Irish Grassland Association

Members' Information Booklet Spring Edition Issue No. 41

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

Special Feature on the Irish Grassland Association Study Tour to New Zealand

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CORPORATE MEMBERS 2019

Cookstown, Kells, Co. Meath, Ireland. Tel: (087) 96 26 483
General Information: office@irishgrassland.ie www.irishgrassland.ie

Contents

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Photographs will be taken at all events and occasionally published.

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Irish Grassland Association Editorial

Rosalyn Drew
IGA Honorary Editor
and Nitrofert Ltd.

Dear Member,

Happy Easter everyone and welcome to our spring issue of the Irish Grassland Association newsletter! This issue contains a special feature on a recent trip to New Zealand that a group from the IGA took last October. I feel privileged to have been part of that trip and for those contemplating a visit I cannot recommend this beautiful country enough. Fantastic farmland set against some of the most stunning scenery in the world makes it a farmers' paradise. You can get a flavour of the farm visits taken and the take home messages on farming in NZ from the tour in some of the articles written by those on the trip. The warmth and hospitality extended by each of the farm families and hosts that we met struck us all and the IGA look forward to repaying the compliment someday to those who were so kind to us on our travels.

In the first section of this newsletter, we have previews on all the forthcoming IGA events happening later this year so make sure to pencil them into your diary! Each event promises to have something to interest the beef, dairy or sheep farmer and our sub-committees have been working hard enlisting the best speakers in their area so you can be sure of a good learning day out. You can also read a report on our very successful Annual Dairy Conference held in Charleville last January. This event is a sell-out every year and the calibre is such that it now attracts speakers from all over the world!

We have a new face to add to A Year in my Wellies where we welcome Waterford man Jason Melbourne dairy farm manager in Mallow as the new dairy contributor while Teagasc Grange student Stephen Coen gives us an update on progress in the drystock sector on page .....

In our Technical Focus section, we have some excellent grassland management advice with a timely article from Dr. Mary McEvoy on Reseeding, while Chris Maughan from TP Whelehans reminds us about the importance of weed control and the effect it can have on silage ground. Paul Kennedy from Interchem has an interesting article on page ... discussing early season worm control and the issue of anthelmintic resistance.

Finally, Mary McDonagh from IFAC accountants has some valuable advice for farmers on managing payroll that will be of interest to many farmers employing staff. As always we hope you enjoy the read and welcome any feedback you may have on future issues.

SUGGESTIONS & FEEDBACK PLEASE!

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

Members Networking Event

Laurence Sexton,
Irish Grassland Association Dairy Conference Chairman and Dairy Farmer
George Ramsbottom
Irish Grassland Association Council Member and Teagasc

On the evening before the Conference (Tuesday 8th January), some 200 IGA members attended an evening gathering in advance of the Conference which was kindly sponsored by Yara. The 2018 guest speaker Jason Hawkins, Carbery CEO, who was interviewed by former Irish Farmers' Journal editor, Matt Dempsey and addressed the topic, '*Dairying – future products and markets*'.

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

Dairy Conference Review

Laurence Sexton,
Irish Grassland Association Dairy Conference Chairman and Dairy Farmer
George Ramsbottom
Irish Grassland Association Council Member and Teagasc

The 2019 Irish Grassland Association Annual Dairy Conference, sponsored by Yara, took place on Wednesday 9th January at the Charleville Park Hotel. An audience of over 700 farmers heard speakers from Ireland, Wales and New Zealand focus on the theme of the business of dairying.

Since the abolition of milk quotas, the rapid expansion of the dairy industry has resulted in an increasingly diverse range of systems of milk production. The UK dairy industry has effectively operated in a non-quota environment for the past decade. Dairy farm Rhys Williams from Duckspool Farm near Fishguard in Wales talked about operating a 440-cow operation on a 102 ha milking platform. Admitting that the high stocking rate being operated was more due to TB restrictions than planned, he described how the Williams family feed and manage the farm. In 2017, grass grown averaged 15 tonnes dry matter per hectare with the summer drought of 2018 reducing grass yield by 3½ tonnes per hectare. The herd averaged 475 last year and achieved a comparable farm profit[1] of approximately €2,400 per hectare farmed.

Challenging farmers, Mike Brady, Cork-based consultant and land agent identified seven characteristics of highly successful dairy farmers. These include being financially savvy, technically efficient and building a good team around them. West Cork dairy farmer Denis O'Donovan talked about a visit to New Zealand as a turning point in his farming career. Memorable quotes from Denis during his speech included one on specialisation which he attributed to Matt Ryan, '*Put all your eggs in one basket and put both hands under the basket*' and another of his own about maximising grass production from the farm as, '*Giving no paddock an excuse not to grow*'. Denis farms near Rosscarbery in west Cork. Milking 150 crossbred dairy cows on a fragmented milking platform last year, he produced 1,300 kilos of milk solids per hectare farmed again at a stocking rate of 3 cows per hectare using approximately 500 kg of meal per

cow. Having farmed at stocking rates of up to 4.4 cows per hectare he has since reduced stocking rate to 3.5 cows/ha on what is a very fragmented milking platform. Whole farm profitability of over €2,500 per hectare has been achieved over the past couple of years on the farm.

Kerry man John Roche who works as chief scientific adviser to the Minister for Primary Industries in New Zealand, talked about marginal milk. He said that we have misled farmers into thinking that they can do whatever they want once they're using all their pasture and operating a low cost system of milk production. According to John, compared with a system feeding approximately 500 kg purchased supplement (meal and silage), production increases as additional meals are fed, but profitability tends to decline. '*The Irish data shows that, on average, for every additional •100 that is fed on meal* [above approximately 500 kg per cow] *variable costs and fixed costs increase by a further •53. An almost identical increase in total costs occurs in the UK and in New Zealand. The latter country experienced a one in one hundred year drought in 2008, supplement input/cow increased and, as a result, production costs/kg MS jumped, without declining again in subsequent years*'.

The afternoon session focused on the grazing season ahead. First up was Kilkenny native Richard O'Brien of Teagasc who set out the key farm targets for grass based dairying. His key message for springtime was to '*get ahead of yourself*'. In other words, do not be afraid to even slightly exceed the targets because farmer experience shows that on occasion, weather will dictate that cows will have to remain indoors. Once early March arrives he said that it was time to look back to see how recovery of the first grazed paddocks was progressing as this would dictate how ambitious you were for the rest of the first rotation. For the summer rotations he advised that most of his farmer clients have decided that almost irrespective of stocking rate a pre-grazing cover of between 1,400 and 1,600 kg DM/ha and a rotation length of 20 days were optimal. In autumn, the start of closing was determined by the farm and pre-grazing yields and set targets of around 700-750 kg DM/ha and 1,300 kg DM/ha respectively in early-mid November.

Stan Lalor of Grassland Agro revisited recommended fertiliser rates for the grazing season ahead highlighting the better ration of P and K in cattle slurry for silage fields rather than grazing fields. He recommended applying Sulphur in fertiliser at a ratio of 12 parts N to 1 part S was new to many of the audience. So for example, when spreading 240 kg N per hectare 20 kg S/ha should also be applied starting in March. Because Sulphur is not stored in the soil, he recommended the 'little and often approach' to applying Sulphur rather than as one or two large dressings of the nutrient.

The last speaker of the day was David Fogarty, farm manager at the Greenfield Farm in Kilkenny. David joined the team at the Greenfield Farm in early April in the middle of what turned out to be a very difficult spring followed by a dry summer. David outlined the changes planned for 2019 at the farm which centre around stocking the farm at 5 LU/ha in April/May. He plans to harvest some in mid-May to ensure that some of the after grass has recovered by the end of June. '*June and July can be difficult months on this farm with summer growth unpredictable because of the drought prone nature of the area. We'll then stock the farm at 4 LU/ha and take a second cut around 8 weeks later*'.

Dairy Conference Speakers


David Fogarty


Denis O'Donovan


John Roche


Mike Brady


Rhys James


Richard O'Brien


Stan Lalor

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

Sheep Conference and Farm Walk 2019

Fiona McGovern
Irish Grassland Association council member and Teagasc

This year's IGA sheep conference sponsored by MSD Animal Health and Mullinahone Co Op will take place in the Headfort Arms Hotel, Kells, Co. Meath. The format will be similar to previous years with an indoor conference in the morning followed by a farm walk in the afternoon. Registration for the conference will commence from 10am with the conference starting at 10.30am and proceedings wrapping up for 4pm.

Session 1: Conference

The indoor morning session has an excellent line up of speakers with Mairead McGuinness, MEP and Miriam Parker, Livestockwise Ltd., UK taking to the podium before we finish with a panel discussion hosted by Darren Carty, Irish Farmers Journal.

Mairead McGuinness will give an overview of the European Union's view towards the family farm with a particular emphasis on Irish farming systems. She will also address current consumer attitudes towards Agriculture and whether or not the EU's policies will change depending on these attitudes. Miriam is an Agricultural science graduate who has specialised in animal production, welfare and handling systems. Are we making the most of our handling facilities? Miriam will outline the science behind handling unit design and provide us with specialist advice on building or renovating handling units for sheep production systems. She will discuss the varying types of handling unit design outlining the positive and negative aspects of each, depending on your specific production system.

Wrapping up the morning session there will be a panel discussion on labour demand and use efficiency on sheep farms and how sheep farming can be the perfect complement to your off farm employment. A panel discussion, chaired by Darren Carty, Irish Farmers Journal, will highlight the opportunities and challenges which are faced by sheep farmers regarding labour demand on the farm. The panel will consist of three speakers, John O'Connor, Teagasc Kildalton, Darrell Meehan, part-time sheep farmer, Co. Westmeath and John Bell, sheep farmer. Each of our three panellists will give an overview of their involvement in the sheep industry and their personal experience in relation to labour efficiency on sheep farms. As we are all aware sheep farming is a seasonal based production system however the demand for labour can be quite intensive at certain times of the year. The growing number of part-time farmers coupled with the heavy reliance on family help can often mean that the smaller tasks become a bigger chore on the farm. We will look at how employing shared labour or availing of agricultural student placements can facilitate greater labour efficiency and alleviate stress that can be associated with busier periods.

Session 2: Farm Visit

Following lunch the attendees will travel to the farm of John Brady for the afternoon session. John farms just outside Navan in Co. Meath. The farm currently has over 1100 mature ewes and 250 ewe-lambs which are all mid-season lambing. John also contract rears 50 dairy replacement heifers, finishes 50 Friesian bulls & fattens 60 cull cows. Over the previous two years his sheep production enterprise has had a weaning rate of 1.43 lambs per ewe in 2017 and 1.35 lambs per ewe in 2018, which is comparable to the national average achieved across the country.

John firmly believes that having good grazing infrastructure will enable you to get the most out both of grass and labour efficiency on the farm. Paddocks are a key feature of Johns grass management. He aims to close paddocks from the 3rd week of October each year which ensures that there is enough grass available at lambing so ewes do not have to be meal fed in the spring. On the main grazing block there are 32 paddocks with an average paddock size of 5ac (2ha) which works really effectively to ensure optimum grassland management. At the moment the remainder of the farm is in larger divisions however the aim is to subdivide these in order to facilitate management. Currently, both the 5ac paddocks & the larger divisions are further subdivided with temporary fencing when required throughout the main grazing season. This has facilitated the production of good quality silage on the farm where silage quality has averaged 72DMD over recent years.

As described by John himself 'most of the paddocks are twice as long as they are wide'. He finds that this simplifies tractor work & reduces the walking distance to the end of the paddock for livestock while also minimising poaching during difficult weather conditions and has made the temporary subdividing of paddocks easier to manage. Rather than putting in roadways the decision was made to include two paddocks in the centre of the main grazing block. These two long narrow paddocks are now used to channel livestock into the handling unit which makes it easier to move both cattle & sheep from the surrounding paddocks to the centrally located handling unit.

John is working full time on the farm and has also employed one full-time employee. Johns' Teagasc adviser, Edward Egan is fully of the opinion that 'whether you have 100 or 1,000 ewes you need a good handling unit for the safe, timely & efficient completion of tasks'. John has a centrally located handling unit, which will be visited as part of the farm walk. The unit is multi-purpose and handles both cattle & sheep. Recent instalments have included a batch footbath that will hold 25 ewes. In addition to the fixed handling unit there is also a mobile handling unit used on the farm however future development plans include building a second fixed handling unit on a 58ac (24ha) out-farm.

Sheep Conference Speakers

Mairead McGuinness, MEP

Miriam Parker, Livestock Wise, UK

John O'Connor Teagasc Kildalton

Darrell Meehan Sheep Farmer

John Bell Sheep Farmer

Both the morning and afternoon sessions will address pertinent topics including labour efficiency, making the most of your faming infrastructure and the challenges and benefits of operating a large scale, multi enterprise grassland livestock system.

The Irish Grassland Association is hugely indebted to Mullinahone Co Op and MSD Animal Health for their support of our 2019 Sheep Conference. Speaking on behalf of the sponsors John Heslin from MSD Animal Health said "MSD Animal Health is proud to sponsor the IGA Sheep event. Events such as this provide a knowledge sharing opportunity to ensure the efficient production of healthy, quality lambs", and Liam Egan from Mullinahone Co Op said "We at Mullinahone Co-op are delighted to Support the IGA for the last fifteen years and in particular their sheep conference as it allows sheep farmers to look at efficient and sustainable production systems that will help overcome the challenges which will inevitably face sheep farmers over the next decade".

Book your tickets early! To book your tickets, you can post back your booking form and payment in the prepaid envelope sent out to members. Alternatively, you can also book online at www.irishgrassland.ie or phone Maura at 087-9626483.

We would like to thank our sponsors for their continued support

MSD Animal Health

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IGA Beef Conference 2019

Adam Woods
IGA Council Member
and Irish Farmers Journal
Christy Watson
IGA Council Member
and Teagasc

The Irish Grassland Association Beef conference sponsored by Mullinahone Co Op and MSD Animal Health will take place on Thursday June 20th in the Abbeyleix Manor Hotel, Cork Road, Abbeyleix, Co. Laois. The format will be similar to previous years with an indoor conference in the morning followed by a farm walk in the afternoon. Registration for the conference will commence from 10am with the conference starting at 10.30am and proceedings wrapping up for 4pm.

The conference will focus on three areas

- Soil Health.
- Suckler Herd Profitability.
- The Irish Beef Industry- Where to from here.

Agricultural consultant John Geraghty will deliver a paper on Soil Health. John has over twenty five years research, development and consulting experience in soil management, crop production systems and rural enterprise. John will discuss what is soil health, how to access the health of a soil and the critical measures that farmers can take to ensure that their soils are in a healthy state and working for the farmer.

Teagasc beef specialist Aidan Murray is going to answer the question "Can Suckling be Profitable". Aidan has 22 years' experience working with farmers / advisers and the wider Beef industry. In 2008, Aidan took up the role of Programme Manager setting up and developing the Teagasc / Farmers Journal Better Beef Farm Programme, since 2014 he has responsibility for providing beef advisers with technical training and Discussion Group development. With a suckler herd of his own in Donegal he has a keen interest in grassland, breeding and animal health.

Beef farmer and former editor of Irish Farmers Journal, Matt Dempsey is uniquely placed to comment on the Irish Beef Industry. Matt will outline his views on the current state of the beef industry and look forward to the future that lies ahead for over 100,000 livestock producers.

The Irish Grassland Association are delighted to have Matt deliver a paper at our beef conference. In 2014, Matt was the recipient of the Irish Grassland Association Lifetime Merit Award in recognition of the considerable contribution he has made to grassland farming and the Agri-Food industry over a long career as a leading opinion-maker and advocate for the farming sector.

After the three papers have been delivered Dr Stan Lalor Grassland Agro & Irish Grassland Association Council Member will chair a Forum entitled "What are the on farm options for the Beef Farmer in these challenging times." The forum panel comprises three very successful beef farmers.

- Robin Talbot is the fourth generation of his family to live and farm in Coole, Ballacolla, Co Laois. He is a commercial suckler and Tillage farmer, producing quality cattle for the Irish and European markets.
- Eddie Connell from Offaly farms in partnership with his son Aidan they run a mixed Beef, Sheep & Tillage farm finishing purchased continental weanlings as bulls
- Thomas O Connor from Kildare runs a 100 cow Suckler Herd in Partnership with his parents with all progeny finished to beef, additional weanlings are purchased for finishing. The O Connors also farm Sheep, Pigs and Tillage.

The afternoon session will be held on the farm of Ken Graham on the outskirts of Mountrath in South Laois. Ken who works full time off farm, is married to Cathy and they have two small children.

The beef enterprise will be focused on during the farm visit, comprising 55 Suckler cows with all male progeny finished as bulls under 16 months and heifers at 21 months. The 55 Suckler cows and two breeding bulls are grazed together as one group in one hectare paddocks. The 27 fattening heifers are grazed together in one group. Grassland management is excellent with the 40 ha farm laid out in 34 paddocks, with the provision for subdivision of paddocks when necessary. Good grassland management is to the fore on the Graham farm with just shy of 10 tonnes of grass dry matter/ha grown and utilised on the farm with the recent exception of the BLIP year (2018) as described by Ken. The all grass farm carries a stocking rate of 2.31 lu/ha producing a beef output of 834 kgs of live weight per ha.

Breeding performance in this spring calving herd is truly exceptional with a calving interval of 361 days achieved alongside a calving season of 9 weeks, resulting in 1.05 calves produced per cow per year. All heifers calve down at 24 months of age. The combination of excellent herd fertility combined with superb grassland management results in a gross margin per ha in 2018 of €634 - a significant drop in comparison to 2017 when a gross margin/ha of Ð981 was achieved. The drop in profitability is accounted for by additional feed cost incurred due to the drought in 2018.

The IGA is greatly appreciative of Mullinahone Co Op and MSD Animal Health for their support of our 2019 Beef Conference. Speaking on behalf of the sponsors John Heslin from MSD Animal Health said "This event offers the platform to discuss beef production and share knowledge around best practice and we at MSD Animal Health are delighted to sponsor such an event", Liam Egan From Mullinahone Co Op said "We at Mullinahone Co-op are delighted to support the IGA and in particular their Beef conference as it allows Irish beef farmers a platform to discuss the challenges ahead for the beef sector in a period of rapid change and also to look at more efficient farming practices to help improve the profit on beef farms in Ireland."

This is an event not to be missed with a combination of an excellent indoor session and a farm visit to a part time Suckler to Beef farm achieving good levels of profitability based on good technical performance which puts the farm among the top 5% of Suckler Herds in the country.

Booking is essential so book your tickets early! To book your tickets, you can post back your booking form and payment in the prepaid envelope sent out to members. Alternatively, you can also book online at www.irishgrassland.ie or phone Maura at 087-9626483.

Beef Conference Speakers

Aidan Murray, Teagasc

John Geraghty, Agri Consultant

Matt Dempsey, Irish Farmers Journal

Robin Talbot Beef Farmer

Eddie Connell Beef Farmer

Thomas O'Connor Beef Farmer

We would like to thank our sponsor for their continued support

MSD Animal Health

Mullinahone Co-op Est. 1893

All roads lead to Westmeath - Dairy Summer Tour 2019

Stan Lalor
Irish Grassland Association
Council Member and
Grassland Agro

County Westmeath will be the location for the Irish Grassland Association 2019 Dairy Summer Tour sponsored by AIB. The event takes place on Tuesday 23 July. Westmeath is amongst the counties that have seen the highest rate of growth in milk production in recent years, with new entrants to dairying forming a significant proportion of this increase.

Two contrasting farming stories will be on show to tell their unique stories of how their farms have developed from being new entrants to dairying in 2014, to become well run and efficient operations that face the future with huge confidence to maximise the future opportunities of dairy farming as a business and as a lifestyle.

Peter Hamm and Robert English are both farming close to Athlone in Co. Westmeath. Both were faced with making decisions around how they would develop their farms, and considered the possibility of a future in dairying as an alternative to their existing beef and sheep operations. While the scale of resources and opportunity presented to both farms were vastly different, the outcome was common to the success of both operations as they embarked on their journey in dairying – they both focussed on not settling for being average dairy farmers, but being amongst the top-performers. This required focussing and prioritising the key elements of their systems including soil fertility, grassland reseeding, grazing infrastructure and cow genetics.

Not only do the farms share an experience as new entrants, they have also both taken additional expansion opportunities beyond the scope of their original business plans by taking on additional leased land into their milking platform. Each of their stories are unique, but both are well worth hearing for anybody thinking of entering dairying, expanding or just doing things better!

Peter Hamm

Peter Hamm was farming 25 suckler cows on a 16 hectare farm of owned land, with a rented out-farm of 8 ha. The farm was a secondary operation to the main day-job: working in his own construction business. With the downturn in the building industry, and the increasing pressure to be on the road less and be more available for family, Peter focussed on improving the farm income to secure a viable living and lifestyle for the future.

Despite the limited land base, he developed a business plan to run a 50-cow dairy farm. He began milking in 2014 with 30 bought in heifers, with a minimal investment of €40,000 to get up and running with milking facilities, housing adaptations and grazing infrastructure. One of the key foundations to his success over time was the quality of these heifers. Of the original 30 in-calf heifers that were purchased, 27 calved down in 2015, and the cull rate of this batch of animals was limited to just 1 cow per year over the following 2 years. Peter highlights that "when you're in small numbers, every single cow matters, so being able to keep those cows in the herd kept replacement rates low and helped build numbers".

Aided by the availability of 3 hectares of additional rented grazing, cow numbers grew steadily to 50 by 2017, and the original business plan was achieved and performing well. This allowed Peter to be in a good position to take his next big opportunity when 32 ha of neighbouring land became available for long-term lease – all of which could be accessed by cows. The land needed soil fertility, reseeding and grazing infrastructure investment, but it was a golden opportunity. Half of it was brought into the system in 2018, and cow numbers increased to 74. Now in 2019, it is all reseeded with water and roadways, and is ready to go as Peter faces into this spring with 109 cows for 2019, and with ambition to reach 135-140 cows in 2020. Underpinning the development of this farm is a high level of performance of the herd, with milk solids per cow hitting 539 kg in 2018.

Peter's journey into dairying has not been an easy one. It began with limited scope in terms of land base, but focussed on efficiency in terms of the grass and the herd performance. It presented major challenges in terms of cash flow in the initial years, but has delivered hugely to date for Peter in achieving his family and lifestyle targets, and in being able to take on the additional opportunity for development when it came his way. Peter is also not afraid of getting help in on the farm to help get work done without over-pressurising his own workload, and he keenly emphasises the importance of people management skills. All this, and more, will be well worth coming to hear on the day!

Mervyn and Robert English

The opportunity of converting a block of 113 hectare of owned land into a dairy farm was what attracted Robert English to switch career from being a civil engineer to return home to farm in partnership with his father, Mervyn. However, it was not a decision that was taken blindly. Up to 2013, the farm was under beef and sheep. Before deciding on dairying, Robert took advice to go and work on a dairy farm to make sure he knew what he was taking on. After six months on a dairy farm close to home, and with a business plan in place for development, he started milking cows in 2014.

The farm is located close to Lough Ree and is variable in terms of land quality. While approximately half the farm is good dry land, there is also approximately 60 ha of low lying land that is heavily dependent on a pumped drainage system that was installed in the 1960's. Twenty hectares of this has been reseeded and is within the grazing block. The remainder is scheduled for improvement in 2019, but has not been prioritised as higher potential soils of the farm were being developed.

The dairy enterprise commenced with 50 bought-in heifers filling milk quota allocated from the National Reserve. Cow numbers and facilities developed over the succeeding years to reach 166 in 2018, as did herd performance, hitting 537 kg milk solids per cow in 2018. The herd (EBI 2019 = €151) has taken on cross-breeding, mainly driven by Robert's ambition to reduce the cow maintenance requirements.

Opportunity knocked in 2018 when an additional 28 ha neighbouring parcel of land came available for lease. Cow numbers have been increased to 260 for 2019 thanks to the purchasing of additional heifers, and the additional ground is reseeded and ready for cows.

On the road to development, both of these farms concentrated on being top performers. While the scale is contrasting, the message is the same: 'Good Practice is Essential'. Focussing on grass and cows has served both well. In both cases, the farms started from zero to maximise the return from the resources available. In doing so, both were well positioned to take full advantage of their next opportunity. The stories of both farms should make for a very interesting day!

The Irish Grassland Association greatly appreciates AIB Banks' support of our 2019 Dairy Summer Tour Event. Speaking on behalf of the sponsors AIB, Eamonn O'Reilly AIB Agri Advisor said, 'this year's tour will be a great opportunity to see, hear and learn from two progressive new entrants. Both Peter and Mervyn and Robert are typical of many of the new entrants we have supported in recent years, who are now reaping the rewards of dairying and are looking to grow their businesses on the back of focussing on the fundamentals of cows and grass. In AIB, we are again delighted to be main sponsors of the IGA Dairy Summer Tour and look forward to another excellent event.'

Book Early
This event sells out early every year so book now to secure your place and early booking discounts of 25%. To purchase your tickets, you can post back your booking form and payment in the prepaid envelope which all members received. Alternatively, you can also make a reservation online at www.irishgrassland.ie or phone Maura at 087-9626483.

Registration Location

Athlone Institute of Technology
Dublin Road, Athlone, Co. Westmeath
Eircode N37 HD68

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

Student Conference, Kilkenny, 9th October 2019

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

A Year in my Wellies

Stephen Coen, PhD student, Teagasc Grange, University College Dublin and University Limerick

Sheep Flock – Lambing Season:

At this stage all the ewes are housed and lambing is just around the corner. The first of the ewes are due to start lambing on approximately the 4th of February. Ewes are consuming ad-libitum silage @ 70%DMD on average. Ewes are bedded with a base of lime, covered with a layer of woodchip and a final layer of straw. Ewes are divided in groups based on litter size and each group are following a pre lambing diet outlined in Table 1. My father, brother and I will split our time off during this busy period to assist ewes where necessary. As lambs are tagged and uploaded on to the Sheep Ireland database as soon as they are dry, it helps to have extra hands to keep everything going during the condensed lambing period and also to keep an eye on the suckler cows for heat detection.

The bulk of the lambing will be over on the 11th of February. Single ewes and lambs are usually let out to grass straight away and twins and triples get an extra few days inside to strengthen up depending on the weather. These ewes will graze the paddocks that were closed off first back in late October. These paddocks are located directly beside the sheep shed in order to have easy access for the ewes and lambs during any harsh weather that we may experience.

Suckler Herd – Calving/Breeding

At this stage the majority of calves are now born. All our cows calved down to our own pedigree Charolais stock bull that we sold after the breeding season last year. The recent ICBF 5 year trend report released on the 23rd of January 2019 showed that the average calving interval for our herd was 335 days. This highlights the work that has been done over the past few years in order to tighten up our calving period. As a result it has been easier for us to identify when cows will be fit for breeding again. Our first cow was bred on the 28th of January; we have found the use of our new vasectomised bull (Pictured) to be extremely helpful in relation to heat detection. He serviced that particular cow 3 weeks previous and the majority of the remainder of the herd in the 3 weeks following that. We have now noted each cows return to heat date and we have selected our AI bulls from Progressive genetics for each cow at this stage. The two main bulls we will use for this breeding season will be Cavelands Fenian - LZF and Fiston - FSZ. Some cows may be artificially inseminated to a Simmental bull to breed replacement females but we are yet to make our mind up on this. Our two replacement heifers will get an easy calving Limousin bull for their first time calving. Any of the later cows will be placed on a heat synchronisation programme with the use of CIDR's, 40 days post calving, in order to tighten them up towards the main calving group.

Grassland Management:

We have started to use the new PastureBase App this year. We have found the new updates to be extremely helpful when filling out our weekly grass cover. Grass is measured every Saturday where possible throughout the year to give us an idea of what paddocks are performing best.

Guide - Meal Levels (kgs/day) - Lowland ewes in good condition - ad lib silage (20% DM)					
Silage Quality Good (70% DMD)	08 ... 07	06 ... 05	04 ... 03	02 ... 01	Total (Kgs)
Singles			0.2 am	0.4 am	8.4
Twins		0.3 am	0.5 am	0.35 am + 0.35 pm	21
Triplets	0.3 am	0.3 am + 0.3 pm	0.4 am + 0.4 pm	0.5 am + 0.5 pm	37.8

Our opening farm cover was taken on the 5th of January and was relatively low with a 496kg/ha average farm cover. Our target farm cover for ewes at turn out on the 10th of February is 700kg/DM/Ha. As we are lambing in early February some concentrate supplementation may be needed to slow down demand in our first rotation. Soil temperatures from Met Eireann for the Claremorris area showed soil temperatures of 5 degrees Celsius.

As a result Urea was spread on the 19th of January at a rate of half a bag/acre (28 kg/ha). As grass covers on the farm are relatively good our attention is also focused on setting up the farm for maximising grass growth and utilisation by ensuring paddocks are in place and carrying out some general fencing maintenance (Pictured). Also in the picture is a 20 square metre area used as an outdoor pad for breeding in order to ensure all breeding females display heat and that there is no damage done to the bull or the cows as slatted floors can have an impact on heat detection.

PhD Experience

Since my last article for 'A Year in my Wellies', I have completed my first experimental trial with Friesian bull calves, collected my samples and I am now working in the lab to prepare these samples for further analysis. I am also preparing for my second experimental trial which should commence in mid-February. This trial involves working with 13 month old, 87.5% Holstein/Friesian bulls, carrying out a Bull Breeding Soundness Evaluation on each bull. The Teagasc illustrated guide "Examination of Bulls for Breeding Soundness", put together by Livestock Veterinary consultant; Colin D Penny and Michael G Diskin (Teagasc) has been a major help for me to prepare for my upcoming trial. This will be an on farm trial and we aim to work with a considerable amount of bulls over the next two years. Between working on my samples from my previous trial, reading literature and preparing for my next trial, the schedule for the foreseeable future is well and truly occupied.

A Year in my Wellies

Jason Melbourne

My name is Jason Melbourne. I am a 23 year old dairy farmer originally from Tramore, County Waterford but currently managing a dairy farm milking 270 High EBI crossbred cows just outside Mallow, County Cork. I've had a huge interest in farming from a young age. As a child, I grew up helping my uncle on the family farm that is situated close to my parents' house. I started off feeding calves whenever I wasn't in school and soon was taught how to start milking. I guess it was here that my interest in farming really came to light.

Farming passion and practice

This passion for farming stayed with me into my teenage years when I chose to attend Gurteen Agricultural College near Roscrea, County Tipperary. Here, I completed my Green Cert and a degree in Dairy Herd Management. I decided after my time in Gurteen that I wanted to further my studies and applied for the 2 year Level 7 Professional Diploma in Dairy Farm Management course in Teagasc Moorepark in Fermoy, County Cork. During my time in Gurteen and Moorepark I learned a huge amount about dairy farming and got the chance to meet some of the best farmers in the country. This has definitely helped me in my professional career as my phone is now full of contacts to help me out with any problems I may have. One part of my college experience that I found particularly interesting was the chance to visit farms across Ireland on farm walks. This led to myself and my class in Moorepark setting up our own discussion group to continue the learning and development. Emma-Louise Coffey is our Moorepark Discussion Group Coordinator. Throughout my time in college I got the opportunity to complete work placement on various dairy farms across Ireland. I got the chance to work with some amazing farmers who can be thanked for teaching me most of the skills I currently use on a daily basis. These include David Kirwan in Stradbally, County Waterford, Bryan Daniels in Killmoganny, County Kilkenny, Enda Moran in Rathcabin, County Tipperary and Shane Maxwell in Tallow, County Waterford. Each farm had its own way of doing things which contributed greatly to my skillset.

American experience

Through the farm management diploma in Moorepark I got the amazing opportunity to spend six months on a dairy farm in Missouri in Central America working for Niall Murphy and Gary Nolan of Emerald Dairies. This was without a doubt an incredible experience that helped open my eyes to how farms around the world manage to cope in differing climates such as the high daytime temperatures of 40 degrees that regularly occur in Missouri. This certainly came in handy during the unusually hot summer we experienced in Ireland in 2018. I also gained a lot of knowledge about different grass varieties and the grass plant in detail.

Farm management

It was through my work placement in my second year in Moorepark that I came to managing the farm I am working on today. I secured work placement in January 2018 with Denis Finnegan and Billy Curtin of GreenSolids. I was then lucky enough to secure a full time position as manager on one of Greensolids farms which is run in partnership with the Hegarty's of Killavullen, Mallow. Since I started working here a lot of changes and improvements have been made. When I came to work here last year it was in the height of the calving season but I could see that a lot of work was needed to bring the farm to its full potential as it was only in start-up phase when I arrived.

During the last year a lot of work has been put into the infrastructure of the farm. We have focused on layout and cow flow to make the systems as convenient as possible for cows and farm staff. After calving, a lot of time was invested in making the area surrounding the parlour more cow friendly. We laid new concrete pathways to make the milking process much faster and more efficient. During the summer months we undertook a huge project to convert existing tillage land into grazing land for an expanding herd of cows. 30% of the milking platform was reseeded in 2018 with a grazing mix of Abergain, Aberchoice and Aberherald white clover.

Investment opportunity

It was through this expansion that Billy and Denis came to me with the opportunity to participate in a profit share agreement whereby I invested by purchasing 54 crossbred in-calf heifers with an average EBI of €181, which is 20% of the herd, for a 20% profit share in the partnership. In the first year we were milking 230 cows with an EBI of €141, with 55% (127) first calvers. In 2018 we managed to sell 390 kg of milk solids with a 13% empty rate after 13 weeks of breeding. We were happy with these results after a poor spring and drought during the summer, along with having a very young herd. The farm targets for 2019 is to have an empty rate of less than 10% after 12 weeks of breeding, to sell 450 kg of milk solids per cow on 500 kg of meal and to get another 30% of the milking platform and the silage block reseeded. My own personal targets are to hit all the key KPI's on the farm in order to build my own equity so that I can reach my short-term goal of having my own herd of cows on a farm near home and my long term goal of owning my own dairy farm.

IGA Study Tour to New Zealand - A Preview

Rosalyn Drew, IGA Honorary Editor and Nitrofert Ltd.

On the 11th of October 2018, a group of twelve intrepid travellers from the Irish Grassland Association departed Dublin airport bound for Auckland, New Zealand. The purpose of their journey was a study tour to learn about New Zealand grass based farm systems. In the course of just over two weeks the group visited a selection of dairy and drystock farms, research stations and organisations involved in the NZ agricultural sector that are grass based. This whistle stop tour covered the North and South islands and according to IGA archives is the second time the association has travelled to NZ – the previous visit is thought to have been possibly 20 years ago so a return visit was long overdue! This special feature of articles contributed by members of the group will try to give readers a brief overview of the tour and its findings.

A number of key take home messages the group took from the tour were as follows:

- Team support is critical on NZ farms. On every farm we visited the group noticed a strong united team of husband and wife and the importance of the family solicitor, banker and accountant in running the farm as a business. Every farm we saw was run as an efficient business with regular meetings around the table with the key people afore mentioned. Business planning is the norm and farmers work tirelessly towards set goals.
- Opportunities are more available for young people to buy their own land for example, through share milking schemes as land is more readily available and regularly changes hands. This is because it is not always automatically handed down to the next generation but rather it is expected that if you want to own your own farm you raise your own capital through borrowings. Farmers of retirement age see the farm as their pension fund and so sell it off if children are not interested in buying it.
- Due to the large land base available, scale allows growth.
- Favourable weather and free draining (if rather stony) land facilitates year round low cost grazing systems.
- Skilled labour is available for farm work and there is a strong value on employees with consideration given to working hours, conditions and pay. This facilitates farm families to have 'time off' the farm at weekends, holidays etc.

The NZ dairy industry is a huge contributor to the economy. New Zealand is in the top ten largest milk producers in the world and is the largest exporter of milk products. That said, it is an industry not without its challenges. The current image of dairy in NZ amongst the Kiwi public is that of 'dirty dairy' due to the impact that its intensive farm systems have had on the environment and water quality. Political pressures in the form of a Green, Left wing government also creates its own challenges for farmers in New Zealand with expensive environmental compliance costs. As over 60% of the Kiwi population lives in cities now there is a huge disconnect between the consumer and farmers here. Poor public image and lack of trust in how food is produced here due to animal welfare issues also add to the pressures many farmers here feel. Many members of the group were shocked at the levels of debt burden currently being carried on dairy farms in particular.

In contrast to the grim reality facing many dairy farms we visited, it was refreshing to learn about NZ merino wool and Kaipara lamb production and how they have adjusted their business models in order to survive. In contrast to the dairy sector who bulk produce in the most cost efficient way, the key to their success appears to be a focus on a high quality product produced in an environmentally sustainable way with consideration to animal welfare issues. The attitude of these farmers demonstrates the importance of knowing what is important to the consumer through regular market research and building relationships with key reputable businesses that provide a route to market.

These farmers are rewarded by being paid a premium for their product which has been produced according to a strict set of criteria meeting environmental, consumer and animal welfare standards.

Arthur Bryan Dairy Farm

John Kelly, Dairy Farmer and past IGA Council Member and Host Farmer

In the early 1700's wide areas of northern America were being discovered and settled. During this time a war was being fought between American settlers and British backed native Americans. People who survived and prospered during this time were no ordinary settlers. Daniel Boone and Andrew Jackson are two such men. Not only did Daniel Boone break new paths across much of America, establishing towns as he went but he also lived to 85 and had 10 children. Andrew Jackson won pivotal battles in New Orleans which turned the tide against the British and then went on to become the 7th President of the United States.

These frontier settlers were mobile, hard-working, optimistic and open to new ideas and innovative thinkers. The weak, well they simply didn't survive. I suspect if I arrived on the American shores back in 1700, I would have best survived for two days. Arthur Bryan on the other hand, he probably would have given both Boone and Jackson a run for their money.

The Bryan Principles

We met Arthur at his beautiful home on a sunny October New Zealand spring day. He welcomed us and gave his time generously, explaining much of his life story from his arrival in New Zealand in 1976 to his involvement in a 22,000 ha farm in Chile. To give the detail and chronology of these events the justice it deserves would take several articles.

Arthur has several farms yet they are all run on the same principles. They have clear rules for grazing management, stocking rate, calving date, financial control and having motivated and competent staff. In a multiple farm business this clarity is a must, something we should all have no matter what the size of our farms.

The system on these farms is very much a low input system where grass covers are a KPI not cow yield. Pre grazing yield and post grazing residuals are very much monitored as these have a direct influence on the quality of future grass fed to the cows. We were shown a diagram with clear rules on where supplement is fed and why. The timing of any supplement fed had to maximize return. There are also clear rules during a summer dry. Culling decisions are made with the whole herds feed supply in mind and not with that of the individual production of cows marked for culling.

Start of calving is linked to the growth wedge of the farm and stocking rate is linked to the amount of grass grown on the farm. In New Zealand they use comparative stocking rate where they link the kg of liveweight to the amount of grass grown. The figure where most profit is shown is 80-90kg liveweight to tonne of dry matter grown. This is where cow size comes into the equation as there is a big difference between a 380kg Jersey and a 550kg Friesian cow. On the farm we visited the cows were mostly Jersey cows.

Financial Control

Financial control is something where Arthur is extremely strong. Before any money is spent he asks himself "Is this the best return for my money?" Any spending is thoroughly analysed and sales talk is routinely ignored. We did spot a shiny new tractor on his farm when we were there but Arthur informed us it was the contractors and his was the cabless 20 year old one we had ignored. Although there wasn't much bling around the farm, roadways were excellent as were cow handling and milking facilities. I guess that's the difference between investing money and spending it.

Buying Time

Having motivated and competent staff is another key area we discussed. When you have a multiple farm system it is impossible for you to keep your eye on everything unless you have excellent staff. This is vital for Arthur, as the better his staff are then the less day to day involvement and decisions he has to make. This is where the key management and grassland rules come in as these rules gives the staff a framework and understanding of what decisions they can make and when to make them. As Arthur said: "Two things you need in life are money and time, you can borrow money and buy time" When he has very good staff he is keen to hold on to them and will go into share milking or equity partnerships with them. A win/win for both parties.

Visiting Arthur Bryan was a real highlight of our New Zealand trip. You could sense the energy, drive, intelligence and enthusiasm from him. Agriculture is one of the few industries where you can fly to the other side of the planet and spend time listening to and learning from a real industry leader. Not only is this an incredible opportunity but these leaders give you their valuable time for free. Not a bad deal for us really.

Whenuanui Farm

Yvonne Johnson Sheep Farmer and past IGA Host Farmer

Our first visit of the tour was 40 minutes from Auckland city. Richard and Dianne Kidd run a sheep and beef farm on 376 hectares of rolling hills and lowland in the valley of the Kaipara river where they place serious emphasis on the environment.

Approaching from Highway 16, we met the managers house close to the highway first and then a kilometre into the farm we saw the impressive homestead of Whenuanui Farm. Built in 1912 from kauri logs which were brought down the Kaipara river from peat swamps on the North Island. Kauri is similar to our bog oak, it has a striking grain and is extremely strong. The house was repositioned by 30 metres and 30 degrees to face the sun in 1992. An extension was added at that time and it was completely restored.

Farm infrastructure

Richard and Dianne were on hand to give us a very warm welcome in their home and showed us an episode of the New Zealand TV show, Country Calendar entitled 'Farming on the Fringe' in which Whenuanui farm was the topic. The bus brought us on the farm roadway to the highest point on the farm. From there we had a spectacular view of the surrounding landscape. The town of Helensville was visible in the valley below and the Kiarara Harbour in the far distance.

The roadway gives access to the 100 paddocks and the open forest at the end of the farm. A water reservoir stores water from springs on the farm and supplies the water for the stock by a gravity feed system. Whenuanui Farm showcases some of the best farming practices in New Zealand including their water and environmental management. All waterways are fenced, 18.5ha of pine woodlot was planted about 20 years ago and 15.3ha of regenerating native bush is established and managed. The Kidds were National winners of the Ballance Farm Environment Awards in 2016 and recipients of the prestigious Gordon Stephenson Trophy for profitable and sustainable farming.

Angus beef & Coopworth sheep

The beef enterprise comprises 300 Angus cows with the progeny sold as weanlings to a specialist beef fattening unit of 450 hectares in the area which is managed by David Kidd, their son. The cows are wintered for two to three months in rented cleared and mature forest adjoining the farm. Silage, maize or hay is fed to the cows during this time on the clearing. They also graze the floor of the forest as an aid to conservation of native woodland vegetation. Cows calve without supervision in the forest in July and August and return to paddocks on the farm in September.

There are 1,600 Coopworth ewes and 300 replacements bred on the property. The Coopworth breed is a composite of the original Romney sheep brought in from the UK and Border Leicester. They are prolific and selectively bred for their hardiness. Richard and Dianne use high genetic Coopworth rams on their younger ewes to produce replacements and use Dorset Down, South Suffolk or a Poll Dorset on the rest of the flock for meat production. All rams are genetically selected for resistance to facial eczema.

Both sheep and cattle are predominantly grass fed. Grass is supplemented during the dry summer months with spring-sown crops. Management is very good with grass measuring and paddock grazing practiced. Soil is of volcanic origin and requires regular applications of lime. The grass sward is rich in high production rye grasses and clovers. Timothy and Cocksfoot are integrated to contend with the summer drought. There is a program of reseeding 15-20% annually. This can be a challenge on this landscape, with some very steep hills

Ewes are pregnancy scanned in May and separated into paddocks depending on their litter size and left there to lamb. The litter size is 1.9 in mature ewes and 1.3 in the hoggets. This delivers 1.62 lambs sold or retained per ewe mated. Lambing commences in late June and continues for one cycle except for the replacements which get two cycles. Supervision at lambing is minimal. The lambing paddocks all have shelter in the form of regenerating native bush or New Zealand flax. Triplets are mainly left with their dam.

Branded produce

The Kidds, along with other local farmers have been instrumental in developing the "Kaipara Lamb" brand in association with Countdown Supermarket chain. They have developed a niche for high quality spring lamb product which is produced to a high welfare standard and with minimal stress to lambs. The processing plant is an hour from the farm and the product is on the supermarket shelves the next day. The proximity to the largest population centre in New Zealand, Auckland, is an advantage in creating this market. In-store tastings and promotions have proved very popular and increased sales.

This was an educational visit to an impressive business that is rearing quality stock on a mainly grass system while nurturing the environment and marketing their produce with a local food story.

Lincoln University Visit

Maura Callery Irish Grassland Association Office Manager

The Irish Grassland Association group visited Lincoln University Research Dairy Farm and Lincoln University Dairy Farm on the 25th October 2018. The tour was hosted by Ciaran Hearn, Forages for Reduced Nitrate Leaching Technician at Lincoln University. Ciaran is from Waterford and had previously worked at UCD Lyons at the Systems Research Herd.

Lincoln University Research Dairy Farm is Lincoln University's smallest dairy unit at 71ha and approximately 180 cows. The farm is managed by Helen Hague who has a background in diverse dairy farming systems and dairy cow research from both the UK and New Zealand.

Lincoln University is the leading dairy research institution on the South Island of New Zealand. It is partnered with several other research and knowledge transfer organisations including DairyNZ, AgResearch, Plant and Food Research and Lincoln Agritech. These organisations will be at the centre of the new Lincoln Hub which will be a base for world leading Dairy research amongst other land-based research activities.

Lincoln University has three dairy farms under its control, each of which plays a different role in the process of research and development of new ideas or concepts.

Novel research

Almost all novel research concepts are tried out on a small scale at Lincoln University Research Dairy Farm, where small plot and individual cow trials are most common, before being trialled on a bigger scale. Such trials would usually run for between 2 and 6 weeks with a limited number of cows on selected areas of the farm. Recent projects here have included investigations of the impact of novel plant-based drenches in a NZ out-wintering system, production and environmental impact of grazing diverse pasture species, production impact of feeding fodder-beet to lactating dairy cows, and the environmental impact of winter fodder establishment methods.

Much of the diverse pasture work that has been carried out at Lincoln University Research Dairy Farm over the past number of years has been carried out under the Forages for Reduced Nitrate Leaching (FRNL) program which is currently run by Dr. Racheal Bryant. These diverse pastures focus mainly on two novel forage herbs (or forbs) consisting of plantain and chicory. Both forbs have been shown to have a positive impact in reducing the environmental impact of dairy cows in grassland dairy systems. The most recent innovation is a farmlet study which aims to develop the best management practice for utilizing a plantain, clover and Italian ryegrass/clover pasture mix.

While visiting Lincoln University Research Dairy Farm our group was also greeted by Helen Hague and Dr. Racheal Bryant. We had a short tour of the yard and milking facilities available at Lincoln University Research Dairy Farm. PhD candidate Anita Fleming talked to the group about her research, specifically the trial which she is currently running at Lincoln University Research Dairy Farm.

The group also visited the paddocks to see both monocultures of forbs along with newly established diverse pasture mixes. While at the paddocks, Christopher, another PhD candidate spoke to the group about his research with forbs and the trials he is planning for the coming

growing season. Once the group finished visiting the paddocks at Lincoln University Research Dairy Farm they visited Lincoln University Dairy Farm (LUDF)

Lincoln University Dairy Farm

The IGA group visit to the Dairy Farm began with an introduction by farm manager Peter Hancox. It is a 186-hectare irrigated property, of which 160 hectares is the milking platform. The farm operates in the top 2% on profitability, producing 1700 - 1800 Kg MS/ha from high quality, irrigated pasture. Operating with the support of the farm manager, Peter Hancox, and some of the industry's best farmers and technical input, Lincoln University Dairy Farm has lifted production through increasing efficiency across the business.

The strategic objective of Lincoln University Dairy Farm is to maximise sustainable profit by embracing the whole farm system. The following goals have been set in order to achieve this overarching objective:

- Lincoln University Dairy Farm is to accept a higher level of risk [than may be acceptable to many farmers] in the initial or transition phase of this project.
- To develop and demonstrate world-best practice pasture based dairy farming systems and to transfer them to dairy farms throughout the South Island.
- To consider the farms full environmental footprint, land requirement, resource use and efficiency in system decision making and reporting.
- To use the best environmental monitoring and irrigation management systems in the development and implementation of practices, that achieve sustainable growth in profit from productivity and protection of the wider environment.
- To manage pastures and grazing so that per hectare energy production is optimised and milking cows consume as much metabolisable energy [ME] as practicable.
- To optimize the use of the farm automation systems and demonstrate / document improved efficiencies and subsequent effects on the business.
- To achieve industry targets for mating performance within a 10 week mating period, including a 6 week in-calf rate of 79% and 10 week in-calf rate greater than 89% i.e. empty rate of less than 11%.
- To ensure specific training is adequate and appropriate to enable staff members to contribute effectively in meeting the objectives of the farm.
- To operate an efficient and well organised business unit.
- To actively seek labour productivity gains through adoption of technologies and practices which reduce labour requirements or make the

New Zealand Seed Industry visit

Rosalyn Drew IGA Honorary Editor and Nitrofert Ltd.

On the 26th October 2018, the Irish Grassland Association study tour visited the NZ Seed Industry Office in Templeton just outside Christchurch. The purpose of this visit was to learn about the seed industry in New Zealand - structure, how it operates, its objectives and current research programs in grass cultivars and how this meets farmers' needs. One of the hosts of the day, Sarah Gard of Germinal Seeds, also presented an overview of Germinals' business and R&D focus in New Zealand. The second part of the day included a visit to a beef and dairy research farm called Marshdale which was hosted by Dr. Glenn Judson of Agricom. Here we learned about various research trials that are being conducted, exploring how various grass species and forages perform under different grazing systems and the effects of such on the environment.

Seed Industry

Unlike Ireland, New Zealand operates in a totally free economy. There are no import or export tariffs, foreign exchange controls or government legislation on the production or marketing of seeds. There are also no subsidies or supports. Due to the lack of a non-commercially funded National List Variety Trial run under a ministry, varieties are available to farmers a lot quicker but this is also under a strong commercial regime with farmers relying on a sales rep selling a variety to them. While certified seed is recommended by the various bodies, home saved seed is also a norm in New Zealand. While this is a cost saving it can also lead to problems in terms of germination or purity on farm.

Participation by plant breeders in the NZ seed certification scheme is voluntary. If breeders decide to register a variety then they do so under the Plant Variety Rights Act and NZ seed certification scheme. This ensures that grass cultivars are of a high standard and conform with a set of procedures.

The economic contribution of the industry is substantial. The seed production area is circa 150,000 hectares and is estimated to contribute $699m to NZ GDP. In terms of seed production, New Zealand offers a good temperate climate, is disease and pest free, has plentiful water supply and good quality soils. It is also able to offer scale of seed crop production while maintaining genetic purity and has strong biosecurity settings. These factors are all very attractive for a commercial seed production company. As illustrated in the diagram below the majority of forage seed sales are of perennial ryegrass which is reflective of the high grass output as demanded by the dairy industry.

The New Zealand seed industry is comprised of two main bodies – the NZGSTA (NZ Grain & Seed Trade Assoc.) and the NZPBRA (NZ Plant Breeding & Research Assoc.) The NZGSTA comprises of over 80 voluntary members from sole traders to large companies with national and international presences. Their activities includ breeding & research, multiplication, marketing, processing & distribution and support services such as advisory to growers, seed testing, broking and grading. Members of this organisation are bound by a set of ethics and standards with the objective to facilitate the successful operation of the seed trade within NZ and overseas.

The NZPBRA represents plant breeders and seed companies substantially involved in the development and marketing of plant intellectual property. There are nine association members of NZPBRA – they are Pioneer, Cropmark, Grasslanz, PGG Wrightson Seeds, DLF Trifolium, Seed Force, Barenbrug, Germinal and VP Maxx. The NZPBRA has roles at both national and industry level. It is involved in encouraging government investment in NZ science, regulation of intellectual property, fostering a fair and practical regulatory environment and promoting environmentally positive advances by industry. It also develops and promotes research programs, develops protocols on cultivar evaluation and engages with and strengthen relationships with other industry organisations.

The National Forage Variety Trial (NFVT) and Forage Value Index (FVI)

The National Forage Variety Trial was set up by the NZPBRA in 1991. There are currently 40 active trials in the ground at any one time which are operated under a strict trial protocol. Results are prepared at the request of and for the purposes of those nine participating companies. Data from this trial also feeds into the Forage Value Index and is used by companies to screen new varieties. The FVI was developed by DairyNZ in conjunction with the NZPBRA. Similar to the Pasture Profit Index (PPI) in Ireland, this index is an independent, region specific, profit-based index for short-term and perennial ryegrass cultivars. This online cultivar selector tool allows farmers to objectively select the most suitable endophyte and ryegrass combination for their farm. This allows farmers to make more informed, confident and profitable decisions when re-seeding or rejuvenating paddocks. The index is based on Economic Values and Performance Values for seasonal dry matter production and is available on the DairyNZ website at dairynz.co.nz/fvi.

Endophytes

NZ has a naturally occurring fungus found in ryegrass and tall fescue pastures called endophytes. There are a range of different endophytes and these are developed and marketed by different seed companies. Examples of some include Edge and Happe by DLF Seeds and the NEA range by Barenbrug. Endophytes are essential for persistence in most NZ paddocks as they protect the plant from specific insect attack. Endophytes do not occur in Ireland and are not of benefit as we do not have the pests or diseases that attack the grasses in NZ.

Germinal NZ

Sarah Gard finished up her presentation with an overview of Germinals' work in NZ. While they have been operating there in various forms over the past 15 years, it is only since April 2017 that they have established a base in New Zealand. As they are so new they are a relatively small player. Germinal have a strong focus on R&D and have recently established a plant breeding programme which Sarah brought us out to view. This is the first time that breeding material has been taken outside of IBERS. The focus is on developing an increase in early spring growth while maintaining the features that their varieties are renowned for.

Reducing nitrogen leaching

The second half of the visit was out to Marshdale research farm near Oxford, where we met our host Dr. Glenn Judson of Agricom. Agricom are the technical division of PGG Wrightsons who are one of the largest seed companies in the southern hemisphere. Dr. Judson showed us the current research being conducted on the farm to include a program on plantain as a forage crop that reduces nitrogen leaching. According to research conducted by Agricom, the variety Ecotain can significantly reduce nitrogen leaching from urine patches on livestock farms.

As a crop, plantain has been found to act as a diuretic and is currently under a lot of investigation in various environmental research programs. According to research findings, Ecotain will cause the cow to urinate more frequently but in lower concentrations. This means that the plant and soil will have a better uptake of the nitrogen and will reduce the leaching effect into the soil and waters.

Ecotain can be sown as a monoculture or with grass or clover and is grown with the same fertiliser policy as grass. When sown as a monoculture it performs well on dairy farms where previously the amount and quality of summer grazing limited milk production. It also is a good source of micronutrients such as copper and selenium and is very rich source of calcium so this may cause problems in lambs or increase milk fever in cows. Results by Massey University have shown a minimum reduction of nitrate leaching from a urine patch of 30% from paddocks containing Ecotain. When asked if plantain could have a role in Ireland, Dr. Judson said it is useful to look at from an environmental perspective.

Guiney Dairy Farm

John Kelly, Dairy Farmer and past IGA Council Member and Host Farmer

Liam Guiney and his wife Clare and three children are originally from Charleville in Cork where they milked 100 cows. He is the brother of Kieran Guiney who is married to Leonie Foster, the now returned board member of Fonterra. With this connection Liam was no stranger to New Zealand and its farming industry.

When you visit New Zealand it's not hard to see the attraction. A sunnier climate, positive attitude and a lifestyle that embraces the outdoors. Add into that mix a brother living and farming there, you can see why Liam was sold on the idea of taking off his wellies and putting on a pair of gum boots.

In 2013 Liam and Clare sold their farm in Charleville and moved to New Zealand. Even though they were no strangers to the NZ dairy industry they spent their first year working for a sharemilker. This gave them some great hands-on experience where they could learn the ropes.

Whilst the NZ dairy industry is very similar to Ireland, it is not the same. We do not regularly get summer drys…hopefully. We do not widely out-winter our cows and neither is irrigation used. Rainfall averages may be similar but the drying wind and sunnier climate are not. When all these things are thrown into the mix you can see what a prudent move it was.

Contract milking

Following this experience, they went on to become contract milkers on a 220ha irrigated flat farm in Fairlie in southern New Zealand. It was originally a beef and sheep farm and they now milk 780 cross bred type cows with 3 staff. This is where we met Liam on a beautiful October day.

When we turned into the farm off a gravel road the first thing we noticed was the 1.2km long pivot irrigator. The sheer size of it was hard to comprehend. It is fed from a group irrigation scheme and it is also able to spread the parlour washings. They say farmers would like sun in one field and rain in another. In New Zealand you can make this happen.

Unlike at home if you drove into a 780-cow farm in Ireland you could probably see the sheds from two miles away. Here all that was present was a small lean-to calf shed and the rotary milking parlour. The farm was immaculately tidy and if there were any weeds they must have been keeping their heads down for our visit.

Liam and his 3 staff work a 7 day on 2 day off rota with cups on at 5am and 2pm in the evening. Liam has some clever staff incentives which create pride and a small bit of competition. The farm is divided into sections and each staff member is in charge of weed control in that section. All staff members do the grass walk each week together. It strikes me that there is definitely a team ethos at work on this farm.

Optimum production

The cows on the farm produce 400kgs MS per cow with minimal supplementation. Last year there was an 8 % empty rate or 8%MT as they say in NZ. They use AI for 5 weeks and for the remaining 5 weeks use a team of Jersey and Hereford bulls. When we visited calving had just finished and the cows looked in super body condition.

Their target pre grazing yield (pgy) is 12-1300kgs DM/ha. They do not aim to grow as much grass as physically possible but instead aim to manage their ideal pgy with the use of the irrigator and by applying N. Surplus paddocks are looked as a costly excess in their system. The cows are off wintered on a support block where they are fed on kale. Some of this is grown on the un-irrigated edges of the milking platform.

Like any of the good dairy farms we visited Liam has a clear system in place and clear guidelines for any grazing management, fertiliser and breeding decisions taken. One thing that stuck me about the successful dairy farmers we met in NZ is that they have a real sense of clarity about how they farm.

When you meet Liam Guiney he comes across as a modest man and when you listen to his story and the way he speaks, a real sense of personal satisfaction, pride and quiet determination come out. Liam is definitely a force to be reckoned with, if you are lucky enough to meet him!

SPECIAL FEATURE

New Zealand farming: Farming for Capital Gain not profit

Adam Woods, IGA Council Member and Irish Farmers Journal

Borrowing on New Zealand Dairy farms has increased at an exponential rate over the past 20 years. In 1998 the average New Zealand farm was carrying $560,000 of debt, by 2017 this has risen to $3.5 million per farm. As part of Adam Woods's visit to New Zealand he sat down with some New Zealand bankers to discuss the banking system and the challenges that lie ahead

New Zealand banking Parameters

The New Zealand banking system differs from the Irish banking system in a number of ways but the biggest difference is the ability of New Zealand farmers to use livestock as security when borrowing money. In the past this has given share milkers a great opportunity to borrow money as their stock numbers have increased. Livestock are seen as a secure asset in New Zealand and this enables younger start-ups to borrow large amounts of capital. Table 1 outlines the scaling factor of different assets. The budgeted milk price for loans at the moment is $5.60/kg milk solid which is below the forecasted payout but gives some scope if milk prices drop. An interest rate of 6.25% is applied to stress test loans.

Table 1. Security and Asset valuing for taking out new loans

	Value/Head	Scaling Factor	Lending/Head
Mature Cow	€873	60%	€524
In calf heifer	€50	60%	€450
Maiden heifer	€394	60%	€236
Land and Buildings	Purchase Price/Market	65%	
Dairy Shares	Market Value	65%	
Plant and Machinery	Book/Market Value	25%	

The lending value ratio (LVR) is a figure used by New Zealand banks to summarise the their exposure to a farm. It is calculated by dividing the term loans and overdraft facilities by the amount of security they hold. A farm with borrowings of $300,000 and security of $325,000 would have and LVR of 92%. Banks at the moment are trying to keep the LVR below 100%. There are some farms geared very highly and are hitting 150% and over but these farms are very exposed to a poor milk payout or a rise in interest rates and the bank is looking for plans as to how the farm will reduce their exposure. Good cashflows have become increasingly important in terms of servicing debt on annual basis. Realistic ash flow budgets are a critical requirement of a successful loan application. The bank has a very good handle on the technical performance of farms and will know from analysing this data whether plans and budgets are realistic.

What do New Zealand banks look for in a client?

- Good personal factor - They get to know the person and are investing in the person as well as the business.
- Evidence of Financial acumen – What has the farmers been involved in already. Is there budgets, cashflows, risk analysis and evidence of monitoring?
- Farming history – Where has the individual been. It's a small industry and word travels about good and bad managers
- Do they have a good network? Who do they surround themselves it? Are they members of a discussion groups? Have they good mentors?

Ongoing banker relationship

- Communicate on a regular basis. Local area managers are at the end of a mobile phone at all times to discuss banking questions
- Talk through the tough times and the good times. Very important to keep the communication channels open especially during the tough times
- The bank will regularly throw around ideas as to the potential direction for the farm or other opportunities available

The National picture

New Zealand dairy farms are quiet heavily borrowed. Dairy sector borrowings increased significantly between 2014 and 2016, when weak global dairy prices reduced farm incomes and forced farms to borrow to meet operating costs. Since then, dairy prices have increased and stabilised at a higher level. 28% of New Zealand dairy farms are classified as being heavily indebted with over $35 per kg milk solid borrowed. To put this in context, the average NZ dairy cow produces 381kg/ milk solids annually so this would be the equivalent of an Irish farm being borrowed at the rate of €7,620 /cow. The average NZ dairy farm have borrowings of $22/kg milks solids or Ð4,700/cow. While high borrowings hasn't been an issue in the past as most loans were issued on an interest only basis, as banks seek to reduce risk by looking for principal repayments, this has applied huge financial pressure on some farms. Some of these larger farms will incur large costs of improving their systems from an environmental point of view which could apply further pressure.

Comment

There is no doubt that the global financial crisis (GFC) has affected NZ dairy farmers and growth checked the rapid expansion path that they were on. Every dairy farm we visited referred to it and how it changed the development of their farm. Volatile milk prices, increasing farm working expenses, and declining land prices have had solvency and liquidity implications. Farmers need to change their business strategy from farming for capital gain and refocus on profitability and positive cash profits. It is also becoming more evident that the rural lending environment and bankers attitudes is changing with no more interest only loans and a requirement of paying back principal as part of the borrowing package. With principal payments in the mix, this halts further growth plans to take on share milkers on existing farms and take on more farms. In some cases farm owners are not even able to take on share milkers as they need the full milk cheque to service debt repayments. In terms of looking to the future, New Zealand is vulnerable on a number of fronts. An open economy like Ireland, its dairy industry is impacted hugely by world market prices. Another wobble from Fontera or an increase in interest rates would see a lot of farms unable to service the high debt levels that currently exist on farms. Environmental regulations are also going to put huge costs on some farms which could stagnate growth for some time. Over the past 20 years New Zealand farmers have concentrated on growing equity through land purchase via interest only loans. With no capital gains tax, it was a fool proof way of g rowing business.

However with talk of a capital gains tax and banks growing more and more apprehensive about high borrowings, growth in the NZ dairy industry could be set to drop a gear.

New Zealand Dairy Stats:

Dairy Herds: 11,748

People Employed: 49,110

1.72 million Ha in dairy farming

1.85 billion kg milk solids produced

Cows milked: 4.8 million

Average herd size: 419

8th largest milk producer in the world and worlds largest exporter of milk products

SPECIAL FEATURE

My personal synopsis of IGA field trip to New Zealand 2018

Eddie Connell Irish Grassland Association Council Member and Beef/Sheep Farmer

We found the Kiwis to be very forthcoming in all our contacts with them. They were excellent farmers and outside of the farms we visited (which would be in the top five per cent of farmers), there was no land which was not farmed to its full potential. Even land that we all considered too steep to travel by tractor was fully utilised and reseeded on a regular basis by tractors, outside of these areas fertilizer and lime was spread by plane.

It is difficult to appreciate the scale of farming in New Zealand from an Irish perspective. Like Ireland, the most intensive and profitable systems are dairying with beef and sheep farming having increasingly been pushed to the peripheral areas. The typical dairy operation for the kiwis will be anything from 300 to 800 cows and many even bigger. Developing dairy farmers were very heavily borrowed with the banks prepared to lend 60% of liquid asset value to the best operators with no fixed assets.

On the sheep side (which was mostly on the higher hills and mountain areas) the flocks or studs as they call them were anything from 2000 to 19,000 breeding ewes per farm with commercial sheep scanning up to 200% with a docking rate of 1.5 to 1.6. These are mostly Romney based easy care sheep with no intervention at lambing. Most of the sheep farms also had a suckler herd of between 300 to 600 Angus or Hereford cows, with the progeny finished on grass by 18 to 20 months with steers weighing 600 kilos and a kill out of 50% with heifer carcases of 250 kilos.

The only lowland beef stud we visited was a pedigree herd of 300 Charollais and 50 Hereford cows. They hold an on farm sale each year of their top 80 to 100 bulls with this year's average of 8000 dollars. A few years ago their customer base for these pedigree bulls was dwindling as farmers were moving to dairying and beef animals were kept for a second winter. They conducted research with Lincoln University to come up with a solution. The most economical solution was to grow and graze fodder beet in situ and to sell animals at fifteen months at a carcase weight of 330 kilos and avoid a second winter. This has been replicated by their customer base and they are now back to selling the same number of breeding stock as 10 years ago.

On my previous visit to New Zealand in 2005 there was some land being reclaimed from afforestation to other land uses - mainly dairying, but this has now increased to levels unimaginable back then. The main driver of this is a government agency called Landcorp, the equivalent of our old Land Commission.

Most of the really productive dairying land on the south Island was irrigated. The big question that the casual observer is entitled to ask is: where is the water going to come from to service these extra dairy operations? Water is limited here and there is an ongoing dependence on the snow melting on the mountains to supply this water. In some areas there can be two weeks' notice that water is going to be restricted to half supply and a similar warning that it will be stopped if there is no rain.

Farmers and in particular dairy farmers are seen in a poor light in kiwi land as they are seen as poor custodians of the environment. This is understandable to us as the only building on a dairy farm is a milking parlour and cows are outdoors all the winter even though they have a 75 to 90 day winter. Some of these animals are fed with silage but fodder beet grazed in situ is seen as an increasing alternative in light of climate change and higher stocking density.

What are the take home messages?

1. The exposure to the lender put some of the rapidly growing dairy operations in a very precarious financial situation should any of a number of scenarios arise such as drought, milk price ease, interest rate increase, disease or a change in taxation.
2. Animal welfare is likely to become a bigger issue as slaughtering calves at a young age will be seen by the wider population as unacceptable. There are lessons here for us as a country as some of the extreme dairy breeding we see now has no real economic value in the male progeny.
3. Similar to New Zealand we depend on tourism and we are selling the environment as much as the product. A few of the people we visited, mainly sheep meat and wool producers, were getting a premium for showing the environment as much as the product to an ever increasingly sophisticated international customer.

Overall it was a very well organised trip and I want to thank my colleagues in the IGA for sharing the experience and I hope everybody enjoyed the journey as much as I did.

SPECIAL FEATURE

Important steps towards a successful reseed!

Dr. Mary McEvoy,
Germinal Seeds Ireland
& IGA Council member

Increasing grassland productivity has never been more important. In order to maximise animal performance from pasture we must first ensure we are optimising the production of grass at farm level. The average level of grass produced nationally is 9.1 t DM/ha, with the top farms producing over 15 t DM/ha. There is huge scope to increase the total grass grown and hence increase grass in the diet, while reducing feed costs in livestock production systems.

Before considering investing in reseeding you need to ask yourself

- Will I use the extra grass grown? Have I enough stock to graze the extra grass?
- Have I taken steps to correct my soil fertility? This is the first step to improving grass production and should be considered before starting to reseed.

Reseeding is important as a mechanism to increase the perennial ryegrass content in swards. There are several benefits to reseeding and maintain perennial ryegrass dominant pastures:

- Provide more grass at the shoulders of the season (early spring and late autumn)
- 25% more responsive to fertiliser N compared to old permanent pasture
- Increased feeding quality
- Faster re-growth
- Greater total grass production

In this article we examine some of the key parameters to consider when reseeding

Soil fertility
Soil fertility is critical to maximising the performance and longevity of swards at farm level. Almost 90% of all soils are sub-optimal in terms of pH, phosphorus (P) or potassium (K). Without doubt, this is costing farms throughout the country significantly in terms of under-performing grass swards and the necessity to bring in more expensive supplements to overcome grass deficits in the system. Completing regular soil fertility tests on your farm (every 3 to 5 years) and using the results to develop a fertiliser program is critical to ensure you can get the most from your swards. Correcting soil pH is the first step to improving soil fertility – the correct pH will have a positive impact on making P and K more available to the plant while also ensuring applied fertilisers are used more efficiently by the plant.

Timing
There is a growing trend towards a spring reseed and there is very good reason for favouring spring over autumn for reseeding. In spring:

- Days are getting longer and temperatures are improving – both will help give the new reseed the best start.
- The improving weather conditions also mean the reseed can be completed with a quicker turnaround time from spraying the old sward to grazing the new sward.
- Greater opportunity to complete a post-emergence spray and allow for several grazings of the new reseed before autumn closing, which will help ensure a weed-free, well tillered sward, ready for grazing the following spring.

Deciding on what fields to reseed
The general recommendation is to reseed 10 to 15% of the farm per year to maximise the quality and performance of your swards. The best way to identify the poorer performing paddocks on your farm is to complete a weekly farm walk and assess the total production of individual paddocks at the end of each year. Those paddocks producing less grass should be targeted for reseeding. Other ways to identify what paddocks need reseeding are to consider the following:

- Is there a high presence of weeds such as docks or thistles?
- Has there being severe poaching of a field?
- Is there a high content of unproductive grasses such as meadow grass or bent grasses?
- Is there less silage being harvested from the field compared to previous years?
- Are re-growths slow after cutting or grazing?
- Is there a poor response to nitrogen?

Variety Choice
Selecting the right varieties for your particular requirements is critical to ensure you maximise the performance and value of your new reseed. Varieties will perform differently depending on the management (e.g. grazing or silage). Using the DAFM Grass Recommended List and the Teagasc Pasture Profit Index will help ensure you choose the best varieties for your needs.

The main traits to focus on are

- Seasonal DM yield (spring and autumn)
- Quality
- Total DM yield
- Persistency

Method of reseeding
Once you identify the fields that require reseeding the next thing to consider is spraying and the method of reseeding. By spraying off the old sward with a glyphosate spray all weeds such as docks, thistles etc and weed grasses will be killed. This is important to give the new seed the best possible opportunity to establish without competition from the existing species.

The method of reseeding will likely be dictated by soil type, amount of underlying stone and machine/contractor availability. Ploughing is the most common method of reseeding, however this may not be possible on stony ground. Minimal cultivation techniques are also widely used.

Regardless of the method of reseeding it is crucial to ensure that the seed bed is fine and firm.

A fine firm seed bed will help conserve moisture in the soil – which is important for germination. A loose seed bed will dry out much quicker and this may result in poor germination or weak establishment. An old rule of thumb is that you should be able to cycle a bike across the seed-bed!

After sowing, rolling is absolutely crucial to ensure good soil-to-seed contact. A loose seed bed will have a lower germination rate. One of the most common reasons for the failure of a new reseed is often related to not rolling after sowing.

Post-sowing management

1. Post emergence spray
   The best time to control docks and other weeds is after reseeding. Using a post emergence spray will kill seedling weeds before they can properly develop their roots. The product you use will depend on if clover is present and also on the main weeds present in the new sward. It is worth discussing your options with your local advisor or rep to ensure you are using the appropriate product for your requirements.

2. Pests
   New reseeds should be monitored regularly for pests such as slugs, frit fly, leather jackets and rabbits. If you suspect that you have a problem, then speak to your local rep to identify the best method of control.

Grazing the new reseed
The new reseed should be grazed as soon as the plants can withstand the pull test (using your fingers check to see if the roots stay anchored in the ground when you pull the grass plants as an animal would when grazing). Early grazing is crucial to allow light into the sward and also encourage tillering of the plant. It is recommended that the first grazing is completed at pre grazing yields of 600 – 1000 kg DM/ha. During the first year a new reseed will grow rapidly and frequent grazings at light covers will help ensure you have a densely tillered sward. The 2nd and subsequent grazings on a reseed should occur at 1200 – 1400 kg DM/ha

2019 Teagasc Pasture Profit Index and DAFM Recommended List

The 2019 Pasture Profit Index (PPI) was released by Teagasc and DAFM recently. The full list is outlined below – separated according to category – late tetraploid, late diploid, intermediate tetraploid and intermediate diploid. In this article, we will examine those traits which are causing the biggest difference between varieties to better understand what is important when examining varieties and comparing mixtures.

The trialling system

Before examining the PPI index it is useful to understand the grass evaluation trials. In Ireland, DAFM conducts the Recommended List trials, for a variety to be published on the Recommended List and the PPI it undergoes a minimum of 4 years of trials. Each variety is evaluated over a minimum of 2 sowing years and 2 harvest years per sowing year. There are 5 trials sites across the country (see map), with each variety sown at each site. Only varieties that demonstrate better than average performance are then published on the list. There are limitations of this evaluation system – as each plot is only tested for 2 years, it is difficult to accurately evaluate persistency, there is no grazing of the plots, so it is difficult to understand differences in palatability, however despite this we probably have one of the most transparent testing systems in the world and this must be supported by both farmers and the industry to continue to deliver unbiased information to the end user.

Understanding the Pasture Profit Index

The PPI is an economic index for ranking grass varieties. It can be considered in terms similar to the EBI for cattle breeding. The PPI uses a model to determine the economic value of each of the key traits in grass production terms – spring, summer and autumn DM yield, quality, silage DM yield (based on 1st and 2nd cut yields) and persistency. The economic value for each trait is applied to measured performance of a variety in the Recommended List trials and the sum of all the values then determines the total PPI value of a variety in € per ha/year.

Seasonal DM Yield

Seasonal DM yield is separated into spring, summer and autumn DM yield in the PPI. Extra grass in the spring is of highest value in the index, followed by autumn, with extra grass grown in the mid-season period being of the lowest value. The reason for this is, in a spring calving system spring grass has the most value, displacing more expensive silage and concentrate from the system, while also improving animal performance. The difference between the best and worst variety for spring growth is €111 per ha/year. Compared to summer growth, the difference between the best and worst is only €31 per ha/year, and in autumn the difference is €55 per ha/year.

Quality

The range in quality in the PPI is from €56 per ha/year to the lowest variety for quality at -€38, a difference of €94 per ha/year. Quality is hugely important trait which has the potential to deliver big differences at farm level.

Quality and spring growth are two important traits to focus on when selecting grass varieties

Silage

The performance of varieties for both 1st and 2nd cut silage yield is combined as one figure in the PPI. The best variety has a silage value of €40 per ha/year while the worst has a negative value for silage of -€7 per ha/year, a difference of €47 per ha/year. This figure is of value if you are reseeding silage ground.

Persistency

In the PPI €0 indicates a persistent variety which is expected to last 12 years or longer under good management. The worst varieties in the 2019 PPI for persistency have values of -€11 per ha/year, indicating that they are expected to last 10 years at farm level. The small variation between the best and worst varieties for persistency in the PPI demonstrate that there are small differences between varieties in persistency terms. Soil fertility and management are the biggest influencers of sward persistency.

Summary

No variety excels in every trait and it is important to ensure that a mixture contains the appropriate balance of diploid and tetraploid varieties, the general recommendation is approx. 60% diploid and 40% tetraploid, on heavier soils increase the diploid proportion, but ensure they are high quality diploids that are going into your mixtures. Diploids bring density to a mixture, with tetraploids generally being higher in yield and quality and this can be clearly seen in the PPI. Tetraploids are also generally more palatable to grazing animals.

There is growing evidence from farmers that very dense diploid varieties are difficult to graze resulting in poor utilisation of mixtures containing these varieties. All diploids will bring sufficient density to a sward, what is important is ensuring that they are high in DMD or quality value on the PPI.

Reseeding is an expensive investment, so it is important to ensure you are using the best varieties available, as by using lower performing varieties will have a negative impact on your subsequent swards.

Ensure you are using the best available varieties to get the biggest return from your sward

Teagasc Pasture Profit Index 2019

Intermediate Varieties

Variety Details			PPI Sub-Indices (€/Ha/Year)						
			DM Production						
Variety Name	Ploidy	Date	Spring	Summer	Autumn	Silage	Quality	Persistency	Total PPI (€/ha/year)
AberClyde	T	25-May	54	43	34	30	44	0	**205**
Fintona	T	22-May	73	23	43	40	12	0	**191**
Elysium	T	25-May	73	30	26	22	19	0	**171**
Dunluce	T	29-May	31	39	45	31	25	0	**170**
Seagoe	T	26-May	45	35	36	40	-1	0	**155**

Intermediate Diploids

Variety Details			PPI Sub-Indices (€/Ha/Year)						
			DM Production						
Variety Name	Ploidy	Heading Date	Spring	Summer	Autumn	Silage	Quality	Persistency	Total PPI (€/ha/year)
AberMagic	D	29-May	44	46	70	17	19	0	**197**
Nifty	D	27-May	80	50	57	29	-23	0	**193**
Moira	D	24-May	118	21	49	29	-30	0	**187**
AberGreen	D	31-May	58	52	62	6	4	0	**182**
AberWolf	D	29-May	65	33	34	23	14	0	**169**
Astonconqueror	D	25-May	79	29	34	27	-4	0	**165**
Gusto	D	30-May	67	31	55	-7	15	0	**161**
Rosetta	D	23-May	85	25	40	22	-16	0	**156**

Late Tetraploids

Variety Details			PPI Sub-Indices (€/Ha/Year)						
			DM Production						
Variety Name	Ploidy	Heading Date	Spring	Summer	Autumn	Silage	Quality	Persistency	Total PPI (€/ha/year)
AberGain	T	4-Jun	37	40	43	37	56	0	**214**
AberPlentiful	T	8-Jun	57	44	42	22	17	0	**182**
Meiduno	T	3-Jun	55	39	41	22	16	-5	**167**
Briant	T	3-Jun	37	39	39	24	19	0	**157**
AberBite	T	1-Jun	10	38	44	34	39	-11	**154**
Ballintoy	T	2-Jun	31	35	35	28	22	0	**150**
Triwarwic	T	2-Jun	42	34	23	27	13	0	**139**
Kintyre	T	6-Jun	25	33	50	22	5	0	**134**
AstonEnergy	T	2-Jun	9	30	36	10	48	0	**132**
Solas	T	10-Jun	16	31	50	24	10	0	**131**
Xenon	T	8-Jun	18	31	30	20	29	0	**128**
Aspect	T	6-Jun	20	32	24	16	32	0	**124**
Alfonso	T	1-Jun	7	30	34	8	34	0	**113**

Late Diploids

Variety Details			PPI Sub-Indices (€/Ha/Year)						
			DM Production						
Variety Name	Ploidy	Heading Date	Spring	Summer	Autumn	Silage	Quality	Persistency	Total PPI (€/ha/year)
AberChoice	D	9-Jun	32	45	51	15	47	0	**189**
Oakpark	D	2-Jun	34	30	33	28	-8	0	**118**
Drumbo	D	7-Jun	29	27	34	3	24	0	**117**
AstonKing	D	5-Jun	64	28	22	17	-15	0	**116**
Smile	D	5-Jun	24	25	43	14	-6	0	**101**
Kerry	D	2-Jun	42	31	35	13	-23	0	**98**
Glenroyal	D	4-Jun	25	32	40	12	-11	0	**96**
Clanrye	D	6-Jun	27	31	15	25	-30	0	**68**
Majestic	D	1-Jun	35	26	36	7	-38	0	**66**

Chickweed 5: Common chickweed can smoother out new grass seedlings if not controlled in time.

Dealing with weeds in reseeded swards

Chris Maughan,
Technical Manager,
Whelehan Crop Protection

The remarkably mild winter and spring have resulted in phenomenal grass growth. But these conditions have also given a dramatic boost to weeds. This applies particularly to reseeded pastures.

The dry summer led to many reseeds being postponed until well into September. I have come across a few farms where reseeding took place in the early days of October. In all cases, the new grass took off well but weeds are a significant problem.

Many of these swards are now dirty, with chickweed and docks posing particular problems. The exceptional mild conditions have meant that chickweed in particular has continued to grow and I have seen a number of swards where the grass is now almost smothered out.

Timing
Unless these swards are sprayed over the coming weeks, other weeds such as docks, thistles and buttercups will germinate and grass establishment will be severely affected. In the case of seedling docks, for example, it is vital to treat them before the taproot gets established.

Controlling these seedling docks within six months or so of reseeding greatly increases the chances of a good kill. Research by Teagasc has shown that a well-timed post-emergent spray can eliminate docks for up to five years.

Therefore, in recently sown new pastures an effective herbicide applied in early spring will get rid of weeds and allow the new grass to tiller out, ensuring that the sward can reach its full potential.

Choice of product is very important. A systemic herbicide gives effective control of a wide range of weeds in newly reseeded pastures, including docks, chickweed, thistles, buttercups, dandelions and plantains. It is also highly effective on the annual weeds redshank, fat hen, charlock, mayweed and fumitory.

Clover
Controlling weeds in a reseeded sward that contains clover is always a big dilemma as clover is susceptible to herbicides that kill broad-leaved weeds. However, where weeds are a problem and account for more than 20% of the field, the best decision economically is to kill the weeds and then add clover to a clean sward at a later stage.

A growing number of farmers are now excluding clover from the original mixture. They then apply a post-emergent herbicide and over-sow the clover into a clean sward. This technique was pioneered by Dr James Humphreys at the Teagasc dairy research farm at Solohead in Tipperary.

Over-sowing technique
The Humphreys technique of over-sowing clover with P and K fertiliser involves the following procedures:

- A high seed rate of 2kg/acre of white clover should be used. This is cheaper than using slug pellets.
- Use a PK fertiliser such as 0-7-30. The fertiliser should not contain nitrogen.
- Two kg of clover is mixed by hand in the fertiliser spreader with each bag of 0-7-30. Mixing is best done in the field to avoid the clover separating out.
- The fertiliser should be spread at one bag/acre in two runs at right angles to each other.
- After spreading, around 3,000 gallons/acre of fairly watery slurry should be applied - to wash in the seed and seal the ground in order to lower moisture loss.
- When using a herbicide, the over-sowing can be done 30 days after the herbicide is applied.

This technique of adding clover can also be effectively used on an established sward after a cut of silage. It can also be done on an established grazing pasture but the sward must be very tightly grazed.

Docks in silage swards
Where docks are a problem in silage swards, the most effective solution is to kill them before the silage is cut. A 10% infestation of docks, which is very common, can cut dry matter yields by 10%. I regularly see infestations of up to 50%, which can be devastating on yield and quality of pit and baled silage.

Docks produce millions of seeds. One mature dock plant can produce up to 60,000 viable seeds a year. Seeds can remain viable in soil for 50-70 years and germinate when conditions of light and soil temperature are suitable.

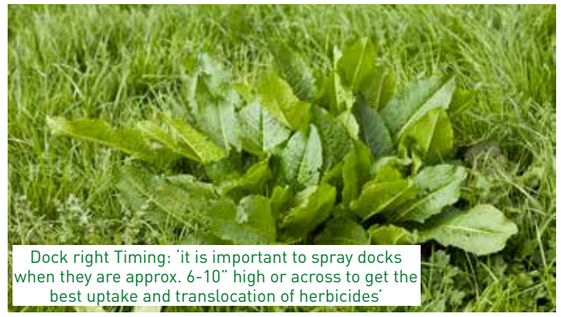
The dock tap root system can be up to a metre deep. This will only be killed by a systemic herbicide. The ideal time to spray docks in first-cut silage swards is two to three weeks after fertiliser is applied. Docks should then be actively growing and be 15-25cm high or across – the ideal stage for a good kill.

It is important not to cut the silage until at least three weeks after the herbicide is applied. This ensures that the chemical is translocated right down to the root system, which is essential for long term control.

Mouse-eared chickweed
I have got a number of queries from farmers in recent years about mouse-eared chickweed and how to control it. Mouse-eared chickweed is not usually a big problem in reseeds where common chickweed can be a predominant weed.

However, it can be a big problem in established grassland. It contains small hairs on the leaves which can make it difficult for the spray to get into the leaf cuticle. It is the only time that the use of an adjuvant wetter to a grassland herbicide can be beneficial.

For best control, weeds should be actively growing and be at the correct growth stage for an effective kill. Keep animals off the pasture for seven days after spraying.



Dock right Timing: 'it is important to spray docks when they are approx. 6-10" high or across to get the best uptake and translocation of herbicides'

Mouse eared chickweed. 'Mouse eared chickweed can be a problem in established grassland. Note the fine hairs on the leaf make it more difficult for the herbicides to penetrate into the leaf surface.'

Budgeting for Payroll Costs

Mary McDonagh
IFAC Accountants

Recent changes to the PAYE regime mean that payroll budgeting is now more important than ever, explains IFAC's Mary McDonagh.

Farmers often find that budgeting for payroll costs can be challenging however creating a budget is the most effective way to ensure your business and finances stay on track.

A good starting point is to use your payroll costs for the previous year as a basis from which to forecast costs for the current year. Remember to take into account any relevant changes such as movement in the national minimum wage rate, PRSI rates and pension contributions.

Where new employees are being taken on, it is very important to find out their PPS number as early as possible, preferably before the commencement of employment. This is because the impact on tax to be deducted where a PPS is not available can be substantial (Figure 1).

Figure 1: Importance of Obtaining Employee's PPS Number

MINIMUM WAGE

Wage increases attract Employer PRSI, adding further to the payroll costs. If you have employees on the national minimum wage, remember to take the recent increases into account when budgeting for your payroll costs.

Hourly Rates of Pay (National Minimum Wage Acts, 2000 & 2015)

Category of employee	Hourly Rate 01/01/2019	Category of Employee (from 4 March 2019)	Hourly Rate (Age-related from 4 March 2019)
Experienced Adult Worker	€9.80	Experienced Adult Worker	€9.80
Under 18 years	€6.86	Under 18	€6.86
In the first year after the date of first employment over 18 years	€7.84	Aged 18	€7.84
In the second year after the date of first employment over 18 years	€8.82	Aged 19	€8.82

Source: Welfare.ie

Employer PRSI contribution rates from 1 Jan 2019

Non-Cumulative Weekly Earnings Band	Employer %
€38.00 - €386.00	8.70
€386.01 and upwards	10.95

PAY AGREEMENTS

Farmers sometimes enter into net pay agreements. This is where you agree to pay an employee an amount 'into the hand'. If you currently have any net pay agreements with employees, these should be phased out as it is almost impossible to quantify the overall cost because of the complexities involved in grossing up pay to take account of income tax, PRSI, USC and local property tax. In effect, by agreeing a 'net' pay figure with an employee, you agree to pay the employee's PAYE/PRSI for them. This means if income tax rates rise or the employee's tax credits change, you will have to pay any additional tax arising. Pay agreements should always be based on gross pay.

PAYE MODERNISATION

Payroll budgeting will be particularly important in 2019 due to the sweeping changes introduced by PAYE modernisation which came into effect on 1 January 2019.

Traditionally, farmers settled their outstanding tax/PRSI/USC liabilities in February for the previous tax year. Under the new system, farmers must provide accurate information for each pay period as there is no longer an option to correct errors on the P35 at the end of the year.

Before making a payment to any employee, you must request a Revenue Payroll Notification. The RPN replaces the old P2C tax-free allowance certificate. It provides you with the necessary information to deduct the correct income tax, USC and local property tax from your employees. If you are unable to retrieve an RPN for an employee, you must operate emergency tax on that employee's pay.

Return and payment due dates

Remitter Type	Return Filing Frequency	Return Due Date	Payment Frequency	Payment Due Date
Monthly	Monthly	14 days after the end of the month	Monthly	14 days after the end of the month (23 days for ROS users who file and pay online, 3 days before the end of the Month for those on a VDD)
Quarterly	Monthly	14 days after the end of the month	Quarterly	14 days after the end of each quarter (23 days for ROS users who file and pay online)
Annual	Monthly	14 days after the end of the month	Annually	14 days after the end of the year (23 days for ROS users who pay and file online)

Table source: Revenue.ie

Variable Direct Debit Scheme

Revenue provides a variable direct debit (VDD) scheme for employers. If you sign up for this scheme, Revenue will debit your full monthly liability from your account. The VDD is collected on the third last working day of the month.

While the VDD scheme gives you peace of mind by reducing the risk of missing a payment, it is very important to ensure that you have sufficient funds in place each month to cover the payment as late payments may attract penalties.

Regardless of how many employees you have, you must provide details of each employee's pay and tax deductions to Revenue on or before every pay date so that Revenue can see details of each employee's pay and tax deductions in real-time. Benefits-in-kind, such as a company car, must be spread over the year and taxed in each pay period. This will affect how you collect and record each employee's mileage.

At the end of each month, Revenue will provide a statement summarising the information that you have provided. You will be able to view this statement on the Revenue Online Service (ROS) from the fifth day of the month and you will have until the fourteenth day of the month to check and correct your reports for the previous month.

Making payments to Revenue

There is no change to the way employers make payments to Revenue. So, if you paid on a monthly or quarterly basis under the old regime, this will continue under PAYE Modernisation. However, while the payment due date will remain the same, quarterly and annual remitters will now have a monthly statement issued by Revenue which will become their monthly return.

Quarterly or annual remitters who sign up for VDD will be converted to monthly remitters.

SEEK ADVICE

While budgeting for payroll costs may appear daunting, it is more important than ever to get to grips with this aspect of your farm business as you no longer have the luxury of correcting payroll errors at the end of the year and simple mistakes could lead to substantial penalties. If you need assistance, now is the time to seek advice. Your accountant will be able to help you avoid penalties and keep your payroll costs under control

Irish Grassland Association

DATES FOR YOUR DIARY

Sheep Conference and Farm Walk
Meath
23rd May 2019

MSD Animal Health
Mullinahone Co-op Est. 1893

Beef Conference and Farm Walk
Laois
20th June 2019

MSD Animal Health
Mullinahone Co-op Est. 1893

Dairy Summer Tour
Athlone
23rd July 2019

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Student Conference
October 2019

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