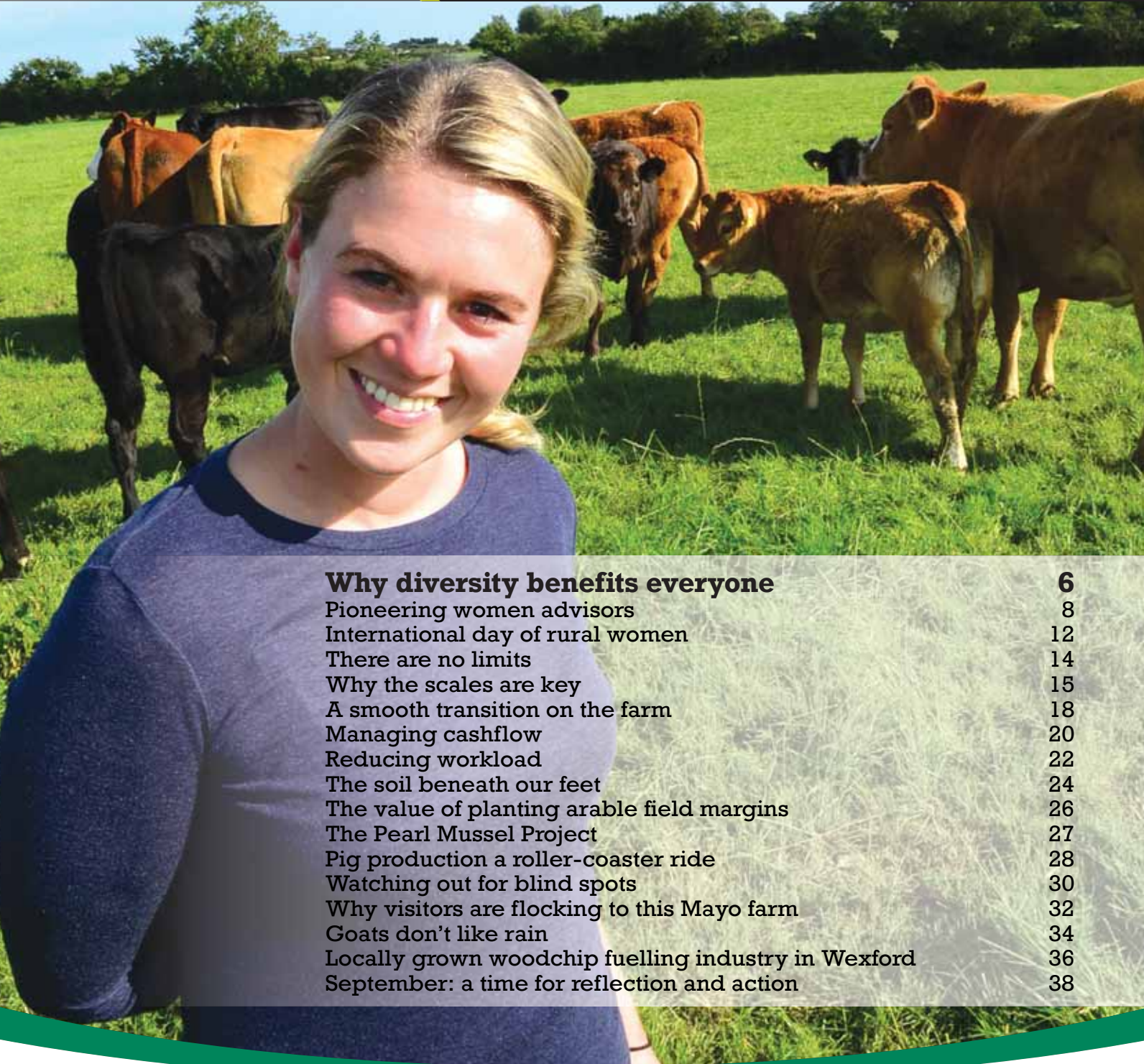




Today's Farm

Business production environment and countryside issues www.teagasc.ie



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COMMENT



Mark Moore
Editor,
Today's Farm

Empowering rural women and girls

In this edition, we've focussed on women in agriculture in honour of the UN International Day of Rural Women on Tuesday, October 15th. "The empowerment of rural women and girls is essential to building a prosperous, equitable and peaceful future for all on a healthy planet," — UN Secretary-General, António Guterres.

Ireland has come a long way in empowering rural women who are now to be found in positions of authority in all areas of rural life and related areas, but there's a way to go yet. "We know that teams that have better gender balance have better outcomes," says Teagasc Authority member Cliona Murphy. Everyone contributing according to their ability will help society meet the challenges ahead.

Cumhacht a thabhairt do mhná agus cailíní tuaithe

San eagrán seo, tá sé beartaithe againn díriú ar mhná sa talmhaíocht, ós rud é gurb é Lá Idirnáisiúnta na mBan Tuaithe é ar an Máirt, an 15 Deireadh Fómhair. "Ní mór cumhacht a thabhairt do mhná agus cailíní tuaithe chun féachaint chuige go mbeidh rath ar ár saol go léir amach anseo ar phláinéad folláin, go mbeimid go léir cothrom le chéile agus go mbeidh an tsíocháin i réim," — Ard-Rúnaí na Náisiún Aontaithe, António Guterres. Sna scéalta a insimid anseo, tugtar le fios go bhfuil cuid mhaith den bhóthar curtha di ag Éirinn maidir le cumhacht a thabhairt do mhná tuaithe... agus bíonn poist údarásacha ag mná tuaithe anois i ngach réimse den saol tuaithe agus i réimsí gaolmhara. "Dá mhéad an chothromaíocht inscne i bhfoirne, is ea is fearr na torthaí a bhaineann siad amach," a deir Cliona Murphy, comhalta de chuid Údarás Teagasc. Cuideoidh an éagsúlacht leis an tsochaí tabhairt faoi na dúshláin mhóra atá romhainn.



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Cover | Debbie Sunderland is the latest generation to farm on her family's Wexford farm. "I'm lucky to be able to work with, and learn from, my father Fred and grandfather Sidney," she says.

Visit us at the Ploughing

17-19 SEPTEMBER 2019

Teagasc at the National Ploughing Championships

Venue Fenagh, Co. Carlow

Under the theme driving sustainable growth, Teagasc will have a substantial presence at the National Ploughing Championships.

In recent years, our outdoor exhibit area has proved hugely popular with visitors to the event. We have extended this exhibit area to include four fenced paddocks where the concept and challenges of Driving Sustainable Growth will be explored.

Teagasc researchers, specialists, and advisors will be able to explain to visitors at first hand the key steps in driving Sustainable Growth. The first paddock will exhibit the soil profile, the basis for all production, demonstrating rooting depth by grass and mustard crops. The benefits of protected urea fertiliser will also be discussed here.

The next paddock will demonstrate how trailing shoe slurry application compares with splash plate application. The third paddock will exhibit varying grass covers and how grass production and management can help optimise profitability sustainably.

The final paddock will address Integrated Pest Management on tillage farms. Environmental issues will also be discussed including how to promote plant biodiversity and support bee populations. Integrating forestry into sustainable production systems



will be addressed here too.

Within the Teagasc marquee located right beside the Demonstration paddocks you can meet Teagasc advisors, specialists, educators and researchers in the fields of:

- Farm management.
- Teagasc courses.
- Health and safety.
- Beef.
- Sheep.
- Tillage.
- Dairy.
- Forestry.
- Environment.

- Food.
- Vistamilk.
- Rural development.
- Renewable energy.
- Horticulture.
- Grass10/PastureBase

We have some exciting demonstration tools to demonstrate key points within the marquee. A forestry machine simulator will highlight safety issues. A virtual reality headset will allow visitors to make a 'journey' through the microscopic structure of a loaf of bread.

State of the art farm models in the Vistamilk and Forestry areas will delight younger visitors. Teagasc Health and Safety colleagues will show how your blood circulatory system works and how to ensure it continues to do so! Sustainable growth is only possible if the farmer AND the environment are in good condition.

We look forward to seeing you at Block 3, Row 20, Stand 437.

Teagasc Transferring The Family Farm clinics autumn 2019

Date	County	Venues
23 September	Cork	Parkway Hotel Dunmanway Cork
24 September	Limerick/ Tipperary	Ballykisteen Hotel, Limerick Junction, Co Tipperary
26 September	Carlow	Woodford Dolmen Hotel, Carlow
30 September	Athlone	Radisson Blu Hotel, Northgate St, Athlone, Co. Westmeath
Tues 1 October	Louth	Monasterboice Inn, Newtown, Monasterboice, Drogheda Co. Louth
2 October	Galway	The Lady Gregory Hotel, Gort, Co. Galway
3 October	Donegal	Mount Errigal Hotel, Letterkenny, Co. Donegal
Each clinic runs from 10.30am to 1pm		

10 SEPTEMBER 2019

Venue Dingle, Co Kerry

- On the farm of John Joe Fitzgerald, Ballydavid, Co Kerry.



24 SEPTEMBER 2019

Master Class in Soil Quality & Health for Advisors & Consultants

- Event Time 1:30pm - 5pm
- Venue Teagasc Advisory Training Centre, Johnstown Castle, Wexford, Y35 HK54.

This masterclass will focus on the upskilling of advisors and consultants with the knowledge and skills to assess soil structure and health.

Soils have many functions to carry out during the growing season such as supplying plant nutrients, enabling good crop rooting to anchor the crop, storing and resupplying water over the summer months and suppressing pathogens and crop diseases to name but a few. Assessing soil structure and health will be a key component of future proofing Irish agriculture to meet both sustainable production and environmental goals into the future.

What will you learn?

- 1 Techniques for assessing soil structure.
- 2 Identification of soil compaction in tillage soils.
- 3 Formulating field solutions for soil compaction.
- 4 Tillage soil cultivation systems and minimising soil compaction.
- 5 The role of organic manures and soil health.
- 6 Cover cropping options and soil health

Registration is essential.

<http://bit.ly/TeagascMasterClassin-Soil>

10 SEPTEMBER 2019

Teagasc / Irish Farmers Journal BETTER Beef Farm Walk- Kerry

- Event Time 5pm
- Venue James & John Flaherty, Cordal, Castleisland, Co. Kerry. Eircode: V92 HRN0

10 SEPTEMBER 2019

National Crops Forum

- Event Time 2pm
- Venue Killashee Hotel, Naas, Kildare

It's clear from this year's trials that variety selection is becoming even more important now as we are facing the loss of some key fungicides and loss of efficacy of many of the remaining fungicides. The Department of Agriculture, Food and the Marine (DAFM) will outline the latest results from their variety trials.

The forum will also cover BYDV in detail with a talk from Steve Foster, Research Entomologist from Rothamsted Research, UK. Steve will talk about resistance issues in the UK and how these relate to Ireland. This will be followed by a talk on how to reduce

the risks associated with BYDV on farms this year.

Impending changes to the CAP and Basic Payments will be a major part of the forum this year.

DAFM speakers will look at the potential changes coming from the EU in terms of the Basic Payment and the accompanying environmental proposals. Speakers will cover how current proposals were formulated and how they will be further modified to suit agriculture in Ireland. There will be ample time for questions and answers during the forum. The event is open to everyone.

12 SEPTEMBER 2019

Hill Sheep Event - Sligo

- Venue Benbulbin, Co Sligo
- On the farm of Francis Goney, Tormore, Glencar, Co Sligo.

12 SEPTEMBER 2019

Teagasc/Irish Farmers Journal BETTER Farm Beef Challenge Open Day - Mayo

- Event Time 5pm
- Venue Farm of Tommy Holmes, Tullysleeve, Ballina, Co Mayo. F26 K7W0

17 OCTOBER 2019

National Agri-Environment Conference

- Event Time 9.30am
- Venue Tullamore Court Hotel, O'Moore St, Tullamore, Co Offaly

Over the next couple of years there is a huge challenge to formulate and implement agri-environmental policy which can contribute to meeting the ever growing and increasingly complex challenges. Irish farmers will need to continue to adopt sustainable practices and increasingly provide evidence of continual improvement if we are to achieve the wide range of targets that have been set for the industry. There is an increased understanding that policy needs to expand the toolkit and become more inclusive and more "bottom-up" and targeted.

The Conference will deal with challenges faced by policy makers in the development of policies which can have an impact while not imposing unnecessary burdens on producers.

Register at www.eventbrite.ie/e/national-agri-environment-conference-2019-tickets-69708498997

Why equality benefits everyone

Three women currently hold positions on the Teagasc Authority. We've asked them their views on how more women might reach their full potential in the workplace

Valerie Farrell
Teagasc Human Resources
Department*

Cliona Murphy is an engineer by profession. She worked in the chemical industry after graduation and joined PepsiCo in 1997. She has held many senior positions and is now responsible for Global Quality Assurance at PepsiCo.

As an Assistant Secretary, **Eilís O'Connell** is one of the Department of Agriculture, Food and the Marine's most senior officials. She has also held management positions at the Department of Defence and the Office of Public Works. In her current role, she has responsibility for human resources and corporate affairs.

After 18 years at Teagasc as a senior agricultural economist, **Thia Hennessy** joined UCC in 2016 as Professor of Agri-food Economics. She was subsequently appointed dean of the UCC Business School.

What advice would you give people, women in particular, considering their future careers?

Cliona Murphy: I would really encourage women, and men, to get out of their comfort zones and embrace opportunities when they arise. I moved from engineering to product development and have taken opportunities to work in China and in Thailand, and now I am in Research & Development. To make big changes in terms of activity or location might seem daunting at the time, but they generate tremendous opportunities to learn and grow.

Eilís O'Connell: I think having a good mentor, or mentors, can be hugely beneficial. I have had excellent informal mentoring throughout my career from both women and men. As well as providing wise advice, it gives you the sense that you have someone in your corner. So I would advise people to participate in mentoring

Cliona Murphy.



programmes if they are available, or to find someone who they trust and who can act in a mentoring role.

Thia Hennessy: If you have been in an organisation or a role for quite some time, to make a change is challenging. But for the growth and progress it brings, the short-term discomfort is worth it.

What do you think about initiatives in terms of gender balance?

CM: It's not about favouring women, it's about favouring diversity. We know that teams which have a better gender balance have better outcomes. It's about ensuring that everyone flourishes, which benefits us all.

EOC: I think some people relate gender initiatives to the introduction of quotas and certainly there can be reservations about this, but gender

initiatives can be more about developing creative initiatives that support women to avail of opportunities to participate at the highest levels and organisations that are more diverse perform better from a business perspective.

TH: I think while legislation protects the jobs of women who are away on maternity leave, it is the responsibility of organisations and leaders to ensure that women are not forgotten about when they are away and that their roles are not eroded. There needs to be advocates for women who are away to ensure that they are not 'out of sight, out of mind'.

What do you think is holding women back?

CM: I think much of the old fashioned thinking by is gone,



We know that teams which have a better gender balance have better outcomes. It's about ensuring that everyone flourishes, which in turn benefits us all

Eilís O'Connell.



Thia Hennessy.



though it's important to be aware of unconscious biases. Some women do need to have greater belief in themselves. A man will look at a job description and say: "Great, I have 80% of the qualifications needed." And have a go. Sometimes women will not go for a job unless they feel they have 100% of what's required. So I think anyone considering a position should be realistic, but not limit themselves.

EOC: I agree with Cliona. A key challenge is believing in ourselves. Stop listening to that voice that tells you that you can't do something. Because you certainly can.

TH: There is no expectation that women should stay in touch during maternity leave, but I think informal advocacy would support women and, as mentioned earlier, ensure that they

are still being considered when away.

What advice would you give to young people, women in particular, considering careers on farms or in agriculture related occupations?

CM: People are most successful when they love what they do. Now, more than ever, we need people in agriculture who are passionate about the future of food and the environment.

If you love it, go for it and make sure you avail of all the training and support that is available.

EOC: Don't allow yourself to be put off by stereotypes. Bring your own unique perspective and insight to the role, and to any new challenges that you may face. Work collaboratively with others and use your networks to get things done. Most importantly, accept support when it is offered to you.

TH: The agri-food sector is at an exciting stage of development and Brexit aside, there are still a lot of opportunities for ambitious young people entering this sector at the farm or industry level. We launched a new BSc in agricultural science at UCC this year and there has been great interest in it from male and female students alike.

My main advice to any young person considering a career is to follow their passions, do what they love, not what is expected of them, and that success will follow regardless of gender.

*This text is derived in part from a series of interviews conducted by Valerie Farrell and videoed by Declan McArdle. The videos are available on the Teagasc website.

More than a century of female pioneers

Women in the Advisory Service

Mícheál Ó Fathartaigh

Unlike in many other professions, women have always been to the forefront of the Irish agricultural advisory service, which was inaugurated in 1901. Initially, women had a defined role in the advisory service. They were the poultry-keeping and butter-making instructresses. In the latter half of the 20th century, though, they would become agricultural educators and advisors and ultimately CAOs and area managers.

Advisors, or instructors as they were called originally, have operated in Ireland since the 1700s. Up until 1901, they were agents of individual landlords or organisations such as the RDS. They were also all men. In 1899, an Irish department of agriculture was established and together with the newly formed county councils and their committees of agriculture it created a national advisory service.

From 1901, every county in Ireland would typically have at least one agricultural instructor and two horticultural and beekeeping instructors, who were men, and two poultry-keeping and butter-making instructors, who were women.

Poultry-keeping and butter-making were farm enterprises that were undertaken traditionally by farmers' wives and daughters. Consequently, the role of poultry-keeping and butter-making instructor was reserved exclusively for women.

The Munster Institute in Cork was where the instructresses were trained from 1905. Before then, they were trained at the Reading College Poultry School. The Munster Institute's course would be better, be less theoretical and more practical. The quality of its education and the value of the instructresses became evident quickly. The instructresses had a starting salary of £150 (about €15,000 in today's terms.).

Poultry keeping

Focusing on poultry-keeping, in 1901 there were 18,811,000 poultry birds kept in Ireland; by 1914, the year that the first world war began, there were 26,919,000. The period of the early 1900s was a buoyant one for Irish agriculture generally. High prices drove expansion across the spectrum. Nevertheless, the performance of the other agricultural sectors came nowhere close to that of the poultry sector. Since the first world war, the growth in poultry-keeping had slowed as a result of the European economic slump following the war and the global Great Depression from 1929. However, it was not reversed thanks in large measure to the efforts of the female instructors.



It is hard to quantify the impact of the farm home advisors any more simply than to point to the visual transformation of many Irish farmhouses between 1962 and 1983

High quality

As well as continuing to promote the expansion of poultry-keeping, the instructresses also promoted the importance of high-quality produce. After independence, Irish agricultural products were losing ground to continental competition in the vital British market. This was especially the case with butter.

Butter exported from Ireland was increasingly creamery butter, which was good-quality. Homemade "farmers' butter" was also being sold in Britain and its quality varied wildly. The instructresses had to ensure that the farming women who made butter adhered to the most rigorous standards because they literally held in their hands the reputation of Ireland's precious dairy industry.

Around the middle of the 20th century, the role of poultry-keeping and butter-making instructresses started to become obsolete. Creamery butter was entirely displacing farmers' butter and poultry-keeping was being practised on a bigger scale but on a smaller number of farms. An aspect of the latter trend also was that poultry-keeping was becoming a male enterprise, and instruction in it was no longer seen as a role reserved for females. In the early 1970s, men, in small numbers, trained in a new course as poultry technicians, a role which supported large-scale production.

Around the middle of the 20th century, too, though, seismic changes were afoot in Irish agriculture and a new prominent role would soon open up for women in the advisory service. Many of the changes were prompted by the prospect of EEC membership.

In 1957, the EEC was founded and Ireland shortly became keen to obtain access to its large common market, particularly for Irish agriculture, and to its financial supports, again particularly for Irish agriculture. Yet if Ireland were to be allowed join, and then to prosper once inside the EEC, Irish agriculture in particular would need to be modernised.

This modernisation did not just need to happen on Irish farms themselves, it needed to happen in Irish farmhouses. Rural electrification and improvements in rural water supply had and would bring potential benefits to Irish farmhouses. If time, energy and money were all managed efficiently in Irish farmhouses, this would make a huge contribution to modernising Irish agriculture.

Irish farmhouses remained the jurisdiction of farming women and it was they who had to be helped to manage them. In response, and continuing to deem that only women could help other women, the Government instituted the role of farm home advisor and reserved it exclusively

Mary Walsh

“At the end of the 60s, things were starting to change,” says Mary. “The marriage ban ended which gave women the choice to pursue a career. I was inspired and encouraged to be ambitious by a number of visionary people, for example Paddy Donnelly, the CAO in Kildare.”

Mary was always convinced of the value of education and pursued courses, she completed the PG in agricultural extension at UCD, followed by public management majoring in human resources, at the Institute for Public Administration in Dublin. She also was a driving force behind short courses, and 100-hour courses supported by the EU, for farmers after 1973. “The period after we joined was very positive because there was money available from the EEC to run the courses,” says Mary. “We were able to achieve a lot.”

In 1983, Mary Walsh (then Mary Kerr) was appointed as CAO for Co Meath (although she did not take up the role). She became the first female CAO. Walsh had also been appointed the first female deputy CAO, this time in Monaghan, in 1976, later served as Deputy CAO in Meath having begun her career as a farm home advisor six years earlier. Mary served on the Teagasc Authority for nine years from 1989.

Mary resigned once her children arrived. “I decided with my training and experience that there were other opportunities out there.”

Today, Mary acts a consultant, coaching people preparing for job interviews. Have we reached equality? “In a lot of workplaces, yes we have,” says Mary. “The women I meet are being treated the same as men in the workplace as I myself was. Women are at a disadvantage, however, in that they usually have to take time out of the workforce to have family, that means they have less time to gain experience and to build evidence of their competence.”



for women. It would succeed the role of poultry-keeping and butter-making instructress. The Farm Home Management Course at the MI was never actually closed to men, but it did not attract young men.

Course

Like their predecessors, the farm home advisors were trained in the Munster Institute. Their course was developed incrementally from 1962 under the guidance of senior practitioners in home economics from the USA, Germany and Austria.

It is hard to quantify the impact of the farm home advisors any more simply than to point to the visual transformation of many Irish farm-

houses between 1962 and 1983, when the role of farm home advisor was abolished.

The farm home advisors in service in 1983 were retrained as socio-economic advisors but by that stage there had already been women working as agricultural advisors and horticultural advisors for two decades, albeit in relatively small numbers.

This would become a growing trend as the gendered-associations of the various advisory roles continued to loosen at an accelerated rate.

Indeed, in 1983 it was, coincidentally, confirmed that there were no longer any reserved roles in the Irish advisory service, either for men or women.



Siobhan Kavanagh

Siobhan qualified from UCD with a degree in Animal Science in 1994. Having spent a summer at the Pig Department in Moorepark in 1993 she proceeded to do a masters and PhD in pig nutrition at Teagasc Moorepark.

Upon graduation, she spent six months in the private sector selling pig minerals until the opportunity came up to do a post doc with UCD, based at Teagasc Moorepark, where she was responsible for the implementation of a new feed evaluation system.

Having worked for two years in that role, she was offered the position of national ruminant nutrition specialist for Teagasc at the end of 2000. "I had a blank canvas to build a nutrition support service," says Siobhan. "I lead the Teagasc Nutrition Programme for 14 years, working closely with advisors, researchers, farmers and industry personnel.

"Having spent 14 years in that role, I was anxious for a change in my career path and I applied and was successful in getting the regional manager's post in 2014, with responsibility for the advisory service in Wexford, Wicklow and Carlow. I am currently regional manager for Waterford and Kilkenny.

"As a woman, I have never been held back in anything I wanted to do. I think you have to be prepared to take on a new challenge or do something outside your comfort zone every year to build confidence and develop your skillset.

"Having a good mentor/coach is really important – someone who will give you guidance, be honest with you and push you. I have had good mentors/coaches since I graduated from UCD in 1994 and they have been instrumental in my career development.



Majella Maloney

Majella Maloney is currently Teagasc regional manager for Kerry and Limerick. A native of Listowel in Co Kerry, where her family were farmers, Majella attended Aberystwyth University in Wales where she completed a bachelor of science in agriculture (animal science) degree. Prior to her current role, Majella has been a Teagasc advisor and Principal of the Teagasc College in Clonakilty.

"I think women having roles as farmers or managers is no longer seen as something out of the ordinary," says Majella.

"Women are not represented at all levels in equal numbers as men and that needs to change. But there has been huge progress and that is certainly due, in part, to the efforts and achievements of women who were pioneers and took on roles that had never been held by a woman before."

Positive trends in family farming

The family farm has always depended on the work and support of all members of the family – men, women, sons and daughters. While research has shown that, commonly, all members of the family have not had equal access to farm ownership or equal influence on decisions made on farms, it is also the case that positive change is happening, according to the latest Teagasc research.

For family farming to survive, traditions that excluded women and offspring from having a meaningful stake in the farm have had to change. Teagasc re-

search has found that family farms are responding to the challenge.

For example, joint farming ventures, such as farm partnerships, allow husbands and wives; parents and offspring; other family members; and neighbours to jointly operate farms bringing together their knowledge and resources.

Research has shown that this boosts the success of the farm.

In Ireland, France, Norway and many other EU countries this trend is a vital part of the future survival strategy of family farms. For it to succeed, the

initial support of the – often male – farm owner is needed.

Our research has found that male owners of farms can be highly supportive and passionate advocates of greater contributions from women and offspring, as owners and co-owners of farm enterprises. This is necessary for old traditions to change, so that family farming survives into future generations.

– **Áine Macken-Walsh**, Department of Agri-Food Business and Spatial Analysis, Rural Economy Development Programme, Teagasc.



Vanessa Kiely O'Connor, Cork; Imelda Kinsella from Kilkenny; Helen Brophy of the UCD Michael Smurfit Business School; and Emer Howard, Cork; at their graduation.

Teagasc/UCD Michael Smurfit School of Business course in strategy for farmers

The aim of this executive-level course is for participants to develop and enhance the skills needed to formulate a strategy for their family business taking into account the needs of all stakeholders.

This course is for farmers (full-time/part-time, male/female) who plan to identify where they want their business and their lives to be in three to five years' time and create a strategy to achieve their goals

Topics covered include:

- My personality/how I interact with others.
- Stakeholder identification.
- Goal setting.
- Negotiation skills.
- Investment analysis.
- Strategy formulation and more.

Successful participants receive a fully

accredited certificate at level 8 from UCD, which is presented at an academic conferring ceremony.

"I found it excellent and it really tuned me in to what I needed to do to move my business forward," says Peter Mongey, Co Meath.

"As well as gaining new skills and knowledge, I felt that doing the course gave me a greater sense of confidence when dealing with certain aspects of the business," said Vanessa Kiely O'Connor.

This premium course will run again in November and December and while interest has been strong, some places are still available.

Further information

For further information, please contact Mark.moore@teagasc.ie or phone 087-417 9131.

Gender-SMART project puts the spotlight on equality

Nine European partners in the Gender-SMART project, including Teagasc, who all work in agricultural and life sciences, will be putting equality in the workplace at the forefront of their operations.

Each organisation, supported by two technical partners specialising in institutional change and appraisal, has committed to develop and implement a gender equality plan, centred on four shared issues:

- Building a gender equality culture.
- Developing equal career support measures.
- Reshaping decision-making and governance.
- Integrating gender in funding, research and teaching.

Funding

Gender-SMART is an H2020 project under the "Science with and for Society" programme. It has €3m of EU funding over four years.

International Day of Rural Women

The achievements of rural women, and their advisory needs, deserve greater recognition abroad ... and at home

Marie Christie
Teagasc public relations department
Aisling Molloy
Teagasc Kanturk

The first World Rural Women's Day recognising the contribution of women to agriculture and rural development took place on 15 October 1997. It was organised by the Women's World Summit Foundation (WWSF).

In 2008, the United Nations (UN) formally recognised the International Day of Rural Women as a day of global observance. The day formally honours the role of rural women, recognising rural women's importance in enhancing agricultural and rural development worldwide.

In recent years, the day has tended to focus more on the role of women in developing countries. It is equally important, however, that the unique challenges faced by women in agriculture and rural development in Ireland are recognised and actions are taken to address these challenges.

It is also important to celebrate the contribution and successes of the many women working in agriculture and rural development in Ireland.

Rural women make up a quarter of the world's population and comprise 41% of the world's agricultural labour force. They play important roles in the rural economy, working as farmers, wage earners and entrepreneurs.

In Ireland, 2016 figures from the Central Statistics Office (CSO) show that just under 13,000 women were employed in the agriculture, forestry and fisheries sectors. This is 10.8% of the total and far below the EU-28 average of 28.5%.

It is important to note that this figure includes only those in paid employment. The most recent Census of Agriculture (2010) shows that 12.4% of farms in Ireland are owned by females yet they make up 27.2% of the farm workforce.



Marie Christie.



Aisling Molloy.

Advances have been made in recent years and some women are now heading organisations connected to agriculture (FBD, Glanbia, etc). Women involved directly and indirectly in farming and agriculture are becoming more visible, over 20% of Teagasc advisors are women. The views of three female Teagasc Authority members are included in this edition. But more can be done.

Teagasc advisor Aisling Molloy recently investigated "How Teagasc advisory services can improve engagement with and empowerment of farm women" in her Walsh Fellow thesis. Aisling's supervisors were Monica Gorman of UCD and Jane Kavanagh of Teagasc.

"The study, which included postal responses from 233 farm women in Co Wexford, highlighted the diverse needs and roles of farm women," says Aisling. "The women were between 41-55 years. The average farm size was 51-100 acres and beef, dairy and sheep enterprises predominated.

"More than half of the respondents were sole owner, joint owner or working in a partnership. Almost a quarter had a form of agricultural education.

"There was an obvious lack of recognition of the work that women contribute to farms, particularly by themselves, as 64% of the women who classified themselves as 'not working on a farm' carried out at least one farm task. Eighty-five per cent of the respondents carried out farm tasks, mainly farm accounts and/or form filling, DAFM schemes and making decisions.

"The women mainly engaged with advisory services for the Basic Payment Scheme, scheme applications and technical information. One-third said they would like to have more engagement with advisory services.

"The women wanted to learn more about cashflow planning, business planning, soil fertility and applying fertiliser, animal nutrition, updating their personal development and computer skills. They mainly wanted to learn through training courses and online courses."

The women suggested that they could be empowered by encouragement to become more involved with agricultural advisory services, through female discussion groups, practical agricultural training, education and awareness, computer training, giving them responsibility, through shared/equal partnerships to allow for joint decisions to be made and by planning for the future, eg succession and inheritance.

The main barriers to engagement with advisory services by women were perceptions that "women producers were not taken as seriously as male producers", the perception that women are not entirely welcome in many agricultural groups, a lack of self-confidence, a lack of knowledge, and training and isolation.

Suggestions to tackle these barriers included: agricultural education, succession and inheritance planning, not referring to the farmer as "he" all the time, encouraging more women to get involved, providing a social outlet for farm women, practical training, holding courses of interest to women, including both male and female parties in advisory activities, female discussion groups and naming female family members on the Teagasc contract and on correspondence.

While eight advisors in the county thought that there was more scope to involve farm women with advisory services, only three had attempted to do so and five advisors saw the relevance of gender analysis in their



Wexford farmer Hannah Doyle with her daughters Niamh and Ciara.

work. There was a difference between what farm women actually want and what advisors think that farm women want from an agricultural advisory service. A form of gender awareness training for advisors to recognise these potential issues and how they can be overcome may be beneficial.

Many farm women suggested including family members at events and encouraging women to engage with advisory services. One respondent said:

“Encourage farm wives to attend meetings. Advisors should engage with them to a greater extent during farm visits. Wives don't give themselves credit for all they do. How professionals engage is important – if they acknowledge the wives' input, then the husbands might do so more.”

Part of the rationale for this study was that the agricultural advisory and education needs of farm women are unknown. Therefore they are unlikely to be considered when Teagasc is developing programmes or proposing policy changes.

There were strong arguments for and against female groups, both in the literature and among advisors during a focus group held as part of the study. There is a recently established farm women's group in South



Wexford dairy farmer Phil O'Neill.

East Ireland called South East Women in Farming Ireland (SEWFI). Other branches associated with this group (currently suspended) have been established in Munster, Connacht and in Northern Ireland.

These are groups of women of different ages, roles and enterprises that meet regularly with a specific theme at each meeting, such as social media, health and safety and education.

Collaborating with pre-established groups like these to provide information and resources would be valuable to farm women and resource-efficient for Teagasc. Female discussion groups were suggested by the farm women in Co Wexford. They would act as a direct link to help improve engagement between farm women and advisory services.

Editor's note: Teagasc strongly and actively encourages women involved in farming to participate in Teagasc education programmes, farm discussion groups, events and conferences and to avail of local Teagasc advisory services, etc. As soon as the first Teagasc women's group has found its feet we will feature it in *Today's Farm!*

There are no limits!

Regardless of one's starting point, if you are motivated and in a position to give it the time, today's education system allows progression, to whatever point you decide you wish to finish.

Edna Curley

Principal, Mountbellew Agricultural College, Mountbellew, Co. Galway.

Having grown up on a farm, I always knew that I wanted to be involved in agriculture in some shape or form. While taking agricultural science for my Leaving Certificate, I realised that studying the science of agriculture at third level, was what I wanted to pursue. I applied to Mountbellew after my Leaving Certificate to complete the Green Cert to begin my practical training and give me the option to return home to farm.

From Mountbellew I went to WIT and Teagasc Kildalton. The possibility to transfer from WIT/Teagasc Kildalton to UCD meant that I could continue right through to a Level 8 honours degree, getting recognition for the learning up to that point, and complete my third level agricultural training.

After finishing my degree, I realised that research was what piqued my interest at that time. I was accepted on to a Level 9 funded research project in crop science, which put me out in the fields with cereal farmers, dealing with the same challenges that they were dealing with. I learned as much listening to and chatting with farmers as I did in a classroom, and it opened my eyes to the real challenges on the ground.

A PhD (Level 10) is not for the fainthearted! I wanted to get more involved in research and to complete longer field studies, and so I applied for a PhD after completing my masters. The emphasis at Level 10 is more about scientific publications than practical learning. Having said that, I again got another view of agriculture as this research and these studies drive the farming of the future. At level 10, I also began lecturing in UCD; this gave me a new perspective on learning and how others learn.

With formal education behind me, I decided that I wished to stay in research and education and so began a six-year spell of conducting and managing research studies while also doing some lecturing.



This eventually led to returning to Mountbellew as College Principal, almost 20 years to the day after I left having completed my Level 5 Certificate in Agriculture.

So if you are starting a level 5 qualification at any agricultural college, remember you are starting a journey which will offer you lots of options along the way. If you too wish to begin your journey in Mountbellew Agricultural College, please don't hesitate to get in touch with us.

Education history

1998-1999: Mountbellew Agricultural College
National Certificate in Agriculture (Level 5)

1999-2001: Waterford Institute of Technology & Teagasc Kildalton College
National Certificate in Science in Agricultural Science (Level 6)

2001-2004: University College Dublin
Bachelor of Agricultural Science-Animal and Crop Production (Level 8)

2005-2006: University College Dublin
Masters of Agricultural Science (Level 9)

2006-2010: University College Dublin
Degree of Doctor of Philosophy (Level 10)

2010-2013: University College Dublin & Oakpark Crops Research Centre
Postdoctoral Researcher

2013-2019: National University of Ireland Galway
Postdoctoral Researcher

2019: Mountbellew Agricultural College
Principal

What would I say to those thinking about entering agricultural education?

Leave yourself open to learning, don't think that you cannot learn or can only learn in a classroom, give yourself a chance. Listen and engage with those who have done it and let them be your guide. Most importantly, you can learn from anybody regardless of the time they have spent in a classroom.

Why the scales are key

Performance varies significantly between suckler cows, but you can't tell by looking at them. Breeding strategies need hard facts to work with

Nóirín McHugh
Teagasc Animal and Grassland Research & Innovation Programme

Liveweight measurements of both the suckler cow and her calf are critically important when assessing the performance of your beef herd. These liveweight records are also key in the formation of the Euro-Star replacement index.

The liveweight of the calf is a good indicator of the milk potential of the cow. It's also used to predict the future carcass performance of the animal. Cow liveweight also helps to estimate maintenance cost, and thereby the feeding costs associated with the cow herself.

Overall milk, cow liveweight, carcass weight and conformation make up a combined 45% of the replacement index (Table 1).

Therefore, it is important to collect as many liveweights as possible on suckler cows and calves, to ensure



Nóirín McHugh.

higher reliability of your Euro-Star indexes. Traditionally, however, the number of weight recording in herds has been extremely low. Given the importance of liveweights, the Beef Environmental Efficiency Pilot (BEEP) was launched in 2019 to increase the amount of cow and calf liveweights recorded. The optimum time to weigh a cow and her calf is 150-250 days after calving.

Cow efficiency

As well as assessing liveweight of the cow and calf individually, combining this information can provide a very useful measure on the efficiency of the cow. Measures of cow efficiency can tell us how good a cow is at converting feed into carcass.

Cow efficiency can be assessed as the percentage of the cow's liveweight that she weans, in terms of calf weight adjusted to 200 days. For example, a cow weighing 630kg with a calf weighing 270kg at 200 days will have a cow efficiency of 43%.

This cow efficiency percentage can vary greatly between individual cow-calf pairs (ie 30% to 60%) and is

Table 1: Traits and their emphasis (%) within the Euro-star replacement index

Trait	Trait emphasis	Trait type
Maternal calving difficulty	6%	Cow traits 71%
Age first calving	6%	
Calving interval	9%	
Survival	8%	
Milk	18%	
Cow liveweight	14%	
Cow docility	4%	
Cull cow weight	7%	Calf traits 29%
Calving difficulty	7%	
Gestation	2%	
Mortality	1%	
Docility	1%	
Feed intake	4%	
Carcass weight	10%	
Carcass conformation	3%	
Carcass fat	1%	



a useful tool in identifying both your top-performing and, more importantly, your poorly-performing cows.

Once your cow-calf weights have been taken and entered, a weaning performance report will be available through your ICBF HerdPlus profile, which will give you a full breakdown of your herd's performance. The report allows you to analyse calf and cow performance both at a herd and individual animal level.

Relationship between Euro-star indexes and cow efficiency

To date, over 50,000 liveweight measurements have been recorded on cow-calf pairs as part of BEEP. To assess the usefulness of the replacement index in identifying efficient cows in your herd, the genetic index of individual cows was compared with the liveweights recorded on both the cow and her calf.

Results from the BEEP data showed that cows with high star ratings on the replacement index had superior on-the-ground performance compared with low star-rated cows (Table 2). On average, five-star replacement index cows were 27kg lighter than cows with low indexes. However, five-star replacement index cows on average produced heavier (17kg) calves at 200 days compared with one-star cows.

This resulted in the five-star cows weaning proportionally more of their own body weight (47%) compared with one-star cows (42%). These results indicate that selection of cows for favourable high replacement indexes will result in progress.

This is because lighter cows require less maintenance and heavier calves drive output by producing more liveweight to sell, or by their calves reaching slaughter at a younger age.

Given the increased importance of the environmental impact of the national suckler herd, these results demonstrate that by selecting high replacement index cows, farmers can help identify the most efficient suckler cows.

This will significantly reduce the amount of greenhouse gases (GHG) generated per kg of beef produced in Ireland.



Results from the BEEP data showed that cows with high star ratings on the replacement index had superior on-the-ground performance compared with low star-rated cows

Case study

Anna Marie Colohan, Crowsnest, Ballinasloe, Co Galway

Sinéad Devaney
Teagasc beef and sheep adviser, Ballinasloe

Anna Marie Colohan is a mother of five, farming full-time at Crowsnest, Laurencetown, just a few miles outside Ballinasloe in Co Galway. She took over the 35ha family farm from her father Jim Colohan in 2002, where she now runs a herd of 31 Simmental suckler cows, together with a 110-ewe flock that lambs mid-season (mid-February).

The farm is stocked at 170kg N/ha. Lime, P and K are being applied where needed, and Anna Marie is aiming to raise grass output and utilisation even further.

Anna Marie farms together with her father Jim, while her husband works off-farm.

"I do have a keen interest in the breeding side," she says. This is reflected in the calving performance and suckler cow genetics of the herd. Anna Marie keeps suckler cows and a five-star replacement suckler bull. A five-star replacement Angus bull runs with the heifers.

"All cows are scanned; those not in-calf are culled," says Anna Marie. "Our calving period is February to April, with 96% of cows calving in six weeks. March is the peak calving month and this works very well as the lambing season is mostly over by the end of February.

"Heifers are calved by two years of age. We rarely have problems at calving and we usually have only one calving difficulty or 'assistance needed' at calving per year."

Anna Marie's herd has a lot of other excellent attributes too. Currently, her cows average €109 on Eurostar (the national top 10% is €105), and the top cow on-farm has a €urovalue of €157. The calving interval is 372 days, while calves/cow/year stood at 1.13 this year.

"We work with a local technician Niall Stoddart who carries out calf weighings for us each year, and then we submit the data recorded to ICBF," says Anna Marie. "By working with Niall we are able to take the subjectivity out of breeding. Margins are too tight to have animals in the herd who are underperforming.

"In 2015 we took part in the Teagasc ICBF cow and calf weighing initiative and this year we participated in the BEEP scheme."

As a member of Herd Plus she consults the ICBF breeding reports to assist her in making breeding decisions, such as purchasing bulls and compacting calving.

Anna Marie has been a member of the Aughrim Kiltormer Beef Discussion Group facilitated by Sinéad Devaney, since 2012.

Table 2
Average performance of cow-calf pairs based on cows differing in star ratings for the replacement index

Replacement index star	No. cow-calf pairs	Avg. rep index	Cow weight (kg)	Calf weight (kg)	Cow efficiency (%)
1	3,482	€27	649	268	42
2	3,998	€58	638	273	43
3	4,562	€76	632	277	45
4	6,248	€93	628	279	45
5	10,364	€129	622	285	47



Sinéad Devaney and Anna Marie Colohan.



As a member of Herd Plus, Anna Marie consults the ICBF breeding reports to assist her in making breeding decisions.



Jim Colohan, Sinéad Devaney, Anna Marie and her son.

A smooth transition on the farm

This young Wexford farmer is drawing on the wisdom of her father and grandfather, while charting her own course

James Doran
Teagasc
Enniscorthy

Debbie Sunderland farms with her dad Fred in Aske, Co Wexford, just minutes from the town of Gorey. Debbie's immediate family network is also made up of her mam Julie, younger sister Hannah and her grandfather Sidney, who at 85 years old still plays an active role on the farm.

At just 27, Debbie is now in her fifth year of full-time farming, after deciding in 2014 to return to the farm; much to the delight of her dad Fred.

"After finishing my second level education I experimented with different career paths, such as hair-dressing, where mam already excels, and I completed a course in holistic therapies," says Debbie.

A trip to New Zealand and Australia in 2013 helped Debbie decide that farming was what she wanted to do.

"I always enjoyed being on the farm growing up, but because it is such a male-dominated profession I never really considered it as an option for me." Based on recent CSO figures, women represent just 11%-12% of the agricultural workforce in Ireland.

Once fully in situ on the home farm, Debbie started to influence the business straight away. This was also aided by her decision to complete the Teagasc part-time Green Cert course, which allowed her to continue to work and make management decisions on the farm while arming herself with more technical knowledge.

Debbie and Fred also joined the local Enniscorthy East beef discussion group of which they are very valuable and active members and the group dynamic and exposure has also helped to progress the farm.

Farm system

The main farm enterprise is suckling-to-beef, with a herd of 130 cows. Calving is split between spring and autumn. All male calves are finished as bulls under 16 months; with the



Debbie with her father Fred, grandfather Sidney and James Doran.

heifers finished from 24 to 30 months, depending on their birth dates. Spring barley is grown on an outfarm to supply the local merchant who then compounds the ration for the finishing stock.

It's the breeding aspect of the suckler system where Debbie really excels and gets the most satisfaction. "I really enjoy calving time, when the calves hit the ground it is the first insight as to whether your choice of sire and dam have been successful," she says.

The suckler cows are typically black and red Limousin crosses, with some Simmental crosses too. Debbie fo-

“ I always enjoyed being on the farm growing up, but because it is such a male-dominated profession I never really considered it as an option for me

cuses on high genetic merit terminal bulls to fuel the beef output.

"I prefer Belgian Blue stock bulls," adds Debbie. The last three Belgian Blues had high terminal Euro-star values of €182, €170 and €161 respectively. Limousin stock bulls have

also been used in recent years, with figures for both terminal and replacement indexes exceeding €150. The short-term goal is to focus on breeding herd replacements, but Debbie sees herself returning to all Belgian Blue bulls in the future.

“I like to use the Belgian Blue bulls on the dairy cross cows and Limousin on the three quarter bred continentals. I find that the Belgian Blue bulls are relatively easy calved with the cow type that we have and in my view we have a fancier animal when it comes to sale time.”

Performance

Over the last three years, 90% of the bulls have graded U- or better, with the vast majority grading U= and U+, and approximately 8% of the bulls grading E. Average carcass weights are impressive at 417kg.

Among the heifers, almost 70% have graded U- or better, with average carcass weights of 385kg at an average of 27 months old. Financially, the Teagasc Profit Monitor is consistently showing a gross output of approximately 1,000kg/ha, €2,000/ha and a gross margin of around €1,000/ha.

Heifers purchased

To complement the heifer-finishing system, Debbie buys approximately 40 heifers each year through the local mart network. Some of these, depending on their maternal index and shape, are kept as breeding heifers.

“I’ll also buy some more mature cows and calves from suckler clearance sales, having looked into their suitability and projected performance,” says Debbie.

Debbie has no problem as a woman arriving at the mart and competing in a very male-dominated ringside bidding war.

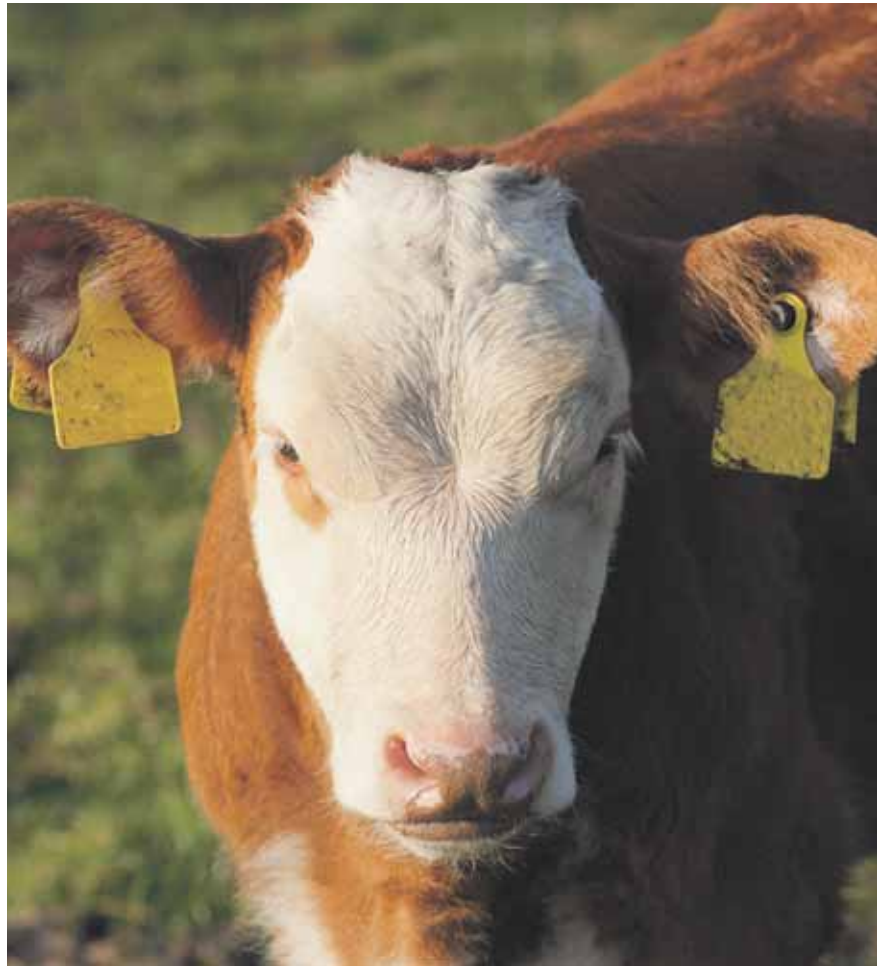
“Any newcomer at the mart needs to learn quickly how to survive and compete when buying or selling cattle,” says grandfather Sidney. “Debbie was never intimidated and the fact that she’s a woman is irrelevant.”

“It was very daunting the first time I started bidding on animals in the mart,” says Debbie. “Trying to put a relative value on an animal and knowing when to stop bidding, especially if you like them, is difficult, but over time you get the hang of it.”

Performance monitoring

Debbie loves monitoring the performance of the finishing animals to make sure they are on track. Finishing bulls are weighed every four to six weeks once they are on their ad-lib diet, with consistent weight gains of 1.8-2.0kg/day.

A high-energy cereal-based diet



Plans for the future

As Debbie is committed to full time farming plans are being put in place to enable her to manage the farm effectively going forward. The farm will switch to all autumn calving, with a 10- to 12-week calving spread starting in late July, with approximately 100 suckler cows being the target. This will allow all under 16-month bulls to be finished prior to Christmas and heifers to be finished in the second season at grass.

Tillage land on the home block will be reseeded with grass to facilitate the move to all autumn calving.

“Calving spread can be an issue where there is split calving, so we will slightly reduce cow numbers which will allow me to cull poorer performers and be more ruthless when it comes to bull removal,” says Debbie.

Dairy

When asked would she consider dairy farming, Debbie’s immediate answer

with a wry smile is ‘No!’. She clearly has a passion for beef breeding, which can be seen as her face lights up when discussing breeding policies, replacement bull strategies, etc. The obvious empathy and appreciation she has for suckler cows as she herds and checks the animals daily proves that her chosen career path was absolutely the right one.

Family support

Debbie’s dad Fred is the current boss and his dad, Sydney, is always there in the background to help out and offer advice. It’s fantastic to see them working together as a family unit; all bringing their own experience and levels of enthusiasm when it comes to decision-making. But while everyone gets an equal say, Debbie is becoming increasingly more involved in decision making on the farm as she gradually takes up the reins from the father.

targeted at keeping fat covers on the right side of 2+ is fed.

All calves are weighed two to three times each year prior to weaning to monitor cow and calf performance

and highlight any issues. Gains of 1.3kg and 1.1kg/day are expected on the bull and heifer calves respectively. Finishing heifers get similar treatment.

farm management

Seven steps to better cashflow management

Martina Gormley
Dairy Specialist
Teagasc Athenry

With herd size and borrowings increasing on many farms, farmers need to know how much money they should have in their account to cover farm expenses, loan repayments, taxation and drawings. Also, with the volatility in weather, building a rainy day fund from cashflow is a seriously good idea.

A rainy day fund does not happen by chance and with this in mind a small group of Galway dairy farmers who were eager to learn how to manage their money more effectively approached me to work with them on cashflow management and budgeting. Seven steps describe how this group set their ground rules and how they operate.

1. Computer programmes

There are many software programmes available to store and analyse farm payment and expense data. To name a few, there are the Teagasc Cost Control Planner, Kingswood and Cashminder. It doesn't really matter which programme you select once it assists you to analyse your data and encourages you to take action.

For group members who are using Cashminder, we set up a "Teamviewer call". This option is very useful as both the farmer and programme provider can view the programme on screen at the same time. Also, a live tutorial of how to use the programme is available.

2. Group rules

Confidentiality was discussed by the group and they agreed that what's discussed in the room stays in the room. The group committed to a minimum of 80% attendance; any member not meeting this require-

ment has to resign from the group.

Many opportunities are lost by the failure to act upon good intentions. Putting aside time to act upon your good intentions to enter actual data into your programme of choice is crucial. The group decided when the data has to be allocated and we set an agenda for the year. The group decided to have four meetings per year and to meet every third month.

3. Support

As two heads are better than one, each member's accountant, group facilitator and the programme provider are given access to their cashflow reports and give support when required. The accountant was identified as key to success for helping members with their questions on data entry and also for using this data in terms of tax accounts. Group members felt very strongly that they did not want duplication and decided that data had to be in a format compatible with their Teagasc Profit Monitor.

4. Budget

At the first group meeting, the members agreed that by mid-January they would all have their 2019 budget entered into a programme. The budget is very important as it captures the entire predicted monthly cashflow for the full year.

In order to make sure the budget was completed thoroughly, each member agreed to audit their farmyard, machinery and grazing infrastructure and make a list of what capital investment needed to be done in 2019.

5. Data collection

To streamline data collection, a reduction in the number of cheques was discussed and a maximum target of 52 cheques written for 2019 was set. When that number is reached, the chequebook has to go into hiding. The reason for this is that the group are using an online programme which



works off bank statements. The programme won't recognise cheque numbers so the more you have, the more you have to manually allocate into this programme.

The number of traders was discussed, and again to make data allocation more streamlined, it was recommended to reduce the number of traders to a maximum of two. All farmers agreed not to use the farm account for personal spending (to reduce data recording and allocation); it was agreed that each month a direct debit would be set up from the farm account to a personal current account.

6. Data analysis

The group meetings last two hours in total and we use a maximum of three reports. At our last meeting through the use of the cashflow actual report the group worked out how much money they needed to bring forward from 2018 to 2019 to cover low milk receipts in the spring.

This figure is then benchmarked against their year-end budgeted and projected bank balance. The group also analyse their monthly surpluses and deficits and decide what action must be taken. From this analysis, group members decided if they have to make cut-backs, change payment structure, consult with their bank manager or if they can make additional purchases.



Tips to help take control of your future cashflow



- Year one: record all income and expenses per month. This includes full loan repayments, drawings and your tax bill. This can be done in a note book.
- When you have the 12 months recorded, total each income and expense per month and for the full year.
- Now, because you have the actuals for the farm recorded you can do a monthly budget for the year ahead.
- To complete the budget correctly, make a list of all the capital expenditure required and any repairs and maintenance. Double check your budget to make sure you haven't left any expenses out.
- Now add up the total income and expenses per month and for the full year. Take note of your closing bank balance on 31 December. This has to be added or subtracted from your monthly net cashflow.
- Identify surpluses and deficits and write down what options you have, e.g. change month of payment, overdraft and reduce capital expenditure. Also, take note of the year end closing balance. Will you have money to bring forward to help cashflow the following year?
- Record your actuals every month and benchmark against budget. Make changes where necessary..

7. Long-term goal

A rainy day fund would have been very welcome for many farmers in 2018. The group aims to build a fund for difficult years. With the volatility in weather and milk price, this should be a goal for all farmers. A figure of €300 per cow is a common target for dairy herds to carry over from one year to the next.

This €300 per cow is only to overcome low milk receipts in the spring. It will not get you through a bad spring, drought in the summer, increased family expenditure or expansion.

Benefits identified by group members

“Financial budgeting is like grass measuring; at the beginning you know you should be doing it and you know that there should be benefits but you don't fully see them until you have measured for the year,” said David Gannon.

“Instead of finding out how the year went when the year is over, I now get to assess how my finances are every three months and also project what money I will have to bring forward to pay for spring 2020 expenses,” said Niall Callanan. “I am already making decisions from using the actual and budgeting reports.”

Martina Gormley with Galway dairy farmers David Gannon and Niall Callanan.



The group aims to build a fund for difficult years. With the volatility in weather and milk price, this should be a goal for all farmers

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Work/life balance key to attracting the next generation into dairying

Five ways to achieve a more sustainable workload

Marion Beecher

Teagasc Animal and Grassland Research & Innovation Programme, Moorepark

Attracting new people (both successors and non-successors) to dairying is essential to enhance innovation in the sector and sustain rural communities. In a recent study, secondary school students believed that dairying offered equal opportunities for males and females. On a slightly less positive note, they perceived dairy farming to be a physically demanding job, with a poor work/life balance.

Improving labour efficiency is necessary to ensuring a good work-life balance and will benefit the farmer by creating more time to pursue other interests while demonstrating that dairy farming can provide a good lifestyle to prospective new entrants. Increased labour efficiency can be achieved without reducing performance while still maintaining enjoyable working conditions.

Firstly, to efficiently manage your labour input, it is important to measure the current situation before making any changes. There are many ways to achieve increased efficiency and some methods may be more applicable to your farm than others.

1 Know your hours worked annually and per week

Ask yourself the following: how much labour is required by the farm system? How many people are available to work? How much labour can be supplied? What is the financial cost of labour? To answer these questions, the labour input needs to be measured using the correct units to draw accurate conclusions.

To improve efficiency on an individual farm, the total labour demand on the farm and the number of hours worked per week are the two key things to measure. One approach is to

estimate the total labour demand (hr/year) and hours worked per week (hr/week) by recording the start and finish times of the work day and any significant non-work/break periods, on different weeks over the year, eg the first week of each calendar month. This figure should be examined on the individual farm to establish if it can be reduced.

2 Milking: Milking is the most time-consuming task on a dairy farm. Research has shown that highly efficient farms have a set evening milking time, often coinciding with the end of the working day. Average finishing time for these farms (evening milking and work) is 6pm which is comparable to other careers.

Having a set finishing time in the evening provides clarity around the length of the working day and forces better time management. Research shows no effect of 16-/8-hour milking interval (eg 7am and 3pm) on milk yield or SCC compared with a 12-/12-hour (eg 7am and 7pm) in herds averaging less than 6,000kg/cow.

Improving milking efficiency could increase throughput. A good milking technique and routine in the parlour is necessary to ensure that milking is time-efficient without negatively impacting milk quality and to prevent repetitive strain injuries. The Teagasc Best Practice in Milking course is designed to upskill farmers in milking techniques.

Short-term (three or four weeks) once-a-day (OAD) milking at the start of lactation can help offset a high labour demand. Once-a-day milking can result in lower income in that period but this may be outweighed by increased labour flexibility and overall reduced labour demand.

Other strategies for improving milking efficiency include optimising milking machine settings, increasing the number of milking units and improving cow flow. More details can

be found in the Teagasc *Dairy Farm Infrastructure Workbook*.

3 Calf rearing: In a seasonal calving system, calf care is the second most time consuming task after milking in early lactation. Labour demand can be reduced by feeding calves OAD from three weeks of age without having any negative effect on calf performance or health. If feeding milk OAD, calves still need to be checked carefully twice a day and fed concentrate at an alternative time to milk feeding.

Other options are to automate calf feeding as automatic milk feeders are more labour efficient than manual feeders and can save up to 1min 28sec per calf/day. For 50 calves, automatic feeders could save 1hr 15min per day on calf rearing. Other strategies to reduce labour input include group feeding calves, pumping milk to the calf shed instead of transporting it by hand, having the calf shed located close to the milking parlour and selling males calves at two weeks of age.

4 Using contractors: Many of the most labour-efficient farmers reduce the hours they work by outsourcing work. They either outsource a task completely (eg fencing) or simply use contractors at particularly busy times of the year (eg slurry and fertiliser spreading in spring). Strategic use of contractors, particularly during times of peak workload, reduces hours worked by the farmer allowing her or him and those working on the farm to focus on achieving a profitable and enjoyable business.

Outsourcing work is an ideal method for any farmer to reduce workload and a cost benefit analysis should be completed when considering how much machinery work to contract out. To maintain a successful relationship with your contractor good communication and paying on time are essential.



Milking is the most time-consuming task on a dairy farm.

5 Facilities: Facilities (milking, calf care, winter housing, fragmentation, grazing and roadway infrastructure) have a considerable impact on labour efficiency. Well-designed and maintained handling facilities are essential for the safe handling of animals and prevention of injury to handlers.

Long hours, poor working conditions and excessive physical work as a result of poor facilities have

been identified as barriers to finding and keeping good people and they also negatively impact on labour efficiency. In contrast, having good facilities and management practices can save time, money and make the farm a more attractive workplace for prospective employees.

The Teagasc *Dairy Farm Infrastructure Workbook* enables you to assess your own farm infrastructure and identify deficits.

Where to invest resources of time, money, effort/labour, materials, is always a challenge with the opportunity cost of investment complicating the decision.

A useful tool for categorising potential projects is the PICK model which is described in detail on page 230 of the Moorepark 2019 Open Day booklet which is available at www.teagasc.ie/publications/2019/moorepark19-open-day.php.

soil health

The soil beneath our feet

Good soil structure accounts for at least 20% of yield. The GrassVess tool will assist you in evaluating your soil's health

Giulia Bondi

Teagasc Crops, Environment and Land Use Programme
Johnstown Castle, Co Wexford

Healthy soil is the foundation for food, feed, fibre, fuel crops on agricultural land and enhanced biodiversity on non-farmed areas. Soil-based plant production also delivers other important ecosystem services, such as carbon sequestration (capture), climate regulation, oxygen production and nutrient cycling.

A reciprocal, and somewhat symbiotic, relationship exists between the soil and vegetation; as fertile soils promote plant growth by providing nutrients, water and a substrate in which to sink the roots. In return, vegetation cover protects the soil, recycling water and nutrients, and reducing wind and water erosion.

The nutritional content of plant tissue is directly related to the availability of soil nutrients and the soil's capacity to supply nutrients and water to the plant's roots. Similarly, root growth is influenced by the physical properties of the soil, such as soil structure and permeability. What is soil's structural quality?

In recent years we have begun to talk more in terms of soil 'health' rather than soil 'quality'. The difference is that the former is more associated with the soil's biological community as the key driver of soil functionality.

Under poor management, the intensification of farming practices can put soil health at risk by exhausting nutrients, altering soil structure and



reducing soil water retention capacity. Most importantly, poor management can reduce soil biodiversity.

Soil biodiversity is crucial for nutrient mineralisation, decomposition of organic matter and fixation of nitrogen. The variety of the microbial community is supported by good soil structure.

Soil structure is the physical construction of the soil or the arrangement of soil aggregates. These soil aggregates are clumps of soil formed by solid, individual particles of sand, silt and clay sticking together with occasional empty spaces between them.

The arrangement of aggregates and pores directly controls the movement of water and air within the soil, which indirectly impacts soil temperature. These properties affect all life in the soil, such as plant roots, macro and meso fauna, along with millions of microorganisms.

It is important to remember that farmers are the "architects" of the

"house for living organisms" which is soil structure, and that they are largely controlling it through management. Because it is not a top priority on a day-to-day basis, many farmers tend to underestimate the importance of monitoring and maintaining soil structure.

While farmers routinely apply fertiliser nutrients to achieve high crop yields, the management of soil structural quality and the habitat for micro- and meso-organisms is potentially more important for achieving effective plant rooting, nutrient and water cycling, and preventing plant diseases and pests.

Ongoing soil research

The Soil Quality Research Group at Teagasc Johnstown Castle has developed a method to visually evaluate soil structural quality in grasslands: the GrassVess method. This method represents a version of the VESS method developed in Scotland for soil



Giulia Bondi.

Knowledge Transfer

Working with Teagasc advisory colleagues has enabled me to engage directly with farmers in discussion groups. On numerous occasions I've worked with groups, getting our hands dirty in the field breaking down samples of soil into aggregates to identify signs of soil damage or health. The subsequent discussion is usually dedicated to potential methods for remediation of soil structural problems, such as severe compaction.

A general rule is that heavy machinery and livestock traffic on wet soils should be avoided at all costs, because soil structure is weaker and prone to damage when wet. Where soil compaction is moderate, the soil should be allowed to recover naturally over time by avoiding management which may damage it further.

Soil organic matter build up is very important to enhance soil resilience because it helps to glue soil particles together into aggregates and acts as a shock absorber between these particles, preventing compaction.

In grasslands, reseeding or ploughing can be a remediation option where shallow compaction is identified, but extreme caution should be taken when considering interventions with sub-soilers, as soil smearing at depth can lead to even greater long-term soil structural problems.

In all cases, being more familiar with the soil beneath our feet and being able to identify the signs of soil structural problems makes decisions on soil management practices more effective, and facilitates early intervention before any severe and long-lasting damage occurs.

structure assessment in tillage sites.

The method was tested and optimised for grasslands in Ireland during a national campaign focused on more than 180 sites.

It is a quick, simple and user-friendly method which requires only very basic equipment and gives an immediate result.

This decision-support tool is a flowchart which guides the farmer or advise, through a series of questions and observable features related to a cube of soil that they have retrieved from the field.

This tool helps the operators describe the soil until they arrive at a final score of its structural quality. The main soil features being observed during the assessment are soil aggregate size, shape and strength; aggregates porosity; aggregates colour; root growth. The test should be carried out across different locations within a field to identify where and what, if any, soil structural issues may exist.

To learn more about the GrassVess method, contact your local Teagasc adviser, or you can download the GrassVess flowchart and soil structure ABC on the Teagasc website at www.teagasc.ie/environment/soil/research/square/support-material/

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The value of planting arable field margins

How arable field margins can benefit the environment and crops

Robyn Earl
Teagasc Walsh fellow
Johnstown Castle

Arable margins support biodiversity by providing habitats for wildlife to live, feed and overwinter in. The margins carry important populations of beneficial insect predators, such as ladybirds, ground beetles and spiders. Predatory insects within the margin can migrate into the main crop and feed on pests (eg aphids).

A potential reduction in aphids can, for example, lower levels of barley yellow dwarf virus (BYDV) or other disease pressures in a crop, which may curtail yield losses from both BYDV and direct feeding by aphids. Thus margins can be an element in an integrated pest management (IPM) strategy.

Arable margins also provide pollen and nectar resources to a variety of beneficial insects, such as hoverflies and parasitoid wasps. Marmalade hoverflies, for example, feed on pollen as adults, but the larvae are predators of aphids. The adults of many parasitoid wasps feed on pollen and nectar, but lay eggs in aphids. The larvae subsequently consume the aphid. Flower-rich arable margins also support solitary bees and bumblebees, which provide crucial pollination services. Butterflies also benefit from access to flower-rich margins.

The value of arable margins is recognised by their inclusion in the Green Low Carbon Agri-environment Schemes (GLAS). Although the positive role of non-cultivated habitats for natural enemies has been highlighted, relatively little is known about their actual role in the control of pests, and how the delivery of pest control services differs in relation to the composition and management of the arable margin. There are also some concerns that arable margins could harbour undesirable species and act as a source of disease and aphids to the next cereal crop.



Robyn Earl.

Research study

The potential benefits and risks of arable margins are being investigated in a collaborative PhD study between Teagasc, University of Edinburgh and the Scottish Rural College. Differing mixtures of plant species (ranging from grass-dominant mixtures, to those containing native wildflowers, to natural regeneration) are being investigated on experimental and commercial farms. Predator, pest and disease assessments of margins and hedgerows are being undertaken. The adjacent crop is also being assessed for beneficial insects, pests and disease, along with yield measurements

to determine any impact of the insect population migrating into the crop from the margin.

Findings from this project will help inform future policy in relation to the establishment and management of arable margins, thus supporting sustainable agricultural systems.

Robyn Earl is a Teagasc Walsh Fellow under the supervision of Louise McNamara (Teagasc), Daire Ó hUal-lacháin (Teagasc), Andy Evans (SRUC), Lorna Cole (SRUC) and Gail Jackson (University of Edinburgh)

The pioneering Pearl Mussel Project



*The Pearl Mussel Project is a European Innovation Partnership (EIP), developing an innovative pilot agri-environment programme that seeks to improve the quality of watercourses through a results-based payment approach. The project, with a budget of €10m, is funded by the Department of Agriculture, Food and the Marine as part of Ireland's Rural Development Programme 2014-2020. The PMP Team is led by Dr Patrick Crushell. A steering group including DAFM, NPWS, Teagasc and other experts oversees the project.

LEFT: Teagasc advisor Joanne Masterson, who carries out Pearl Mussel Project assessments in Co Galway, thinks agricultural advisors are well placed to provide a key role in this biodiversity work, and acknowledges excellent support from the PMP team.

Catherine Keena
Teagasc Crop, Environment and Land Use Programme



Eight river catchments were selected for the Pearl Mussel Project* due to their importance in supporting the largest remaining freshwater pearl mussel populations in Ireland and western Europe. Contracts have been offered to 365 farmers across the eight catchments based on their proximity to water courses. Farmers will receive their first payment this autumn.

Pearl mussel

The freshwater pearl mussel (*Margaritifera margaritifera*) is a large filter-feeding bivalve, which is found in near-pristine freshwater habitats. Just like all bivalve molluscs, it has a shell with two halves enclosing the soft body of the animal. These animals can live for up to 140 years, making them Ireland's longest-living animal.

Adults can reach lengths of 15cm, and they live buried, or partially buried in the river bed. Freshwater pearl mussels are filter feeders, inhaling and expelling up to 50l of water per day, retaining food particles. This filtering activity means that pearl mussels can help to maintain and improve water quality.

Pearl Mussel Project

This is a results-based programme and peatland, grassland, and woodland habitats are used as "result indicators". The higher the quality of these habitats, the higher the payment farmers receive. The quality of watercourses on the farm will also influence the final payment. This approach has the effect of creating a market for biodiversity, and provides an opportunity and incentive for farmers to manage their farm habitats to produce higher-quality biodiversity.

Farmer Martin Gavin (pictured) is delighted that the Pearl Mussel Project has finally opened on the Bundor-

ragha river which supports the best population of the Pearl Mussel in Europe. According to Martin: "While it is early days, there is great positivity towards it locally and while no doubt there will be challenges, the key thing is that they can now be met with the support of the project."

Mary McAndrew of the Pearl Mussel project team said: "The feeling among farmers is that it is a very fair approach, with a clear link between the payments and what's happening on the ground. Many farmers enjoy learning about the various plants and habitats on their farms and how habitat condition influences their payments." As one farmer said, "in the past we only heard what we were not allowed to do; now we are given advice on what we can do to improve our local environment."

Farmers with land within one of the eight catchments who wish to enter the programme can still submit an expression of interest to join the project – more farmers will be accepted into the project in 2020.

Pigs progressing

You need to hold on tight when dealing with pig price fluctuations

Teagasc Pig Development Specialist Advisors:

Emer McCrum and Michael McKeon

The Irish pig sector imports a large percentage of its inputs, such as soya, and exports 60% of output. The result is rapid and substantial fluctuations in profitability. In 2016, the sector was making a modest profit but this began to decline rapidly in early 2017, reaching the lowest margin-over-feed in 20 years during late 2018/spring 2019.

Thankfully this has now improved. In the space of 10 weeks (April-June 2019), the sector's profitability went from a 20-year low to a 20-year high and the outlook is bright for the next 12 to 18 months. In light of this volatility, we spoke to Rosemary Fryday on her journey in the pig sector and how she sees the industry developing.

Harvest Lodge Pigs is located in Co Offaly and managed by Rosemary and Richard Fryday. It is a 600-sow integrated unit. Originally, the Frydays also milked a 140-cow winter milk herd but they disposed of the herd in 2015 to concentrate on the pig operation.

"In the end, it came down to a decision on our work-life balance," reflects Rose. "On the dairy side, the workload was much more intensive for the family, with less flexibility when milking year-round. At 140 cows, it wasn't cost-effective for us to hire an additional labour unit and so we were completely immersed in dairy farming.

The couple focused on the pig farm and began to build their enterprise into the modern and efficient unit it is today. "It didn't happen overnight and there were bumps in the road like any venture but we know now that we made the right decision," says Rose. "It was a whole new learning curve but both of us get a far better buzz from the pigs."

There are four full-time staff members working alongside the couple. While the specialised staff each have responsibility for a particular part of the farm, the couple are still heavily

involved in the day-to-day running of the unit. One task Rose says she finds surprisingly enjoyable is the management of production and financial data.

"Paperwork is a big part of farming life where pigs are concerned. The books need to be updated each week as part of the cycle. This task is something that lends itself well to my stage in life and complements my role on the farm."

Rose acknowledges that attracting staff into the sector is a weakness in the industry at present.

"We need a specific type of person who has the it factor when minding pigs. Unfortunately there can be a negative perception of the industry and this is a huge barrier to attracting potential employees.

"There have been substantial technological advancements in recent years and these have led to improvements in working conditions. Work on a pig farm is not as physical as it once was. Employees enjoy a good work/life balance with attractive working hours and I think more people would consider it if they had more information.

 Pig farming has been good to us.

"There is a high demand for skilled farm staff and great progression available as positions in management will come up for those who are experienced. We need to do something to motivate people to consider a career in the sector.

"We should be proud to promote our industry, invest in those who are interested, highlight the successful careers different individuals have carved out in the sector and advertise the various accredited training courses available through Teagasc to those working in the industry."

Rose is optimistic about the future of the pig industry.

"Pig farmers are very resilient and we will still be producing pigs in this country. Long-term, I see a more efficient industry where sustainability and traceability are key factors. There are costs attached to this, however, and this must be reflected in the marketplace."

Rose would also like to see more farmers working together. "There

seems to be a deep divide between sectors within the farming community in this country. Rather than one sector dominating, if farmers were more united we could promote our industry together as a whole and work together.

"Take pig and tillage farmers – if we had more formal business linkages between the two sectors, such as guaranteed prices, there would be a bigger pie for all and this would allow better forward planning for both parties."

Reflecting on her experience in the industry, Rose acknowledges the support and friendship she has received from others within the sector and the crucial role this has played.

"The fantastic circle of friends we have around us in the sector has been of immeasurable help since we started our journey. Particularly when we were new to managing this business. Sometimes the small things can seem like big problems and this pressure can mount.

"Farmers are on the front line trying to keep the show on the road and particularly during the tough times we don't always have the time or the clarity to realise decisions that need to be made. A quick call to a fellow farmer or to our Teagasc advisor is often enough to keep us on track and help us to refocus.

"Communication is vital. People deal with people and you need to respect those around you and those you are doing business with. From the various suppliers we work with on a regular basis and who keep our farming ticking over right through to the staff we rely on each day, you must be open and honest. Through good times and bad communication is key and in my experience you will get goodwill and respect in return.

"Support and friendship are essential but you also need to manage your own anxiety. Particularly in a family farm setting you need to manage your feelings and not allow yourself to bring farm problems into the house. The rule in our house is no farm talk after 6pm!

"Pig farming has been good to us. Richard and I have made a livelihood and we have put our girls through college with the youngest about to embark on her third year in UCD. Aside from being passionate about what we do, we need a sense of achievement to keep us motivated. There is great satisfaction in seeing the business we have grown as a family."



Rosemary and Richard Fryday.



Know your blind spots inside the white line, the driver has NO vision

Get serious about tractor safety

In the last 10 years 210 people have lost their lives on Irish farms. That's 210 families whose lives have been changed forever

Serena Gibbons
Teagasc education officer
Mellowes Campus, Athenry

The introduction of a health and safety element in DAFM schemes, such as Knowledge Transfer Groups and TAMS (Targeted Agricultural Modernisation Scheme), helps highlight safety on farms. However, with farmers dealing with increasingly busy workloads and suffering ever-greater time pressure, they find it difficult to take the time to implement a safety-first attitude and

practices. The consequences can be grim. In recent years, the number of tractor accidents has increased, with strikes and crushes causing injury and even death.

The vast majority of Irish farms have a tractor, regardless of the size of the farm. If tractor safety is an area that could do with improvement, make two or three small changes which could greatly reduce the risk of you or anyone on the farm becoming the next person injured in a tractor accident. You will never regret the effort you make in relation to safety on your farm.

Maintenance

The tractor, a fabulous invention, is the work horse of the farm and it can be difficult to manage without it when repairs or service are needed, but having a tractor that is not in good operational order is an invitation for an accident to occur. A simple thing, such as a faulty handbrake, can result in untold damage or injury.

The *Risk Assessment Document* provides a quick checklist of the "health" of your tractor. Complete

this checklist honestly and if any of the answers are negative, act immediately to rectify the problem.

- **Blind spots:** Get to know your blind spots (areas that are not visible when you are sitting in the tractor seat). It is surprising how poor visibility can be from a tractor seat, all-round 360° visibility is rarely available. Be aware of the reasons for blind spots from your tractor. These can include window bars, high mudguards and large machinery or trailers being attached. Children, and even adults, assume you can see them, but quite often they are invisible to the tractor driver. Raise this awareness among your employees and family, particularly children.

- **Children:** Under the new *Children's Code of Practice*, youngsters between the ages of eight and 16+ may be carried on a tractor or other farm machinery, but only if they have a dedicated seat, fitted with a seatbelt. They must wear the belt. Children of seven or under are not

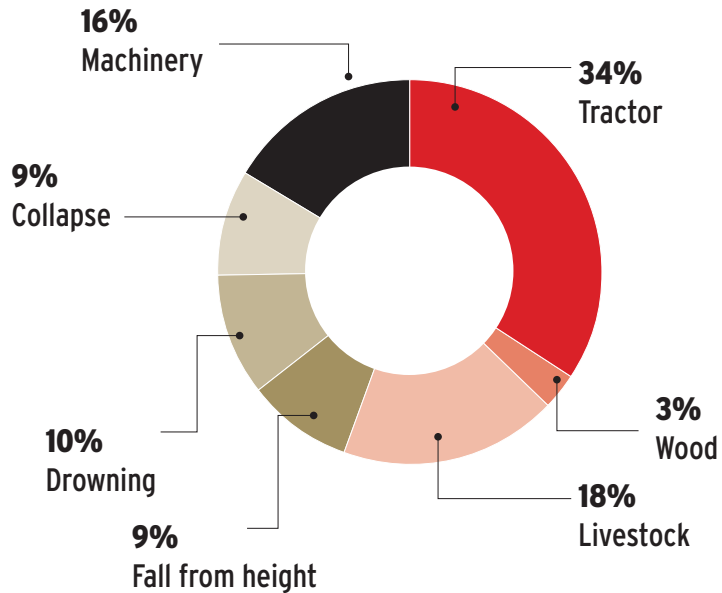
“ Children understand clear rules, not variations of rules. Implementing this ban on the farm may take some extra time and commitment, but I know from farmers' experience it has helped to reduce the instinct of children to run to the tractor without any thought to the potential danger

allowed in tractors. While this rule created some controversy when first introduced, the idea behind it has merit. Some may argue that the tractor is the safest place for their child, but it is the journey to the tractor which is the main cause for concern. The child has only one thing on their mind when they see the tractor and unfortunately it can be too late when the driver has spotted them.

Children understand clear rules, not variations of rules. Implementing this ban on the farm may take some extra time and commitment, but I know from farmers' experience it has helped to reduce the instinct of children to run to the tractor without any thought to the potential danger.

- **Reverse parking:** Reverse parking into any parking space is advisable. It considerably reduces the risk of colliding with someone or something when exiting later. Driving out from a parking position into a working area also offers the tractor driver improved visibility.
- **Loader:** Always leave the loader arm down when parked. Even with check valves and the locking mechanisms in place on modern tractors, it is always best practice to keep the loader in a lowered position when parked.
- **Training:** The HSA has a number of short e-learning courses available at hsalearning.ie, including a 40-minute course on tractor safety. This presentation is an excellent starting point when identifying the tractor hazards on your farm. The course also provides guidelines on putting safe work systems in place. You can test your knowledge with the questions on completion of the course. You could even encourage your family members to take

Figure 1
Main causes of fatalities



Talk about machinery blind spots with your family and friends.

the course too and compare your grades. Teagasc provides half-day courses for clients and the general public on health and safety. Part of this course focuses on tractor safety and on completing the parts of the farm safety code of practice risk assessment document that are linked to the tractor. Contact your local Teagasc office for details.

Perhaps this month is a good time to assess your tractor habits, look at the

areas that are working well and build from there. Talk to neighbours; make tractor safety a topic at your next group meetings. Discussing safety and sharing ideas and experiences with your friends and neighbours is one of the best ways to spread good practice and recognise bad habits which are endangering lives.

No one wants to be meeting their friends and neighbours in a hospital or, God forbid, at a funeral. Change that habit, you will be glad you did.

Why visitors are flocking to this Mayo farm

This west Mayo farm integrates a high-performing sheep unit with a dynamic tourism enterprise targeting national and international visitors

Patricia Lynch
Teagasc, Ballinrobe

Remote west Mayo has always had overseas connections. For centuries local ships sailed to the continent trading hides for wine and other goods. A trade “discouraged” by the British navy when it began anchoring in nearby Killary harbour. Emigration, particularly related to the famine, created links worldwide.

Today, the natural beauty of the region and the marketing success of the Wild Atlantic Way which has become an international tourism superhighway is drawing national and international visitors to the county, creating opportunities.

The Glen Keen farm, the family home of the O’Gradys, is located six miles from Louisburgh on the Leenane road. The farm was transferred to Catherine O’Grady Powers and her husband Jim in 1999 and they returned from the US in 2009 to run what was largely a sheep enterprise. Catherine is the sixth generation of the O’Grady family to farm at Glen Keen. Her local ancestors, the seafaring O’Malleys, can be traced back to the 1600s.

“Initially, we followed the traditional farming system of the area and ran the Blackface Mountain ewe with a mountain ram but we soon realised that this was not viable as a standalone business,” says Catherine. “So we decided to investigate other ways to achieve sustainability, including farm tourism.”

The farm is set in a stunning location which includes waterfalls on the Carrowniskey River, and views of the Sheeffry and Mweelrea mountain ranges. It has been designated by the EU as a special area of conservation for its natural beauty, unique habitats and wildlife. Extending to over 1,400 acres with a commonage footprint





Catherine O'Grady Powers and Patricia Lynch.

of over 5,500 acres, the farm is larger than some national parks.

Tourism

“Growing up on the farm, tourism had always been a part of life. As a child, I was amazed when tourists stopped to photograph my father and uncles cutting tur,” says Catherine. “As we did our own research, the Wild Atlantic Way was being developed, so we were able to have Glen Keen Farm up and running to coincide with the launch of the Wild Atlantic Way in July 2014.”

The construction of the visitor centre at Glen Keen was supported by South West Mayo Development Company LEADER programme. “Linking the visitor experience with everyday farm life means that the day-to-day running of the farm can work alongside the new tourism business, and that’s important,” Catherine notes. Visitors can enjoy a number of on-farm experiences including farm walks which include a treasure trove of natural and historical interest.

“We are fortunate that a number of very old farm buildings and houses are still in place and even ridges indicating where potatoes were being grown 180 years ago are fascinating for visitors.”

Catherine’s background in hotel sales and marketing means she understands what is involved in reaching her target market and managing risk. “We don’t want to be overly dependent on any one market so while we get a lot of our business from the US, I we have prioritised China, Germany and Canada.”

Catherine and Jim’s farm experience made such an impression at the Britain and Ireland Marketplace tourism event in 2017 that they were invited by the Chinese National Tourism Agency to a major tourism fair in China. They were subsequently invited back to China for promotional visits to solidify their new relationships. Their hard work has paid off and Glen Keen has been rewarded with a stream of visitors from the Chinese market, more than 1,000 so far. When entering new markets, Catherine is always keen to also promote other Mayo businesses. “Together, we achieve so much more for the local area than any of us can do alone,” she says.

Since 2014, the business has grown steadily and has welcomed over 55,000 visitors in its fourth season. Attractions include a visitor centre which consists of a café, craft shop and a demonstration area.

The business was built with a focus on the coach tour and private visitor market where guests enjoy; sheepdog herding, sheep shearing, agricultural

group visits, traditional turf-cutting and farm style lunch to include the Glen Keen farm lamb dishes.

The focus for the future at Glen Keen is to continue to build on the group visitor market, increase employment in the area while continuing to operate a successful working hill sheep farm. “The sheep enterprise is still very important for us, generating a substantial and steady income,” says Jim.

Catherine and Jim are constantly seeking new techniques and increased profit opportunities for the working farm. In 2015, they introduced Texel breeding rams into the flock of 330 blackface ewes at Glen Keen to produce a more profitable Hilltex lamb (mountain ewe x Texel ram).

“We selected 100 blackface ewes to breed with two Texel Rams as a trial,” says Catherine. “With 90% scanning success rate and a higher number of twins produced this has proved a huge success.”

“Texel rams have been a perfect fit for us. The lambs can survive in harsh conditions in the mountainous terrain and the Hilltex lamb prices are double the value of a blackface hill lamb with the same amount of farm effort in terms of lambing, etc.”

All of the Hilltex progeny are sold, and all female progeny from the mountain ewes mated with Blackface Rams are kept as replacements and all blackface ram lamb are sold bar 20 ram lambs that are kept for the tour lunches which promotes the Glen Keen “farm to fork” concept.

Although Glen Keen Farm has achieved a great deal in its five years in business, Catherine feels “There is still room for expansion and diversification in the agri-tourism business. But sheep will always play a big role. “People appreciate the landscape and the scenery and the history but they also enjoy hands-on activities such as spinning wool from our own animals. They are often city dwellers, and absolutely love to come out and see the sheep up close and to watch our sheep dogs Holly, Liz and Jess working.”

As this offering works equally well for visitors from locations as diverse as Cologne, Chicago and China, west Mayo and Glen Keen’s international connections look set to grow ever stronger.



The Team at Glen Keen Farm has availed of the ‘Fáilte Ireland China Ready’ training programme to provide a warm welcome for Chinese visitors. Catherine works closely with Fáilte Ireland and Tourism Ireland.



Zero grazing goats healthier and more productive

This Galway producer makes the award-winning Killeen Farmhouse Cheese

Anne Kinsella
Teagasc Rural Economy Development Programme

At the heart of Killeen Farmhouse Cheese are the 200 goats who supply the milk from which this multi award-winning cheese is made on the farm near Portumna in south Galway. All the grass and silage on which the goats feed is grown here, supplemented by meal mixed on-site, containing beans, peas, beet pulp and oats.

“We know exactly what they are eating and what goes into the cheese,” says farmer and cheesemaker Marion Roeleveld from the Netherlands. “We operate a zero-grazing system. Goats don’t like the rain. We used to have them out grazing, but when it rained they would run back into the shed. That made them very bad grazers and on top of that they were also very susceptible to parasites. We had to feed them additional concentrates, which proved very costly. Indoors the goats are healthier and they produce more milk.”

The goats get 1kg of meal along with fresh grass, out of that they produce 3.5l of milk per day.

Marion and Haske

Marion, one of four siblings, grew up on a dairy farm just south of Amsterdam. She had worked on a cheese farm in the Netherlands for seven

years while at second level and in college. Marion met Haske, her now business partner, through a mutual friend in 1990. Setting up a cheese-making business formed the basis of their early discussions. Marion came to join Haske in Ireland in 2001.

After attending agricultural college in the Netherlands, Haske had moved to Ireland in 1990 when he was just 18, starting his dairy goat enterprise with 20 goats on eight acres. In 2007 he bought additional land at the “height of the boom”. The farm now extends to 50 acres.

Dairy goat production is unpredictable, says Marion: “At the time the market for goats’ milk was extremely bad. On some occasions we could not sell the milk and had to dispose of it.”

To grow the business and maintain a steadier income, they thought it safer to make cheese. From her previous work experience, Marion knew how



We know exactly what they are eating and what goes into the cheese. We operate a zero-grazing system. Goats don't like the rain. We used to have them out grazing, but when it rained they would run back into the shed. That made them very bad grazers and on top of that they were also very susceptible to parasites

to set up a cheese plant. In those early days, although Marion already had a good knowledge of cheese-making, she consulted Eddie O'Neill, artisan food specialist at Teagasc. "His advice was most helpful," she says.

Marion also references a cheese-making course which one of her staff attended about five years ago at Teagasc, Moorepark.

Participants gained "a complete overview of how to make cheese, including the hygiene aspect, which was very useful and practical".

A further advantage of the course, Marion cites, is that as part of her HACCP plan she needs to prove that staff are completing such training. "Documenting that they have attended such relevant training is most important."

Cheese-making

Cheese-making began at Killeen in 2004. At first only some of the milk produced on the farm was used. Now all of it goes into cheese. The cheese at Killeen is semi-hard, made from pasteurised goat's milk. It's aged for two months, with cheese wheels weighing around 5kg, available in plain or fenugreek.

"All Killeen cheeses are made with traditional rennet, as it ensures the best quality," says Marion.

Year-round production

At Killeen, they use staggered kidding so that milk production is all-year round. Kidding happens in two main periods, which occur between February and the end of May. Kids are left on the goats for three to four days. From April to the end of October there is sufficient milk for cheese production five days a week. From November milk production declines and cheese production is restricted to three days a week. Over winter this reduces further to two days for a period of six weeks.



Marion Roeleveld and Anne Kinsella.

An inspector from the Department of Agriculture, Food and the Marine inspects the cheese production unit every two months and takes samples of the cheese. It is a very rigorous process. Irish standards are very high and this is certainly good for the cheese business.

Her cheese storage area has reached capacity, so Marion cannot produce much more than she is currently making. The cheese is certainly in demand but she feels goats' cheese would be even more popular if people were a bit more adventurous.

A recent media post in the UK hailed Killeen as the standout winner in a taste test, it said of the Galway cheese "a smooth and creamy cheese"; "if you think you don't like goats' cheese you have to try this."

Business relationships

Haske has been predominantly the farm manager, while Marion is in charge of the cheese production unit. This is how it has been since the beginnings in 2004.

"We fall in and out of the various roles assisting on both sides of the house, as required," says Marion.

In recent times, Haske has been recovering from orthopaedic surgery, so Marion has been running both the farm and the cheese unit with assistance from staff.

"I firmly believe that I have been afforded the same opportunities in life as anyone, male or female," says Marion. "As I was saying to my sister recently, to me there is no difference in being a woman. I can do the same as anyone, or hopefully even better."

forestry

Co-operating to avail of opportunity

Locally grown woodchip is fuelling local industry in Wexford

Frances McHugh

Forestry advisor, Teagasc Crops, Environment and Land Use Programme

Mary Maher, who was left a 39ha mixed woodland near Enniscorthy, Co Wexford, by her late father, John in 2011, says: “Inheriting any asset is a privilege but with privilege comes responsibility.”

The woodland originated with the planting of a small area of Sitka spruce in 1995. Four years later, four additional plots were planted. These consisted of ash, sycamore/alder mix, Sitka spruce/Norway spruce mix and an oak/pine mix.

“When I assumed ownership of the woodland there was a steep learning curve as I hadn’t previously been involved in its management,” says Mary. “The woodland had been established well by a local forestry company, but their contract and involvement was well over.”

With most of the trees approaching the requirement to thin; Mary knew she needed to gain some forest management knowledge, fast.

Local growers gaining knowledge

Mary’s father had attended Teagasc forestry events to learn about the early management of forests. These Teagasc-led events attracted a core group of very interested and proactive forest owners who enjoyed meeting and sharing experiences as their forests grew.

This core group became more organised and with Teagasc facilitation; the Wexford Forest Owners Group formed. Over time, many of these woodlands began to produce timber and discussion at meetings turned to timber markets.

The main question posed was; how could owners work together to ensure economies of scale and access a local market for their initial small-scale forest production?

The Vulcan project

The Wexford Forest Owner Group began discussions with LEADER about how small dimension timber could be kept local in order to return maximum value to the owners and the local community.



Frances McHugh, Teagasc, discusses wood chip quality with Mary Maher, forest owner, and Alex Kelly, Irish Wood Producers.



Fortuitously, Danone, a baby nutrition company located outside Wexford town, as part of its ambition to achieve carbon neutrality had installed a new woodchip boiler to supply high pressure steam to their factory. They had also approached LEADER looking for a sustainable and local energy supply.

The Vulcan project was born. Its role was to provide financial support to coordinate the development of this local supply chain, and its operation, from “forest to furnace”.

The Wexford Forest Owners Group amalgamated with other forest owner groups in Kilkenny, Laois and Waterford and today they trade as Irish Wood Producers. This amalgamation was necessary to upscale supply and develop and supply other energy customers in the region.

Irish Wood Producers is a not-for-profit company managed by private forest owners to support almost 800

Teagasc forest research showcase

16 October 2019
at Teagasc,
Oak Park, Carlow

This outdoor event will be an opportunity to see the role forest research has in contributing to addressing the challenges and opportunities across many aspects of forestry and forest management in Ireland.

Among others, the following research topics will be discussed on the day:

- Broadleaf tree improvement; birch and alder.
- Broadleaf silviculture.
- Ash site restocking options.
- Sitka spruce provenance trials.
- Alternative conifers.
- Thinning conifers.
- Ash dieback resistance breeding.
- Integrated pest management of pine weevil.
- Continuous cover forestry.

This forest research day is approved as a Forestry KTG event. Please contact Frances McHugh, Teagasc to register your group for attendance. frances.mchugh@teagasc.ie or 087-6222111

Further details see www.teagasc.ie/forestry

Timber air-dried roadside at Mary Maher's forest is chipped on site and delivered straight to Danone's boiler.



members with the sustainable management and development of their forestry. It was Irish Wood Producers that Mary contacted when she needed to 'tap into' the local forestry scene in Wexford. Alex Kelly, manager at IWP, called to her site and explained what services were available.

With such a very mixed woodland, different operations were timed for different plots.

Soon after, a felling licence was applied for along with a woodland improvement grant to support the thinning of broadleaves. When the licence and grant was approved; steps were taken to organise the thinning operation.

In 2014, first thinning commenced. A local chainsaw operator was engaged to thin the ash and oak; the alder/sycamore mix was not ready at the time. A harvesting machine was brought in to thin the spruce.

A variety of products came out of

the various plots. Spruce pallet wood was sold locally.

The spruce pulp wood was air dried on-site to 34% moisture content so that when a chipper was brought in the chip could be delivered and fed directly into the boiler in Danone. This returned Mary a net payment of €22.60/tonne. A second thinning in the spruce was carried out this year; again organised by Alex and her team in IWP. This time products were similar but Ash thinnings from previous thinning was blended with the spruce pulp which was very successful in reaching a high quality chip at 40% moisture content. This time the net payment per tonne delivered was €24.21 per tonne.

Mary keeps in constant contact with IWP and attends events and meetings organised by the group. Last year she joined one of the first forest Knowledge Transfer groups, a scheme that continues this year.

Chatting to Mary, she reflects on her now eight years managing her forest. "Even though trees seem to grow relatively slowly; a mixed forest within the thinning cycle requires lots of timely management."

She laughs when thinking back on her first steps into forest management: "I didn't even possess a phone number for a forester. I had no idea who was out there to help. It was only when I went to a few Teagasc forest walks and found out about IWP that I finally made some progress and began to understand what needed to be done."

Since those early days, Mary has completed a chainsaw course with IWP and is confident in discussing forest management with her fellow forest owners in Wexford. This is the type of Knowledge Transfer that will help the development and success of private forestry in Ireland.



Bridal Crown daffodils.

September: a time for reflection

Chores completed now will pay dividends at Christmas and in spring

Linda Murphy

Lecturer at the Teagasc college at the National Botanic Gardens

September is a great time of year to assess the success, or otherwise, of planting done in spring: did newly planted schemes work? How did the colour schemes of various plants combine, either together or with existing plants? Did plants outgrow their allocated space or did others fail to thrive and develop as the summer progressed? Now is the time to review these aspects of planting design and make changes where necessary.

Herbaceous plants are now at full size. We might imagine that in spring we will clearly recall their height, scale and full extent. But as plants die back and deciduous trees and shrubs lose their leaves, the garden empties and we can forget. September is the time to make any changes required while we can still see how things stand. It's also a good idea to take pictures of your plant combinations when they are in flower.

This is also a great time of the year to plan for a spring display. *Narcissi* (daffodils) bulbs can be planted now and some of the most attractive varieties includes *Thalia*, which is one of the few daffodil flowers that opens out pure white. They are multi-headed and beautifully scented. It is one of the most elegant narcissus and will multiply over time.

Another lovely daffodil worth seeking out is *Sir Winston Churchill*. This double-flowering daffodil will bear clusters of dainty, white flowers, with small orange-yellow interspersed in the centre and is excellent for pots/containers, growing to about 40cm and flowering in April/May.

Planting bulbs in 2l or 3l pots in good compost with some sand added will give the bulbs a great start. Later in autumn, say late October or November, when the garden has been tidied and gaps appear in mature borders, the bulbs can be planted up and will have the advantage of a good root system.

September is a great time to divide summer-flowering plants while the soil is dry enough to work with and the ground is still warm. They have time to settle in before the first frosts of winter. Remember to water well after replanting.

As the garden is now in full maturity, it's possible to collect seeds of your

favorite plants. When cutting back and tidying up in the herbaceous border, keep paper bags close to hand for seed that could be harvested. Put in a cool, dry place until ready to process.

As September closes and the temperatures fall, try forcing some spring bulbs for a perfect display in time for Christmas.

“September is the time to make any changes required while we can still see how things stand

Hyacinths, scented freesias or amaryllis are all suitable. Plant them in free-draining compost, with the tip of the bulb just showing above the surface. Store them in a dark area to allow the roots to develop and don't forget to water.

When the new shoots appear and have grown to about 4cm, move the pots indoors to a cool area and position them away from direct sunlight. As they continue to grow, the pots can be moved to a warmer area indoors to be enjoyed over the festive season.

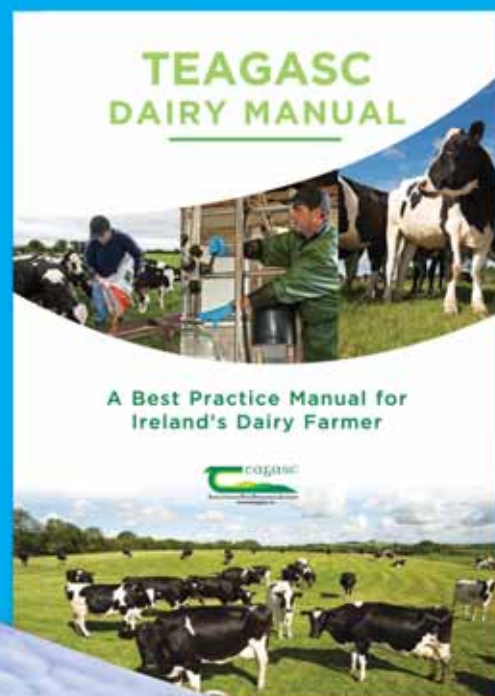
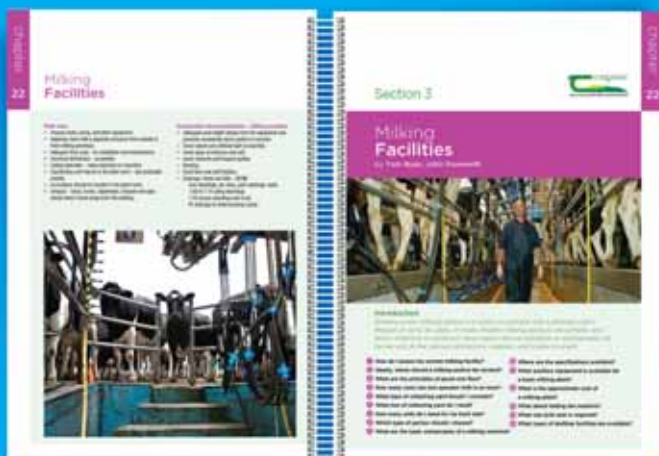
TEAGASC DAIRY MANUAL

A comprehensive source
of practical advice
for any dairy business.

- Why dairy farming?
- Business management
- Dairy facilities
- Dairy farming and the environment
- Milk quality
- Feeding dairy animals
- Dairy breeding
- Dairy animal health

These sections are further divided into a total of 49 chapters with titles such as: Creating a Business Plan, Winter Facilities, Feeding the Dairy Cow, Managing Your Grass, Replacement Heifer Management etc.

The information within each chapter is built on feedback from farmers and is laid out as Questions and Answers, How-to's, Key Performance Indicators, Key risks, etc. making the Manual extremely easy to read and use. The Manual will be of particular interest to anyone planning to expand over coming years.



The Teagasc Dairy Manual is available from your local Teagasc office (**clients €25, non-clients €50**). Alternatively contact **Therese Dempsey (059 9183422)** who will send you a copy by post (**p&p €7.50 extra**)

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