Irish Grassland Association

Members' Information Booklet

Issue No. 44 April 2020

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





CORPORATE MEMBERS 2020

Irish Grassland Association





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

CORPORATE MEMBERS 2020

IRISH GRASSLAND ASSOCIATION - MEMBERS' INFORMATION BOOKLET

Contents

Editorial	5
SECTION 1 - EVENT REVIEWS	
Pre-Dairy Conference event review	6
Dairy conference review	8
SECTION 2 - EVENT PREVIEWS	
Dairy Summer Tour Preview	11
Beef Event Preview	12
SECTION 3 - FARMER FOCUS	
A year in my Wellies - Peter Doyle	14
A year in my Wellies - Jason Melbourne	16
Contract Dairy Heifer Rearing	18
SECTION 4 - TECHNICAL FOCUS	
New grass variety list	21
Role of Clover in the sward	24
Use of protected urea	28
SECTION 5 - HEALTH AND SAFETY	
Coronavirus: Protect yourself, your family and your business	30
SECTION 6 - ARCHIVES	
IGA Past president Dr. Tom Walsh	32

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Matt O'Keeffe Editor

Welcome to the latest edition of our members information booklet. This Spring will be remembered for many reasons, none of them more alarming and threatening than the Covid-19 pandemic. The importance of agriculture and food production is once more being recognised as one of the few activities without which humanity cannot exist. Our Irish farming model is proving to be sustainable, even in the most challenging circumstances and is one of the few sectors of the economy that may come through this health crisis reasonably intact.

In this Newsletter we look back at our first activity of the year, the Annual IGA Dairy Conference, and look forward to our tentative calendar of events to be held over the Summer. The dates of these events will be subject to change and will depend on the timescale involved in eliminating the Corona Virus from the island of Ireland.

This Newsletter also goes back to basics, providing a step-by-step guide to grass measurement and management. We cannot overstate the importance of spreading the message that grass is and will continue to be our most important competitive advantage in livestock production. Whether it is milk, beef or lamb production, we can never compete on scale. Grass production and utilisation still has huge potential to improve profitability on Irish farms. While some of our farmers are at high levels of grass productivity, many others have significant potential to improve their production, management and use of grass. Our article featuring the latest list of recommended grass varieties provides direction for farmers who are considering replacing existing grass swards. The role of clover in swards is also examined.

Our continuing series of A Year in My Wellies featuring young people engaged in dairy and cattle production, provides examples of how youth, enthusiasm and skills can bring very positive perspectives to grassland farming. Dairy Heifer Contract Rearing offers opportunities to farmers with high levels of grass and livestock management skills. We provide an example of Contract Rearing in these pages.

Ultimately, our health is of the utmost importance. There are clear guidelines from both the HSE and the Department of Agriculture on how to safeguard ourselves, our families and those we interact with as farmers. It is essential that we continue to follow those guidelines stringently so that our health as well as our businesses are protected. Dr. Paddy Wall has contributed an article to the IGA Spring Newsletter outlining the impact of the virus and what we can do to contain it. He provides a novel perspective on the value of social isolation at this time. Dr. Wall highlights the importance of agriculture with his comment that 'farmers have to stay healthy to feed the nation'.

The President and Council of the Irish Grassland Association wish you all well at this critical time.

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!



Irish Grassland Association Members Networking Evening

George Ramsbottom, IGA Council member and Teagasc Niall Claffey

The Irish Grassland Association (IGA) held its annual Dairy Conference in the Charleville Hotel, Co. Cork, on Wednesday, January 8th. The pre-conference networking evening sponsored by Yara has become a regular feature of the event so this year's preconference evening took place at the venue on Tuesday, January 7th, at 8.00pm. Facilitated by lifetime member award winner Matt Dempsey, a panel of three unique, but very successful farmers took to the stage to explain their individual pathways and recipes for success. They also reflected on their farming journeys, while shining some light on the direction that they foresee agriculture will take over the next decade.

"We're not even having the same conversation as environmental people" – John Kelly



The past decade has provided many opportunities and challenges for Irish farmers – particularly those involved in or with a grá for dairying. The unshackling of milk quotas in 2015 provided an obvious opportunity for existing dairy farmers to increase cow numbers, whilst also paving the way for new entrants into milk production. Co. Wicklow-based farmer John Kelly was a new entrant to dairying in 2013. John was formerly a sheep farmer and hosted the IGA's sheep summer tour in 2010. In the years that followed, he became a sheep monitor farmer, growing the size of his ewe flock to a peak of 700 ewes. However, it was at a dairy discussion group meeting where John was first exposed to the potential margins associated with dairy farming. "I saw the difference in margins from a dairy farmer and what I was making". Prompted to convert to dairying, John converted and initially milked 50 cows. He currently milks 250 cows in a spring-calving system. In 2019, the herd averaged 480kg of milk solids feeding 700kg of concentrate. "We are conscious of what drives profit and we are always trying to drill down into that all the time", he added.

New challenges have emerged on the horizon, particularly in relation to the environment, which John will have to address in the years ahead.

"We're not even having the same conversation as not exposed. The day we slip our standards, we are definitely in trouble and we could have 10 different environmental people; we are only talking about economic efficiencies; that does worry me. There customers and it's still the same thing. So, every day is a lot coming at us guite fast, but as an industry, of the week we have to make a margin for ourselves, we don't ask ourselves enough hard questions about but also keep produce competitive on the shelves 'are our cows producing too many emissions? And, and do the job with them as partners - that makes another thing, we need to convince the European us important to them," he explained. consumer and - to me - we're not doing that. We don't sell the positives enough. As farmers, we Commenting on the changes over the years, the Cork should take more control and sell ourselves better, native explained: "One of the big changes we noticed while facing up to the challenges," John concluded. when you are expanding from a small potato farmer

"It's not me; it's the whole team. Without them, I couldn't do anything" – Ned English



The second panelist at the event was the very successful vegetable grower and tillage farmer Ned English who has become one of the leading suppliers of potatoes to the supermarket giant, Lidl. Ned, alongside his son Edward and daughter Niamh, run

Castlecor Potatoes just outside Mallow, in Co. Cork, growing some 450ac of potatoes, 150ac of onions and approximately 1,300ac of tillage – of which 280ac is owned. However, this did not just happen overnight.

According to Ned, "Our product consistently made the grade, so we could produce what the supermarkets wanted consistently, but we were only getting a fraction of the price because we were going through a merchant who was packing it and then supplying it on. So, we started knocking on the door of supermarkets and one of those doors was Lidl. Nothing happened and twelve months later we knocked on the door again. After a period of time, a buyer arrived on the farm with a message: 'When can you start?' That was 14 or 15 years ago." Currently, Ned employs 43 people in the pack house and another 15-16 people indirectly in the rest of the business. And while potatoes were the first product sold directly to Lidl, another soon followed. "We have also gone into onions. Lidl wanted onions because they wanted to promote as much Irish in their stores as possible; this is one of the things they wanted. We had to facilitate this particular request because we are in the business of servicing our customers; however, it did provide challenges, but we had to overcome them," he said.

When asked what sets the business apart from other competitors, he added: "I think being customer oriented and realizing that I need a bob out of this and that they have to sell our product; the day we come irrelevant to them, we're not in business anymore. I genuinely believe if we can do the job for them we are Commenting on the changes over the years, the Cork native explained: "One of the big changes we noticed when you are expanding from a small potato farmer to a larger-scale operation is that you start to get involved in managing people. I think when you regard the people you work with as your partners and human beings – and that you're no better than them – and you motivate them and look after them, you create an environment in which they take responsibility for the various tasks. And, in fairness it's not me; it's the whole team. Without them, I couldn't do anything. We have over 40 people employed on our farm and that is what we are most proud of today," he concluded.

'I can only see 10,000 dairy farmers in Ireland in the future' – Pat O'Keeffe



The third panelist at the preconference event was Co. Cork pig farmer Pat O'Keeffe. Farming in Mitchelstown, Co. Cork, Pat O'Keeffe has grown his pig enterprise into a large-scale operation over the past 30 years. In 1989, there were 450 sows; this

had increased to 1,600 head by 1996 and to 2,000plus sows today. Such scale places Pat among the largest ten pig farmers in the country. Pat noted that pigmeat prices are "pretty good" at the moment, making reference to the demand arising from the outbreak of African Swine Fever (ASF) in China.

Pat forecasted that dairy farming in Ireland will become more consolidated in the years ahead. "In 10 or 15 years' time, you will see less milk suppliers. There are some 18,000 suppliers today; I only see 10,000 farmers in the future. There will be bigger operators and they will become more efficient as time moves on," the Cork man explained. Pat also expressed concerns with the direction the dairy industry in Ireland is going. "We're not going up the value chain. We are producing 20% milk with some value, while the remaining 80% is commodity based. We need a few ruthless fellas to make more decisions. We are living in the past; the world has moved on. Our competitors are very good and we have to come up to them and be more creative in our thinking. It's not happening enough," the pig farmer said.



IGA Dairy Conference 2020 Review

Stan Lalor Irish Grassland Association and Grassland AGRO

The Irish Grassland Association Annual Dairy Conference, sponsored by Yara, took place in Cork at the Charleville Park Hotel. The conference well attended once again with over 600 delegates present on the day to hear the papers and the accompanying questions and discussions. Of particular note at this year's conference was the high proportion of youth in the audience, which bodes well for the future of the sector.

The content of the day also had a significant impact on social media as #IGADAIRY reached Position 2 in Ireland as a trending topic on Twitter during the day! This was a great signal of the interest of those present in the content of each of the papers presented, and also the reach of the Irish Grassland Association and the Dairy Conference to a wider audience on social media around the event.

The conference content was divided into 3 sessions.

DEVELOPING YOUR DAIRY BUSINESS

The opening session, chaired by Tadhg Buckley, AIB, was based around the topic of decision making within the farm business when expansion opportunities present themselves. Barry Murphy of FDC Group spoke about the importance of focussing within the farm-gate on efficiency and the bottom line being generated on the existing enterprise. Setting targets for the farm and business in line with current and future lifestyle and family needs and goals are also important when making budget and investment decisions.

Complementing this paper was Patrick Gowing from Teagasc who spoke about how to consider the feasibility of expansion opportunities. Similar to Barry Murphy's message, Patrick urged the mantra of "...looking inside the hedge before you look over it..." as a warning of the lure of expanding the herd or scaling-up to second units to generate extra revenue before maximising the profitability within what is already in place. He also provided some useful reminders of the timescale and potential pitfalls of expansion projects, including the time often required for new units to achieve full output - a point which can be overlooked when working out revenue and cost budgets for expansion projects.



Jensma Yara and IGA President Paul Hyland with the Speakers and Chairperson from Session 1

EFFICIENCY OPPORTUNITIES WITH MULTIPLE BENEFITS

Introducing the second session, Chairman Brendan Horan of Teagasc highlighted the increasing challenges for the sector around sustainability, and the 7 Steps to Improving Farm Sustainability that have been developed by Teagasc. Two of these steps: clover and herd EBI, both represent significant opportunities for both improving farm environmental sustainability as well as having profitability benefits. Fergal Coughlan, Dairy Herd Manager in Teagasc Clonakilty gave a very detailed account of the work to date both in research and on-farm studies around clover and its potential to impact on Nitrogen inputs, and as well positive animal performance, particularly in terms of milk solids.

Donagh Berry of Teagasc Moorepark highlighted the benefits that the ongoing improvement of the EBI of the Dairy Herd can have on the carbon efficiency of the herd in conjunction with the productivity and profitability benefits more normally associated with the Index. The selection of genetically superior animals for profit also means a more carbon efficient cow due to, for example, improved feed efficiency to milk and better survivability and reduced replacement rates. This is evidenced by the strong correlation that exists between the EBI and the carbon emitted per cow per lactation. This link highlighted the potential future role in the EBI for a Carbon Sub-Index. However, Donagh highlighted the importance of having accurate and sufficient animal data available in order to maximise the reliability of the sub-Index calculations. Work is ongoing on this particularly regarding methane measurements from cows while grazing and the development of indicators of methane emissions from milk samples.



Eva Ross Yara and IGA President Paul Hyland with the Speakers and Chairperson from Session 2

8

IRISH GRASSLAND ASSOCIATION - MEMBERS' INFORMATION BOOKLET

PRIORITIES FOR 2020

The afternoon session of the conference, chaired by George Ramsbottom, (Irish Grassland Association Council Member and Teagasc) looked at three important areas to consider for the spring and the year ahead.

Doreen Corridan from Munster Bovine spoke to the question of 'should you milk every cow?'. The discussion revolved around the range of performance that exists within most if not all herds between the best and the worst cows, and the true marginal profitability of the weaker performers in the herd. Demonstrating the point, figures showing profitability from the top 10% of cows that were double that of the lowest 10% of cows were shown to highlight the gap that can exist within herds. The difference between herds was also highlighted to show that the worst cows in one herd could be amongst the best in another herd. This is important when considering options for a herd improvement strategy involving breeding from within the herd as opposed to sourcing high EBI replacements from other herds.

Donal O'Reilly, farming in Watergrasshill in Co. Cork presented an overview of his farming system. Critical to his success is his planning and organisation in advance of the busy spring period including very simple and clear targets being in place for grassland management (opening cover targets and grazing plan), feed budgets (calving plan converted to a feed demand budget, including grass and silage requirements), farm infrastructure (road infrastructure in place and being well prepared with fence handles, pigtails and reels all ready to go) and having labour in place (being well rested and having extra labour planned to be able to maintain focus on the key management tasks). The emphasis of the use of slurry within the spring nitrogen budget is also part of the plan for 2020 to reduce costs and maximise Nitrogen efficiency.

The final paper was presented by Eamonn Duggan, who farms close to Durrow in Co. Laois. Rearing replacement heifers for both his own replacements and also for sale as in-calf heifers is an important enterprise within the farm, especially for utilising the out-farms, which amount to almost half the total area. Eamonn focusses on simplicity when it comes to calf rearing, particularly when it comes housing, as he utilises a number of older farm buildings that have been adapted for calves. Starting in small groups, calves are grouped into a big group as the numbers increase and are fed on an out-farm with a 50-teat trailed feeder. Feeding once-a-day allows better spread of work across the day. The sheds are set-up to allow the calves access to a field as well being able to return to the shed for shelter.

Papers and presentations

All the papers from the conference are available on the website: www.irishgrassland.ie. Thanks to all our speakers and session chairs for their time in preparing their papers and talks and for such high quality presentations on the day.



Eva Ross Yara and IGA President Paul Hyland with the Speakers and Chairperson from Session 3

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



Irish Grassland Association Dairy Summer Tour Preview

Hurling rivals Kilkenny and Tipperary were coming km from home to start a second unit. Starting with together to play host to the 2020 Irish Grassland 40 cows, two additional parcels of land have been Association Dairy Summer Tour sponsored by AIB. leased adjoining it to create a 46 hectare second Originally scheduled to take place in July, the date dairy farm. Each platform now milks just over 150 for this event has now been put on hold because of cows. An additional 75 hectares of land is farmed the Covid-19 crisis. With the theme of optimising in three separate sections to supply winter forage output on the milking platform, our hosts were and rear the 100 replacement heifers reared dairy farmers Tom Walsh from Johnstown, Co. annually. Kilkenny and Denis Cody from Templemore, Co. Tipperary. When restrictions are lifted, a new date In 2019 an average of 500 kg milk solids was sold will be confirmed to IGA members. per cow (4.62% fat and 3.77% protein) to Centenary

Commenting at the launch of this year's Summer Tour, Tadhg Buckley Head of Agriculture, AIB, said, 'We are delighted to continue our support of the Irish Grassland Association Dairy Summer Tour. This year's event will be a further opportunity for farmers to learn first-hand from two progressive financially driven dairy farmers. The fundamentals of grass utilisation and maintaining efficiencies are key for all farmers, particularly in a period of volatile milk prices. Learning how both farmers managed to successfully optimise output without compromising profit will be an important lesson from the day's event".

Denis Cody

Denis farms near Clonmore, Templemore, Co. Programme. Tipperary on two almost equally sized milking platforms, one owned and the second leased In 2019, the average milk solids sold was 611 kg per cow (4.44% fat and 3.72% protein). This was totalling 94 hectares. Returning home from Kildalton College in 2010 with a level 6 diploma in produced from 1.4t of concentrate per cow. In dairying to farm with his parents, he reseeded the 2019, Tom calved 93% of the herd in 6 weeks. The 48 hectare home farm over the next three years. herd has an EBI of €156 putting it in the top 10% of In 2013 he leased a 21 hectare former dairy unit herds in the country. with a disused milking parlour approximately 7

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George Ramsbottom, <u>GA Council membe</u> and Teagas



Coop. Approximately 700 kg meal per head was fed per cow that year. With an overall stocking rate of 2.5 livestock units per hectare farmed, the milking platforms are stocked at 3.2 cows/ha. Last year the farm grew approximately 15 tonnes of grass dry matter per hectare.

Tom Walsh

Tom farms 64 hectares near Johnstown, Co. Kilkenny. He came back to farm fulltime in 2003. The milking platform is 52 hectares and last year carried 126 cows at a stocking rate of 2.63 cows/ hectare. The remaining 12 hectares is used for rearing of replacements and provision of winter feed. Tom is a Glanbia supplier and a monitor farmer in the 2004-2008 Teagasc Glanbia Joint





cil member and

The 2020 Irish Grassland Association Beef Event, sponsored by Mullinahone Co-op, was originally scheduled to take place in late June at Country Crest's beef unit in north Co. Dublin. This year, the format was set to differ somewhat, with the entire event taking place on-farm. The Beef Event has now been put on hold because of the Covid-19 crisis. A new date will be confirmed to IGA members when available.

Country Crest

Country Crest was originally established by Hoey brothers - Michael and Gabriel - to grow and prepack potatoes for the retail sector back in 1993. Since then, the company has gone from strength to strength and, in 2008, Ballymaguire Foods was born - a prepared foods division of the wider enterprise. Building on this success, in 2014, Country Crest invested in its own on-site beef unit. The following year, the company evolved yet again - with the opening of a farm shop.

The beef holding spans approximately 300ac of

grassland, with 1,000-1,200 animals passing through the system annually. The farm is managed by Leitrim native, Niall Maguire - who took the reins in December 2019.

The unit consists of U and R-grading continental heifers (60%) and Aberdeen Angus-cross steers and heifers (40%). Specific cuts are used in the prepared food division, while beef is also supplied to the craft butcher market and well-known chef Nevin Maguire.

Steers and heifers are purchased all-year-round and arrive on-farm in batches of 20-30 every seven-to-10 days - to offset the 20-30 cattle that are processed every two weeks. As animals arrive on-farm from numerous different sources, a strict animal health plan is activated - all stock are guarantined on arrival in an isolation unit.

Every animal is vaccinated after 48 hours of arrival, as well as being weighed, dosed, clipped and treated for lice. The continental heifers are



bought in weighing 460-590kg; heavier heifers of 'strong' paddocks for silage. Through grass move into the finishing unit, before being built-up measuring - coupled with soil sampling - Niall can slowly - over a two-week period - onto a fattening identify poorer-performing paddocks, which are diet. Regular weighing is an intrinsic part of the earmarked for reseeding each year. Approximately 200ac of pit silage is harvested in two 100ac cuts, system. with the first cut aimed to be ensiled mid-May (weather depending). All silage cutting, as well as Depending on the time of year, lighter continental slurry and fertiliser spreading, is carried out by the on-farm team.

heifers (less than 500kg) are either fed a store diet or batched according to weight and turned out to pasture. The land can be described as heavy, with typical turnout achieved by early March every year (weather depending).

Aberdeen Angus steers and heifers are purchased weighing 380-420kg and brought to finish aiming for a 300kg carcass, with all cattle slaughtered under 30 months-of-age.

Niall plans to achieve as much liveweight as The Irish Grassland Association is immensely possible from the cheapest resource at his disposal grateful to Mullinahone Co-op for its support - namely grass. While some larger paddocks of our 2020 Beef Event. This event is not to be are present on the farm, more paddocks will be missed. This is a farm that demonstrates: a installed with temporary wires allowing cattle to combination of good grassland management graze following the 'grow in three weeks; graze in practices; exemplary animal health protocols and three days' mantra. biosecurity; excellent facilities; and solid technical performance. Discussions around environmental Grass measurement and management best practice and sustainability will also feature Grass is measured using a Grasshopper with on the day.

measurements recorded on PastureBase Ireland, which allows precise management decisions to be made accordingly, including the cutting

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



Additionally, a small pedigree herd of Aberdeen Angus and Hereford animals also resides on the holding, consisting of 15 cows of each breed and their followers (yearlings and calves) and two stock bulls. Going forward, Niall also plans to graze 400-500 sheep over the winter months on the 300ac of available grassland.

The event is free to all IGA members. Members are also welcome to bring a guest or friend.





A Year in my Wellies

Peter Doyle Teagasc Grange and University College Dublin

Grassland management on the home farm

Weather conditions in January and February were poor, inevitably delaying turnout to grass. Slurry was applied via dribble bar in late January when conditions were dry and soil temperatures were 6DC. We will apply 40 units (49 kg N/ha) of 27-2.5-5 when weather conditions settle and soil temperatures are \rightarrow 5°C. We used to regularly apply fertiliser in February; however, we were struggling to identify a sufficient grass response to the incurred cost. For this reason, we only focus on applying slurry in early spring and fertiliser in March. Farmyard manure (FYM) is removed from the sheds mid-January. However, FYM is prioritised to our tillage ground to improve soil organic matter. Silage fields will be grazed first in spring, with an aim to have all the silage fields grazed by 10th April, to prevent a severe silage yield reduction. These fields will be grazed tight to ensure that all dead material is removed and fresh leaf growth and tillering is encouraged. Two separate 1st cut silage dates are planned; to produce good quality silage (75 % DMD) (cut mid-May) for the finishing stock and cows postcalving, and to produce average quality (68 % DMD), but high yielding silage (cut early June) for the suckler cows pre-calving.

Finishing diets on the home farm

Currently 23 - 24 month-old heifers are being drafted for slaughter with a target carcass weight of 360 kg carcass (pictured). They are currently consuming 3.4 kg DM barley-based ration + 2.8 kg DM fodder beet + silage ad-libitum. The spring born bulls are currently one year of age and we aim to have them 'finished' at 16 months of age. They are currently consuming 2.8 kg DM fodder beet + 2.6 kg DM barley-based ration + silage ad-libitum. They will be slowly transitioned off a fodder beet-based diet to an ad-libitum barleybased concentrate ration at the end of April and will remain on this until slaughter. All our fodder beet and barley inputs are home grown, to reduce costs. Our barley is mixed with a purchased 30 % crude protein soya-based balancer, to counteract the high inclusion of fodder beet in the diet, which is low in crude protein. The yearling spring born heifers are currently on silage ad-libitum + 1.7

kg DM barley. They will be turned out to grass as soon as possible and this year we will only graze them to a 6-cm post-grazing sward height, in order to maximise individual live-weight gain at grass. Heifers were grazing to 4 cm last year but individual live-weight gain was compromised as a result.

Calving season

The calving season went well. Our main priority over the calving season is to maintain good calf health and the necessary steps to keep ourselves close to breeding season can temporarily affect safe during this dangerous time of the year. Calves their fertility. For this reason, every stock bull is receive 2.5 to 3 litres of colostrum within the first hoof-pared in February. Further stock bulls are 3 hours of life, with a second feed approx. 8 hours put on a good plane of nutrition now as sperm can later if the calf is not actively suckling the cow. The be produced 10 weeks prior to breeding season. earlier the calf suckles, the greater the level of The stock bull with the lowest calving difficulty immunoglobulin absorption. To prevent the buildfigure (\leftarrow 3 %) is used on the heifers. This year up of scour in the shed, we aim to turn-out cows half of our replacement heifers are bred from our and calves as soon as possible. However, poor own herd and half will be purchased as Limousin weather conditions did not allowed this. For this × Friesian heifers. These heifers will be purchased reason, we keep all the sheds regularly bedded to re-introduce higher milk yielding replacements with straw and they are regularly cleaned out and back into the herd, as milk yield was becoming an limed. Further, preventing a high stocking density issue in home-bred heifers. We aim to calve down in the calf sheds is essential, so maximising shed heifers at 24 months of age or sometimes at 29 space is critical. On our farm we aim to have all months of age if the replacements are introduced the 'autumn-born' bulls finished at 16 months of from our autumn calving herd. As we find that age by mid-February so that their shed space can calving down at 24 months of age can increase calving difficulty. Currently, 80 % of the heifers are become available to cows and calves. Keeping a lowly stocked and clean bedded area also helps to calved between 22 - 26 months of age. prevent swollen navels which can be a problem on suckler farms. At de-horning, calves are treated PhD: Grass-fed beef production for Coccidiosis, as this was a major issue on our As stated in my previous article, I am now in the 3rd year of my Ph.D. "Grass-Fed Beef Production" farm previously. Lastly but importantly we aim to maintain cow health; a pre-calver mineral is in Teagasc, Grange. My plan for this coming spring introduced 6 weeks pre-calving to reduce placenta is to analyse meat samples from my previous trial retention and to promote healthy born calves. work which compares 100 % grass-fed beef vs. Further straw is introduced to the cow's silageconcentrate fed beef. Along with my supervisors, based diet 4 weeks pre-calving to reduce calving Dr. Edward O'Riordan, Dr. Mark McGee, Prof. Aidan difficulty. Moloney and Dr. Alan Kelly, we are also planning

trial work to determine the effect of pre-grazing Preparation for breeding season herbage mass and post-grazing sward height on The preparation for breeding season began at nitrogen use efficiency, in-vivo digestibility and housing last October, where cows were grouped rumen function in beef steers. Nitrogen balance is in the shed based on body condition score (BCS) becoming a key issue for the future of beef systems and were fed appropriately to ensure that all cows and a grazing system needs to be explored that were calving down with a BCS of 3.0. Cows are maximises animal performance and growth but in good condition this year and were turned out minimises nitrogen excretion to the environment. to grass as early as possible to avail of a more I had planned to travel to Helsinki in June to the cheaper and higher energy diet and therefore European Grassland Federation conference to preventing excessive body condition loss postpresent two papers on the "effect of pre-grazing calving. Four Limousin stock bulls are used on our herbage mass on grass growth and guality" and farm with an average terminal index of \in 152. We the "effect of post-grazing sward height, breed find that the stock bulls work well for us, though maturity and finishing diet on suckler steer lameness can be an issue with them, and needs performance". That may be deferred by travel to be resolved early as we find that injecting bulls restrictions.





A Year in my Wellies

Jason Melbourne, Dairy Farmer, Co. Waterford

With the new season well and truly underway, life on Ballymacmoy farm is as full of excitement as ever.

With the new year came some changes around the farm. Unlike in previous years where all our heifers were contract reared, this year we decided to take on a new approach. The opportunity to lease a farm just outside Cork city arose and we decided that it was the ideal opportunity to start rearing our heifers ourselves on this farm. This farm is perfect for us as it is located centrally between all the farms in the Green Solids Farms and the in-calf heifers return back to the farms in January instead of October which has huge benefits for the dairy farms as less silage needs to be made on these blocks and all the milking cows can be milked right through to dry off and the farm has all the facilities we needed in order to start looking after our own heifers. On this farm we plan to rear one hundred and fifty heifer calves and one hundred and fifty in-calf heifers each year from all the farms in the group. In terms of

improvements around the farm the only additions we made were slight adjustments to the sheds for rearing calves, teat feeders and a mobile tank for mixing milk replacer in order to make the process as efficient as possible.

Another new and exciting change that has occurred this year was the arrival of a new team member on the Ballymacmoy farm. Daire Cregg from Roscommon decided to join us for the springtime to help out and learn about the busy life on the farm this time of year.

Grass situation

Moving on, I want to discuss the grass situation on the farm at the minute. We had great growth rates during the Winter. We closed with an average farm cover of 830kg/DM/ha on the first of December 2019 and opened with an average farm cover of 1,206kg/DM/ha at the start of February 2020. This was a growth rate of over 6kg per day throughout the Winter which we are more than pleased with. Currently, we are heading towards the end of

Irish Grassland Association

Step by Step Guide to Grass Measuring

For many IGA members, the principles underpinning grass measurement are 'old hat'. However, if you're not completely up to date or you wish to train up some of your new staff, there are more opportunities to get in on the system now than ever before. The start of the grazing season is a great time to begin measuring. We've outlined the basic steps in this pull-out document to keep you and your farm team informed.

PULL-OUT SUPPLEMENT

Cut and weigh method - what do I need?

- A guadrat;
- Clippers;
- Plastic bag;
- Portable scales; •
- Note pad and pen (ideally a list with all the paddock numbers on a page so grass cover can be entered next to it);
- Size of paddock;
- Calculator; ٠
- Grass budgeting programme such as PastureBase Ireland or your own simple excel sheet.

What should my plan be?

- Assign a weekly time to walk farm;
- Allow for time afterwards to upload data;
- Make calculated decisions.

There is no point collecting data if you don't use it to make informed on-farm decisions.

What are the steps?

Step 1

Walk the farm and start by measuring the first paddock with your equipment. This will help to train your eye in. Pick a patch that you feel represents what grass is in the paddock.

Step 2

Knock any water off the grass inside the quadrat. Then, cut the grass with your clippers to a residual of 4cm.



Step 3

DM %

For example:

17.5% or 20%

For example:

Description Grass

Prior to placing the grass in the bag, the empty bag should be weighed. Then, place the cut grass in the plastic bag and weigh. It is important to subtract the weight of the empty bag from this figure. To calculate how much dry matter (DM) is present, we need to estimate the DM of the grass you have in the bag.

14%

Grass

after

At this stage you should have the weight of grass in the

bag and an estimate of DM. We now need to use these

measurements to estimate how much grass is in each

hectare. There are 40,000 guadrats in one hectare. To

calculate the **grass cover per ha** follow this formula:

Grass weight (kg) *40,000*grass DM% divided by 100

0.2 kg * 40,000 * 18 divided by 100 = 1,440kg DM/ha

200g * 6 means that the grass cover is 1,200kg DM/ha

To get a rough estimate multiply the weight of grass in the bag

by 5,6,7 or 8 if the grass has a dry matter value of 12.5%, 15%,

Remember multiplying the calculated cover by the number of

hectares in the paddock will calculate total paddock yield

Note the paddock number and cover before moving to the

- make a decision and move on. After a while it won't be

your eye trained you should do so.

next paddock. Don't waste time debating the cover too much

necessary to cut and sample each paddock, but until you get

16% 18%

to the touch

is wet is dry dry to

recent touch -main

Grass Grass is Grass

season

This table can act as a guide:

12%

is very

raining rain

wet/

it's



Step 4

At the end of the walk, enter the figures into your computer programme or even a simple excel sheet that you have prepared. It's important to use the information that you have collected to make informed decisions. You need to work out a few simple things - this will happen automatically on tools such as PastureBase Ireland.

Look for the following information:

- Growth Rate; •

- The grass wedge.

The Grass Wedge

If you are using a computer programme, it will automatically come up with your wedge. This is a very important tool and lets you visualize what is happening on the farm. It is like a stock take of feed on the farm. It will show clearly your average cover and what paddocks have the most or least amount of grass.

Acting on what your grass wedge is indicating means that you will have the potential to add value by reducing the stress associated with allocating feed on a daily/weekly basis. This can protect your farm's bottom line through increasing forage utilization on farm.

Other tips for grass measuring

- spring feeding;
- when necessary.

20%

is very

dry - dry

weather

 Average Farm Cover; Grass Cover per livestock unit; Target pre-grazing cover;

The wedge will allow you to spot surpluses or deficits: • So that you can make timely decisions on area(s) for silage and reduce nitrogen (N) if necessary; • It will identify deficits giving you an option to step in and

fill the gap before it ends up costing you too much.

 Keep a grazing diary of paddocks. This can help you identify poorer-performing paddocks that you might want to add to your reseeding list;

• Do a feed budget every year and revise when necessary;

Use tools like the spring rotation planner for planning your

Keep measuring so you can make timely, effective decisions and ask your local adviser for targets and help

"Happy Measuring"

	Irish Grassland Association Quick Guide to Paddock Cover									
Grass weight (g)	DM %	Yield (kg DM/ha)	DM %	Yield (kg DM/ha)	DM %	Yield (kg DM/ha)	DM %	Yield (kg DM/ha)	DM %	Yield (kg DM/ha)
25	11	110	12	120	13	130	14	140	15	150
50	11	220	12	240	13	260	14	280	15	300
75	11	330	12	360	13	390	14	420	15	450
100	11	440	12	480	13	520	14	560	15	600
125	11	550	12	600	13	650	14	700	15	750
150	11	660	12	720	13	780	14	840	15	900
175	11	770	12	840	13	910	14	980	15	1050
200	11	880	12	960	13	1040	14	1120	15	1200
225	11	990	12	1080	13	1170	14	1260	15	1350
250	11	1100	12	1200	13	1300	14	1400	15	1500
275	11	1210	12	1320	13	1430	14	1540	15	1650
300	11	1320	12	1440	13	1560	14	1680	15	1800
325	11	1430	12	1560	13	1690	14	1820	15	1950
350	11	1540	12	1680	13	1820	14	1960	15	2100
375	11	1650	12	1800	13	1950	14	2100	15	2250
400	11	1760	12	1920	13	2080	14	2240	15	2400
425	11	1870	12	2040	13	2210	14	2380	15	2550
450	11	1980	12	2160	13	2340	14	2520	15	2700
475	11	2090	12	2280	13	2470	14	2660	15	2850
500	11	2200	12	2400	13	2600	14	2800	15	3000

Irish Grassland Association Ouick Guide to Paddock Cover

Grass										
weight	DM	Yield (kg								
(g)	%	DM/ha)								
25	16	160	17	170	18	180	19	190	20	200
50	16	320	17	340	18	360	19	380	20	400
75	16	480	17	510	18	540	19	570	20	600
100	16	640	17	680	18	720	19	760	20	800
125	16	800	17	850	18	900	19	950	20	1000
150	16	960	17	1020	18	1080	19	1140	20	1200
175	16	1120	17	1190	18	1260	19	1330	20	1400
200	16	1280	17	1360	18	1440	19	1520	20	1600
225	16	1440	17	1530	18	1620	19	1710	20	1800
250	16	1600	17	1700	18	1800	19	1900	20	2000
275	16	1760	17	1870	18	1980	19	2090	20	2200
300	16	1920	17	2040	18	2160	19	2280	20	2400
325	16	2080	17	2210	18	2340	19	2470	20	2600
350	16	2240	17	2380	18	2520	19	2660	20	2800
375	16	2400	17	2550	18	2700	19	2850	20	3000
400	16	2560	17	2720	18	2880	19	3040	20	3200
425	16	2720	17	2890	18	3060	19	3230	20	3400
450	16	2880	17	3060	18	3240	19	3420	20	3600
475	16	3040	17	3230	18	3420	19	3610	20	3800
500	16	3200	17	3400	18	3600	19	3800	20	4000

February and grazing has proven slightly difficult with the wet and wild weather we have been having recently with Storm Ciara and Dennis but we have been grazing day and night since the 31st of January 2020 and no silage has been fed to any milking cow. We have been able to do this by on/off grazing in the bad weather and threehour allocations twice daily of grazing for the cows using spur roadways and back fencing.

Each year we soil sample the farm to assess which paddocks need attention and paddocks that need to be targeted with extra nutrients, such as better use of our slurry on these low index soils.

Calving pattern

We are very happy to say that calving has gone very well. We had 50% of the cows calve within 17 days after the planned calving start date. We used all Jersey and cross bred bulls for breeding last year and this has made our life a lot easier this Spring as we have not had to use the calving jack at all to aid in any births. We have had very few losses or sickness to date which has helped with reducing the workload in the long term by having good calving protocols, for example good colostrum management and good dry cow management also. We usually use a general pre-calving mineral for the cows. However this year we tested our pit silage and the results came back with very high readings of potassium (K). Therefore to solve this issue we have been feeding the cows Cal Mag



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along with our pre-calving mineral so we don't have high incidence of milk fever..

Planning ahead

With the start of a new season the team from all the farms in the group had a meeting to discuss both the year ahead and the previous year. In general, we were very pleased with the year gone and made a plan for the year ahead using the prior year as a base and adjusting it for anything new we want to achieve in 2020. This meeting was a huge a success. We looked back at last year's financials and noted where we can make improvements and set up a cash budget for 2020 so we have a clear focus on our costs for the year. We were very lucky to have John Maher from Teagasc to talk with us and to provide us with advice on grass management for the year ahead. This was very valuable and we took onboard his advice for the year ahead. We were also very lucky to have Mike Murphy present to pass on some of his vast knowledge and experience. Along with this we had our local vet James Dunne present to guide us to best practices to ensure both cow and calf health in the Spring.

In all, we are very pleased with the results of the prior year and we have seen these results extend into the current year making for more efficiencies and better use of time around the farm. We are very excited about the year to come.





Niall Claffey rish Grassland Associatior Council member and AgriLand beef specialist

Farming in the parish of Culfadda, in south-east Sligo, Kieran Kielty - alongside his wife Sandy and two young children Samuel (9) and Arwen (7) – runs a contact heifer rearing enterprise across 73ac of mixed-quality ground. This ground consists of peaty, heavy and some uphill land.

The farm - located nine miles from the Roscommon border - is situated in a high-rainfall area.

Some 66 heifers are reared each year on the holding and Kieran has built up a strong relationship with dairy farmer and heifer owner, Seán O'Donnell - a Nuffield scholar and 2014 FBD Young Farmer of Year.

The heifer rearing business was not always the predominate enterprise on this scenic holding. Upon graduating with a degree in agri-business in 2002, Kieran - who also works off-farm - and his mother (Peggy) and father (PJ), then milked 15 Jersey-cross cows on 32ac of land.

However, after getting married and building a

house, the future of the farm was at a crossroads. Other less-laborious enterprises were considered, including suckler farming. But, in 2012, after a conversation with Seán - a college friend - 24 heifer weanlings arrived on the Kieltys' farm; the rest, as they say, is history.

"It was all new; we were used to putting cows in calf, but we never had dealt with synchronisation, scratch cards or even bulls.

"You'd initially think 'they are not my animals' ... and I might have called the vet a bit sooner at the start, but that was all part it," he explained.

At that time, an additional 30ac were purchased which bolted onto the farm; another 10ac block was bought in 2019.

Keeping the system simple

Since then, the system hasn't changed much on the farm - except for the timing of the heifers' arrival each year.

Seán – who farms approximately 30 miles away on the Mayo/Sligo border - operates a spring-calving, Jersey-cross herd. Weanling heifers – from Seán's holding – arrive in Culfadda in October, weighing 170-220kg.

The scale of Kieran's business has grown in line with the expansion of Seán's herd - which has doubled in size - over the last nine or so years. The 66 heifers stay for one year, residing for a winter period and grazing season and are returned to Seán in October of the following year.

"The same day the in-calf heifers leave, the weanlings are dropped off and the cycle begins again," he said.

"I don't over-complicate the system. I like having one batch of heifers from one herd owner - which keeps biosecurity levels high."

On arrival, if weather and ground conditions allow, heifers are turned out to pasture, with Kieran noting that "any day at grass after October 20th is a bonus around here".

"With the heifers coming in October, it suits us as they are that little bit lighter and you would get a little more grass into them - weather depending obviously," he added.

They are weighed, batched and divided into four pens according to their weight at housing and fed good-quality silage over the winter period. Last year's silage samples delivered a dry matter digestibility (DMD) value of 72-76% on average, which yielded 7-8 bales/ac.

Meal feeding is kept to a minimum on-farm; however, lighter heifers will be offered some meal, with the quantity dictated by silage sample results. All heifers are vaccinated and dosed in line with the contract drawn up between Kieran and Seán.

Target weights and the role of grass

Hitting target weights and achieving good weight gain from grass are the important components of the simple system that Kieran runs.

"Grass is key. We know it's three times cheaper than silage and five times cheaper than meal, so it's key to get grass into them."

Heifers are weighed and turned out of the shed in spring at the first available opportunity, which is sometimes achieved in February, but generally in March.

The silage ground is the first destination for the heifers, with the aim to get this grazed off, fertiliser spread and closed for first-cut silage; heifers are then grazed rotationally in 2ac paddocks, targeting covers of 1,100-1,200kg DM/ha.

> Kieran Kielty pictured on his Co. Sligo-based holding

19

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Breeding begins on May 1st every year and careful attention is given to ensuring that heifers are at the target of 300kg by this date, with 95% normally on or above this target.

"It's all about weights; these drive everything. We weigh three times/year - when they arrive; when they go out; and just before breeding."

Breeding would be classed as the busy time on the farm. Scratch cards are used as heat detection aids; the heifers are also synchronised. Heifers are checked daily - morning and evening, with all normally inseminated by day 12. A team of twoto-three bulls is then introduced and run with the heifers until July 20th.

After this, scanning takes place in early September.

"Last year, 78% of the heifers held to first service. We had two empty heifers and one the year before. Obviously, I'd like to have none, but that's the joys of it I suppose," Kieran joked.

Grass is measured using a digital platemeter in conjunction with PastureBase Ireland. Kieran outlined that he needs to grow just under 11t of DM/ha/year - assuming an average heifer weight of 350kg across the year.

As he says: "You have to spend money to make money". A portion of the farm is reseeded every year; the entire grassland area has been reseeded within the past 15 years.

Additionally, pH levels are kept in tune, with lime and fertiliser spread on the back of soil sampling results. Depending on the soil type, reseeds normally consist of a diploid-tetraploid mixture, with the stitch-in method of reseeding preferred. Kieran is currently investing in more water troughs for the paddocks, which will be strategically located - allowing for easier grazing management.

The dairy farmer and heifer rearer relationship

The Sligo native is extremely happy with his decision to embark on contact heifer rearing, noting there are many advantages to the enterprise, such as: monthly cashflow; and being protected from market fluctuations. But he highlighted that a good relationship between the heifer owner and contract rearer is key to success, adding that a contract is important to fall back on.

"At the end of the day, the dairy farmer wants someone that they trust, with heifers returning on target and in-calf - that's the long and short of it.

"The rearer wants calves that are on target on arrival and are ready to go; you are working together and it's in both your interests," he added.

Both Kieran and Seán are in regular contact, with visits to each holding a common practice, ensuring that both parties are happy.

Reflecting on his journey to date, Kieran said: "When we started there was not much info on contract rearing; there was no blueprint, but that's all changed now. There's more information and help out there now.

"Every day is a learning day, but I would definitely recommend it to any farmer that is interested in getting involved."





Clover Recommended List

The 2020 Pasture Profit Index (PPI) and Grass their ploidy (diploid or tetraploid) and heading date Recommended List was recently published by reported. the Department of Agriculture, Food and the Marine (DAFM). Perennial ryegrass accounts for Compared to diploids, tetraploids generally have approximately 95% of forage grass seed sold in higher quality, are more palatable (resulting in Ireland. The Recommended List measures the higher animal intakes) but are lower in sward performance of grass varieties across a number of density (ground cover score) resulting in more open key traits which are important from an agricultural swards. Typically, grazing mixtures will have 40-50% perspective – seasonal yield, quality, silage yield and tetraploid varieties and the balance will be made up ground cover which is an indicator of sward density. of diploid varieties.

Varieties are evaluated over a minimum of two separate sowing years, with each sowing harvested for 2 years subsequent to the year of sowing. Trials are conducted at 5 sites across the country: Backweston, Co. Kildare; Fermoy, Co. Cork; Raphoe, Co. Donegal; Athenry, Co. Galway, and Piltown, Co. Kilkenny. Those varieties which demonstrate a better than average performance compared to other varieties already on the list become Recommended List varieties, after they have completed a minimum of 4 trial years as outlined above.

Ploidy and Heading Date

Varieties listed on the Recommended List have

& Germina

In addition to ploidy, varieties are categorised into three maturity groups - early, intermediate and late, which is determined by the heading date of the variety. Early varieties head in the first half of May, give good spring growth but tend to be poor in quality during the mid-season period. There is almost no use of early varieties in Irish grass seed mixtures. Intermediate varieties head from mid-May to 31st May, and tend to dominate silage mixtures, but some higher quality varieties may also be suited to grazing mixtures. Late varieties head out after the 1st June, they tend to be higher in quality and dominate grazing mixtures in Ireland but can also suit silage systems taking their first cut in early June.

2020 Recommended List Varieties

There are 2 new varieties which are Recommended for 2020: Nashota (late tetraploid) and Callan (late diploid). A further four varieties have been removed from the list this year as they have become outclassed.

The Recommended List is published alongside the Pasture Profit Index. The Recommended List presents the seasonal and total yield (t DM/ha), quality (DMD g/kg), silage yield (t DM/ha) and ground cover score of each variety. The Pasture Profit Index (PPI) is an economic index for ranking grass varieties. It 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 \in per ha/year.

Recommended White Clover Varieties 2020

Variety Name	Total Yield	Leaf Size*	Clover %	Year 1 st Listed	Breeder
¹ Control Mean (t DM/ha)	: 9.4t DM/Ha	3		
Barblanca	105	Large 0.76	50	2009	Barenbrug
Violin	101	Large 0.75	44	2020	DLF
Dublin	102	Large 0.73	50	2018	Teagasc

Chieftain	98	Medium 0.68	47	2005	Teagasc
Buddy	100	Medium 0.58	45	2015	Teagasc
Iona	94	Medium 0.56	44	2014	Teagasc
Crusader	95	Medium 0.56	42	2009	Barenbrug
Aberherald	97	Medium 0.55	45	2003	IBERS

Coolfin	104	Small 0.51	47	2017	Teagasc
Galway	95	Small 0.36	38	2017	Teagasc
Aberace	95	Small 0.26	33	2016	IBERS

¹Controls in 2016 Trial were Barblanca, Alice, Chieftain and Crusader *Values in brackets indicate leaf size compared to the variety 'Aran' (i.e. Aran = 1.00), based on data from UK D.U.S. tests.

Understanding the PPI

Seasonal DM Yield

Reported as spring, summer and autumn DM yield in the PPI, this information presents the yield performance of each variety across these three time periods. 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 difference between the best and worst variety for spring growth on the 2020 PPI is €107 per

ha/year. Compared to summer growth, the difference between the best and worst is only \in 34 per ha/year, and in autumn the difference is \in 48 per ha/year.

Quality

Quality is measured across the months of April, May, June and July. AberGain is the highest variety overall for quality at €52 per ha/year. The variety with the lowest value for quality scores -€34 per ha/year; a difference of €86 per ha/year. Quality is a hugely important trait as it has the potential to deliver big differences at farm level.

Persistency

The small variation between the best ($\in 0$ per ha/ year) and worst variety (-€11 per ha/year) for persistency in the PPI demonstrates that there are small differences between varieties in persistency terms. Soil fertility and management are the biggest influencers of sward persistency.

Variety performance

AberClyde, an intermediate heading tetraploid, is the highest ranked variety overall for 2020, with a total PPI value of €205 per ha/year. AberGain is the leading late tetraploid (€192 per ha/year) and has held this position consistently over the last number of years. AberChoice is the leading late diploid at €176 per ha/ year. AberMagic is yet again the leading intermediate diploid at €187 per ha per year.

Grass mixtures

When selecting your grazing mixtures for 2020, focussing on varieties with strong PPI values and high quality are essential to maximise the return on your investment. Choosing varieties with positive values for quality will help ensure you have a palatable mixture, which will support higher animal intakes and animal performance. Varieties with good spring and autumn growth are also desirable to increase grass availability at these key points in your grazing season.

A maximum of 3 to 4 varieties in a mix is the ideal as if you have too many varieties, some will be included at a low rate and the benefit of that variety over an acre would be guestionable. Mixtures should contain varieties with a narrow range in heading date (7 to 10 days maximum). The recommended sowing rate for perennial ryegrass mixtures is 14kg/acre.

From 1st January 2020, farms in derogation must include 0.6 kg clover per acre or 1.0 kg coated clover per acre when reseeding. White, red or a mixture of both white and red clover is acceptable. Remember to use a clover-safe post emergence spray after sowing clover.

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				Recomn	IEnded II	termedi	ate & Lat	e rerenn	ial Kyeg	rass varie	TIES ZUZU						
				Pas	ture Profit I	ndex Value	s€/Ha/Yé	ear		Spring	Summer	Autumn	Total Yield	Mean DMD	1st Cut Silage	2nd Cut Silage	Ground Cover
			Total			Sub-In	dices			(t DM/ha)	(t DM/ha)	(t DM/ha)	(t DM/ha)	(g/kg)	(t DM/ha)	(t DM/ha)	Score
Variety Name	Ploidy	Heading Date	Idd	Spring Growth	Summer Growth	Autumn Growth	Quality	Silage	Persist.	*01'1	7.03*	2.36*	10.49*	840.7*	4.65*	4.05*	6.1*
Aberclyde	⊢	25-May	205	51	42	34	41	38	0	1.31	7.20	2.22	10.73	852.1	5.25	3.73	5.4
Abergain	F	4-Jun	192	21	38	42	52	39	0	1.13	7.10	2.29	10.52	854.3	5.05	4.06	5.6
Abermagic	۵	28-May	187	33	45	70	17	22	0	1.20	7.29	2.55	11.04	845.1	4.87	3.73	6.3
Nashota	F	3-Jun	186	43	33	34	32	44	0	1.27	6.98	2.22	10.47	846.8	4.99	4.31	6.2
Aberchoice	۵	11-Jun	176	19	45	51	43	18	0	1.12	7.29	2.37	10.78	849.4	4.37	4.24	6.0
Aberwolf	۵	30-May	169	56	34	37	10	33	0	1.34	6.98	2.25	10.57	841.7	5.04	3.85	7.0
Astonconqueror	۵	27-May	169	76	28	38	-7	34	0	1.47	6.84	2.26	10.56	837.6	5.49	3.29	6.5
Aberplentiful	⊢	8-Jun	169	48	43	41	13	24	0	1.30	7.22	2.28	10.80	843.2	4.58	4.19	5.5
Moira	۵	26-May	169	102	17	52	-33	31	0	1.63	6.55	2.38	10.55	827.3	5.07	3.76	6.1
Meiduno	F	3-Jun	166	41	35	39	30	21	0	1.25	7.03	2.26	10.54	845.3	4.71	3.92	5.4
Fintona	⊢	24-May	154	45	31	4	6-	43	0	1.28	6.92	2.31	10.51	838.8	5.42	3.68	5.5
Dunluce	⊢	29-May	148	17	37	4	20	31	0	1.10	7.07	2.31	10.49	844.7	4.75	4.23	5.4
AberGreen	D	31-May	145	25	51	61	0	8	0	1.16	7.43	2.47	11.05	840.7	4.45	3.82	6.7
Ballintoy	⊢	4-Jun	138	21	36	33	19	28	0	1.13	7.05	2.21	10.40	845.8	4.84	3.99	5.6
Seagoe	⊢	25-May	137	29	34	36	4-	43	0	1.18	6.98	2.24	10.39	841.0	5.32	3.78	5.9
Elysium	⊢	27-May	136	43	30	25	13	24	0	1.27	6.88	2.14	10.28	844.2	4.87	3.76	6.1
AberBite	⊢	1-Jun	132	Ϋ́	38	42	35	32	-11	0.97	7.11	2.30	10.38	849.2	4.78	4.20	5.7
Gusto	۵	31-May	127	37	29	52	11	-5	0	1.23	6.87	2.40	10.50	842.0	4.32	3.58	5.8
AstonEnergy	н	1-Jun	124	0	28	37	51	8	0	1.00	6.84	2.25	10.09	854.5	4.64	3.61	5.6
Briant	н	3-Jun	123	9	37	38	15	27	0	1.04	7.08	2.26	10.38	841.7	4.75	4.05	5.6
Oakpark	D	2-Jun	120	28	32	4	-10	25	0	1.17	6.94	2.31	10.42	833.7	4.63	4.19	6.7
Nifty	۵	28-May	119	50	42	39	-34	23	0	1.31	7.19	2.27	10.77	831.7	4.89	3.74	6.5
Drumbo	۵	5-Jun	116	19	24	34	27	12	0	1.12	6.72	2.22	10.06	843.2	4.46	3.95	6.3
Callan	D	3-Jun	116	67	21	29	-25	25	0	1.41	6.64	2.17	10.22	832.2	4.97	3.76	6.4
Solas	⊢	10-Jun	115	5	29	49	9	27	0	1.03	6.85	2.36	10.24	838.8	4.54	4.33	5.9
Xenon	⊢	7-Jun	114	6	29	28	31	17	0	1.06	6.86	2.17	10.08	846.6	4.29	4.41	6.3
AstonKing	۵	5-Jun	112	62	27	23	-19	20	0	1.38	6.81	2.12	10.30	832.6	4.74	3.82	5.9
Kintyre	н	8-Jun	110	9	31	45	9	21	0	1.04	6.92	2.32	10.29	840.1	4.54	4.24	5.8
Aspect	н	3-Jun	109	8	30	23	29	19	0	1.05	6.89	2.12	10.05	848.9	4.48	4.15	6.1
Triwarwic	⊢	2-Jun	108	16	33	22	6	29	0	1.10	6.96	2.11	10.17	843.0	4.88	3.97	5.9
Alfonso	⊢	1-Jun	107	1	31	33	34	7	0	1.01	6.90	2.21	10.13	849.5	4.63	3.60	6.0
Kerry	۵	2-Jun	73	21	29	34	-27	16	0	1.13	6.87	2.22	10.22	830.8	4.42	4.15	6.4
Smile	۵	4-Jun	60	÷	21	39	6-	11	0	0.99	6.64	2.26	9.89	834.5	4.45	4.07	6.4
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Introduction

Research investigating the benefit of incorporating white clover (clover) into perennial ryegrass pastures for high stocking rate systems of milk production over the last number of years has shown the potential to increase grass production, reduce costs (lower nitrogen (N) input), increase milk production per cow and improve environmental sustainability, through reduced nitrous oxide emissions. Therefore, clover has huge potential to benefit Irish farmers at farm level. However, the use of clover on Irish farms is low with little or no intensive farms reliant on nitrogen (N) from clover.

Why white clover now?

The benefit of white clover in grassland in terms of savings in nitrogen fertiliser and increased animal performance has previously been shown at a number of experiments undertaken at Teagasc Moorepark and Teagasc Clonakilty. Incorporating white clover into grazing swards can increase grass production, particularly at lower N application rates. Research from Clonakilty Agricultural College found that incorporating white clover into intensively managed swards increased annual grass production by 900 to 1200 kg DM/ha, on average, relative to grass only swards (where both sward types received 250 kg N/ha) over a four year period with a sward clover content of 23%.

Previous research has shown that clover can contribute up to 100 kg N/ha/yr through N fixation, resulting in significant saving for farmers and environmental sustainability if the application of N fertiliser is reduced. Research at Moorepark has shown that grass+clover swards receiving 150 kg N/ ha grew the same quantity of herbage as grass-only swards receiving 250 kg N/ha (13.5 t DM/ha). White clover can also increase animal production when compared to grass only swards. Recent research at Teagasc has shown milk solids production increased by between 40 to 65 kg milk solids/cow/year when clover was included in the sward. The 15% increase in animal performance is particularly evident from June onwards when sward clover content is at its greatest (> 25%). This was associated with higher farm profitability with grass+clover swards (€2,674/ ha) compared to grass-only swards (€2,369), at

250 kg N/ha/year on both systems. Currently there is increased interest in white clover as a result of the production and profitability benefits and the increased focus on the environmental. Since 1st January 2020, with new nitrate derogation rules, have specified white clover must be incorporated when reseeding swards.

Managing white clover swards

In order to achieve the benefits from clover an average clover content of 20-25% is necessary in the sward across the year. Managing and maintaining this level of clover in the sward can often be challenging. If not managed correctly it can lead to a decline in clover content or clover dominance. Poor grazing management such as high pre-grazing covers (>1600 kg DM/ha) and high post-grazing residuals (>4.5 cm), can reduce sward clover content, as a result of reduced light intensity hitting the base of the sward which is essential for clover growth. An 18-21 day rotation in mid-season with a pre-grazing cover of 1300-1500 kg DM/ha and grazing swards to 4 cm can maintain clover in an intensive grazing system.

To prevent clover dominance in paddocks, heavy cuts of silage (1st and 2nd cut crops) should be avoided. This can result in an increase in the level of white clover in the swards. Clover dominance can often lead to reduced spring herbage availability, as a result of lower over winter growth. This can be minimised by the application of early spring nitrogen fertiliser (70 units by April 1st, applied in two splits; 23 units January/early Feb and 46 units March) and early grazing to encourage tillering of the perennial ryegrass plant.

Bloat

Bloat can be an issue with swards containing clover swards especially where the clover content is high. Bloat can occur at any time of the year, but it is more likely to occur in the second half of the year when clover content in the sward is highest. However, there are certain risks/triggers that farmers need to be aware of when grazing clover swards that indicate a greater risk of bloat

- High sward white clover content (>50%)
- Weather conditions (high rainfall over prolonged period leading to lower DM swards)
- Hungry cows going into a paddock with high levels of clover
- Switching from grass-only sward to a grass/clover sward with high levels of white clover.

When dealing with bloat prevention is better than treatment. Teagasc have developed prevention

strategies that will help to reduce the incidences of bloat:

- Provide a small area in paddock for the first 2-3 hrs after turn-out to prevent initial gorging process
- Provide anti-bloating agent in the water supply (important that bloat oil is in the water supply for a number of days before stock are in the risk paddock)
- Keep post-grazing sward height to 4 cm
- Avoid switching from grass-only sward to mixed grass/clover swards (as much as is possible)
- Avoid turning excessively hungry animals onto mixed grass+clover swards
- Always check cows after initial turnout and regularly for first 3 hrs during the high-risk period.

Management practices can help to reduce the risk of bloat, however, vigilance is required to minimise bloat occurrences.

Soil Fertility

Soil fertility is a crucial factor in establishing and maintaining adequate clover levels on farm. Clover will establish and persist only on high fertility soils (soil pH >6.3, and > index 3 for P and K. Correcting soil deficiencies is important before trying to establish clover. White clover seeds are very small and clover seedlings tend to be relatively fragile. Seedling vigour is favoured by having optimum soil pH and plenty of P in the vicinity of the establishing seedling. It is usually recommended that clover seed is sown with a fertiliser that contains P compound as this will favour establishment.

Establishing a grass/white clover sward

The benefit of clover in grassland has previously been highlighted throughout this paper. However, currently there is little to no clover sown or established on Irish farms. If Irish farms are to successfully establish clover as part of their grazing system, it will need to be undertaken over a period of time (2 to 3 years) and take a combination of methods. When selecting clover cultivars to sown, use the DAFM Recommended List of Grass and Clover Varieties. Small and medium leaved cultivars are best suited to intensive grazing systems, with large leaf clovers having a limited role due to their aggressive growth habit and are prone to smothering out grass. Clover should be sown when soils are warm and moist ideally in late April/ May. Sowing in the autumn can reduce chances of a successful establishment as soil temperatures are on the decline so it is more difficult for clover to compete with the grass. Since

1st January 2020 farms in derogation must include clover when reseeding at a minimum of 1.5 kg/ha (0.6 kg/acre – unpelleted seed) or if using coated clover seed 2.5 kg/ha (1.0 kg/acre coated clover seed). White clover can be established on your farm using two methods; 1) Direct reseeding or 2) Oversowing.

1. Direct Reseeding

(Key steps involved in a full reseed)

- Take a representative soil sample for analysis of P, K and pH; if ploughing take sample after ploughing
- Spray off the old pasture with glyphosate as per label recommendations; allow a minimum of 7 to 10 days after spraying before cultivating
- Avoid ploughing too deep (15 cm) as it can reduce soil fertility
- Prepare a fine, firm seedbed and apply lime, P and K as per soil test results
- Sow grass (34 kg/ha) and white clover (1.5 to 3.5 kg/ha) seed mix
- Avoid sowing white clover seed too deep; sowing depth: approx. 10 mm
- Ideally cover seeds and roll well to ensure good contact between the seed and the soil

2. Over-sowing

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



Over sowing white clover into a perennial ryegrass sward immediately after grazing

Key steps involved with over-sowing white clover:

- When over-sowing, the white clover seed can be broadcast onto the sward or stitched in using a suitable machine
- Best practice is to over-sow directly after grazing
 (≤ 4 cm post-grazing sward height, or after
 cutting the paddock for surplus bales ideally
 only over-sow 3 to 4 paddocks at a time
- Control weeds before you consider over-sowing clover - some herbicides have a residue of up to 4 months – always check the residual time on the label of the product or seek advice on a suitable weed control product
- A slightly higher seeding rate (2.5 to 5 kg/ha) is recommended for over-sowing compared to a full reseed, to overcome the issues with slugs and a lower germination rate
- Sow with a fertiliser that contains P as this will favour establishment particularly if soil fertility is poor
- 1 bag of 0-7-30 or 0-10-20/acre
- If possible, reduce N fertiliser post over-sowing
- Soil contact post over-sowing is one of the most crucial factors effecting germination
- Roll paddocks post sowing to ensure soil contact
- Apply watery slurry (if available) ideally around 2000 gallons/acre
- Ideally over-sow on well managed grassland

 not suitable on old 'butty' swards with a low content of perennial ryegrass if this is the case a full reseed is best practice
- If broadcasting with a fertiliser spreader
- Mix clover seed with 0:7:30 fertiliser and only add clover to the spreader when you are in the field, to avoid clover settling at the base of the spreader
- Only do a maximum of 2 ha at a time (to avoid seed settling), and spread in 2 directions across the field

Management of grass-clover swards after oversowing

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

Weed control is an essential element in both direct reseeding and over-sowing. Weeds in new reseeds are best controlled when grass is at the 2-3 leaf stage (approx. 4-6 weeks after sowing). Docks and chickweed are two of the most critical weeds to control in new reseeds; it is important to control these at the seedling stage, by applying the herbicide before the first grazing. When clover is included in the swards, it is important to use a clover safe herbicide. The only clover-safe herbicide active for reseeds, 2,4-DB is due to be withdrawn from sale in October 2020. Some of the well know products which contain 2,4-DB are Legumex DB, Clovermax and UnderClear. Use of these products will not be permitted after 31 October 2021.

When over-sowing clover into existing grass swards, it is best to control weeds before over-sowing white clover into the sward. Many products have a residual effect on clover, therefore always check the



withdrawal period from application to sowing clover. Speak to your advisor or merchant for best advice on the product suited to your needs and weed problem. When applying herbicide, always follow best practice guidelines and read and follow the product label. All pesticides users should comply with the regulations as outlined in the Sustainable Use Directive (SUD).



Clover plants 3 months after over sowing into an existing grass sward. Open space and soil visibility is important when over sowing clover.



The role of protected Urea – Q&A Extracts from Teagasc publication

Why should I use protected urea?

Protected urea is the No. 1 technology for farmers to reduce losses of both ammonia (from urea) and the GHG nitrous oxide (from CAN).

What is protected urea?

Protected urea (ProUrea) is urea which is treated with a urease inhibitor. The urease inhibitor can be either **a**) coated onto the outside of the fertiliser granule or **b**) incorporated into the urea granule melt during manufacture.

Can I spread protected urea throughout the growing season?

Yes, you can spread at times when you would otherwise spread calcium ammonium nitrate (CAN) or unprotected urea, potentially simplifying spreading and fertiliser spreader setting.

Fertiliser programmes incorporating protected urea instead of CAN offer both environmental (reduces GHG's & Ammonia losses) & economic benefits. A protected urea-based programme is ~ €6 to 17/ha cheaper than a CAN based programme.

Will using protected urea reduce yields and N efficiency?

No, published Teagasc trials (Figure 1) have shown that protected urea consistently yields as well as CAN and is as efficient in Irish grasslands.



Is protected urea more costly?

No, prices in \in per tonne fertiliser and \in per unit N delivered for the three main fertiliser N types available as per 14 March 2019. To convert to cost per unit to cost per kg N multiply by 2.

Fert N product	N Content	Cost/tonne€	Cost/unit€
Urea	46%	391	0.43
Protected Urea	46%	430	0.47
CAN	27%	285	0.53

Will protected Urea reduce/eliminate N losses?

The two main sources of N used on Irish farms are CAN & Urea. Either source can have a potentially negative impact on the atmospheric or aquatic environments if spread before, during or after unsuitable weather or soil conditions. Unfavourable spreading conditions can include very wet/ saturated or very dry soil conditions, very warm weather or persistent, heavy rainfall. The problems include possible N losses as either nitrous oxide (from CAN) or ammonia (from urea) under poor soil / weather conditions that promote N loss. Urea treated with a urease inhibitor (NBPT / 2-NPT) reduces both ammonia & nitrous oxides losses helping to reduce their impact on both air and water quality.





Maybe farming is currently the best job in Ireland

Dr. Patrick Wall University College Dublin

This current outbreak is unprecedented and there is no health service in the world that could cope with it. The Irish health system had very little spare capacity, so this has put it under severe pressure.

Approximately 80% of people who become infected with the coronavirus have a mild flu-like illness, with a variation of the symptoms: fever; cough; or shortness of breath.

However, anyone who is elderly, frail, or has other illnesses that could weaken their immune system, is at risk of getting more severe symptoms and require hospitalisations.

Smokers are also more susceptible to getting severe symptoms. Unusually, children get very mild symptoms if any.

The virus is transmitted by aerosol (coughing or sneezing) or droplet spread.

Droplet spread is when coughs or sneezes result in droplets (effectively micro-snots) landing on surfaces around you; or if you cough into your

hands you then have the droplets on your hands and will contaminate utensils, door handles etc - hence, all the advice about the need to keep washing hands and sanitise surfaces.

We need to cocoon the elderly and frail to protect them.

If you are in close contact with somebody who has the disease you can become infected and it can take up to 14 days to fall ill - although most people are falling ill within eight days.

This period of time – from exposure to symptoms - is known as the 'incubation period' and during this time the virus multiplies and increases to a critical level to trigger symptoms.

The virus also has to multiply to a high level to result in a positive test.

So, if somebody is tested too early in the incubation period they may test negative and receive false reassurance – hence testing is only being offered to people who have symptoms.

Veterinary labs

Most hospital labs are used for testing individual patient's samples or small numbers of samples - and the HSE has not got the laboratory capacity to process the thousands of people who are requesting tests.

Therefore, it is important that the high-risk patients, and health-care workers, receive priority.

It is likely that some of the major veterinary labs used to processing thousands of samples – like occurs with the BVD program or BSE testing will come on stream to help out the HSE.

The HSE has recruited the cadets from the Irish Defence Forces to assist with calling cases and close contacts.

Many Government departments are redeploying staff to operate call centres to give information and advice to cases and their close contacts and most of the higher education institutions are volunteering staff and space to set up satellite call centres.

The HSE has developed standardised training for front-line operators and health professionals who will have to be present in these call centres to handle difficult health-related questions.

The media is doing a great job keeping the public informed and the HSE has a comprehensive website - www.hse.ie.

Healthy farmers

We used to be oan that farming was 'a lonely job' and often farmers didn't see anybody from one day to the next.

However, in these difficult times, maybe farming is currently the best job in Ireland. You can't catch the virus if you don't meet anyone to give it to you.

Many farmers go to the mart, or other events, just to meet people and have 'the craic': but there will not be much craic if you catch the virus and bring it home to one of your loved ones.

Everyone of us have elderly family members, and friends, or those with illnesses that leave them with compromised immune systems and vulnerable to corona.



This graphic is useful in terms of explaining the power of social distancing. Source: SignerLab

- We owe it to them not to bring them home the virus.
- The male calves have to be sold or we will have a welfare issue; and some other livestock have to be sold also; but perhaps mart attendees will have to be confined to 'sellers and buyers only' and the spectators will have to stay at home.
- The health service is under pressure and many GPs are swamped with worried people with respiratory systems, as well as potential corona cases and these two come on top of the GPs' routine workload.
- Many health-care workers in the hospitals have caught the infection and are absent from work. If this continues the ability to care for corona cases, as well as the normal non-corona illnesses, will be compromised.
- The farmers have to stay healthy to feed the nation.
- It is a difficult time for everyone and everyone has to play their part - many people are now off work not being paid, so it is time for solidarity.
- We are all in this together. We need to protect the elderly and frail and the health-care workers and we will get through this.

This article first appeared on AgriLand in March 2020 IGA Archives of past Presidents

DR. TOM WALSH IGA President 1957/58

'A job of work to be done'.

Dr Tom Walsh is recognised as one of the foremost soil scientists worldwide. A native of Piercetown, Co. Wexford, he graduated from University College Dublin in 1937 with an honours B.AgrSc. degree. He received the MAgrSc the following year, his PhD in 1941 and was awarded the DSc in 1947 for his published work. He was elected a member of the Royal Irish Academy (MRIA) in 1955. The National University of Ireland awarded Dr. Tom Walsh with an honorary LLD doctorate in 1972 and he received an honorary ScD doctorate from Trinity College Dublin in 1980.

On graduation, Dr Walsh worked with the Imperial Chemical Industries Ltd, (ICI) and later as an agricultural instructor in North Tipperary. Then he joined the staff of University College Dublin where he lectured in soil science from 1938 to 1945, and from 1945 to 1954 he worked as Soil Advisory Officer in the Department of Agriculture. In 1952 he was appointed Senior Inspector in that Department, with responsibility for soils and grassland research. When the Agricultural Institute was established in 1958, the government appointed him as its first director. He was appointed first director of ACOT (the forerunner of Teagasc) in 1980. Dr. Walsh retired from the public service in 1983.

Dr. Walsh participated in a large number of national and international, scientific, educational and voluntary organisations. At national level, he was founder member and president of the Agricultural Science Association and of the Fertiliser Association of Ireland. He was chairman of the National Council for Educational Awards and of the State Agencies Development Co-operation Organisation. He was senior vice-president of the Royal Irish Academy and served as Secretary for seven years. Dr. Walsh was also a member of the Commission on Higher Education and chairman of the Garda Training Review body. He was president of the Soil Science Society of Ireland and of the Irish Grassland Association. Other interests and membership of bodies range from nuclear energy to ecumenics to statistics. On the international stage Dr. Tom Walsh was chairman of various Food and Agriculture Organisation (FAO) committees, International Soil Science Societies, the EU Committee on Agricultural Research, and a member of the American Institute of Biological Sciences and the British Society of Soil Science.

Among the awards Dr. Walsh received were Fellowship of the American Association for the Advancement of Science, the medal of the French Society of Soil Science and the RDS's Boyle medal. He received the Freedom of Wexford in 1979 and the Soil Laboratory at Johnstown Castle was dedicated to him in 1987 "In recognition of his contribution to agricultural science and to the nation."