# Irish Grassland Association

Members' Information Booklet Issue No. 49 Spring/Summer 2022

"To advance the knowledge of good grassland management in Irish farming"



## **CORPORATE MEMBERS 2022**

Irish Grassland Association



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## **CORPORATE MEMBERS 2022**

Corporate membership commences on the 1st January annually. Standard membership is deducted from all IGA members via direct debit on an annual basis.

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Front Cover Photo: Sheree Jordan Monaghan, Student in Sustainable Agriculture, Dundalk Institute of Technology, 2nd Place.

### Editorial



Mike Egan Editor and IGA Council Member

#### Welcome to the IGA Spring / Summer 2022 Members Information Booklet.

Welcome to our first issue of 2022 and a coming year full of live events! Since our last publication, all the various committees of the association have been busy arranging events for the coming year. In our spring edition we would normal start by giving the highlights of the Dairy Conference normally held in January, however as has been the case so many times in the past 24 months, Covid restriction called for a change of plan. However the Sheep, Beef and Dairy committees have being working hard and will give a previews of events planned for the coming months. Meanwhile in Section 3 our 'Year in My Wellies' is back with two new contributors - Lauren Claffey and Edel O'Connor, have written how they have survived the past few busy months on their dairy and sheep enterprises and balancing there busy college work and PhD trial work.

Farmers have always been a central part of our newsletter and in this edition were are lucky to have articles from sheep and beefs farms on how they are both improving output and productivity on their busy farms. We hear from John on how

#### SUGGESTIONS & FEEDBACK PLEASE!

If you have any suggestions for the members information booklet or any particular topics or features you would like us to include in our forthcoming issues, please send them via email to office@irishgrassland.ie. We would love to hear from you!

biosecurity, hygiene and colostrum management at lambing have increased productivity and output on his farm. Robert a beef farmer from Meath explains how he manages his compact calving pattern and how he fits his calving spread around his busy off farm work life.

With increasing inputs costs across the entire industry now is a key time to have a renewed focus on improved grassland management and increased grass utilisation. We are lucky to have a number of articles all demonstrating how to improve productive of our grass swards and reducing the need for expensive inputs. Peter a Grassland researcher from Grange outlines key management guidelines in improve performance and profit for the beef herd from grassland swards. Additionally with a he renewed focus on white clover due to environmental concerns and ever increasing fertiliser prices, we outline how best to establish and management grass/clover swards. William and Martin focus on increasing the efficiency of our grassland swards through improved fertiliser management and effective weed control in grass swards.

We include an Archive biography of the past president of the IGA Michael Walshe who was president from 1966 - 1967, a very significant presence in Irish agriculture for many years and was involved in establishing the Teagasc Dairy Research Centre Moorepark.

Finally, Christy Watson IGA President has put a call out to members for information for our 75<sup>th</sup> anniversary. Please submit any information or memorabilia to Maura in the IGA office if you have historical data of interest. The Editorial Committee thanks everyone who contributed to this Information Booklet.

Michael Egan, Editor IGA publication.



## **IGA Annual General Meeting 2022**

Maura Callery IGA Office Manager

The Irish Grassland Association (IGA) AGM is scheduled to take place in early September. Each year a small number of seats on our council can become available to be filled through election, on foot of existing council members terms expiring. Last year seen the retirement of Eddie Connell, Noreen Lacey, George Ramsbottom, Finbarr Kiernan, Thomás O'Leary and Past President Jan Jensma. The IGA would not be able to function without the expertise of our extraordinary voluntary council members. When these people retire and vacate their seat, this then gives us opportunities to welcome new faces to the team. Last September we welcomed six new faces to our council namely, Liz Duffy, John Farrell, John Pringle, Patrick Gowing, Paddy Casey and Aoife Feeney.

All fully paid-up members of the IGA are eligible to be nominated for election. We want to give you our loyal members, lots of notice to consider if you wish to put your name forward this year for election to our council. If you think that this is for you, then please contact us to express your interest by emailing office@irishgrassland. ie (no later than our administration deadline of 9 am Monday 4th July 2022) with two supporting nominations. (Constitutionally we also need to receive two supporting nominations for you in writing from two current Irish Grassland Association members). Feel free to ring our office if you require some guidance in this process.

While our AGM is a good time away, it is paramount to register your interest if you wish to attend, by emailing the office @irishgrassland.ie no later than 4th July 2022.

Pictured above are some of the newest faces to our council Paddy Casey, Liz Duffy, Aoife Feeney, Patrick Gowing and John Pringle

While our AGM is a good time away, it is paramount to register your interest if you wish to attend, by emailing the office **office@irishgrassland.ie** no later than 4th July 2022.

## IGA Sheep Conference and Farm Walk 2022

This year's IGA sheep conference sponsored by Mullinahone Co Op will take place in the Hudson Bay Hotel, Athlone, Co. Westmeath on 19th May. The format will be similar to previous years with an indoor conference in the morning followed by a farm walk in the afternoon. Registration for the conference will commence from 10 am with the conference starting at 10.30 am and proceedings wrapping up for 4 pm.

The indoor morning session has an excellent line up of speakers with Ryan Duffy, HIPRA, Philip Creighton, Teagasc and Roger Bell, a sheep farmer from Northern Ireland taking to the podium. Both the morning and afternoon sessions will address pertinent topics including mastitis control, incorporating clover into your sheep sward and the challenges and benefits of operating a large scale, multi enterprise grassland livestock system.

We would like to thank our sponsors Mullinahone Co-Op for their continued support





Fiona McGovern IGA council member and Teagasc





**Ryan Duffy** 

#### Ryan Duffy, MVB CertDHH MRCVS, HIPRA

Ryan qualified as a veterinary surgeon from UCD in 2016. Since then, he has completed a number of years in practice in the Republic of Ireland, the UK, and New Zealand. He has completed a farm animal clinical studies internship in the UCD

referral veterinary hospital and a postgraduate certificate in dairy herd health. He is currently undertaking a masters in ruminant nutrition in Harper Adams. Ryan has a particular interest in preventative medicine with an emphasis on herd/ flock health, with particular focus on calf health and milk quality.





**Philip Creighton** 

potential. Additionally, he also investigated methods of reseeding grassland pastures.

He is currently a Research Officer based in Teagasc Athenry leading the Sheep Grassland Systems research programme. He established the Sheep Research Demonstration unit at Athenry and he was recently appointed Sheep enterprise leader with responsibility for managing



Roger Bell

#### Roger Bell, Sheep and Beef Farmer

Dr. Philip Creighton,

**Grassland Scientist** 

Philip graduated from

UCD with a degree in

Agriculture Science and

went on to complete a PhD

with Teagasc Moorepark

and UCD investigating the

impact of varying levels of

perennial ryegrass content

on sward production

Teagasc

Roger and his wife Hilary are sheep and beef farmers based in Kells, Co. Antrim. They are currently farming 550 Texel x Mule ewes in a mid-season lambing flock. Roger and Hilary are strong advocates for technology adoption and as a result are one of

the DAERA technology demonstrations farms in Northern Ireland. In addition, Roger and Hilary are members of the Herbal lay EIP

#### Afternoon Farm Walk

Father and Daughter team, Peadar and Aoife Coyle, farm 230 acres near Curraghboy in South Roscommon. The farm consists of 70 acres of owned land in one block and the remaining 150 acres is comprised of rented ground. The Coyle's have a number of enterprises on the farm including a flock of 575 mid-season lambing ewes, a 40 cow suckler to weanling system, and a dairy calf to beef system finishing 50 bullocks annually. Over the past number of years the sheep enterprise has had a scanning

rate of 1.84 and weaning rate of 1.64 lambs per ewe joined to the ram with all lambs finished on farm. Peadar and Aoife make up the bulk of the labour force with other family members lending a hand during the busy periods of the year.

Maintaining optimal grazing infrastructure is a key element to the Coyle's farm with excellent facilities enabling good grassland management and reducing the labour requirement. The 70 acre home farm is divided into 17 permanent paddocks. Grass isn't measured on the farm but instead it is managed by eye and experience with heavy paddocks removed as baled silage, although this is rare due to the high stocking rate.

The Coyle's are strong advocates for mixed grazing with the cattle and sheep grazing together achieving better grass utilisation and animal performance compared to grazing separately. The home block is heavily stocked at 2.6 LU/ha with the 80 acres supporting 4 grazing groups consisting of 40 suckler



cows and their calves along with approximately 300 ewes with twin lambs. The remainder of the ewes and dairy beef animals are all grazed on the out farms.

All lambs are finished on farm with grass making up the majority of the diet. Lambs are weaned at 14 weeks of age at an average of 32kg. All lambs are weighed fortnightly which allows for frequent drafting across the summer months until October when all remaining lambs are housed and offered ad lib concentrates until drafting for slaughter. All potential replacement ewe lambs are ear notched at birth and the best performing 150 ewe lambs are retained. In august the 150 replacement ewe lambs are moved off farm to a contract rearer who looks after them until they return the following august as hoggets ready for the ram.

Peadar is a firm believer in soil fertility and has made a huge effort over the years to ensure it is optimised. This is evident with approximately 80% of



Peadar and Aoife Coyle

paddocks in index 3 or 4 for P & K. The home farm is soil sampled every 3 years and lime is spread accordingly to maintain a soil pH of 6.3 or above. The Coyle'sare keen to optimise their Nitrogen use efficiency through more targeted applications and the inclusion of clover in grazing swards in the future.

The Irish Grassland Association is hugely indebted to Mullinahone Co-op their support of our 2022 Sheep Conference. Speaking on behalf of the sponsors James Manley from Mullinahone Co-op said "We at Mullinahone Co-op are delighted to support the IGA since the outset and in particular their sheep conference as it allows sheep farmers to look at efficient and sustainable production systems that will help overcome the challenges which will inevitably face sheep farmers over the next decade".

Book your tickets early! To book your tickets, you can book online at www.irishgrassland.ie or phone Maura at 087-9626483.



## IGA Beef Event 2022

Niall Claffey IGA beef committee chairperson and Tradeforus

The 2022 Irish Grassland Association Beef Event will take place in Ballyhale, Co. Kilkenny, on the farm of Jimmy Madigan, on Tuesday, June 14<sup>th</sup>. Moving away from the traditional conference format, this year's complete event will take place on-farm - kicking off at the later time of 6.30pm. Event goers at the farm will be treated to some food before the walk commences at 7.00 pm.

Jimmy's farm consists of tillage, forestry and 76 ha of grassland - home to a herd of 100 autumn- and spring-calving cows and their followers. Jimmy and his wife - Ann-Marie - are the only labour units on the holding, with plenty of help coming in the years ahead from their children: Hannah, Jim, Kate, and Eddie. The cows and heifers calve from December to March, and from August to September each year. Replacements - sired by a maternal Charolais stock bull - are chosen from the crop of heifers from cows that calve in autumn, and the remainder are aimed to be finished at 19-20 months. Males are brought to beef in an under 16-month finishing system; additional bought-in bulls are also finished in the same system. The Kilkenny-based farmer moved

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away from steer beef in 2017 in order to grow the breeding herd on the farm - as the under 16-month bull system leads to bulls been wintered for one season only.

Furthermore, a good relationship with a dairy farming neighbour allows Jimmy to purchase several Limousin dairy-cross yearling heifers each year, which he calves down in the autumn time to the maternal Charolais stock bull; heifers obtained here will enter his spring-calving herd. He also uses Limousin AI on his home-bred heifers, and these calve in the springtime all going to plan. Two terminal Charolais stock bulls are run with the spring herd during the breeding season. While this breeding strategy may differ from the norm, it is something that has worked well for Jimmy down through the years. In 2021, Jimmy's calving interval stood at 369 days with an impressive 0.9 calves/cow/year.

For Jimmy, focusing on cows that have an ample supply of milk to feed their calves and utilising as much grass as possible has always been the key to success. The herd is grazed in an 18-paddock



system - operating in a 'grow in three weeks, eat in three days' system. The paddocks are serviced by excellent roadways which make the route to pasture as labour-free as possible. With an early turnout in spring, he takes advantage of the long grazing season prior to weaning. Pre-weaning, spring-born bulls are crept fed, while heifers are fed no meal. Bulls are then housed in November; however, heifers return to grass and are grazed until weather forces housing. In 2021, the males had an ADG to 200 days of age of 1.32kg/day, while their heifer comrades had a ADG of 1.2kg/day.

While grazed grass is Jimmy's number one priority during the growing season, excellent-quality silage is harvested to ensure high growth rates during the winter and finishing period. He maintains that without excellent-quality grass silage, the under-16-month bull system would be hard to operate. Last year's silage crop came back at 76% DMD when tested allowing the weanlings to achieve a 0.54kg/ day growth rate for the first two months of housing. Regular weighing complements the beef system and once bulls hit the target weight of 480kg, they are then moved into the finishing regime. In terms of slaughter, the 2021-killed bulls had an average carcass weight of 425kg, while the heifers averaged 347kg - with 89% of the feed coming from grass or grass silage.

To achieve this top-quality silage, Jimmy harvests his own silage with a mower, tedder, baler and wrapper. The same land is never cut year-on-year and ground earmarked for silage is grazed off early in the year. with 2,500 gallons/ac of slurry applied. At the start of March, chemical fertiliser is applied, and once the weather allows in May, it is harvested. Reseeding along with keeping soil fertility at optimal levels have also played a pivotal role on the farm over the years, with most of the grassland reseeded in the last decade. Jimmy is now ready to explore the different options available when it comes optimising nitrogen efficiency and plans to sow clover this spring.

Jimmy believes that for suckler-to-beef farming to be successful, there are a menu of criteria that must come together - number one being grass and topquality silage. He also highlights adequate facilities - especially with a bull finishing system; and a fertile, milky cow that can produce and rear a calf every year.



Research Officer

In addition to the farm walk, Teagasc Research Officer, James Humphreys, will focus on how beef farmers can reduce their dependency on purchased chemical nitrogen on suckler and beef farms. With fertiliser prices witnessing James Humphreys unprecedented highs, this Teagasc Moorepark timely discussion will indicate how farmers may mitigate some of the high input costs

this year. The role that clover plays in such systems has been well documented of late and James will highlight establishment and management practices of both red and white clover on beef farms, and how to reduce the need for chemical nitrogen. He will also discuss how to maximise the release of nitrogen from the extensive soil nitrogen reserves present on farm.



Phelim O'Neill Irish Farmers Journal Market Intelligence & EU Specialist

On the final stand of the day, Irish Farmers Journal Market Intelligence & EU Specialist, Phelim O'Neill, will examine the changing marketplace for commodities in 2022 and what this means for the Irish beef market. He will also highlight both the short- and longterm outlook for commodity prices that Irish beef farmers purchase - namely fertiliser, feed and energy. Finally, Phelim will discuss Ireland's

position in world markets and what this means for Irish beef farmers on the ground.

The Irish Grassland Association is hugely indebted to Mullinahone Co Op their support of our IGA Beef Event 2022. Speaking on behalf of the sponsors, James Manley, from Mullinahone Co Op said: "We at Mullinahone Co-op are delighted to support the IGA Beef Event as it allows beef farmers to look at efficient and sustainable production systems that will help overcome the challenges which will inevitably face farmers over the next decade."

If you require further information, please visit our website - www.irishgrassland.ie; or call Maura at: 087-9626483.

# **Irish Grassland** Association

## **DAIRY SUMMER TOUR** 19th July 2022



We would like to thank AIB for their continued support #BackedbyAIB



## Irish Grassland Association **DAIRY CONFERENCE** 20th July 2022



We would like to thank our sponsors YARA for their continued support

## The 2 day, 1 night extravaganza is coming this July. 3 events will be held over 2 days.

Book your tickets soon on www.irishgrassland.ie to attend the Dairy Summer Tour and the Dairy Conference to avoid disappointment. We will be hosting a free admission event for all IGA Members in the Talbot Hotel Clonmel on the 19th July 2022 jointly supported by Yara and AIB.

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## IGA Dairy Summer Tour 2022



Stuart Childs IGA council member and Teagasc

John Farrell IGA council member and AIB

Following a COVID enforced hiatus since 2020, the Irish Grassland Association Dairy Summer Tour sponsored by AIB will return in 2022. The trip to Tipp (and Kilkenny) will take place on Tuesday July 19th and will focus on a theme of optimising output on the milking platform. Host farmers for the day will be Tom Walsh from Johnstown, Co. Kilkenny and Denis Cody from Templemore, Co. Tipperary. Proceedings will begin at Semple Stadium in Thurles and while there will be no music on our trip to Tipp, we do have two excellent host farmers who are hitting the high notes in terms of farm performance. Commenting at the launch of this year's Summer Tour, John Farrell, AIB Agri team, said, 'We are looking forward to returning to a physical event this year and meeting with our customers again. The IGA have sourced from two excellent host farmers and while both farmers have different stories to tell, the fundamentals of grass, cows and management are key on both farms. Given the year that is 2022, the theme of optimising output on the milking platform is very appropriate and I have no doubt that there will be some excellent insights on the day for all those in attendance'.

## We would like to thank AIB for their continued support #BackedbyAIB





**Denis Cody** 

Denis farms with his wife Carmel and his parents Eamon and Anne, near Clonmore, Templemore, Co. Tipperary on two milking platforms, one 50% owned and the second 100% leased totalling 138 hectares. Returning home from Kildalton College in 2010 with a level 6 diploma in dairying to farm, he reseeded the 48-hectare home farm over the next three years and began building stock numbers. In 2013, Denis leased a 21 hectare former dairy unit with a disused milking parlour approximately 7 km from home to start a second unit. Starting with 40 cows, two additional parcels of land have been leased adjoining it to create a 48-hectare second dairy farm, milking 150 cows on this block. All cows are calved on the home farm, and cows moved from the home farm to the second unit from late February. An additional 75 hectares of land is farmed in three separate sections to supply winter forage and rear all replacement heifers. There are 2 full time labour until, which have been with Denis over 10 years, plus Denis on the farm and weekend and casual labour also brought in, with the majority of machinery work contracted out.

In 2021 an additional 44 ha blocked was leased in to the home farm to give a 90ha platform. In 2022 a total of 250 cows will be milked on this home platform. In 2021 an average of 520 kg milk solids was produced per cow (4.63% fat and 3.78% protein) to Centenary Coop, with approximately 700 kg meal per head. The overall stocking rate is 2.5 livestock units per hectare farmed, the milking platforms are stocked at 3.2 cows/ha and 2.8 cows/ha. Last year the farms grew approximately 14 tonnes of grass dry matter per hectare.



#### Tom Walsh

Tom and his wife Norma farm 64 hectares near Johnstown, Co. Kilkenny. Having spent a number of years working away from the farm, Tom started farming fulltime in 2003 milking 40 cows that year. Since then, he has grown the herd to the 126 cows being milked this year on the 48 hectare milking platform at a stocking rate of 2.63 cows/hectare. The remaining land area is used for rearing replacements and providing winter feed.

Tom has bred a high milk solids herd producing >500kg/ cow every year since milk quotas were removed in 2015. In 2021, 620 kg per cow (4.5% fat and 3.72% protein) were delivered to Glanbia. This was produced from a diet of approximately 1.5t of concentrate per cow, high quality grazed grass and grass silage. In 2021, Tom calved 86% of the herd in 6 weeks with a calving interval of 364 days. A herd EBI of €182, puts the herd in the top 10% of herds in the country.

Tom actively culls low performing cows from his herd each year and this coupled with breeding replacements from the best performing cows and excellent grazing management underpins his continued improvement in milk solids production over the years. Tom was previously a monitor farmer in the 2004-2008 Teagasc Glanbia Joint Programme.





## DAIRY EXTRAVAGANZA

"Doing the basics right to fulfill potential"

## **IGA FREE MEMBERS EVENT**

Tuesday 19<sup>th</sup> July 2022 Talbot Hotel Clonmel

#### **Networking Evening**

8:00 pm / 'Looking both ways'

Guest speaker: Ashleigh Fennell Joe Patton Seamus Quigley

**Facilitator:** Matt Dempsey, Irish Farmers Journal and IGA Lifetime Merit Award recipient On the evening in-between the Dairy Summer Tour and Dairy Conference, there is an opportunity for the IGA members to meet at a free event in the Talbot Hotel Clonmel at 8pm

The guest speakers for 2022 are Seamus Quigley Dairy Farmer, Ashleigh Fennell Dairy Farmer and Joe Patton Teagasc. They will be interviewed by former Irish Farmers' Journal Editor and IGA Lifetime Merit Award recipient, Matt Dempsey.

This free event is Kindy supported by Yara and AIB

#### Speaker Biographies



Ashleigh Fennell Diary Farmer. Ashleigh farms in Palatine, Co Carlow milking 96 cows in a spring calving herd. Ashleigh entered milk production in 2019 converting from beef and sheep. In 2021 the herd produced 549 kg milk solids per cow (4.43% fat and 3.62% protein) from 1.2 tonnes of meal. The farm is very light and struggles with grass growth during a dry summer.



**Dr Joe Patton** Joe is head of the Teagasc Dairy Knowledge Transfer Department. He graduated from UCD with a Degree in Agri Science. His research PhD was on 'Influence of nutrition and energy balance on the reproductive function in dairy cattle'. In 2009, he took up a role as dairy specialist for winter milk production in Teagasc with responsibility for the Tegasc winter milk systems project. In 2020, he moved to the position of ruminant nutrition specialist.



**Seamus Quigley** Starting in 1990 with 30 cows on an owned block of land at Nenagh, Co. Tipperary, Seamus and Monica Quigley moved to farm at Loughrea, Co. Galway in 1999. Now operated as a partnership, they milk 450 cows on the farm with over 460 kg milk solids sold per cow in 2021.



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Dairy Summer Tour 19<sup>th</sup> July 2022 Semple Stadium #BackedbyAIB

IGA Members Event 19th July 2022 at 8pm Talbot Hotel Clonmel Supported by Yara and AIB

IGA Dairy Conference 20th July 2022 Talbot Hotel Clonmel Sponsored by Yara

Tickets must be booked separately online to attend the Dairy Summer Tour and The Dairy Conference.

Attendance at the members event is free – No registration required.





## IGA Dairy Conference 2022

and Dairy Farme

The 2022 Irish Grassland Dairy Conference will take place on Wednesday the 20<sup>th</sup> of July in the Talbot Hotel Clonmel. In the two years since the last in person IGA dairy conference there has been unprecedent change in the world, affecting every part of dairy farmer's businesses. Farmers are faced with record input prices, new environmental regulations and a challenging labour market. The conference has been divided into three parts to deal with these topics;

- Controlling the controllable's
- Creating Certainty
- Attracting and retaining talented people

#### Controlling the controllable's

This session will focus on the tools dairy farmers can use to manage the risks and opportunities in their businesses. There is a lot in the world now that is out of our control, however there a key elements within our own farm gate that we can control as farmers, and this session will look at what we can do in our business to reduce these uncertainties. Dr Brendan Horan will outline the ways farms can maximise nitrogen use efficiency, particularly important considering record fertiliser prices, the need to reduce chemical nitrogen applied and the need to improve water quality. Mary Kinston will outline the financial reality on farms where record milk prices have been accompanied by record input prices. Mary will use data derived from her discussion groups to give a current state of play on farms mid-way through 2022. Finally, Robert Hovenden a dairy farmer from Co. Laois will outline the decisions he made on his farm to create a more sustainable business, from both a farm profitability and lifestyle perspective. Robert made the decision to reduce the number of cows milk on his farm to take the pressure off his farming system.

#### Creating certainty

In the second session Prof Laurence Shalloo, Head

of Animal and Grassland Research in Teagasc, will outline the issues facing the Irish Dairy Industry in the years ahead. He will outline the environmental challenges within the industry currently and in the future. These challenges can be overcome, and both new research and technology adoption by farmers will play a key role in this, and will require significant change on dairy farms, Laurence will outline a vison for the Irish dairy industry and new research.

#### Attracting and retaining talented people

The covid pandemic has changed the way many people view their work life balance, the way employers recruit and retain staff will need to



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change to meet employees expectations. Many dairy farms have faced significant difficultly with staffing in the past 18 months. Mark Cassidy and TJ Kelly have large dairy farms employing both full and part time labour on their farms. Both farms have expanded successfully by creating a positive working environment for their employees.

Dr Nollaig Heffernan will outline the science behind what successful businesses do to attract and retain the most talented people. The people that work in a dairy business are its most value asset, maximising the efficiency of the people working in a dairy business will lead to better outcomes for the staff and the business.







## A Year in my Wellies

Lauren Claffey – Mount Temple, Moate, Co. Westmeath

My name is Lauren Claffey, from Co. Westmeath and I'm a third year Dairy Business student in UCD. I farm in conjunction with my dad and brother, who are in partnership, where we are currently milk 225 cows. We are operating a spring calving, grassbased system having recently converted from a splitcalving system. There is 150 acres on the milking platform which is stocked at 3.75 LU/ha and we farm 330 acres in total with an overall farm stocking rate of 2.49 LU/ha. I'm involved in the grassland management, milking and I have a particular interest in the calf rearing and young stock management at home. The last few years I have bought and reared heifer calves and this year I hope to have 8 of my own cows milking along with six maiden heifers for the coming breeding season. I also do relief milking for two local farmers, mostly during the summer months, but I done a lot during COVID as our degree program moved online and I put the early mornings and evenings to good use.

#### College

We are currently studying in Moorepark Research Centre for semester two of third year. This is an excellent opportunity as it is very practically orientated. The course covers all of the main elements from grassland management, genetics and reproduction, animal health, milk quality and business aspects of running a farm. We also complete a project on a mentor farm, who we visit five times to complete grass walks and learn how they manage their farm under the main aspects of the course. We also go on regular grass walks and farm trips which is a great opportunity to learn from other farmers and see new things.

Last semester, we embarked on PWE and I took the opportunity to travel to Cumbria in the North of England for five months. There was 500 crossbred cows on the farm in a spring calving, grass-based system with a 36-unit Waikato herringbone parlour on the farm. During placement, I was involved in milking, grassland management, fencing, spreading slurry, rearing young stock and silage. The farm was a contract farming agreement, so it was very interesting to see this type of business structure and the opportunities that can arise from working with a landowner to achieve personal goals. I really enjoyed my placement and learned a lot from the family.

#### Calving season

At home planned start of calving was January 25<sup>th</sup>, with the first arrival on the 13<sup>th</sup> of January. There were 151 cows calved by the end of February and all is going well. We feed a pre-calving mineral along with Mag-Chloride flakes to the dry cows to reduce the risk of sub-clinical and clinical milk fever. Every cow receives a bucket of Reviva immediately after calving, to boost calcium and energy levels and rehydrate them and helps stimulate appetite.

To date it has been mainly Friesian calves, with a few Belgian Blues and Angus calves from lower genetic merit cows, as we try to improve our herd EBI, milk solids, fertility, and feet. We have over 90



heifer calves as we used sexed semen on the heifers with a conception rate of 60%, which were very happy with. We have an automatic JFC calf feeder, which is a great labour saving technology this time of year. Calves are fed colostrum for the first feed and transition milk for 10 days before going on the feeder to ensure they receive enough antibodies from the milk as we vaccinate for rotavirus.

#### Spring grazing

We had an opening farm cover of 935 kgs DM/ ha on the 15<sup>th</sup> of January. The cows went out by day on the 25<sup>th</sup> of January but were housed for approx. two weeks in mid-February with storms and heavy rainfall. On the 23<sup>rd</sup> of February we had a farm cover of 907 kgs DM/ha. They are being given a daily allocation of 6 kg DM/ha and we are utilising on-off grazing where necessary to achieve this. The cows went out for three hours after the evening milking from the 28th of February and will be allocated 4 kg DM/ha for this grazing. They come back in around 8.30 pm, and we will continue on/off grazing until ground conditions improve further. We plan to start the second rotation on the 10<sup>th</sup> of April. There was slurry spread on 30% of the farm through an umbilical system at 2500 gallons/ acre. The stormy weather delayed fertiliser application, and we spread a half bag/acre of protected urea on all ground that can be travelled in early March.







## A Year in my Wellies

Edel O' Connor, Teagasc Athenry and University College Dublin Droumnakilla, Mastergeehy, Killarney, Co. Kerry

My name is Edel O' Connor. I am a third year PhD student working on the Department of Agriculture Food and the Marine funded project 'Greenbreed'. I am based in Teagasc Athenry and my project focuses on testing different methods of measuring methane produced by grazing sheep and determining how methane production varies across the production cycle. On our farm at home, I help my brother Aidan and mother Marie run a 200 ewe hill and lowland flock. The 80 ha farm, consists of 55 ha of hill land, and is situated in Dromid on the Iveragh peninsula in Co. Kerry.

#### **Breed type**

Scottish Blackface Mountain ewes are the main breed type on our home farm accounting for about 50% of the ewes, with the remainder made of up Cheviots, Cheviot crosses and Suffolk x Scotch. A Scottish Blackface Mountain ram and Cheviot x Leicester cross ram are used to breed replacement ewe lambs. We try to keep 30 of our own replacements each year which works out at a replacement rate of 15%. The Charollais and Suffolk rams used are both terminal rams. The lambs from these rams are sold as stores from the end of June onwards in the local mart on live trade. We try to have lambs averaging 32 kg or more but this all depends on the prices each year as the prices received are divided into certain weight brackets depending on the buyer's needs.

#### **Breeding season**

The rams went out on the 16th of October for two

days to induce cycling. Over the last three years we have started to use the ram effect to encourage cycling in the ewes, this has been a huge help with over half of the ewes lambing in the first two weeks. The rams are brought back in after two days and the ewes are put back up the mountain. On the 30th of October (approx. 2 weeks later) the rams are let out for five weeks, this is to ensure that ewes who repeat can be mated on their second cycle.

The ewes were scanned in January with a scanned flock size of 1.4. The targeted scanned flcok size for a hill flock is between 1.2 to 1.4, which means ewes will carry more singles than twins. This is the largest scanned flock size we have ever had and is testament to the ewes being in the right condition at mating. In 2021, the lambs were weaned at 12 weeks; this gave the ewes a bigger break than in previous years to gain condition pre-mating. After scanning ewes are divided into different groups depending on litter size and body condition. The single bearing ewes go back to the mountain for a few weeks after scanning while the twin bearing ewes and poorer condition ewes stay on a lower section of the mountain for feeding.

#### Lambing season

The ewes were due to lamb on the 26th of March this year. In the few days before this, the ewes are further divided into smaller groups. The majority of the ewes will lamb outdoors, twin bearing ewes and small ewes will be kept in paddocks nearest to the house to ensure that we can keep a close eye on them. These paddocks have trees and stonewalls for shelter. The remainder will lamb in the lower sections of the mountain and a small number of ewes are housed.

#### PhD

I am doing my PhD with Teagasc Athenry and University College Dublin. I use Portable Accumulation Chambers (PAC) to measure emissions from grazing sheep. The PAC are an aluminium airtight box and sheep are placed in the chamber for 50 minutes. We take methane, oxygen and carbon dioxide measurements as three time points (0, 25 and 50 minutes). There are 12 individual chambers with the capacity for 72 sheep to be measured daily. The chambers are mounted on a trailer, which allows us to take methane measurements on commercial farms across the country. While the PAC measurements will differ from the absolute output values, they allow us to identify high and low methane-emitting sheep. The ultimate aim is to breed these low emitting sheep for reduced emissions without compromising their performance. The PAC has been tested against the 'gold standard' method of measuring emissions, the respiration chamber. A strong relationship was found between both measurement techniques, this essentially means that both the PAC and respiration chamber were ranking the animals the same (i.e. high and low methane emitters).



My study also follows a group of 60 female animals that were originally selected as lambs in 2019, from the INZAC flock in Athenry. The group consists of two breeds, Suffolk and Texel and can be broken down into Elite Irish, Low Irish and Elite New Zealand genetic groups. These are now three year old ewes and will be followed throughout their lifetime to look at how methane production varies depending on life stage (i.e. lamb, hogget and ewe), stage of production (i.e. dry and lactating) and diet type (Perennial ryegrass and silage). Feed intake measurements are also taken to coincide with methane measurements, as feed intake is the main driver of methane production. In the coming articles I will update you on some of the results we are seeing from my study.





John O'Connell<sup>1</sup>, Francis Campion<sup>2</sup> and Fiona McGovern<sup>2</sup> <sup>1</sup> Teagasc Better Farmer <sup>2</sup> Animal and Grassland Research and Innovation Centre, Mellows Campus, Athenry, Co. Galway

Spring is one of the busiest, if not the busiest time of the year on most farms nationwide. As we transition into summer, it is very important that we reflect on the months gone by, acknowledge our successes and embrace the challenges that we faced in order to improve our practices going forward. Obtaining optimum animal health is a significant component of all farming systems; with recent changes to veterinary medicine regulations intensifying the need for better farm management practices thus reducing the need for antimicrobial (including antibiotic) use. In light of this we spoke to John O'Connell, who farms with his wife Amanda in Ballinamore, Co. Leitrim. John highlighted the importance of flock health and how he and his family have dealt with and overcame various flock health issues on their farm.

#### Background

John, alongside his wife Amanda and their three children Peter, Lizzie and Dearbhla, farm 34 ha, split into two separate blocks either side of Ballinamore, Co. Leitrim. The O'Connell's operate a mid-season lambing flock of 210 ewes alongside a dairy heifer contract rearing enterprise. Since 2010, John has also been a part-time retained member of the local fire brigade in Ballinamore and is involved in various local clubs and societies. The farm is run at a stocking rate of 11 ewes/ha. Currently, there are also 44 dairy heifers being contract reared on the farm with a further 26 weaned calves arriving in June and going back to their parent farm at the point of first calving.

#### Joining the BETTER Farm Sheep Programme

In August 2013, John joined the Teagasc BETTER Farm Sheep Programme, at that time he had approximately 120 mainly Suffolk cross and Texel type ewes. The previous year, 2012, he had purchased Belclare cross ewe lambs and hoggets to increase numbers and output from the flock which at the time had a scanning rate between 1.6-1.8 lambs per ewe joined.

Upon joining the BETTER Farm sheep programme a detailed farm plan was drawn up for the farm which focused around four main areas; breeding policy, flock health, soil fertility and grassland management. In order to increase the output from the flock John changed the ewe breeding policy. He introduced a Belclare ram and began crossing it back to Suffolk type ewes and crossing a Suffolk ram back on my white faced ewes in order to breed his own replacements. Terminal rams, i.e. Texel, are still used but all lambs from these sires are sent for slaughter. John also began breeding his ewe lambs easy lambing terminal sires, for example Charollais.

#### Lessons learnt from previous experiences

The overarching area of flock health, including maintaining ewe body condition score, is something that John takes very seriously on the farm, particularly after having some bad experiences with various flock health issues over the years. From talking to John his focus on flock health and overall farm hygiene was obvious with some tough lessons learned from past experiences.

As a result of buying in ewes from multiple different sources without full knowledge of their flock health profile John ended up buying in both enzootic abortion and contagious ovine digital dermatitis (CODD). Neither of these diseases had previously been an issue on the farm and they were very expensive to get under control while also requiring extra labour to do so. John has since put in place a strict bio-security protocol when any purchased sheep arrive on farm.

## Can you tell us about your farm bio-security protocol?

New stock go straight to the slatted house on arrival for at least 48 hours after being dosed with either a Group 4 or Group 5 wormer product to kill any potentially resistant worms they may be carrying. Bought in stock also receive a Closantel based flukicide to kill any fluke they may have. I also put new sheep through the foot bath and keep them separate after turnout for as long as is possible to ensure any lameness issues are not passed onto the other sheep in the flock.

#### John, you mentioned there were low levels of abortion in the flock prior to 2013. How did this escalate when you bought in replacement animals of an unknown health status?

I had low levels of abortion in the flock but in 2014 there was an abortion storm. Following on from this all of the ewes on the farm were vaccinated against enzootic abortion the following year and replacement ewe lambs are now vaccinated every year. The same protocol was applied for toxoplasmosis with ewe lambs vaccinated annually. While it took a couple of years to get on top of the abortion issues we are hopeful we now have it under control.

#### What is your ewe culling policy?

During the first couple of years in the BETTER farm programme while I was building ewe numbers and trying to change the breed type culling was not always as hard as it should have been. Today, any ewe



that has an issue during the year such as prolapse, mastitis, consistently lame etc. is marked using the electronic handheld device and culled after weaning.

#### Hygiene at lambing

Lamb mortality had previously been an issue for John with high levels of lamb loss occurring not only through abortions as mentioned above but also after lambing each year. In 2017 John lost 11% of his lambs between lambing and weaning. While not exceptionally high for a farm with a high scanning rate the issue was that a large proportion of the dead lambs were found dead in the field after turn-out.

## Are there measures you now take to prevent early life lamb losses?

While there are a number of potential factors causing lamb mortality, I have overhauled how colostrum is managed on the farm and the hygiene in the lambing shed. I firmly believe both of these measures have made a huge difference.

## Can you tell us a bit more about the hygiene practices in your lambing shed?

I'm not afraid to say that I am an absolute stickler for hygiene as I believe it is one of the most important factors influencing a successful lambing. Over the years we have had a lot of placement students come and work with us and they always laugh when I tell them about my '7 P's' policy – Proper Prior Planning Prevents Piss Poor Performance'! All of our ewes are housed from mid-pregnancy until after lambing. Water drinkers are checked regularly and cleaned out every 3 or 4 days to prevent contamination. Once a ewe lambs she is moved to a clean, dry, straw bedded pen. All of our individual pens are cleaned out between each ewe, regardless of the length of time she has spent there. Stalosan powder is used to dry and disinfect pens between ewes. We have one individual pen per every five ewes lambing. In the shed there are three main areas namely: intensive care, step down convalescent and group pens. Depending on where a ewe is placed we automatically know the pens where most attention is required.

Prior to lambing we wash and disinfect all of the utensils and buckets that will be used to during the lambing period. We recently had a water heater fitted in the shed. This has made a huge difference in making life a little easier during lambing, especially for washing and disinfecting lambing aids and stomach tubes. I often refer to my nurses station which is where everything we might need during lambing is kept. I am a firm believer that everything has a place and there is a place for everything. When you are busy having to run around looking for things is a nightmare.

## Do you think personal hygiene plays an important role?

Absolutely! I strongly encourage everyone to wear disposable gloves at all times and especially when handling ewes and lambs. It is second nature to us at this stage and I wouldn't have it any other way. You need to be mindful of the potential bacteria that you can introduce to a ewe when handling for lambing and ultimately you are a source of potential infection to the newborn lamb.

#### Can you explain your colostrum management?

Previously, where a ewe had multiples or was short on colostrum I used only substitute colostrum to feed the lambs without mixing it with ewe colostrum, meaning the lambs were not getting any antibodies from the ewe. Now where a ewe is short on colostrum, or she has three or more lambs, I milk what colostrum I can from the ewe first. I then divide this evenly across all of her lambs using the substitute colostrum to top up the amount of colostrum the lamb is getting, up to 50 ml/kg lamb birth weight. I aim to ensure all lambs have sufficient colostrum in the first hour targeting 50 ml/kg lamb birth weight. All of the ewes are also on a Heptavac-P vaccination programme which plays a role in providing the lambs with antibodies to prevent certain diseases taking hold in early life

I have also focused on improving the quality of silage I make and I now look more closely at the pre-lambing ration being fed to ewes, ensuring it contains a good quality protein in the form of soya bean meal. This has contributed to improved quantity and quality of the colostrum in ewes at lambing time.







## **Breeding in sync**

It seems that the simpler Robert McGuiness makes his breeding season, the simpler his calving season is becoming too. That's quite the achievement for a man who – alongside his father Gerry and mother Imelda – is managing a herd of over 100 suckler cows and at the same time travelling the roads of the northeast as a scanning technician and AI technician with Progressive Genetics.

On the family farm just outside Slane in Co. Meath, calving started for the McGuinness' on 3 December 2021. By 10th March 2022, all but 5 of the 105-cow herd had calved down with three mortalities and one set of twins along the way. What makes this tight calving spread even more impressive is the fact that not one calf was born between 23rd December and 5th January – sufficient time to relax and enjoy the Christmas festivities one might say. And this wasn't by accident.

Almost all cows in the herd are Al'd through a fixed-time Al synchronisation programme. After a couple of years using this approach, Robert has now mastered the art of getting his cows to calve, when he wants them to calve. "On the 1st March 2021 we served a batch of nearly 40 cows. So they started calving in early December and they calved right up to 23rd December."

By the time the Christmas turkey and ham were eaten, the second batch of cows was just ready to get going. "We Al'd a second big batch of cows, nearly 50, on 1st April then, and these cows started calving Matthew Halpin, IGA Council Member, in conversation with Robert McGuinness, suckler farmer



around 10th January 2022 and at the same time we had the repeats from the first batch calving down too." Calving continued at a steady pace throughout the month of January and a final smaller group of cows - that had been synchronised around 20th April and then run with a stock bull to clean up, and these started to calf in early February, with the majority of the cows calved by 15th February. "I try to get as much work as I can out of the way before the busy AI season starts on dairy and beef farms. Once I start getting busier out on the road, I simply can't dedicate as much time to calving and breeding with our own cows."

#### System

The system on the farm is kept pretty simple; bulls are typically slaughtered under 16 months of age, with the females, suitable candidates are selected for breeding first and foremost. Surplus heifers are then sold either off the grass at 18-20 months of age or carried into the shed and slaughtered at 23 or 24 months of age.

Maiden heifers are not synchronised, but they are Al'd with the assistance of a vasectomised bull instead. With the heifers, Robert has two main objectives. 1) First and foremost is to promote fertility, with heifers only getting a maximum of two straws. 2) the next objective is to ensure an easy calving. "With calving heifers at two years of age, you want to be aiming to have as small of a calf as possible the first year. A live calf, a heifer that is going to go back in calf quickly



and, most importantly, minimal stress on heifer and farmer. Because of this Robert has been using easy calving, Angus AI sires for the last number of years on the heifers.

With the cows, the breeding plan is kept simple too: "Early in the season we use all maternal sires in order to produce enough females for replacements," says Robert. Over the last number of years, Simmental and Shorthorn have been the maternal breeds of choice. We had a Shorthorn bull years ago and he brought lots of milk so we are hoping to produce milky, docile cows with the AI Shorthorn again. Midway through the season, a switch is made to terminal Charolais, Belgian Blue and Limousin. All AI sire selections are underpinned by ease of calving, though Robert knows his cows well and isn't afraid to push the boat out on a mature cow that he knows has super calving ability.

#### Synchronisation

The synchronisation protocol Robert uses is outlined in Figure 1. It takes place over 11 days and requires the cows to be handled five times (twice on the day of Al). We aim to have a first conception rate of between 60% and 70%. "What I find is that the first repeat (second serve) is usually very good - upwards of 80%." Translating these figures to a 100 cow herd,

that would result in 65 cows pregnant after one straw and a cumulative total of 93 cows pregnant after the first round of repeats. Robert continued: "to be honest, I'd find that any cow that doesn't go in-calf after the first repeat is going to be extremely difficult to get in calf at all. I'd let stock bulls out to mop up and even still those cows struggle to end up pregnant. If they don't go in calf after the first two serves, you'd have to wonder should you be keeping her at all"

At a cost of €27/head (not including AI straw), synchronising isn't cheap, but in Robert's mind, there are a number of benefits which more than outweigh the cost. As mentioned, the first obvious advantage is the ability to control the calving season. It also streamlines labour around the calving season whereby you can pick out, concentrate on one bunch of cows, and not have to worry about the rest of the cows in the herd. "We certainly would have busy days with five or six calving per day calving, but at the same time, the batch usually calves over a two week period," Robert explained.

And a more simple calving season has come as a direct result of a more simple breeding season: "For me, the breeding season is very straightforward now, and it needs to be when I'm working offfarm. I'm breeding the vast majority of the cows in two batches with just four days' work per batch." Furthermore, when all of the cows are bred on the same day - usually anywhere between 30 to 50 head - Robert can scan them all 30 days later. Since the farm is quite fragmented, Robert can quickly identify pregnant cows and move them to an outblock for the rest of the summer where their labour demand is very minimal thereafter.

#### 2022

The 2022 breeding season started on 28 February with 56 cows served to fixed-time AI following the synchronisation protocol in Figure 1. Of these 56 cows, 40 received sexed Shorthorn straws. Scanning of this batch took place on 30 March and Robert was extremely pleased with the results. "We had 73% in-calf which I was delighted with. Of the cows not in calf, I had seen all but two of them repeating so there were no real surprises anyway." Another batch of 23 cows was Al'd in early April.

Overall, the plan for 2022 is to breed 90 cows. On top of that, Robert is considering breeding most of his 40 yearling heifers with the view to selling the surplus as in-calf heifers at the end of the year. "This

year, we are in a great position because we have 40 maternally-bred heifers that can go for breeding. We won't need them all, but it leaves us in a position to tighten up the calving season even more and potentially sell the rest in calf."

He went on to say that "any breeding plan has to be



AM - Morning, PM - Afternoon

Figure 1. Synchronisation protocol used on cows



done over three to five years. You can't just expect to bring in big changes over night. For example, if you want to cut back the length of the calving season, you can't do that in one year or you're going to lose too many cows. It's the same if you want to expand a herd or reduce the age of your herd. Any breeding plan takes time."

# Establishing a grass/white clover sward



- The benefit of clover in grassland has previously been reported through increased animal performance, increased herbage production and potential saving in chemical N fertiliser as well and improve N use efficiency and N farm gate surplus. If Irish farms are to successfully establish clover as part of their grazing system, it will need to be undertaken over a period of time (3 to 4 years) and take a combination of methods. Soil fertility is a crucial factor in establishing and maintaining adequate clover (average 22%) on farm. Clover requires fertile soils for establishment and persistence, with a soil pH 6.5, and  $\rightarrow$  index 3 for P and K. Rhizobia bacteria that fix N in association with clover are more productive in soils with a pH of 6.5. The phosphorus content of the soil is also important when establishing a clover sward. White clover seeds are very small and clover seedlings tend to be relatively fragile. Seedling vigour is favoured by having plenty of P in the vicinity of the establishing seedling. It is usually recommended that clover seed is sown with a fertiliser that contains P compound as this will favour establishment. When selecting clover cultivars to sown, use the department recommended list. Small and medium leaved cultivars are best suited to intensive grazing systems, with large leaf clovers more suited to silage-based systems. Clover should be sown ideally when soils are warm and moist ideally in late April/ May. Sowing in the autumn can reduce chances of a successful establishment as soil temperatures are on the decline so it is more difficult for clover to compete with the grass. White clover can be established on your farm using two methods; 1) Direct reseeding, 2) Over-sowing.
- **1. Direct Reseeding** (Key steps involved in a full reseed)
  - Aim to reseed as early in the year as possible (April, May, June) when soil temperatures are high and increasing, and there is adequate opportunity for weed control.
  - Soil sample for P, K and pH.
  - Spray off the old pasture with a minimum of 5 L/ha of glyphosate; allow a minimum of 7 to 10 days after spraying before cultivating.

- Prepare a fine, firm seedbed.
- Use grass and white clover varieties from the Irish Recommended List.
- Cattle sowing rate 28 to 30 kg/ha of grass
  plus 3.5 to 5.0 kg of medium leaved clover.
- Sheep sowing rate 25 to 28 kg/ha of grass plus 5.0 to 6.0 kg of small leaved clover.
- Avoid sowing white clover seed too deep sowing depth approx. 10 mm.
- Apply 40 kg N/ha (30 units N/acre) at reseeding.
- Apply P and K fertiliser as required.
- Roll well to ensure good contact between the seed and the soil.
- Apply 25 kg N/ha (20 units N/acre) 4-6 weeks post sowing.

#### 2. Over-sowing

Over-sowing is a simple and low cost method of introducing clover onto your farm. Success is very much dependent on weather conditions around sowing and post sowing grazing management; therefore there is a certain amount of risk associated with this approach and it should be undertaken in the early part of the year (early April to late May).

- Key steps involved with over-sowing white clover;
- Do not over-sow old 'butty' swards with a low content of perennial ryegrass – white clover will not establish well in these.
- Control weeds before over-sowing white clover as weed control options afterwards are more limited. Some herbicides have a residue of up to 4 months – always check the residual time on the label of the product or seek advice on a suitable weed control product.
- Take a representative soil sample for P, K and pH analysis and correct soil fertility prior to over-sowing. Optimum soil fertility when over-sowing will help increase the chances of success.
- · White clover seed can be broadcast onto

the sward or stitched in using a suitable machine.

- If broadcasting with a fertiliser spreader:
  - Mix clover seed with 0:7:30 fertiliser and only add white clover to the spreader when you are in the field to avoid white clover settling at the base of the spreader.
  - Do a maximum of 1 ha at a time (to avoid seed settling) and spread in 2 directions across the field.
- Stitching in white clover seed with a drill/harrow ensures better seed to soil contact. Stitching must be used for oversowing sheep grazed swards due to the denser nature of swards.
- Over-sow directly after grazing (≤ 4 cm postgrazing sward height) or after cutting the paddock for surplus bales – ideally only over-sow three to four paddocks at a time.
- Sow at a rate of 5.0 to 6.0 kg of white clover seed/ha.
- Soil contact post over-sowing is one of the most crucial factors affecting germination.
  - Roll paddocks post-sowing to ensure soil contact.
  - Apply watery slurry (if available) ideally around 2000 gallons/ac.
- Reduce N fertiliser post over-sowing to 15 kg N/ha (12 units N/acre) per rotation for two rotations to reduce grass growth.

#### White Clover Establishment Blueprint

A targeted multiyear approach should be used in establishing a white clover system- combination of reseeding and over-sowing

- Reseed approx. 10% per year
- Over sow approx. 20 % per year
  - Yr 1- reseed 10% & over sow 20% = 30%
  - Yr 2- reseed 10% & over sow 20% = 30% (60%)
  - Yr 3 reseed 10% & over sow 20% = 30% (90%)
  - Yr 4 remaining 10% + any ground that clover didn't establish on (100%)

Paddocks for a full reseed should be identified as early as possible in the process to avoid over-sowing clover on these;

Poor performing, age of sward, weed content etc.

30

Select paddocks for over sowing to give the best chance of establishment

- Optimal soil fertility (index 3 or > for P & K, soil pH 6.5)
- High perennial ryegrass content
- Open/low density swards dense swards prevent light getting to new clover plant, hindering establishment
- Low weed content

Any paddocks that are not suited for over-sowing in the first year (but not ear marked for reseeding) should have any issues corrected and over sown the following year

- Correct soil fertility issues
- Spray any weeds well in advance of over-sowing to allow for residual time frame

#### Management of grass-clover swards after oversowing

Poor establishment results have been obtained where grass gets too strong after over-sowing. This is the single biggest reason for failure that lies within the farmer's control. Swards need to be grazed tight after oversowing clover. The most important recommendation is tight grazing for the first 3 grazings post sowing, both for direct reseeding and over-sowing, keeping pre-grazing herbage mass < 1200 kg DM and grazing swards to  $\leq 4$  cm. By doing this it allows light to penetrate to the base of the sward which is essential for clover establishment. Soil moisture conditions have a major influence on the success of over-sowing.

Weed control is an essential element in both direct reseeding and over-sowing. Weeds in new reseeds are best controlled when grass is at the 2-3 leaf stage. Docks and chickweed are two of the most critical weeds to control in new reseeds; it is important to control these at the seedling stage, by applying the herbicide before the first grazing. When clover is included in the swards, it is important to use a clover safe herbicide. When oversowing clover into existing grass swards, it may be better to control more established weeds before over-sowing white clover into the sward. For established Grass/Clover Swards the herbicide Eagle and Prospect are clover safe options. Speak to your advisor or merchant for best advice on the product suited to your needs and weed problem. When applying herbicide, always follow best practice guidelines and read and follow the product label. All pesticides users should comply with the regulations as outlined in the Sustainable Use Directive (SUD).

## Mid-season fertiliser Nitrogen and Sulphur advice



#### '1 unit of Nitrogen/day rule'

From May on it's time to move to the '1 unit of nitrogen (N) per day' rule for the summer which is 30 units N/ month. However, this often is mistaken as 30 units N/rotation which leads to too much N being spread when we get into short rotations of around 21 days. This increases fertiliser N cost and may increase the amount of surplus bales to be harvested to maintain grass guality which also comes at a cost. The easiest way to stick to the '1 unit of N/day' rule is to match your units N/acre you're spreading after the cows to your rotation length i.e. if you're on a 20 day rotation you should be spreading 20 units N/acre after the cows. An example of this is given for a typical paddock in rotation number 3 to 7 in Table 1.

Table 1: Example of a chemical fertiliser N/slurry programme for a grazing paddock delivering 221 units N/ acre and 18 units S/acre.

Rotation number	Graze date	Rotation length	Fertiliser date	Fertiliser N units/ slurry	Blanket spread/ Follow cows	Fertiliser product
			01-Feb	2,500 Slurry gals/ acres	Blanket	
1	05-Feb	60	05-Mar	46	Blanket	1 bag 46% Protected urea/acre
2	05-Apr	27	07-Apr	30	Follow cows	<sup>3</sup> ⁄ <sub>4</sub> bag 38:0:0:7 protected urea/acre
3	02-May	22	04-May	25	Follow cows	2/3 bag 38:0:0:7 protected urea/acre
4	24-May	19	26-May	19	Follow cows	<sup>1</sup> ⁄ <sub>2</sub> bag 38:0:0:7 protected urea/acre
5	12-Jun	22	14-Jun	25	Follow cows	2/3 bag 38:0:0:7 protected urea/acre
6	04-Jul	23	06-Jul	23	Follow cows	½ bag 46% Protected urea/acre
7	27-Jul	23	29-Jul	23	Follow cows	½ bag 46% Protected urea/acre
8	19-Aug	28	30-Aug	30	Blanket	2/3 bag 46% Protected urea/acre
9	16-Sep	35				
10	21-0ct					

#### How much N does it take to grow a pre-grazing cover of 1,400 kg DM/ha?

During the middle of the year grass crude protein content varies from 17 to 22% (avg. 19%). This essentially means that the N content of the grass averages 3.1% N during the summer (19% crude protein ÷ 6.25; Protein content of grass divided by 6.25 gives the grass percentage N content). Using this figure we can calculate the amount of N that will be need to grow a particular amount of grass so to grow a cover of 1,400 kg DM/ha the sum is as follows;

#### 1,400 kg DM grass/ha × 3.1%N = 43.4 kg N/ha or 35 units N/acre

Soils with good soil fertility have been found to supply over 1/2 a unit of N/day during the summer from soil organic matter (Redline Figure 1) which will supply around 12 units N/acre over a 21 day rotation in summer.



Figure 1. Grass N requirement units N/day (Green line) and background soil N release from soil SOM units N/ day (Red line) throughout the year for a typical grassland sward (Humphreys et al., 2003)

This N comes from the soil, N left from previous fertiliser/slurry applications and some N from dung and urine from previous grazings. The remaining 23 units N/acre is generally applied as N fertiliser. This ties in with the '1 unit of N/day' rule.

#### Don't forget Sulphur

Sulphur (S) is closely associated with grass nitrogen uptake and the development of certain proteins in the grass plant. Recent Teagasc trials (Aspel et al., 2022) have found S additions to grassland to significantly increase fertiliser N recovery in grass, increase grass yield and reduce nitrate leaching. The study also noted that the sulphur applied in slurry was not sufficient to prevent an S deficiency in grass.

The below S targets should be applied to meet grass sulphur requirements;

- 15 units S/acre in total across April to June on grazing ground
- 15 units S/acre on 1st cut silage ground
- 10 units S/acre on 2nd cut silage ground (Only required on lighter soil types)

N:S products such as 38:0:0:7, SulfaCAN and ASN or compounds containing S can be used to get S applied (Table 2).

Table 2. Options to apply 15 units Classe on graving ground

Table 2: Options to apply 15 units 5/acre on grazing ground.						
	April bags/ac	May bags/ac	June bags/ac	April-June bags/ac	April-June Units S/ac	April-June Units N/ac
Option 1	<¾ bag Protected urea 38:0:0:7	<¾ bag Protected urea 38:0:0:7	<¾ bag Protected urea 38:0:0:7	2.1	14.7	80
Option 2	1 bag Sulfa CAN	1 bag Sulfa CAN	1 bag Sulfa CAN	3	15	80
Option 3	1 bag CAN	1 bag ASN	1 bag CAN	3	14	79

\* Almost all compound fertilisers come with the option of adding S at a cost of around €10 extra/tonne and can be used in place of the options outlined in the table above where P and K needs to be spread.

#### **References:**

Aspel, C., Murphy, P., McLaughlin, M.J. and Forrestal. P.J. (2022) Sulfur fertilization strategy affects grass yield, nitrogen uptake, and nitrate leaching: A field lysimeter study. Journal of Plant and Soil Science. doi. org/10.1002/jpln.202100133

Humphreys, J., O.Connell, K., and Watson. C.J. (2003) Effect of nitrate legislation on fertiliser nitrogen management for grassland. Proceedings of the International Fertiliser Society. London. Paper no. 517



## at pasture and what are the benefits of a grass forage-only beef production system?

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Despite the rising cost of fertiliser, grazed pasture remains our cheapest feed resource and with the ever-increasing costs of inputs, maximising animal live-weight gain (LWG) from grass remains paramount. Recent research at Teagasc Grange has investigated methods to increase beef cattle LWG at pasture and has identified the positives and negatives associated with forage-only suckler weanling-to-beef systems.

#### Increasing animal live-weight gain at grass

#### Post-grazing sward height

In two separate years, a compressed post-grazing sward height of 4 vs. 6 cm (Figure 1) was evaluated in a weanling-to-beef suckler steer system. At the end of the 'first' indoor winter, steers were turned out to pasture and rotationally grazed to their assigned post-grazing sward height 'treatment' for 209 days at a stocking rate of 2.5 livestock units/ha. At the end of the grazing season (November), they were housed and offered a finishing diet until slaughter (March) at 24 months-of-age. Averaged over the 2 experiments, increasing post-grazing sward height from 4 to 6 cm resulted in:

• Increased individual animal LWG at pasture by 0.14 kg/day, equivalent to 29 kg at the end

of the grazing season (mainly due to greater intake).

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and University College Dublir

- Increased carcass weight by 15 kg at the end of the subsequent indoor finishing period (live-weight differences from pasture were retained until slaughter).
- No difference in grass 'quality'.
- Decreased annual grass production by 512 kg DM/ha.
- Decreased grazing stocking rate by 15 %.
- No difference in LWG/ha.

#### Pre-grazing herbage mass

Additionally, over two years a pre-grazing herbage mass of 1500 vs. 2000 kg DM/ha (year 1; topping occurred mid-summer) and 1500 vs. 2500 kg DM/ha (year 2; no topping) was similarly evaluated during the 'second' 213-day grazing season of a weanlingto-beef suckler steer system. Increasing pre-grazing herbage mass from 1500 to 2000 kg DM/ha (year 1) resulted in:

- Increased individual steer LWG at pasture by • 0.05 kg/day, equivalent to 14 kg at the end of the grazing season (resulting from greater intake).
- Increased carcass weight by 5 kg at the end of the subsequent indoor finishing period.
- No difference in grass 'quality'.

In year 2, grass 'quality' for the higher pre-grazing herbage mass (2500 kg DM/ha) declined from August onwards. Consequently, increasing pregrazing herbage mass from 1500 to 2500 kg DM/ha resulted in:

- Decreased individual LWG at pasture by 16 kg (occurred from mid-season onwards).
- Had no effect on carcass weight at the end of the subsequent indoor finishing period (2500 kg DM/ha steers exhibited compensatory growth during the indoor finishing period).

In both years, increasing pre-grazing herbage mass above 1500 kg DM/ha increased annual grass production (+ 947 kg DM/ha), which increased the closing farm cover but had no effect on grazing stocking rate. In summary, if pre-grazing herbage mass is too high ( $\geq$  2000 kg DM/ha) grass 'quality' and individual animal LWG are affected from midsummer onwards.

#### The sustainability of suckler weanling-to-beef finishing systems

The current feed budget in spring-calving suckler calf-to-beef research systems comprises of 92 % forage. The majority of growing cattle are supplemented with concentrates in order to achieve live-weight targets and adequate carcass fat cover prior to slaughter. However, the rising price of concentrate feeds, the desire not to use human-



Figure 1a

edible foodstuffs (e.g. cereals) in animal feed and interest in developing markets for beef (e.g. 100 % grass-fed beef) has led to more interest in grass forage-only systems.

To address this, late-maturing steers (8 months of age) were assigned to one of three suckler weanling-to-beef finishing systems, which following a 'second' grazing season were finished on: 1) ad libitum concentrates for 120 days and slaughtered at 21 months-of-age ('Grain'); 2) grass silage ad libitum supplemented with 3.5 kg concentrate DM for 124 days and slaughtered at 24 months-of-age (end of second winter) ('Silage + Grain'); and 3) grass silage-only during the second winter and returned to pasture for 97 days during a third grazing season and slaughtered at 28 months-of-age ('Forageonly'). The aim was to slaughter the animals at a mean target carcass weight of 390 kg.

Results of the experiment are outlined in Table 1. Due to a younger slaughter age and lower proportion of herbage in the diet, the 'Grain' system had a higher stocking rate and carcass output/ha than the 'Silage + Grain' and 'Forage-only' finishing systems. However, despite the greater carcass output/ha, purchasing concentrates (assumed price of €400/t DM) increased variable costs and reduced the net margin for the 'Grain' system. In this study, indoor winter feed costs (purchased concentrate ration and silage) accounted for 91, 85 and 73% of total variable costs in the 'Grain', 'Silage + Grain' and 'Forage'

system, respectively, illustrating the importance of increasing grazed pasture in the diet to reduce variable costs in weanling-to-beef systems. Previous studies have also identified the importance of reducing purchased concentrates in the diet, to optimise profitability. From an environmental perspective, the 'Grain' system produced the lowest greenhouse gas (GHG) emissions mainly due to a younger slaughter age, but increased farmgate N balance due to a greater stocking rate.

From a food/feed debate perspective, the 'Forageonly' system did not use any human edible-food (no concentrates fed) and thus produced more human-edible protein and energy than it consumed compared to the 'Grain' system. In conclusion, inverse relationships between system profitability, human-edible protein efficiency, and GHG emissions implies inevitable trade-offs.

**Table 1** Effect of contrasting suckler weanling-to-beef finishing systems on carcass traits, output, profitability and environmental impact (greenhouse gas emissions (GHG)).

	Grain	Silage + grain	Forage-only
Proportion of grass + grass silage in the diet	0.61	0.84	1.0
Carcass traits			
Slaughter age (months)	20.9	23.7	27.6
Carcass weight (kg)	390	386	396
Conformation score (1-15)	9.74 (U-)	8.67 (R+)	9.05 (R+)
Fat score (1-15)	7.23 (3-)	7.33 (3-)	6.53 (3-)
Output and profitability			
Carcass gain output (kg/ha)	1,169	630	491
Net margin per ha (€)¹	-46	-39	361
Net margin per animal (€)¹	-8	-13	163
Environment(kg CO <sub>2</sub> eq)			
GHG per animal ('00)	34.7	41.6	42.9
GHG per kg carcass weight gain	16	19.8	19
Farm gate N balance (kg N/ha)	278	193	152

<sup>1</sup>Assumes a 37 ha farm with no land charge for 'Grain'. Additional land in excess of 37 ha as required for 'Silage + grain' and 'Forage-only' is rented in at  $\in$  450/ha. Labour costs and CAP payments are excluded from the analysis.

Figure 1b Pasture grazed to a compressed post-grazing sward height of 4 cm (left) and 6 cm (right)



As we head into another main grass gowing season, there are opportunities to increase both quantity and quality of grass on Dairy and Livestock farms. With a focus on key details such as weed control, farmers can make significant improvements to forage yield, quality and pasture longevity.

For example, removing a 10% cover of docks can increase grass yield by 10% - a simple relationship that shows the impact weeds have on grass yield. Effective Weed control is a key element of productive grassland farming and it is important that herbicide applications are necessary, effective, made safely and with care for the environment. A considered approach to controlling weeds in the form of Integrated Pest Management (IPM) is therefore vital where all appropriate control options are employed to achieve the required weed control outcome efficiently and with minimal impact on the environment. In terms of IPM in grassland, we cosnsider a hierarchy of control measures to establish the need for herbicide application to grass - (i) cultural methods - cutting, topping, grazing, (ii) re-seeding and crop rotation, (iii) sward competition - good grass establishment needs correct soil pH, no compaction, (iv) weed prevention - no bare soil, no poaching from livestock, good drainage, and (v) consideration of economic weed thresholds and finally all have a role to play. Herbicide application is







undertaken if considered necessary.

In established and permanent grassland, it is important to assess weed pressure as soon as grass starts to grow in spring, with timing being of extreme importance. Achieving the optimum 'Return on Investment' for weed control application is linked to correct timing of herbicide application. Herbicides applied too early or too late will not work as effectively, if at all. Generally, herbicides should be applied when weeds are healthy and the leaves actively growing. Once stem extension starts, translocation of the herbicide to the weed roots is insufficient for the operation to work effectively. If you are going to achieve a significant return on investment, it is important to assess your weed problem early, plan and choose the right product for timely application as advised by your Teagasc Advisor or Agronomist, using either own on-farm sprayer or hiring a registered farm contractor to the job.

Grass is the cheapest form of feed on Irish grassland farms, so growing and utilising as much quality grass as possible this year will bring economic benefits. No one wants weed infested grazing or silage land so weed control is a very important consideration to increase supply and quality of our most valuable natural asset - grass.

## IGA Archives of Past Presidents

## **#IGAFBDSTUDENT** Photo Competition 2021



**Photo Competition Runner-up** 3rd place: Sarah Armstrong Cavan Student in Sustainable Agriculture **Dundalk Institute of Technology** 

I am a 3<sup>rd</sup> year student studying Sustainable Agriculture in Dundalk Institute of Technology. Along with my family, we have a suckler beef farm in Co. Cavan.

Over the past year and a half, I have become more involved in the dairy sector. I started helping local farms milking, just to gain experience before getting my first job relief milking. Here I gained further experience in milking, calf rearing as well as animal health. As part of my degree, I completed a 8 week placement on a local dairy farm. I was placed on a 150 cow, crossbred herd. There was a huge emphasis on minimising the costs of production as well as maximising grass yield. Here I gained knowledge on managing grass during spring as well as minimising damage to paddocks during wet periods. I began working through the farm relief during the summer, milking on different farms and picking up news skills as I go. Next summer, for my 3 month placement, I hope to travel abroad (if Covid allows) and possibly go to a large-scale dairy farm or an agricultural company.

The picture I entered was taken in mid-September, on a farm I relief milk for. I often take pictures when I am out on the farm at home and at work just using my phone. Some of the best pictures are the ones you do not plan!

We would like to thank FBD Insurance who have sponsored our student conferences since their inception in 2010



## MICHAEL J. WALSHE **President of the Irish Grassland** Association 1966/67



**IGA** Council

Member

**B** orn on May 7th, 1932, Michael Walshe had an enduring impact on Irish agriculture, most especially in his oversight of the development of the worldrenowned Teagasc, Animal & Grassland Research and Innovation Centre, Moorepark, Fermoy, Co. Cork.

From a farm in the Glen of Aherlow in Tipperary, he graduated with a first-class honours degree in Agricultural Science in 1954 and went on to have a stellar career both in Ireland and internationally. He began his working life with Vitmin Ltd, then with the Esso Oil Company followed by a period as an Agriculture Instructor in Longford. Michael then joined the Department of Agriculture, based in Johnstown Castle, where he spent two years before his appointment as Officer in Charge, Moorepark in 1959. Following the establishment of Moorepark Research Centre in 1960, Michael Walshe was its pioneering leader in grassland and dairy production research. Basic objectives were focussed on eliminating the technical constraints in Irish dairy farming, to the extent that, by 1965, Moorepark had demonstrated that the stocking rate and grazing capacity of 2.5 cows per ha were an attainable target in response to moderate levels of fertiliser inputs. Under Michael Walshe's tutelage, Moorepark held its first Open Day in 1963, an event attended by an estimated ten thousand farmers.

In the run up to Ireland's entry to the EEC, he delivered the keynote paper- 'Challenges to Farming in the Seventies'- to the Grassland members at the Association's Winter Meeting held in Kilcoran Lodge, Cahir, on February 12-13th 1971. This paper was reproduced later in



the Irish Grassland Association/Irish Farmers' Journal publication- '60 Years of Progress' - published in January 2008. Michael spent thirteen years in Moorepark and during this time was President of the Irish Grassland Association from 1966-1967.

In 1961 he travelled to New Zealand and spent one year as a Visiting Scientist at the Ruakura Research Station before returning to Moorepark. During that period Michael co-authored with Dr. CP McKeekan, Director of Ruakuru Animal Research Centre NZ, the still-authoritative paper on grassland dairy production 'The inter-relationships of grazing methods and stocking rate in the efficiency of pasture utilisation by dairy cattle'.

Michael joined the World Bank in Washington DC, USA in 1971 and worked there until 1996, appraising and supervising agriculture and livestock projects across the world. The family moved from Ireland to the United States in the following years, though he always maintained a close connection with Ireland and Irish agriculture including a first-hand involvement in an Irish dairy farm until the early years of this century. Michael's job required extensive travel throughout the world, and he delighted in making friendships wherever he went. During his career Michael was a Board Member of NET, a Muintir na Tire Council Member and was a British Dairy Technology Council member.

He met his wife Patricia Buzzard of Amarillo Texas in 1961; married her the following year and together they had five children. After retiring in 1996, Michael was better able to indulge his passions for history, economics, politics, and Gaelic sports. He owned a dairy farm near Horse and Jockey, Tipperary until 2003. Michael died in Gaithersburg, Maryland USA at the age of eighty-eight in November 2020

# Irish Grassland Association

Sheep event Athlone 19th May 2022

Beef event Kilkenny 14th June 2022

Dairy Summer Tour Thurles 19th July 2022

IGA Members Event Clonmel 19th July 2022

Dairy Conference Clonmel 20th July 2022



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