



# TEAGASC WOMEN IN STEM



# STEM skills crucial to solving world's problems



I am delighted to introduce you to the 77 talented women featured in this publication who work in the research directorate in Teagasc. These are just some of the many women working in Teagasc who are contributing to the development of the Irish agri-food industry. All of these women, who are currently either researchers or specialists, pursued their degrees, master's degrees or PhDs in science-related subjects. As you will read, they now work in a wide variety of areas across our four research programmes: animal and grassland; crops, environment and land use; food; and, rural economy and development. While each of their journeys is very different, they were all sparked by an interest in science and I hope that this publication will inspire young women to get engaged with science, technology, engineering and maths (STEM) subjects and pursue a career in science.

STEM skills are crucial for providing solutions to the global problems we face in today's world. People working in STEM are changing the face of the world we live in. Studying STEM subjects provides you with key skills including critical thinking, problem solving, creativity, innovation, design and communications, all of which are highly valued by employers for many different jobs. However, women continue to be underrepresented in science; only 25% of the people working in STEM-related jobs are women despite the fact that STEM-related sectors have been growing much faster than others and have significantly higher wages.<sup>1</sup> In Teagasc, 30% of our staff in the research directorate are women.

One of the factors contributing to this low percentage is the selection of subjects in secondary school and third-level programmes by women. Teachers and parents, in particular, are the main influencers of educational and career paths; however, they often lack critical information about career options in STEM.<sup>2</sup>

Interestingly, the 2016 iWish<sup>3</sup> study shows that 75% of female students want careers

that improve people's lives. The research that Teagasc carries out across its four research programmes contributes to addressing key societal challenges including food security, sustainable agriculture and forestry, bioeconomy, climate action and the environment. Globally, agriculture faces significant challenges. It must produce more food for a growing, increasingly affluent global population that requires a more diverse, protein-rich diet, while preserving and enhancing the environment and mitigating the effects of climate change. With the rapid development and emergence of new technologies, the challenge is to develop innovative ways of bringing together the knowledge from our research with these new technologies to create new and improved solutions for improving the productivity and competitiveness of Irish agriculture.

Innovation is crucial for the development and sustainability of the Irish agri-food sector. We need to encourage more women to pursue careers in STEM and to increase the gender balance on our research teams. Gender-balanced teams have higher collective intelligence, resulting in more innovation for societal benefit. More gender equality has economic benefits too, with positive impacts on GDP that grow over time.<sup>4</sup>

Teagasc is committed to promoting STEM and actively engages in many science outreach events as part of the annual Science Foundation Ireland-sponsored Science Week in November.

I wish to thank all the women who participated in this publication; you are all role models, both for women in Teagasc and the agri-food industry and also for the future generation of scientists. I would like to acknowledge and celebrate each of your achievements, and your important contributions to advancing knowledge in agri-food research and addressing the grand challenges we face.

**Professor Gerry Boyle**  
*Director, Teagasc*

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EDITOR Jane Kavanagh

[jane.kavanagh@teagasc.ie](mailto:jane.kavanagh@teagasc.ie)

Teagasc, Oak Park, Carlow, R93 XE12



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E: [ann-marie@thinkmedia.ie](mailto:ann-marie@thinkmedia.ie)

[www.thinkmedia.ie](http://www.thinkmedia.ie)

*Editorial:*

Ann-Marie Hardiman, Colm Quinn  
and Paul O'Grady

*Design:*

Tony Byrne, Tom Cullen  
and Eimear Moroney



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# Tackling the major challenges of our time



Teagasc is quite a unique organisation both in national and international terms. It is the largest scientific organisation in Ireland outside of the third-level sector. It has a statutory mandate to provide research, advisory and education services to the Irish agri-food industry. This combination of functions is only to be found in a very small number of comparable organisations around the world, with most state-owned agri-food institutes in other countries only having a research function. This combination of functions is a major strength of Teagasc, and gives the organisation great diversity and expertise among its staff, both wide and deep reach into the agri-food community, and a powerful platform to achieve impact by supporting science-based innovation in our domain.

The Research Directorate of Teagasc contains its research function in addition to a core of specialist advisors or subject matter experts who act as a bridge between researchers and front-line advisors, and a small cohort of front-line advisors in the areas of pig production, horticulture and forestry. Most of the organisation's front-line advisors and its education staff are in the Knowledge Transfer Directorate. This publication highlights the very valuable roles carried out by our female researchers and specialist advisors.

STEM is central to the work of Teagasc across all its functions, and Teagasc research and advisory activities span soils, plants, animals, farm systems, the environment, food processing, nutrition and human gut health, and other areas in between too numerous to mention.

We place a high value on social science as important to gain an understanding of the market and society, and in that way, it is necessary to support innovation. Innovation does not just involve technology, but also change, and therefore it is important to consider innovation more broadly in terms of the context into which it will be adopted, which requires input from social science.

Our programmes are focused on improving the competitiveness of agriculture, food and the wider bio-economy, supporting sustainable farming and the environment, encouraging diversification of the rural economy, and enhancing quality of life in rural areas. Having a concentration of scientists in the agri-food area, but with a multitude of different disciplines and functions, allows us to tackle the major challenges of our time with a mixture of disciplinary and multidisciplinary research and knowledge transfer activities.

Reading about the jobs of the women profiled in this publication gives a sense of the range of expertise which Teagasc has available and can bring to bear on an issue. Reading their interests outside of work illustrates how grounded they are, being involved with family, sporting and cultural aspects of Irish life, the agri-food industry, and indeed exploring the world through travel or hobbies. The women profiled here are, of course, supported by the many farm, technical and administrative staff in Teagasc, as well as a large cohort of excellent Walsh Fellows (postgraduate students) and postdocs. These staff and students help the women profiled in these pages to do the wonderful things they do in their jobs.

**Professor Frank O'Mara**  
Director of Research

## So many opportunities in science

I am always curious about people, particularly how they ended up where they are, and I'm fascinated by the different journeys people take in their careers and how their interests influenced them to follow such different paths. Reading through each of the profiles of the women featured in this publication, you will see that every one of their journeys is different and they are all working in very different areas within agri-food research.

Like many teenagers today, one of the biggest dilemmas I faced in secondary school was choosing subjects for my Leaving Certificate. My mother, a pharmacist and my personal key influencer, gave me strong advice to pursue science subjects, which I loved, so I studied biology and chemistry for my Leaving Certificate. Growing up on a farm, with a keen interest in agriculture, my parents had a strong influence on my decision to study agricultural science in UCD. I took their advice without ever really knowing what the career options were or where it would take me. I think that is an important part of the adventure with science. Many young people are put off studying STEM subjects because they do not understand the career options related to these subjects.

The 2017 Accenture<sup>1</sup> report on girls in STEM states that parents and teachers feel there is inadequate information about the career opportunities in STEM. This is particularly challenging for the STEM sector because parents and teachers are the biggest influencers of their children's subject and career choices.

There are so many opportunities for women in science. In fact, in the ever-changing and fast-moving world we live in today, it would not be possible to define all the career options in STEM, as there are so many career paths available and multiple routes to entry. However, we can increase awareness of career options by highlighting people working in STEM as potential role models, particularly for women. We all need role models to motivate and inspire us, and this is one of the key motivations behind this publication. While all the women featured here are working within one organisation in the agri-food industry, you will see that they have widely differing educational backgrounds and work in a wide variety of areas. They work mainly in research or specialist roles.

It is also possible, as some of the women have done, to change career and move into a supporting role. Supporting roles within science are equally important in assisting in the quest to generate new knowledge. Supporting roles within Teagasc include technologists, technicians, laboratory managers, administrators, farm staff, and also those with skills in science communication, intellectual property and sourcing research funding.

I hope you enjoy reading about our role models, and that this publication is a source of inspiration for young women who may be considering a career in STEM. Look beyond the stereotypes, broaden your mind and embrace the adventure – science needs you!



**Jane Kavanagh**  
Head of Research Operations, Teagasc

### Reference

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Examining the uptake of metals in crops.

## Dr Sheila Alves

Research Officer

Teagasc, Crops Research Centre, Oak Park, Carlow

### Education...

Although my primary degree was in biotechnology, I started my career in environmental chemistry and soon realised that was the right area for me. I completed a postgraduate course in applied analytical chemistry and obtained a doctorate degree in chemistry.

### Professionally...

My scientific career started in 2002 in the Chemical and Electrochemical of Natural Systems Group (university research unit). The research focused on metal quantification and speciation in the biological and mineral matrix. After a brief period working as a technician in the National Reference Laboratory of Portugal, I decided to pursue a career in applied research. I have worked in Teagasc since 2012, examining the uptake of metals in crops. My research focuses on three distinct aspects: determining the magnitude of metal contamination to crops; developing soil remediation strategies to immobilise metals in the soil matrix; and, determining crops and varieties less susceptible to metal accumulation.

### Outside work...

I love the green and luxurious Irish landscape, so different from home (Portugal). Whenever the weather allows, my husband, daughter and I love to go outdoors for a good long walk. Usually, this activity ends with tea, scones, butter and jam! I also love animals of all kinds. We have two cats that travelled with us from Portugal and whenever I can I help animals that have no home.

### QUALIFICATIONS

2001 Biotechnology Engineer UAlg, Portugal  
2003 Post-Graduate Diploma  
FC/UL, Portugal  
2010 PhD IST/UL, Portugal



Looking for alternatives to traditional antibiotic therapies in humans, animals and the food industry.

## Dr Sara Arbulu-Ruiz

Researcher

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I completed a degree in pharmacy since I always liked chemistry and biology. I loved microbiology subjects so I decided to do a master's degree in microbiology and explore what research was about. I ended up doing my PhD on lactic acid bacteria and antimicrobial peptides.

### Professionally...

After defending my PhD I spent some time at Complutense University of Madrid working on the heterologous production of bacteriocins (antimicrobial peptides) by lactic acid bacteria and yeasts. I started working in Teagasc several months ago on a project focused on bacteriocins and their biochemical and genetic characterisation. Our interest is to look for new bacteriocins and probiotic strains that could be used as alternatives or complements to traditional antibiotic therapies in humans, animals and in the food industry.

### Outside work...

I'm from northern Spain, and I enjoy hiking and long walks: the landscape in Ireland couldn't be better suited to this! I also practise yoga and enjoy hanging out with friends, or relaxing with a good movie or book on cold days.

### QUALIFICATIONS

2008 BSc University of the Basque Country, Spain  
2009 MSc University of Barcelona, Spain  
2016 PhD Complutense University of Madrid, Spain



Researching forage and bioenergy grasses, cereals and herbicide resistance.

## Dr Susanne Barth

Senior Research Officer

Teagasc, Crops Research Centre, Oak Park, Carlow

### Education...

I was always interested in biology, landscape ecology and geology. To complement my interests, I studied agricultural sciences with a specialisation in plant sciences and majored in plant nutrition, agronomy and phytopathology, with minor subjects of grassland science and forestry. My diploma thesis subject, the phenology and genetic variability of quinoa in southern Germany, led to an interest in pursuing plant breeding.

### Professionally...

My PhD focused on the control of meiotic recombination in the model plant *Arabidopsis*. I gained postdoctoral experience in the genetic diversity of wild grapes and light stress in *Arabidopsis* in Stuttgart and ETH Zurich before joining Teagasc in 2003. There I focused initially on perennial ryegrass genetics before also pursuing research in bioenergy grasses, cereals and herbicide resistance in grass weeds. I enjoy networking as part of these research projects nationally and internationally. I contribute regularly to the peer-review process of grant applications and journal articles.

### Outside work...

Most of my spare time is spent with my children and our pets, and gardening in my flower and vegetable garden.

### QUALIFICATIONS

1996 Diplom Agraringenieur Dipl Ing sc agr  
University of Hohenheim, Germany  
2001 PhD  
University of Hohenheim, Germany



Researching labour productivity on dairy farms.

## Dr Marion Beecher

Researcher

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I studied several science subjects at school but my love of the outdoors and animals in particular led me to pursuing a degree in agricultural science specialising in animal science at UCD. Following my degree I went on to complete a PhD in animal nutrition with Teagasc.

### Professionally...

After completing my PhD I co-ordinated the Teagasc Professional Diploma in Dairy Farm Management programme, which is the recognised standard for farm ownership and management training. My role involved the co-ordination of the 35 people who delivered the course content, as well as overseeing and managing the on-farm placement of the students. While in that role I developed an interest in labour efficiency and work organisation on dairy farms, and this exposed me to the issues regarding labour within the industry. I've recently taken up a research position specialising in the area of labour productivity on dairy farms.

### Outside work...

I'm from Middleton in Co. Cork and am still involved in the running of our dairy farm at home. I love being outdoors and, since I'm lucky enough to live close to a 5km beach, I love being at the beach regardless of the weather!

### QUALIFICATIONS

2010 BAgSc UCD  
2014 PhD Teagasc/UCD



Communicating Teagasc's research.

## Catriona Boyle

Research Officer – Science Communications and Outreach

Teagasc Head Office, Oak Park, Carlow

### Education...

I studied applied biochemical sciences, followed by a master's in biomedical sciences. I returned to university after a number of years working to do a master's in science communication. I recently completed a diploma in leadership with the Irish Management Institute (IMI). I am a firm believer in continuing professional development and undertake many courses.

### Professionally...

After a number of years working in different laboratory roles, I completed an MSc in science communication. I subsequently worked as a journalist, followed quickly by an editorship role. My current position is very varied. My role aims to communicate the research work Teagasc is undertaking. I am editor of a popular science magazine and production editor of a peer-reviewed journal. I am very involved in social media and science outreach events like Science Week and the BT Young Scientist & Technology Exhibition. I also liaise with TV producers and journalists on content and write press releases.

### Outside work...

I love nature and the great outdoors, and particularly enjoy hiking and biking. I am also a swing dancer and love to travel to social events on this vibrant scene. I am an avid reader and always have a novel on the go.

### QUALIFICATIONS

1994 BSc University of Ulster, Jordanstown  
1996 MSc University of Ulster, Coleraine  
2000 MSc Queen's University Belfast/DCU  
2015 PGDip IMI/UCC



Harnessing the natural power of soil.

## Dr Fiona Brennan

Research Officer

Teagasc, Environmental Research Centre, Johnstown Castle, Co. Wexford

### Education...

I enjoyed science and had a keen interest in agriculture growing up. This led me to undertake a BSc in environmental biology. It was there I got the bug for research science! I later went on to complete a PhD that focused on how enteric bacteria move and survive in soil.

### Professionally...

After completing my PhD I worked as a research scientist in France and Scotland, and as a lecturer in NUI Galway, before returning to Teagasc in 2016. My research focuses on understanding microorganisms in soils. Soil microbes are critically important to agriculture, and to environmental sustainability. By understanding how these organisms work, and how they are affected by management and the environment, we can provide advice to farmers on how best to manage soils – harnessing the natural power of soil microbes to provide for, and protect, their crops.

### Outside work...

I'm from Westmeath originally. I love the outdoors and enjoy getting out hiking, running or kayaking. My father being a Kilkenny man, we have a great grá for hurling in our house! I'm a volunteer with Wexford Marinewatch, an organisation involved in suicide prevention along the Slaney River.

### QUALIFICATIONS

2005 BSc UCD  
2010 PhD Teagasc/NUIG





Where does food poisoning bacteria come from?



## Dr Kaye Burgess

Senior Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I did biological and chemical sciences in University College Cork and quickly realised that the biological stream was a better fit for me. I went on to specialise in microbiology and graduated with a BSc degree. I remained in UCC to undertake my PhD, which focused on understanding and improving vitamin production in lactic acid bacteria.

### Professionally...

After a short postdoctoral position in UCC, I moved to Teagasc in Ashtown, taking up a position in the food safety department, going from working with good bugs to bad bugs. Our research programme focuses on food poisoning bacteria: understanding where they come from, how they survive in the farm to fork chain, and what we can do to ensure the safety of the foods we produce. I use molecular technologies to better understand how these bacteria respond to their environment. I work with PhD students and researchers on projects that address these issues and find it very rewarding.

### Outside work...

One of my great loves is live music and theatre, and I am always on the lookout for what gigs are coming up. I'm originally from Co. Cork and love going to support Cork GAA and Munster Rugby, and have even been known to attend the odd Cork City FC game. Exploring new countries and cultures is a passion of mine and it's always great to tick another country off the list.

### QUALIFICATIONS

2000 BSc UCC  
2005 PhD UCC



Bringing Teagasc research to industry.



## Sarah Cahalane

Technology Transfer Officer

Teagasc Head Office, Oak Park, Carlow

### Education...

I enjoyed science, languages and art in school, but finally settled on a science course in Trinity College Dublin following my Leaving Cert. I didn't regret my decision. After studying a broad range of topics for the first two years, I majored in botany. I followed that up with an MSc in biological sciences from Dublin City University.

### Professionally...

After working for a short while in the banking sector, I joined Prof. Cliona O'Farrelly's comparative immunology research team. Among other things, I analysed the team's novel work in the fight against antibiotic resistance, including its work into methicillin-resistant *Staphylococcus aureus* (MRSA). I left the team to join Teagasc's Technology Transfer Office. My work involves helping Teagasc researchers to identify patentable intellectual property, facilitating their work with industry and research-performing organisations (RPOs) via negotiating complex research agreements, and assisting with licensing Teagasc research to interested industry parties. My science background is invaluable for this.

### Outside work...

I grew up in the beautiful coastal village of Malahide and I moved to Carlow when I married my husband. We now have three beautiful children and a lovely country home. I was passionate about dance, particularly ballet, when I was younger, and my daughter has inherited that passion so it has become a shared hobby. I have family ties to Skibbereen and we spend a lot of our holiday time on the beaches of west Cork.

### QUALIFICATIONS

2002 BA(Mod.) TCD  
2004 MSc DCU



Improving efficiency and performance on Irish dairy farms.



## Dr Emma-Louise Coffey

Dairy Specialist

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I studied agricultural science at UCD where I particularly enjoyed the dairy and grassland modules. During this time, I created the opportunity to travel to New Zealand for work experience, where I worked on a dairy farm and in research with Dairy NZ. I subsequently completed a PhD in animal science at Teagasc Moorepark.

### Professionally...

Based at Curtin's Research Farm at Teagasc Moorepark, my PhD involved a comprehensive study to identify the appropriate stocking rate and dairy cow breed in order to maximise productivity and profitability within grass-based systems. I have recently taken up the role of dairy specialist for the South West region, where I support Business and Technology (B&T) dairy advisors, dairy farmers and the wider dairy industry to improve the technical efficiency and financial performance of Irish dairy farms. I also provide support to industry partners in the form of joint programmes and industry initiatives.

### Outside work...

I come from a rural parish, Toomevara in Co. Tipperary, a traditional GAA stronghold. I am an avid camogie player and proudly represent my home club. Farming is of huge interest to me and I can often be found lending a helping hand on my home farm at the weekends.

### QUALIFICATIONS

2013 BAgSc UCD  
2017 PhD Teagasc/UCD





*Influencing the sport horse sector at farm gate and policy level.*



## Wendy Conlon

*Equine Specialist*

**Teagasc, Mellows Campus, Athenry, Co. Galway**

### Education...

I undertook a degree in equine science, which satisfied both my passion for horses and my interest in science. I have also achieved a higher diploma in farm financial management and, over the course of my employment with Teagasc, have undertaken many short courses on topics including radio interview skills, facilitation, and specific equine-related topics.

### Professionally...

My career in Teagasc commenced in 2002. The role has developed and changed massively over the years. It is an interesting, varied role, where I play a part in positively influencing the sport horse sector both at farm gate and in a strategic way through engagement with breeders, producers, and industry stakeholders at policy level also. As part of a team, I was involved in developing a strategy for the sector to 2025; we deliver educational seminars, demonstrations, conferences, courses, press articles, tours abroad, discussion groups and various other supports.

### Outside work...

Throughout my teens and twenties I was probably addicted to riding and being around horses. Injuries intervened and a more recent hobby is hillwalking, perhaps adrenalin seeking of a different variety. This allows me to appreciate the countryside from a different vantage. I'm to be found on the hills of Connemara or elsewhere hail, rain or shine most weekends. I'm also an avid gardener and get great satisfaction from creating and maintaining colourful planting around my home. I enjoy travelling when the opportunity arises, especially if a show jumping event is on the itinerary.

### QUALIFICATIONS

1997 BSc UL  
2008 HDip WIT



*Exploring human gut microbiology.*



## Dr Fiona Crispie

*Researcher*

**Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork**

### Education...

I have always enjoyed biology and did my degree in natural sciences in Trinity College Dublin, specialising in microbiology. I subsequently worked for a while in the Microbiology Department in Trinity before completing a PhD in UCC in microbial genetics.

### Professionally...

I work on the Next Generation Sequencing Platform in Teagasc Moorepark. The Platform is the largest such centre in Ireland and is recognised both nationally and internationally as a leading research platform. Next-generation sequencing has revolutionised biological research, enabling identification of all microorganisms in a particular microbiome. My research interests include the human gut microbiology, its role in metabolic and mental health, and its modulation by diet and exercise, as well as the effects of functional foods and pharmabiotic-producing probiotics on human gut microbiology and metabolic disorders.

### Outside work...

I'm originally from Kerry and still love to support the Kingdom in football matches, though I will shout for Cork (sometimes) in hurling! I like to keep active and enjoy hiking, swimming and running, and completed my first half marathon in 2014. That said, with two small boys at home, most of my exercise involves running around after them! My husband is a part-time farmer and breeds pedigree cattle, and in recent years we've all gotten involved in showing the cattle at summer sales.

### QUALIFICATIONS

1994 BA(Mod.) TCD  
2002 PhD UCC



*Understanding how our senses affect our perception of food.*



## Dr Emily Crofton

*Research Officer*

**Teagasc, Food Research Centre, Ashtown, Dublin 15**

### Education...

As well as being fascinated by science, I always had a keen interest in food, so blending my two passions and pursuing a degree in food science was a natural choice for me. Following my degree I completed a HDip in education, and later a PhD at UCD in the area of sensory and consumer science.

### Professionally...

I started in Teagasc as the manager of a newly established national network called Sensory Food Network Ireland. In 2016, I moved into my current role where I'm responsible for developing a research programme in sensory science. As a sensory scientist, I'm interested in understanding how humans perceive and respond to the various stimuli in food through our senses of sight, smell, touch, taste and hearing. My current research focuses on applying novel sensory testing techniques to understand the impact of animal diet on the sensory quality of Irish beef. I also have a keen interest in examining cross-cultural sensory preferences so food products can be designed and optimised for specific global markets.

### Outside work...

I'm from Co. Meath where my husband and I live with our three-year-old son Patrick. Between work and motherhood I don't have too much time for hobbies anymore! However, I absolutely love to travel and spent 2013 travelling around the world, visiting many beautiful places and sampling some very delicious cuisines.

### QUALIFICATIONS

2007 BSc UCD  
2008 HDip Maynooth University  
2013 PhD UCD



*Making light work: developing methods for soil and crop sensing at Teagasc.*

## Dr Karen Daly

Senior Research Officer –  
Soil and Catchment Science

Teagasc, Environment Research Centre,  
Johnstown Castle, Co. Wexford

### Education...

I studied several science subjects at school, but gradually veered towards chemistry as I enjoyed the practical aspects and could see its applications in other subjects. I majored in chemistry at university, and did an MSc in synthetic organic chemistry, and later a PhD in Teagasc on the chemistry of Irish soils.

### Professionally...

I work in soil science, with a particular interest in optimising phosphorus in soil while minimising its environmental impact. My current research looks at new methods of soil analysis. In the soil and crop sensing laboratory at Johnstown Castle, we are examining spectroscopy as a non-destructive technique to scan soils in the field. Spectroscopy potentially offers instant readings for farmers who currently have to take soil samples and wait weeks for results, enabling them to better judge where to spread fertiliser. This work draws on my chemistry skills, applying theoretical chemistry in real life, and using well-established techniques in new ways. If I'd come from an agricultural science background I wouldn't have developed this work.

### Outside work...

My husband (who is also a chemist) and I have three children, all of whom have a keen interest in science. I visit their school during Science Week and have worked with their classes on projects for the RDS Primary Science Fair. I also play and teach fiddle with our local branch of Comhaltas Ceoltóirí Éireann.

### QUALIFICATIONS

|               |             |
|---------------|-------------|
| 1990 BA(Mod.) | TCD         |
| 1992 MSc      | TCD         |
| 1999 PhD      | Teagasc/TCD |



*Extending the shelf life and enhancing the microbiological safety of food.*

## Dr Maria de Alba Ortega

Research Officer

Teagasc, Food Research Centre,  
Ashtown, Dublin 15

### Education...

I completed degrees in biological sciences and in food science and technology in Spain. I got a grant from the Spanish Government that allowed me to do a master's and to start my PhD studies in food microbiology at the National Institute for Agricultural and Food Research and Technology (INIA, Madrid).

### Professionally...

I have worked in Teagasc as a postdoctoral researcher in the EU HDHL JPI project 'Innovative processing to preserve positive health effects in pelagic fish products', the aim of which is to develop a comprehensive toolbox of optimised existing and novel technologies (HPP, cold plasma or ozone) for developing healthy, high-quality, safe and sustainable fish products from pelagic fish species. Currently, I am working as a Research Officer at Meat Technology Ireland (MTI). My research interests focus on extending the shelf life and enhancing the microbiological safety of food, and the application of novel food technologies.

### Outside work...

I'm originally from Cadiz in Spain and I enjoy travelling, going to the gym and cooking.

### QUALIFICATIONS

|          |  |
|----------|--|
| 2004 BSc | University of Seville  |
| 2008 BSc | University of Granada  |
| 2009 MSc | Complutense University of Madrid   |
| 2014 PhD | National Institute for Agricultural and Food Research and Technology (INIA, Madrid)/Complutense University of Madrid |



*Working across different continents to research the global bioeconomy.*

## Dr Laura Devaney

Research Officer

Teagasc, Rural Economy and Development Programme, Ashtown, Dublin 15

### Education...

Having loved biology and geography in school, I pursued a four-year honours degree in natural sciences at Trinity College. Gaining an appreciation of both physical and social sciences, I specialised in geography, with a particular interest in environmental and food geography. I stayed on to complete a PhD in food governance, graduating in 2013.

### Professionally...

My work concerns how society can use resources more sustainably and how wider infrastructures might govern this transition. Following my PhD, I lectured in the Department of Geography in Trinity for two years. I also completed postdoctoral research for CONSENSUS, which included testing practices for more sustainable eating within households. Since moving to Teagasc in 2015, my research has focused on the governance of the Irish and European bioeconomy. I have also researched bioeconomy issues in Canada as a Dobbin Atlantic Scholar, and will travel to the University of California, Berkeley in 2018 as an Environmental Protection Agency-Fulbright scholar to research the American bioeconomy – tackling the global bioeconomy one country at a time!

### Outside work...

I love to travel, grabbing every opportunity to experience new places across Europe, New Zealand, Canada and, in the near future, the US. I am originally from Kildare, and you will often find me walking my dog up around Punchestown Racecourse, or taking part in any yoga, pilates or zumba class that I can find.

### QUALIFICATIONS

|               |     |
|---------------|-----|
| 2009 BA(Mod.) | TCD |
| 2013 PhD      | TCD |



Survey design, data analysis and reporting key trends in contemporary Irish agriculture.



## Dr Emma Jane Dillon

Research Officer

Teagasc, Rural Economy and Development Programme, Mellows Campus, Athenry, Co. Galway

### Education...

Having always enjoyed economics and history at school I decided to study both at Trinity. Early on, I decided to focus on economics and graduated with a BA in 2002. A final-year course in food market economics sparked my interest in agricultural policy and prompted me to begin an MLitt in animal health economics. I was subsequently awarded a Government of Ireland Research Scholarship for the Humanities and Social Sciences and a Teagasc Walsh Fellowship, and completed my PhD in 2007.

### Professionally...

Since joining Teagasc as an economist in 2007 I have been involved in a broad range of policy-relevant research, primarily relating to agricultural sustainability and animal health. Farmer behaviour with regard to technology adoption and best practice uptake is another key area of interest. To this end, the interaction between research and extension is vital. Having recently joined the Teagasc National Farm Survey team, I am enjoying the multi-faceted role in terms of survey design, data analysis and reporting key trends in contemporary Irish agriculture.

### Outside work...

I am passionate about country life and enjoy spending time on the family farm. I have always been interested in politics and current affairs, and this prompted my interest in society life at Trinity. I like meeting people and enjoyed my time as secretary of the Agricultural Economics Society of Ireland (AESI), when I was involved in organising a number of successful conferences and events.

### QUALIFICATIONS

|               |     |
|---------------|-----|
| 2002 BA(Mod.) | TCD |
| 2007 PhD      | TCD |



Recovering valuable proteins from low-value parts of the beef and pork carcass.



## Dr Liana Drummond

Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I love food and have always been curious about food research, science and technology, so after I completed a BSc in chemical engineering I went on to do an MSc in food safety and control in London, and a PhD in biosystems engineering at UCD.

### Professionally...

I have worked in different national and European projects on various topics, including innovative technologies for cooking/cooling meat products, microwave drying of heat-sensitive foods, and even ultrasound ageing of wines! Applying new technologies to improve food processing is an ongoing challenge and one I really enjoy. I am currently working on a national project in Teagasc, looking at the recovery of valuable proteins from low-value parts of the beef and pork carcass, for their potential application as functional and bioactive ingredients.

### Outside work...

I am originally from Rio de Janeiro, Brazil, so Ireland is quite a few degrees colder than what I was used to. But it was an easy transition and the warmth of the people and the scenery helped a lot. I enjoy music, reading and travelling, as well as food of course!

### QUALIFICATIONS

|          |                              |
|----------|------------------------------|
| 1991 BSc | UFRJ, Brazil                 |
| 1997 MSc | London South Bank University |
| 2008 PhD | UCD                          |



Developing new technologies to detect and assess the risk posed by food pathogens.



## Dr Geraldine Duffy

Principal Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I studied for a BSc at University College Dublin, during which time I developed a strong interest in microbiology. I then undertook a PhD at Teagasc Food Research Centre, Ashtown, in collaboration with the University of Ulster, Jordanstown, which focused on novel technologies to detect food-borne pathogens.

### Professionally...

I am Head of the Food Safety Department and manage a diverse research programme across Teagasc Food Research Centres at Ashtown and Moorepark. My own research interest is on the microbiological safety of food, particularly meat safety. It includes the development of new technologies to detect and assess the risk posed by food pathogens, investigating their carriage by food production animals, and the development of pathogen control measures that can be implemented on the farm or in food production and processing. I have been fortunate to have a high involvement, over many years, in international and European Commission-funded research programmes, which has given me many exciting research and travel opportunities.

### Outside work...

My day-to-day activities are diverse, but can involve a lot of time sitting at a desk or in the car, so outside work I really enjoy spending time outdoors. I am a keen golfer and active member of the local golf club. I play a round of golf most weekends and am striving to reduce the handicap! I also enjoy walking, and having a dog is a great motivator to do a few miles every day, whatever the weather.

### QUALIFICATIONS

|     |                              |
|-----|------------------------------|
| BSc | UCD                          |
| PhD | Teagasc/University of Ulster |





Providing support and training for advisors and engaging in knowledge transfer.



## Karen Dukelow

*Cattle Specialist*

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I come from a farming background and always loved farming. This led me to study agricultural science at college. I graduated with my degree from UCD in 2001 and followed on with a master's degree at Lyon's Estate (UCD).

### Professionally...

I joined Teagasc in 2005 as an advisor in west Cork. I loved the technical side and applying science to improve profits at farm level. In 2012 I took on the role of Cattle Specialist based in Moorepark, Fermoy. This role involves providing support and training for advisors and engaging in knowledge transfer through publications and events. I am currently involved in the Green Acres Programme, which focuses on dairy calf to beef. I have a strong interest in grass and have worked with the Irish Grassland Association for a number of years.

### Outside work...

Outside of work family life keeps me busy, with a husband and a child to look after! I am originally from west Cork and love to get down over the weekends. I enjoy walking, swimming and the great outdoors.

### QUALIFICATIONS

|             |     |
|-------------|-----|
| 2001 BAgrSc | UCD |
| 2003 MAgrSc | UCD |



Improving animal health and welfare in Ireland and abroad.



## Dr Bernadette Earley

*Principal Research Officer*

Teagasc, Animal & Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath

### Education...

I always had a great interest in science subjects at school and attended UCG where I studied for an honours degree in biochemistry. One of the modules I found most interesting was related to industrial biochemistry and pharmacology. I then studied for a higher diploma in education (honours), and really enjoyed the modules on science communication. Afterwards, I completed a PhD in pharmacology, which I found very inspiring and rewarding.

### Professionally...

My research on animal health and welfare has had substantial impact on the development of codes of practice and legislation at both national and European level. I have been particularly active on national and international advisory bodies looking at animal housing, transport (nationally and internationally), castration procedures, weaning strategies and housing of beef cattle. I have provided scientific input to the OIE guidelines on beef cattle production, and our transport research, conducted at national and international (Spain, Italy, Australia, Lebanon) level, contributed to regulations on animal transport. Weaning research has contributed to the Animal Welfare, Recording and Breeding Scheme (AWRBS).

### Outside work...

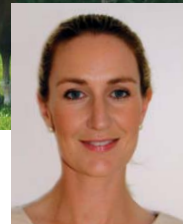
I am a native of Co. Roscommon and still love to work on the family farm there. I am a very keen Roscommon GAA supporter and have always had a great interest in sport. I enjoy all outdoor activities, most especially hill walking and cycling, and have cycled in France, Spain and Croatia.

### QUALIFICATIONS

|           |      |
|-----------|------|
| 1979 BSc  | NUIG |
| 1980 HDip | NUIG |
| 1984 PhD  | NUIG |



Supporting the Irish equine industry.



## Crea English

*Equine Specialist*

Teagasc, Kildalton College, Piltown, Co. Kilkenny

### Education...

From a young age I loved the challenges of science and had a passion for horses. I have been involved in breeding, breaking and competing with horses for many years. Completing a BSc in equine science at the University of Limerick gave me a qualification with a unique blend of science and practical skills.

### Professionally...

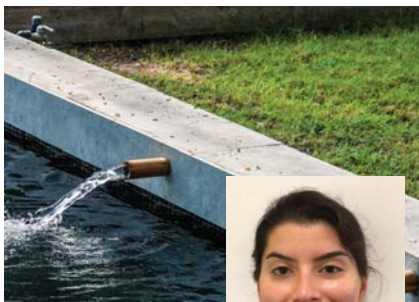
I worked as an equine lecturer in Kildalton College for 10 years. During this time many students completed training with Teagasc. I also found time to attain my BHS I and HSI level 2 coaching qualifications, allowing me to take my coaching to a new height. I recently moved into the role of Teagasc Equine Specialist, where I use my knowledge and experience to support breeders and producers, and help them to add value to their horses. My work involves one-to-one consultations, group work, conferences, seminars and skills demonstrations to the wider equine industry.

### Outside work...

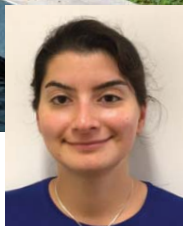
I keep a number of horses, which I break and produce for the eventing market. I have two young children, but still manage to compete most weekends. It is very satisfying when your work and your hobby blend together into an enjoyable and successful career. I would advise everybody to try to achieve this balance in their life.

### QUALIFICATIONS

|                                      |                     |
|--------------------------------------|---------------------|
| 2005 BSc                             | UL                  |
| 2011 British Horse Society "I" Coach |                     |
| 2014 Level 2 Coach                   |                     |
|                                      | Horse Sport Ireland |



Developing eco-friendly wastewater treatment systems.



## Golnaz Ezzati

Researcher

Teagasc, Johnstown Castle Research Centre, Co. Wexford

### Education...

I have a taste for lifelong learning, and for getting out of my comfort zone to explore the world while doing research! With a chemical engineering BSc from my home country, Iran, I got my first MSc in environmental engineering in 2012. I graduated from my second MSc in geo information science and earth observation in March 2015. I am currently an early-stage researcher in the Marie Skłodowska-Curie Actions: INSPIRATION Innovative Training Network. I am also doing my PhD in civil engineering in NUI Galway.

### Professionally...

My first MSc thesis involved developing sustainable water management strategies and water/wastewater treatment systems using environmentally friendly techniques. Shortly after, I got an Erasmus Mundus scholarship to do my second MSc, in which I developed extensive knowledge in the use of remote sensing techniques to monitor, assess, map and manage natural resources and ecosystem processes. My current research involves developing eco-friendly wastewater treatment systems, and engineered solutions and models that mitigate nutrient losses and minimise negative externalities created by agricultural activities in drainage water.

### Outside work...

I enjoy travelling, jogging, mountain climbing, learning new languages, and getting to know different people, cultures, food, etc. I am fascinated by nature and anything adventurous!

### QUALIFICATIONS

|          |   |
|----------|---|
| 2009 BSc | Azad University<br>(Tehran North), Iran |
| 2012 MSc | University Putra Malaysia,<br>Malaysia  |
| 2015 MSc | University Twente,<br>The Netherlands   |



Finding healthy alternatives to traditional ingredients in baked goods.



## Dr Eimear Gallagher

Principal Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I completed a BSc in food science in UCC, which was a great mix of theoretical science, practical laboratory work and an industry placement. I stayed on to do an MSc, and then went to Teagasc to complete a PhD on gluten-free ingredient interactions and novel formulations.

### Professionally...

I am currently Head of the Food Quality and Sensory Science Department, where meat, cereal, sensory and flavour chemistry research is undertaken. Within my own research group of postgraduates and postdocs, we focus on cereal/bakery and sensory science projects. I also have confidential contracts with the food industry, so my research follows two strands – academic and industry – and I really enjoy both. Our current projects focus on new ingredients and formulations, and the links between food/ingredient structure and functionality. We're studying reduced fat and sugar bakery formulations, exploring the use of pulse proteins as healthy and functional ingredients, and investigating the properties of different milling fractions of grains. Some of the research I've done on gluten-free products has been used to develop new formulations and innovations that are now in the marketplace.

### Outside work...

I'm originally from Bandon in Co. Cork, and am a huge sports enthusiast. I try to go to all of the Cork GAA matches and I also enjoy rugby. I've recently taken up golf, but I'm finding it more difficult than I expected – mastering the swing is a real challenge!

### QUALIFICATIONS

|          |             |
|----------|-------------|
| 1997 BSc | UCC         |
| 2000 MSc | UCC         |
| 2005 PhD | Teagasc/UCC |



Developing functional foods for all.



## Dr Linda Giblin

Senior Research Officer

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I completed a degree in biotechnology at Dublin City University where I enjoyed the combination of science and engineering. I then decided to do a PhD at University College Cork in microbiology. As part of this, I was lucky enough to work in a research laboratory at Leiden University in The Netherlands.

### Professionally...

I then completed biochemistry postdoctoral studies at UCC and at Massey University, New Zealand. On then to North Carolina, USA, where I joined a start-up biotech company and thoroughly enjoyed the rollercoaster ride that is the start-up. Here at Teagasc, I lead a molecular biology group working on food digestion and foods for health. Our team develops functional foods for different age groups (from the pregnant woman to the older consumer) and different health status (from consumers who want to manage their weight to those who want to combat ageing).

### Outside work...

I'm originally from Roscommon but now live in the rebel county of Cork. My husband (who is also a scientist) and I have three children, including a set of twins. We also have two big dogs to ensure I'm out walking every evening. I still love to travel and have recently returned from a research sabbatical in Switzerland. I enjoy food (cooking, eating and research). I like to stay fit by spinning and I have recently started swimming.

### QUALIFICATIONS

|     |     |
|-----|-----|
| BSc | DCU |
| PhD | UCC |



Assessing pesticide efficacy in the field.



## Liz Glynn

Research Officer

Teagasc, Crops Research Centre, Oak Park, Carlow

### Education...

I have always had a keen interest in agriculture, so studying for my degree in UCD seemed like the perfect fit for me, and I majored in agricultural and environmental science. It was during this time that my interest in crop science, specifically plant pathology, grew. I went on to complete my MAgrSc in UCD looking at the potential of cereal pathogens to infect alternative crops.

### Professionally...

I work in crop science, with a particular interest in pesticide efficacy and plant pathology. The majority of the work is field based, which is a major bonus for me as I love to work outdoors! We carry out trials on all the main combinable crops in a number of locations throughout the country, assessing the efficacy of both current and development pesticides. I work with researchers, advisors and students within Teagasc. We also work closely with industry, allowing us access to new products in their developmental pipeline.

### Outside work...

I'm from Co. Dublin and recently moved over the border to Kildare! I have always had a passion for horses, and they are a large part of my life to this day. I hunt regularly and have a strong interest in all areas of equestrianism. I also enjoy going to rugby matches.

### QUALIFICATIONS

|             |     |
|-------------|-----|
| 2004 BAgrSc | UCD |
| 2009 MAgrSc | UCD |



Effective ruminant parasite control and anthelmintic resistance.



## Dr Barbara Good

Senior Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Mellows Campus, Athenry, Co. Galway

### Education...

Living on a farm surrounded by lakes nurtured my interest in biology and the outdoor life. I undertook natural sciences and majored in zoology in TCD. As an undergrad, I was hooked on parasites from my first lecture given by Prof. Celia Holland and returned to complete a PhD in parasitology.

### Professionally...

Post PhD, I worked as PA to the one of co-ordinators of ICT for teachers at the National Centre for Technology in Education (NCTE) in DCU. I joined Teagasc in 1999 as a parasitologist. My principal role is in research, knowledge transfer and supervision of students. My research, in collaboration with fellow scientists, focuses on effective ruminant parasite control, diagnostics, anthelmintic resistance (AR) and promoting responsible anthelmintic usage, and studying host-parasite interactions. Current projects include investigation of ticks as vectors of disease, AR in livestock, parasite fitness, and the role of anthelmintic combinations in AR management.

### Outside work...

True to my love of animals I have acquired a menagerie of pets (a couple of donkeys being the latest addition, much to the amusement of the elder member of the family but despair of the youngest!) Walking, reading, photography and watching nature programmes would be among some of my favourite pastimes.

### QUALIFICATIONS

|               |     |
|---------------|-----|
| 1992 BA(Mod.) | TCD |
| 1994 HDip     | TCD |
| 1998 PhD      | TCD |



Helping food businesses develop ideas and appeal to consumers.



## Carol Griffin

Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I was always interested in science subjects at school. A degree in science in NUIG, focusing on biochemistry and nutrition, led me to a postgraduate diploma in food science. I subsequently went on to complete an MSc in food science and technology in UCD.

### Professionally...

I am a member of the Food Industry Development Department in Teagasc, Ashtown. I work with client companies in the areas of innovation, new product development, sensory analysis and training. The work is extremely interesting and varied. I help food businesses develop their food ideas, identify potential markets, refine their recipes, scale up those recipes to pilot scale and launch their new products. I also manage the sensory analysis service and train our sensory descriptive panel. These consumer and sensory assessment techniques enable businesses to predict if their products will appeal to consumers.

### Outside work...

Volunteering as a cub scout leader with my children's scout group has unexpectedly piqued my interest in the outdoors, nature and camping. Seeing the kids developing, learning and having a really great time while doing it, is very rewarding. I also get to have lots of fun and it is a great way to switch off and remember what it's like to be a kid again.

### QUALIFICATIONS

|               |      |
|---------------|------|
| 1989 BSc      | NUIG |
| 1991 Grad Dip | DIT  |
| 1993 MSc      | UCD  |





Working with industry to produce mushrooms of the highest quality.



## Dr Helen Grogan

Senior Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I studied natural sciences (botany) in TCD, where I was drawn to the world of soil microbiology and mycology. That led to a postgraduate diploma in France on fungal taxonomy and mycorrhizal fungi of forest trees followed by a PhD in UCD on the same topic.

### Professionally...

Although I had always wanted to be a science teacher, once I got a taste for research I wanted to carry on in this vein. I started my professional career working as a mushroom pathologist in England at Horticulture Research International (University of Warwick). I worked closely with the British mushroom industry, studying the epidemiology and control of several pathogens of the cultivated mushroom, *Agaricus bisporus*. It was very rewarding to identify research-based solutions to resolve industry problems. My current work at Teagasc has broadened into other areas of mushroom science, including controlling mushroom virus disease, using *Agaricus* genomics to understand compost utilisation, and addressing plant pathology issues in the forestry and nursery stock sectors.

### Outside work...

Although a Dubliner, I have a deep love for the countryside and the natural world. I enjoy hillwalking with family and friends, and seldom go out without my bird books and binoculars. I am usually the one holding everyone up as I investigate some tiny plant or bird that has caught my eye, or a butterfly or moss or fern...

### QUALIFICATIONS

|               |                   |
|---------------|-------------------|
| 1980 BA(Mod.) | TCD               |
| 1982 MSc      | TCD               |
| 1983 DEA      | UCB, Lyon, France |
| 1984 HDipEd   | TCD               |
| 1992 PhD      | UCD               |



Improving grazing efficiency in beef systems through grass physiology and sward dynamics.



## Clare Guy

Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath

### Education...

My favourite subject at school was biology and so I decided to study natural sciences at TCD. I majored in botany as I loved learning about the natural world and how plants can be used in many different applications. I joined Teagasc Moorepark in 2014 to undertake a PhD on the interaction between grass and white clover in dairy production systems.

### Professionally...

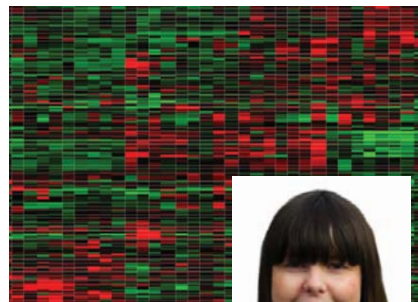
I am currently in the final stages of my PhD, which examines white clover inclusion in grass-based dairy production systems. Within the area of grassland science, I have a particular interest in the optimisation of sward structure and composition, and the interaction between plants and animals. I will be taking up a new role as a Grassland Research Officer in Teagasc Grange looking at how grazing efficiency in beef systems can be improved through grass physiology and sward dynamics. This role will require me to use my expertise in the areas of botany and grazing management to help optimise ruminant production systems.

### Outside work...

I'm originally from Dublin city and I pursued a career in agriculture because of my interest in plant science. At weekends, you will most likely find me somewhere near Charolais cattle! Outside of agriculture, I enjoy all things outdoors and I've recently taken up running. I love reading and movies too, but anything that gets me outside makes me happy!

### QUALIFICATIONS

|                     |             |
|---------------------|-------------|
| 2013 BA(Mod.)       | TCD         |
| 2018 PhD (expected) | Teagasc/QUB |



Unravelling the complexities of meat quality traits.



## Dr Ruth Hamill

Senior Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I was quite young finishing school and a little uncertain about my career path, so I chose science because I loved the subjects, but also because it would offer a general education with flexibility to specialise in whatever I wanted. I completed my degree in zoology in UCD, and getting a taste for research in my fourth-year project encouraged me to pursue a PhD, also in UCD.

### Professionally...

Following my PhD, I undertook a postdoctoral fellowship in population genetics at the University of St Andrews, Scotland, spending two summers of fieldwork in the Pyrenees. Since joining Teagasc, I have continued to use molecular biology methods, and I apply tools of functional genomics, proteomics and biophysics to try to unravel the complexities of meat quality traits, including tenderness, juiciness and flavour, but also work with Irish industry partners to try and apply this knowledge in practice. Working in Teagasc has allowed me to expand my research focus in new directions, and we have several interesting projects developing healthier versions of traditional meat products and fortified foods.

### Outside work...

I enjoy getting outdoors and exploring the countryside when I can, and I think nothing tastes quite as good as a cup of tea on the hills. I also love to go and hear live music, especially at music festivals like Electric Picnic. Spending time with my two small kids has inspired me back to my zoology roots and we have a shared fascination with rock pools, bugs and creatures of all sorts.

### QUALIFICATIONS

|          |     |
|----------|-----|
| 1997 BSc | UCD |
| 2002 PhD | UCD |



Working to develop functional foods.



## Dr Maria Hayes

Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

I did biology and chemistry for my Leaving Certificate. I completed a BSc in industrial microbiology and chemistry in UCD, and subsequently did a PhD in microbiology and protein chemistry in UCC. I also have a diploma in leadership from the IMI.

### Professionally...

I work in the laboratory and carry out feasibility studies for companies concerning functional food product development. These are foods that impart health benefits to the consumer that go above and beyond basic human nutrition. I was hired as a natural product chemist. This involves identifying bioactive ingredients/compounds from food sources and developing extraction, characterisation and stabilisation methods and product development. I screen for ingredients that may inhibit type 2 diabetes and prevent high blood pressure, and supervise PhD students. I enjoy working with marine companies/Bord Iascaigh Mhara on by-product utilisation and the bioeconomy.

### Outside work...

I am lucky enough to be a native of the beautiful Glen of Aherlow in west Tipperary and enjoy the outdoors, nature and hillwalking. I'm an avid fan of sport, especially Tipperary football, hurling, athletics and Munster Rugby (in that order) and have spent a small fortune following Munster around Europe. I'm happiest when I am in my wellies on my mam and dad's dairy farm and I breed Canadian Speckled Park cattle as a hobby. I love good food and travel.

### QUALIFICATIONS

|  |         |
|--|---------|
| 2002 BSc   | UCD     |
| 2007 PhD   | UCC     |
| 2016 Post Graduate Certificate in Leadership Development | IMI/UCC |



Researching human behaviour in relation to agri-food innovation.



## Dr Maeve Henchion

Principal Research Officer

Teagasc, Rural Economy and Development Programme, Ashtown, Dublin 15

### Education...

I studied agricultural science as I loved the idea of combining science, agriculture and business. Financial support from UCD and Teagasc allowed me to continue to combine these elements for my master's (which looked at collaboration in the emerging farmhouse cheese sector) and my PhD (which examined the market performance of Irish beef).

### Professionally...

I use social science research methods to examine the hows and whys of human behaviour in relation to innovation in the agri-food sector. One research theme relates to consumer and industry acceptance of novel technologies and foods, with the overall objective of contributing to sustainable production and consumption. My current work on the bioeconomy enables me to use my research to contribute to policy as well as industry. As Head of the Department of Agri-food Business and Spatial Analysis, the diversity of topics addressed ensures my commitment to lifelong learning.

### Outside work...

With four children, my outside activities are extensive and varied. I spend a lot of time pitch-/pool-side attending GAA and rugby matches, and swimming galas. I also have a keen interest in Irish and am chairperson of the board of management of our local Gaelscoil.

### QUALIFICATIONS

|  |         |
|--|---------|
| 1991 BAgSc   | UCD     |
| 1993 MAgSc   | UCD     |
| 1996 PhD   | UCD     |
| 2014 Post Graduate Certificate in Leadership Development | IMI/UCC |



Researching grassland science.



## Dr Deirdre Hennessy

Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I studied biology and chemistry in secondary school, and then agricultural science at UCD, specialising in animal and crop production. Following this, I undertook a research PhD in grassland science through Queen's University Belfast, funded by the Teagasc Walsh Fellowship Scheme. I completed fieldwork at Teagasc Grange and Moorepark.

### Professionally...

I work in grassland science. My current research includes: examining the role of white clover in high stocking rate grass-based milk production systems; comparison of milk production, quality and processability of milks from pasture and total mixed ration-based diets; the interaction between white clover and nitrogen fertiliser in intensive grazing systems; and, the development of a predictive grass growth model. I supervise a number of PhD students, whom I really enjoy working with.

### Outside work...

My husband and I have two children. We have a beef farm with a pedigree Limousin herd as well as some calf-to-beef stock. In my free time I enjoy working on the farm, walking, baking and reading.

### QUALIFICATIONS

|            |                            |
|------------|----------------------------|
| 2001 BAgSc | UCD                        |
| 2005 PhD   | Queen's University Belfast |



*Increasing healthy bacteria in the gut.*

## Dr Rita Hickey

Senior Research Officer

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I studied chemistry, physics and biology at school and then went on to complete a degree in science in UCD. I enjoyed the practical aspects of this and later went on to complete a PhD in microbiology with Teagasc/UCC on the development of molecular tools for the improvement of food cultures.

### Professionally...

I supervise PhD students on various research projects, and also have confidential contracts with the food industry. My research focuses on investigating the biological properties of beneficial sugars isolated from foods. A major area of interest is the effect of sugars on host bacterial interactions in the gut. For instance, certain sugars in milk can alter the intestinal surface, which in turn contributes to early immune development in the newborn intestinal tract. I'm particularly interested in strategies to increase the numbers of health-promoting bacteria in our gut.

### Outside work...

I'm from Tipperary and enjoy horse riding and walking when I get the chance. I have four sons, six and under, so I don't have a lot of spare time. My weekends usually involve cooking and cleaning and the occasional bit of fun!

### QUALIFICATIONS

1998 BSc UCD  
2003 PhD Teagasc/UCC



*Developing clinical models of the gallbladder microbiome.*

## Dr Crystal Johnson

Researcher

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I have always been interested in how things work and enjoy the idea of contributing to new knowledge, so studying biological mechanisms has been a perfect career fit for me. I completed a BSc and a PhD in microbiology at the University of Oklahoma, focusing on the recovery of novel anaerobic organisms.

### Professionally...

In 2015, I moved to Ireland in order to join Prof. Catherine Stanton's lab as a postdoc carrying out faecal transplantation studies. I had previously isolated many new species of bacteria from the faeces of various animals, so working with human stool samples was a natural transition. In conjunction with such human-biome studies, I wrote my first grant application in 2016 and was awarded the Marie Skłodowska-Curie Independent Fellowship to develop clinical models of the gallbladder microbiome.

### Outside work...

Although I spend my days as a microbiologist studying very small things, I also enjoy the evenings, when I can dabble in astronomy and look at the other end of the size spectrum. I am part of a team of citizen-scientists who work to map uncharted portions of outer space. So far, I have found three previously unknown asteroids and a distant galaxy!

### QUALIFICATIONS

2008 BSc University of Oklahoma, USA  
2014 PhD University of Oklahoma, USA



*Examining potential molecular biomarkers of early pregnancy in dairy cows.*

## Dr Dayle Johnston

Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath

### Education...

I completed a science degree at Trinity College, specialising in zoology, and a professional diploma in education at NUI Maynooth. Following an enjoyable internship as a laboratory technician at Teagasc, Moorepark, I was inspired to study for a PhD, which involved the use of molecular biology techniques to characterise calf health.

### Professionally...

I graduated with a PhD in calf health/molecular biology from Teagasc and UCD in December 2016. Since then I have been working as a contract research officer examining potential molecular biomarkers of early pregnancy in dairy cows. I work closely with principal investigators in both Teagasc and UCD, and with a PhD student. We are aiming to develop a pregnancy test that can be used with milk or blood samples taken before day 21 of pregnancy. My work involves on-farm sample acquisition, and computational and laboratory-based analyses.

### Outside work...

I am originally from Offaly and I still enjoy helping my parents with the farm work and taking my dog walking around the beautiful Slieve Bloom mountains. I also enjoy running, cycling and horse riding. I am a member of Trim Athletic Club and I regularly compete in races and duathlons.

### QUALIFICATIONS

2011 BA(Mod.) TCD  
2012 PDE Maynooth University  
2016 PhD Teagasc/UCC





Ensuring high-quality, sustainable meat production in the future.



## Dr Michelle Judge

Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

After completing a degree in animal science in University College Dublin I undertook a PhD in statistical genomics with Cork Institute of Technology and Teagasc.

### Professionally...

I have recently taken up a role as a statistical geneticist with Teagasc in collaboration with Meat Technology Ireland (MTI). MTI is an industry-led initiative for meat processing research and technology. My role is to find out why the meat from some animals is of higher quality than meat from other animals. I use the DNA profile of the animal to help me do this. The aim of this research is to identify genetically superior animals for meat quality traits so that we ensure high-quality, sustainable meat production in the future.

### Outside work...

I am originally from Donegal and I spend a lot of my weekends travelling home. I love the outdoors and have always had a keen interest in horses. I'm also a big fan of the GAA and try to attend as many matches as I can.

### QUALIFICATIONS

|            |     |
|------------|-----|
| 2013 BAgSc | UCD |
| 2017 PhD   | CIT |



Studying pathogen genetics, and strategies to subvert the immune system.



## Dr Orla Keane

Senior Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath

### Education...

As well as focusing on science subjects at school, I loved the outdoors and was fascinated by the natural world, living organisms, and figuring out why things are the way they are. I majored in microbiology in university, and then stayed on in the microbiology department to do a PhD on virulence gene regulation in *Salmonella*.

### Professionally...

I worked in New Zealand doing postdoctoral work at the University of Otago in Dunedin on the ovine response to gastrointestinal nematodes – my first foray into agriscience. I then spent some time in the Genetics Department in TCD before moving to Teagasc in 2009. My research still focuses on infection biology and how host and pathogen interact to influence the outcome of infection. We look at things like host genetics – some animals are naturally more resistant or susceptible to disease than others – and at the impact of animal management. We also look at pathogen genetics, for example antimicrobial resistance or the ability to form a biofilm. We're trying to identify genes and other markers of resistance or susceptibility, as well as looking at the strategies pathogens use to subvert the immune response.

### Outside work...

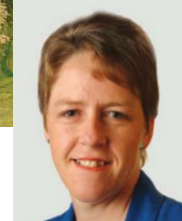
I'm originally from Kildare, so being based in Meath is quite close to home. I still love the outdoors, and enjoy running, hiking and scuba diving. In Ireland we are so lucky to have the most fabulous underwater scenery and marine life, and it's so exciting to be able to go diving and see that at close quarters.

### QUALIFICATIONS

|                |     |
|----------------|-----|
| 1998 BA(Mod.)  | TCD |
| 1999 PGrad Dip | TCD |
| 2003 PhD       | TCD |



Promoting sustainable farming for the benefit of farming and wildlife.



## Catherine Keena

Countryside Management Specialist

Teagasc, Environment Knowledge Transfer Department, Kildalton College, Piltown, Co. Kilkenny

### Education...

I loved farming and although I did not focus on science subjects at school, I completed a degree in agricultural science in UCD following a year in Mountbellew Agricultural College. I completed an environmental master's while working with Teagasc and am currently undertaking a PhD on biodiversity practice by farmers.

### Professionally...

I worked with ADAS in Wales as an agricultural consultant for five years before returning to work in Cavan as a Teagasc agricultural advisor. Since 2000 I have worked as Teagasc Countryside Management Specialist, leading biodiversity and agri-environment schemes. I work with advisors, farmers and agri-environmental stakeholders to promote sustainable farming for the benefit of farming and wildlife. Effective use of the media is key to bring about practice change among farmers.

### Outside...

Originally from Offaly, I am married to a dairy farmer in Co. Waterford. I enjoy both the productive and environment aspects of our farm. I love milking the cows when time allows, and maintaining habitats for wildlife such as hedgerows and wild bird cover, keeping the farm a nice place for wildlife, cows and us to live! Our daughter Eilish participated in the STEAM Summer Camp in WIT and loved it.

### QUALIFICATIONS

|                       |                      |
|-----------------------|----------------------|
| 1983 Cert. in Farming | Mountbellew          |
|                       | Agricultural College |
| 1987 BAgSc            | UCD                  |
| 1998 MAgSc            | UCD                  |



Spring grazing management and calf research.

## Dr Emer Kennedy

Senior Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

From a dairy and beef farm in Co. Kilkenny I was always immersed in the world of agriculture so I went to UCD to study agricultural science. As part of my degree I travelled to New Zealand where I worked on a 1,800-cow farm, and developed a love of grazing management. After graduating I went to Teagasc Moorepark to complete my PhD on spring grazing management.

### Professionally...

I work in grazing management, and calf and heifer rearing. My job is extremely varied: as well as focusing on many research projects and supervising PhD students, I work with advisors, farmers and industry, and lecture undergraduate students. I spent six months in Australia working with a research team in southern Victoria, and have developed several other international collaborations. At the moment my work is focusing on grazing management strategies during the spring period when cows are in early lactation, a time when there can be deficits in grass growth. Our calf research is currently concentrating on colostrum management and feeding calves during the pre-weaning period. Many of the findings of our research are now implemented in everyday management practices on farm.

### Outside work...

I love to travel and see new places so I aim to visit at least one new country every year! I also love the outdoors, cycling and walking. I am an exercise enthusiast and love to hit the gym on a regular basis. I also recently bought a few acres of land and I'm in the process of developing my own mini farm, which of course I hope to stock with a few calves!

### QUALIFICATIONS

|            |     |
|------------|-----|
| 2003 BAgSc | UCD |
| 2006 PhD   | UCD |



How does policy and taxation affect farm succession and inheritance?

## Anne Kinsella

Senior Research Officer – Economist

Teagasc, Rural Economy and Development Programme, Mellows Campus, Athenry, Co. Galway

### Education...

I always had a keen interest in science, the natural world, and facts and figures. I completed a degree in economics at UCD and then a science master's. I enjoyed the practical aspects and economic applications. My dissertation examined the suitability of agri-environment schemes to unique landscapes.

### Professionally...

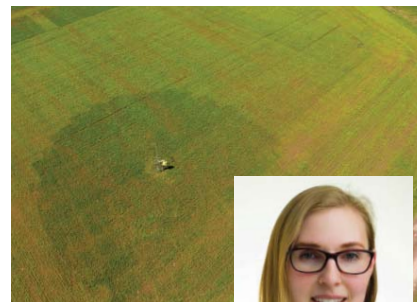
I specialise in the area of production/farm-level agricultural economics research, including policy analysis. My current research interests include land-use economics, with a particular interest in the impact of policy/taxation drivers on succession/inheritance decisions. This research has been facilitated by developing models to compare income streams under various policy/agricultural conditions. I retain a keen research interest in multidisciplinary projects; one such project was instrumental in changing agri-environmental policy. In more recent years, I have completed all ACCA (professional accountancy) qualification examinations.

### Outside work...

I love to be close to nature and helping on the farm provides ideal opportunities for this. I enjoy walking, and have taken part in hiking trips at home and abroad. I remain actively involved in many artistic/design pursuits, including painting and stain glass. I play various musical instruments and have participated in musical society productions, having always been a music/dance enthusiast.

### QUALIFICATIONS

|                            |                      |
|----------------------------|----------------------|
| 1993 BA(Econ.)             | UCD                  |
| 1995 MSc                   | UCD                  |
| 1999 Cert. in Mutual Funds | Institute of Bankers |
| 2017 Chartered Accountant  | ACCA-affiliated      |



Helping farmers and the environment.

## Dr Dominika Krol

Research Officer

Teagasc, Environment Research Centre, Johnstown Castle, Co. Wexford

### Education...

I'm originally from Poland where I studied environmental science for a BSc and environmental biology for an MSc. I enjoyed how my course was applicable and relevant to so many industries. In 2008 I moved to Ireland and did a PhD in greenhouse gases from agricultural crop systems with Teagasc.

### Professionally...

I work in the area of agricultural gaseous emissions, in particular nitrous oxide and ammonia. My research focuses on a variety of nitrogen inputs such as synthetic fertilisers and animal waste to soils, and their effect on crop yields and gaseous losses. My work is helping farmers to achieve their outputs while reducing impacts on the environment. My career path was somewhat unusual in that after my PhD I worked as a technician. Later I won funding for my postdoctoral research and recently moved on to be a research officer.

### Outside work...

I have been living in Ireland for nine years now. I love exploring new places and learning about Irish people, traditions and culture. I am engaged to a farmer and enjoy helping out on the farm, especially working with animals. My fiancé and I are both passionate about good-quality, locally produced food. We grow our own produce and always try out new recipes and ingredients. I enjoy running and practising pilates; however, I also love relaxing with a good book and my cat curled up on my lap.

### QUALIFICATIONS

|          |                         |
|----------|-------------------------|
| 2006 BSc | Jagiellonian University |
| 2008 MSc | Jagiellonian University |
| 2013 PhD | UCD                     |



Providing information to farmers on organic farming practices.



## Elaine Leavy

Organic Specialist

Teagasc, Farm Management and Rural Development Department, Grange, Dunsany, Co. Meath

### Education...

I am from a farming background and after many years helping my parents I knew that I wanted a career in agriculture. I completed a degree in agricultural science in UCD. I also have a PGradDip (organic farming) and did an MSc in organic farming.

### Professionally...

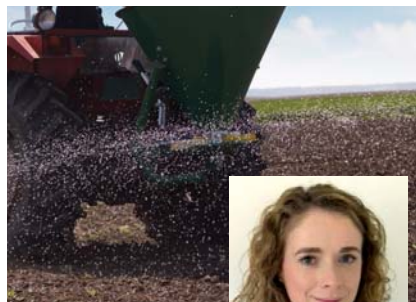
I joined Teagasc in 1998 and worked as a farm advisor based in offices in Limerick, Longford and Leitrim, working with drystock farmers. Since 2007, I have been working as an organic specialist. My role is to provide information on organic farming practices. I do this by providing support to local Teagasc advisors, delivering courses, farm walks, giving talks and preparing printed material for the organic industry. I also get the opportunity to work with other stakeholders within the sector, and to participate in projects with advisors from other countries.

### Outside work...

I am an avid sports spectator and love watching a wide range of disciplines but I still have to find a sport that fits my skillsets! I love the outdoors and enjoy walking and pottering about in the garden.

### QUALIFICATIONS

|               |                       |
|---------------|-----------------------|
| 1994 BAgSc    | UCD                   |
| 2008 PGradDip | University of Glasgow |
| 2009 MSc      | University of Glasgow |



Help farmers to comply with Nitrates Action Programme measures and to maximise farm profits.



## Patricia Lynch

Agricultural Development Officer

Teagasc, Ballinrobe, Co. Mayo

### Education...

Growing up on a farm I had always shared a keen interest in both agriculture and the environment. Combining these two interests, I majored in applied environmental science, and did an MSc in biodiversity and conservation in TCD.

### Professionally...

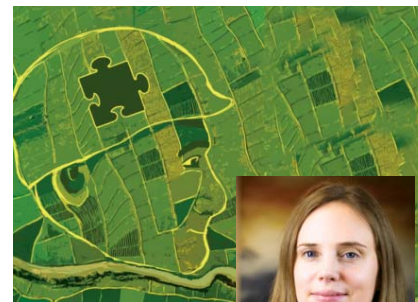
My position within the Agricultural Catchments Programme (ACP) is defined by two main roles, as a technologist and as an advisor for the Cregduff Catchment. Having the diversity of these two roles brings a new challenge every day, which is enjoyable. My main role as an agricultural knowledge transfer advisor is to help farmers within my catchment to comply with the Nitrates Action Programme measures and to maximise farm profits through improved business management and technical performance. I am also tasked with the analysis and data collection from the catchment to facilitate and aid the work of the research team.

### Outside work...

I'm originally from Cavan, and enjoy all things sport, both playing and spectating. Although I have hung up my football boots, I am now a running fanatic but mix it up with basketball, badminton and, with Connemara on my doorstep, I have taken to hiking at the weekends.

### QUALIFICATIONS

|            |     |
|------------|-----|
| 2009 BAgSc | UCD |
| 2010 MSc   | TCD |



Analysing behaviour in agricultural communities.



## Dr Áine Macken-Walsh

Senior Research Officer

Teagasc, Rural Economy and Development Programme, Mellows Campus, Athenry, Co. Galway

### Education...

My BA included a fascinating course on human behaviour in a rural Irish community, which inspired me to choose agriculture topics to PhD level. My MA thesis focused on the EU Special Accession Programme for Agriculture and Rural Development (SAPARD) in Poland and Romania, followed by a PhD on governance and rural development in Lithuania.

### Professionally...

As a rural sociologist, my research involves identifying and analysing patterns of behaviour. The aim is to explain policy and extension outcomes, but also to contribute to effective policy and extension design on the basis of sociological evidence. This type of proactive work involves interacting with farmers, advisors, diverse disciplinary scientists, industry and policymakers, and Teagasc as an organisation provides a unique laboratory for this work. Sociologists are trained to understand and enhance how people collaborate so they are increasingly in demand by research projects requiring a transdisciplinary and multi-actor approach.

### Outside work...

I live in my native Galway, which is a vibrant place to live when it comes to my main interests: the arts and music. I spend most of my free time enjoying activities with my young children, and supportive policies (parental leave, term-time leave) have been vital in achieving work-life balance. My experience is that a career in research can be a very family-friendly option.

### QUALIFICATIONS

|              |   |
|--------------|---|
| 2001 BA      | NUIG  |
| 2002 MA      | European Inter-University Centre for Human Rights |
| 2003 Diploma | Community Development Practice                    |
| 2007 PhD     | NUIG  |





Delivering knowledge-based solutions for new product development.



## Dr Olivia McAuliffe

Principal Research Officer

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I completed my BSc at UCC, majoring in microbiology. My PhD was also conducted at UCC, where I studied the genetics and applications of antimicrobial peptides. During my PhD, I spent six months at Wageningen University in The Netherlands, investigating the mode of action of these fascinating peptides.

### Professionally...

Following my PhD, I spent three years as a postdoctoral researcher at North Carolina State University, USA, working on the application of genomic technologies to the study of probiotic organisms. Since taking up my post with Teagasc in 2003, my research group has implemented a genomics-based approach to studying the bacteria used in fermentation and biotransformation. I work extensively with national and international dairy companies and commercial culture suppliers, delivering knowledge-based solutions to the selection and generation of desirable cultures for new product development.

### Outside work...

I am originally from Blarney, Co. Cork, and now live in the beautiful Gaeltacht area of Ring, Co. Waterford, with my husband and two sons. We love the outdoors and have several great beaches nearby where we walk our dog, swim and surf. We also enjoy cycling as a family and regularly cycle the fabulous Waterford Greenway. I am a keen runner and a member of the West Waterford Athletics Club. I train with them weekly and completed my first marathon last year.

### QUALIFICATIONS

|          |     |
|----------|-----|
| 1995 BSc | UCC |
| 1999 PhD | UCC |



Researching how motivations such as taste and health influence food choice.



## Dr Sinéad McCarthy

Research Officer

Teagasc, Rural Economy and Development Programme, Ashtown, Dublin 15

### Education...

Having had an interest in science since primary school, I went to University College Cork to pursue my love of science and complete a BSc. While there, I developed a keen interest in the link between food and health, and went on to complete an MSc in food science and a PhD in public health nutrition.

### Professionally...

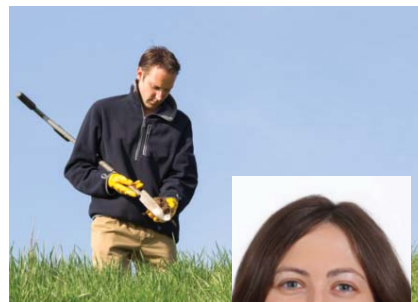
My career commenced with researching the impact of nutrient intake on heart health in UCC. I moved to Trinity College Dublin to manage the National Food Consumption Surveys, and developed my expertise in public health nutrition. Since joining Teagasc in 2007, I have worked in the area of consumer food behaviour, researching how different motivations, such as taste and health, influence food choice. Recently, I've been especially interested in nutrition and health for the older consumer, and researching how targeted food product development could enhance healthy ageing.

### Outside work...

I am married to Jason and live with our two daughters along the Boyne Valley in Co. Louth. As a family, we enjoy running and were involved in setting up our local parkrun at the Battle of the Boyne site in Co. Meath. I am a Girl Guide leader and have great fun with our local group of Brownies every week. At weekends, I love to cook and serve up tasty dishes to family and friends. Although I'm no masterchef, they keep coming back for more!

### QUALIFICATIONS

|           |     |
|-----------|-----|
| 1993 BSc  | UCC |
| 1994 HDip | UCC |
| 1996 MSc  | UCC |
| 2003 PhD  | UCC |



Collecting soil from across the ACP catchments to monitor soil fertility.



## Dr Noeleen McDonald

Research Officer

Agricultural Catchments Programme, Teagasc, Environmental Research Centre, Johnstown Castle, Co. Wexford

### Education...

My undergraduate qualifications are in agricultural science, which I started in WIT and finished in UCD, choosing to specialise in environmental science at UCD. I liked that this degree had such a wide variety of subject areas. My PhD with Teagasc was on developing nitrogen tests for Irish soils.

### Professionally...

As the soil scientist within a multidisciplinary team of advisory and research staff in the Agricultural Catchments Programme (ACP), my role is to investigate the processes involved and understand the linkages between farm nutrients and their availability for transport and loss to water. My current work involves collecting soil from across the ACP catchments to monitor the trend in soil fertility. In order to explain the change in soil fertility levels, which may have an agronomic or water quality impact, I also carry out nutrient balances at the field and farm scale.

### Outside work...

I mostly enjoy catching up with family and friends, usually over a good cup of coffee; it should be an official pastime. When the lovely Irish weather permits me, I regularly go for a walk, taking advantage of the beautiful surroundings of Johnstown Castle when I can. I am a fan of the arts – movies, concerts, theatre – and attend. I just got a new bike and hope to add passionate cyclist to my list of hobbies in the future.

### QUALIFICATIONS

|                 |             |
|-----------------|-------------|
| 2004 CertAgriSc | WIT         |
| 2005 BSc        | WIT         |
| 2007 BSc        | UCD         |
| 2014 PhD        | Teagasc/QUB |



*Focusing on processing technologies to create healthier meats.*

## Dr Ciara McDonnell

Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education

At school, I had an interest in science while also being curious about food products and ingredients. This led me to study food science in UCD, which included an exchange semester at Purdue University, USA. I went on to complete a PhD in Teagasc and UCD on novel technologies for the accelerated production of processed meat.

### Professionally...

After completing my PhD, I spent three years working in the food industry. Working for an ingredient company that supplied the meat industry enabled me to apply my meat science knowledge daily. Through this, I learned about consumer trends and the challenges involved in the production of healthier meat products. Since returning to Teagasc in 2016, my research focus has been on new processing technologies to create healthier, clean label processed meats and technologies for improved process efficiency in the fresh meat sector.

### Outside work...

I like to practise a healthy lifestyle and really enjoy going to the gym. I recently took up weightlifting, which is great for health and strength. I also love to take advantage of our beautiful country and hike during my free time. My favourite hobbies include baking and hairdressing! However, my absolute favourite thing to do is travel. I am extremely fortunate that my chosen career has enabled me to see so many new countries. I love meeting new people and learning about their culture.

### QUALIFICATIONS

|            |     |
|------------|-----|
| 2009 BAgSc | UCD |
| 2013 PhD   | UCD |



*Providing good independent advice to farmers on forestry.*

## Frances McHugh

Forestry Development Officer

Teagasc, Oak Park, Co. Carlow

### Education...

My initial education was growing up on a mixed farm where an appreciation of all things outdoors was encouraged. This sparked a long-term interest in science subjects, which steered me towards agricultural science for third level. I completed a BAgSc (forestry) and subsequently a master's based on timber measurement.

### Professionally...

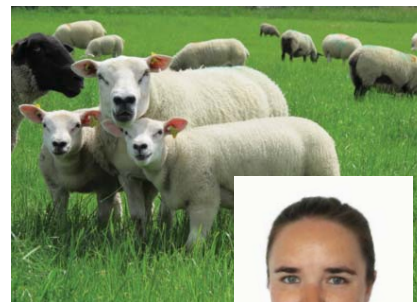
My first proper job was working as Project Director of the Tree Register of Ireland, with the very pleasant task of finding Ireland's biggest and/or most historic trees. Moving to Teagasc was a good fit for me coming from a farming background with forestry training; I enjoy working with farmers who are considering planting or who have already planted some land. It's a very people-centred role as the decision to plant forestry is a significant one so landowners expect good independent advice specific to their own situation.

### Outside work...

Marrying a farmer from Laois has brought me back to my home county and life on a farm (tillage this time with some forestry). Teagasc has facilitated a good work-life balance as I work four days with Teagasc and three days ferrying around our two busy sons!

### QUALIFICATIONS

|   |         |
|---|---------|
| 1997 BAgSc  | UCD     |
| 1999 MAgSc  | UCD     |
| Ongoing:  |         |
| Post Graduate Certificate in Leadership Development | IMI/UCC |



*Improving the national genetic evaluations for sheep and beef.*

## Dr Nóirín McHugh

Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I completed a degree in animal science in UCD, and after travelling to New Zealand as part of the professional work experience module and seeing animal genetics in action, I knew that was the career path I wanted to follow. This led to me completing a PhD investigating the genetics of animal liveweight and price.

### Professionally...

My research primarily focuses on improving the national genetic evaluations for sheep and beef, so it is very industry focused and has a direct route to application. I work with a team of postdoctoral researchers and PhD students on various research projects, including the design and analysis of data from research flocks and herds, as well as analysis of data from the national sheep and beef databases.

### Outside work...

I grew up on a sheep farm in Co. Monaghan and still love to help out as much as possible. I have a keen interest in sport and play rugby for Fermoy Lionesses, and am a long-suffering but devoted Monaghan GAA fan!

### QUALIFICATIONS

|            |             |
|------------|-------------|
| 2008 BAgSc | UCD         |
| 2012 PhD   | Teagasc/UCD |



*Taking scientific research and translating it into impactful messages and resources.*

## Lauren McMaster

*Network Manager – Sensory Food Network Ireland*

**Teagasc, Food Research Centre, Ashtown, Dublin 15**

### Education...

My degree in consumer studies gave me a broad perspective on the food industry, including new product development, nutrition and marketing. I then completed an MSc in communications, where my research project investigated if optimistic bias played a role in consumer responses to food safety campaigns.

### Professionally...

I have spent most of my career in communications roles in the agri-food sector, including the Livestock and Meat Commission for Northern Ireland, safefood and now Teagasc. A common theme in these roles is taking scientific research and translating it into impactful messages and resources. This has included everything from a song to encourage children to wash their hands to a video to help chefs understand allergen control. In my current role I manage the Sensory Food Network Ireland. My job is to promote and develop sensory science expertise on the island of Ireland.

### Outside work...

I continue my love of food outside work. As a newcomer to Dublin I am enjoying attending local food events and trying out just a few of the many diverse restaurants available in the city. I have a keen interest in art and design, and enjoy learning new skills. I recently completed a ceramics course where I was able to make some lovely unique pieces. I also enjoy spending my free time with my family at home in Northern Ireland.

### QUALIFICATIONS

|           |     |
|-----------|-----|
| 2010 BSc  | UU  |
| 2014 MSc  | QUB |
| 2015 PDip | DMI |



*Tackling the unique challenges of pest control.*

## Dr Louise McNamara

*Research Officer*

**Teagasc, Crops Research Centre, Oak Park, Carlow**

### Education...

Studying science in college was a natural fit for me because I've always loved nature and the environment. I specialised in biological sciences in Maynooth University and stayed there to complete a PhD in integrated pest management in forestry. I got the opportunity to explore Ireland's beautiful forests while carrying out my research.

### Professionally...

Following completion of my PhD, I moved to Teagasc as a research officer specialising in crop pest control entomology at Oak Park. Our work addresses integrated pest management of insect pests, with a focus on arable crops. This encompasses best use of insecticides, insecticide resistance, biological pest control, cultural and physical control, and biodiversity in an arable farm landscape.

### Outside work...

I'm a big nature enthusiast and in my spare time enjoy going on road trips exploring the Irish countryside. I also love attending hurling matches, doing yoga and going to gigs.

### QUALIFICATIONS

|          |                     |
|----------|---------------------|
| 2012 BSc | Maynooth University |
| 2016 PhD | Maynooth University |



*Researching genetics and milk quality in dairy cattle.*

## Dr Sinéad McParland

*Research Officer*

**Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork**

### Education...

I loved science, particularly biology, in school as I loved learning how our bodies work. My love for animals led me to study animal science in UCD. Following this, I completed a PhD investigating inbreeding levels and effects in dairy and beef cattle.

### Professionally...

I work in quantitative genetics, and although I was previously involved in some projects with other farm species, these days I focus on dairy cattle. My job is quite varied and includes providing breeding programme advice to semen companies as well as using spectroscopy to add more value to milk recording by providing additional information on milk quality and the cow that produced the milk.

### Outside work...

I love the outdoors and try to keep active through running and cycling with friends. However, these days most of my time and energy is spent running around after my two little girls!

### QUALIFICATIONS

|            |     |
|------------|-----|
| 2005 BAgSc | UCD |
| 2008 PhD   | UCD |
| 2011 MSc   | UCC |





Assessing the economic impacts of nutrient loss management in Irish farms.

## Dr Evgenia (Nenia) Micha

Research Officer

Teagasc, Environment Research Centre, Johnstown Castle, Co. Wexford

### Education...

I studied agricultural sciences and specialised in winemaking, as this was my passion. The management decisions of the farmers I worked with challenged me to investigate their economic and social backgrounds, and motivated me to complete a PhD on farmers' behaviour at the University of Reading.

### Professionally...

I have worked in different fields involving farming communities. I started my career as an assessor of government farm subsidies, and later I worked for several winemakers in various countries, and as a sessional lecturer in farm system management. After completion of my PhD, I worked as a researcher in a number of projects on farmers' behaviour. Today, I am an environmental-economic modeller focused on assessing the economic impacts of nutrient losses management in Irish farms.

### Outside work...

I am originally from Greece, and I lived in Spain, New Zealand and the UK before moving to Ireland in 2014. I enjoy travelling, seeing new places and meeting new people, and being in contact with nature. I am passionate about photography, sailing, and horse riding, which I recently took up.

### QUALIFICATIONS

|          |                                      |
|----------|--------------------------------------|
| 2001 BSc | Aristotle University of Thessaloniki |
| 2006 MSc | Universidad Politecnica de Madrid    |
| 2014 PhD | University of Reading                |



Providing support for research projects.

## Dr Sheila Morgan

Senior Research Officer

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

Biology was my favourite subject in school, although I had so many career interests spanning nursing, horticulture, Montessori teaching and science, that when my Leaving Cert results came out I was in a real predicament. Ultimately I opted to do a BSc and from there, in 1990, I joined Teagasc to do a PhD. My research focused on the application of peptide antimicrobials in food systems.

### Professionally...

I spent a number of years in postdoctoral positions in laboratory-based research, investigating the application and action of antimicrobials produced by good bugs for the killing of bad bugs. I published a number of significant peer-reviewed articles. However, this research involved pathogens and when I found myself pregnant with my first child, I gradually moved from the laboratory to the office and a scientific administration/project management role. Scientific administration and research support is a crucial part of the success of any research programme and my role is incredibly diverse, ranging from report/grant application writing to laboratory design, event planning, research reporting, and staff and student support.

### Outside work...

Outside of work is often busier than work itself. I work a reduced number of hours to facilitate a better work-life balance and my two children (almost 18 and 15) probably don't even realise how much I achieve in any given day. I enjoy cooking and baking, which is just as well really, as it seems non-stop. We live in a lovely rural community and I particularly enjoy the space and freedom that rural life provides.

### QUALIFICATIONS

|          |                     |
|----------|---------------------|
| 1995 PhD | UCC                 |
| 1990 BSc | Maynooth University |



Researching aspects of the meat processing chain.

## Dr Anne Maria Mullen

Principal Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

My interest in science started at a young age and brought me to UCG for a degree in science specialising in biochemistry. During that time I had the good fortune to work at a lab at Harvard University for a summer. Following the degree I completed a PhD in pharmacology in UCG. While in a neuro-pharmacology environment, my PhD retained a biochemistry angle and provided me with the opportunity to work in a research lab in a French hospital.

### Professionally...

My research covers different aspects relating to the meat processing chain. Understanding the biochemical basis for variation in meat quality has provided insights into, and improvements in, the eating quality of Irish meat. In addition, we are recovering high-value proteins from meat co-products for applications from food to sports nutrition and the biomedical sector. Maintaining a view on the application of the research is key and our close collaborations with industry ensure this happens. Securing funding for research, supervision of postgraduate students and presenting research at international conferences are some of the diverse activities in my work. My career to date has also included the opportunity of taking on a head of department role.

### Outside work...

I grew up in Portumna, Co. Galway, and have always held a love for the countryside and places of natural beauty. Our young daughter has an interest in climbing mountains so this ensures that we get to enjoy the great outdoors.

### QUALIFICATIONS

|  |     |
|--|-----|
| 1991 BSc                                     | UCG |
| 1995 PhD                                     | UCG |
| 2006 Cert in Project Management              | NUI |
| 2016 Level 6 Coaching Models of Practice QCI |     |



Assisting with all aspects of competitive research funding and grant applications.



## Dr Órlaith Ní Choncubhair

Research Officer

Teagasc, Head Office, Oak Park, Carlow

### Education...

Science subjects were my favourite at school, especially physics because it provides a fundamental understanding of the world around us and beyond. So I studied science in UCD, specialising in physics. Later I completed a PhD in Teagasc on greenhouse gas (GHG) emissions from agriculture using atmospheric physics techniques.

### Professionally...

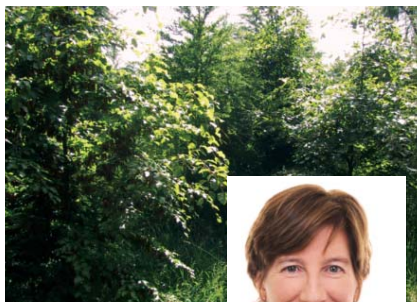
As a Teagasc postdoctoral researcher, my work focused on assessing carbon storage in agro-ecosystems. I also became Consortium Manager of FACCE ERA-GAS, an ERA-Net Cofund co-ordinated by Teagasc and co-funded by the European Commission. Involvement in this international project led to my current role in the Research Support Office, where I promote funding opportunities in Teagasc and assist with all aspects of competitive research funding and grant applications. In FACCE ERA-GAS, we're also now focusing on launching the newly-funded GHG projects and developing opportunities for enhanced co-operation with international alliances.

### Outside work...

I'm originally from Wexford and have a keen interest in GAA. Coupled with an optimistic outlook, I'm hoping for great things for Wexford in 2018! Apart from jogging, yoga and mountain hiking, I also love all types of music. I play the piano and have recently taken up the concertina.

### QUALIFICATIONS

|          |             |
|----------|-------------|
| 2004 BSc | UCD         |
| 2007 MSc | UCD         |
| 2015 PhD | Teagasc/UCD |



Promoting afforestation, and providing developmental and advisory support to forest owners.



## Dr Nuala Ní Fhlatharta

Head of Teagasc Forestry Development Department

Teagasc, Mellows Centre, Athenry, Co. Galway

### Education...

I always knew that I wanted to work in the area of growing plants and trees, and decided to do a degree in forestry in UCD. After graduating I went on to do a PhD with Teagasc on the factors affecting the growth of poplars and willows for biomass.

### Professionally...

I initially worked in the private sector on various consultancy and afforestation projects, and also in the nursery/soft fruit sectors. Subsequently, I was recruited by Teagasc as one of the first three forestry advisors in the organisation. This was an exciting, if challenging, time as it coincided with the expansion in farmer forestry in Ireland. I'm now Head of the Teagasc Forestry Development Department and we have a team of researchers and advisors working on a range of topics including tree improvement, silviculture and forest management. In addition to promoting afforestation, we also provide developmental and advisory support to forest owners.

### Outside work...

I now live in Galway and we have three children. I enjoy watching hurling and football, which is good as I spend much of my free time ferrying children to matches and training! I also love walking (particularly on the coast and in the woods), swimming and, when I get a chance, reading.

### QUALIFICATIONS

|             |             |
|-------------|-------------|
| 1988 BAgrSc | UCD         |
| 1991 PhD    | Teagasc/UCD |
| 1996 MRD    | NUIG        |



Increasing efficiency and improving farming practices.



## Dr Bernadette O'Brien

Principal Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I was always interested in science subjects at school and took all that were available – physics, chemistry, biology and maths. I qualified with a primary degree in dairy science from University College Cork, and followed this with an MSc and a PhD, both also from UCC.

### Professionally...

I have worked with Teagasc more or less since I finished my education, in the areas of conventional milking technology, labour efficiency on farms, milk quality, automatic milking and precision farming technologies. Currently here at Moorepark, we're researching ways to milk herds of dairy cows automatically. It's different to other automatic systems around the world because here we have a grass-based system. Precision farming technologies look at ICT tools for grass measurement, among other things. Many farms around the country have expanded recently and farmers are talking about the problems they are facing regarding labour efficiency and availability. We are looking at ways this could be addressed. Facilities and practices on farm will have a bigger influence on increasing efficiency.

### Outside work...

I was born and raised in west Cork and am still living in a rural area. I enjoy outdoor activities such as walking and sightseeing.

### QUALIFICATIONS

|                                   |     |
|-----------------------------------|-----|
| 1982 BSc                          | UCC |
| 1985 MSc                          | UCC |
| 1988 PhD                          | UCC |
| 1995 Diploma in Rural Development | UCC |



Carrying out biomedical research and research management.

## Dr Grace O'Callaghan

Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I completed my PhD in medicine at University College Cork focusing on the identification of novel drug targets for colon cancer. I then completed my research fellowship at Harvard Medical School, Dana Farber Cancer Institute, Boston, USA.

### Professionally...

I have always had an interest in biomedical research and research management. I have managed many projects, including clinical studies at Cork University Hospital, and I currently work on a wide variety of projects as manager of the APC Microbiome Institute project for Teagasc. I am also actively involved in management of the communication of research findings to the public.

### Outside work...

I enjoy volunteering with Special Olympics Ireland, running, swimming and playing music.

### QUALIFICATIONS

|                    |     |
|--------------------|-----|
| 2006 BSc           | UCC |
| 2013 PhD           | UCC |
| 2016 MSc (ongoing) | UCD |



Creating process efficiencies that result in cost savings for dairy manufacturers.

## Dr Norah O'Shea

Research Officer

Teagasc Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I completed a degree in food business in UCC, which had a mixture of business and science subjects. As I found the food science aspects interesting I decided to do an MSc in food science. After my MSc I went to Teagasc to do a PhD in gluten-free ingredients and formulations.

### Professionally...

The PhD and the first postdoctoral position I held in Teagasc were based on gaining a greater understanding of cereal structures, i.e., bread formulations and extruded snack formulations and, in particular, investigating the effects of healthy alternative ingredients on the nutritional, product structure and eating quality of cereal products. As I had a keen interest in food structures and new technologies, I then progressed to a postdoctoral position in the research field of process analytical technologies (PAT). In my current researcher role we have projects looking at creating process efficiencies that result in cost savings for dairy manufacturers. We do this by investigating different properties of dairy concentrates; once we understand how a dairy concentrate behaves we can use instruments to monitor and control the overall behaviour of the process.

### Outside work...

I am originally from Co. Kerry, so naturally I am a big Gaelic football supporter. Like every Kerry person I love going to Croke Park, although we haven't been as lucky in recent years. As my home in Kerry is near the sea, I love fishing, going out in the boats and the sea air! I also enjoy attending music concerts and festivals.

### QUALIFICATIONS

|          |             |
|----------|-------------|
| 2008 BSc | UCC         |
| 2009 MSc | UCC         |
| 2014 PhD | Teagasc/UCC |



Ensuring the sustainable management of land and soil in Europe.

## Lilian O'Sullivan

Research Officer

Teagasc Environment Research Centre, Johnstown Castle, Co. Wexford

### Education...

I completed a BSc in international development and food policy at UCC focusing on the area of food security and agricultural development. A natural progression led me to completing an MSc in soils and sustainability with the University of Edinburgh. I am currently an external PhD candidate with WUR, The Netherlands.

### Professionally...

Having completed my MSc research with Teagasc in 2014, I have been working as part of the soil research programme. Currently, I work on LANDMARK, a European research project on the sustainable management of land and soil in Europe based on the concept of soil functions. My role is to support the development of the functional land management policy framework, with particular emphasis on network analysis and intercontinental shared learning. I also work on the EU Soilcare project, which is looking at the development of soil improving cropping systems for Europe.

### Outside work...

I am originally from Bantry, Co. Cork, so I try to go home as often as I can. As I travel overseas so frequently in my current role, I am very happy to spend time enjoying Ireland outside of work. I like to stay active and will usually swim, walk or jog several days a week. I enjoy more relaxed pursuits also, such as cinema, and Wexford has plenty to offer in relation to the arts. I am an avid sports fan and I enjoy watching GAA. Friends and family are particularly important to me so time spent with them is time well spent!

### QUALIFICATIONS

|                    |                         |
|--------------------|-------------------------|
| 2013 BSc           | UCC                     |
| 2014 MSc           | University of Edinburgh |
| 2017 PhD (ongoing) | Wageningen University   |





*What is the role of exercise and diet on the human gut microbiome?*

## Dr Orla O'Sullivan

Research Officer – Computational Biology

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

Since childhood I have had a passion for science so opting to study all science subjects for my Leaving Certificate was a no-brainer. I started a degree in biological and chemical sciences in UCC, choosing to focus on biochemistry in third year. This was followed by a PhD in bioinformatics.

### Professionally...

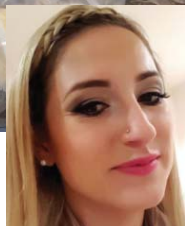
In 2006, following a postdoctoral fellowship at the Conway Institute in UCD, I joined Teagasc where I have had the opportunity to work on many exciting projects. My current research focuses on profiling the microbiome from various environments, including the human gut and lung, rumen and food. Of particular interest to me is the role of exercise and diet, specifically whey protein, on the human gut microbiome, both in healthy and diseased cohorts. I also have a keen interest in science communication and participate in many public events.

### Outside work...

I'm an avid sports fan and love watching rugby, GAA, basketball, golf, athletics and basically anything competitive. I try to attend as many live sporting events as possible. Also a lot of my time is taken up sitting at dance competitions with my young daughter.

### QUALIFICATIONS

|          |     |
|----------|-----|
| 2000 BSc | UCC |
| 2004 PhD | UCC |



*Developing and testing alternative packaging for cheese and hazelnuts.*

## Dr Camila Augusto Perussello

Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

My education in both food and mechanical engineering helped me to develop a holistic view of the agri-food industry.

### Professionally...

I use mathematical modelling and computational simulation to predict and optimise food manufacturing processes. This allows me to work in virtually all food science areas. I manage the EU-funded project FoodStars at Teagasc, which is a joint work between Teagasc, FINS – Institute of Technology (Serbia) and University of Bologna (Italy). With the increasing demand for sustainable technologies and materials in the food sector, I've been studying eco-friendly packaging and edible coatings for food applications. I've been developing and testing antioxidant films made from biodegradable materials and residues from the food industry as alternative packaging for cheese and hazelnuts.

### Outside work...

I'm originally from Brazil and moved to Europe four years ago – I lived in Italy for three years before coming to Ireland. I love travelling and enjoy being outdoors in contact with nature; this recharges my batteries! I've been engaged in the animal cause since I was a teenager and I've been a vegetarian for almost 20 years now. I try to bring my environmentalist side to my work in science, for example investigating ways of recovering value from food waste.

### QUALIFICATIONS

|           |  |
|-----------|--|
| 2006 MEng | Pontifical Catholic University of Paraná, Brazil |
| 2008 MSc  | Pontifical Catholic University of Paraná, Brazil |
| 2013 PhD  | Federal University of Paraná, Brazil             |



*Food microbiology and the role of the gut microbiota in health and disease.*

## Dr Mary Rea

Principal Research Officer

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I studied in UCC, majoring in microbiology with biochemistry as a subsidiary subject. The microbiology degree at that time was very much geared towards food, and particularly dairy foods, as a consequence of the long tradition of the dairy science degree in Cork. I studied for a master's in food microbiology before moving to Moorepark.

### Professionally...

During my time in Moorepark I worked on a wide range of microbiology-related projects; early in my career this was mainly in cheese and dairy fermentations, and food safety. More recently, through my involvement with the APC Microbiome Institute, while still involved in food microbiology, the focus of my research has expanded to include the role of the gut microbiota in health and disease, and the study of gut microbes producing antimicrobials as alternatives to antibiotics. As Platform Leader in the APC I also look after the DPC and APC culture collections.

### Outside work...

I am married to a teacher with a passion for physics and the outdoors, and we have three grown-up children. I love hill walking; we have walked most of the hills in Munster and beyond with the same group of friends over many years. I enjoy reading, gardening and cooking for family and friends at the weekends.

### QUALIFICATIONS

|          |     |
|----------|-----|
| 1975 BSc | UCC |
| 1977 MSc | UCC |
| 2011 PhD | UCC |



Studying people's food choices and mapping the factors that drive them.

## Dr Áine Regan

Research Officer

Teagasc, Rural Economy and Development Programme, Ashtown, Dublin 15

### Education...

I studied psychology in NUI Galway. I was really interested in understanding what drives people to persist with risky health behaviours, so I went on and completed a master's in health psychology in Galway. I then moved into the food research area and completed a PhD on food risk perception and communication in UCD.

### Professionally...

I have worked on national and European research projects in UCD, the University of Ottawa and now in Teagasc. As a behavioural scientist, my approach to solving a behavioural problem is to apply systematic and rigorous models that allow us to understand and map all of the factors that drive the behaviour – the same approach can be used whether we are working with consumers, farmers or other agri-food actors. When we understand what factors are driving the behaviour, we can then develop evidence-based interventions that tackle those factors and have a greater chance of achieving long-lasting behavioural change.

### Outside work...

I'm from Glenties in Co. Donegal and love getting back up as often as I can to one of the most beautiful and scenic parts of Ireland! Outside of work, you'll mainly find me out running, going to GAA matches, watching Netflix, working in the garden or cooking. What I'm doing on any given day depends on my current motivation levels.

### QUALIFICATIONS

|          |      |
|----------|------|
| 2009 BA  | NUIG |
| 2010 MSc | NUIG |
| 2014 PhD | UCD  |



Creating sustainable development in staple foods.

## Dr Kim Reilly

Research Officer

Teagasc, Food Research Centre, Ashtown, Dublin 15

### Education...

Having always loved science subjects in school, I did a joint honours degree in molecular biology and industrial microbiology at UCD. Then I moved to Bath University in the UK where I did my PhD on molecular biology of the staple tropical food crop cassava (*Manihot esculenta Crantz*).

### Professionally...

My PhD and first postdoctoral posts were joint projects with the Centro Internacional de Agricultura Tropical (CIAT), one of seven Food and Agriculture Organisation of the United Nations-mandated CGIAR research centres, so I was lucky to travel and work several times at the CIAT. I continued the staple food/sustainable development theme with an internship in an NGO in Mexico before going back to Bath. In 2008, I moved home to Ireland and began working for Teagasc on a project studying the effects of agricultural practices on phytochemicals in vegetables, before moving into my current role in research support.

### Outside work...

My hobbies continue the food theme. I have two allotments and I'm a member of the pig syndicate at the allotment. We raise our own free-range pork and currently have 14 pigs – a mixture of Gloucestershire Old Spots and Saddlebacks. I try to stay in shape by getting to the gym or running several times a week. At the moment I'm training for the Dublin Run in the Dark 5k in aid of the Mark Pollock Trust. I did it last year and it was great fun.

### QUALIFICATIONS

|          |                    |
|----------|--------------------|
| 1994 BSc | UCD                |
| 2001 PhD | University of Bath |



Using knowledge transfer to support rural farm families.

## Dr Mary Ryan

Researcher and Rural Development Programme Co-ordinator

Teagasc, Rural Economy and Development Programme, Mellows Campus, Athenry, Co. Galway

### Education...

Having been brought up on a dairy farm, I have always been interested in nature and the environment. I initially studied forestry and worked as a forest manager in the private sector and as a farm forest advisor/specialist in Teagasc. Since then, I undertook a master's in environmental management and a PhD in environmental economics.

### Professionally...

My current research involves examining the cost-effectiveness and likelihood of adoption of different farm-level environmental protection measures. The rural development unit makes farm families more aware of opportunities to supplement their income. These include rural tourism, artisan food, organics, sport horses, renewable technologies, forestry, training and upskilling opportunities, and information on benefits and entitlements. I find it very rewarding to work with farm families and believe in the importance of knowledge transfer in helping them to deal with financial, environmental and social sustainability challenges.

### Outside work...

I enjoy visiting primary schools and taking the students on nature walks. Although my work is largely indoors in recent years, I'm still an outdoor girl and enjoy walking by the sea, in the Burren, and the physical (and mental) challenges of skiing and golf. I enjoy most types of music and dance, and I sing in a renaissance choir.

### QUALIFICATIONS

|                 |      |
|-----------------|------|
| 1986 BAgSc      | UCD  |
| 2003 MAgSc      | UCD  |
| 2007 Grad. Dip. | WIT  |
| 2016 PhD        | NUIG |



Researching infectious diseases of domestic livestock.

## Dr Riona Sayers

Senior Research Officer

Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork

### Education...

I began my academic career with a science degree in UCC. I eventually specialised in biochemistry, as I loved the elegance of metabolic cycles and proteins, the building blocks of biological systems. I completed a master of animal science in UCD, focusing on BSE. I returned to UCD to complete a degree in veterinary medicine as a mature student in 2002. Following a period in veterinary practice, I took up a position with Teagasc and completed a PhD on infectious diseases in Irish dairy herds.

### Professionally...

My professional career began in 1993 when I joined an Irish start-up veterinary diagnostics company called Enfer Scientific. I was lucky to head up the research team that developed the Enfer TSE test for BSE. My career in Enfer allowed me not only to develop my scientific skills, but also skills in project management, logistics and marketing. I left to complete my veterinary degree, and secured a position with Teagasc as a research officer. My research centres on infectious diseases of domestic livestock.

### Outside work...

I have two children, eight horses, five heifers, three dogs and a cat. Needless to say, I like the outdoor life and have plenty to keep me busy! All of the family are interested in horses, so we have some great days out at local fun rides. We all love to ski and travel to France annually for some fun on the slopes. My most recent interest is gardening, a pastime that I find challenging, but therapeutic and rewarding.

### QUALIFICATIONS

|            |     |
|------------|-----|
| 1993 BSc   | UCC |
| 1998 MAnSc | UCD |
| 2007 MVB   | UCD |
| 2015 PhD   | UL  |



Studying proteolysis and production of bioactive peptides in a variety of cheeses.

## Dr Sanja Seratlic

Research Officer

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

As a great cheese lover I graduated as an engineer in food science and technology (equivalent to an MSc). I completed my postgraduate (Magisterium) studies at the same faculty. I studied the proteolysis of blue-veined cheeses in a type of Gorgonzola, which inspired me to learn Italian as well. Then I fell in love with microbiology, so I completed my DSc in the area of the permeabilisation of lactobacilli cells by using pulsed electric fields (PEF).

### Professionally...

I worked as a teaching assistant at the University of Belgrade for over eight years, and as a researcher at Lund University in Sweden. In January 2012, I commenced working as part of a team investigating novel technological and microbiological approaches to improve the quality of reduced-fat, reduced-salt Cheddar-type cheese in Teagasc. I then joined Food for Health Ireland to investigate potential bioactive peptides in commercial Cheddar and other cheese varieties, for the identification of specific health-enhancing properties. I am also a Programme Manager of Health Cheese Work Package.

### Outside work...

I am originally from Belgrade, the capital of Serbia, so living in a small town has its pros and cons. I miss going out with my friends on river restaurants, but I like Irish nature, travelling around the island and hiking in the woods. I love horse riding, and also do some mountain biking. I also paint, like learning foreign languages and recently started learning to play violin – luckily, my neighbours cannot hear me!

### QUALIFICATIONS

|                  |                                |
|------------------|--------------------------------|
| 1998 MSc         | University of Belgrade, Serbia |
| 1998 Mag.Scient. | University of Belgrade, Serbia |
| 2007 DSc         | University of Belgrade, Serbia |



Adding value to foods to make them more healthy and nutritious.

## Prof. Catherine Stanton

Principal Research Officer

Teagasc, Food Research Centre, Moorepark, Fermoy, Co. Cork

### Education...

I had a great science teacher in Loreto Fermoy, who made the subject very interesting. While studying for a BSc at UCC, I specialised in nutrition and food science. I loved the laboratory, and realised that a career in research was the one for me, so I completed an MSc.

### Professionally...

After six years at UCC I felt it was time for a change, so I completed my PhD in the UK, and then worked in industry in the UK and in research in the US. On my return to Ireland I started work with Teagasc and have been there ever since. I also work in the APC Microbiome Institute in UCC, and am a Research Professor in UCC's College of Medicine and Health. My research focuses around the area of milk, food and health, adding value to foods to make them more healthy and nutritious. This takes in a large variety of projects, from investigating the importance of gut microbiota in human health to looking at a possible role for omega 3 fatty acids in mental health. I'm also involved in research comparing milk produced by cows in a grass-based feeding system with that from other feeding systems, and reducing greenhouse gases through research on bovine gut bacteria.

### Outside work...

My husband is also a scientist, and works in UCC, so science is a very big feature in our household. Our two children are in college now, and we are enjoying having more time on our hands for relaxing and walking the dogs.

### QUALIFICATIONS

|          |                            |
|----------|----------------------------|
| 1983 BSc | UCC                        |
| 1986 MSc | UCC                        |
| 1988 PhD | Bournemouth University, UK |
| 2009 DSc | NUI                        |





*Farm economics and how different countries' farms compare in competitiveness and efficiency.*



## Dr Fiona Thorne

Senior Research Officer

Teagasc, Rural Economy and Development Programme, Ashtown, Dublin 15

### Education...

I completed a degree in agricultural science, specialising in agribusiness and rural development. It was during my third-year work placement with Teagasc that I got the love for research. After my degree, I went on to study for a PhD under the Teagasc Walsh Fellowship programme in horticultural economics.

### Professionally...

I specialise in farm-level economics and policy analysis research related to the crop sector in Ireland, and inter-country farm efficiency and competitiveness analysis. Projects I have worked on relating to policy analysis reviewed possible impacts of decoupling direct payments and energy crop establishment grants on the economics of crop farming in Ireland. Inter-country competitiveness analysis, which I have been involved in for nearly 20 years, reviews the inter-country costs and returns of all major farming systems in Ireland with other EU and international producers.

### Outside work...

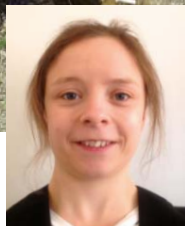
I was always interested in the business side of farming coming from a strong farming background in north Dublin, so the career choice in agricultural economics was an obvious one for me. My husband is a cereal farmer and we have three children, which equates to a very busy home life. A busy work and home life leaves little spare time for me to personally devote to leisure time, apart from the odd stroll along the canal in Ashtown at lunchtime, but I have recently taken up cycling.

### QUALIFICATIONS

|            |     |
|------------|-----|
| 1999 BAgSc | UCD |
| 2002 PhD   | UCD |



*Developing best practice on water quality.*



## Dr Sara Vero

Research Officer – Agricultural Catchments Programme

Teagasc, Advisory and Training Centre, Johnstown Castle, Co. Wexford

### Education...

I studied animal and crop production as an undergraduate. Coming from a non-agricultural background this helped me to develop a broad understanding of Irish agriculture. I became increasingly interested in soil science and hydrology, and focused on these areas in my MSc and PhD research with Teagasc.

### Professionally...

I spent my postdoc in Kansas State University, developing interdepartmental research between the geology, agronomy and ecology departments. I then took up a position with the Agricultural Catchments Project. My current role focuses on disentangling the factors influencing water quality. I have been leading synoptic river surveys involving high spatial intensity water sampling over brief time periods to give a comprehensive overview of in-stream nutrient dynamics. The work our team does is vital not only to guide policymakers, but also to develop effective best practices at farm level.

### Outside work...

I am a keen powerlifter and generally compete a couple of times a year. Having a little strength certainly helps during fieldwork!

### QUALIFICATIONS

|            |      |
|------------|------|
| 2011 BAgSc | UCD  |
| 2013 MSc   | UCD  |
| 2016 PhD   | NUIG |



*Facilitating the transfer of research outputs to industry.*



## Dr Miriam Walsh

Head of Intellectual Property, Technology Transfer Office

Teagasc Head Office, Oak Park, Carlow

### Education...

I completed my degree in analytical sciences at DCU, majoring in chemistry, and then undertook a PhD in bio-analytical chemistry. While working in UCD's chemistry department, I completed an MSc in technology management. I then completed a diploma in IP and technology law at the Law Society of Ireland.

### Professionally...

After a short period working in industry I took a post as programme manager in the UCD chemistry department, where I developed an interest in intellectual property (IP). I worked as IP officer in the TCD Technology Transfer Office (TTO) before taking the job in Teagasc to set up an intellectual property function in 2006. I head up the IP section of Teagasc TTO and am responsible for managing Teagasc's patent portfolio, IP commercialisation support to researchers and formalised arrangements with industry through collaborations and licensing of Teagasc IP. I find this an interesting, challenging and constantly evolving role, and my scientific background is key to understanding issues involved in facilitating the transfer of research outputs to industry.

### Outside work...

I'm from Kilkenny so a mad hurling fan and spend a lot of time at GAA matches, and since marrying a Kerryman, football has been added to the agenda. I play badminton and tennis competitively, and played soccer and camogie at competitive level for years. I also love to travel, cycling for fun and other outdoor pursuits, and the Irish arts/music scene.

### QUALIFICATIONS

|          |     |
|----------|-----|
| 1992 BSc | DCU |
| 1997 PhD | DCU |
| 2006 MSc | UCD |



Researching gut microbiology in cattle and sheep.



## Dr Sinéad Waters

Principal Research Officer –  
Animal Molecular Biology

Teagasc, Animal & Grassland Research  
and Innovation Centre, Grange, Dunsany,  
Co. Meath

### Education...

At school my strengths were always in mathematics and science subjects, which led me to a career in science. I completed a degree in biotechnology specialising in genetics and microbiology, a PhD focused on gut microbiology and later a higher diploma in statistics.

### Professionally...

I worked at the University of Illinois as a postdoctoral scientist and at Alltech as a research scientist focusing on gut microbiology. In my current role, I focus on understanding the microbes that exist in the rumen of cattle and sheep, and strategies for their manipulation to improve nutrient digestion and reduce greenhouse gas (GHG) emissions. I am also involved in discovering DNA-based biomarkers for feed efficiency and low GHG emissions contributing to the breeding programme. I was a visiting scientist at the Institut National de la Recherche Agronomique (INRA) in France in 2015.

### Outside work...

I am originally from Co. Galway, raised on the shores of Lough Corrib. As such, my husband and I, along with our three young children, enjoy the outdoors, spending time walking in the mountains, boating and fishing on the lake. The children are involved in ballet and GAA, particularly hurling and football; hence, my weekends are occupied with their training and sporting activities. I enjoy playing piano and tennis, and doing pilates and yoga. I speak fluent Irish and French.

### QUALIFICATIONS

|                     |      |
|---------------------|------|
| 1999 BSc            | NUIG |
| 2003 PhD            | NUIM |
| 2008 Higher Diploma | TCD  |



Helping people to upskill and improve their organisations.



## Ita White

Food Safety and Quality  
Consultant/Trainer

Teagasc, Food Research Centre,  
Ashtown, Dublin 15

### Education...

A secondary school teacher advised me to study something I loved: that was science. I specialised in industrial microbiology for my primary degree, followed by a master's in agricultural science. Later I returned to complete another master's in education and training management to complement my work in training.

### Professionally...

My qualifications opened many doors and gave me many choices. I've worked in the civil service, industry, the European Commission and currently in Teagasc. I've held many roles from quality and regulatory affairs manager to auditor. The area I enjoy most is training; transferring knowledge and helping others to upskill and improve their organisations is really rewarding. I've worked with and trained people from all over the world and worked in many European countries and in parts of the US. Science really does open up many choices from a career perspective.

### Outside work...

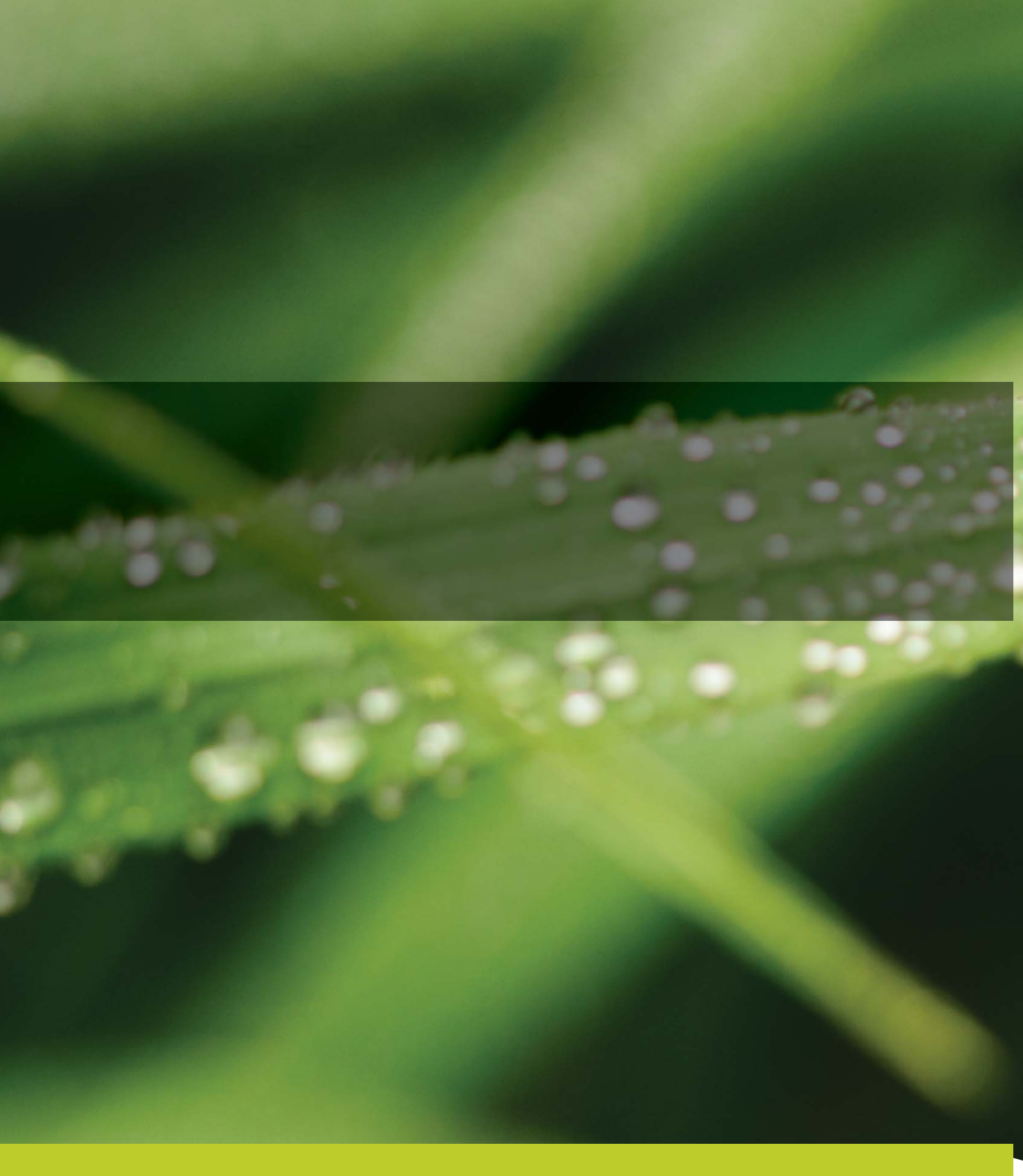
My husband studied computer science so our children have little option but to share our love of science, from astronomy to nature and the outdoors. Scouting is another way we enjoy the outdoors, from hiking to kayaking. I love nothing more than snorkelling when on holidays, followed by a good book. I've recently taken up tennis and have been lucky to join a very welcoming club. Between that and soccer, rugby, sailing and Irish dancing, life is pretty busy.

### QUALIFICATIONS

|          |     |
|----------|-----|
| 1986 BSc | UCD |
| 1990 MSc | UCD |
| 2002 MSc | DCU |

### DISCLAIMER

While every effort has been made to ensure that the information in this publication is correct, Teagasc and the publishers cannot accept responsibility for any errors or omissions in the content.



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Teagasc, Oak Park, Carlow, R93 XE12  
[www.teagasc.ie](http://www.teagasc.ie)