



TEAGASC

March - April 2014 | Volume 25 | Number 2

# Today's Farm

Business, production, environment and countryside issues [www.teagasc.ie](http://www.teagasc.ie)



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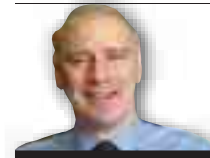
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## COMMENT



**Mark Moore**  
Editor,  
Today's Farm

### Seizing the initiative

The sight of early-born lambs starting to gather in gangs is a sure and joyful indicator that spring is here. Hopefully we'll have a year of more normal weather conditions rather than last year's deluge followed by a glorious late summer, followed by yet another deluge. Many rivers are still over-full and fields flooded. Crucially, farmers must not succumb to the fatalism that can result from weather of apocalyptic character.

This edition is full of indications that farmers are taking the initiative and making progress: Mayo farmers are using DNA-testing to help copperfasten the desirable traits of the Mayo-Connemara Blackface breed. Dairy farmers are taking practical steps to improve labour efficiency. Farmers generally are seeing available soil phosphorus levels improving thanks to effective use of lime and bagged fertilizer.

We also have a story, in the forestry section, of a farmer who sold his cows, bought a guitar, and followed his dream. Carpe Diem is always good advice.

### Dul in aghaidh na gnáthchéille.

'An glan as do mheabhair atá tú?' – is é seo an freagra a fuair roinnt feirmeoirí stoic thirim nuair a d'inis siad do chomharsana dá gcuid go raibh ar intinn acu dul isteach san fheirmeoireacht déiríochta. Agus déanta na firinne, próiseas deacair, strusmhar, costasach is ea an próiseas athraithe. Ar an taobh geal den scéal gheofar réidh leis na cuótaí go luath agus éireoidh an t-athrú beagán níos éasca dá bhrí sin.

Is mó is cruá é an t-athrú seo d'fheirmeoirí lasmuigh de chroíthailte déiríochta na Mumhan agus d'áiteanna áirithe i gCúige Laighean, ní hamháin de bharr go mbíonn cineál agus riocht nádúrtha na hithreach agus an aimsir ábhairín níos lú fabhrach don fheirmeoireacht déiríochta (cé nach suntasach na míbhuntáistí seo i ndáiríre), ach de bharr gurb iadsan na ceannródaithe in áiteanna a ndeachaigh an déiríocht i léig fadó.

Slí bheatha dhlísteanach, uasal is ea an fheirmeoireacht stoic thirim, ach cén fáth nach mbainfeá triail as an bhfeirmeoireacht déiríochta dá bhféadfá ioncam níos fearr a fháil ar an iarracht chéanna agus ar bheagán riosca shobhainistithe sa bhréis?

WHERE  
THERE'S  
WATER,  
THERE'S LIFE

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**Cover** | The Mayo-Connemara Blackface ewe has developed and evolved on the various upland and commonage habitats in the region and has the foraging instincts to travel to higher peaks and inaccessible areas that lowland crosses do not have either the ability or the instinct to achieve. Galway and Mayo farmers are taking DNA samples from rams and tagging ewes to help prevent inbreeding and protect the breed.

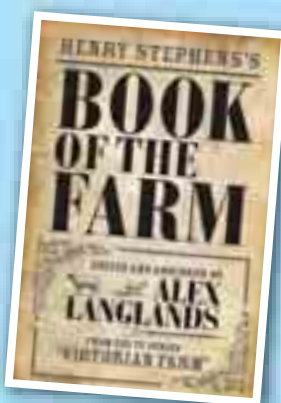
**BOOK REVIEW**

**Henry Stephens's Book of the Farm**

Edited and abridged by Alex Langlands (Batsford)

Starting with winter and working through the seasons, the work of the conscientious farmer is clearly set out in *Book of the Farm* and the emphasis throughout is on practical advice. It originally appeared in six volumes in the 19th century but this smart new edition has weeded out material no longer relevant.

The result is still a historical document but, surprisingly, full of information that can be read with interest and thought.



The advice on the lambing of ewes is as sound today as when it was written and there is plenty of sensible guidance on such matters as the building of stone dykes, planting of potatoes, training a dog, weaning calves, liming soil and sowing seed. Other sections, on topics like hay-making, stacking wheat and sowing turnips retain their value and, throughout the pages, there are superb illustrations that add to the joy of having this book on the farmer's shelf.

– Sean Sheehan

Henry Stephens's *Book of the Farm*, available in good bookshops, costs €18 from The Book Depository ([www.bookdepository.co.uk](http://www.bookdepository.co.uk)) and this includes postage to Ireland.

**Monitoring grass from space**

The Spatial Analysis laboratory in Teagasc, with partners in the Department of Geography, UCC, is developing new tools to estimate grass growth in Ireland using satellite imaging. The aim is to be able, within a few years, to give very local measurements of growth rates and, more importantly, predictions for growth over the coming few days, or even weeks.

Having developed complex computer-based crop models, the scientists are able to compare current growth, as seen by satellites passing overhead each day, with the model. They can then calculate whether the growth is on target or lagging behind where it would normally be in a particular area.

Later this year, Teagasc aims to offer an online service which will allow users to select their townland and see how growth is doing compared with an average year. "Ultimately, we hope to offer grass growth forecasts which will be available in much the same way as weather forecasts are," says Teagasc Ashtown researcher Stuart Green.

(Teagasc TRResearch)

**Avoid obesity with milk proteins**

Teagasc scientists have discovered that whey protein (a by-product of cheese or casein production) could help us to avoid becoming overweight. In a paper in the *British Journal of Nutrition*, the Teagasc Moorepark scientists reported that mice fed a high-fat diet with a whey protein isolate gained less weight than mice who were fed a similar diet without the whey protein.

**Energy**

According to Dr Kanish Nilaweera, Teagasc Moorepark, the mice getting the whey laid down more muscle, which is energy demanding, so they had less surplus energy to lay down fat.

Ultimately, the scientists hope that their work will help to identify exactly which whey proteins are causing this effect and whether they will also work in humans.

In the meantime, for those of us who would like to shed a few kilos, more exercise and fewer calories remains the only solution!

(Teagasc TRResearch)

**Pesticides publication**

A new revised 13th edition of *Approved Pesticides for use on Vegetable Crops* has just been published. This book is a quick reference spray guide to what growers can legally use on vegetable crops. Please email Stephen Alexander at [stephen.alexander@teagasc.ie](mailto:stephen.alexander@teagasc.ie) for a free copy. It's also available as a PDF download from the Teagasc website.



**Silage stocks and slurry movement**

Heavy rainfall in late February has led to delayed turnout of stock and postponed fertilizer spreading. As a result, silage stocks are starting to tighten on many farms. Farmers are encouraged to:

1. Walk the farm and target the driest fields for grazing first. Having two-thirds of the grass grazed by St Patrick's Day or slightly later may be more difficult to achieve this year.

Graze the medium cover fields (approximately 800kg to 1,000kg DM/ha) first to allow a greater area to regrow from early to mid-March.

Graze the heaviest (in terms of



If you are short of feed, it is important to act now, and not wait until you have completely run out of silage before taking action.

covers) third of the farm next. Grass continued to grow over the winter on many farms this year so average farm cover is higher than usual. When grazing conditions improve, such covers will allow you to turn more stock than usual out to grass. Should conditions continue to be difficult, use on-off grazing to get grass grazed.

**2.** If you are short of silage, it is important to act now, and not wait until you have completely run out of silage before taking action. Assess current fodder stocks. Be realistic about turnout date and allow an additional buffer of two to three weeks.

**a.** Use meals and straw/hay to stretch silage. Feeding an additional 2kg to 3kg of meals per day can save 30% to 40% on silage demand, provided access to the silage is restricted.

**b.** Keep the silage for the cows post-calving. These animals cannot be restricted on silage or straw. In herds where milk quota is an issue, maintain energy intake and keep a close eye on cow condition.

**c.** Put late-calving dry cows on restricted silage as well as straw and meals (assuming 3kg straw plus 2kg meals). Avoid making big changes to cow diet in the three weeks before calving. Keep a close eye on cow condition – cows in poor condition cannot be restricted in late pregnancy.

**d.** Consider ad-lib concentrates plus minimum roughage for ewes pre-lambing and for finishing stock.

**3.** Have fertilizer in the yard ready to spread once conditions are appropriate. The target fertilizer N application rate for March is 23 to 40 units N/acre (28kg to 49 kg N/ha). Apply 40 units at stocking rates of above 1.6 livestock units/ha; 23 units/ac at stocking rates below 1.4 LU/ha and 30 units/ac at stocking rates in between. Urea is a third cheaper and safer to use in March than CAN on practically all soil types. None are safe to use on waterlogged ground.

**4.** Don't apply slurry in conditions which will cause soil damage or risk potential losses of slurry to waters.

**a.** Where tanks are full and storage

capacity is limited, only apply slurry on drier and flatter fields where the potential risk of waterlogging and/or run-off is minimised. The required set-back distances from water-courses must also be observed when applying slurry. Where only a limited amount of land will permit application, aim to apply only enough slurry to allow capacity for the next two to three weeks. Applying more dilute slurry (for example, by taking water from unagitated tanks) may also reduce the risk of nutrient losses.

**b.** Moving slurry to another farm should be considered where tanks are full and no fields permit spreading. Records of slurry movements must be kept and submitted to the Department of Agriculture before the end of year under the requirements of the Nitrates Regulations. Note that slurry movements can also affect compliance with the 170kg/ha stocking rate limit on receiving farms.

# upcoming events

## AGRICULTURAL RESEARCH FORUM

The Agricultural Research Forum will take place on 10 and 11 March in the Tullamore Court Hotel, Co Offaly. This meeting provides an opportunity for the presentation and publication of new scientific information relating to the Sciences of Agriculture (including animal and crop science, molecular biology and biotechnology), environment, soil, food, agri-economics and forestry. The conference places emphasis on novel, high quality research and on the professional presentation of results. The forum will provide an opportunity for scientists, specialists, advisers and others working in the above areas to interact and exchange views.



The Agricultural Research Forum will provide an opportunity for the presentation of new information on areas such as forestry.

## TEAGASC/IRISH FARMERS JOURNAL BETTER FARM BEEF PROGRAMME WALKS

On 11 March, farmers will have the opportunity to visit Trevor Minnion's farm at Trevalhean, Ballintreskin, Co Wicklow. The other two events are on 20 March at Mark Maxwell's, Knockcosker, Balinagore, Co Westmeath, while Charlie Crawford, Alt, Castlefin, Co Donegal, will host a walk on 22 April.

» Continued on page 8

## Schedule of events for March and April

March		
11 March	BETTER Farm Beef Event	Trevor Minnion, Co Wicklow
10 & 11 March	Agricultural Research Forum	Tullamore Court Hotel
11 March	College Open Day	Clonakilty Agricultural College
13 March	Dairy Expansion Seminar Series	Horse & Jockey
19 March	College Open Day	Gurteen Agricultural College
20 March	College Open Day	Ballyhaise Agricultural College
20 March	College Open Day	College of Amenity Horticulture, National Botanic Gardens
20 March	BETTER Farm Beef Event	Mark Maxwell, Co. Westmeath
27 March	College Open Day	Pallaskenry Agricultural College
27 March	Teagasc & RDS Public Lecture	RDS
April		
4 April	College Open Day	Kildalton Agricultural & Horticultural College
9 April	Dairy Open Day – Kilworth Farm Open Day	Dairygold Farm, Fermoy, Co Cork
17 April	Farm Partnership Conference	Clonmel Park Hotel
22 April	BETTER Farm Beef Event	Charlie Crawford'S, Castlefin, Co Donegal
April*	Series of Forest Walks on Early Forest Management	Nationwide
April*	Dairy Discussion Group Open Day	Clonakilty College
April*	Dairy Discussion Group Open Day	Ballyhaise College
April*	Dairy Discussion Group Open Day	Greenfield Kilkenny
April*	Spring Tillage Crops Walks	Nationwide
April*	Mushroom seminars	Tipperary and Monaghan
April*	Food Gateways Event	TBC

\*See www.teagasc.ie for dates



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Teagasc Mayo, in conjunction with Aurivo Co-Op, is holding an 'Introduction to Dairy Farming' course starting on 1 April.

» From page 6

## COLLEGE OPEN DAYS

Open days for prospective students of agricultural colleges start on 11 March in the Teagasc Agricultural College in Clonakilty. An open day will be held at various colleges in March and April. See listings on page 6. These provide prospective students and their parents with an opportunity to visit the facilities and hear more about the courses on offer.

## DAIRY EXPANSION SEMINAR

A seminar on dairy expansion will take place on 13 March in the Horse and Jockey Hotel, Co Tipperary. The theme of the event is a high level discussion of the farm level challenges that will be faced in bringing about an expansion in Irish milk production.

The seminar will include a review of the findings of a recent report produced by Teagasc examining how expansion objectives should be communicated and measured.

The event will include a presentation of the new Teagasc dairy score card

system, which will be used to benchmark the expansion of individual Irish dairy farms, against comparable farms from 2015 onwards. The seminar will also include a review of the expansion experience of Northern Ireland during the quota era and a comparison of the economic performance of Northern Ireland dairy farms with dairy farms here.

## DAIRY DISCUSSION GROUP OPEN DAYS

Open days for dairy discussion groups will take place in Clonakilty on 1 April, in Ballyhaise on 16 April, and on the Greenfield Kilkenny farm on 14 May. This will provide active discussion group members with an opportunity to be updated on the dairy research farms in the two colleges and also on the latest developments from the Greenfield farm in Kilkenny.

## TEAGASC RDS LECTURE SERIES

The date of the fifth lecture in the Teagasc RDS lecture series has been changed. It will now take place on 15 April in the RDS. 'Is Better Global Governance of the Food System the Answer?' is the subject for the lecture to be deliv-

ered by Dr Maximo Torero, director of the markets, trade, and institutions division at the International Food Policy Research Institute (IFPRI), Washington DC.

## INTERESTED IN BECOMING A DAIRY FARMER?

Teagasc Mayo, in conjunction with Aurivo Co-Op, is holding a 25-hour 'Introduction to Dairy Farming' course starting on 1 April. This is one year to the day before milk quotas will be abolished. The abolition of quotas offers new opportunities for farmers who wish to begin milk production from 2015 onwards.

The course will be held in the Teagasc office, Claremorris, once a week over five weeks. In addition to classroom sessions, there will be a number of visits to dairy farms in the region.

The course will outline the key elements required when starting out in dairying: financial planning, infrastructure and grassland management.

Further information on the course can be obtained from the Teagasc office, Claremorris, 094-9371360 or any Teagasc office in the Mayo region. The course is open to all but booking is essential.

Very occasionally, distribution factors may result in *Today's farm* arriving with some readers after an event has taken place.





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William and Martin Flynn.

## Family tradition in tomatoes

This young north Dublin grower is investing in a state-of-the-art glasshouse which will produce the equivalent of 240 tonnes of tomatoes per acre

**T**omato growing has been synonymous with north County Dublin for more than 50 years. During its heyday in the 1970s, tomatoes were being exported from Dublin to Liverpool.

As recently as 1980, there was 240 acres of heated glasshouses growing tomatoes in the country, mostly located in a north County Dublin horticultural triangle of Rush, Lusk and Skerries.

Due to increased international competition, and rising production costs, only about 20 acres of glasshouse tomatoes are grown in Ireland today.

With advances in technology and design, modern glasshouses produce four times the fruit that glasshouses in the 1980s would have been capable of. A state-of-the-art glasshouse can yield 245 tonnes of round tomatoes

per acre in the season from April to October.

Modern glasshouses are typically six metres high and have extremely efficient heating and environmental control systems. This is a very sustainable way of growing food, with the carbon dioxide generated from the heating systems purified and pumped back into the glasshouse.

This is a necessity as modern glasshouses can contain 22,000 tomato plants per hectare and, when growing rapidly on a sunny day, they can lower the ambient levels of carbon dioxide in a glasshouse by 25% in just a couple of hours.

Typically, a tomato crop will absorb about 18 tonnes of carbon dioxide (CO<sub>2</sub>)/ha/yr, but if carbon dioxide is supplied in excess of ambient levels the crop is capable of fixing far more.

### Challenge

It is the challenges, opportunities and the technologies involved in glasshouse growing which first attracted Martin Flynn to look at investing in a modern glasshouse.

Martin, a recent graduate from UCD, is from a tomato-growing family in north County Dublin.

"My father and I currently grow tomatoes in Cambridge-style venlo glasshouses, which are about 40 years

old," said Martin. "But the demand for tomatoes earlier in the season and the need to increase volume has led me to investigate building a new glasshouse."

### Investment

"This is not a decision to be taken lightly as a hectare of modern glass equipped to grow tomatoes will cost over €1m," according to Dr Michael Gaffney of Teagasc. Martin believes that the increasing demand for Irish-grown tomatoes from supermarkets means there is great potential.

"I believe that people prefer Irish-grown tomatoes as they are left to ripen on the vine," says Martin. "Vine ripened tomatoes are usually tastier and more aromatic. A lot of the imported tomatoes are picked earlier and ripen in transit."

With construction due to commence in the coming months, Martin's father William said: "It's great to think that Martin will be going forward and developing the family business. "I remember my own father growing tomatoes in wooden houses here in the '60s, which I replaced with the current structures in the '80s and, while the technologies have changed dramatically, our goal remains to continue to supply great quality tomatoes to our customers."

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# soils

# Positive news on grassland Phosphorus

## Changes to nitrates regulations mean more P can be used on grassland

**Stan Lalor, Teagasc**  
Crops Environment and Land Use Programme, Johnstown Castle.

Changes to the nitrates regulations have resulted in significant increases in the rates of Phosphorus (P) fertilizer that can be used on grassland. The recently announced changes will result in the permitted rates of P fertilizer being more closely aligned to soil and sward requirements. More specifically, the new rules provide considerably more scope to address low soil P fertility issues on farms. Low levels of P in soils has become an increasing issue in recent years.

These changes took effect on the first of January 2014. (Note that records currently being submitted by farmers for 2013 must comply with the old rules that were in place in 2013).

### Changes in grassland P

There are three main amendments to how the grassland P allowances are calculated. These are summarised in Figure 1 (page 13). In short, the changes have increased the overall P allowance on farms above 1 LU/ha (85 kg/ha or organic N), and reduced the impact of concentrate feeds and slurry on the allowance of chemical P

fertilizer. The net result will be an increased P allowance on many farms; on some farms P can be applied where it has not been allowed for years.

Figure 2 describes the impact on a 40ha farm under the new and the old rules. It is important to note that specific allowances of P will vary between farms due to differences in stocking rates, soil test results and concentrate feed inputs. It is also important to have the calculations done for your own individual farm circumstances.

The example shown assumes 750kg of concentrate feed, and that the farm is all in grass. Additional P is also permitted for reseeding, but this is not included in this example. It is also assumed that the whole farm has been soil tested, and has an even spread of soils in Index 1 (very low), 2 (low), 3 (optimum) and 4 (high).

The graph shows that:  
1) Even though the total P allowance has been decreased on farms stocked at <1 LU/ha, the chemical P allowance has still increased slightly due to the changes in the concentrate feed and slurry P adjustments. However, this would not be the case if no soil test results were available.  
2) The chemical P allowances on the more highly stocked farms have gone up by a factor of between 2 and 3. For



it is important to look at the farm's requirements, and match fertilizer to the needs of your soils and your farm system.

example, at 2 LU/ha in this scenario, the increased P allowance is 240 kg of P, which would equate to an additional four tonnes of 18-6-12 on the farm.

### Soil testing is critical

The biggest change is the 'reduced availability of P' in slurry. However, this requires soil test results to be available on the farm. This is critical. In the past, soil test results were perceived negatively by farmers as the identification of Index 4 soils dramatically reduced the P allowed on the farm overall. Under the new rules, the soil test results are the key to being allowed to apply more P rather than less.

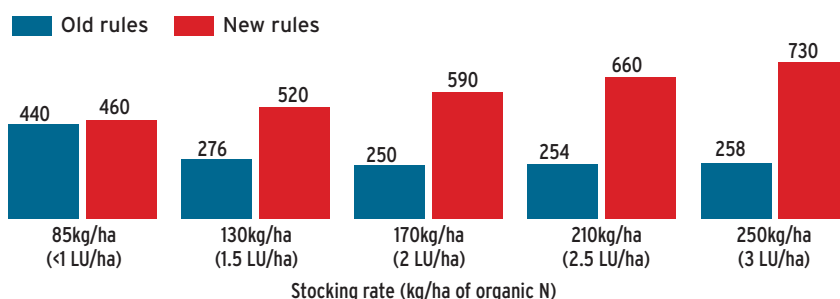
All farmers should be getting soil test results for the whole farm to ensure that the fertilizer applied to each field is appropriate for the soil and plant requirements.

Fertilizer is too expensive to be making decisions in the absence of soil tests results. Slurry and organic fertilizers should be targeted to fields that are low in P and K based on soil test results.

The advantage with the new rules is

**Figure 2**

Effect of new regulations on a 40ha farm - Chemical P fertilizer allowed (total kg over 40ha)





**Figure 1**

Three elements of the changes in grassland P fertilizer allowances under new Nitrates rules

1

**Total P allowances**

- These have increased by 1 kg/ha on farms stocked above 1 LU/ha, and by 2 kg/ha on farms above 1.5 LU/ha
- P allowances have been decreased on farms below 1 LU/ha, but these farms can apply extra P if growing silage or hay for sale

2

**P in concentrate feeds**

- The P in the first 300 kg of concentrates fed per LU is no longer counted against the fertilizer P allowance
- The provision to discount the first 500 kg of concentrate feed per LU that was announced during the fodder crisis in May 2013 remains in place in 2014

3

**P in organic fertilizers**

- The availability of P in organic fertilizers is reduced from 100% to 50% when applied to a field with a low soil P level (shown as Index 1 or 2 on a soil test).

that farms which have a genuine requirement for additional P now have more flexibility to use it. However, just because the P allowances might have gone up on the farm, it doesn't mean you have to spread it!

There are many cases where the additional P may not be required, or is not cost-effective to apply. So it is important to look at the farm's requirements, and match fertilizer to the needs of your soils and your farm system.

**It's not only about Phosphorus**

Also remember that while the new rules focus specifically on P, other nutrients such as lime, potassium (K) and sulphur (S) are also critical. While the regulations put a strong focus on P, getting all of these nutrients supplied in the correct proportions is critical. Having sufficient K and S as well as P is essential if you are to maximise the return on N fertilizers.

Grazed swards will require between 15 and 40 kg/ha of K for maintenance. Silage swards require 125 kg/ha of K for first cut and 35 kg/ha for second

cut. Apply slurry on soils low in K to build fertility. (To convert to units/acre, multiply kg/ha by 0.8)

Lighter soils tend to respond to S application. Apply 20 kg/ha/yr to grazed swards. Ideally apply this in three splits of 6-7 kg/ha between April, May and late June or early July. Apply 20 kg/ha of S per cut of silage on lighter soils.

**Organic fertilizers**

Farms with lower stocking rates have the option of importing organic fertilizer onto the farm to offset chemical fertilizer requirements.

Pig slurry is an excellent fertilizer for grassland, especially as a cost-effective way of rebuilding soil P fertility levels.

Having soil test results is essential if you are to avail of this. Ensure that organic fertilizers are targeted to fields that will give the best response. Check with your adviser to see how much organic fertilizer you could transfer onto the farm. You may be pleasantly surprised to see how much you could potentially save on bagged fertilizer!

# REDUCE YOUR WORKLOAD

Following a survey of labour usage last year, dairy discussion group members have reduced labour input on their farms

**Pat Clarke,**  
Teagasc Animal & Grassland  
Research and Innovation Programme

**D**airy herd size has been relatively static over the last 10 years but is likely to grow rapidly in the years after quota abolition. This will put increased pressure on resources. Normally, we think about cubicles, slurry storage, roadways and paddocks when resources are mentioned, but labour (workload) is often overlooked and it will become a limiting factor on dairy farms.

Last year, 12 dairy discussion groups completed a survey of labour usage on their farms. The aim was to:

- Quantify the labour input for each farm.
- Find the average labour input for the discussion group.
- Identify the most labour efficient farms and the factors which are contributing to efficiency on these farms

After completion, each farmer received an individual report and a group report. While anonymity was retained, each farmer could benchmark himself against the group and the most labour efficient farms. Currently, over 500 farmers have completed this analysis for their farm.

Some of the key points learned from the 500 farms were in relation to cows

per labour unit, total farm labour per day, acceptable working week:

## Cows per labour unit

One labour unit is classified as 1,800 hours work in the year. The average herd size was 95 cows for the 500 herds and the hours of work required per livestock unit was 33. This is equivalent to one labour unit managing 55 livestock units. National Farm Survey data, which represents the average herd size in Ireland, shows that, nationally, just 40 livestock units are being managed per labour unit.

## Total farm labour per day

The total hours worked per day were 13.6, with the farmer accounting for 9.1, family members 2.7 and employed labour 1.9 hours. Farm variation

“ One of the key differences was that the top 10% finished their working day about one hour earlier. This was a result of starting the evening milking about one hour earlier

within this breakdown created a lot of debate within discussion groups, especially where the farmer or family were working long hours

## Acceptable working week

All farmers were asked: “What is an acceptable number of hours to work per week?” The average response was 59 hours (ranging from 39 to 80). The actual hours worked were calculated at 64 hours per week. This difference is the starting point for any discussion on labour efficiency on a dairy farm. Once farmers identified that they wanted to work fewer hours, they had a target to aim for.

## The most labour efficient farms

Some of the key differences between the average farms and the top 10% are outlined in Table 1. One of the key differences was that the top 10% finished their working day about one hour earlier. This was a result of starting the evening milking about one hour earlier.

The farmers examined many aspects associated with labour efficiency, e.g. grassland, breeding, machinery use, office work and facilities.

Calving and calf rearing are in full flow at the moment. The panels list the experiences that farmers say have reduced labour input for these two jobs.



## Calving

- Compact calving: Simplifies calf and heifer rearing and gives a break before breeding. Extra help may be required at this peak period.
- Downer cows: Use preventative practices, e.g. correct calving body condition, adequate feeding, dry cow minerals and batching cows to prevent downer cows.
- Freshly calved cows: Keep in a separate group to the milking herd, near the parlour and milk once a day (morning only).
- Easy-calving sires will reduce the number of assists during calving.
- Night feeding of silage: Feeding cows late in the evening after a restricted period results in more calvings by day.
- Calving camera: Reduces the time spent travelling to/from the calving facility.
- Group calving: Reduces the feeding time and observation time.
- Outdoor calving: Reduces the need for bedding.
- Two-year-old calving: Fewer groups of replacement stock to manage.

## Calf rearing

TOP TIPS

- Group feeding: Individual pens require more feeding, bedding and cleaning time.
- Calf movements: Get calves settled in their weaning pen quickly and minimise the movement of calves from pen to pen.
- Cold milk: Calves will perform satisfactorily when fed cold whole milk once daily, which will allow them to be fed at an off-peak time during the day.
- Outdoor rearing: Rearing calves outdoors with shelter will reduce the labour needed for bedding.
- Milk transfer by pump: Pumping systems for milk transfer from dairy to calf house and within a calf house will reduce manual labour and reduce the feeding time.
- Calf feeder on a quad bike: Easy movement of milk from parlour to calf house and calf-rearing paddock.
- Mechanical cleaning of calf houses: Doorways with access for a loader for quick and easy cleaning.
- Adequate facilities: New facilities may be required as the number of calves reared increases.

**Table 1:** Some key measures of labour efficiency for 506 farmers in dairy discussion groups (2012 and 2013) and the most efficient 10%.

	Average (n=506)	Efficient herds (n=50)
Farmer - hours worked/week	65.	55
Farmer - acceptable working week	59	55
Finish time in the evenings	6.55pm	5.48pm
Drafting facilities present	58%	79%
Backing gate present	33%	54%
Milking interval (hours)	9:55	9:1
Start evening milking	5.18pm	4.31pm
Date calves to grass	Apr 7th	Mar 30
Once-a-day feeding of calves	26%	46%
Calving pens mechanically cleaned	72%	92%
Slurry contractor	41%	60%
Fertilizer contractor	9%	28%
Heifer contractor	5%	23%
Heifers synchronised	35%	54%
Paddocks topped once/none	53%	88%
Three grazings/paddock	43%	58%
Output (kg milk solids/labour unit)	20,000kg	30,500kg

100% IRISH

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# A year of two halves

## Teagasc/GIIL Monitor Farm Review 2013

Richard O'Brien,  
Teagasc Kilkenny

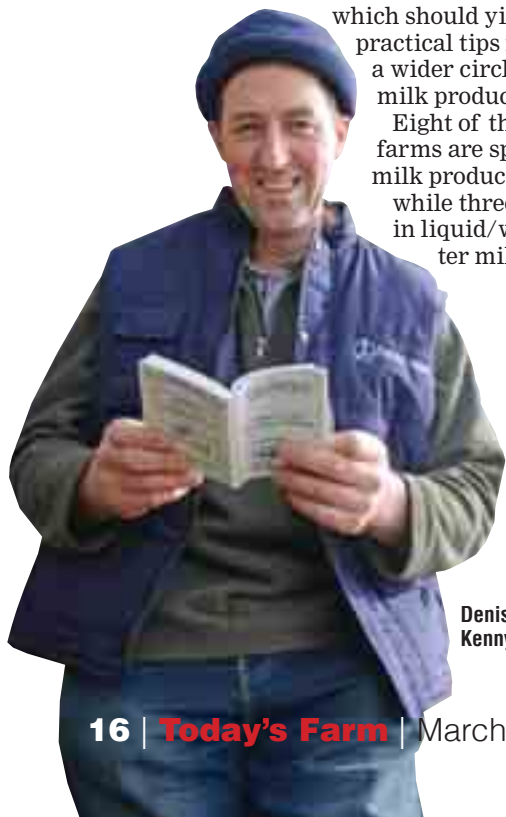
As the crow flies, it's not much more than 20 miles from Eamonn Duggan's farm near Durrow, Co Laois and Denis Kenny's land near the Tipp-Kilkenny border. In terms of soil, they could be on different planets. Eamonn has extremely free-draining land and Denis has heavy soil which came into its own during the comparative drought of late summer. Both are members of the Teagasc/Glanbia GIIL group.

"Last year was unusual in that the first half suited us but we suffered drought later in the year," says Eamonn. "Regardless of the plans you make, the weather will always have an influence." Denis Kenny agrees: "Protecting and improving the soil fertility are vital to our long-term plans but the season will always play a role."

Eamonn, Denis and all members of the group are keen to increase their productivity while maintaining cost control. Financial assessment has been completed on the 11 farms, each of which is a Monitor Farm

which should yield practical tips for a wider circle of milk producers.

Eight of these farms are spring milk producers, while three are in liquid/winter milk.



Denis  
Kenny

### Key messages

- Compact calving and reduced infertility will give all these farms higher profits through higher milk solids sold and an increase in cow sales.
- Increasing the soil fertility will lead to more grass grown.
- Using the cost control planner and the profit monitor has given all the farms control over their finances and will be essential for planning.
- Plan for 2014:
  - a) All farms are aiming to reduce meal cost. Most have built up silage stocks.
  - b) Fertilizer costs will be the same.
  - c) Bull selection, > €250 EBI, > €140 fertility sub-index, >30kg fat and protein.

The farms are located throughout the Glanbia area from Louth to Cork. It comes as no surprise that the cost of milk production increased by 12% in 2013. Most of this increase arose from feed and fertilizer costs. Fixed costs remained fairly static.

Overall net profit rose from 14.05c/l to 16.74c/l, an increase of 20% compared with 2012. The rise in fertilizer cost on these farms was a management decision to increase soil fertility and grow more grass. Fertilizer cost increased by 50%, but the participating farms consider this a long-term investment.

The average milk price across the 11 farms was up by 11% to 39.33. Some of the farms have a proportion of their milk price fixed which lowered the average price achieved. Milk yield (litres and kilos of milk solids) increased by 1.5% since 2012. This is a very small increase. The fat percentage increased slightly, while protein percentage remained static. Weather conditions in 2013 and a shorter lactation (cows dried off early due to super levy) had an impact on these figures. Please note that the



costs entered in the profit monitor do not include own labour, capital repayments and taxation.

### Fertility

The fertility performance across all herds has improved dramatically. The average EBI is €122, with an annual EBI gain of €7.

The average EBI of the 2013 calves is €169 and the 2014 calves are expected to average €190. As can be seen from Figure 1, the CI has improved by almost 20 days. This is mainly due to the introduction of additional heifers and ensuring that these heifers are at their target weights at mating. Improvement in management at mating (better heat detection and recording) has also contributed to the gains.

The average grass grown on each of the 11 farms did not change at 10.7 tonnes DM/ha each year. But there was a big variation within farms. Heavier farms like Denis's in Kilkenny grew four tonnes more in 2013 due to the dry year. Drier farms, such as Eamonn Duggan's, remained static or grew less, depending on the





Eamonn Duggan.

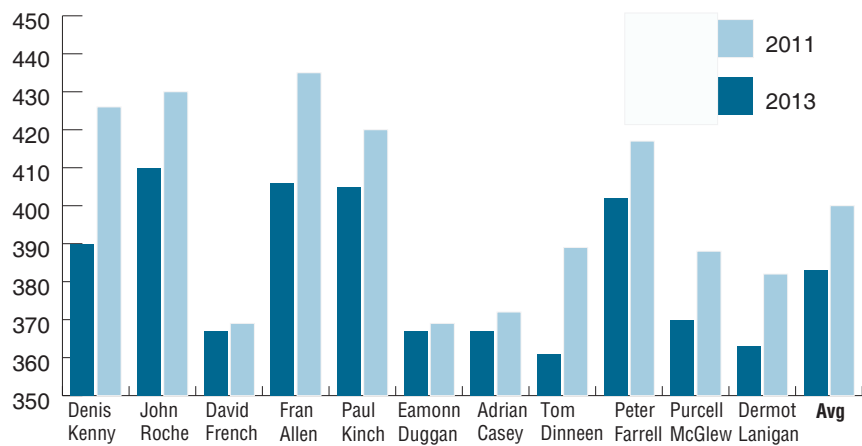
severity of the drought. "A year like 2013 certainly makes you think about the stocking rate but we won't be put off," says Eamonn Duggan.

"We want to reach a higher stocking rate but we'll have to be sure that the production potential of paddocks is maximised first – that means continuing with fertility improvements. Otherwise, we could get hit by a bad year."

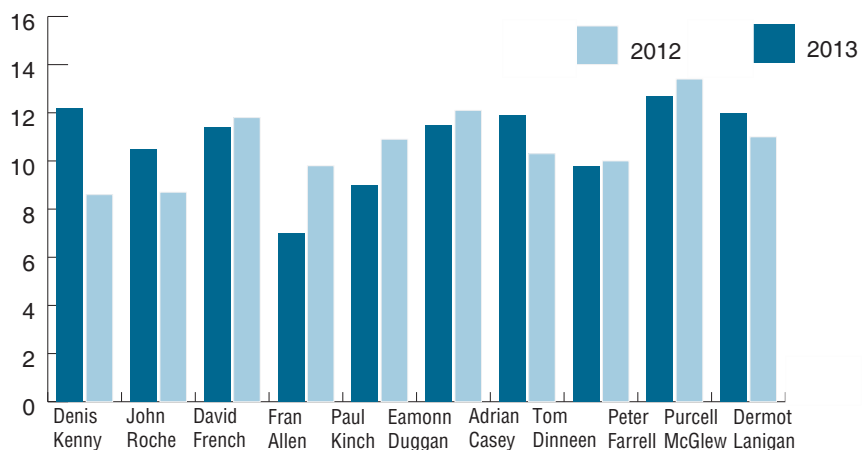
As well as targeting more grass production, the group is targeting tighter calving to make optimum use of grass. The calving interval has dropped for all members in recent years. "We're very pleased with progress," says Denis Kenny. "Having plenty of young heifers in the pipeline allows us to cull later calvers. Reducing calving interval increases total solids and profitability."

Interestingly, the group doesn't see the diversity of its soils and conditions as a problem for the group. "We all have the same goals," says Denis. "It's interesting to see the different challenges group members face in achieving them."

**Figure 1**  
Teagasc/GIIL monitor farms calving interval (days) - 2013 v 2011



**Figure 2**  
Grass dry matter yield/ha for 2012 and 2013 - t DM/ha



**Table 1: Teagasc Profit Monitor 2011 - 2013 (c/l) – average for 11 farms**

	2013	2012	2011
Milk price	39.33	33.34	35.42
Gross output	40.76	35.5	36.42
Feed costs	5.29	4.46	3.67
Fertilizer	3.64	2.5	2.43
Vet/AI	1.73	2.11	2.00
Contractor	1.71	1.32	1.62
Total variable costs	14.36	11.91	11.72
Total fixed costs	9.66	9.54	10.70
Total costs	24.02	21.45	22.42
Net margin	16.74	14.05	14.01
Net margin/cow (€)	905	749	745

**Table 2: Key physical data 2011 – 2013 (average for 11 farms)**

	2013	2012	2011
Cow numbers	136	123	122
Dairy land (ha)	64	60	59
Stocking rate (LU/ha)	2.13	2.05	2.08
Yield/cow (litres)	5427	5362	5331
Fat %	4.06	4.01	3.95
Protein %	3.41	3.41	3.37
kg milk solids per cow	417	410	402
Meal/cow kg	900	720	698
Calving interval (days)	382	-	400
Grass grown (tonnes DM/ha)	10.7	10.7	-
Somatic cell count	169	176	188

drystock



# Profitable suckler production

**Aidan Murray,**  
Beef Specialist, Teagasc Animal  
and Grassland Research and  
Innovation Programme

**A**s you turn out your yearling heifers this spring, ask yourself: how well have they done over the winter? Have they put on 60kg, or more, since housing and are they likely to be 400kg to 440kg (continental crosses) by the time they reach 15 months of age?

If they meet the criteria above, will you think about bulling them to calve down as two-year-olds?

On a recent trip to Britain, we visited a farm with lovely continental heifers and the farmer insisted that he wouldn't calve them down until they were three years old because he liked them 'big'. He is not alone in his views but I think our mindset needs to change from the idea of 'big' and more towards the idea of 'efficient'.

Work by Dr Paul Crossan at Teagasc, Grange, clearly shows that the most profitable age to calve heifers is 24 months. For a 50-cow herd calving 10 heifers, each additional month that calving is delayed costs €490.

## Heifer calving facts

As a country, we are calving down around 16% of our heifers at 22 to 26 months.

ICBF recently took a look at some of the stats from beef heifers calved in 2011 and they make interesting reading. They looked at the various age categories of heifers calving down, their subsequent calving interval, degree of calving difficulty, percentage calving again as second calvers and the calving difficulty of the sires used to mate these heifers.

We often put up many reasons as to why not to calve heifers at 24 months, such as if they calve at two years, they will not calve again at three years. *Table 1* doesn't really support this notion. Heifers that calved at 23 to 26 months had as good a calving interval, and calved down again as a

## In summary

Heifers that are to calf down at two years of age will:

- Come from the best cows in the herd and be sired by bulls with strong maternal traits.
- Be born early in the calving season to allow them to be heavier at bulling.
- Need to achieve a daily liveweight gain of 1.1kg to 1.3kg/day up to weaning.
- Have to be fed to achieve 60kg to 80kg liveweight over the first winter so they will need good quality silage, plus 1kg to 2kg of concentrates.
- Be turned out early in spring to grass.
- Have reached 60% of their mature weight by bulling.
- Be bred to a known easy calving sire.
- Have reached up to 80% of their mature weight by the time they calve down.
- Require preferential treatment as first and second calvers.

second calver, as heifers calving down in the older age categories.

Another reason given is that they are harder to calf at a younger age. The figures show that younger heifers have a slightly higher calf mortality. By the same token, heifers, irrespective of age, will be more difficult to calve and as the figures show will need a high level of assistance at calving.

Perhaps this could be reduced if we were more selective in the sires we put on heifers. Even the younger calving heifers are being mated with sires with an average calving difficulty of 4.7%.

.....  
» Continued on next page

**David Durkan**  
(pictured left),  
from Co Sligo,  
always aims to  
calve heifers at  
24 months. David  
is a member of the  
Enniscrone Suckler  
Farmers Group  
facilitated by  
Tom Coll of  
Teagasc Mohill.

» From page 19

Interestingly, our dairy counterparts try and mate their heifers calving down at two years with sires with a calving difficulty of 2%, or less. We may never drop that low on the beef side but we should aim for 4% calving difficulty, or less, on heifers.

Farmers often say that if heifers calve at two years of age, their growth is stunted. The important thing to remember here is that cows don't reach their mature weight until they are five years old. Heifers that calved down at two years will be smaller as first and second calvers compared with those calving older but, by their third calving, it will be difficult to see the difference.

The current position here is that heifers are around 32 months old at first calving which is inefficient in so many ways.

### Managing bulling heifers

Heifers can be successfully calved at two years old provided they reach the targeted weight-for-age at bulling time. Heifers need to be at least 60% of their mature weight at bulling. This will ensure that there is a strong likelihood they will be cycling at 15 months.

Puberty in heifers is more related to weight than age so a good plane of nutrition is important. Traditional breeds and crossbred heifers tend to reach puberty earlier than purebreds.

Once heifers reach the target weaning weight, it is important that they are treated well over their first winter and gain in the region of 60kg to 80kg.

**Table 1: Heifer calving**

Age at first calving (months)	Average calving interval	Calving for second time	Average calving difficulty of bulls used on heifers	Heifers calving unassisted	Mortality at first calving
23 to 26	383 days	85%	4.7%	50%	3.2%
27 to 30	394 days	84%	5.1%	53%	2.8%
31 to 35	392 days	88%	5.2%	58%	2.6%
36 to 40	386 days	86%	5.2%	57%	2.0%

Source: ICBF

**Table 2: Mature cow weight**

	Weaning weight	Bulling weight	Calving weight
<b>Target percentage of mature weight</b>		<b>60%</b>	<b>80%</b>
600kg	260kg to 280kg	360kg	480kg
700kg	300kg to 320kg	420kg	560kg

This is a critical stage and, often, it is where heifers fall behind achieving the target bulling weights.

Particular attention needs to be paid to the weanling heifer at housing. They need to be well dosed for fluke and worms.

Concentrate feeding should be front-loaded at the start of the winter where they are offered up to 2kg/hd/day, depending on silage quality.

Heifers which are bulled too light may well go in calf as heifers but they are likely to struggle thereafter as first and second calvers as they will struggle to reach the correct body condition score at mating.

Heifers are generally a fertile group and should be bred for six weeks. This will allow each animal two services. Heifers that are not in calf after this are less fertile and may become prob-

lem breeders in the future.

Reaching 60% of their mature weight at bulling, means that heifers need to achieve a steady gain of around 0.85kg/day from birth. By the time they calf down at 80% of their mature weight, their required daily gain has dropped to 0.7kg/day.

Heifers should be calved down in fit condition but not fat. Once calved, they require preferential treatment, particularly if they are to remain indoors for a period.

Heifers will be shy feeders if mixed with mature cows and can lose condition quickly. In Teagasc, Grange, heifers were fed as a group and given 1.5kg to 2kg of concentrates/day until turnout to maintain body condition – which is vital if they are to remain in the herd and calve down as second calvers.

## Farmer perspective

David Durkan farms in Ballymoghenny, near Enniscrone, Co Sligo. Both he and his father have always aimed to calve heifers at 24 months. David runs a suckler to beef system with heifers going to the butcher trade and bullocks finishing at 24 months.

The bulk of the calving on the farm is in January and February.

The idea of two-year calving appeals to him because it leaves fewer groups of stock to manage and he is very happy with how they mature into cows.

When asked what he views as the most critical aspect of achieving two-year-old calving, David says that he tries to select early-born heifers because he feels the later-born heifers find it difficult to catch up.

He always aims to have heifers at

between 400kg and 450kg at bulling.

His preference is to use easy-calving Angus bulls from AI on heifers. He is very clear that he pushes easy calving sires.

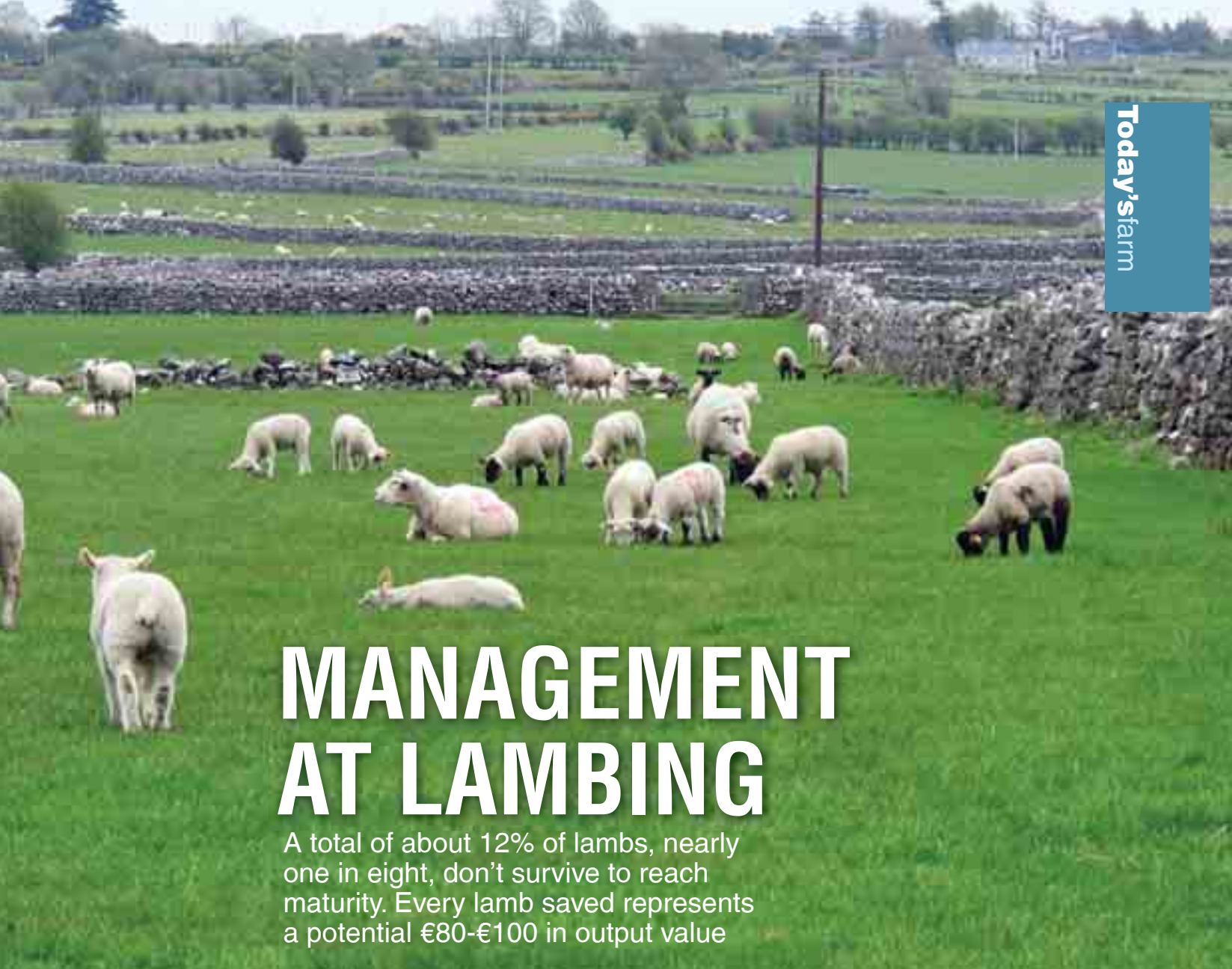
### Bullocks

Heifers are bulled over a 10 to 12-week period. "The AA bullocks may have lighter carcass weights than continentals but the Angus scheme bonus makes up some of the shortfall," says David. When asked if he has any trouble getting his first calvers back in calve, he said: "Generally, no".

"They take three to four weeks longer at coming round than the cows but you'd expect that," he says. "They are picked up by the bull when they go to grass."



Michael, Eoghan and David Durkan.



# MANAGEMENT AT LAMBING

A total of about 12% of lambs, nearly one in eight, don't survive to reach maturity. Every lamb saved represents a potential €80-€100 in output value

**Shane McHugh**  
Teagasc Animal and Grassland Research and Innovation Programme  
& **Ciaran Lynch**  
Teagasc BETTER Farm Programme

The mortality figure breaks down as 4% before lambing, 6% in the first five days after birth and 2% in the four to five days to weaning. Mortality pre-lambing is a result of re-absorbed foetuses, abortions and stillbirths. Starvation and exposure account for the majority of lamb deaths in the first week of life – the time when farmers have most scope to reduce deaths.

Paying close attention to a few key areas will get lambs off to a good start. The most crucial step is to ensure that lambs receive adequate colostrum (beestings) in the first few hours after birth.

Colostrum fulfils three vital functions for the newborn lamb:

- It provides an easily digestible source of energy and nutrients.
- It provides maternally-derived antibodies. This will be the lamb's

passive immune system until it forms its own active immune system.

- It acts as a laxative to clean out the lamb's digestive tract.

The feeding regime of the pregnant ewe in the run up to lambing is critical to ensure she produces adequate colostrum. The level and quality of protein fed to the ewe is particularly important. Rumen un-degradable protein is best and soya bean is also a good source.

Most newborn lambs will suckle without help from the shepherd but there will be cases where intervention is required. Ewes with small, weak lambs or triplets, or ewes with enlarged teats or inadequate colostrum will need assistance. For these lambs, colostrum should be given within the first six hours of life.

After this 'window', the level of absorption through the gut wall falls rapidly. The feeding rate for lambs is 50ml of colostrum for every 1kg of liveweight, at six-hour intervals.



The feeding regime of the pregnant ewe in the run up to lambing is critical to ensure she produces adequate colostrum

» Continued on next page

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This means that lambs should receive 200ml/kg by 24 hours of age.

Colostrum from the ewe is the preferred option for lambs but there will be cases where substitute colostrum or colostrum from cows is required. Take care when heating or thawing colostrum as it is extremely sensitive to heat. Never heat or thaw colostrum in a microwave or water that is too hot to put your hand in.

The next key task is to monitor ewes and lambs closely to ensure that lambs are suckling and ewes are bonding with their lambs. Ewes should be kept in individual pens for 24 to 48 hours after lambing. A minimum of one individual pen per 10 ewes is advisable but this may change if the flock is lambing over a compact spell.

Ewes and lambs should be released to grass within two to three days after lambing if ground and weather is favourable.

### Post turnout management

Planning for turnout on the BETTER farms began last autumn. Sheltered paddocks close to the yards were closed up first in October as these will be used first at turnout. The long closing period allowed covers to build up over the winter providing more grazing days at turnout.

### Identifying issues

David McLaughlin's lowland flocks in Co Donegal will start lambing on 10 March. The main grazing area for these ewes is one mile from the home farm. However, a field beside the lambing shed is rested up for ewes at turnout with the rest kept for his hill flock.

Ewes and lambs graze for three to seven days, depending on how they are performing on this field before moving to the out farm. The time spent grazing beside the lambing shed gives David the opportunity to see any potential mothering issues or to identify weaker lambs that may require an extra few days care, minimising problems and potential losses.

### Grouping up

John Curley from Co Roscommon will begin lambing his 205 ewes on 1 March, with 25 ewe lambs lambing a week later. Ewes will be held indoors for one to two days after lambing and then turned out in batches of eight to 10 ewes and lambs per field.

They remain in this batch for two to three days. These will then be moved on and grouped into larger batches of 20 to 30 ewes, where they will remain



Most newborn lambs will suckle without help from the shepherd but there will be cases where intervention is required.

for a further two weeks. Later, ewes are grouped once more and form their grazing management groups.

### Management groups

It is important that ewes keep moving on once mothering issues are dealt with and lambs are strong enough to establish a grazing rotation.

One clear message coming from the BETTER farms has been to keep the number of grazing groups to a minimum to allow for effective grassland management as the season progresses.

Brian Nicholson from Co Kilkenny splits the main ewe flock approximately in half on the basis of lambing date. He splits them into older (earlier lambed) and younger (later lambed) groups.

One key benefit of this approach is that lambs in the groups are all of a similar age which has advantages for routine flock health treatments, dosing and for weaning.

John Curley's flock is split on the basis of the number of lambs they are rearing, with singles and twins managed separately. Priority for grazing is given to the 'twin' group, particularly

when grass supplies are tight.

John also rears a proportion of his triplets on the ewes. These are managed alongside his yearling ewes. Both sets of ewes receive supplementation for up to five weeks after lambing and lambs have access to concentrate supplementation.

### Group size

The target management group size will differ for each flock, depending on ewe numbers and availability of paddocks. For the flocks mentioned in this article, grazing groups vary from 25 to 350 ewes, with the latter at the upper end of the scale for management purposes.

Aside from the considerations already mentioned, there are two other key areas that will influence group size. Firstly, from a grassland management point of view, a group should be able to graze out paddocks every three to four days. Secondly, from a practical point of view, it is important that the group size will comfortably fit in the handling yard, particularly later in the season as the space required will increase up to weaning.

# Unique breed preservation

Local producers are working hard to protect the Mayo-Connemara Blackface sheep breed. **John Noonan, Teagasc, Westport, reports**

**T**he magnificent Mayo-Connemara sheep has evolved to thrive in the often harsh conditions on the Maumturk, Murrisk and Nephin Beg mountains. Local producers are working to protect this precious genetic resource.

The Mayo-Connemara breed is a low-input and low-maintenance breed, whose grazing conserves the delicate balance of heathers and grasses on the mountains, while producing a tender and delicious carcasses. The ewes are superb, fiercely protective, mothers. Lifetime production of eight or nine crops of lambs is not unusual.

In lowland situations, Mayo-Connemaras are a good ewe to rear from a terminal sire or cross with a Leicester ram to produce a very desirable mule lamb. In recent years, there has been pressure on the breed due to crossing with other Blackface types which dilutes the hardiness traits which have evolved in the Mayo-Connemara type.

To counter the trend, farmers have established a flock database and started taking DNA samples from rams. The project's main objective is to preserve the unique genetic base of Mayo-Connemara sheep in the region and to reduce the chances of inbreeding. Inbreeding can reduce vigour, growth rate, fertility and conformation. The project is a partnership between committed Mayo-Connemara Blackface breeders, Sheep Ireland, Teagasc advisory, Teagasc Research and the rural development company Forum Connemara Ltd.

"Establishing a formal ancestry flock book and DNA database for the breed will provide farmers with better information when selecting rams," says Eamon Wall of Sheep Ire-



John Noonan, Teagasc, records the Department tag number, along with the individual Mayo-Connemara Blackface tag as Brendan Joyce and Micheal Conway tag a ewe.

land. "Farmers can also use the Sheep Ireland platform to record more information on their lambs, such as lambing difficulty, birth weights weaning weights, longevity, etc. Over time, they will be better informed when making decisions about their own flock."

## Work to date

The programme began in July 2012 when breeders within a geographical spread from Roundstone, Co Galway as far as Achill, Co Mayo, presented their main stock ram for inspection. A sample of the ram's saliva was collected (all stock rams entering the programme must have a sample

taken) from which DNA was extracted for identification.

In autumn 2012, each member presented their best performing ewes for inspection. If the ewe was 'true to type' and showed no visual evidence of having Lanark, Swaledale or other foreign Blackface types present, she received a special clip identification tag. All ewes were single-sire mated to ensure the lambs born could have their parents identified and attain pedigree status.

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Members tagged and recorded parentage of lambs and the data was entered on the Sheep Ireland website by Teagasc Mayo last year. To date, there are approximately 3,100 sheep with the Mayo-Connemara prefix in the system. The aim is to increase numbers to over 6,000 sheep recorded by year five of the programme.

Of the 70 odd members, 15 are in MALP or LambPlus and have been recording performance data for their flocks for the last few years. Importantly, they are using this data to make management decisions. Some members are interested in performance recording; others will be happy to get their valuable stock recorded purely for pedigree status.

**Data growing**

As the project develops, members will be able to look at different ram breeders' sire lines when purchasing a new ram to ensure genetic diversity and improve quality. Other buyers will want more information when buying their rams and are already looking for Euro-Star figures for ram lambs and hogget rams.

The Mayo-Connemara ram group has an annual sale in which the numbers of rams with performance figures is increasing annually. The

STAP (Sheep Technology Adoption Programme) is increasing awareness of the importance of figures as one of the tools used when making a ram purchase.

At the recent ram sale, breeders had pedigree certificates for 2013 ram lambs issued by Sheep Ireland detailing the sire and dam and breeders of both. This breeding certificate will become more valuable as the page fills with five or six generations of pedigree that can be viewed online, before sales, for example.

The Mayo-Connemara programme is of national importance for the overall sheep sector. Firstly, it will preserve the genetic base which is crucial to the sustainability and management of hill and commonage areas in the west.

Secondly, the crossbred daughters of these ewes (whether they are mule, greyface or hilltex, for example) all possess the excellent maternal traits and longevity which are in decline in many of the lowland flocks. This contributes to overall profitability in terms of reduced mortality and reduced labour demands.

The group is interested in attracting breeders who want to record purebred flocks or an elite core group of ewes within a flock, and are willing to complete the tagging and recording in a planned timeline. Contact John Noonan on 098-28333 or email John.Noonan@Teagasc.ie



The Mayo-Connemara programme is of national importance for the overall sheep sector



**Michael P Conway**

Micheal P Conway farms at Knockmoyleen, Ballycroy, Co Mayo. His business comprises 25 autumn-calving sucklers and a mid-season lambing flock of 400 Mayo-Connemara Blackface ewes and 80 Hilltex ewes.

"My Hilltex flock (Mayo Blackface x Texel) are lambed in late February/early March and read 1.7 at scanning time. These lambs are finished reaching carcase weights of 18kg to 20kg, mostly off grass with smaller doubles receiving creep pre-sale. They are slaughtered at Dunleavy Meats.

"The pure Mayo-Connemara Blackface flock scanned 1.4 and is lambed in late March/early April. The majority of the male lambs reach carcase weights of over 16kg deadweight and are killed by Dunleavy Meats or Kildare Chilling.

"Smaller doubles receive creep and good quality grass and reach similar



weights later in the year. The best ewe lambs are selected to be retained as replacements while the remainder is sold to a regular buyer or through the annual Mayo-Connemara Blackface sale.

"We sell aged ewes to lowland producers for crossing with blueface Leicester rams to produce Mayo Mules. I am a member of the Mayo Connemara Blackface ram group and I keep up to 20 elite ram lambs for sale as hoggets the following year to local buyers and through the annual sale."

Micheal has great hopes for the new recording programme. "It will improve all stock nationally. There will be better quality stock coming off hills and it will gear producers to breed stronger bigger ewes that will have bigger framed lambs to reach higher carcase weights."

Micheal (left) along with son Jonathon select one their best ewes the camera.







The Mayo-Connemara head clearly distinguishes them from their Blackface cousins (Scotch, Lanark, Swale dale, Perth and Kerry Hill). The head is lighter with a nicely balanced set of horns usually with a black face but they can have the occasional speckled face as well. The nose can turn grey as the sheep ages but not as pronounced as the Lanark or Swale dale breeds.

**Views of Sheep Ireland & Teagasc**

**Value for industry**

The aim of Sheep Ireland is to add value to the Irish sheep industry by identifying and promoting the best sheep genetics. The only way in which we can identify these better genetics is through the recording of data.

Ancestry information is the foundation of all genetic improvement programmes. But the extensive nature of hill farming means that the collection of this information can be seen by many farming these hills to be an almost impossible task.

The Mayo-Connemara group has helped to prove this theory wrong through the design of a simple flock book model that is amenable to all breeders of the Mayo-Connemara sheep.

In time, Sheep Ireland hopes that this ancestry recording will become routine for Mayo-Connemara breeders and develop further into a widespread programme of performance-recording of the traits that will help sheep farmers improve their returns.

It will only be through performance recording that the better genetics can be identified and promoted across the breed through the Euro-Star evaluations. There is now a solid foundation in place for the Mayo-Connemara breed improvement program and if breeders remain committed, there will be major future benefits for all involved.

— Eamon Wall, Sheep Ireland

**Role of genetics**

Traditionally, the participation of hill breeds in the national breeding programme has been low or non-existent. One of the main hindrances for the development of sustainable genetic gain in the hill breeds is the requirement for parentage information on lambs.

Farmers are asked to operate single-sire mating to collect parentage for lambs. However, this is not a viable option on many hill sheep farms. The development of the Mayo-Connemara Blackface Sheep Group has the potential to accelerate genetic gain in the hill breed rapidly.

With the identification of sires on a large number of lambs, along with routine access to phenotypic information, such as lamb and ewe weights and ewe pregnancy scan information, genetic evaluations can be generated for all flocks on a routine basis.

This will allow for the identification of animals of superior and, also, inferior genetics, which can aid in the culling and breeding decisions on-farm. The inclusion of some of the MALP (Maternal Lamb Producer) flocks in the scheme provides strong linkage between the Mayo-Connemara breed and other hill and lowland breeds. This ensures that high levels of accuracy can be achieved in the animal's star ratings.

The generation of pedigree information also allows for inbreeding values to be estimated for the breed for the first time. This will ensure that genetic diversity is maintained within the breed.

The use of DNA technology by the Mayo-Connemara Blackface Sheep Group ensures that the breed will be in a position to exploit genomic selection when it becomes available in the Irish sheep population.

— Noirin McHugh, Teagasc

# Plan ahead for Basic

The new payments scheme will be straightforward for most farmers but, for some, it will be complex. Familiarise yourself with the new rules and the implications for rented or leased entitlements

## Fintan Phelan

Head of Farm Management and Rural Development, Knowledge Transfer Department, Teagasc

**T**he new Basic Payment Scheme (BPS), which will run from 2015 to 2019, replaces the Single Farm Payment. For the majority of farmers, the new scheme will involve relatively little change. For those in leasing or tenancies, it is more complicated. Decisive action will be needed.

## The big picture

Due to the reduction in the EU budget, there will be automatic cuts to most farmers' payments. As this cut is approximately 10.4%, many farmers won't notice as it is similar to the previous cut due to modulation that is now gone. Farmers who claimed less than €5,000 in 2013 will be exempt from this cut.

Additional cuts are 2% to fund the Young Farmers' Scheme and 3% to fund the National Reserve.

Due to the order in which these cuts are applied to the overall national budget, they will tend to work out to be a similar figure for the individual farmer.

The largest cut is 30% – to fund the



new Greening Scheme. While this money is taken away at the start, it will be added back as a top-up to an individual's basic payment later and is a percentage of the basic payment (not a set amount of euro). For the majority of farmers, compliance with the greening measure will not be a problem. It will, however, pose particular challenges for some tillage farmers.

So, how will the new payment be calculated? We can divide the payment rules into two sections, land and money.

• **Land:** The calculation of new entitlements will be based on the net eligible area claimed in either 2013

or 2015 – whichever is lower. So, if I farmed 40ha in 2013 and dropped 10ha in 2015 to leave me with 30 net hectares claimed, my new basic payment entitlements will be 30.

If, however, I had 40ha in 2013 and took an extra 10ha – so farming 50 hectares – my basic payment entitlements are still going to be 40 which is the least number of hectares I farmed in 2013 or 2015. In relation to land area, nothing I do in 2014 will have any impact.

• **Money:** While 2014 is not important for the land portion of the calculation, it is a vital year for the new Basic Payment Scheme. 2014 is the reference year for money. The calculation



## Key points

- National average BPS = €171 + greening = €249
- 90% of average BPS = €153.90 + greening = €223
- 60% of average BPS = €102.50 + Greening = €149

Source: DAFM presentation, Teagasc Farm Business Conference 2013 (national average and greening are estimated).

# Payment Scheme



Due to the reduction in the EU budget, there will be automatic cuts to most payments



The calculation of new entitlements will be based on the net eligible area claimed in either 2013 or 2015 – whichever is lower.

will be based on the entitlements held (owned) in 2014. Definitively held in this context means 'owned'.

The only people who will be automatically entitled to draw down the new Basic Payment Entitlements are those who farmed in 2013.

The national average and the individual farmer's figure will depend on the amount of land included in 2013 and 2015 and entitlements owned in 2014. At this stage, both of these figures are not known so it is not possible to give an exact national average. In recent presentations, the Department of Agriculture Food and the Marine (DAFM) has used an estimate of €171 for the national average

basic payment (excluding greening). If greening is included, this figure comes to €249/ha.

So, ignoring actual figures as these won't be known until later, the new rules are that every farmer will be brought up to 60% of the national average of the Basic Payment by 2019. In the DAFM example, this would be €102.50, with greening to be added.

In addition, farmers will be brought up by one-third of the difference between their starting value and 90% of the national average.

This is €153.90 in the DAFM example. So, if you have a starting point of €120, one third of the difference to €153.90 is €11.30.

Therefore, your payment in 2019 will be €133.30, plus greening. To bring you up to the new figure the payment will rise in equal steps up to 2019.

In order to raise payments which are below the average, payments above the average will have to be reduced.

As we don't know what the average is, or how much money will be required to bring payments up, it very difficult to say what the cut will be with any degree of accuracy. No Basic Payment Entitlement can be worth more than €700/ha by 2019.

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Minister for Agriculture, Food and the Marine Simon Coveney and An Taoiseach Enda Kenny at a press conference on CAP direct payments and the Rural Development Programme 2014 to 2020.

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## Leases and tenancies

The more complex your current farm structure, the more complex the new rules will be. Some rules are yet to be finalised.

A key point is that Single Farm Payment entitlements will cease to exist at the end of 2014. If you have entitlements leased, or on conacre, you will be paid these in 2014 but they will not be counted in the calculation of the new Basic Payment – as they are not owned.

It is vital for farmers to realise that entitlement leases need to be reviewed and, in most cases, ended so that the entitlements can be definitively held (owned) by a person who farmed in 2013.

There may be an opportunity for land owners to come to agreements with their tenants so that the tenant establishes the new Basic Payment Entitlements and passes them back to the land owner at the end of the lease. This falls under an instrument called a 'private contract' clause. However, this option may not be available to all land owners. We are awaiting further details on this from the Department of Agriculture, Food and the Marine.

As there will need to be a lot of sales

of entitlements, it is important not to forget that there are tax implications relating to the trading of entitlements – even where money doesn't change hands.

The main tax is Capital Gains Tax (CGT). This is paid on the value of any gain when disposing of an asset. For most farmers, they have established their own entitlements so the starting value when disposing of them is zero – hence, the entire value is liable to CGT at the current rate of 33% — less an annual exemption of €1,270.

Also, note that the tax is due on the entire value of the disposal. If you sell an entitlement with a value or €300 for 1.5 times value, tax is due on 33% of €450 – less your exemption. If you inherited entitlements, or purchased them, you have a starting

“ If you have entitlements leased, you will be paid in 2014 but they will not be counted in the calculation of the new Basic Payment Scheme as they are not owned

value that can be deducted before any gain is calculated.

The other tax that is potentially relevant is VAT. This is due if the disposal value exceeds €37,500 in any 12-month period. Again, it is the entire sale precedes – not just the face value of the entitlements – that is relevant. If you exceed the €37,500 limit by any amount, the entire sales proceeds become liable to VAT at a rate of 23%.

As you can see, the rules are forcing some farmers to sell entitlements which may trigger a large tax liability. DAFM is aware that this is an issue and it is to be hoped that a reasonable solution can be found (with Revenue) so that this does not remain the case.

Overall, this new scheme will be straightforward for the majority of farmers but, for some, it will be complex and take time to decide on the correct course of action. As time passes and more of the rules are being decided on, it is becoming clearer.

In all cases, farmers need to familiarise themselves with the new rules and, in particular, the implications of rented or leased entitlements in 2014.

Please note that the details in this article are correct at the time of going to print. However, there is the possibility that the rules may change before implementation.



Michael Somers and John Bermingham examine the tree crop.

# Beating to a new Timbre

This farmer's fascinating story has a happy ending at his home place near Mullinahone, Co Tipperary

**Michael Somers**  
Teagasc Forestry Development Officer

**T**he happiness gurus tell us: 'Follow your heart'. In 1982, John Bermingham did just that. Unenthusiastic about dairy farming, he sold his dairy cows, let the land and bought a ticket to America, where he planned to make his living as a musician. "I invested the proceeds from my best cow in a good guitar," says John. Thirty years later, having seen much of the world, John is back on the family farm nestled below Slieve na Mban. He still has the guitar.

"I loved the farm and the area, but I was never a farmer," says John. "I always intended to come back and I'm delighted to have found a way to make a living here."

During a three-year spell working as a performer and music teacher in Germany, John gained two things: his German wife Monika and a love of trees. Now, music, trees and farm tourism in the form of cottages-to-let,

generate his income at Crocanoir, near Mullinahone.

Together with Monika, he has created one of Ireland's hidden treasures. *The Irish Independent* lists it as one of country's top 10 holiday hideaways. Tourists from 40 different countries have visited this little place at the bottom of a breen in Tipperary.

"My time in Germany had a big influence," says John. "I was living near Nuremburg and I saw how trees were a huge part of the business for farmers there. Trees have been managed in Germany for centuries and are central to many farming systems. German forest owners add value to their crops through careful silvicultural mixtures, timely harvesting and tidy timber stacking."

Soon after their wedding, the Bermingham family left Nuremburg, a city with a population of one million, and returned to the slopes of Sliabh na mBan.

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Tourists from 40 different countries have visited this little place at the bottom of a breen in Tipperary

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### Return to Ireland

When the Berminghams returned to Mullinahone, they decided to plant their marginal land. With the help of their local Teagasc forester, they carefully planned and laid out meandering pathways through the young trees.

From their research, the Berminghams had noticed that there are 18 million individual forest visits in Ireland every year. Most foreign tourists come to Ireland to walk. People who walk spend money in local shops, on equipment and accommodation.

"We fully utilised the 15% open space and biodiversity options when planting the land," says John. The area was planted with Norway spruce, oak and ash.

They constructed a wooden bridge to cross the Anner river, which divides the farm. This opened up the woodland walks for all visitors.

John was conscious of the need to create a highly productive forest. The area proposed for planting was prone to frost, so Norway spruce was the chosen tree species.

Norway spruce is slower growing than Sitka spruce. John notes that it didn't grow much in its first four years. This is a characteristic of the species. But it subsequently thrived and is now approaching thinning.

Deer proved to be a problem early in the life of the forest. As the trees grew, deer damage reduced. However, a lot of plants died and had to be replaced. This was a steep learning curve for the Berminghams.

### Crocanoir

Forestry was only part one of the Berminghams' plan. John's next step was to enrol in a rural development course with Tipperary Institute.

"This opened my mind to developing the farm yard," says John.

"The old house had been in ruins since 1961. In addition, there were a number of old buildings around the traditional farm house.

"We set out to convert these disused farm buildings into holiday cottages.

“ Seechange will be rolling out a month-long national green ribbon campaign in May 2013 to get people talking openly about mental health problems



Ash thinnings.

With the help of Barrow/Nore/Sure Leader, the restoration process at Crocanoir began in 2001. It was expertly undertaken by local master craftsman, Liam Morrissey."

Stone by stone, slate by slate, the project progressed. Some commercial timber from the farm was cut and sawn and used in the project. Monika designed the layout of the buildings, which included many of their original characteristics, such as the flag floor from 1860. With the holiday homes finished, the Berminghams needed a means of enticing tourists 'down their lane'. Locals told them that "tourists don't come to Mullinahone". However, the town is not too far from Cahir and Kilkenny, two towns with vibrant tourist industries.

The Berminghams decided to commission a website [www.crocanoir.com](http://www.crocanoir.com). This was to prove the biggest tool in promoting the business.

John says that when the website was set up, they didn't know what to expect. "Our first guest was a man from Texas. It later turned out that he had worked on the first space shuttle. We have built up a wonderful friend-

ship with him and many more from all over the world".

In many ways, the peace and quiet of Crocanoir, the flowing river and the forest walks are its biggest asset. John acknowledges that "people who live in big, crowded, noisy, cities appreciate what's on offer here".

### Ash thinnings and woodchip boiler

During the restoration phase, John installed a wood chip boiler to heat the complex. For the first few years, forest thinnings were bought from local woodland owners. In 2012, John attended the Teagasc forestry advisory clinic in Clonmel seeking information on thinning ash.

From the information he obtained, he set out to mark his potential crop trees (PCTs). Later that year, he applied for the Woodland Improvement Scheme (Thinning and Tending). Felling was carried out in 2013. These ash thinnings are now heating the entire Crocanoir complex. With any kind of tourism, energy and heat are massive bills. John is proud of the fact that Crocanoir now produces its own fuel and heating needs.

**Music and the arts**



John had a bridge constructed over the Anner River which dissects the farm.



A wrought iron seat offers a "breather" for walkers at Crocanoir.

**The future**

Crocanoir, is evolving all the time. Today, the venue caters for weddings, christenings, workshops and concerts. In addition, John and Monika are at an advanced stage of planning their next forest plantation. Their primary objective remains recreation for visitors.

Pathways, ponds, picnic areas and open space are integral to the project. This new plantation will mainly consist of oak and other broadleaves. "This time, we'll make better plans to keep the deer out," John grins.

**Thinning Norway spruce**

Thinning the 10ha Norway spruce will be the second harvesting phase in the forest. "I'm fully aware that thinning Norway spruce is not like thinning sitka spruce," says John.

Norway spruce can suffer from "thinning shock" if thinned heavily. This affects its potential productivity. Because of the little-and-often approach to thinning Norway spruce John says it "suits Crocanoir". The pulp will be used on-site as woodchip. Other more valuable products will be

sold into industry. "Someday, we might be able to make a guitar from the wood of a tree that grew here," says John, who is now a member of the local producer group. "The group is a place where we can bring our experiences and share them," he adds. "No doubt, there will be issues affecting forestry here in the future. We need to be able to address these issues when they arise. There is strength in numbers."

Crocanoir is one of the best examples of fully utilising farm forestry. Simply providing a forest for people to use does not create jobs or new enterprises. However, with vision and careful planning, forestry can be used as an ingredient in the pie of tourism. The circle has turned the full 360 degrees for the Berminghams. Their passion has made it grow.

John sums it up by saying: "I'm a believer that if you don't have a passion for what you do it doesn't work. I now love what I do and long may we continue to grow and develop. I'm not sure what the future holds but the potential of this place is massive."

Another thing John did on his return was to give guitar lessons. This started in his sitting room and John's proficiency with his guitar and patience with students of all ages soon saw his business grow. It became obvious that a bigger room was needed. This gave rise to the "music room". "It wasn't long before we started to have small concerts here. Eventually, we started to get some pretty big artists to perform".

Musicians such as Eurovision winner Charlie McGettigan, John Spillane, Mick Hanley, Frankie Gavin, Jimmy Crowley, Neill Toner and Sonney Condell have performed in Crocanoir. In addition, the forest was used in 2013 for a production of William Shakespeare's *A Midsummer Nights Dream*. The audience moved around the forest, where different scenes were performed. John says these performances "thrive on the intimacy and access to performers", be it in the forest walking with the 'players' or sharing a cup of tea with musicians in front of a wood fuelled fire following a show.



John Bermingham

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# Bridging the profit gap

**Phelim McDonald,**  
Teagasc, Carlow  
& **Michael Hennessy,**  
Teagasc Crops, Environment and Land  
Use Programme, Oak Park Carlow

**G**rain prices have slipped by €12 to €15/tonne since November. However, the extremely cold weather in the US and Eastern Europe has shifted sentiment somewhat: "It's an ill-wind which doesn't blow someone some good." Growers should nonetheless budget for a reduction in grain prices in the region of €20 to €25 per tonne compared with last year. This will knock €190/ha (€75/ac) off the margins of a 7.5t/ha (3t/ac) crop of spring barley in 2014.

Can this gap be bridged within the farmgate in 2014? Fergus Cole, Ballybar, just outside Carlow, is a good example of a grower striving to improve yields and income. Fergus plants about 44ha (110 acres) of spring barley; some is under a malting contract with Boortmalt.

Fergus's average yield of spring barley is 7.5t/ha, substantially above the national average, but he believes he can push that yield further. *Figure 1* shows the difference in spring barley yield between the average and top one-third of growers participating in the National Farm Survey. The top third consistently outperform the average.

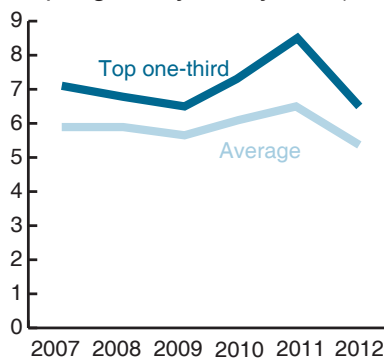
What can you take from this graph? Weather can reduce yields but it cannot be blamed for the entire yield loss as the top growers maintain their advantage over the average growers, even in a poor weather year.

Yield is the key driver of profit, so what are the key areas which growers can focus on to improve yield? Areas within the grower's control are rotation, seed rate and soil nutrient health.

## Crop rotation

Fergus is aware the new CAP regime which will insist on some form of crop rotation through the mandatory 'greening conditions' from 2015 onwards. "I have a relatively simple cropping system but I will probably introduce winter barley and beans to the rotation, subject to soil suitability," says Fergus. "I am hoping the

**Figure 1**  
Spring barley NFS yields (t/ha)



new crops will improve the overall performance of the farm."

Expected gross margins for 2014 from the 'Teagasc Costs and Returns Data' show that a similar margin can be achieved from 5.0t/ha (2t/ac) of beans as from a 7.5t/ha (3t/ac) spring barley crop. Beans may also benefit from a government payment this year but that has yet to be confirmed. There is provision in the new CAP reform for a protein payment scheme from 2015 to 2019.

## Seed rates

Fergus completes all tillage operations himself, apart from planting and harvesting, which is done by local contractor John Byrne. Fergus is conscious of the damage which can be done if soil is worked at the wrong time. "I aim to plant spring barley by St Patrick's Day, if possible, but this can range from late February to late March," he says.

"I adjust the seed rate to take into account the seed itself, the conditions and potential pest problems," said Fergus. Teagasc research shows that spring barley needs to develop 1,000 shoots per square metre (across the entire field) to achieve high yield.

Once this platform has been established, fertilizer, herbicides and fungicides can build high yields. The challenge for everybody is to adjust the seed rate to take into account their unique field conditions and the variation in seed size at planting.

## Fertilizer and yield

Based on analysed soil samples, 88% of all soils tested are lacking in one or more of the major elements (P, K

and pH) needed to sustain high yield. Soil sampling is not done regularly enough and the results from soil samples which are taken sometimes not taken into account.

Fergus supplied sugar beet for many years and soil sampling remains routine for him. At the beginning of 2009, Fergus took soil samples from his barley ground. All samples indicated correct pH, no lime requirement and high (index 4) P and K levels. He believes this to be the result of intensive beet rotation and its associated inputs. Fertilizer savings have been made in recent years, reaping the benefit of the high fertility.

With the help of John Byrne, yield maps were produced for the tillage fields. In themselves, yield maps can be interesting but without on-site investigation, they may not be able to explain why some areas of a field yielded higher (or lower) than others.

The low yielding areas may be a consequence of low soil fertility or perhaps sandy versus heavy ground. Close investigation is needed to explain these differences. *Figure 2* gives a coloured outline of the yields from one of Fergus's fields.







Yield is the key driver of profit, so what are the key areas which growers can focus on to improve yield?



Fergus Cole and Phelim McDonald.

## The benefits of a yield map

So, what are the maps showing, and what actions can be taken? Yields on the map range from 2.0t/ha (Red) to 8.0t/ha (dark green). Many of the low yields relate to the combine turning on the headland but a light green/yellow line running across the field can also be seen. This corresponds to an old hedge in the field.

The continuous red lines are half-cuts to finish the field. Fergus is more acutely aware of the headland (red and yellow) areas and he will dig test pits to assess the extent of compaction damage. "I'll sub-soil these areas once conditions are right," he says.

"I can vary the rate of fertilizer while on the move. This allows me to make practical use of the yield maps and soil sample results. A Nitrates Directive fertilizer plan will also guide my overall fertilizer plans through the year. There is no magic solution to low prices, but you can pay close attention to the things in your own control."



# Marketing your foal

It's time to ignite your online presence and reach a wider audience

**Declan McArdle**

Equine Specialist,  
Teagasc Rural Economy  
Development Programme

**T**his year's foals are born, or will arrive very soon, and hopefully you will be happy with their health and conformation. Before we address the process of marketing this year's animals, let's talk briefly about breeding choices and how they can impact on your success next year.

**Key questions to ask**

- Should I continue to breed this mare?
- If the answer is yes, am I aiming at the correct market/ choosing the right sires?
- What do potential buyers want?  
For many buyers of foals, pedigree will be the first attraction. Obviously, you can't change the pedigree of existing animals but you can adjust future mating plans based on the type and quality of foals born this year.

- This raises more questions:
- Are you aiming mares at the right market?
- Are you aiming too high given their merits on paper (pedigree/mareline)?

As we are all acutely aware, the economic downturn has adversely affected the sport horse sector. On a positive note, sales results in 2013 showed that the average foal price was marginally up over 2012 figures. However, only 20% of foals sold through the sales ring left a profit for their breeders.

This leads us to yet another question: Why is this?

Simply, too many inferior mares are being bred and even in the case of good mares, inappropriate stallions are often chosen. To be financially viable you must think commercially. Marketing doesn't begin a month before the sales; but when you decide to cover your mare.

Once you have selected the market

you wish to target, the goal should be to aim for the top of that market. Do some research and speak to key players in your chosen segment. It's futile to breed for a market if you can't meet its requirements.

The best breeders know that marketing becomes easier when the story they are selling is performance-rich! That means gathering all available evidence which proves that your foal comes from a family of performers. Foals which sold well in 2013 were bred for purpose and the breeders were rewarded for their efforts.

Another fundamental of marketing is that you can only sell what you have, which brings us back to this year's foals.

**Tips for selling a foal**

Foals should be handled from the beginning and it is important to allocate time to do this. It will make life so much easier for the future, resulting in a more pleasurable horse to work with.

Even if the sale is six months away, you can start compiling relevant information now. For example, can you tell the story of your mare's damline in terms of performance accolades, particularly if your focus is to market the foal as a future performance horse.

Start gathering information on performance in the mare line. Capaloir (Horse Sport Ireland database) will prove very useful if you do not already know the information.

Try to track down all previous progeny, if sold on, and find out are they competing and at what level. Again, Capaloir can prove invaluable here.

Contact the current owners/riders to find out about the horses. If they are competing, ask for photographs or short video clips as these may add to your marketing campaign. Find out what is planned for them for the coming season.

Take photographs of your foal. Spend time on this during the summer months when the weather is fine and animals are looking at their best. Have your mare and foal well turned out and pick a location which is clean



Marketing doesn't begin a month before the sales; but when you decide to cover your mare



and neutral, i.e. no distractions in the background.

Get the foal to stand in the open stance (near fore directly under the shoulder, near hind directly under the point of buttock, with the off fore slightly behind the near fore leg and off hind leg slightly in front of the near hind leg).

Have something in your hand to grab the foal's attention (a baby rattle works very well). Presenting the foal in the correct stance with head alert and ears pricked forward will pay dividends.

Video clips can be a very powerful marketing tool. The footage should consist of stance, movement in hand (walk and trot) and loose movement. Be careful about zooming in and out too much as the standard camera struggles with light, particularly in indoor arenas. A tripod for your camera will ensure a steady shot.

Most computers or cameras come with editing software. With practice you can easily transform the footage into something which shows the best attributes of the animal.

Music can play a significant part when used as background to the video clip. Choose music which is upbeat but not too distracting. You also need to keep in mind copyright issues. A tutorial on how to video, edit and upload footage onto Youtube is available to watch for free on the Teagasc website.

Once you have the above collated, you can start your marketing campaign. For many, auction houses are the intended point of sale.

However, you can use the internet to generate advance interest in the foal.

So, hopefully, at time of sale, potential buyers will travel to see your foal.

### Social media

Social media is all the rage in marketing today. I suggest having a business page on Facebook to promote your stock. This is free and easy to set up. Invite all your friends to the page. Add content you have gathered about your foal. When your friends like the clips, their friends will see the content too.

You can generate further interest by posting relevant and timely information.

For example, "a four-year-old full sibling is competing on the national circuit, has a double clear in the 90s over the weekend – owner and rider very pleased with the way he is coming on". Better still, include a picture of him competing.

Consider setting up your own YouTube channel. Upload your videos on the website. Subscribe to other horse enthusiast pages. Encourage your fans on Facebook to also subscribe to your YouTube channel.

The idea behind this is simple, when you upload your video, all those who subscribe to it (it's free to subscribe) will be notified by email that you have uploaded a video.

In summary, always remember that marketing can only do so much. You must start with a product that the market demands.

To get the best financial return for stock, breeders should approach the challenge in a business-like manner and present the product in its best light with as much relevant information as possible.



Video clips can be a very powerful marketing tool



# LIFE ON THE LINE

Rivers are motorways of biodiversity but every small stream contains precious aquatic life

**Catherine Keena,**  
Teagasc Crops, Environment  
and Land Use Programme

A fisherman seated contentedly on a riverbank or in a boat on a lake conveys the image of a healthy watercourse. It's obvious that despite 'the one that got away' stories, there are fish present. Large rivers are vital for biodiversity, but so too is every single watercourse on every farm across the country. There is valuable aquatic life in the smallest stream and even drainage channels. This was the message from Inland Fisheries Ireland at a recent series of Teagasc 'Countryside Management Watercourse' courses throughout the country – held in conjunction with Inland Fisheries Ireland.

## Healthy rivers

In upland valleys, there are sequences of boulder-strewn riffles with disturbed, ruffled water and pools with still, calm conditions.

These areas are important as spawning and nursery areas and are also likely to support stocks of small adult trout.

Fry which have just hatched and parr (one-year-old fish) live in fast, riffley areas, which supply food and cover from predators.

Pools are important holding areas for parr and smolts (four-year-old fish) moving downstream and adults moving up. The deep water provides shelter and refuge, particularly during winter and periods of drought. Boulders, roots and other cover are also important.

Parr are territorial and behave aggressively to one another. The more cover there is, the less time is spent fighting and the more fish the stream will support.

Lower down in the landscape, rivers tend to be slower and may meander along. Riffles tend to form on either side of a bend, with lateral scour pools on the outer, eroding, side of each bend. Salmon and trout will spawn on these riffles.

Bankside vegetation along riverbanks is important. It prevents excessive bank erosion, maintains bank stability and provides cover, food and shade for fish. It also reduces high summer water temperatures, limits silt and fertilizer run-off and provides leaf litter as food for invertebrates.

## Native Irish species

The following fish species have been present in Ireland since the last ice age:

- Brook lamprey\*
- River lamprey\*
- Sea lamprey\*
- Artic char
- Atlantic salmon\*
- Brown trout/Sea trout
- Pollan\*
- Killarney shad\*
- Twaite shad\*
- Allis shad\*
- Smelt
- Three-spine stickleback
- Nin-spine stickleback
- Flounder
- European eel

\*Protected under the European Habitats Directive. For more information see <http://www.npws.ie/publications/redlists/RL5.pdf>

Fish must have adequate supplies of clean and well-oxygenated water. Clean, loose gravels for spawning are essential. Fine, silty material clogs the gravel and suffocates the eggs.

**Freshwater**

There are 29 species of fish found in Irish freshwater. Fifteen of these are native which means that they have been present since the last ice age ended about 10,000 years ago. Eight of these species are protected under the EU Habitats Directive. Fish and their spawning grounds are generally protected under the Fisheries (Consolidation) Act 1959. Work on watercourses should be completed from July to September but always consult Inland Fisheries Ireland before carrying out in-stream works.



**There is renewed interest in nose or pasture pumps with greater environmental concerns and increasing charges for water.**



**Adviser Niall O'Lamhna, Teagasc, Co Louth, demonstrates the operation of the nose pump at the watercourse event held in conjunction with Inland Fisheries Ireland on one of the farms in the Agricultural Catchments Programme.**



**Salmon migrate to sea because the feeding at sea is better than in fresh water and return after two to three years.**

**Managing watercourses**

Fence off watercourses to restrict access by livestock. Ideally, provide alternative sources of drinking water for animals. Where piped water isn't available, consider installing a nose or pasture pump. There is renewed interest in these pumps as environmental concerns about animals in watercourses grow and also because of increasing charges for water.

Preventing animal access to watercourses avoids damage to the river bank and bed and reduces siltation. It also stops water becoming fouled with pathogens and avoids any escape of nitrogen and phosphorus. Leaving a distance between the fence and the top of the bank provides a buffer and adds further protection to the watercourse.

Native trees and hedgerows along watercourses stabilise the banks and absorb water from the soil. They create a natural buffer zone, control the in-stream temperature and help control weeds. They also provide shade and shelter for livestock, as well as adding to the habitat value of the watercourse.

River crossings by bridge or box-culvert are preferred fisheries solutions. Box-culverts are large rectangular

pre-cast concrete structures placed in the watercourse through which water can flow with less restriction than through pipes. Obstructions and pipe culverts in watercourse channels can prevent fish getting upstream. Fish that can't pass are excluded from all channels upstream of this. Narrow pipe inlets get blocked by debris leading to flooding. Ford crossings are damaging to fish at the crossing points and further downstream.

Invasive non-native species can be a major problem. The three main problem species on Irish watercourses are Japanese knotweed, Himalayan balsam and giant hogweed. They rapidly form large, continuous stands, of tall, dense, vegetation along river banks. They shade out native herbaceous plants and when they dieback in winter they leave large bare areas, susceptible to soil erosion.

When planning to clean watercourses, contact Inland Fisheries Ireland. Only vegetation and silt should be removed from the open channel, not stone or gravel. Spoil should be placed along the bank outside the bank-full line, spreading thinly. The slope of the bank should be left intact. The non-working bank should not be disturbed retaining a margin of vegetation.



**Did you know?**

**The story of salmonids**

Salmonids include salmon and trout species. Salmon and sea trout live at sea as adults and return to the river before spawning. They spawn in loose, gravel beds. The gravel is usually of a mixed size with stones varying from 'larger than a tennis ball' down to pea size. However, finer sediments may prevent the free access of oxygenating water to the eggs. Eggs are laid between mid-October and February. Usually, trout spawn before salmon. All salmonids, particularly trout and sea trout, will spawn in small streams. Salmon and sea trout will also spawn in the main river and down almost as far as where waters are tidal.

The female lays her eggs in the gravel. Fertilisation occurs externally with the male releasing sperm over the eggs. An average-size hen salmon lays about 5,000 eggs. Some species, such as salmon, tend to spawn once in their lifetime and after spawning, most die. Others, such as trout, spawn once a year for their lifetime.

A high proportion of fish eggs hatch. The young fish absorb the yolk sack and leave the red between March and May the following year. They are now fry. At this stage, there is usually very high mortality due to a lack of food and cover as the fish establish territories. Fry feed on aquatic insects, larvae and other invertebrates. They tend to move downstream looking for appropriate territories. After one year, they become parr. Young salmon and trout live in the river for one to four years before migrating to the sea as smolts where they feed on small fish. They return to their river of origin after one to three years at sea.

**Irish fishing regulations**

Licences are required for salmon and sea trout fishing. No licence is needed for trout, pike and coarse fishing in the Republic of Ireland. Sea fishing for marine sport fish does not require a licence. A state licence is required to fish for salmon and sea trout, but does not entitle you to fish. Permits or permission from fisheries owners must be obtained. Salmon fishing opens on 1 January on a handful of rivers and, after that, the remainder of rivers open on various dates in February, March, April and May. The majority of rivers close on 30 September but some rivers remain open for sea trout fishing to 12 October.



The rose is a joy to look at and smell but you should always choose carefully

**Eileen Murphy,**  
Lecturer, Teagasc College,  
National Botanic Gardens

**R**oses have been among the most popular garden plants since the 1820s when several species from China were hybridised to produce garden-worthy new cultivars. There are more than 120 species of roses and, as fashions have changed, a constant supply of new cultivars has kept the interest going.

### Choose carefully

Flower type, colour and scent are the most obvious traits to consider. As larger flowers were bred, there was, in some cases, a reduction or loss in fragrance. Some cultivars flower only once a year, so a repeat flowering cultivar is going to give more value.

Roses can be susceptible to diseases such as black spot, where dark spots surrounded by yellow leaf colour result in early leaf drop.

Powdery mildew appears as a white fungus on young leaves. A pesticide programme will help control these but good natural resistance is desirable. By choosing roses that have been awarded the RHS Award of Garden Merit, you can more or less guarantee reliable results.

Traditionally, roses were grown on their own in rose beds. Where space allows, these beds make effective

displays. Again, be careful in choosing cultivars. If several types are put into a bed together, the effect will be muddled with uneven height and growth patterns. Select one cultivar and mass plant it.

The most popular type of rose is the hybrid tea which has large single flowers and is suited for both formal beds and cut flower production. Floribunda are more robust than hybrid tea and have smaller flowers produced in clusters. It is suited to mixed planting.

Shrub roses combine the flower type and fragrance of old-fashioned roses with the good growth and disease resistance of the modern rose. They are more expensive than hybrid teas but are versatile and fit in to the mixed border. Climbing and rambling roses can be effective in arbours, against walls and arches. The rambler is more vigorous than the climber and either can be used to grow through a tree.

### A good start is vital

Roses need good growing conditions. The site should be sheltered but not overcast or shaded. Well-drained, deep, loam soil, with a good supply of organic matter, is needed and garden compost or well-rotted farmyard manure should be added to the trench or planting hole before putting in the roses. Rose fertilizer

should be applied at planting time and as a top dressing each spring.

The best and most economical approach when establishing roses is to use bare-rooted plants. November to March is the planting time. They are grown in open ground and should be planted as soon as they are received from the grower. Containerised roses are bare-rooted plants that are potted up to allow the Garden Centre to hold on to plants for longer. They will cost more than bare-rooted and offer no additional value.

Container-grown roses have been grown for a season in containers. They allow year-round planting but they are more expensive than bare rooted.

Care is needed at planting time. Don't attempt to plant when the ground is frozen or wet.

Most commercially-produced roses are budded onto a rootstock. The planting hole should be big enough, roughly twice the width of the plant's roots and a full spade depth. The union where top and rootstock meet should not be buried as this may cause die-back disease. If the plant is too high, it will not establish.

If you are planting where roses were grown previously, you may come across replant disease or 'soil sickness'. Dig out the soil to a depth of 45cm and replace it with good soil from another part of the garden.

With luck, in months, you will be able to simply 'smell the roses'.



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