IRISH GRASSLAND ASSOCIATION

"to advance the knowledge of good grassland management in Irish Farming"

Newsletter Issue 11 • April 2011

WHAT'S INSIDE

Irish Grassland Association Reseeding Events 2011

Reseeding is a key component to increasing meat and milk production from grazed grass. Reseeded swards generally produce greater quantities of herbage, particularly in the early spring and late autumn/winter, than do old permanent pastures. This increased grass supply allows livestock to be turned out to grass earlier than is possible in old permanent pasture. Reseeded pastures also generally have higher feed quality than old swards.

The Irish Grassland Association will host a series of reseeding events, jointly sponsored by Germinal Seeds and Goldcrop in 2011. Events will take place in April, May, June and August. These events will focus on:

- when is the best time to reseed
- why reseeding is necessary
- the benefits that can be gained from reseeding swards
- importance of soil tests
- options for reseeding
- post emergence spraying
- post reseeding grazing management

Teagasc Advisors and Grassland Researchers will be in attendance to provide information on all aspects of reseeding, there will be a demonstration of reseeding and the sponsors will also be present.

The first two events will take place on the farm of Pat and Olive Weeks, Ballyagogue, Kilfinane, Co. Limerick on Thursday 28th April at 11am, and on the farm of Henry Walsh, Moneynore East, Oranmore, Co. Galway on Wednesday 4th May at 11am. Dates and details of the June event in Tipperary and the August event in Westmeath will be available on the next newsletter and on the Irish Grassland Association website.

IRISH GRASSLAND ASSOCIATION

Irish Grassland Association
Cookstown, Kells, Co. Meath.

CORPORATE MEMBERS 2011

Tel: 087 9626483 Email: secretary@irishgrassland.com Web: www.irishgrassland.com

OPENING HOURS: Tuesdays & Thursdays: 9.00a.m. to 5.00p.m.

IGA Presidential Editorial

Dear Member,

"Maxamising farm profitability by improving grassland management" has been and continues to be the sole objective of the Irish Grassland Association. This edition of our Newsletter highlights just how relevant that message is today, sixty three years on.

Tonnage of grass grown and utilised will determine profitability of farms, and reseeding the poorer performing pastures on farms will facilitate increases in total grass yields, which will be followed by improved profitability. As a follow on from our hugely successful reseeding event last year, we have once again teamed up with Goldcrop and new sponsor Germinal Seeds to hold a series of reseeding events spanning the country. At these events there will be a strong emphasis on the reasons to reseed. In addition, at least two grass varieties will be sown on each of the host farms. As a follow up to the reseeding events, establishment will be assessed and weekly growth rates measured. This information will then feed into the Teagasc project to establish an economic index for grass, highlighting the IGA's commitment to play its' part in improving grass variety evaluation. All recorded measurements will be available on our website.

Council member and sheep farmer John Kelly is also focusing on improving farm profitability in our Farm Focus Section. It is worth highlighting how he found the biggest impact on profitability comes from doing the simple things well, like weekly grass measurement followed up by correct analysis and consequently good decisions.

On page 10 Padraig French gives an overview of the Greenfields project and the key principles associated with it. One such key principle is the need for future dairy systems to be viable in years of low milk price. In such an environment cash costs need to be minimised and a key strategy applied to keep the business viable was to minimise capital investment in depreciating assets while having an absolute focus on maximising grass grown and converted to milk.

From the well established farms to the newly established ones like Greenfields we continue to see the desire to improve and hunger for knowledge. We in the Irish Grassland Association hope to satisfy some of those desires through our wide range of events through the summer months. After all every day is a school day.

Philip Donohoe

Philip Donohoe
President Irish Grassland Association

Poor pastures could be costing up to €300/ha

Michael O'Donovan

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

There is huge variation in grass dry matter (DM) production on Irish dairy farms, as much as 50% between farms and 60% within farms. While there are a range of reasons behind this difference, including poor soil fertility, soil type, drainage issues and poor management, the most obvious is the lack of perennial ryegrass within pastures.

What level of reseeding is taking place on dairy farms?

In 2009 Teagasc Moorepark surveyed a number of Co-op suppliers from Kerry, Connaught Gold and Glanbia, as well as a number of discussion groups. The survey was based around grassland and reseeding, and posed 46 questions to the participants. A number of key findings on reseeding strategies resulted from this survey.

The three most important findings from the survey are as follows:

- Regular reseeding took place on 50% of participants farms, 25% reseed infrequently, and 25% never reseed
- Autumn reseeding was the preferred time of reseeding for 75% of survey participants
- Post emergence spray was used on 50% of farms

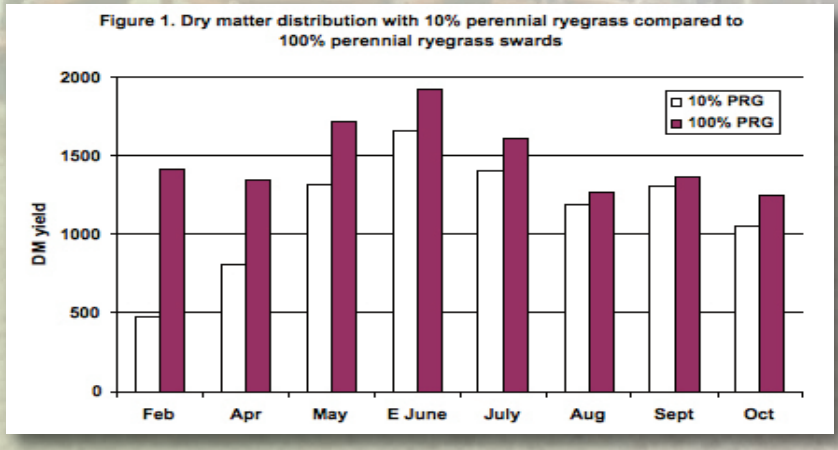
Reseeding is crucial for grassland farmers

The biggest limitation to herbage production on grassland farms in Ireland is that our swards are not dominated by perennial ryegrass. Recent research at Moorepark has shown old permanent pasture to produce, on average, 3 tonne (t) DM/ha less than perennial ryegrass dominated swards. Figure 1 shows the herbage production across the grazing season of a sward containing 10% perennial ryegrass compared to a sward containing 100% perennial ryegrass. The majority of the difference in herbage production between the two swards is accounted for up to mid-May. If spring grazing is an objective, it will not be achieved with a 10% perennial ryegrass pasture. Swards with low levels of perennial ryegrass are nutrient inefficient, 25% less than swards with high levels of perennial ryegrass. Such swards have no role on farms and should be replaced. From an economic perspective a low proportion of perennial ryegrass in the sward is costing dairy farmers €300/ha in lost herbage production that could be turned in to milk during the growing season. A similar effect occurs on beef and sheep farms.

The objectives of reseeding are to create swards that are:

1. Productive
2. Maintain high grass quality
3. Nutrient responsive - (+10 kg DM per kg N applied)
4. Allow higher animal output - 8% higher milk output per hectare relative to permanent pasture
5. Reduce silage requirement (early spring turnout)
6. Increase the productive capacity of the farm (carry a higher stocking rate)

Figure 1. Dry matter distribution with 10% perennial ryegrass compared to 100% perennial ryegrass swards



Newsletter No. 11 April 2011

"Success in sheep farming depends on getting the simple things right."

By John Kelly IGA council member and sheep farmer

In the three years that I have participated in the Teagasc BETTER Farm Sheep program I have made many changes to my farm. During this period I have worked closely with Ciaran Lynch based at Sheep Research Centre in Teagasc Athenry. None of the changes that I have made have been drastic or have involved cutting edge technology. The things that have made the biggest impact on my farm and on my profitability have involved doing the simple things well.

I currently farming 56 ha just outside Baltinglass, Co. Wicklow. I applied for the BETTER Farm programme because I wanted to improve my technical efficiency and improve my farm productivity. At the start of the programme I had 300 ewes plus replacements and a stocking rate of 7 ewes per ha. I am in the process of increasing my flock size to over 600 more prolific ewes which will substantially increase the stocking rate on the farm to 12 ewes per ha. The objective is to improve the overall farm profitability.

The foundation on which all other things are built on is my grassland management. All but 40 of my lambs were finished without concentrates in 2010 despite there being no tyfon, chicory stubble turnips, rape or any other cash crops on my farm. These lambs averaged €95 and 95% graded a U or R3 (Table 1) and the average carcass weight was 19.6 kg.

Table 1 Percentage of carcasses within conformation and fat class

	Fat Class		
Conformation	2	3	**4**
O	0	2	**0**
R	1	**44**	**1**
U	0	**50**	**2**

(Lynch, 2010)

Dr Seamus Hanrahan, John Kelly, Ciaran Lynch Teagasc and Dr Andrew Cromie IGA President 2009/10 at the Irish Grassland Association Sheep conference and farm walk hosted by John in 2010

The aim is to have a pre grazing cover of 6cm at turnout and manage swards to appropriate post grazing sward heights during the season of 3.5 to 4 cm in March and April increasing to 5 cm in May and 6 cm from June onward. Following weaning ewes are used to graze paddocks down as followers to the lambs in a leader follower system allowing lambs access to the best pasture. Grass quality is maintained by weekly measurement of the pasture using a platemeter and subsequent grazing management decisions are made and implemented. These decisions include when to move lambs to new paddocks or to remove a paddock from the grazing rotation for silage production. Its sounds obvious and simple but timing of these decisions is vital. In the active growing periods of the year a week can be the difference between having a highly digestible leafy pasture or one in which digestibility has declined due to stem elongation. Timely grassland management decisions may have consequences on the productivity of a paddock for a considerable period of time. This simple and costless process produces results for me.

The second aspect which I have focused on is ewe condition. The aim is to have ewes at condition score 3.5 at joining. This process starts at weaning when all ewes are handled and condition scored. It is not good enough to have a quick look as looks can be deceiving. Thinner ewes are given preferential grazing and vice versa until tupping where ewes are handled again. Any that have not improved are culled. This has helped to increase my litter size and decrease the proportion of ewes that do not lamb (Table 2). Flushing is not practiced on my farm as the correct condition score is the priority for me.

Table 2 Effects of Condition score on Litter size and percentage of ewes that lambed.

	Season		
	2009	**2010**	**2011***
Condition score	2.8	**3.1**	3.5
Litter size	1.59	**1.83**	1.83
Percentage lambed %	86	**90**	98

* Based on scanning results (Lynch, 2011)

I am also in the process of changing ewe breed. The foundation flock consisted mainly of Suffolk X Cheviot ewes. This is seen by many as a good ewe but for me has some draw backs. The disadvantages are their large mature size and moderate level of prolifacy (table 3). I have been crossing this ewe with a Belclare ram to produce a smaller ewe which eats less while producing more lambs. For me the aim for a mid season lamb producer is to produce lambs which have a 20-21 kg carcass, and more importantly produce as many of them as possible. This is where the larger mature weight of the Suffolk X Cheviot ewe has no advantage over the Belclare. This is because lambs are killed at between 40 and 50kg liveweight (dependent on sale date) which is a long way short of their mature weight.

Table 3 Effect of ewe genotype on reproductive performance

Ewe genotype	**Litter size**	**Weaning rate**
Belclare x Cheviot	1.87	1.62
Blue Leicester x Cheviot	1.78	1.47
Suffolk x Cheviot	1.72	1.42

(Hanrahan, 1997)

At the end of the day everybody has their preference of breed but mine will always go with the most important factor, which is profitability. This is predominantly influenced by the number of lambs sold per ewe joined.

The other area where I have made a change is my use of labour at lambing. In previous years I lambed all the ewes by myself. Losses ranged from 8 to 11.5% in my mature ewes. This year I have two students and this extra help has reduced my lamb mortality and my own stress levels. Currently my lamb mortality is around 6%. There is also extra work at lambing with the BETTER farm program as all lambs are tagged, weighed, linked to their dam and sexed at birth. This is all recorded on a handheld EID system. Following lambing the lamb performance is monitored during the season. This has helped me focus more on the factors which influence lamb performance.

Other changes I have made have involved fencing, handling equipment, feet treatment, worming policy, shearing timing, post lambing grazing management, leaving male lambs entire and fertiliser application. There is nothing fancy or ground breaking about any of these changes but they have increased my production and more importantly profit. I have worked hard at each of these changes to give me and my family a future in farming. Simple changes yes, but easy to accomplish not always, but the potential for improvement is within everyone's grasp.

Student Focus

Multi-cropping – potential for Irish farmers?

Cows grazing Italian ryegrass 1st September in New Zealand

Micheál Corcoran, Knockinclash, Ballypatrick, Co.Tipperary
Stage 4 Animal Science, UCD School of Agriculture, Food Science and Veterinary Medicine

Background:

The Department of Agriculture, Fisheries and Food recently published, Food Harvest 2020, its strategy for the development of Irish agriculture and fisheries over the next 10 years. The target for growth in the dairy industry is a 50% increase in milk production by 2020. The New Zealand dairy industry has also set a goal to increase farmer profit by achieving a 50% gain in productivity by 2015. Under pinning this goal in New Zealand is the target of producing 45t DM/ha/yr of forage with an average metabolisable energy value of 11 MJ ME/kg DM (Minee et al., 2009). Hence the development of the multi-cropping concept, which involves incorporating a sequence of high yielding crops into a pasture renewal programme. The proportion of land in supplementary forage crops as part of a pasture renewal programme on Irish dairy farms could have important consequences for feed supply, farm profitability and sustainability in the future. There has been increasing interest in forage maize in recent years due to improved varieties and advances in plastic technology meaning that forage maize has become an option for more livestock farmers. Forage maize is harvested in late September through October in Ireland. With a very mild winter temperature in recent years there is an opportunity and often enough time to produce a second forage crop following maize harvest. Producing a second forage crop allows for the increased use of machinery, labour, and land during the year and a lowering of fixed cost on a per-hectare basis, resulting in a more profitable farming operation (Roach & Morton 2005).

Multi-cropping options

A total biomass yield of 57.5 t DM/ha have been produced from a rotation of maize–Italian ryegrass–maize over 18 months (Dairy NZ). Other sequences (maize–Italian ryegrass–turnips, turnips–oats + Italian ryegrass–maize or rape–triticale) yielded less but provided continuity of feed supply and high quality feed. Increased use of forage crops for supplementary feeding is driven by the need for increased productivity through increased forage intake, increased response to supplements fed (Clark & Woodward, 2007) and by the need for pasture renewal (Lane et al., 2009).

In New Zealand, maize silage has been shown to consistently yield between 18 and 22 t DM/ha (Densley *et al*., 2005), in Ireland yields are typically between 14-18t DM/ha depending on region and plastic use. Other crops with lower yield potential such as whole crop silage, turnips, rape, kale, fodder beet and chicory offer other options for conserved and grazed feeds (Pitman, 2005).

Pre grazing sward of Italian ryegrass at 2400kg DM/ha

System of cropping for a dairy farm:

The primary requirement for profitable multi-cropping is that there must be adequate time for the production of a second crop. The secondary requirements for successful multi-cropping are the same as those needed for successful full-season crop production. Research has shown that, when a proportion of grass silage is replaced by alternative high dry matter forage like maize or whole-crop cereals, an increase in DM intake generally results. Whether or not this is converted into increased output, beef/milk, depends largely on the quality of the alternative feed offered; quality being measured in terms of dry matter content (>25%) and grain content (>35%) and digestibility (>65%) (Kavanagh, 2010). Therefore the use of maize is a good option for a forage cropping system in Ireland.

A potential crop to plant in late September/ October after maize is Italian Ryegrass (IRG). IRG has several features that make it popular with livestock producers:

- IRG can grow better at lower temperatures than other grasses

- IRG give a better yield of grass in early spring compared to other grasses
- IRG can be cut for silage or used as early grazing before tilling for the next maize crop in April or before returning to permanent grassland

IRG varieties under evaluation by The Department of Agriculture, Fisheries and Food (2010) have yielded almost 18tDM/ha/year with a spring growth of 1.47t DM/ha and a silage yield of 9.4 t DM/ha/ year.

However, IRG tend to have low sward densities and are susceptible to poaching under adverse conditions. Although somewhat less tolerant of severe and frequent defoliation than perennial ryegrass, IRG is relatively tolerant of defoliation as long as at least 2 to 3 inches (5 to 7 cm) of stubble remains after harvest, and regrowth periods are at least 3 weeks.

On farm experience in New Zealand:

My practical experience of this cropping method stems back to my visited to New Zealand in 2010 as part of my professional work experience. On the farm I worked on in Huntley (which is known as wet country) maize was cut the 1st April and IRG was directly stitched in. 16ha were sown on an out block 1km from the grazing block. On the 9th July when cows where turned out to this pasture, average pasture cover was 2500 kg DM/ha. The target post grazing residual was 1200kg DM/ha which provided approximately 20,800kg DM. Cows stayed here for 3 weeks at 290, 190 and 90 dry cows each week respectively with a requirement of 9kg/cow/day. Good quality silage, 77 bales in total, were also fed to lengthen the rotation to 3 weeks on the grazing block. The budget worked out as follows:

	Week 1	Week 2	Week 3
Cows numbers	290	190	90
Area (Ha/day)	1.25	0.75	0.25
Grass allowance (kg/cow/day)	5.6	5.5	4.7
Silage (kg/cow/day)	2.4	2.4	3.3

Grass is allocated using a strip wire and silage is fed out on pasture. Cows were back on this pasture on the 1st September. After this grazing the fields are rolled and closed up for silage. Grass is sprayed off in middle of October and silage is cut a week later. The soil is not tilled at all and the maize is sown using a direct drill.

Advantages to this system in relation to Ireland

- Better utilisation of land, labour and machinery
- Lowering fixed cost on a per hectare basis
- Filling a gap in the feed supply with a cost effective crop.

Disadvantages to this system in relation to Ireland

- Maize must be harvested in the middle of September to allow sufficient time for grass to establish.
- Some soil damage may occur but with good use of management tools available this can be minimal.
- Weather is a major factor in the establishment process and site selection and soil type are key in the success of the cropping system

Conclusion:

Multi-cropping maybe an option for Irish dairy farming, though may not be suitable for all farms due to land availability and quality. Though this practice may have some drawbacks, these limitations may be overcome by proper intercrop selection and management. Multi-cropping offers many important benefits:

- Potential to increase total forage produced/ha /year
- Supply forage in periods of the year when there are deficits of grazed grass
- Potential increase in production through supplementation
- Incorporate into a pasture renewal programme

Better understanding of multi-cropping and improved farming systems should lead to the increased adoption of multi-cropping in the dairy agricultural sector, leading to great utilization of fixed assets and maximum return per unit area.

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www.dairynz.co.nz
www.teasgac.ie
www.agriculture.gov.ie

Micheál Corcoran

We would like to thank our event sponsor Pfizer

L-R Charles Chavasse Pfizer (Event Sponsor) along with Philip Donohoe IGA President and Eddie O'Donnell IGA council member and dairy farmer

IRISH GRASSLAND and PFIZER Plan For Post Quotas

The Irish Grassland Associations' annual Dairy Conference took place in two venues this year, Navan on Tuesday 11th January (a 1/2 day conference) and Cork on Wednesday 12th January. This was in response to the surge in membership that the association has enjoyed in the past 2 years, especially in the North Eastern part of the country. The event which was titled "Planning for Post Quotas" was sponsored by Pfizer Animal Health and attracted a crowd of 150 delegates to the Navan venue from right across the North East and 300 in the Cork venue.

Commenting on the event William Minchin from Pfizer Animal Health said "We were delighted to sponsor the annual dairy IGA conference held on the 11 and 12th of January 2011. The event underpinned the dedication and commitment of the IGA to grassland and production knowledge transfer to the industry. Pfizer was particularly pleased to see the event incorporate the northern half of the country by holding a well attended half day session in Navan Co. Meath"

Grass is the key

By John Shirley

Irish agriculture is energised these times by the prospect of an explosion in milk output once quota is abolished in 2015. Now that world milk prices are rising there is a growing consensus that Irish dairy farming can prosper when freed of the quota shackles. But rapid expansion brings new challenges, including the threat of a superlevy between now and 2015.

Irish Grassland Association held conferences in Cork and Meath on meeting post quota challenges sponsored by Pfizer Animal Health. While milk price will always be crucial, the meetings again and again, stressed that the key to long term wellbeing in Irish dairy farming will be low cost production off well managed grass.

Teagasc has bought into grass based dairying for Ireland; - bigtime. Increasingly farmers too are adopting grass measurement and implementing the Teagasc budgeting blueprint for season long grass management. This places grass management and the maximisation of grass intake at the heart of the dairy farm business. But there is

Maura Callery IGA Office Manager, Padraig French IGA Vice President and Donal Callery IGA Regional Development Officer at the IGA Dairy Conference in Navan

Sean McNamara, ABC Nutrition and Richard Hinchion, Crookstown Discussion Group who spoke at the IGA Dairy Conference in Cork

still a large group of dairy farmers, including winter milk producers, who consider themselves good users of grass, but for whom milk yield takes priority over grass issues. Many of these herdowners feel that they are restricted by land availability and are stocked too tightly for implementation of the full Teagasc grass package. Not so, insisted the Teagasc dairy specialists at the Grassland meetings. Joe Patton said that even tightly stocked producers of winter milk should aim to get the cows out to grass in February. Apart from the health and milk constituent benefit arising from grass inclusion in the diet, the February start to grazing gives more time for early grass regrowth which in turn leads to a better flow of grass throughout April and May.

Niall O Loughlin, of Nurney Co Kildare, with 140 cows of which 50 are autumn calving, told the Meath meeting that the adoption of grass measurement and budgeting has led to a saving of 6,000 on feed and fertiliser. For the past two years he has put the 50 autumn calvers to grass on the first week of February. His land is free draining but Niall will manage the early grazing to minimise pasture damage. This can mean using an electric fence to provide 12 hour grazing blocks or maybe even shorter grazing spells in wet weather. Later in the season Niall has increased paddock size to allow 36 and 48 hour grazing. He said that this gives heifers a better chance to graze their fill. At all times he has measured the available grass. If supply is short cows intakes are topped up. If grass is in surplus a paddock or more is cut for big bale silage. "Grass budgeting gives me the confidence to increase herd size and stocking rate on the milking platform knowing that I'll still have adequate feed for my cows. This opens the door for more profit from my farming", concluded Niall O Loughlin.

"In the South farmers should aim to turn cows out to grass on February 1 with the first round completed by April 5. Further North, and on wetter farms, turnout to grass, and thus the end of the 1st rotation may need to be delayed by 7 to 10 days" Teagasc specialist Aidan Bugler told the grassland meetings. He outlined a detailed grazing programme which started with cows getting 1/100th of the grazing platform per day in early Feb with this gradually increasing to about 1/20th per day by April 5. "Delayed turnout can result in too much grass on the farm on the 1st round and a scarcity for the 2nd round. Cow intake post calving is about 10kg/dm/day rising to 17-18 kg/dm/day 10 weeks post calving but common sense is required when changing cows from an indoor to a mainly grass based diet" stressed the Teagasc man who is based in Clare.

Managing Milk Quota from 2011 to 2015.

Official Ireland, as in Food Harvest 2020, has targeted a 50% increase in milk by 2020. Judging by the lift in dairy heifers on farms, this dairy expansion is underway. In this, Cork farmers are leading the field with a 28% jump in dairy heifers, next comes Tipperary at + 12%. Waterford, Kerry, Limerick, Wexford and Kilkenny are up about 7%. Against this background and assuming a continued 1.3%/year increase in cow yield, Dr Laurence Shalloo from Moorepark warned the grassland meetings that a superlevy fine could be an issue as we approach 2015. He said that the country remains 2 to 4% under quota for 2011 despite the above quota position at Glanbia and Dairygold. Since quota was introduced in 1984 Ireland has had to pay superlevy fine in 14 years, costing a total €117 Million. 2007/08 saw the last fine. An increase of 9.3% in the Irish total quota between 2008 and 2013 give some room for expansion but a 8 to 9% jump in milk output in the current season signals that we are back on track for rapid growth in milk output last seen in the 1970's. Dr Shalloo said that the EU is to review the milk quota position again in 2012 but he suggested that too much pressure on the Commission could cause a review of the decision to end quota and that is not in Ireland's interest. The Moorepark man said that only the most efficient producers can afford the high price still paid for quota in the South. Looking at options for farmers already on an expansion path and facing a superlevy fine, Dr Shalloo said that his 1st choice would be to reduce concentrate feeding. After that he would look at once a day milking and drying the cows earlier or selling off older cows. He advised against delaying heifer calving from 2 to 3 years of age. In every year that there was a superlevy fine, the country was already above quota in April May June period. Farmers can watch this as an indicator of superlevy fine, the Teagasc man concluded.

The Teagasc Greenfield dairy programme

By Padraig French, IGA Vice President

The abolition of milk quota by April 2015 is anticipated to allow a significant increase in Irish milk production through expansion on existing family farms in addition to new farm conversions from alternative enterprises. This will, for the first time since the early 1980's, enable Irish producers to increase production without incurring additional milk quota costs. There will be significant opportunities for Irish dairy farmers to profitably grow their farm businesses. This increase in milk production will be realized on existing family farms in addition to new farm conversions from alternative enterprises. Teagasc has set about developing a new project in dairying in conjunction with key industry stakeholders.

The overall objective of the programme is to provide family dairy farms who intend increasing in milk production or entering milk production with the necessary skills and technologies to deliver satisfactory financial return to the resources employed. The programme encapsulates different models of expansion each incorporating low cost, high productivity grass-based technologies. It incorporates family owned farms implementing a 5-year expansion plan, demonstrating how best to maximize financial returns on capital employed within a family farm model.

The other model is the development of Greenfield Dairy Farms, the specific objectives of which are to

- demonstrate the design and set up of grass based dairy farms
- demonstrate the profitable operation of relatively large scale grass based units
- to give confidence to farmers considering large scale expansion
- to identify the risks and demonstrate the risk management strategies associated with dairy expansion.

Two Conversion Farms

Teagasc in association with key industry stakeholders have developed two commercial demonstration farms in Clara, Co Kilkenny and Bandon, Co Cork. Both of these farms are set up as stand alone commercially transparent businesses in which all of the land, labour and capital investment has to be funded from the operating profit of the farm. In both situations the land is leased for 15 years at approximately €450/ha and the capital set up cost is borrowed over 15 years with the first two years on interest only. Each of the farms has a number of commercial farms attached that are also undergoing expansion as part of the Greenfield programme, these farms will demonstrate the profitability and risks of growing existing dairy businesses.

The Kilkenny farm began production in the spring of 2010 and the Shinagh farm began in 2011 and Teagasc is currently evaluating the potential of developing a demonstration farm in the west of Ireland.

Table 1 Outline of two Greenfield demonstration farms

	Greenfield Dairy farm, Kilkenny	Shinagh Dairy farm, Cork
Shareholders	Glanbia, Irish Farmers Journal and Farm Owners	Bandon, Barryroe, Drinagh and Lisavaird Co-Ops
Farm Size (ha)	112	79
Approx. cow no.s	320	210
Capital investment	€1.2m	€760,000
Converted from:	Tillage	Drystock/conacre
Capital investment	€1.2m	€760,000
Shareholder equity	€350,000	€260,000
Debt	€850,000	€500,000
Debt/cow	€2650	€2380
Labour	2 full time +relief	1 full time + relief

Managing the risks of expansion

One of the specific objectives of this programme is to identify the risks associated with dairy expansion and develop and demonstrate risk management strategies. One of the first significant risks associated with any significant expansion of a dairy farm business is financial viability. This has become more acutely obvious since the volatility experienced over the last few years. To be able to cope with a volatile milk price scenario, future dairy systems will have to be viable in years of low milk price. On a farm such as the Greenfield or Shinagh dairy farm, on leased land, and full labour costs, it is imperative that farm debt servicing and all cash costs of production are minimised. The key strategy to cope with this risk is minimal capital investment in depreciating assets such as farm buildings and machinery and an absolute focus on maximising the amount of grass grown and converted into milk.

One of the other significant risks associated with large scale expansion is the risk of acquiring stock with an infectious disease which could have a very detrimental effect on animal performance and subsequent economic viability. There are a number of strategies that can be used to manage this risk including minimising the number of herds that stock are purchased from, testing animals for a range of diseases prior to purchase, quarantine of animals post purchase and vaccination for a range of diseases. All of these strategies were used on the Greenfield and Shinagh farm to minimise the risk of an infectious disease entering the herd. Cows were bought in minimum lots of 30 and were blood tested for BVD, Johnes and Neospora prior to entering the herd and all cows are vaccinated for IBR, BVD, Salmonella and Leptospirosis.

The 1'st year's performance at Greenfield Dairy Farm, Kilkenny

In February 2010 the farm commenced milk production after two difficult months of farm yard construction with 75 % of the farm newly reseeded from the previous autumn and 25% still under maize stubble. Two hundred and twenty cows were purchased and arrived on the farm in late January. A further 65 were purchased in mid May and 35 more in September.

Grass production for the farm far exceeded expectation (Table 2) and this facilitated the increase in stocking over projections and a winter silage production surplus of approximately 30%. To utilise this extra production, stocking rate will be increased significantly in 2011 to 2.75 cows/ha with a target of 300 cows milking in mid-summer.

The milk solids output from the farm was 5.5% below target and this deficit occurred in early spring when the farm was under stocked and all of the calves were reared to weaning on-farm as the farm was restricted by TB eradication rules as it sought to acquire a new herd number. From mid-summer onwards the output exceeded expectation.

Overall animal health on the farm was good which justified the capital investment of approximately €35,000 in disease screening and vaccination. Calf and cow mortality were much lower than expected which in a large part can be accredited to the skilled staff employed on the farm. Culling rate was substantially lower than target and was mainly attributed to infertility, mastitis and lameness. The cows on the farm were purchased from eight herds and the survivability was very influenced by herd of origin with the lowest culling (<10%) on herds of first lactation animals and highest (>25%) with older and smaller herds. For the Shinagh farm only first lactation animals were purchased

The cash surplus generated on the farm was very close to that projected however this masks considerable divergence from projections in a number of key areas. Milk price was significantly higher than forecast but milk production was slightly lower due to the factors outlined above. The surplus of winter feed produced on the farm and the purchase of unused winter feed for the previous winter negatively impacted on cash-flow but has provided a significant buffer against future feed shortages.

Table 2 Target and actual outputs from the Greenfield farm in 2010.

	Target	Actual
Cow numbers	250	220-280
Grass production (t DM/ha)	9.5	16.09
Milk solid sales (kg)	88,018	83,197
Cow mortality	6%	2.20%
Culling rate	27%	21.9%
Calf mortality	7%	5.53%
SCC	<200,000	178,909
cash surplus	24093	22439

Lessons learned from Greenfield and Shinagh Dairy farms to date

- The investment in animal health paid off with no outbreak of an infectious disease on either farm to-date
- First lactation animals were a much better investment than older animals due to lower culling and mortality rates
- Segregation of high SCC cows in a second herd was very effective at controlling bulk SCC
- Project management of the conversion to dairying over a very short timeframe is very demanding and can lead to significant capital overrun if not managed properly
- Cash flow management during conversion and first season production is very difficult but critical to the success of any new dairy business.

These dairy farms will provide clear information for those considering either the expansion of existing dairy operations as well for new dairy farm conversions. It is hoped that this information will be of significant help to those suppliers who are planning a long term future in profitable, low cost milk production.

A new Era for Cattle Breeding in Ireland

Pat Donnellan

When people hear of a database, they often think of a computer with a large volume of information relating to a certain sector, and they would not be far wrong, but the use that this data can be put to is often not immediately clear.

The establishment, in 2000, of the ICBF Cattle Breeding Database in Ireland is one such example of a database. The ICBF database has strong links with many different important beef and dairy organisations within Ireland and has changed how they manage their data. Instead of each organisation being a stand-alone entity in terms of data gathering, storage and use, they now use the ICBF database, which has removed duplication of information (e.g. Dates of birth).

Any organisation using the database benefits greatly in terms of efficient management of the required data. Farmers interacting with these organisations also benefit as the duplication of data has been removed and there is much more 'value add' in terms of information received back from the database. . Many different animal activities now involve the ICBF database. Too many to mention but to just zone in on one area that has benefited from the use of the database is the National Beef Progeny Test program, also known as 'G€N€ IR€LAND'.

Centralised Progeny Testing

Progeny testing of beef bulls in Ireland up until the early 2000's was carried out by each AI Station, usually on the farmland surrounding their AI Stud. Thiswas called the 'Centralised Progeny Test' program and was overseen by DAF Liaison Officers. Farmers were surveyed to find out how easily (or not) the first calves from the new Progeny Test Bulls were born. The AI Stations would then purchase between 10-20 calves from their new beef and dairy test bulls. These calves were always out of dairy cows. They would also purchase calves from well proven beef and Holstein bulls so as they would have animals to compare their test bull's progeny against. They would rear all of these calves together, weighing them regularly before finally slaughtering them and recording their carcass data. It was a system that served the Irish AI industry well and was a method through which many top beef AI sires were identified. That said, like any process, there were areas that could be improved. Two of which are the following:

1. First Breeding Values never updated

Each test bull got one set of genetic evaluation figures based solely on those calves purchased for the 'Centralised Progeny Test' and the figures would remain the same for the lifetime of the bull, with no new data ever being recorded on their progeny. Like any assessment process, the more information you have, the more confidence you will have on which to draw your conclusions. New progeny being constantly included in a bull's proof ensures that the estimation of his genetic strengths and weaknesses are continuously improving.

2. Progeny Test Results limited to Bulls in AI Stations only

It was also only those young beef bulls purchased by and standing in AI stations that were progeny tested. Stock bulls or imported AI sires never had the opportunity to have their progeny compared against the progeny of these AI station owned AI bulls.

G€N€ IR€LAND Progeny Test Program – a new era

The establishment of the 'Animal Events' on-farm data recording system and the ICBF database allowed the progeny testing of bulls to move to an 'On-Farm' approach and hence 'G€N€ IR€LAND' was launched. This meant that AI stations no longer had to safeguard the recording of data on their new test bulls by purchasing progeny and rearing them through to slaughter. It also meant that with fresh data being constantly recorded, a bull is effectively always on 'Progeny Test' with his breeding values constantly moving until such time as so many of his progeny have had data recorded on them that his figures do not move any more.

G€N€ IR€LAND Process:

- Bull Owner makes 700 straws of young bull available for progeny testing.
- ICBF signs up herds willing to use G€N€ IR€LAND test bull semen.
- Herd owner records 'On-farm' data through the ICBF database (calving ease, liveweight, etc).
- ICBF stores 'Off-farm' data through ICBF

member organisations (mart, factory data, etc).
- ICBF includes all available data in its Genetic Evaluations (January, April and August).
- ICBF publishes the results of these evaluations in the form of '€uro-Star' Indexes.

An example of how the ICBF database allows the data recorded on the progeny of a young bull to build up over time, and how his genetic evaluation reflects this data is the Calving Survey records for the Charolais Testbull 'Roundhill Doc 1068' owned by 'Dovea AI'. The bull entered the G€N€ IR€LAND program in 2009. A summary of calving ease, gestation and mortality data recorded on his progeny so far is shown below, as is the effect of this data on his genetic evaluations.

Number of Progeny Records			
Date	Calving Difficulty	Gestation	Mortality
Jan 2011	390	135	368
Aug 2010	298	102	284
April 2010	50	13	44
Jan 2010	11	0	11
Aug 2009	0	0	0

Genetic Evaluations		
Date	Calving Difficulty %	Reliability %
Jan 2011	8.52	95%
Aug 2010	8.34	94%
April 2010	6.31	66%
Jan 2010	6.53	52%
Aug 2009	7.83	45%

As the number of calving survey records increases over time – the 'Reliability %' figure also increases. A progression of a bull's Genetic Evaluation results over time can be seen on **www.icbf.com.**

The system means that there is now a level playing pitch and that all sires, regardless of whether they were in AI stations, imported in straws or were stock bulls on farm, can be evaluated in the same way.

Although AI Sire's will of course have the opportunity to have more progeny on the ground across more herds, over time a farmer filling in the Animal Events book, selling breeding bulls and in-calf heifers can quickly build up a lot of progeny data on a particular stock bull. An example of a stock bull that was not 'Progeny Tested' but who, over time, built up enough progeny records of his own to allow comparison with some of the top AI Bulls is

the Limousin stock bull turned top AI Sire 'Roundhill Saturn' owned by Ray Carolan, Co. Cavan and bred by Tim and Doreen Corridan, Co.Limerick. His semen is now marketed by NCBC.

Born on the 15th December 2001, he is sired by 'Ideal 23' and out of a 'Geant' cow 'Roundhill Meridian'. Ray has been recording all of his progeny (mostly pedigree) through Animal Events over the years. The calving, linear score, weight and carcass data that has been recorded on his progeny and grand progeny have resulted in his €uro-Star ratings to rank him up above most AI Sires.

This bull is a prime example of how the ICBF database allows a bull to demonstrate his genetic merit while still being an on-farm stock bull and then make the transition to being an AI sire – appearing alongside the top ranking beef AI sires.

Roundhill Saturn - RHN				
€uro-Star Rating (ICBF,Jan 2011)				
% Rank	Star Rating (Within Breed)	Index and Traits	€uro-Value	Data Reliability
99%	★★★★★	Suckler Beef Value (SBV)	€162	71%
99%	★★★★★	Weanling Export	€82	78%
98%	★★★★★	Beef Carcass	€118	79%
99%	★★★★★	Daughter Fertility	€66	23%
76%	★★★★	Daughter Milk	€29	40%
Other Key Traits				
79%	★★★★	Calving Difficulty (% 3 or 4)	4.21%	86%
99%	★★★★★	Gestation Length (Days)	2.71 Days	53%
72%	★★★★	Docility (1-5 score)	-0.04	81%
Source: www.icbf.com - Bull Search				

UPCOMING EVENTS

Suckler/beef tour to Scotland

The Irish Grassland Association propose hosting a 3 day suckler/beef tour to Scotland in September provided enough members express an interest in attending. The suggested programme is as follows:

- A visit to 2 suckler farms that operate different wintering and grazing methods.

The first farm out winters all 300 cows on pads sheltered by sand dunes, with all replacement stock sourced in Ireland.

The second farm of 200 PBNR limousin cows run on leased land and produces top quality stock.

- The third visit will be to an Intensive beef farm which supplies a local meat plant of a farm which has diversified into recycling of green waste from the local council and also an adventure trail, which generates substantial off farm income.
- There will be numerous other stops along our journey to make it more enjoyable.

The organisation of this tour is subject to a minimum of 40 delegates traveling. We encourage you to contact us if you are interested in finding out more information so we will know whether to progress the organisation of this event.

For further details and also to let us know if you are interest, please contact our midlands regional development officer Gerard McBrien by calling (087) 7990179 or emailing gerard@irishgrassland.com before Monday 2nd May.

Summer Tour

26th July 2011

Updated information will on the IGA Website www.irishgrassland.com and in your next newsletter

UPCOMING EVENTS

Grassland Event, Cavan

Our regional development office in the North East Donal Callery is in the process of organising a regional event in Cavan in mid-May. The event will cover some of the following topics and live demonstrations:

1 Clover stitching
2 Soil testing benefits and the value of lime
3 Cost of fertiliser and how to calabrate your fertiliser spreader
4 Value of slurry
5 Weed control on grassland

Dates and updates will be updated on the website www.irishgrassland.com. Two complimentary tickets will be posted out to all members prior to this event.

If you have any further thoughts on the above topics or what other items should be covered on the day, call Donal on (086) 2108168 or email Donal@irishgrasslad.com.

Reseeding Events 2011

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Limerick, 28 April 2011, 11am
Galway, 4 May 2011, 11am
Tipperary/Westmeath TBA

GERMINAL SEEDS

Dave Barry Goldcrop and Oliver Vaughan Germinal Seeds (joint event sponsors) along with Deirdre Hennessy IGA council member

For further information about this event you can contact our Office Manager Maura Callery, Irish Grassland Association, Cookstown, Kells, Co. Meath (087) 9626483.

We would like to thank our joint reseeding event sponsors Germinal Seeds and Goldcrop

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