



# Irish Grassland Association

Quarterly Newsletter Issue No. 34 Winter 2016

Special  
70

Anniversary Edition

*Celebrating 70 years of excellence in agriculture*

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



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# CORPORATE MEMBERS 2016



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## Irish Grassland Association Editorial

### Dear Member,



Darren Carty  
Editor

You are very welcome to the winter edition of the Irish Grassland Association Quarterly Newsletter. This edition is particularly noteworthy as it also celebrates the association's 70-year successful connection with Irish agriculture. The founding members of the IGA had great foresight and developed a strong association and principles that remain the core objective of the IGA today.

While farming in a much different environment than 70 years ago, the challenge of stimulating and developing new ideas, research and farm practices, while being mindful to analyse the associated financial impact, is of equal importance today as when the association was formed.

As the newsletter marks the start of our 70th year we have asked a number of leading figures in Agriculture to give their account and views on how agriculture has changed during this period. The outline of these features is on page 23, which marks the start of our 70th year celebratory coverage. A special thanks to previous newsletter editor Paul Crosson and the 2015/2016 committee who organised and collated the majority of this material. Articles looking back on the association's history will also be carried in our spring, summer and autumn newsletters.

#### Planning for 2017

Back to the day-to-day tasks of the association, new committee members (page 7) have hit the ground running and taken up their position on organising committee's for 2016/2017 events. The first of these is the Dairy Conference which takes place on Wednesday 18 January in the Newpark Hotel, Kilkenny. The event, sponsored by Yara, is

outlined on page 22 and unfortunately for those who did not get tickets is sold out. Updates from the event will be available on the IGA twitter account and also following the event on [www.irishgrassland.com](http://www.irishgrassland.com) and in the spring newsletter. Bringing a conclusion to the successful events of 2015/2016, the student conference is reviewed on pages 16 and 17. Harnessing the interest of potential future farmers is critical for the industry and the conference, sponsored by FBD, has become a firm favourite among students in the many institutes offering agricultural-related courses.

Staying with students, a recent initiative of the IGA has been to offer two student bursaries where postgraduate students will be supported in travelling to an event of their choice. A review of last year's bursaries and a call-out to interested applicants is detailed on pages 18 and 19.

The 'Year in My Wellies' diary features continue to attract favourable reader feedback. Pages 14 and 15 catch up again with dairy farmer Bryan Hynes as housing marks the end of a positive grazing season the farm run in partnership with David Neilan. Kilbeggan farmer and Teagasc/UCD PhD student Noel Claffey is preparing for the lambing and calving cycle starting once again, while Sligo native Jonathan Higgins gives us a taste of life in Illinois while completing a semester abroad.

Lifetime Merit Award winner for 2016 Noel Culleton is honoured on pages 10 and 11 where details can also be found on proposing applicants for the 2017 award. Finally, a report on the presentation given at this year's sheep conference by Dr Tommy Boland on the mixed species grazing trial taking place in UCD Lyons Research Farm is featured on pages 16 and 17.

As always we welcome feedback on any aspects we can do better - e-mail [secretary@irishgrassland.com](mailto:secretary@irishgrassland.com).



# Thanking retiring members and welcoming new faces

The Irish Grassland Association is a voluntary organisation that is indebted to farmers and industry personnel that so kindly give their time to ensure the organisation keeps progressing forward. Members generally serve on the council for a one or two three-year terms.

## RETIRING MEMBERS

This year the council has lost two long-serving stalwarts with Paul Crosson, who works in Lacpatrick and Sligo Dairy farmer Padraig Mulligan retiring while Donal Patton has retired after completing two years on the council.



### Donal Patton

Donal Patton joined the IGA council in 2014 and served two years of a three-year term. With his strong background in dairying Donal worked closely with dairy committees who continue to oversee and organise the popular dairy summer tour and spring conference. We hope that Donal's expertise, working for Teagasc in Ballyhaise Agricultural College will continue to benefit farmers in the area.



### Padraig Mulligan

Padraig was elected onto the IGA council in 2009. During his two terms, Padraig participated in numerous committees, both as chair and part of a team. He brought a wealth of dairy knowledge and experience from the large-scale dairy herd he runs in partnership with his son Padraig Og. We wish Padraig, his wife Mary and six children many more successful years on the farm in Templeboy, Co Sligo.



### Paul Crosson

Paul Crosson was a member of the IGA council for seven years. He was a very successful president in 2014/2015, bringing many new ideas and energy to the role. Paul has recently joined LacPatrick as group technical support manager for the Monaghan based dairy company after a distinguished career in Teagasc Grange where his work included data analysis and bio economic systems modelling to identify profitable production systems. His work showed the impact of market, policy and technical changes on farm profitability as well as exploring the environmental impact of such. The IGA wishes Paul well in his new role with LacPatrick.

## RE-ELECTED MEMBERS

The IGA are delighted that the following members agreed to commit to another three year term on the council.



### Jan Jensma

Jan is from a farming background and works with Yara, specialising in fertiliser sales. He has been a valuable member of the IGA council and has been instrumental in developing the association's presence online and giving speedy updates from our main events.



### Emer Kennedy

In an era of abolition of quotas, Emer's current research with Teagasc Moorepark on optimum calf rearing strategies is invaluable for a sector undergoing rapid expansion. This, along with extensive research in increasing the volume of grass in the diet of spring calving dairy cows, has been hugely beneficial in organising very worthwhile IGA dairy and student events.



### David Cummins

David's background in grass seed testing, analysis and certification from working with DAFM brings a wealth of expertise to the IGA council. His day-to-day duties which include the organisation of the national list and recommended grass and clover variety list serve farmers well and is also hugely advantageous to the IGA council where David has also taken a keen interest in harnessing student interest.



### Rosalyn Drew

Originally from a mixed farm, Rosalyn has always had a huge interest in agriculture. She has recently joined the sales and marketing team at Nitrofert Fertilisers. Previously she was a grass seed specialist for Drummonds Seeds. Her business acumen and knowledge of grassland management has been a great aid to the IGA. She has been an active contributor to the newsletter and many IGA events over the past 3 years.

## NEWLY ELECTED MEMBERS

The IGA is delighted to welcome three new faces to the council in 2016. Christy Watson, Teagasc, Westmeath beef farmer Mark Maxwell and Stan Lalor, Grassland Agro joined the council in September. Some information on the new recruits is listed below.



### Christy Watson

I am a Graduate of Agricultural Science from University College Dublin having qualified in 1984 with a Bachelor of Agricultural Science (Honours).

In 1985 I obtained a Masters of Agricultural Science (Honours) from University College Dublin. My thesis was an in-depth study of the *Factors affecting Flock Performance and Ovine Perinatal Mortality* on lowland sheep farms in south Roscommon.

On completion of my masters, I joined the state advisory service ACOT in 1985. I have worked to date as a cattle and sheep adviser, initially specialising in sheep in county Wicklow for my first ten years in the advisory service. I transferred to county Kildare in 1995 and continue to work there dealing predominantly with cattle farmers.

I have a particular interest in grassland management and believe there is tremendous scope for improvement of farm income through better grassland management.

I completed a marketing course at the Irish Management Institute. I have served on the council of the Fertilizer Association of Ireland, and was elected President in 2000. I have been closely involved in the Teagasc Better Farm Advisory Initiative with one of my clients an initial focus farm.

I have used the discussion group model for delivering advisory services to my clients. I currently facilitate four beef and one sheep discussion group including a Joint Teagasc / Macra Na Feirme young farmer beef group.

I am currently studying for a diploma in Leadership at the Irish Management Institute.



### Mark Maxwell

My name is Mark Maxwell and I am married to Aoife. We have five children ranging in age from eleven to two and live in Ballinagore, Co Westmeath. I am a beef farmer with a small tillage enterprise. The farm is about 105 hectares with 98 hectares of grass. My principle production system is suckling-to-finishing, and I also rear and finish dairy-beef as a way of increasing output on the farm.

I joined the Teagasc/Irish Farmers Journal Better Farm programme in 2012 (phase 2) and since then much has happened on the farm and in our family life. The farm was going through a development phase prior to joining and over the next four years the farm progressed at a much faster rate. The stocking rate went from 1.5 to 2.5LU/ha. Cow numbers went from 70 to 120 with

split spring/autumn calving herds. The programme provided a great opportunity to develop personal and professionally, and also provided a challenge to learn and embrace new technical knowledge.

The main objectives on the farm were to increase the stocking rate and gross output, and maximise grass growth and utilise it as efficiently as possible. The relationship between stocking rate, gross output and gross margin became very clear. The farm became more streamlined through compact calving and keeping variable costs to a minimum. I have always been positive about beef farming and seeing the farm move forward in recent years has been very rewarding.



### Stan Lalor

Dr. Stan Lalor graduated B.Agr.Sc in 2002 and M.Agr.Sc. in 2005, both from UCD. He then went on to graduate from Wageningen University, The Netherlands, with a PhD in 2014. He worked for over 10 years with Teagasc, initially as a dairy advisor in Co. Kildare and Co. Monaghan, before working for almost nine years as a researcher on manure management and soil fertility in Johnstown Castle, Wexford.

He moved to his current position as Head of Speciality Business with Grassland AGRO in 2014. He is from a farming background in Co. Laois, and still has an active role on the family dairy and beef farm near Mountrath. He is well known as a proponent of the importance of good soil fertility management for optimum grassland productivity, and has contributed to a number of Irish Grassland Association events on this topic in recent years.





## Irish Grassland Association Council and Staff 2016 – 2017



**Bernard Ging**  
President 2016-17  
Dairy Farmer



**Adam Woods**  
Vice President 2016-17  
Irish Farmers Journal



**Maura Callery**  
Office Manager



**Alan Kelly**  
IGA Council Member  
and UCD



**Austin Flavin**  
IGA Council Member  
and Teagasc



**Brian Nicolson**  
IGA Council Member  
and Sheep farmer



**Cathal McCormack**  
IGA Council Member  
and Alltech



**Karen Dukelow**  
Past President 2015-16  
Teagasc Beef Specialist



**Kevin Farrell**  
IGA Council Member  
Beef and Sheep Farmer



**Laurence Sexton**  
IGA Council Member  
and Dairy Farmer



**Mark Maxwell**  
IGA Council Member  
and Beef Farmer



**Christy Watson**  
IGA Council Member  
and Teagasc



**Ciaran Lynch**  
IGA Council Member  
and Teagasc



**Donal Callery**  
IGA Regional  
Development Officer  
Farm Manager



**David Cummins**  
IGA Council Member  
Crop Evaluation and  
Certification,  
Dept. of Agriculture



**Michael Bateman**  
IGA Council Member  
Dairy Farmer



**Noreen Begley**  
IGA Regional  
Development Officer  
Dairy Farmer



**Pat Donnelan**  
IGA Council Member  
and ICBF



**Paul Hyland**  
IGA Council Member  
and Dairy Farmer



**Darren Carty**  
IGA Council Member  
Irish Farmers Journal



**Emer Kennedy**  
IGA Council Member  
Teagasc Moorepark



**George Ramsbottom**  
IGA Council Member  
and Teagasc



**Jan Jensma**  
IGA Council Member  
YARA



**Ronan Delaney**  
IGA Council Member  
Sheep and Beef Farmer



**Rosalyn Drew**  
IGA Council Member  
Nitrofert



**Stan Lalor**  
IGA Council Member  
Grassland Agro



**Tommy Moyles**  
IGA Council Member  
Beef Farmer





## Presentation of the 2016 Lifetime merit Award to Dr Noel Culleton

Michael Doran,  
Dairy Farmer,  
Wexford



The 2016 Irish Grassland Association Lifetime Merit Award was presented to Dr Noel Culleton at a function in the Heritage Golf and Spa Resort in Killenard Co. Laois on the 15<sup>th</sup> September 2016. Noel was joined by members of his family, former work colleagues and those he worked with in the agricultural industry. Also present was the council of the Irish Grassland Association and former recipients of the Lifetime Merit Award including Dr Sean Flanagan 2010, Dr. Pdraig O'Kiely (2011), Matt Dempsey (2014) and John Shirley (2015).

Noel was a worthy recipient and I was delighted to have had the opportunity to nominate Noel and be present when Bernard Ging, President of the IGA, presented him with the Lifetime Merit Award.

Noel received a first class honours degree and a masters degree in UCD before starting his career in the Department of Agriculture where he worked on the evaluation of grass cultivars. In 1980 he joined the Grassland Department of An Foras Talúntais (AFT) at Johnstown Castle.

In the course of his career he researched a range of issues around soil fertility and grassland management. During his early work he was concerned with studies on the seasonal productivity of different sward type's e.g. old permanent pasture, different types of leys, Italian ryegrass and early and late flowering perennial swards for grazing and silage production. During this period he spent a year in INRA in France in order to gain experience in the wider aspects of grass physiology as part of his PhD under Gilles Lemaire.

Following the establishment of Teagasc in the late eighties, the role of Johnstown Castle was expanded to include, not just aspects of soil fertility and fertiliser use (including slurry) on the productivity of grassland and crops, but also to include the influence of these factors on the environmental aspects of farming.

In 2004, he became head of the Environment Programme and in 2006 became Head of Johnstown Castle Research Centre. The primary focus of the centre changed to conducting research that would facilitate farmers in farming efficiently while at the same time not damaging the environment. He was deeply involved in the negotiations with the Department of the Environment on the Nitrates Directive and succeeded in mitigating the more restrictive aspect to farming of this legislation.

The research he, and his team, conducted in Johnstown showed clearly that it is possible to farm intensively, maintain high soil fertility and maintain high productivity of grassland and animal production and still not damage the environment. A win- win for farmers and the environment is possible, providing care is taken with nutrient management. In keeping with this objective Noel undertook a vital part in investigating the build-up and maintenance of phosphorous over a long period for grazing cattle at high production levels.

In 2010, he was appointed Programme Leader of Crops, Environment and Land Use in Teagasc. Throughout his career he published some 60 scientific papers as well as over 600 popular/technical papers. He has also written books, has been extern examiner in UCD, moderator in University of Limerick as well as being a frequent lecturer in WIT. He was on the editorial board of the Irish Journal of Agricultural and Food Research for many years.

During his time at Johnstown Noel received a request from the GAA to conduct a study of the factors influencing the productivity of ash for the production of hurleys. In his studies he found that moderate to high levels of soil fertility, good grass and weed control at planting and early growth stages were essential for successful establishment of ash plantations. It was a fitting coincidence that during the same week that Noel received the Lifetime Merit Award from the IGA, the GAA were taking their first harvest from the ash trees that he planted in Johnstown Castle.



*At the presentation, Dr Noel Culleton was joined by members of his family, former work colleagues & those he worked with in the agricultural industry, including former recipient winners, along with members from the IGA council.*

In his address Noel thanked the Irish Grassland Association for awarding him with the Lifetime Merit Award and acknowledged the respect he has for the Association and its unique and central role in the development of profitable systems of milk, beef and lamb production from Ireland's grasslands. He outlined the importance of having continuing research to show how intensive productive agriculture does not have a negative effect on the environment when done to the correct standards. However he also warned how climate change legislation could potentially restrict every Irish farmer's ability to farm to their potential into the future. He argued strongly that this problem is solvable. Ireland can produce food with a lower carbon footprint than other European countries and can, given time, reach the climate change targets, while still allowing for significant expansion of our dairy production. This can be achieved through research and implementing key strategic decisions taken at national level.

The event and presentation of the IGA Lifetime Merit Award is recognition by the IGA of the contribution that Noel Culleton has made to the Irish grassland farming sector and he is a very worthy recipient.



*Bernard Ging Irish Grassland Association President awarding Noel Culleton with the Irish Grassland Association Lifetime Merit Award 2016*



# Nominations sought for the Irish Grassland Association Lifetime Merit Award 2017

Maura Callery, Irish Grassland Association Office Manager

The Irish Grassland Association Lifetime Merit Award was established in 2009 to acknowledge the unique life contribution of an individual to the understanding and application of grassland husbandry and technology. This prestigious award is a public endorsement on behalf of our Association and its members, to the great and important contribution made by the recipient to our industry and lives.

Previous winners of this award are Paddy O'Keeffe, Sean Flanagan, Padraig O'Kiely, Norman Bateman, Seamus Hanrahan, Matt Dempsey, John Shirley and Noel Culleton. We are now seeking nominations for the 2017 Lifetime Merit Award. If you would like more information on this award please contact Maura on 087 9626483. If you would like to nominate a person for the award please email your nomination to [secretary@irishgrassland.com](mailto:secretary@irishgrassland.com) before 1st April 2017.



Paddy O'Keeffe  
Award Winner 2009



Dr. Sean Flanagan  
Award Winner 2010



Dr. Padraig O'Kiely  
Award Winner 2011



Norman Bateman  
Award Winner 2012



Dr. Seamus Hanrahan  
Award Winner 2013



Matt Dempsey  
Award Winner 2014



John Shirley  
Award Winner 2015



Noel Culleton  
Award Winner 2016

Irish Grassland Association  
Lifetime Merit Award



# A Year in my Wellies

## Jonathan Higgins, Leekfield, Skreen, Co Sligo



**Introduction:** Philip Higgins and his son Jonathan hosted an Irish Grassland Association farm walk in August 2014. The event was very well received by farmers, with over 300 delegates attending the day. A notable feature of the day was Jonathan's discussion on establishing a pedigree Texel flock with the attendance welcoming a well-needed injection of youth into the sheep sector.

Two years on, Jonathan has expanded his own pedigree Texel flock, the Avondale Flock, and is juggling management of the flock with a busy schedule studying Animal Science in University College Dublin School of Agriculture and Food Science.

### The final stretch

Having been in Illinois University for just over three months now I have experienced a host of different lifestyles and cultures as well as seeing how animal science is taught in the US. The course here doesn't vary much to the one in UCD but the lectures are smaller and more interactive. It is mostly continuous assessment so there is less pressure at the end of each semester. During my semester here in Illinois I've been able to travel at the weekends to different states and cities. This has allowed me to see firsthand the different types of agricultural enterprises as the landscape changes from flat land here to hills in the eastern states and southern Illinois. I also had time to drive through the Amish community which was a real eye-opener.

Here in Illinois, like most mid-west states, it is mostly arable crops with livestock being more common on rougher terrain. However, I was lucky enough to be able to participate on research projects on two beef farms through college. The first farm was located four hours south of the college and was an extensive all grass system. The project there was to examine the effect of a long-range de-wormer on fall (autumn) calving cows grazing endophyte-infected fescue grass. 450 out of the 900 angus-cross cows on the farm were used in this project. Blood samples, flies on the cows, ticks in the ear and egg counts in faeces were all collected or counted on day one. On the second day I was helping to analyse these samples in the lab on site. This project was also looking at how the de-wormer affects the reproductive efficiency of the cows as they go back in calf this winter.

The second farm was located two miles off campus and this was mainly where the calves came after weaning until they were finished for the factory. These animals stay outside until December and then they are housed (with some exceptions). While on this farm I helped perform muscle biopsy on 10 animals to determine the mechanistic effects of implants in growing beef animals, (five with implants and five without implants). I found both projects very interesting and it has put into my head the idea of research as a highly possible future career.

Home in Ireland, dad has been busy since I left with all the daily tasks as well as the seasonal ones. He has sold all bar 60 lambs and these will be going within the next two weeks. Some lambs were sold privately for breeding, some as stores to the

local mart and the rest to the factory in Navan. The majority of lambs were housed for the past six weeks to see how they will finish from indoor management rather than leaving them out on grass until they are slaughtered as we usually do. Time will tell whether this was the right decision or not.

All 450 breeding ewes and ewe lambs were checked for long hooves and all of them were foot-bathed, crutched and fluked. The thin ewes and ewe lambs were dosed with a wormer as well. The ewes were then spilt into several groups according to their breed ie. Suffolk cross, Mule and Texel cross.

The rams were put out to the commercial ewes on October 15th. The Charollais and Texel rams were put on the Suffolk cross ewes and the Suffolk rams with the Mules and Texel crosses. The ewe lambs were put to the ram two weeks later and split two-third with Texel rams and one third with the Charollais rams. All breeding ewes and ewe lambs will be housed within the next week, to allow the remaining paddocks to recover for grazing next spring. Some paddocks have already been stripped for the past month to allow for early spring grass. The cows have already been housed for six weeks due to weather conditions.

The pedigree flock were sorted and 10 were chosen for A.I. with the RamPlus scheme and are due to lamb on February 20th. The remainder were put with a stock ram. These will be housed in the coming week along with the 2016 ram and ewe lambs and the commercial stock rams. They will have a straw bed until the end of February.

And finally, dad has finished converting a cattle shed to a sheep shed. It now has plastic sheep slats and can house 250 large breeding ewes which helps to facilitate for the expanding sheep flock on the farm over the winter months.

## Bryan Hynes, Clarin Farm, Clarinbridge, Co Galway



**Introduction:** Bryan Hynes started farming in partnership with David Neilan in May 2013. Cow numbers have been increased gradually in advance of the abolition of milk quotas with 130 cows grazing in 2016 at a stocking rate on the milking platform of about 3.2cows/ha.

Land type can be described as dry, free draining soils with limestone rock lying not far beneath the surface. This gives an opportunity for grazing early and late in the year but does present the risk of paddocks burning up and growth slowing significantly in a dry summer. A high percentage of the farm has been reseeded in the last two to three years in line with the herd expanding.

### Housing marks end of milking grazing season

My last update was in August so it is useful at the outset to recap on what has happened since then. With the previous three months being close to ideal for our land type, September was very difficult. Constant rainfall lowered the dry matter content of grass and left it hard to maintain the same level of grass utilisation and get on track building covers.

We experimented this year with bringing the 50 in-calf heifers back to the shed for a few weeks in September. These will

# A Year in my Wellies

be outwintered on grass (offered every one to two days) that was built up on an out-farm block in September and October and were never trained in on cubicles. It worked well when the shed was quiet and will hopefully lead to a smooth transition when they are brought indoors in January ahead of calving. It also served to reduce grass demand and allow covers to develop after third-cut silage was harvested.

While on the heifers, current weather is ideal with heifers going into covers of 2,200kg DM/ha and cleaning them out perfectly. We are also taking advantage of the dry weather and are slowing down the rate heifers are grazing by supplementing silage in a bale trailer. Our thinking is that if weather turns bad it will give us a larger area for grazing.

A batch of 30 first-calf heifers were the first animals dried off last Thursday (24 November). These have also been put to grazing on an outfarm block and are grazing heavier covers close to 3,000kg DM/ha. We will also leave these out as long as possible. 2016-born heifers were housed last week and are settling in nicely indoors. They are being fed bales that were saved from surplus grass and are ranging in DMD from 78 to 82. This has reduced concentrate cost and we aim to make about two bales per heifer. Heifers look well on target and should not need supplementation but we will weigh and dose next week.

The milking herd was housed on Friday and are being fed pit silage which tested 72 to 74 DMD, 28% dry matter and 15.5% protein. Cows are in excellent condition with only a handful under BCS 3. These have been also dried off. We will stay milking for another few weeks and dry off cows once they hit eight to 10 weeks pre-calving. Cows are still milking well at 12 litres per day at 4.1% protein and 5.6% fat and we are on target to hit our target of 400kg milk solids produced.

All-in-all the year has ended up not overly bad. Milk price has been tough but we have been lucky enough to have invested in previous years in reseeding, infrastructure and land improvement. This has allowed us to keep capital investment to a minimum and get through the year ok.

### Nuffield travels

I have been lucky enough to be awarded a Nuffield scholarship looking into the options of setting up another dairy unit alongside an existing unit. I think this will have many benefits in looking to expand into another unit but also in our own system.

## Noel Claffey, Kilbeggan, Co Westmeath



**Introduction:** Noel Claffey farms 140 acres (100 owned and 40 rented) with his father Tommy. Both Noel and Tommy have off-farm employment with Noel in his third year of a PhD with Teagasc Athenry and UCD. His research aims to uncover the effects of production factors on various meat quality attributes of Irish lamb. At home, the farm operates both beef and sheep enterprises.

The beef herd consists of 60 suckler cows with calving split

between autumn and spring. Progeny are predominantly sold as weanlings. The herd consists primarily of Limousin and Simmental crossbred cows, most of which are mated to a Charolais stock bull. Approximately 25 cows are selected for AI each year to either breed replacements or, in the case of highly terminal cows, to breed show quality calves.

### Winter management with one eye on 2017

The attention on the farm has turned to the tasks that the winter months bring to any farm, however preparation for 2017 is already under way. All cows on the farm have been housed. The first were housed from the 25th of September with the final group housed on the 20th of October.

Although weather conditions remained favourable for grazing, the decision was made to house stock in an attempt to help build covers to enable early turn out and spring grazing when grass will be of more value to us as cows have calves at foot. Fertilizer and farm yard manure was applied to paddocks which are marked for early grazing in the spring.

Our main cut of silage was taken on June 5th and returned with 71% DMD. This will predominantly be fed to the cattle, while baled silage removed from surplus paddocks will be offered to the sheep. All weanlings have been sold off the farm with the exception of a group of 11 heifers which have been retained for breeding. Autumn calved cows will be served in late November with the view to calving in early September next year. Vasectomised bulls are run with cows while housed on slats to help indicate heat with the cow then either served to AI or moved to the bull pen for natural mating.

The show season has drawn to a close for us on what has been another successful and very enjoyable year. Our final outing was at the winter fair held in Carrick-on-Shannon on the last weekend of November with the last of our show calves for 2016 been sold there. The attention now turns to calving 2017 and the cycle starting once more.

On the sheep side of the farm the attention is turning towards preparing for lambing. We are early lamb producers so the majority of our lambs will be born in early to mid-January. The main flock of ewes were scanned in the opening days of November. We were reasonably pleased with a scanning rate of 1.86 lambs per ewe joined to the ram with 93% of ewes joined becoming pregnant. The ewes which did not show up in lamb will be scanned again with hoggets in late December with a mean lambing date of 15th of February expected for the hoggets.

Following scanning, ewes were separated according to their scanned litter size. Twin and triplet-bearing ewes are grouped together until three weeks pre lambing where triplets will be separated for increased feeding. Meal feeding commenced in the last week of November at a rate of 250 grams per day. This will rise to 1kg per day pre lambing. Ewes and lambs will be released to pasture seven to 10 days after lambing if weather conditions are favourable. They will graze blocks of grass which have been stripped since September.





## Irish Grassland Association Student Conference 2016 – Review

**David Cummins**  
IGA Council Member  
Crop Evaluation and  
Certification,  
Dept. of Agriculture



The seventh annual Irish Grassland Association Student Conference took place in Kildalton College, Piltown, Co. Kilkenny on Monday 10<sup>th</sup> October 2016 in lovely autumn sunshine. The event was attended by students from University College Dublin, Waterford Institute of Technology / Kildalton Agricultural College, Tralee Institute of Technology and Dundalk Institute of Technology / Ballyhaise Agricultural College. The event was divided into two main sessions, with a morning conference session and an afternoon farm session in Kildalton College. After the official opening of the Conference by Mr. Bernard Ging, IGA President and after a brief few words by Mr. Simon Doocey on behalf of the sponsor FBD, the Conference got under way. IGA Council member and dairy farmer Mr. Paul Hyland chaired the morning conference session.

Dr. David Devaney from Kildalton started proceedings with an interesting presentation on the Kildalton Open Source Sustainable Farm. This platform was launched in late 2014 and has undergone a year of planning and data gathering. The last year has been a time of increased activity and involves setting the groundwork for future monitoring and evaluation. David gave an introduction to the concept of sustainability and how sustainability could be measured.

Sustainable intensification exists where you simultaneously raise yields, increasing the efficiency with which inputs are being used and reducing the negative environmental effects of food production. However, there is a growing consensus amongst definitions and statements that sustainable intensification should not only avoid further environmental damage, but actively encourage environmental benefits. Sustainable intensification sets out to achieve greater production, greater efficiency with greater environmental protection.

David outlined the seven pillars to sustainable intensification; resource use efficiency, water quality,

enhancing biodiversity, economic sustainability, gaseous emissions, animal welfare and health & safety. Recent work has shown that, on average, 6.4L of water is used on Irish farms for every 1L of milk produced. Water usage is determined by livestock maintenance, milk cooling and cleaning procedures and can be influenced by leakages in the system. Work done in Moorepark has shown that milk cooling is the largest consumer of electricity (37%) followed by water heating (31%), vacuums pumps (19%) and lighting (10%). Other items such as wash pumps, milk pumps, feed augers and air compressors make up the balance (3%).

The relationship between agricultural activity and water quality has improved between 2000 and 2010 (Teagasc 2015). This is due to investment in improving storage facilities, improved farm management practices, more efficient use of fertiliser, participation in Agri-Environmental programmes and compliance with Nitrates Directives and compliance with cross-compliance. However, it was noted that 31.5% of river channels in the Rep. of Ireland are failing to achieve good status.

In conclusion it is important to remember that sustainability and economic viability are the key to success.

### Critical role of self-development

John Kelly gave an interesting lifetime experience talk on how he got to where he is today. John and his wife Caroline are dairy farming in Baltinglass, Co. Wicklow where he started his self-employed life as a sheep farmer. Almost four years ago, John converted from sheep farming to dairy farming. A key nugget of advice highlighted for a successful business was "if you don't measure, you can't manage".

Farmers often talk about the weather being the biggest variable with markets or currencies also important.

However, according to John, you (yourself) are the biggest variable in a system. You have to be able to understand yourself and interact with others; you need to get clarity and be inquisitive.

John found self-development courses very useful to help you understand yourself. He also listens to audio books/podcasts when out on the farm and sees wider benefits in collaboration. Today John is milking 150 cows and hopes to milk 180-190 next year. He produced 430Kg milk solids/cow last year from 290kg meal, with 65% first calvers in the herd. His SCC has averaged under 100,000 since he started milking and his empty rate was 5% last year.

John summed up his talk by saying "you have one life; value yourself and value others."

### Measuring and managing

Micheál O'Leary from the Grassland Science Department, Animal & Grassland Research and Innovation Centre, Teagasc Moorepark gave a very informative talk on PastureBase Ireland.

PastureBase Ireland can be divided into two segments; it is a web-based grassland management tool for farmers and it is a grassland database for Ireland. Farmers record their weekly cover and researchers in Moorepark can collate the data, discovering different trends in growth rates and dry matter (DM) production across different enterprises, regions and soil types. There are approximately 1,300 farms on PastureBase Ireland, yet there are 17,000 dairy farms and over 100,000 drystock farms in Ireland. The number of farms measuring needs to increase drastically.

Micheál's presentation included findings that have been highlighted by PastureBase Ireland. For example, PastureBase Ireland has identified that the advantage of creating one new paddock on a farm will give five extra grazings on the farm for the year. As a consequence of sub-dividing a farm into paddocks of adequate area, the number of grazings will increase in conjunction with DM production.

Dairy farms recording farm covers regularly on PastureBase Ireland have grown between 12t to 14t DM/ha/year over the past three years (2013-15) while drystock farms have grown between 10.5t to 12.3t DM/ha/year for the same period. Spring DM production is variable on farms. Dairy farms finishing

their first rotation before 10<sup>th</sup> April grew 20% more grass in spring 2014 compared to farms who finished the first rotation after 10<sup>th</sup> April.

Top producing farms are achieving 1.7t DM/ha with others only growing 0.3t DM/ha between the 1<sup>st</sup> January and 10<sup>th</sup> April. When modelled on a whole farm basis, early grazing will generate an increased profitability of €2.70/cow/day for each extra day at grass through higher animal performance and lower feed costs.

If soil fertility and grazing management can be improved, many farms are very capable of increasing their DM production substantially. Increasing grass utilised by 1t DM/ha increased net profit by up to €267/ha on dairy farm, while 1t DM/ha utilised on a drystock farm is worth €105/ha.

Closing date in the autumn, and timing and level of spring nitrogen fertiliser application are the two most important management factors influencing the supply of grass in early spring. Autumn closing date has a very significant impact on what level of grass is available the following spring. For each week delay in closing in autumn, spring grass accumulation is reduced by 77kg DM/ha.

A key take-home message from Micheál's talk is that huge potential exists to grow more grass with improvements in grazing management.

### Visit to Kildalton

In the afternoon Kildalton College staff gave students an insight into the dairy, beef and sheep enterprises on the Kildalton Farm. Students also visited the Department of Agriculture herbage evaluation trials in Kildalton College, which is one of five herbage evaluation trials sites operated by DAFM.

The Irish Grassland Association would like to sincerely thank our host, Kildalton College, Piltown, Co. Kilkenny for their help and cooperation in hosting our 2016 Student Conference. Particular thanks must be given to Mr. Tim Ashmore, Assistant Principal and the college staff who helped out on the day. We would also like to thank our sponsor of the event FBD Trust, who have kindly sponsored this event for the last seven years. Also, thanks to all the students and their lecturers for attending on the day. We look forward to another successful event in October 2017.

**Irish Grassland Association Student Conference 2016**  
was kindly sponsored by



We would like to sincerely thank our sponsor the FBD Trust, who have sponsored this event since its inception in 2010





## Irish Grassland Association 2016 Postgraduate Student Bursary Winners

**David Cummins**  
IGA Council Member  
Crop Evaluation and  
Certification,  
Dept. of Agriculture



There were two winners of the IGA Postgraduate Student Bursary this year, **Cornelia Grace** and **Eamon Corcoran**.

Cornelia is a postgraduate student (studying for her PhD) in UCD School of Agriculture and Food Science and is based in Lyons Research Farm. Her postgraduate project is titled: 'The effect of multispecies pasture mixes, defoliation method and nitrogen input on dry matter yield, nutrient value and digestibility of herbage'. The conference/event that Cornelia attended was the European Grassland Federation Conference 2016 in Trondheim, Norway, where she gave a theatre presentation in a session at the conference entitled "Forage Potential in Ruminant Nutrition" with over 20 other speakers.



Eamon is also a postgraduate student (studying for his PhD) in UCD School of Agriculture and Food Science, based in Lyons Research Farm. His postgraduate project is titled: 'Identification of the major factors affecting nitrogen use efficiency and nutritive value of forage maize production in Ireland'. The conference/event that Eamon attended was the European Grassland Federation Conference 2016 in Trondheim, Norway where his own abstract was presented as part of the "forage potential in ruminant nutrition" section of the conference.

This year the two winners were presented with their presentation pieces and cheques for €500 each at the IGA Student Conference on the 10th October 2016.

## Applications for IGA Student Travel Bursaries

Since its foundation, the Irish Grassland Association (IGA) have worked alongside the most progressive individuals in the farming, research, advisory and agri-industry sectors for the betterment of Irish grassland farming. This relationship has been significant in bringing Irish grassland technology to the forefront as an international science.

We are particularly interested in supporting young people prepare for their agricultural careers. Along with our other events, we host a Student Conference and award two student travel bursaries annually. The Irish Grassland Association awards these student bursaries to support travel to conferences or events deemed to be of benefit to students undertaking postgraduate studies in grassland or grass-based livestock systems research in Ireland. Two bursaries with a value of up to €500 each will be available in 2017.

### Application procedure:

Applications are invited from members and non-members of the Irish Grassland Association and must be received at least two months prior to the funding being required. Interested persons can apply for the bursary by completing an application form which can be accessed at [www.irishgrassland.com](http://www.irishgrassland.com) from the 1st January 2017.

The successful applicant(s) will be notified within one month of the closing date. The successful applicant(s) will be required to provide a written report for the Irish Grassland Association council which will be published in the Association's Newsletter.

As already mentioned, applications can be downloaded at [www.irishgrassland.com](http://www.irishgrassland.com) and submitted to: [secretary@irishgrassland.com](mailto:secretary@irishgrassland.com) with the subject line in the email titled 'IGA bursary application 2017'.

**Closing date for applications is 5 pm on Friday 28th April 2017.**







## Exploring the potential of multispecies swards

Darren Carty,  
IGA Council Member  
Irish Farmers Journal



Exciting provisional results on the potential of multispecies swards in sheep enterprises were presented by Dr Tommy Boland, School of Agriculture and Food Science, UCD at this year's sheep conference held in Aughrim, Co Wicklow. The results are from year one of a two-year trial which is funded by the Department of Agriculture, Food and the Marine and supported by collaborators through Smartgrass (researchers from UCD, Teagasc and AFBII), the project which aims to increase the yield and quality of forage/silage on livestock farms while also reducing any negative environmental impact of producing crops under intensive farming conditions.

The trial, which is managed day-to-day by PhD student Connie Grace, is comparing performance of mid-season lambs born in Lyons Research Farm across four sward types. It started in August/September 2014 when the following sward types were sown;

- Perennial ryegrass (PRG) only with nitrogen application of 163kg/ha
- PRG and white clover with 90kg nitrogen application per hectare
- Six-species mix including PRG, timothy, white clover, red clover, plantain and chicory, also with an allowance of 90kg N/ha/year.
- Nine-species mix including PRG, timothy, cocksfoot, white clover, red clover, birdsfoot trefoil, plantain, chicory and yarrow with an allowance of 90kg N/ha/year.

### Trial metrics

The swards were sown randomly across an area with five paddocks allocated to 30 twin-suckling ewes and

their lambs at a stocking rate of 12.5 ewes/ha. This was the entire area that was offered and with 2015 being a difficult year growth wise, concentrates were introduced to supplement any shortfall in nutritional intake when required. In total, there was 8kg fed/ewe to group grazing PRG, 19kg/ewe to PRG & white clover, 7kg/ewe to the six-species mix and 18kg/ewe to the nine-species mix group.

Extensive measurements were collected on ewe weight and body condition and lamb performance. Ewes were recorded at six week intervals while lamb performance (weighing) and faecal egg counts were carried out fortnightly. A drafting weight of 45kg live weight was set and after weaning lambs were grazed ahead of ewes in a leader-follower system to optimise performance with ewes used to graze paddocks from 5cm to 4cm.

### Provisional results

Tommy presented results on all the areas described above. Ewe body condition score was highest six weeks after lambing on the nine species mix with very little difference between the others. This changed at weaning with the PRG & WC and six species mix best. The nine species mix regained top position however at breeding and housing with a BCS of about 3.2, slightly ahead of the other three groups. Ewe weight also varied throughout the year with ewes grazing the six and nine-species mixes heaviest from after lambing right through to housing.

Moving onto lamb performance, Tommy showed a significant difference in weaning weight in 2015. Lambs grazing the six-species mix weighed 36kg at weaning with both the nine-species mix and PRG & WC swards weaning lambs at 34kg while lambs grazing PRG only swards were lightest at 32kg. As can be expected this was reflected in average daily live weight gain with lambs grazing six-

species swards gaining slightly over 300g/day, significantly ahead of the PRG lambs gaining 285g.

Figures 1 and 2 shows the effect of sward type on average daily gain from birth to slaughter and on days to slaughter. This visually shows the huge merit gained in year one of the trial from grazing multispecies swards. Lambs grazing the six species swards finished 25 days earlier than those grazing PRG only swards.

### Health impact

The lift in performance is stemming from higher performance attained from grazing a more diverse sward and also from a lower health challenge. The nine-species mix had the lowest faecal egg counts at ten weeks of age and longest period of time of over 70 days between the first and second anthelmintic treatment. This compared to about 50 days for the six species mix, 38 for the PRG & WC and 35 for lambs grazing PRG only. This had a significant impact on the number of doses required per lamb as shown in Figure 3.

### Further research

Tommy stressed to farmers at the event that while the results achieved are very positive, they are only from year one of the study with further research required into areas such as persistency of swards, performance in varying soil types and rainfall levels, faecal egg counts and parasitic burdens, meat quality and amongst others animal interactions with the sward. For example, after one year the persistency of birdsfoot trefoil is questionable, especially given the high cost of seed. Further updates will be followed and more information can be got on the project at [www.smartgrass.ie](http://www.smartgrass.ie).



Tommy Boland, UCD

### The effect of sward type on average daily gain from birth to slaughter (g/day)

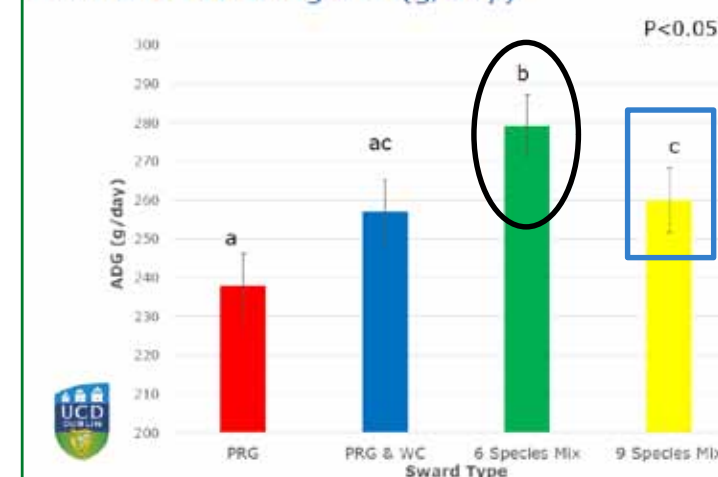


Fig 1

### The effect of sward type on days to slaughter

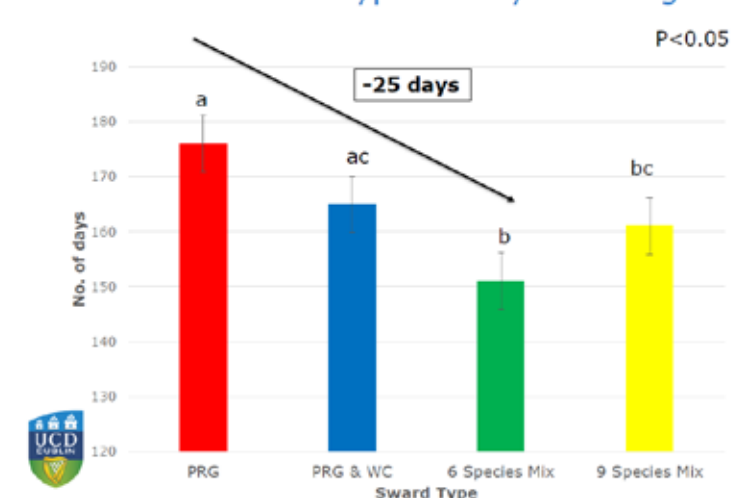


Fig 2

### The effect of sward treatment on number of doses required per lamb

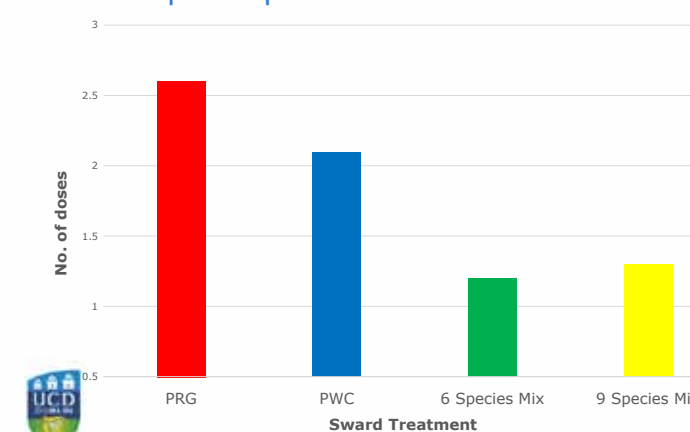


Fig 3



**SOLD OUT!**



**Irish  
Grassland  
Association**

## The Business of Dairying

**IGA DAIRY CONFERENCE 2017 – SOLD OUT**

The annual Irish Grassland Association Dairy Conference, sponsored by Yara, which takes place on Wednesday 18th January 2017 at the Newpark Hotel Kilkenny, has now sold out.

Addressing the conference is a selection of dairy farmers, agri-consultants and researchers from Ireland and abroad.

Over the past decade milk price volatility has become an increasing feature of the Irish dairy industry. Farmers who recognise the challenges it presents and adapt accordingly will continue to operate profitable and viable farm businesses. This conference, focusing on the business of dairying, is divided into three parts: strategic development for the medium to longer term; tactics for the spring ahead; and budgeting for the current and future years.

**Long-term business strategy:** Mayo's Sean O'Donnell will describe how he operates his dairy farm; review strategies for overcoming fragmentation in dairy farming; and present his recommendations for profitable dairy farming on a fragmented holding. Dairy lecturer Dr. Karina Pierce will outline the rationale behind UCD's decision to investigate the high EBI, high yield, high stocking rate dairy farm option and review the performance of year one of their trial. Welsh dairy farmer Chris Mossman will detail his system of milk production which incorporates crossbreeding with a high stocking rate and a late start to the calving season.

**Short-term spring tactics:** Cork man Shane Fitzgerald will outline performance on his dairy farm focusing on the strategy employed in spring during the busy calving season to maintain a high health status and control disease. Teagasc researcher Dr. Michael Egan will report on a recent experiment at Moorepark on spring grazing and review the targets set in the spring rotation planner for different regions and soil types.

**Business budgeting:** Patrick Gowing, expansion consultant with Teagasc will describe his approach to business budgeting for new and expanding dairy farmers following a difficult financial year in 2016. Paul Tully will describe his path to leasing and owning his own pig business and his approach to budgeting in a volatile marketplace. Monaghan born Olin Greenan will describe his progression through the New Zealand dairy industry and his guidelines for budgeting in a volatile industry.

On the evening before the conference, one hundred Irish Grassland Association members who booked tickets on a first come first serve basis will meet at an evening gathering/dinner in advance of the conference. The 2017 guest speaker, Siobhan Talbot, CEO Glanbia PLC, will be interviewed by former Irish Farmers' Journal Editor, Matt Dempsey. She will address the topic, 'Future expectations for milk markets and milk price – a glanbia perspective'. This part of the conference also sold out within the first two days of the launch of the event.

Sponsored by



Special  
**70**

Anniversary Edition

*70 years of excellence in  
Irish Agriculture*

The Irish Grassland Association is delighted to be in its 70th year. This section of the newsletter is dedicated to marking the association's growing history with Irish agriculture. The following two pages lists the names of all the people who gave generously of their time to serve as president with a photo collage included of some of the presidents.

A project that we are endeavouring to complete over the next year is to find out a bit more about the history of the association, including a profile of as many of our past presidents as possible. Maura Callery has set this in motion and we would be very grateful of any information people may have (email [secretary@irishgrassland.com](mailto:secretary@irishgrassland.com)).

Pages 26 to 29 give a nice snapshot of the diverse range of events the IGA has organised for its members since our 60th celebrations. The following pages starts with a look down memory lane with 2011 lifetime merit recipient Padraig O'Kiely before progressing into an industry overview of changes in the grass breeding and varieties in southern and Northern Ireland, along with changes in the beef and sheep sector. The section finishes up with a look at the history of milk recording and an overview of the AUTOGRASSMILK project which IGA was involved in.



**Irish  
Grassland  
Association**



## List of Past Presidents

1946/1947	The O'Morchoe
1947/1948	The O'Morchoe
1948/1949	The O'Morchoe
1949/1950	Lord Carew
1950/1951	W.J. Mitchell
1951/1952	E.R. Richards-Orpen
1953/1954	R.J. McCulloch
1954/1955	H. Kennedy
1955/1956	The O'Grady
1956/1957	W.A. Smith
1957/1958	T. Walsh
1958/1959	R.I. Allen
1959/1960	J. Ruane
1960/1961	L.B. O'Moore
1961/1962	J. Richards-Orpen
1962/1963	Harry Spain
1963/1964	E. White
1964/1965	J. Baxter
1965/1966	A.J.M. Kilroy
1966/1967	M.J. Walshe
1967/1968	Paddy O'Keeffe
1968/1969	M.J. Bruton
1969/1970	Edward J. Keating
1970/1971	Stan Brophy
1971/1972	R.B. McCarrick
1972/1973	Neville Chance
1973/1974	Joe Harte
1974/1975	Michael Ward
1975/1976	Dan Browne
1976/1977	Brian Hussey
1977/1978	Jim O'Grady
1978/1979	Donal Cashman
1979/1980	Matt Barlow
1980/1981	John Dardis
1981/1982	Pat Gleeson

1982/1983	Michael Murphy
1983/1984	Peadar McCanna
1984/1985	John Flood
1985/1986	Aidan Conway
1986/1987	Denis Fay
1987/1988	Donal McCarthy
1988/1989	Tom Reid
1989/1990	Michael Drennan
1990/1991	Christopher Crofts
1991/1992	Patrick Caffrey
1992/1993	Brendan Meade
1993/1994	Padraig O'Kiely
1994/1995	Mike Magan
1995/1996	Con Hurley
1996/1997	Padraig Walshe
1997/1998	Maurice Keane
1998/1999	Matt Dempsey
1999/2000	Pat McFeely
2000/2001	Jim Dwyer
2001/2002	Noel Culleton
2002/2003	John O'Brien
2003/2004	Tony Petit
2004/2005	Brendan Barnes
2005/2006	Jan Fredericks
2006/2007	John Donworth
2007/2008	William Kingston
2008/2009	Pearse Kelly
2009/2010	Philip Donohoe
2010/2011	Andrew Cromie
2011/2012	Padraig French
2012/2013	Deirdre Hennessy
2013/2014	Eddie O'Donnell
2014/2015	Paul Crosson
2015/2016	Karen Dukelow
2016/2017	Bernard Ging

## Some of our Past Presidents



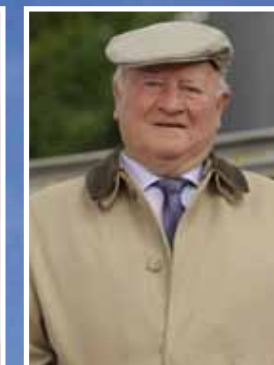
1962 - 1963  
Harry Spain



1967 - 1968  
Paddy O'Keeffe



1969 - 1970  
Edward Keating



1971 - 1972  
Roger McCarrick



1975 - 1976  
Dan Browne



1978 - 1979  
Donal Cashman



1979 - 1980  
Matt Barlow



1985 - 1986  
Aidan Conway



1988 - 1989  
Tom Reid



1992 - 1994  
Padraig O'Kiely



1996 - 1997  
Padraig Walsh



1998 - 1999  
Matt Dempsey



2001 - 2002  
Noel Culleton



2002 - 2003  
John O'Brien



2007 - 2008  
William Kingston



2014 - 2015  
Paul Crosson



# Snapshot of past IGA



IGA Dairy Summer Tour Aug 2013



Photo taken at the Low Cost Grass Production event at the farm of Patrick Murtagh, Virginia, Co. Cavan 2011



Pat Donnellan, ICBF addressing a large crowd attending the sheep farm walk on John Renehan's in 2009. The event included an overview of the new Sheep Ireland breeding programmes as well as demonstrating the latest equipment on sheep recording and handling.



RDO Donal Callery at the IGA "making good quality silage" event held in 2013 at Ballyhaise Agricultural college, Co. Cavan and sponsored by Yara.



2010 Drew McConnell Past President UGS, Mike Camlin UGS, Maura Callery Office Manager IGA and George Reid Secretary UGS at a visit to the Ulster Grassland Society in Loughgall May 2010.



Some of the delegates at the Irish Grassland Association Beef Conference and Farm Walk 2008



Michael Murphy & Jenny Jago give a demonstration on the correct way to put on clusters during milking at the 2010 Irish Grassland Association Dairy Conference in Cork.



Peter Prior, Cavan & Eva Shiels, Co. Monaghan are pictured at the 2010 IGA Student Conference & Farmwalk on the farm of James Walsh, Killmurray Lodge, Carrick on Suir.



A group of farmers at the Irish Grassland Association Sheep Conference and Farm Walk 2008 held on the farm of Andrew Maloney.



Past Presidents of the Irish Grassland Association that participated in a Presidential debate at the IGA Dairy Conference Jan 2012



Irish Grassland Association/Irish Farmers Journal/Ulster Grassland Society Beef Summer Tour 2011 on the farm of Paul Turley Downpatrick



Action from the Irish Grassland Association Reseeding Event on the farm of Pat & Olive Weeks, Kilfinnane, Co. Limerick in 2011.

Regular attendees John & Gertrude Keane, Kilcormac, Co. Offaly pictured at the IGA 2012 Beef Farm Walk on the Farm of Jim & Audrey Parkinson, New Inn, Co. Tipperary.



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# Snapshot of past IGA



Launching the new IGA website in 2009



Photo taken at the Cork International Hotel 16 June 08 at the Irish Grassland Association Members Dinner Prior to the Dairy Summer Tour. L- R. Paddy O'Keeffe IGA Past President, Tom Clinton Dairy Farmer, Philip Donoghue IGA Past President and William Kingston IGA Past President.



Kevin Twomey IGA, William Keane Dairy Farmer and Alan Duke former Fine Gale leader speaking at the Irish Grassland Association Dairy Conference 2010



Over 600 delegates attended a Reseeding & Live Machinery Demonstration in 2010 on the Farm of Paul Gilsenan Oldcastle Co. Meath



Speakers and Irish Grassland Association members at the Dairy Conference 2016 in Limerick



The IGA remain keen to provide its members with the latest advice. Here Dr John Roche, Dairy NZ is pictured speaking at the 2015 Dairy Conference titled 'Pathways to Success Post-Quota' in Cork.

# Snapshot of past IGA



Speakers at the Irish Grassland Association Sheep Conference and Farm Walk 2012 that was hosted on the farm of Gordon and Yvonne Johnston.



Some of the council members successful in the elections to the IGA in 2013



Some of the Irish Grassland Association council in 2008



Farm Walk Held at John Fagans Farm at Gartlanstown, Mullingar in 2011.



Irish Grassland Association members at the Dairy Summer Tour hosted By Tom Kelly and Andrew Purcell and Alf McGlew Drogheda



Kepak hosted the IGA beef event in 2011 and attracted one of the largest attendances to a beef event.



# *A look down IGA Memory Lane with Padraig O'Kiely*

## 1. How did you first become involved in the IGA?

When I started working at Teagasc Grange I was struck by the considerable interest in and commitment to IGA. The first IGA beef meeting I attended was held in Thomas Prior House at the RDS – this is now the site of the British Embassy. I was hugely impressed by the array of authoritative papers presented by Irish researchers on numerous aspects of winter finishing of cattle. They were strongly grounded in good research and had a clear practical and commercial focus. There was also an invited speaker from Denmark, Brolund Larsen, who spoke about fodder beet as a high quality feed. I joined IGA after that meeting.

## 2. What roles did you fill with the IGA?

In 1987 Sean Flanagan invited me to join the council of IGA, and I was president during 1993-1994.

## 3. What did you enjoy most about being involved with the IGA?

It provided a great opportunity to learn. This could be from farmers who were exploiting opportunities or overcoming unique difficulties on their farms, researchers providing state of the art overviews of topics, or foreign speakers describing technologies for beef, sheep or dairy production in their countries.

## 4. What was the most memorable IGA conference that you ever attended and why?

Probably the first IGA beef meeting that I attended, in late 1978. Winter finishing was an exciting business at that time and the IGA meeting provided a lot of really good independent guidance. It was impressive to see how valuable Irish research was.

## 5. In your opinion what is the biggest development in grassland management that you have seen?

The focus on quantifying grass growth and matching its supply to meet the needs of livestock throughout an extended grazing season.

## 6. If you had to mention one main benefit that the IGA has brought to the Irish Ag Industry – what is it?

It has provided a positive forum for leading livestock farmers and technical experts to share their experiences and pool their knowledge.

## 7. What role do you think the IGA has in the future of grassland farming in Ireland?

The IGA will continue to have a central place in leading the development of grassland farming in Ireland. Its core role will remain the same as it has always been. Events targeted at young farmers and students will be particularly important.



## Seeds of progress – the journey of grass varieties

**Patrick Conaghan**  
Oak Park Animal and Grassland  
Research and Innovation Centre,  
Teagasc, Carlow, Co. Carlow.

Forage grass breeding is still in its infancy. There is little doubt that significant progress has been made. In the 1950's most perennial ryegrass varieties such as Irish Commercial were low yielding, lacking in persistence and early heading. Today's modern varieties show significant improvement with 35% higher annual yields, a dramatic 150% higher ground cover and predominantly late heading. However, genetic variation within and among populations is still extremely high, showing no signs of decreasing. Harnessing the power of modern technologies is expected to substantially accelerate genetic improvement. The most exciting and interesting new developments are the exploitation of heterosis and application of genomic selection.

Heterosis is the superiority of a hybrid, produced by crossing two genetically distinct lines, over its parents. Heterosis is responsible for a large portion of the genetic gains made in maize, oil seed rape, fodder beet and many vegetable and fruits. It is also extensively utilized in varieties of three forages: bermudagrass, sudangrass and lucerne. In bermudagrass, hybrid varieties have resulted in a genetic gain of 4.3% per year in annual forage yield. This compares with a genetic gain of 0.5% per year in annual forage yield for open pollinated perennial ryegrass varieties which are currently the norm.

The production of hybrid seed requires a cross between a pollen donor and a pollen recipient line. Self-pollination of the recipient line has to be prevented. This can be achieved by either manual emasculation of the male floral parts or genetic mechanisms, including self-incompatibility and cytoplasmic male sterility, which cause pollen infertility. In perennial ryegrass, in which male and female floral organs are present in the same small flower, manual emasculation is impractical. Therefore, the production of commercial

hybrid perennial ryegrass varieties has not been possible to date. However, recent research has uncovered the gene controlling self-incompatibility in perennial ryegrass paving the way for hybrid seed production. Teagasc has been at the forefront of developing a hybrid breeding system for perennial ryegrass. A hybrid perennial ryegrass variety within 10 years is now a realistic target.

Genomic selection is a form of DNA marker-assisted selection in which individuals are selected based on thousands of genetic markers covering the whole genome. The genomics revolution has brought about rapid acceleration in the rate of genetic gain in animal breeding. It is now set to revolutionise grass breeding. The main advantages of genomic selection over traditional methods are lower costs, shorter evaluation time and the ability to evaluate significantly greater numbers of plants. It is particularly advantageous for complex traits that are difficult, expensive and time consuming to select for such as forage yield which traditionally requires the production of seed from plants and multiple years yield evaluation in the field. In contrast, genomic selection facilitates the selection of plants at the seedling stage in the glasshouse.

A traditional breeding programme may only have sufficient resources to evaluate 100's of genotypes for yield whereas genomic selection practiced in the glasshouse could readily evaluate 1000's of genotypes for yield. Genomics selection is currently being applied by many commercial perennial ryegrass breeding programmes including Teagasc. It is predicted that the rate of genetic gain in perennial ryegrass with genomic selection may be up to five times greater than traditional breeding methods. The first fruits of genomic selection will be evident in perennial ryegrass varieties in about 10 years' time.



## AFBI: Breeding Grasses for Irish Farms

David Johnston,  
Plant Breeder,  
AFBI Loughgall, Armagh,  
Northern Ireland



Advances in grass breeding research will mean that new varieties coming onto the Irish market will continue to show improvement in yield and nutritional quality over varieties currently available. At present, many of the grass varieties which are used on Irish grassland farms were bred by the Agri Food & Biosciences Institute (AFBI) at Loughgall in Co Armagh. The programme has been in existence for over 60 years and is jointly funded by the Northern Ireland Department of Agriculture (DAERA) and the Dutch seed company Barenbrug. Well known varieties, such as Navan, Drumbo, Tyrella and Dunluce have contributed significantly to pasture production on farms throughout Ireland, the UK and further afield and were bred at Loughgall.

The AFBI Grass Breeding programme is very extensive, with over 10 hectares of grass trials in 3,000 plots. In addition, further testing of new varieties and breeding lines is carried out by commercial partner Barenbrug on sites across the UK and continental Europe and also on Irish farms. Genetic material used by AFBI is of very diverse background, making use of winter-active material for New Zealand, winter-hardy varieties from Eastern Europe and disease resistant lines from France.

Grass breeding is a slow and expensive process, taking up to 15 years at a cost of around half a million euros per variety. The programme commences with pair crosses made with selected mother plants under controlled conditions, with the objective of combining the favourable characteristics of both parents. Subsequently the progeny of these crosses is evaluated, initially as individual

genotypes in spaced plant nurseries, then in small plots on several sites. Harvesting is with specialist equipment which can accurately calculate yield and samples are processed through the laboratory to determine herbage quality. As with any plant breeding programme, large numbers of individual plants, progenies and varieties are evaluated but only a very small number ever make it through to the marketing stage. The final hurdle in this process is to have varieties independently assessed on several sites in Ireland by the Department of Agriculture, Food and the Marine (DAFM) for possible admission to the Irish Recommended List.

### Breeding Objectives

When the programme was established at Loughgall in 1952, the main objective was to produce persistent high yielding varieties for grazing and conservation. At that time, grass seed was an important crop on many farms in Northern Ireland and the seed producing ability of a new variety was therefore an important breeding objective. However, much has changed during the last 60 years, including the disappearance of grass seed production from Irish farms. Nowadays, the breeding focus is on total yield under silage and grazing, early spring growth, disease resistance, herbage quality and winter hardiness.

### Disease Resistance

Foliar diseases are becoming an increasing problem on farms throughout Ireland and have a detrimental effect upon both sward production and palatability. In higher rainfall areas, leaf-spot poses a serious threat, while in drier, eastern parts of the country, crown rust, which is

distinguished by orange pustules, is increasingly evident. In England, disease resistance is an increasingly important characteristic when farmers are selecting varieties for a re-seed and this is likely to become a big issue on Irish farms in the future. In order to breed disease resistant varieties, AFBI evaluates all new breeding material with Barenbrug in France and the Netherlands, where foliar diseases are endemic. The results of these trials are combined with data from Loughgall trials, so as to identify high yielding, disease resistant germplasm. This approach has allowed the breeding of varieties such as Rosetta and Dromara, which have both high rust resistance and good yield.

### Herbage Quality

Considerable effort has been invested into breeding for improved digestibility at every stage in the breeding programme as highly digestible forage produces more meat and milk. Selecting grasses which produce fewer seed heads in mid season, has been a key aspect of this, supported by laboratory analysis. A new plot harvester, recently acquired by AFBI, has been fitted with a Near Infra Red Spectrometer (NIRS) which will allow field assessment of dry matter, proteins, soluble carbohydrates and fibre content. An important aspect of herbage quality is palatability, as this is the main parameter driving animal intake. Consequently all new AFBI varieties are trialled on farms in Ireland, where their performance under grazing can be monitored.

### Hybrids

Hybrid grasses are produced by crossing an Italian ryegrass with a perennial. Some hybrids express the characteristics of the Italian parent very strongly, producing very high yields of up to 20 tonnes per hectare. It is likely that these varieties will be used in future on Irish farms which are using zero-grazing or anaerobic digestion. In contrast, perennial type hybrids are more persistent, yet retain some of the high yield and rapid re-growth of their Italian parent.

### Continual Progress

AFBI has recently completed a statistical analysis of data from 26 years of trials at Loughgall, with new trials sown annually and maintained for three years under a 4-cut silage management. Total dry matter yield from each trial was recorded and while there were differences between years and between trials, the general trend showed a steady increase in total yield of 0.3% per annum. Furthermore, there is every indication that increase in grass yield by breeding is likely to continue with new varieties such as Fintona, setting new, high standards. When we consider that the average grass yield from lowland pastures is Ireland is around 8 tonnes DM/ha and the potential is 15+ tonnes, there is huge potential to improve.

### Market trend

On Irish farms, in recent years there has been a trend to using late-heading varieties (with heading dates in June). However, most of these varieties are lower yielding in spring than intermediates (ie heading 20<sup>th</sup> -30<sup>th</sup> May). Subsequently it is likely that there will be a swing back to using more of the high quality intermediates as farmers recognise this potential. Furthermore, the biggest advances being made in grass breeding are in intermediate heading varieties, especially in tetraploids.

### The Future

New research in the more fundamental aspects of plant breeding is also being undertaken by AFBI, through funding from the NI Department of Agriculture. This includes the use of Digital imaging for disease assessment and the possible adoption of molecular techniques for Genetic Marker Technology. Continued investment in the programme, strongly enhanced by the connection with the seed industry, will ensure a steady supply of new grasses and clovers which can meet the ever changing demands of the grassland industry in Ireland.







## An overview of the Irish beef industry

**Michael Drennan,**  
formerly Teagasc Grange and  
past President of the Irish  
Grassland Association (1989/90)



There was substantial progress in beef production in Ireland over the last 40 years. Beef output has increased from 454,000 tonnes yearly in the period 1977/79 to 564,000 tonnes in 2015. This was due to increased cow numbers, mainly suckler cows, and greater average carcass weights due to an increased usage of late-maturing continental sire breeds, such as Charolais, Limousin, Simmental etc. This increased output is of particular importance to the Irish economy as over 85 % of beef is exported.

### Changes in the national herd

Suckler cow numbers have more than doubled over the last 35 years, having increased from 0.5 million in the early 1980s to 1.1 million in 2015. Corresponding figures for total cow numbers (i.e. including dairy cows) were 2.0 and 2.4 million. During the last 35 years there were major changes in the breed composition of the national calf crop. Dairy breeds and crosses have almost halved, declining from 63% of the calf crop in 1980 to 34% in 2015. Between 1980 and 2015, progeny of the early-maturing (Hereford, Aberdeen Angus and Shorthorn) sire breeds remained relatively constant at 24% of the calf crop. However, during the same period, progeny of late-maturing sire breeds increased from 12 to 42% of the calf crop. The change to late-maturing breeds is even more evident when the breed composition of the current suckler herd is examined. In 2015, 75% of suckler cows comprised of late-maturing breeds and crosses, and 85% of cows were bred to late-maturing sire breeds.

### Changes in carcass weights and carcass quality

The changes in the breed composition of the calf crop has contributed to the increase in beef output and the substantial improvement in carcass quality, as assessed by conformation score. Average carcass weights of steers and heifers increased from 275 kg in 1981 to 336 kg in 2015. In 1996, the percentage of steers, heifers and cows in the three carcass conformation classes E, U, and R combined, were 59, 54 and 4%, respectively. The corresponding figures for 2015 were 49, 69 and 18%. The decline in percentage of steers having good conformation scores can be attributed to the relatively large increase in the proportion of male cattle slaughtered as young bulls, particularly suckler-bred bulls. The number of young bulls slaughtered at meat export plants has doubled in the last ten years, increasing from 95,000 in 2005 to 188,000 in 2015. Three-quarters of these young bulls graded in the three carcass conformation classes E, U and R.

### Changes in beef markets

In addition to carcass changes there were also changes in beef export markets with a dramatic increase in the proportion of exports going to higher-priced markets, which are, in general, in western Europe. In 1996, 13% of exported beef went to the UK, 23% to continental EU, 53% to international markets and 11% to intervention. In 2015, 54% was exported to the UK, 43% to continental EU and only 3% to international markets. While live cattle exports can vary considerably from year to year, the figure for 2015 was 178,000. The total number of cattle slaughtered during that year was 1.66 million.

### High quality carcasses from the suckler herd are under-priced

A major development some years ago was the agreement between beef producers and processors for carcass payment to be based on meat yield for steers and heifers (with young bulls to be included at a later date). However, the premiums paid for carcasses of higher quality (high meat yield) have not kept pace with the general increase in beef prices in recent years. The importance of carcass payment based on meat yield is clear when calculations show that a one percentage unit increase in meat yield increases the value of an average carcass by about 20 euro and the national annual value of beef output by over 30 million euro.

The agreement for payment based on meat yield was constructed on the results of a large-scale beef carcass dissection study carried out by Teagasc Grange that quantified the relationship between meat yield and carcass conformation and fat scores. The results of the study showed that on a scale of 1 to 5, a 2-unit increase in conformation score (e.g. O to U) increased meat yield by 7.0 percentage units and carcass value by 11.6 %. Thus, based on beef prices at the time of the agreement, this 2-unit increase in conformation score merited a premium of 36 c/kg. However, using current beef prices the price difference should be about 45 c/kg for a 2-unit change on a 5-point scale (or 6 units on a 15-point scale e.g. O= to U=) in conformation score. In 2015, the price difference between O3 and U3 carcasses for steers, heifers and young bulls averaged 30 c/kg in Ireland while the corresponding figure in the UK was 46 c/kg. Young bull carcasses grading U3 were priced at 63 c/kg more than O3 carcasses in France, 90 c/kg more in Italy and 42 c/kg more in Germany. Although there is considerable variation between countries, the premium paid for the better conformation carcasses is generally considerably less in Ireland than in other EU countries.

### Carcasses from suckler and dairy herd progeny

In order to obtain a wide range in carcass conformation scores the steers used in the carcass dissection study consisted of the main breeds and breed crosses available in the country. Included in the 507 steer carcasses dissected were 94 progeny, of known parentage, from the suckler herd (about 7/8 continental breeds) and 76 Holstein-Friesian. The carcass weights of the suckler and dairy herd progeny were 404 and 316 kg, respectively. Corresponding conformation scores were U- and O-, whereas both had similar carcass fat scores of 3+ (15-point scale). Progeny of the suckler herd had 6.2 percentage units more meat, 1.7 percentage units less fat and 4.5 percentage units less bone. Using present beef prices, the suckler progeny are valued (based on carcass composition) at 45 c/kg carcass more than the Holstein-Friesian.







### Efficiency of production

Numerous studies show that bulls grow faster than steers, produce carcasses with a higher meat yield and are more efficient in converting feed to meat. In the carcass dissection study outlined above bulls were also included, and the results showed that the estimation of carcass composition from conformation and fat scores also applies to these animals. It is therefore important that bulls are incorporated into the payment system based on carcass conformation and fat scores.

The efficiency of meat production is important and should not be ignored in dairy herds producing calves suitable for beef production. Data obtained at Grange indicates that the percentage of meat produced per unit of feed energy consumed was 50% greater for late-maturing continental beef breeds compared to dairy breeds. This was due to greater feed intake, lower live weight gain, poorer killing-out percentage and lower percentage of meat in the carcasses of the dairy compared to the beef breed animals.

### Conclusions

Having a beef price structure that reflects the value of the carcass is in the long-term interest of the beef industry. Price is the mechanism whereby the processor can indicate both to the farmer and those involved in beef improvement programmes the requirements of the market. It is long-accepted that product composition is taken into account when deciding on milk and cereal prices. The future of the Irish beef industry is dependent on a similar system of payment. The viability of the suckler herd depends on a system in which the carcass price paid reflects the value of the carcass produced and thus, must take account of meat yield in addition to specific market requirements.



Irish Grassland Association Sheep Conference and Farm Walk 2008 held on the farm of Andrew Maloney.

## Sheep farming – an integral sector for the IGA

**John Shirley**  
Lifetime Merit Award Recipient



Sometimes Irish sheep farmers complain about being on the hind teat, a sort of afterthought to other farm enterprises; - not so in the Irish Grassland Association.

As IGA Secretary for 30 years, sheep research scientist Dr Sean Flanagan kept sheep as a core project for the Association.



The dedicated body of sheep farmers, scientists, advisers and industry people attracted to the IGA under Sean Flanagan's stewardship continues to grow and participate in the Association today. Indeed the Irish Grassland Association over recent decades has helped drive the great issues and developments in Irish sheep.

Dr Flanagan's tenure as IGA Secretary from 1969 to 1999 included huge swings in the fortunes of the Irish sheep flock. During the 1970's there was no EEC Sheep Policy. Irish farmers abandoned sheep and the ewe flock fell to under 1.7 million head. All that changed from the late 1970's and start of the 1980's. First Ireland got a bilateral deal giving year round access to the French market. This was followed by the adoption of a common sheep policy in 1980 which saw the arrival of the Ewe Premium plus the extra payments in Disadvantaged Areas.

### Quick transformation

This produced a transformational turnaround in Irish sheep in the 1980's. Higher incomes from sheep

coupled with the Milk Quota putting the lid on dairy expansion, led to an explosion in the ewe flock which peaked at almost 5 million ewes at the end of the decade.

This rapid growth challenged all concerned with sheep including the Irish Grassland Association. The mission of the IGA is to motivate, inform and educate on grassland based livestock farming. To achieve this with sheep the IGA sought out relevant research, top farmers and top speakers, both in Ireland and overseas.

The gaps in the sheep knowledge were identified in the areas of nutrition, breeding, fencing and health. In practice this meant that the IGA worked closely with the Agricultural Institute and ACOT, the forerunners of Teagasc. In 1978 the Agricultural Institute established an economic test farm at Blindwell near Tuam. In addition to measuring the earning capacity of sheep farming, Blindwell demonstrated the use of paddock grazing for sheep and the wintering of sheep on silage. New approaches to fencing, including electric fencing for sheep, were seen on this farm.

Sometimes Irish sheep farmers complain about being on the hind teat, a sort of afterthought to other farm enterprises; - not so in the Irish Grassland Association.

In the mid 1980's Sean Flanagan was instrumental in establishing another Blindwell type operation in Knockbeg beside Carlow. This unit really put the





new-type Belclare ewe on the map as well demonstrating how to manage clover pastures and also how to manage grass to deliver grazing for sheep across the 12 months of the year.

Such was the popularity of Blindwell and Knockbeg amongst farmers that the farm managers Peter O Malley and Willie Kelly became household names among producers. Grassland farmer visitors to Blindwell and Knockbeg went back home and organised their own sheep farm on similar lines.

#### First conference

In tune with the rapidly expanding sheep flock the IGA organised its first dedicated annual sheep conference in 1983. Early speakers at the IGA sheep conferences included John Reid who had been nominated as UK Sheep Shepherd of the Year and Carl Linklater from the then UK Sheep Disease Investigation Centre at St Boswells in Scotland.

As Irish sheep farmers expanded their flocks, labour and the handling of big numbers of sheep became an issue. This prompted the IGA to organise sheep tours to the UK for its members. Whereas in Ireland a few hundred sheep constituted a large flock, many UK farmers counted their ewe flocks in thousands. In 1984 the IGA tour of the UK included a visit to Chilbothan Farm near Stockbridge which ran a 3,000 ewe flock stocked at six ewes to the acre.

The visitors saw that it was possible to handle up to 1000 ewes per labour unit with the emphasis on the ewe type along with good fencing, excellent handling facilities and timely veterinary treatments.

The IGA visits to the UK also exposed the members to the Mule and Greyface crossbreeds and the hybrid vigour exhibited by these crosses. Irish sheep farmers in Mayo especially have developed an Irish version of the Mule which is being successfully marketed across the country.

Along with the annual conferences the pivotal activity of the IGA has been the tours of Irish sheep farms. Seeing science in practice on a Government-funded research farm is always welcome. But seeing the same science being carried out on commercial farms that have no state funding and have to live with all the restrictions of family labour and finance has an even bigger impact on the Irish sheep farmers psyche.

#### Demonstrating best practice

Over the years the IGA visits to sheep farmers have made a difference. I can think of Andrew and Deirdre Moloney near Edenderry where lambs got no creep feed but performed excellently on grass. He rotated his grassland between cattle and sheep. In Kilkenny William Hutchinson created a lot of interest in his use of undersown catch crops of Typhon to finish his lambs.

Visitors also picked up management and handling tips during IGA farm visits. Those who took part in the IGA



tour of George and Shirley Stanley's sheep unit at Rathdowney were treated to a treasure trove of sheep handling ideas. George Clarke near Birr had a "dipping cage" where the sheep were hydraulically raised and lowered into the sheep bath.

PJ and Mary O Dea in Athenry were among the first to work commercially with Belclare sheep. Former sheep farmer of the year Anthony McShane in Louth farms both lowland and hill sheep and showed how both could be successfully integrated to best use. Every IGA farm visit had its own interest and attraction. The strength of the Association is the research and homework done before choosing host farmers.

In 2005 the IGA branched out holding a joint sheep production and health conference in Greenmount Co Antrim in May 2005 with the Grassland and Veterinary Societies in Northern Ireland.

#### Falling numbers

Ireland's ewe flock has contracted again since 1990. Some of this arose from the necessary destocking of ewes from overgrazed hills but there is no doubt but that as a country Ireland is not fulfilling its potential in sheep farming.

We have moved a long way since the visit of Prof Holmes from New Zealand in the 1950's who commented that "Irish farmers are growing the

minimum grass possible under an Irish sky" but there is still room for improvement.

There is also room for an increase in the Irish sheep flock. The EU is not self sufficient in sheepmeat. I believe that practically every farm in Ireland could carry a small number of sheep almost for free.

#### Room to improve

There is room for recycling some of the old science as well as adopting the new. The work on mixed stocking by Dr Tom Nolan at AFT Creagh is as relevant today as it was when the IGA was featuring this technology 40 years ago. In grassland management there is room for more paddocks and forward creep grazing of lambs is rarely practiced.

At one stage sheep farming and tillage was a widespread practice in Ireland. With the pressure on tillage incomes and the run down in soil organic matter, surely it's time to revisit this approach.

Shortly the Irish Farm Minister is to come up with a package for sheep which will justify the introduction of a €10 a head extra per ewe per annum. Ideally this could revolve around improvements in grassland.

The presence of a strong sheep section within the Irish Grassland Association is as vital today as it ever was.







## History of milk recording in Ireland

Pat Donnellan  
IGA Council Member  
and ICBF



Milk Recording (MR) was initially undertaken by the Department of Agriculture and only pedigree animals were recorded with the first records dating from the 1940's.

These farms were using bucket plants and the recorder had to transfer the milk from the bucket to their own bucket. They then stirred the milk to take a sample into a glass bottle before they weighed the milk using a hanging scales. The animal's number and yield were recorded on a book which was handed into an office.

The recorder provided the jumbo ear tags which he fitted to animals so he could match records. The recorder also had to ask the farmer for calving and dry dates along with ancestry data for pedigree cows. The farmer's report was hand written.

When farms moved from bucket plants to milk lines the practice of weighing the milk still continued until the late 1960's unless they had recording jars. These jars first began to appear on farms in the 1950's and are still used today. The yields are read visually using the graduated scale on the jar and agitating/sampling is done using the valve. The use of freeze branding became more prevalent which made animal identification much easier.

The late 1960's saw the introduction of mechanical milk meters and these are still used today. They use a proportional flow head to hold a representative sample in the flask. The yields are visually read using the graduated scale and agitating/sampling is done using the valve.

The 1980's saw the introduction of pre-printed sheets containing cow numbers which required less writing for the recorder.

The 1990's saw the Department introducing the new tag identification system in 1996 and this improved the quality and accuracy of records.

### ICBF central database

The early 2000's saw the introduction of Tru Test's portable Electronic Milk Meter (TTEM) which are still in use today. This is a farmer DIY service where the farmer receives initial training from a technician. The system requires no writing and is fully paperless.

The meter records yield electronically, automatically agitates and dispenses a sample into a barcoded vial. The animal identification, yield and sample are linked which ensures data integrity. There is a printout left on farm with animal identification and their yields.

The data is electronically loaded to the database by the technician and this has improved report turnaround. Once the data is processed the farmer receives a text with his five highest SCC animals and his report is available online.

The introduction of the TTEMs/DIY service has had a direct impact on milk recording with the number of animals participating increasing from 33% in 2004 to 52% in 2015. It has also meant that 36% of data is now recorded electronically.

The last two decades has seen an increase in milking parlours with inline electronic meters and auto ID which simplifies the process and requires less writing for the recorder. These meters must be approved for MR. These farms can print the yield data from the parlour pc which means the recorder does not have to write yields on his pre printed sheet. In some cases these farms are doing

their own DIY recording and either printing the yield data or uploading electronically.

Robot milking systems are also becoming more popular and they also utilise technology by printing milk yields.

The future? We will see a continuation in technology usage in the form of electronic meters, robots and data transfer with the next technological leap being in the form of inline milk analysers for fat/protein etc but there is also no doubt that the tried and tested systems will still prevail.



Weighing milk



Mechanical Meters



Recording Jars



Tru Test Electronic Milk Meter



Inline Meter



Robotic Milking



DIY recording



Technology keeps getting better





## Is robotic milking a viable option for Irish farmers?

Bernie O'Brien  
Teagasc,  
Moorepark.



This was the question addressed in an EU funded project "AUTOGRASSMILK" recently conducted across six EU countries and coordinated by Teagasc. The project objective was to investigate the feasibility of integrating automatic milking (AM) into a grass-based milk production system. Such systems are growing in popularity on European dairy farms, with 20 percent of cows expected to be milked by robots by 2020. It is clear that many dairy industry stakeholders and farmers consider that robotic or AM systems have significant potential on dairy farms in EU countries. With regard to Ireland, AM could play a similarly positive and significant role if one fundamental difference was addressed. That is, could the AM system operate efficiently in a scenario where up to 90% of the cow's diet during lactation is in the form of grazed grass, as it is in Ireland? In automated systems it is the cows themselves that decide when to go to the milking unit, and it can be difficult to tempt them away from grazing/pasture. The question is – can this be achieved?

### Research Consortium

The integration of AM and grazing of dairy cows was the subject for a consortium of farmers, researchers and dairy advisors in a joint collaborative project, in which the Irish Grassland Association was a significant partner. The reporting of project findings is currently being targeted towards the dairy farmer/producer/processor associations, their members who are engaged in dairy farming, and thereafter to all EU dairy farmers.

### AM system operation

A system consisting of a Merlin 225 AM unit (provided by Fullwood) and a herd of 70 cows was put in place at Teagasc to test if grazing and robotic milking could be

integrated in a cost-effective way. A three-way grazing management system was used to promote the voluntary movement of the cow to the milking unit at appropriate intervals. The cows were effectively lured into the robotic milking unit when the amount of grass in the current grazing section decreased. The cows knew that there was a fresh grazing section to go into, but to get there, they had to pass through the robotic milking unit, at which point they could be milked.

Cows received 400 kg concentrates during the year. Milk volume and milk solids yield was 4,400 and 380 kg/cow, respectively, during the complete lactation. An average MF of 1.8 milkings/cow per day was achieved during the lactation. Regular, self-directed milking with access to pasture (as described) allowed cows to behave and socialise naturally.

### Labor savings of AM

The integration of robotic milking and cow grazing certainly has benefits in terms of reduced labor input; it gives farmers more time to focus on management. Other benefits include the ability to expand the size of a herd across geographically distant sites and increased cow performance data that can later be used as a management tool.

In conclusion the project showed that integration of AM into pasture-based systems is challenging, but it has been achieved successfully. Thus, a potential role for AM can exist within a grass-based system of milk production. The cost of investment does remain a challenge but this could be impacted on by reduced cost of technology and increased labour costs in future.

**DATES  
FOR YOUR  
DIARY**  
2017



**SOLD OUT!**

**Irish Grassland Association  
Members Networking Evening & Dinner  
Tuesday 17th January 2017  
Newpark Hotel Kilkenny**

**SOLD OUT!**

**Irish Grassland Association  
Dairy Conference  
Sponsored by Yara  
Wednesday 18th January 2017  
Newpark Hotel Kilkenny**

**Sheep Conference  
and Farm Walk  
Thursday 11th May  
Co. Westmeath**

**Beef Conference  
and Farm Walk  
Wednesday 21st June  
Co. Kildare**

**Dairy Summer Tour  
Tuesday 25th July  
Carlow**

**Student Conference  
and Farm Walk  
Monday 9th October**





# Irish Grassland Association

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