



TEAGASC

March - April 2015 | Volume 26 | Number 2

# Today's Farm

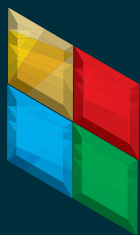
Business, production, environment and countryside issues [www.teagasc.ie](http://www.teagasc.ie)



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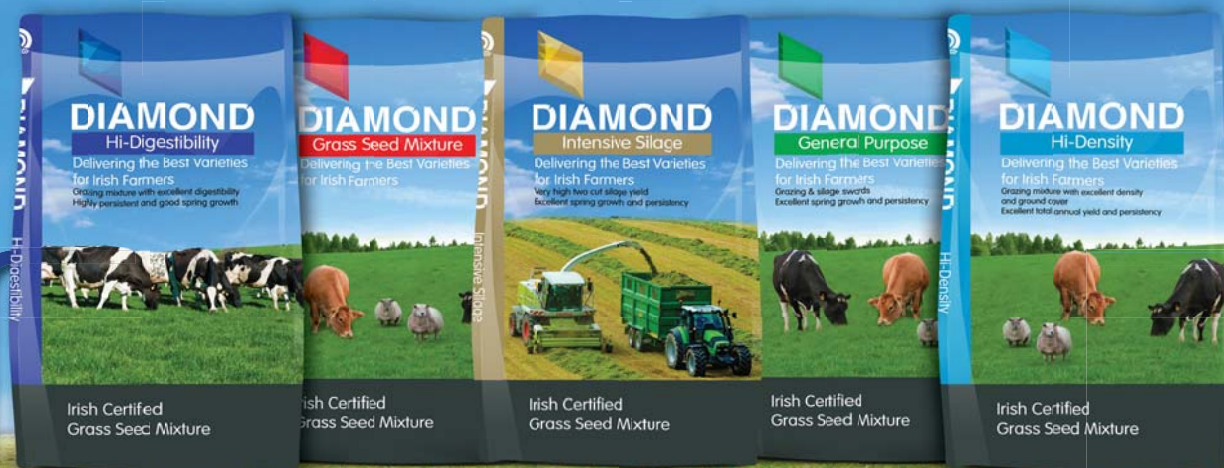
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**Cover** | Joe Leonard and his colleagues in the Navan Dairy Discussion Group believe in being pro-active when it comes to managing stress and mental health. "We believe it's better to prevent something before it happens," says Joe. You can read tips from Joe and others in our cover story.

## COMMENT



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

## Managing stress

In our cover story, we address the topic of stress and how farmers can manage it. Too many would rather have a tooth pulled without anaesthetic than admit to stress of any type. Mental health too is often a taboo subject despite the fact that one in four of the population experience it at some stage in their lives. This makes all the more remarkable the initiatives undertaken by the Navan Dairy Discussion Group to protect the mental health of their members. These mentally healthy farmers intend to keep it that way and have, for example, undertaken a course in "mindfulness". Clever farmers invest in themselves, as well as their businesses.

## Bainistiú Struis

Is iad na bealaí a dhéileálann feirmeoirí le strus ábhar plé ár bpríomhscéil. B'fhearr le mórchuid daoine cead a thabhairt don fhiacloir fiacail a tharraingt gan ainéistéiseach ná a rá os ard go raibh siad faoi strus de chineál ar bith. Níos minice ná a mhalairt bíonn drogall ar dhaoine cúrsaí meabhairshláinte a phlé ainneoin gur ábhar é a bhíonn ag déanamh inní do dhuine amháin as gach ceathrar uair éigin i gcaitheamh a saoil. Dá réir sin, is cinnte gur díol suntais iad na tionscnaimh atá forbartha ag Pléghrúpa Dhéirí na hUaimhe chun aire a thabhairt do mheabhairshláinte bhaill uile an Ghrúpa. Tá sé beartaithe ag na feirmeoirí seo tús áite a thabhairt dá meabhairshláinte agus is chuige sin atá cúrsa 'Aireachas' mar shampla, déanta acu. Ní ina ngnóthaí amháin a infheistíonn feirmeoirí cliste - infheistíonn siad iontu féin freisin.

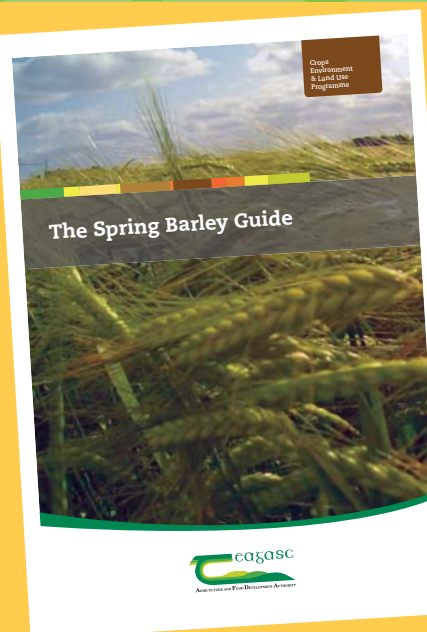
# Don't forget options at ag and hort colleges



Teagasc offers courses at the College of Amenity Horticulture, National Botanic Gardens.

Teagasc and private agricultural colleges are holding open days over the next couple of months – see our Coming Events pages for details. Students who have filled out CAO applications have until May to change their minds and may wish to consider the wide range of courses at Level 7 offered by Teagasc and the private

agricultural colleges in collaboration with the Institutes of Technology. There is a huge range of highly interesting degree courses in this category which can suit the subject or geographical preferences of students around the country. Full contact details for each college is included in coming events.



## Barley publication

The Teagasc Spring Barley Guide produced in collaboration with DAFM and Boortmalt was launched at the Teagasc Tillage Conference. The guide brings together the latest Teagasc crop physiology and agronomy research. It gives a detailed description of how the crop grows and forms its yield and details crop management to optimise crop growth and yield in a one-stop shop for researchers, advisers, farmers and students. Copies of this chargeable publication are available from Eleanor Butler at Teagasc Oak Park.

## Vegetable publication

A new seventh edition of the *Teagasc Guide to Vegetable Growing* has just been published. Copies, which are free of charge, may be obtained by emailing Stephen Alexander at [stephen.alexander@teagasc.ie](mailto:stephen.alexander@teagasc.ie). An electronic version is also available on the Teagasc website.



## BOOK REVIEW

### Nature in Towns and Cities

By David Goode (William Collins, 2014)

This is another handsomely produced book in the New Naturalist Library and is one of the few, in a series now amounting to 126 volumes, to focus on urban habitats like parks, canals, marshes, rivers, even cemeteries.

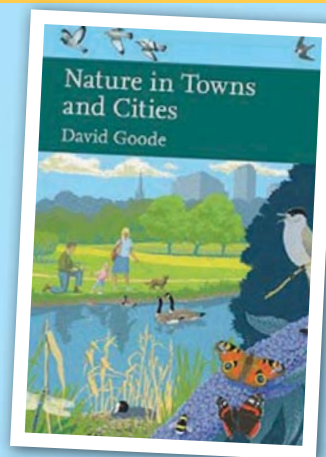
Each habitat and the species likely to be found there is described, with the focus on flora and fauna and what the author calls 'a motley selection of opportunists', including alien arrivals like Japanese knotweed, giant hogweed and their ilk.

The final section is devoted to urban nature conservation, a subject the author is supremely well qualified to write about having worked in this field all his life.

The issues he discusses are British-based but their growing importance in this country is obvious and the range of species he covers apply just as well to Ireland.

This hardback book is a superb introduction to the New Naturalist Library, illustrated with colour photographs on every other page, and may well set you collecting other titles in the series.

– Sean Sheehan



Nature in Towns and Cities, available in good bookshops, costs €44 from Amazon ([www.bookdepository.com](http://www.bookdepository.com)) including postage to Ireland.



## LECTURER SERIES

The Teagasc Annual Distinguished Lecturer Series takes place between 6.30pm and 8.30pm on Monday 23 March at The Mansion House, Dawson Street, Dublin 2. The "Darwinian Agriculture: Evolutionary Tradeoffs as Opportunities" lecture will be presented by Professor R. Ford Denison, Adjunct Professor in Ecology and Evolution, University of Minnesota and Professor Emeritus, UC Davis.

## DAIRY FARM WALK

A dairy farm walk will take place in Thurles on 23 April on the farm of the winners of the 2014 National Dairy Council/Kerrygold Quality Milk Awards, Eddie, Anne and Thomas Dwan. Edmund and Thomas Dwan are a father-and-son team milking 105 cows on a 75ha farm, which borders the River Suir on the outskirts of Thurles town. All of the milk from the farm goes to Centenary Thurles Co-op.

## BETTER FARM BEEF EVENTS

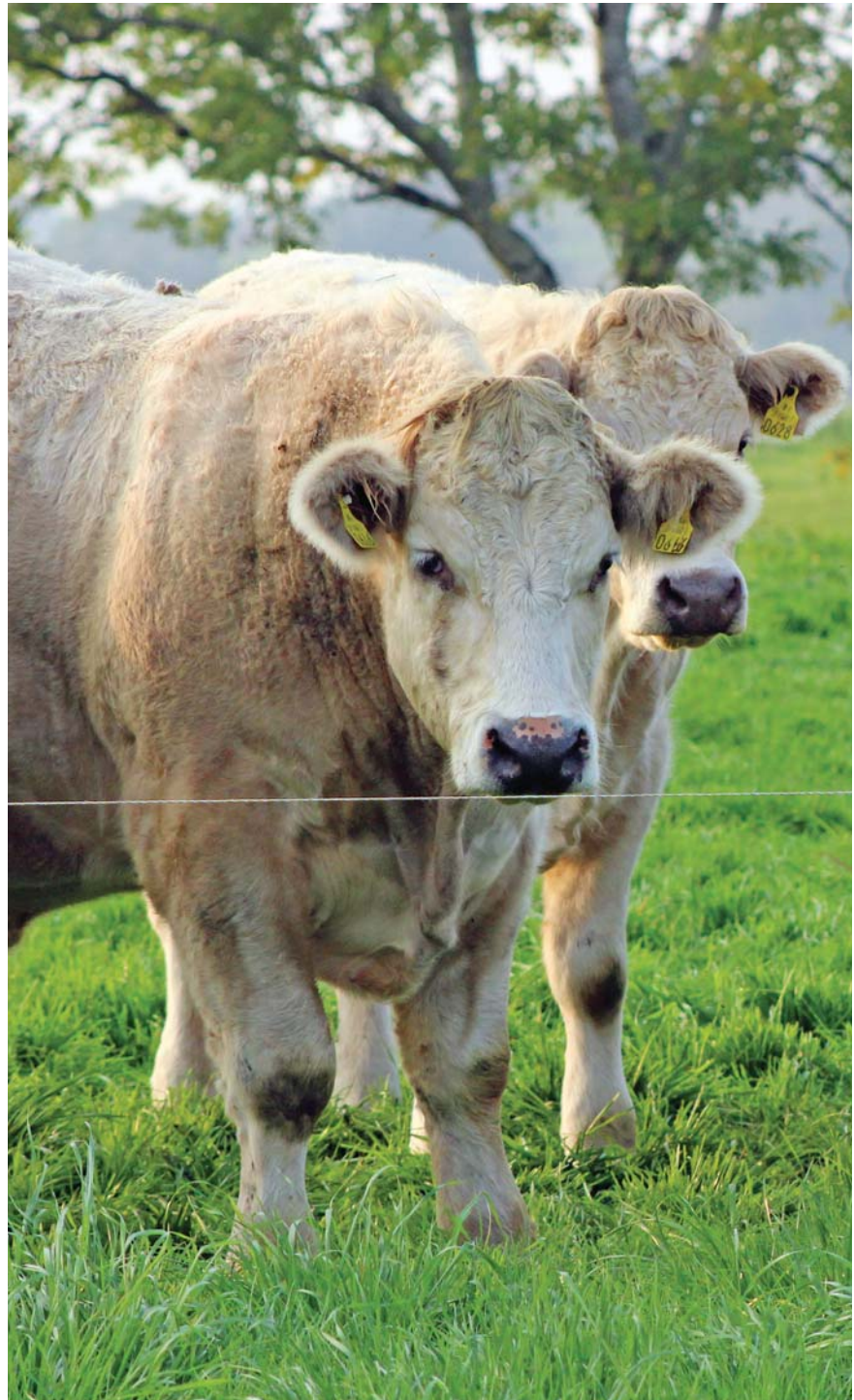
A total of 10 events will take place on the farms participating in the Teagasc/*Irish Farmers Journal* Better Farm beef programme in 2015. Four regional events will take place from 24 March to 9 April.

Two national events will take place in May and July and four autumn events will take place regionally in September. These farm walks will be used to disseminate the findings and the lessons learned on the individual farms and from the overall national programme. See Table 1.

## GET FINANCIALLY FIT FOR 2015

Five events to encourage farmers to carry out a financial health check on their business will take place in the week of 23 March. A national event is planned for 23 March in Carlow, followed by regional events in Tipperary, east Cork, Mayo and Offaly. These financial health seminars will cover topics such as farm household budgeting, social benefits, mortgage or loan repayments, investment decisions, tax, education and planning for retirement.

Each event will be broken into two sessions. The first session will be based on farm household budgeting and will include a panel discussion facilitated by a local agri-journalist. The second session will include questions and answers and an opportunity to meet trade stands. See Table 2.



**Table 1:** Better Farm beef events

Date	Event	Farmer
24 March	Farm walk	Patrick Drohan, Co Waterford
2 April	Farm walk	Donal Scully, Co Limerick
7 April	Farm walk	Des and Frank Beirne, Co Longford
9 April	Farm walk	William Treacy, Co Louth

**Table 2:** Regional financial health seminars

Date	Location	Time
23 March	Talbot Hotel, Carlow	1pm
24 March	Radisson Blu Hotel, Little Island, Cork.	1pm
25 March	Tullamore Court Hotel, Tullamore, Co Offaly	1pm
26 March	Breaffy House Hotel, Castlebar, Co Mayo	7.30pm
27 March	The Anner Hotel, Thurles, Co Tipperary	1pm

Continued  
on p6





The Teagasc financial health seminars will cover topics such as planning for retirement.

## MEAT PRODUCTION

Two-day butchery and small-scale meat production workshop on Wednesday and Thursday, 25 and 26 March.

• **Venue:** Teagasc Food Research Centre, Ashtown, Dublin 15, training and conference centre.

The workshop will demonstrate the butchering of a side of beef, a lamb and a pig into retail cuts.

The workshop will be useful for individuals who are already selling or considering processing and/or selling meat from their own herd.

### Objectives

- Demonstrate the boning of beef, pork and lamb carcasses.
- Familiarise participants with retail cuts of meat.
- Discuss the potential uses of various cuts of meat.
- Understand the types of packaging typically used.
- Deliver an overview of the legal implications of setting up a meat processing unit.
- Introduce participants to meat-labelling requirements.
- Familiarise participants with the concept of costings.

The workshop fee is €300 or €225 (for those qualifying for Skillnets funding). Cheques should be made payable to the Rural Food Company Training Networks Ltd.

For information on booking a place, please complete the online booking form.

Alternatively, contact course administrator Margaret Hennessy on 01-8059520 (direct) 01-8059500 (general). Alternatively, you can fax 01-8059570 or email: [courseadministrator@teagasc.ie](mailto:courseadministrator@teagasc.ie)

**Table 3:** 2015 college open days

Location	Date
<b>Teagasc, College of Horticulture</b> National Botanic Gardens, Glasnevin, Dublin 9 Principal: John Mulhern Phone: 01-8040201 Email: <a href="mailto:botanic.college@teagasc.ie">botanic.college@teagasc.ie</a>	Thursday 19 March Open day: 2pm to 4pm (tours ongoing)
<b>Gurteen Agricultural College</b> Ballingarry, Roscrea, Co Tipperary Principal: Mike Pearson Phone: 067-21282 Email: <a href="mailto:info@gurteencollege.ie">info@gurteencollege.ie</a>	Wednesday 18 March Open day: 10.30am to 2pm (tours ongoing)
<b>Ballyhaise Agricultural College</b> Teagasc, Agricultural College, Ballyhaise, Co Cavan Principal: John Kelly Phone: 049-4338108 Email: <a href="mailto:ballyhaise.college@teagasc.ie">ballyhaise.college@teagasc.ie</a>	Thursday 19 March Open day: 10am to 3pm (tours ongoing)
<b>Kildalton Agricultural &amp; Horticultural College</b> Piltown, Co Kilkenny Asst Principal Agriculture: Tim Ashmore Asst Principal Horticulture: Ciaran Walsh Phone: 051-644400 Email: <a href="mailto:reception@kildaltoncollege.ie">reception@kildaltoncollege.ie</a>	Friday 20 March Open day: 10am to 1pm (tours start at 10am and 11am)
<b>Mountbellew Agricultural College</b> Mountbellew, Co Galway Principal: Tom Burke Phone: 0909-679205 Email: <a href="mailto:tvburke@iol.ie">tvburke@iol.ie</a>	Wednesday, 4 March Open day: 10am to 3pm (tours ongoing)
<b>Clonakilty Agricultural College</b> Teagasc, Agricultural College, Darrara, Clonakilty, Co Cork Principal: Majella Moloney Phone: 023 8832500 Email: <a href="mailto:clonakilty.college@teagasc.ie">clonakilty.college@teagasc.ie</a>	Friday, 13 March Open day: 11am to 2pm (tours ongoing)
<b>Pallaskenry Agricultural College</b> Salesian Agricultural College, Pallaskenry, Co Limerick Principal: Derek O'Donoghue Phone: 061-393100 Email: <a href="mailto:info@pallaskenry.com">info@pallaskenry.com</a>	Thursday 26 March Open day: 10am to 2pm (tours ongoing)



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# Future is written in the stars

But science, rather than astrology,  
is driving progress for  
suckler farmers





In 2008, I realised that I needed to target milk and fertility in my herd and I purchased a five-star bull strong for these traits. Thankfully, everything has worked out well



**James Keane**  
Beef Specialist,  
Teagasc Animal and Grassland  
Research & Innovation Programme

**J**ohn Kelly, together with his wife Mairead and their two daughters Rachel and Avril, farm 90ha in Moydow, Co Longford.

The family runs 100 cows, mostly three-quarter bred Limousin. Calving takes place between July and October and John sells his weanlings from June onwards to the live export market. Ninety per cent of the heifers over the last few years have all been kept on the farm as the plan is to go to 120 cows. Three Limousin stock bulls and an Angus bull for heifers calving down at two years old are used.

John says: "My focus has always been on keeping milk in the herd and making sure that all cows are fertile. As a result, I have been selective in the stock bulls purchased and AI used on the farm."

Since the introduction of the Irish Cattle Breeding Federation (ICBF) Euro-Star ratings, John has used as much of this valuable information along with physical appearance when buying bulls. Initial Euro-Star ratings on his stock bull have proven to be accurate and, while he is always trying to improve his herd, John believes his cows have adequate milk to feed their calves and go back in calf each year.

John has four goals – get one calf from each cow every year; calve cows in as short a timeframe as possible to save labour; get cows back in calf as soon as possible and breed heifers to have good milk and fertility traits.

"When I started farming, none of this information was available to me. ICBF now creates excellent reports on all suckler herds in the country. It pulls it together in a simple farmer friendly report" (Table 1).

"This shows figures from my latest beef calving report, which I can use each year," John says.

At a quick glance, John can see the critical figures for his herd, such as calves/cow/year, calf mortality, calving interval and compare them with the national average.

John targets 1.0 calf/cow/year and plans to have that weanling for sale in May/June/July the following year. As can be seen from Table 1, John has 0.96 calves per cow per year versus the national average of 0.79. This means that out of 100 cows calved, John will have 96 live weanlings to sell versus the average for the country of 79. This is a difference of 17 weanlings to sell each year and, at an average value of €850/weanling, this equates to €14,450 every year.

### Breeding replacement heifers

John always tries to pick a bull on his physical appearance but also his star rating. With this in mind, he purchased a Limousin bull bred from Ronick Hawk (RKH) in 2008.

"At the time, I looked at the bull and liked his appearance and shape. I needed a bull that would bring milk into the herd, if possible. I had a bull bred from Dauphin (DAU) and from looking at my heifers I believed that milk was going to be a problem in the future."

In 2008, the RKH-sired bull had a suckler beef value (SBV) of €90, which gave him four stars overall. He had four stars for weanling export and five stars for beef carcass. For John, this was great as he was producing weanlings for sale but also finishing some as bulls. The bull had three stars for daughter fertility and "this was what I was looking for, i.e. a bull that would have saleable bull calves and fertile daughters for replacements," John says.

This bull has been a great success. John has cows and heifers bred from him and, as can be seen from Table 1, they are fertile and have adequate milk to feed their calves. The target weight for bull calves in June is 400kg and 370kg for heifers and John has been consistently hitting these weights.

Table 2 shows the current replacement and terminal indices for the RHK bull.

He has a replacement index of €232 (which gives him five stars for each index both within and across all breeds) and, most of all, the reliability is at 68%.

**Table 1:** Figures from ICBF 2014 beef calving report

	John Kelly	National average
Calving interval	374 days	412 days
Calves/cow/year	0.96	0.79
Mortality – birth	1.30%	4.50%
Mortality – 28 days	1.30%	5.60%
Percentage of cows calving at two years	63%	17%

Left: John Kelly



Continued  
on p10





As suckler farmers, we have to target one calf per cow per year and also breed heifers that will be fertile and have enough milk to rear a calf

This replacement index of €232 means that each daughter of the bull will leave €232 extra profit more than the average suckler cow over the course of her lifetime (all of her calves and their slaughter value).

John's initial decision to follow the Euro-Star ratings has paid off and he has produced some top-quality heifers on the farm. Under the new replacement index, we can see that his expected daughter performance for milk is five stars and, again, reliability is at 71%. Reliability is obviously high for RKH-bred bulls because a lot of information has been gathered about his progeny.

Breeding with good genetics is cumulative. This means that if you cross a five-star bull with three/four/five-star heifers, your breeding will improve year on year. With this in mind and needing to invest in two new stock bulls, John purchased two five-star rated Limousin bulls.

### APM sired bull

One of the Limousin bulls sired by Ampertaine Commander (APM) was purchased in spring 2014 and his Euro-Star ratings are outlined in Table 3. John liked the physical appearance of the bull and was also impressed with his Euro-Star figures. He is a 2013-born bull with a five-star rating for the replacement and terminal indices (within and across all breeds). "He should produce quality bull calves for sale and good replacement heifers with milk. I know that the reliability is low, but having bought this bull with five stars for the replacement index and from my previous experience with the RKH-sired bull, I am hoping that this bull will breed good performing heifers."

John also looked at the figure in the daughter milk index of +1.90kg and this means calves from this bull's daughters should be 1.90kg heavier at weaning than the average calf in the country. John believes using the replacement index, as well as the visual appearance, will give better results for every suckler farmer. This bull has either four or five stars for docility, carcass weight and carcass conformation and his maternal grand sire is Otan (OTX), who is very reliable for milk and fertility. If he produces all that is set out for him, he will be a great addition to John's herd.

"As suckler farmers, we have to target one calf per cow per year and also breed heifers that will be fertile and have enough milk to rear a calf," says John. "The replacement index gives me the confidence to pick bulls on their genetic evaluations and it is there as an extra tool for us all to use."

Table 2

Lot 1 CREGGPARK BUSTER				
ID: IE182499610053		Breed: Limousin		
Sex: Male		DOB: 06-Nov-2006		
Owner: John Kelly - Mornine Moydow Co Longford				
Breeder: Robert Mcnevin - Cregg Demesne Tubber Co Galway				
Sire: Ronick Hawk RKH		Broadmeadows Cannon		Broadmeadows Vip
		Ronick Esther		Talent Vanilla
Dam: Milburn Patricia IE181698340099		Gamin		Delta Digitale
		Barnhill Hannah		Hydeville Domino Barnhill Etiole
Star Rating (Within Limousin breed)	Economic Indexes	€uro value per progeny	Index Reliability	Star rating (across all beef breeds)
★★★	Terminal Index	€121	70% (High)	★★★★★
★★★★★	Replacement Index	€232	68% (High)	★★★★★
	Maternal Cow Traits :	€28	65%	
	Maternal Progeny Traits :	€204	71%	
	Dairy Beef			
Star Rating (Within Limousin breed)	Key profit traits	Index Value	Trait Reliability	Star rating (across all beef breeds)
Expected progeny performance				
	Calving difficulty (% 3 & 4) Breed ave: 4.95%, All breeds ave: 4.99%	+3.6%	85% (V High)	
★★★	Docility (1-5 scale) Breed ave: -0.06, All breeds ave: 0	-0.07 scale	63% (High)	★★
★	Carcass weight (kg) Breed ave: 23.88kg, All breeds ave: 22.88kg	+17kg	80% (V High)	★★
★★★★★	Carcass conformation (1-15 scale) Breed ave: 2.11, All breeds ave: 1.84	+2.22 scale	75% (High)	★★★★★
Expected daughter breeding performance				
	Daughter calving diff (% 3 & 4) Breed ave: 4.55%, All breeds ave: 5.19%	+5.6%	57% (Average)	
★★★★★	Daughter Milk (kg) Breed ave: -0.92kg, All breeds ave: 0.15kg	+4.3kg	71% (High)	★★★★★
★★★★★	Daughter calving interval (days) Breed ave: 1.13days, All breeds ave: -0.41days	-1.17days	61% (High)	★★★
Additional Information:		Linear composites Value Reliability		
		Muscle	113	48%
		Skeletal	107	42%
		Function	119	27%
Herd data quality index				
N/A				
Animal scored. Linear scores and weaning weights in evaluations				

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Table 3

Lot 2 DERRYGULLINANE IMPECABULL				
ID: IE271061750330		Breed: Limousin		
Sex: Male		DOB: 31-Mar-2013		
Owner: John Kelly - Mornine Moydow Co Longford				
Breeder: John Joseph Walsh - Derrygullinane Knockmore Ballina Co Mayo				
Sire: Ampertaine Commander				
APM	Glenrock Ventura	Glenrock Spartacus	Glenrock Saspirilla	
	Ampertaine Annabella	Sympa	Kype Sharon	
Dam: Derrygullinane Catherine				
IE271061780192	Otan	Insecte	Jade	
	0128 Otalie	Farceur	Elite	
Star Rating (Within Limousin breed)	Economic Indexes	€uro value per progeny	Index Reliability	Star rating (across all beef breeds)
★★★★★	Terminal Index	€148	30% (Low)	★★★★★
★★★★★	Replacement Index	€217	26% (Low)	★★★★★
	Maternal Cow Traits :	-€ 22	22%	
	Maternal Progeny Traits :	€ 240	30%	
	Dairy Beef			
Star Rating (Within Limousin breed)	Key profit traits	Index Value	Trait Reliability	Star rating (across all beef breeds)
Expected progeny performance				
	Calving difficulty (% 3 & 4)	+5.1%	35% (Low)	
	Breed ave: 4.95% All breeds ave: 4.99%			
★★★★★	Docility (1-5 scale)	0.02 scale	45% (Average)	★★★
	Breed ave: -0.06 All breeds ave: 0			
★★★★★	Carcass weight (kg)	+33kg	34% (Low)	★★★★★
	Breed ave: 23.88kg All breeds ave: 22.88kg			
★★★★★	Carcass conformation (1-15 scale)	+2.4 scale	28% (Low)	★★★★★
	Breed ave: 2.11 All breeds ave: 1.84			
Expected daughter breeding performance				
	Daughter calving diff (% 3 & 4)	+4.3%	16% (V Low)	
	Breed ave: 4.55% All breeds ave: 5.19%			
★★★★★	Daughter Milk (kg)	+1.9kg	22% (Low)	★★★
	Breed ave: -0.92kg All breeds ave: 0.15kg			
★★★★	Daughter calving interval (days)	+0.17days	19% (V Low)	★★★
	Breed ave: 1.13days All breeds ave: -0.41days			
Additional Information:		Linear composites Value Reliability		
		Muscle	124	50%
		Skeletal	129	47%
		Function	104	24%
		Herd data quality index	N/A	
Animal scored. Linear scores and weaning weights in evaluations				

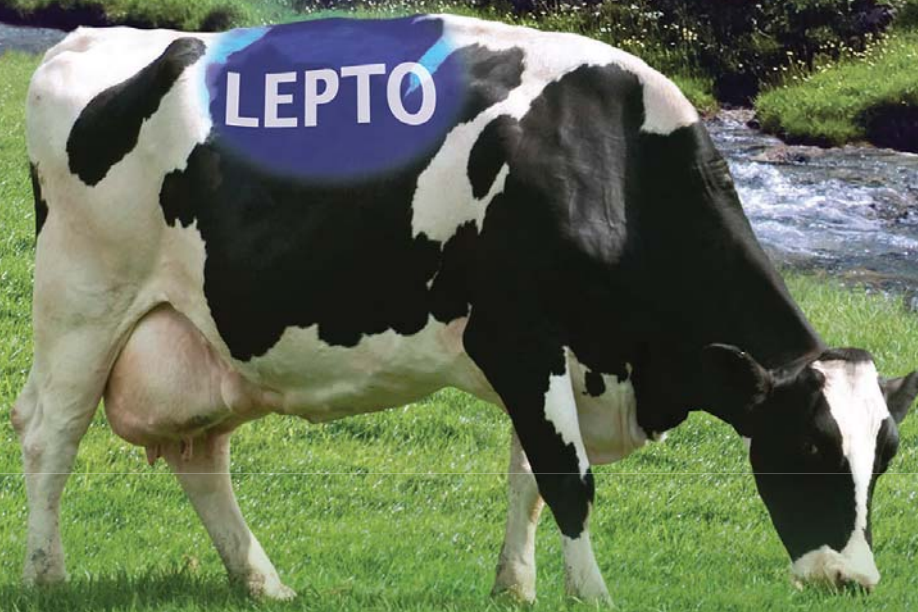
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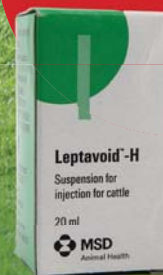
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of *Leptospira hardjo*



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and Bovilis BVD  
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concurrent use**



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- ✓ Proven to protect for 12 months

**Use Medicines Responsibly.**

Bovilis BVD Suspension for injection for cattle vaccine contains inac. antigen of cytopathogenic BVD virus strain C-86. ROI: [POM(E)] NI: [POM-V].

Leptavoid-H Suspension for injection for cattle vaccine contains inac. *Leptospira interrogans* serovar hardjo 204 organisms. ROI: [LM] NI: [POM-VPS]. Withdrawal periods: zero days.

Always read the package leaflet or SPC before use. Prior to first time use on a farm, it is strongly recommended that the advice of a veterinary practitioner is sought.

For further information see SPC, contact prescriber or MSD Animal Health, Red Oak North, South County Business Park, Leopardstown, Dublin 18, Ireland.

Tel: +353(0)1 2970220. E-Mail: vet-support.ie@merck.com Web: www.msd-animal-health.ie

\* Where Leptospirosis is the cause of infertility



# Don't buy any old bull

## 5 THINGS TO KNOW BEFORE PURCHASING

**Pearse Kelly**  
Drystock specialist,  
Teagasc Animal and Grassland  
Research & Innovation Programme



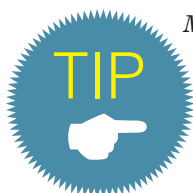
The star ratings published for a bull help to narrow your selection when choosing to buy

A pedigree stock bull is a substantial investment. For many, it is something they will hopefully only have to buy once every five or six years. The bull chosen will have a huge influence on your suckler herd's performance for many years to come. The purchase therefore deserves to be given time and effort.

### 1 What published figures are available on the bulls that you are looking at?

The days of buying a bull based on his looks and what the seller tells you about his ancestry are long gone. The Irish Cattle Breeding Federation (ICBF) now publishes breeding values on every pedigree bull born in the country. Use these figures (and the stars that go with them) to help make up your mind when comparing bulls. You may have already seen these on page 10 of James Keane's article.

Go to bull sales where there are published indices available on the animals. Catalogues are usually available to download from the web before these sales or you can ask the breed society to post one to you before the sale. If you are buying a bull privately, only deal with breeders who can give you all the relevant figures.



*Many farmers now buy bulls they first see advertised on websites such as DoneDeal. When you ring to discuss the bull, ask for the full ear tag number and enter this into the ICBF*

*bull search facility on [www.icbf.com](http://www.icbf.com). This will give you all of the breeding values on that bull along with his ancestry. It might save you a journey if they do not match your requirements.*

### 2 Are you looking to buy a bull to produce calves for finishing or to breed suckler replacements?

Suckler farmers who have no interest in keeping replacement heifers out of a particular bull should focus on what the terminal index values are for the bulls they are looking at. High terminal index bulls (those with four and five stars) are more likely to produce calves with above average daily gains, have better conformation than the breed average and have higher feed efficiency. These three traits make up 71% of the index. Difficult calving bulls are heavily penalised on this index.

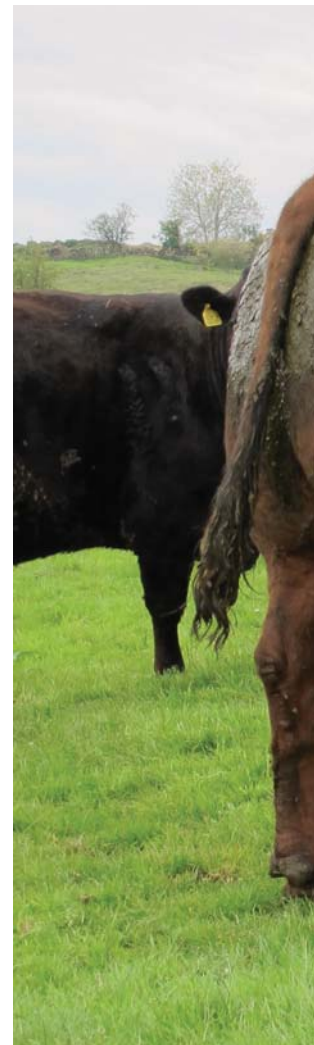
The majority of suckler farmers, however, would like the option of keeping some replacements from a bull they have purchased. The replacement index should then be your index of choice rather than the terminal index. It identifies bulls that have the potential to produce breeding heifers with both good maternal traits and good beef traits.

A word of warning though – bulls with high star ratings for the replacement index can get this from their maternal traits, from their beefing traits or from a combination of both. A bull with five stars for the replacement index can also rank poorly on maternal traits, i.e. milk and fertility. It is important to take note of the key profit traits in conjunction with the overall figure.

### 3 What are the most important key profit traits for your farm?

Looking at the overall index values is not enough. You also need to look at the key profit trait values before you make any decision. Some traits may be more important to you than others. For example, the key profit trait for calving difficulty estimates how hard it will be to calve a bull's own

**Give the same amount of time to researching a bull's breeding values as you would to checking all the options when buying a new tractor.**







progeny. Mature suckler cows calving in a fit body condition should not have a huge amount of difficulty when bred to bulls with estimated calving difficulty figures of up to 8%. However, maiden heifers should not be bred to bulls with calving difficulty figures above 4%.

For some farmers, these figures may be even too high and they will aim for bulls with lower figures to reduce the risk even further.

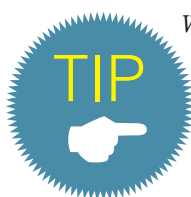
If you are trying to improve fertility within your replacement heifers, the key profit trait for daughter calving interval should be negative, i.e. daughters from this bull are likely to reduce the average calving interval of your herd. Similarly, if milk is important in your heifers, you should pay close attention to the key profit trait for daughter milk – it should be positive and the higher the better.

#### 4 How reliable are the star ratings for the indices and the key profit traits?

No breeding index in the world is 100% accurate. They are only a prediction of how a bull will perform and

like all predictions they can sometimes be wrong. Farmers over the years have given examples of buying a bull that had five stars for an index on the day of purchase and a couple of years later that bull had only one star due to the fact that his own performance was much lower than was predicted for him.

All of the indices and key profit traits have reliability figures published beside them. The higher this figure is, the less likely that a bull's breeding values will change considerably over time (the range is from one to 100%). The more data that is available on a bull the more reliable his star ratings will be, i.e. the higher the reliability figure will be. Stock bulls that have been weight recorded and/or linear scored will have more reliable star ratings. If they are bred from bulls and cows with high reliability figures, their own figures will be more reliable.



Where the reliability figures are low for a young bull, check the indices and key profit traits for his sire and maternal grand-sire

as these can also give a good indication of a bull's potential.

#### 5 Does the bull's appearance match his published figures? Is he fit for breeding?

The star ratings published for a bull help to narrow your selection when choosing to buy a bull but his pedigree and physical appearance are also important.

His own physical build should match what the figures are saying about him.

Examine the size of his scrotum and testicles to ensure they are at the correct size for his age. Inspect his legs and feet to avoid sickled/swollen hocks or other functionality problems that could affect him.

Assess his body condition to ensure he is fit and ready for a busy breeding season.

Young bulls will not be able to run with many cows in their first year and they should, if at all possible, be broken in slowly.

Ask the seller what diet he has been on, and what he should be fed on for the first month on your farm, to adjust his diet slowly.

# Why extra protein can

Ewes in late pregnancy and early lactation may need 20% more protein than normally recommended

**Frank Hynes**  
Sheep Specialist,  
Teagasc Animal and Grassland  
Research & Innovation Programme

**A**t the recent Teagasc national sheep conferences, held in Killarney, Co Kerry and Trim, Co Meath, Dr Jos Houdijk, Scotland's Rural College (SRUC), discussed a number of strategies to reduce the reliance on anthelmintics for worm control. One suggestion was that dietary protein levels of ewes in late pregnancy and early lactation should be increased by about 20% over the normal recommended levels.

He suggested that increasing the protein percentage in the diet at this time will help reduce worm burden in lambs later in the season. This should reduce the number of worm doses required and increase lamb performance in terms of growth rate.

## Anthelmintic resistance

Farmers rely heavily on the use of anthelmintics to control worm populations in growing lambs. Due to the increasing problem of anthelmintic resistance, wormers have become less effective as a sole control mechanism for roundworms in lambs. Therefore, any developments that offer alternative methods of reducing worm burden are worth considering.

It is widely known that the worm burden in ewes increases dramatically around lambing time and for several weeks afterwards. This increase in the worm burden is known as the "periparturient rise". It leads to a significant increase in pasture contamination and subsequent infection of lambs during the summer. The increase arises due to a reduction in ewe immunity to worms. Until recently, it has not been clearly understood why the reduction in ewe immunity occurs.

## Ewe protein supplementation

Dr Houdijk suggests that the underlying breakdown of immunity to parasites may be a result of inadequate protein supply around lambing. He



argues that the available protein is prioritised to lamb growth, including milk production, at the expense of maintaining immunity. According to Houdijk, many recent studies have demonstrated that the level of periparturient faecal egg counts (FEC) can be reduced through improved protein nutrition, typically at least 20% above the assumed protein requirements.

**Dietary protein levels of ewes in late pregnancy and early lactation should be increased by about 20% over the normal recommended levels.**

## Main findings

Houdijk identified the main findings of these studies, which have been ongoing over the last 15 to 20 years:

- A reduction of ewe FEC and increased lamb weight gain can be expected by providing protein supplementation when an inadequate



**Dr Jos Houdijk suggests that the underlying breakdown of immunity to parasites may be a result of inadequate protein supply around lambing.**



## Key messages

There are opportunities to exploit maternal protein supplementation to achieve reduced pasture contamination (through reduced worm burdens and FEC), increased lamb performance and reduced wormer usage. This approach could help to reduce our reliance on anthelmintics for the control of gastrointestinal nematode parasites and is certainly worth considering.



# help against parasites



## Protein TYPE

Protein fed to sheep can be divided into two main types. Firstly, rumen degradable protein (RDP) which is broken down in the rumen. It is required by the rumen bacteria to enable them to break down forage in the diet. Secondly, digestible undegradable protein (DUP) is not broken down in the rumen (it bypasses the rumen). It is broken down in the gut and its amino acids are absorbed directly from the gut. In late pregnancy, DUP is essential for udder de-

velopment and milk production. Soya bean meal is rich in DUP.

Furthermore, there is now evidence to suggest that the efficacy of protein supplementation on the level of parasites may differ between protein sources.

Protein supplementation using bypass protein sources is likely to be more effective at reducing FEC than simply feeding more rumen degradable protein.

Soyabean meal can be treated with xylose which has the effect of further increasing the proportion of the protein by-passing the rumen.

This xylose-treated soya bean meal appears to be more effective at increasing ewe productivity and reducing FEC than simply feeding more protein that is degradable in the rumen.



protein supply is limiting productivity. The increase in lamb weight gain can be attributed to increased milk production.

- When insufficient protein is supplied in the diet, the scarce protein is directed towards milk production rather than to immunity to parasites. By gradually increasing protein supply from scarce to more than adequate for twin-rearing lactating ewes, milk production will firstly be increased to a maximum before it leads to a reduction in worm burdens.

- Improving the nutritional status of the ewes can reduce FEC and worm burdens within days. Therefore, we can expect rapid effects of ewe supplementation on the level of parasites present and subsequently a reduction in the ewe's contribution to pasture contamination.

- Ewes rearing twins excrete more nematode eggs than single-rearing ewes. Furthermore, the presence of body protein reserves reduces FEC at times of limited protein supply from the diet. Therefore, ewes rearing two or more lambs and under-nourished ewes in relatively poor condition contribute most to infecting the pasture.

- Protein under-nutrition may penalise immunity to parasites to a greater degree in highly-productive ewes (ewes with a high litter size) compared with those with average or low litter size.



It is widely known that the worm burden in ewes increases around lambing time and for several weeks afterwards

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# Financial planning with a Teagasc eProfit Monitor

More than 1,400 dairy farmers have completed their Teagasc eProfit Monitor analysis for 2014, allowing them to benchmark their performance and plan for a sustainable future

**Tom O'Dwyer**

Teagasc Animal & Grassland Research and Innovation Programme

**J**ohn Roche who farms in Tallow, Co Waterford, has his own routine for doing a Teagasc eProfit Monitor. "I gather all the invoices, receipts, bills and bank statements, organise them into categories and enter the figures on to the eProfit Monitor input sheet in pencil. When I'm happy the figures are complete and correct, I ink-in the figures and give the input sheet to my Teagasc adviser Billy McCarthy."

John's herd size has increased from 75 cows in the mid-2000s to 116 cows in 2014. His 2014 analysis indicates that he achieved a net profit of 19c/litre. "I like to do the eProfit Monitor with the previous year's beside me," he says. "I can immediately see how figures compare with last year. If



Tom and Billy believe grass is key to profitability.



## 2014 review

Early indications from Teagasc eProfit Monitor suggest that 2014 was a good year for dairy farmers with net profit per litre increased by between 1.5c/litre and 2c/litre on average to 16.6 c/litre. But not all farmers earned this profit from their business in 2014.

Net profit ranged from 8.2c/litre to 23.8c/litre – an almost three-fold difference between best and weakest performance – on spring-calving dairy farms.

The best performers had both higher output and lower variable and fixed costs (approximately 5c/litre difference in each category for a 15c/litre difference in net profit when compared to the weakest performers).

there's a large difference, I check if I have left something out."

Many farmers find that working with a recorder/accountant who gathers the data and forwards it to Teagasc works very well, but John says he finds that the actual process of handling the paperwork himself to be useful. "It encourages you to look at the business in a way you might not do on a day to day basis," he says.

Regardless of who gathers the data, the resulting eProfit Monitor report allows farmers to benchmark nearby colleagues, in discussion groups perhaps, or similar farms nationally. "If my costs are a few cent higher than a comparable farm, I always want to find out why that is," says John. "It's impossible to know how you're doing if you're only looking at your own figures."

The Teagasc eProfit Monitor can also help evaluate enterprises within the business. "For example, with quotas going, the report gives me a clear picture of whether I should continue with producing heifers for sale or milk more cows," says John.

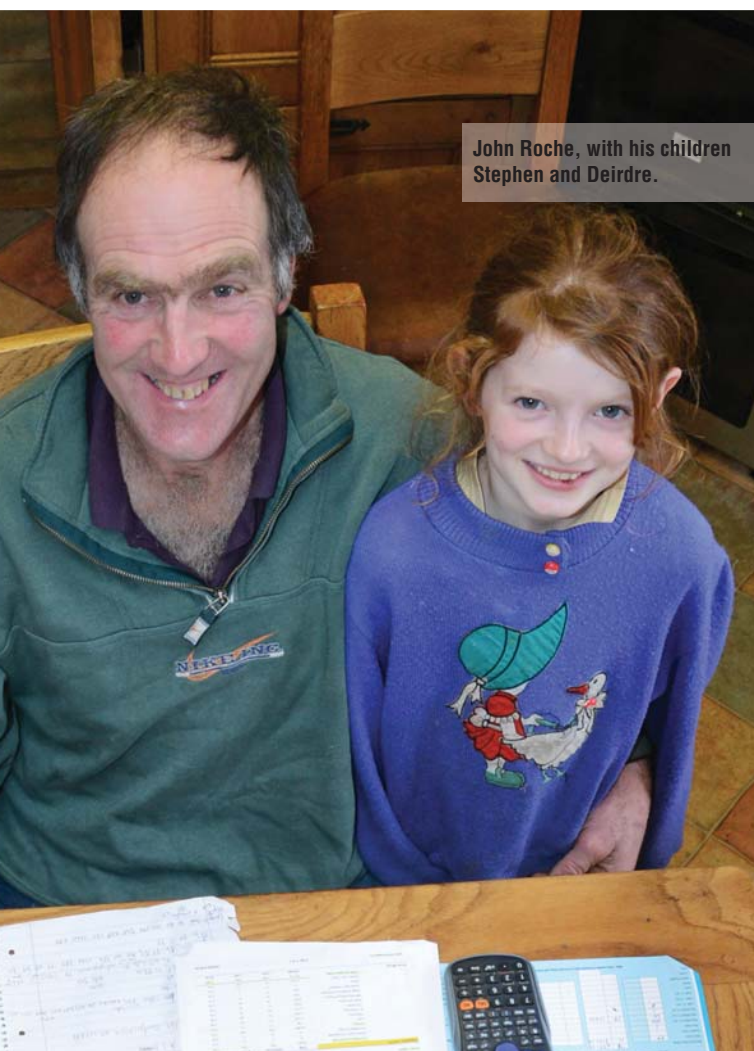
Tom Moroney milked 53 cows in Baldyduff, Co Waterford last year. His 2014 Teagasc eProfit Monitor (he's been

doing one for more than 10 years) indicated that his herd produced 417kg milk solids per cow (4.32% fat, 3.65% protein) and achieved an average milk price of 40.6c/litre. The ratio of production costs to production receipts (cashflow ratio) was 53%, which means that for every €1 in receipts, €0.47 is retained. He avails of the IFAC eProfit Monitor report service to complete his profit monitor (other accountancy firms also offer this service). "If you don't know where you are, you don't know where you are going," is how Tom Moroney views the value of doing a Teagasc eProfit Monitor. Asked what he would say to a farmer thinking about doing one for the first time, Tom says it's important to keep at it. "In the first year, you can compare yourself with similar farms but once you have a couple of years under your belt you start to get a really good picture of where your own business is going."

As for John Roche, the eProfit Monitor has proved useful in evaluating business initiatives on the farm. "My son Tomas was comparing several years of results and the annual profitability showed that some land we had taken was not adding to profit-







John Roche, with his children Stephen and Deirdre.

**Table 1:** Output, costs and profit from Teagasc eProfit Monitor analysis for 2014 (results based on eProfit Monitors completed by 8 February 2014)

	Average (preliminary)	Best 10% (preliminary)	Weakest 10% (preliminary)
No. of farmers	1,079	108	108
Co-op milk price	39.4	40.8	38.2
Gross output	39.5	42.1	37.0
Variable costs	12.8	10.6	15.3
Fixed costs	10.1	7.6	13.5
Net profit	16.6	23.8	8.2

## Complete an ANALYSIS

Teagasc eProfit Monitor analysis is available to all Teagasc dairy farmer clients and can be accessed through your Teagasc Dairy Adviser. While December and January are recommended as the best time to complete the analysis, it is never too late to enter your figures. It is important to discuss your results with your dairy adviser and to identify areas of good performance and areas for improvement. Finally, knowing how your farm performed is a necessary first step if you wish to make changes. Too many decisions are made on the basis of instinct and assumptions. Take the guesswork out of your business decisions and complete a Teagasc eProfit Monitor analysis for your farm. But remember it's available for other farm enterprises too.

ability. We believe we can increase the returns from it but the report showed us that you can increase your workload and your output without necessarily increasing your farm profit. If that's happening, you need to know about it!"

### Steps to a positive cashflow

Conducting an analysis of 2014 performance is the start. The vital next step is to plan for 2015. Information gathered for the eProfit Monitor will help with this.

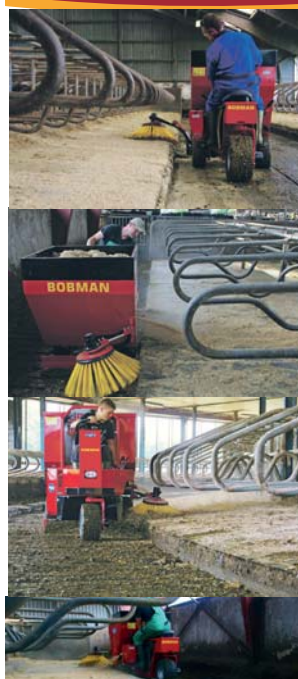
Teagasc has revised its cashflow budget and copies are available online ([http://www.teagasc.ie/advisory/farm\\_management/monitor\\_budget\\_cashflow/](http://www.teagasc.ie/advisory/farm_management/monitor_budget_cashflow/)) or from your Teagasc adviser.

You should use your 2014 eProfit Monitor analysis to guide your 2015 cashflow budget. But remember: 'If you do what you always did, you will get what you always got.' Change may be needed. Most dairy farmers will be required to think and act differently. Your Teagasc Dairy Adviser and your discussion group can help. The assistance of Teagasc Dairy Adviser Billy McCarthy is acknowledged.



Conducting an analysis of 2014 performance is the start. The vital next step is to plan for 2015

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## farm management

# What to consider before leasing dairy cows

Cow leasing is a collaborative arrangement where a farmer with cows that are surplus to requirements can lease these cows to another farmer

**Thomas Curran**  
Farm Structures Specialist,  
Teagasc Rural Economy and  
Development Programme

**W**hen cow numbers are expanding there is a lot of capital tied up in the extra replacement stock and there is also the financial cost associated with rearing the extra stock.

Leasing out cows is an opportunity for the dairy farmer to get a financial return on these retained animals. It is also an opportunity for the lessee to increase numbers at a lower initial cost than buying them outright. The lease can be short-term for one to two years or for a longer-term arrangement of four to five years.

In general, cows on a short-term arrangement will return to the owner whereas those on a long-term lease generally do not. Teagasc developed a template agreement for long-term cow leasing some time ago but was awaiting Revenue clarification on the treatment of leasing income for income tax and VAT. The template agreement and the Revenue clarification are available to download at [http://www.teagasc.ie/collaborative-arrangements/cow\\_leasing.asp](http://www.teagasc.ie/collaborative-arrangements/cow_leasing.asp)

## Short-term leasing

Cows can be leased out on a short-term basis for one to two years. In this case, the same animals would return to the owner less any animals that do not go in-calf over the duration of the arrangement.

For example, 50 cows are leased out in January 2015. Ten cows are not

in-calf by November 2015. The lessee can sell the culls and replace them with equivalent cows in terms of EBI status and lactation number. At the end of year two, 10 more cows are not in calf. Again, these can again be sold and replaced with equivalent cows in terms of EBI and lactation number. There is now a group of 50 cows ready to be returned to the owner after the two-year agreement has come to an end. Only 30 of these are part of the original group of cows and 20 are cows that have been slotted in as replacements.

The criteria for the replacement of animals must be set out and agreed at the start of the arrangement. These include lactation number, age, disease status etc.

## Long-term leasing

Cows leased out for four to five years generally do not return to the owner. They are replaced with an equivalent group of cows at the end of the agreement. The profile of the leased cows should be noted at the start of the agreement and the group of cows returned must be, at a minimum, equivalent in terms of age, lactation and disease status and superior in terms of EBI status. These criteria must be agreed between the parties at the beginning of the agreement and written down.

Calves born out of the leased cows are the property of the lessee and this allows him (or her) to build up a stock of replacements for the herd and also to cover the return of the cows as part of the lease agreement.

## Benefits to the lessee

There are a number of situations where a farmer might consider leasing in cows. It can be good option for a new entrant to dairy farming. In a startup or conversion

## VETERINARY ADVICE

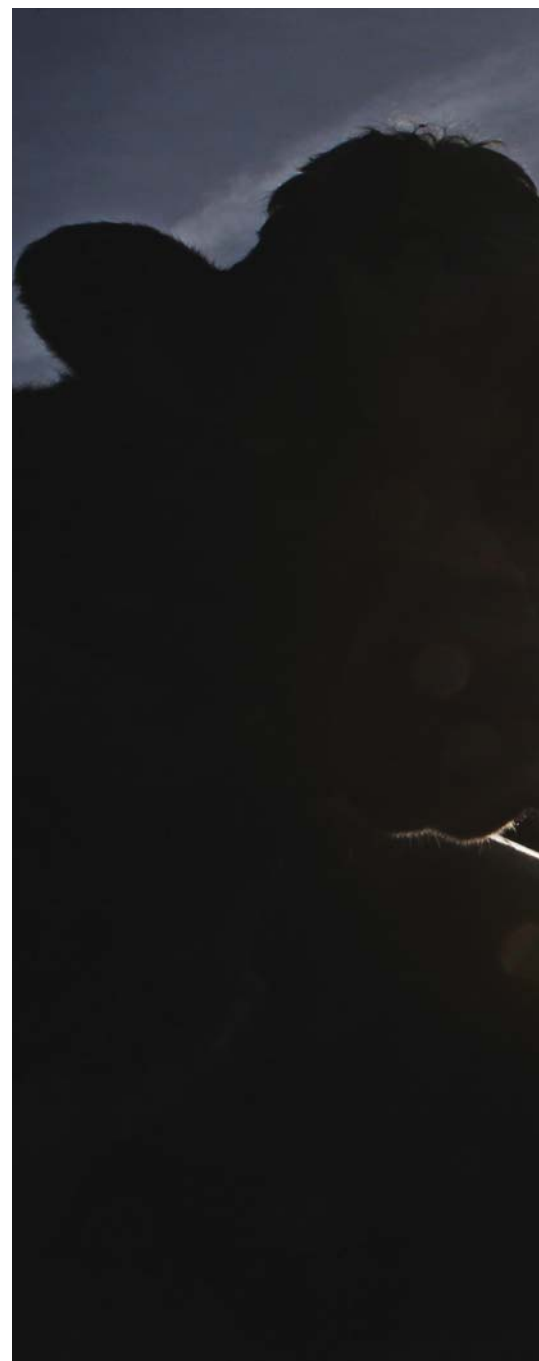
Contacting the vet and getting good veterinary advice before the start of the cow leasing arrangement can avoid a lot of problems once cows have moved into a new herd.

farm, capital is required for milking facilities, farm infrastructure, reseed-ing and buying cows. Leasing in the cows reduces the financial outlay and can help to make the business more viable in the cash hungry early years.

Cow leasing may also be an option for established dairy farmers to increase cow numbers quickly at a lower initial cost outlay.

For young farmers who are considering cow leasing, it is important not to rush into the first opportunity that comes along. There are two things to consider; the lessor farmer as a person and the quality of the stock that is being offered.

The lessor can be an individual who is just in it for the money or someone who takes an interest in the young





# LEASE AGREEMENT

Like any other collaborative arrangement, it is essential that two farmers entering into a cow leasing arrangement have a written agreement.

Working through the template document requires both parties to come to agreement on the various issues and then sign the document as a commitment to the arrangement.

The cow leasing template agreement sets out a number of key components for the arrangement to be successful.

- **The personal details:** These include the names, addresses and PPSN of the farmers taking part in the arrangement.

- **Commencement date:** It is important to agree a commencement date and duration of the lease. This is also recorded in the template agreement.

- **The payments schedule:** A schedule and method of payment has to be agreed at the start and documented in the agreement as set out.

- **Animal identity and value:** A critical part of the agreement is the identity of the animals to be leased. The BTE tag numbers can be entered into the tables provided in the agreement.

- **Facilitation:** The agreement becomes a written record of what is agreed between the parties before the start of the lease period. In the event of any difficulties arising, the agreement can be viewed by the parties to resolve the issue and in cases where a disagreement cannot be resolved, there is a facilitation process built in.

- **Building a working relationship:**

The two farmers involved in the agreement must work towards building up a good working relationship. This has benefits for both parties. It can reduce the risk for the lessor by working with the young farmer. The lessor farmer can provide mentoring by sharing their experience so that the young person learns from the established farmer.

person and offers mentoring to them. The quality of the stock offered has a big bearing on the profitability of the enterprise. For example, high-EBI cows with above-average milk solids can deliver a higher milk price.

## Costs of leasing

The two parties must agree an average value per cow at the outset of the agreement and this value is included in the written agreement. They must also arrive at a leasing cost that is fair to both parties and document the payment schedule in the written agreement.

## Income tax and VAT clarification

The Revenue Commissioners have clarified that income earned from the

leasing out of surplus cows will be treated as farm income. The lessor (owner) can claim stock relief on the leased cows provided that the cows have not been purchased with a view to leasing them out.

The farmer leasing in the stock can claim the cost of leasing as a tax deductible expense but they cannot claim stock relief as they do not own the animals. The cost of replacement animals is also an allowable expense.

Cow leasing is liable to VAT at the standard rate of 23% and is not regarded as an agricultural production activity for VAT purposes. If the leasing income is greater than €37,500 in a continuous period of 12 months then the lessor is obliged to register and account for VAT on all farm income.

# Establishing spring cereals

**Michael Hennessy,**  
Tillage specialist,  
Teagasc Crops Environment  
and Land Use Programme

**T**he old saying, “well sown is half grown”, is as true now as it was 50 years ago... accepting that there were far fewer post-emergence inputs a half century ago. Economics now, as then, dictate that all crops must deliver a high yield to produce a positive margin.

There is very little room for error in variety selection, establishment or crop management up to and including harvest. This article will focus on establishment methods and the elements needed at the establishment of spring cereals to achieve maximum yields at reasonable costs.

Spring crops, barley in particular, have a short growing season and all of the conditions including excellent soil conditions are needed for good growth and should be in place from the start. Soil management is an important issue for the Feighery family, Kilcormac, Co Offaly.

Alan, with his brother William and father Billy, have been making steady progress in improving their soils. “We have changed the farm rotation over the past few years from continuous wheat to a rotation that encompasses winter and spring cereal and break crops,” says Alan.

The Feighery rotation is not set in stone and they take advantage of new opportunities as they emerge.

“This year we are planting beans on one of our heavy fields. After we did some calculations it became clear that this crop can compete on a profit basis with spring barley and it will fit into our current rotation.”

Cultivation strategy was also a

factor in the decision to change the cropping programme. “We are using min-till establishment for the past 10 years and we are convinced that it is contributing to an improvement in soil conditions and health,” says Billy, whose passion for this cultivation method is clear. However, he points out a major deficiency of the min-till system: “Sterile brome and, to a lesser extent soft brome, becomes an issue quickly and because of these weeds it was clear that continuous winter wheat was unsustainable on the farm.”

The “minimum” part of minimum tillage (min-till) is generally not practised in Ireland due to experience of compaction and wet soils. Typically, the practise here involves cultivation to a depth of 10cm to 12.5cm (5in to 6in) and, as such, it is more accurately described as “non-inversion tillage”.

Min-till is more associated with winter cereal production as land is drier and easier to cultivate in the autumn. As land is wetter coming out of the winter it can take plenty of patience from a min-till grower to wait for the soil conditions to be dry enough for cultivation.

The Feigherys are farming a variety of soil types from light land to peat to heavy land. Alan explains that it can be difficult to get the conditions right “It’s difficult using min-till as you are forced to wait for a wettish hollow to dry out, in an otherwise dry field, before starting to plant.”

The Feigherys aim is to complete some preliminary cultivations in late autumn or early spring to 7.5cm (3in) and then follow with a deeper cultivation a day or two prior to planting.

Alan points out that in poor conditions soils will smear which can result in planting into a “wet slot”.



These conditions always lead to poor yields. He emphasised the need for good plant counts to get spring barley to yield. “Experience has shown us that a thin crop of barley will not yield,” he said.

For spring barley, begin with your target plant population when calculating your seeding rate. Aim to establish 300 plants per metre squared for most soils.

## Factors

There are a number of factors to take into consideration:

- The level of germination expected in the seed.
- The level of establishment expected (influenced by seed quality, disease and pests in the field).
- The thousand grain weight of the seed. Generally speaking, the larger

**Table 1:** Influence of seed rates on the weight of seed to be sown

Sowing date	Up to mid-March	Mid-March to mid-April	Mid- to late April
Target plants (m <sup>2</sup> )	280	300	320
Expected establishment (%)	85	85	90
Thousand grain weight (TGW)	Kg/ha		
40	132	141	142
45	148	159	160
50	165	176	178
55	181	194	196





Alan Feighery, Teagasc adviser Pat O'Gorman, Billy Feighery and William Feighery inspecting min-till cultivations before planting.

The seed rate is calculated by completing the following formula:

$$\text{Seed rate (kg/ha)} = \frac{\text{Established population (plants/m}^2\text{)} \times \text{thousand grain weight(g)}}{\text{Expected establishment (\%)}}$$

the seed, the more kilos need to be sown to achieve the desired population.

Earlier-sown spring crops have more time at the vegetative stage and, therefore, have more time to produce leaves compared with later-sown crops. The plant has the capacity to produce a shoot (tiller) from the base of each leaf (after the third leaf), therefore the plant can produce more shoots. Later-sown crops develop faster and enter stem extension more quickly – limiting the number of potential shoots. Later-sown crops should be sown to

achieve a higher plant stand than earlier sown crops.

Table 1 gives an indication of the influence of TGW on the weight of seed to be sown. Teagasc recently published its spring barley guide, which outlines the key parameters to achieving a high yield in barley. The guide gives practical advice from planting through agronomy decisions to harvest. Hard copies are available from Teagasc or it can be downloaded from [www.teagasc.ie/publications](http://www.teagasc.ie/publications). Although many growers would say min-till has had its day, growers such

as the Feigherys are proof that it can work well.

Dermot Forristal at Teagasc Oak Park says research indicates that on lighter, easily-tilled soils, crop establishment and yield differs little from plough-established crops. On medium soils, establishment was 16% lower and yields were less reliable with penalties of up to 1t/ha recorded in some seasons with min-till. There is less scope for cost-saving when operating min-till at similar depths to a plough-based system. There are many ways to establish spring cereals from the plough/one pass to min-till or strip tillage. For all systems, pay particular attention to the condition of the soils when cultivating. Always adjust seed rates to reflect the seed quality and the potential losses which can occur before the crop is established.



## tillage

# Climate change creating work

Teagasc plant pathologists are helping growers to identify and manage both native and novel diseases

**Brian McGuinness**  
Teagasc Ashtown Plant Diagnostics

It's barely light on a cold February morning and plant protection specialist Liam O'Regan is standing in a field of daffodils almost ready for harvest. All is not well. A mysterious leaf spot disease which neither Liam nor the east Cork grower have ever seen before is infecting the crop.

With great care, Liam takes a sample from the field, packages the infected leaves and has them couriered to Brian McGuinness in Teagasc, Ashtown Plant Diagnostics. The unit is based in the Teagasc Ashtown Food Research Centre just inside the M50 in west Dublin.

Here, Brian assesses the samples using state-of-the-art microscopy and culturing techniques to establish the pathogen type. Experience and detective work are required.

Each pathogen produces different symptoms and structures which often can appear quite similar to the naked eye, but differ immensely at 400x magnification.

## Investigation

After detailed investigation, there are found to be two fungal pathogens present, *Ramularia* and *Phloeospora*. Both are new diseases of daffodils in Ireland. "This is not really surprising, as many new invaders have been detected by the clinic over the last 10 years," says Brian McGuinness.



## Mushroom industry shows the way

"The mushroom industry offers an example of the implementation of IPM solutions to disease problems," says Helen Grogan. "For example, new diagnostic tests for the detection of both *Trichoderma* and Brown Cap Mushroom Disease in compost have been developed providing the industry with the means to monitor their presence.

"Such monitoring provides an early warning system and can alert growers

and composters to the need to review procedures in their hygiene systems, which may have allowed unwanted organisms to slip through unnoticed."

The Teagasc Horticulture Development Department has established close links with the European Mushroom Scientific community, as well as the European mushroom industry. MushTV is a network of 18 mushroom compost producers, grower associations, busi-

nesses and research organisations from across Ireland, Britain, the Netherlands, Belgium and Poland. With the help of an EU funded research project worth €2.5m, the partners are working together on Integrated Pest Management solutions.

As diseases don't respect borders, it's good to know that detecting and controlling them involves increasing international collaboration.



# for plant disease detectives

The diagnostic service is available to Teagasc clients through their advisers who are encouraged to always investigate unusual symptoms, which may or may not be due to disease, so that chemical spray applications can be targeted.

## Key element

"Plant disease diagnostics is a key element of integrated crop management that ensures a targeted approach to pesticide use, which is better for both the environment and the grower," says Brian.

The Ashtown clinic receives dozens of diseased crop samples every year from Teagasc advisers and their clients around the country. Field crops predominate, but mushroom diseases are also investigated by Brian's colleague Helen Grogan, a world-renowned expert on mushroom pathology. "We can get rare or unusual cases as well as routine ones," says Helen, "but we can virtually always identify the pathogen using microscopic and molecular investigations and collaborating with other experts around the world".

Climate change may result in more novel diseases arriving in Irish fields. "A recent review of over 600 records taken since 1960 showed that pests are shifting approximately 3km per year from the equator towards the poles," says Brian.

**“** The Ashtown clinic receives dozens of diseased crop samples every year from Teagasc advisers and their clients around the country

"The data suggests that this is due to climate change. Ireland's predicted shift to a warmer, wetter climate leaves us open to increased disease incidence from novel pests and diseases."

Liam O'Regan has been working with McLaughlins Bandon Medical

Hall, established in 1947 by the late PJ McLaughlin, for over 40 years. He has seen a significant shift of focus from reactive to proactive methods of growing, with strong emphasis on integrated pest management (IPM) in the last couple of years due to the implementation of the European "Sustainable Use of Pesticides Directive" (SUD).

"The Teagasc diagnostic service is exceptional and enables our growers to get the best out of their crops. With changes in regulations and with an increased number of plant protection product active ingredients going off the market as well as new diseases emerging, it is essential that growers adapt integrated solutions to keep their crops weed, pest and disease free," he says.

"By examining crops, and advising appropriately, plant protection advisers can supply the most appropriate products relevant to each situation, rather than providing 'blanket treatments' therefore maximising the chances of a successful outcome while minimising the effect to the environment."

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# Adding a leaf to book on foliage

Kildalton College has established a cut-foliage plantation which benefits both students and commercial growers

**Catherine Gavin**  
Horticultural technician,  
Kildalton College

**I**n 2011, Teagasc, Kildalton College, established a plantation of approximately three acres of novel cut foliage species. The aim was to establish whether these new species can be grown here and whether there are buyers for them. Pests and disease levels are monitored and controlled using different chemical and biological control strategies. Pruning regimes are also compared.

The demand for cut foliage in floristry is not a new phenomenon and foliage has been grown commercially in Ireland for many years.

Research into the cut foliage industry has been carried out in Ireland since the late 1960s, in particular on *Eucalyptus* and *Pittosporum*. However, there is a gap in our knowledge of optimum pruning regimes for other foliage plants such as *Ozothamnus*.

This plantation is visited by existing and new growers but is also a valuable learning opportunity for students, in particular for QQI Level 5 students who get to work on these shrubs and degree students who can carry out trial work on plants for their final-year projects.

## Results

The aim of the research, conducted between 2012 and 2014, was to identify the optimum pruning regime for *Ozothamnus hookeri* Sussex Silver. Rejuvenation of mature *Ozothamnus* plantations was also examined on a plantation at Kilmore Quay in Co. Wexford.

To date, *Ozothamnus* growers have been mainly agricultural enterprises as opposed to specialist producers where 2ha to 3ha can provide maintenance, harvesting and processing work for one person working full-time. It is a useful winter crop when other crops are not being harvested

## Courses

Teagasc Kildalton College continues to offer full-time QQI Level 5 and QQI Level 6 courses. In addition to this, potential students have the opportunity to study individual Level 6 modules, such as nursery production, landscape design, garden centre operations or turfgrass, which can be standalone modules or can be used towards completing a Level 6 horticulture qualification over time. This would be of benefit to people who would like to take one or more modules to gain a better understanding of a horticultural subject or particular skill but don't require a full certificate.

Each module passed will be certified as a standalone module. This approach also allows workers to gain a qualification while still in employment.

For information on QQI Level 5 and 6 full-time and part-time courses, please contact Teagasc Kildalton College at 051-644400. See page 6 for the dates of open days at all Teagasc and Teagasc-supported colleges.

and it also provides employment at that time of the year.

Pruning too late in the summer means that there is insufficient time for the plant to put on growth for harvesting in December. Pruning too early in the year runs the risk of frost damage to new tender stems.

Hard pruning to 1m on site three showed that there was insufficient growth produced by December of that year, so harvesting was delayed for a year. However, unpruned plants become congested after five to six years, producing less marketable stems than two to four-year-old plants, which suggests that pruning or replacing of plants is required.

The use of protective structures for cut foliage production is also being examined by Grainne McMahon and Andy Whelton at Kildalton.

Over the last number of years, a variety of crops including solidago, ornamental cabbage and peonies have been trialled under glass and polythene. Protective structures offer growers the opportunity to grow crops which have potential value but will not normally grow in the Irish climate.







A plentiful supply of water, rich organic soils and a short distance to market are Ireland's major advantages over competitors from Israel, Italy and developing countries



## Irish industry

Tralee-based foliage company – Forest Produce Ltd – is Ireland's largest exporter of cut foliage to the British and European flower markets. The company harvests and markets over 150ha of cut foliage from its own farm and also through its network of growers along the southern coast.

The mild, relative frost-free climate in southern Ireland is ideal for growing lush, premium foliage and a unique product range has been developed in conjunction with Teagasc and Bord Bia at research stations in Kildalton College, Kilkenny and in Tralee, Co Kerry.

There are over 80 people employed on a full-time or contract basis in the industry. Forest Produce recently announced the creation of 10 new jobs in sales and marketing, supply chain and harvesting. Expansion in planted area supported by DAFM in the past two to three years will see a doubling of the production base coming on stream in 2015/2016, with an anticipated increase in turnover from €3.5m to €5m by 2017 and the creation of 30 new positions.

Seventy percent of sales end up in British multiples, where the company has supply agreements in place with Morrisons, ASDA and the horticultural suppliers to M&S, Waitrose, Tesco and Sainsbury's.

According to Andy Whelton, foliage specialist in Teagasc, "future private and state investment in the development and commercialisation of innovative new species from trials in places like Kildalton will see the industry copper-fasten its position as the dominant force for the mid to high-end marketplace".

Irish foliage is also well positioned to capitalise on the recent surge in environmental accreditation being demanded by the multiples and Teagasc research on sustainable production systems is crucial to progressing the industry and meeting the high regulatory and market specifications.

A plentiful supply of water, rich organic soils and a short distance to market are major advantages over competitors from Israel, Italy and developing countries.

Whelton says that succession among current growers and recruiting new growers is important to the development of cut foliage and that the collaboration with Teagasc Kildalton is a vital link with the industry, so that young qualified people who are the lifeblood of any industry get the opportunity to experience this exciting new market-led sector of commercial horticulture in Ireland.

LEFT: Catherine Gavin pruning Rosa "magical fantasy".



# The last taboo

Mental health issues are seldom talked about but the stresses of modern farming mean protecting yourself against stress has never been more important

**Mark Moore, Tom O'Dwyer and John McNamara**

**D**airy farmer, rugby coach and former back-row forward, Joe Leonard's the last guy who you'd expect to have mental health "issues". And you'd be right, he's in robust shape psychologically. But this Stamullen, Co Meath man is a passionate advocate of "protecting your mental health".

"As farmers, we take great care to vaccinate our cows and fill our tractors with the best of oil but we can neglect our own health," Joe says.

Efforts to promote good mental health need champions such as Joe and his colleagues in the Navan Dairy Discussion Group.

The organisation "See Change" – which exists to try and reduce the stigma associated with mental health problems – reports that in Ireland, one in four of us will experience a mental health problem at some point in our life. That's enough of us to fill Croke Park 14 times over. In a 2010 survey, they found that stigma acts as a barrier to people asking for help. Nearly 30% of young men said they would delay seeking help for fear of someone else finding out, and one in three people would hide mental health problems from friends.

The Navan group set out to investigate possibilities to manage the ever-increasing stresses associated with farming today. "As part of a project for the EBI discussion group competition, we carefully recorded the hours we were worked. The group realised they were doing 65 to 70 hours a week. That came as a shock!"

Group facilitator Matt Ryan has long advocated a healthy work-life balance.

Since completing the working hours project, the group has undertaken a series of initiatives, including a mindfulness course. The course, which

took place one night a week for eight weeks, followed by a weekend away, proved effective and popular with the group members and their wives. "It's all about living in, and enjoying, the moment," says Joe. "Techniques aimed at relaxing your mind and observing what is happening around you are as relevant for farm families as anyone else."

"But there's no doubt about it; farming is a male-dominated "macho"-type industry. Farmers are not likely to admit their nerves are at them. Fortunately, there was no one actually suffering from a problem in the group and we have been together for a long time, so we could see these activities as an investment in our future mental health rather than a reaction to a crisis."

Other activities undertaken by the group included a talk by Derek Pepper of Shine, an organisation which helps families through mental health issues.

The HSE also delivered a talk on a suicide awareness programme, entitled SafeTalk. "I think people naturally shy away from ever using the word suicide but, on this programme, we learned that if you are concerned about someone it can be useful to ask if they have considered it."

"Farmers can feel guilty if they take even a few hours off during busy spells but I believe one of the main benefits of the various things we did on mental health is that we came to realise the benefits of hobbies and the absolute need for time off."

"A key message is that anyone who feels under serious pressure should seek help. Nearly every single farmer or rural professional would be delighted to help a neighbour or colleague if approached, but people are still slow to ask. We have to change the mind set of people so that they are more ready to seek help if they need it."



## Navan discussion group

Navan discussion group celebrated 21 years in existence by holding a dinner dance in the Conyngham Arms Hotel. All proceeds from the event went to Pieta House. The money was handed over to Brian McEvoy (grey jumper) from Pieta House by the discussion group at their annual Teagasc eProfit Monitor meeting at the Teagasc research centre in Grange. A total of €4,580 was raised for Pieta House who help people deal with stress, depression and mental health issues. Presenting the cheque is Owen Brodie, organising chairman and Peter Brady, group chairman.



Efforts to promote good mental health need champions such as Joe Leonard, pictured left. Joe is pursuing a Nuffield Scholarship on the theme of stress management and mental health awareness in rural Ireland.



Continued  
on p28



# Plan now to protect your mental health

## Five ways to wellbeing

**Finola Colgan**

Development officer,  
Mental Health Ireland,  
finola@mentalhealthireland.ie

**T**he demands and pace of farming life have increased significantly in recent years. Farming by its nature can be stressful even in the best of times. Financial worries, unpredictable weather, livestock diseases, isolation, the necessity for compliance with many government policies and procedures can all add to the challenges faced by farmers on a daily basis. If not managed sensibly, these stressors can affect your mental health and wellbeing.

The ongoing changes and trends in farming locally, nationally and internationally have placed increased demands on both the physical and mental health of farmers and their families. For example, the changes taking place within the dairy industry will result in larger-scale dairy farms which, in turn, will challenge the physical and mental health of dairy farmers and their families. Farming by its nature ranks as one of the most stressful ways of life in our country. Ignoring the vital signs of stress can and will lead to tiredness and depression, which lead to further risk of poor mental and physical health, increasing the risk for accidental injuries, poor decision-making and potential relationship difficulties.

"The nature of rain is the same, but it makes thorns grow in the marshes and flowers in the garden."

Our mental health, like the weather, can go through varying patches from being sunny to overcast to sunny again. But remember that clouds come and go, some are small, some large, some black and some pure white.

One in four adults will experience mental health difficulties and over 450 million people globally experience a mental disorder each year. Despite the commonly repeated mantra of

"no health without mental health," people with mental health difficulties face a number of barriers in obtaining the help required. Stigma and discrimination are two such barriers to obtaining support and to accessing the everyday social activities which keep a person mentally well. The good news is that there are practical, simple everyday solutions that can protect mental health.

So, what can help? Accepting that stress is part of life is helpful, but the steps you take to reduce it can determine how stressed a person can feel and the state of your mental health. Mental Health Ireland's "Plan to Protect Your Mental Health" ([www.mentalhealthireland.ie](http://www.mentalhealthireland.ie)) contains five key universal messages for wellbeing established by the New Economic Foundation (along similar lines to the message of five-a-day fruit and veg for good health) These include:

### Connect

**1** There is strong evidence that feeling close to, and valued by, other people is a fundamental human need and one that contributes to functioning well in life. Social relationships are essential for promoting wellbeing and to act as a safeguard against mental ill health for people across the age spans. Farming by its nature can lend itself to many hours of isolation. Being aware of this, consider some of the following

- Discuss/share problems with family, friends or a local support service.
- Talk to your GP.
- Talk to someone instead of sending an email or text message.
- Put five minutes aside to find out how someone you know is keeping.
- Connect with other farming families in the community.
- Contact government services and agencies, such as Teagasc for guidance and support.

### Be active

**2** This might seem a strange one to suggest to farmers given that farming is such a hands-on active/physical way of living and working. However, it is established that







Finola Colgan pictured with her husband Timothy Carey.

regular physical activity is associated with lower rates of depression and anxiety and therefore it is good for promoting wellbeing. Explore opportunities to engage in exercise away from the farm. Such involvement can also have the benefit of encouraging social interactions. Some suggestions include:

- Do some gentle exercise such as stretching before you head out for a tough physical day's work.
- Take up swimming, join a cycling club, a badminton club, a drama group or some other group.
- Enjoy a "kick around". Many local GAA and soccer clubs have astro turf pitches. Consider getting a local team together or join in an existing one.

### Take notice

**3** Reminding yourself to "take notice" can strengthen and broaden awareness of what is going on around you. Studies have shown that being aware and mindful of what is taking place in the present directly enhances personal wellbeing. Take some time to enjoy the moment and the environment around you that you are so familiar with.

- Take notice of how your neighbours are getting on.
- Be mindful of health and safety risks around the farm.
- Take time out to enjoy your family and farm success.
- Enjoy the seasons and observe nature.

### Keep learning

**4** It is well established that continued learning throughout life can improve self-esteem, while also supporting social interaction. Learning can be fun and sociable. Most communities have adult education programmes through the Education and Training Boards (ETB) and Regional Institutes of Technology that offer a variety of accredited programmes ranging from personal development to business courses. The practice of setting goals, closely related to adult learning, is also strongly associated with higher levels of wellbeing.

- Sign up for a class – learn a new language and update your computer skills.
- Research something you've always wondered about.
- Visit websites on mental health i.e. [www.mentalhealthireland.ie](http://www.mentalhealthireland.ie)

Join a Teagasc discussion group or, if already a member, become a more active participant in group activities.

### Give

**5** It is now recognised that people who demonstrate a greater interest in helping others are more



## Sources of support

- Teagasc and farm consultants are available to farmers nationally to advise on farm management issues. Farming organisations offer services to their members.
- The Samaritans: For mental health support and advice, please call the Samaritans on their freephone number 116 123.
- St Patrick's Mental Health Services, University Hospital, Dublin 8, provides a confidential support and information service staffed by experienced mental health nurses from 9-5 Monday to Friday, with an answering and call-back facility outside hours. You can contact the support and information service by calling 01-249 3333.
- **Web:** [www.mentalhealthireland.ie](http://www.mentalhealthireland.ie)
- **Twitter:** @MentalHealthIrl
- **Facebook:** [www.facebook.com/Mental.Health.Ireland](https://www.facebook.com/Mental.Health.Ireland)

likely to rate themselves as happy. Ongoing research into actions for promoting happiness demonstrates that doing an act of kindness once a week over a six-week period is associated with an increase in wellbeing. Some suggestions include

- An hour of your time during the quiet season, volunteering with a local community support group, can make a huge difference.
- Develop a fundraising campaign to benefit vulnerable people young and elderly.
- Donate produce to local charity groups looking after the homeless and others in such need.

A concluding point to consider is that there is recognition that farmers who are traditionally used to working things out for themselves might be resistant to sharing their problems and concerns. Although asking for help may go "against the grain" and the nature of a strong, self-reliant farmer, obtaining support for stress-related problems usually provides meaningful solutions. As the adage goes, "a problem shared is a problem halved"

All mental health problems or difficulties, no less than physical health problems are identifiable and manageable and require the same attention in order to get better and enjoy life. Minding both are equally important. Recognising this at the outset can lead to prevention and minimise the risk of the situation getting worse. Remember, you are not alone.

# Getting farm financially fit

Teagasc is promoting financial fitness for farm families. In co-operation with other stakeholders, the goal is to help farm households build their skills in farm and household financial management

## Kevin Connolly

Finance management specialist,  
Teagasc Rural Economic Development  
Programme

## What does a financially fit farm family look like?

### ✓ They have a good system to manage the farm and household paperwork

The key point here is to have a fixed point where all paperwork is assembled and organised. This could be the corner of the living room, a spare room or a dedicated office. Establish a simple system, understood by all members of the family involved, to manage documents.

A simple system might have three elements: a stapler (to staple invoices, statements and receipts together); an in-out tray (or, alternatively, a box file) which acts as temporary storage until you get a chance to file the papers; and, finally, a filing cabinet complete with clearly labelled files, allowing documents to be easily accessed when required.

Ensure that family members always put paperwork in the in-out tray at the end of each day – not leaving it lying around the kitchen, in pockets or in car/jeeps where it will get mislaid.

At least once a week, a nominated person should go through all the paperwork and staple connected documents together; file what needs no further action and identify bills to be paid. This kind of system ensures that bills get paid but, more importantly, it assists in monitoring the flow of cash through the business and the household.

There are a variety of computer-based tools to assist in the monitoring process, including the bank's own online banking websites. Teagasc also has its own tools for this purpose – more information on these can be found from the following links:

• <http://goo.gl/i2wb8c>

• <http://goo.gl/Z5jzph>

They understand that the farm business and the household can be looked at separately for daily cashflow management but must be linked when it comes to forward planning.

When looking at income and expenditure, keep the farm business and the farm household separate, so that the sources of income and expenses and the net finishing position for both can be identified. This requires separate current accounts (and deposit accounts, if there are savings) for the farm business and the household.

Maintaining multiple accounts risks increased bank charges so investigate low-cost banking options. Deposit non-farm sources of income, such as wages from off-farm work or state payments, in the household/personal account. Use this account to pay all household bills and personal expenses for family members. Many families use a credit card to pay all household bills, such as the weekly grocery shop or even major household purchases. The monthly credit card statement helps keep track of where the money was spent.

Use a separate farm account to manage all income and expenses from farming. A regular (usually monthly) bank standing order can be used to transfer money from the farm account to top up the household account. Financially fit families use online banking to monitor their accounts and, often, one member of the family is nominated to pay bills using online bank transfers, as required.

When it comes to significant decisions, such as a major farm or household-spending project, which is going to be funded either by savings or debt prepare an overall net cash-flow projection for at least five years. This should set out the effect of the proposal on overall cashflow taking into account both the farm business and the farm household's requirements for cash.

As part of the process, be sure to

estimate and include any projected increase in demands for cash from the household due to life events such as college starters, weddings, etc. All family members can highlight the areas to be included here. By adopting this approach, it is less likely that a conflict between spending on the farm or spending in the house will arise. Teagasc can assist in forward planning using its two-step farm planning process:

• <http://goo.gl/nlQ1gn>

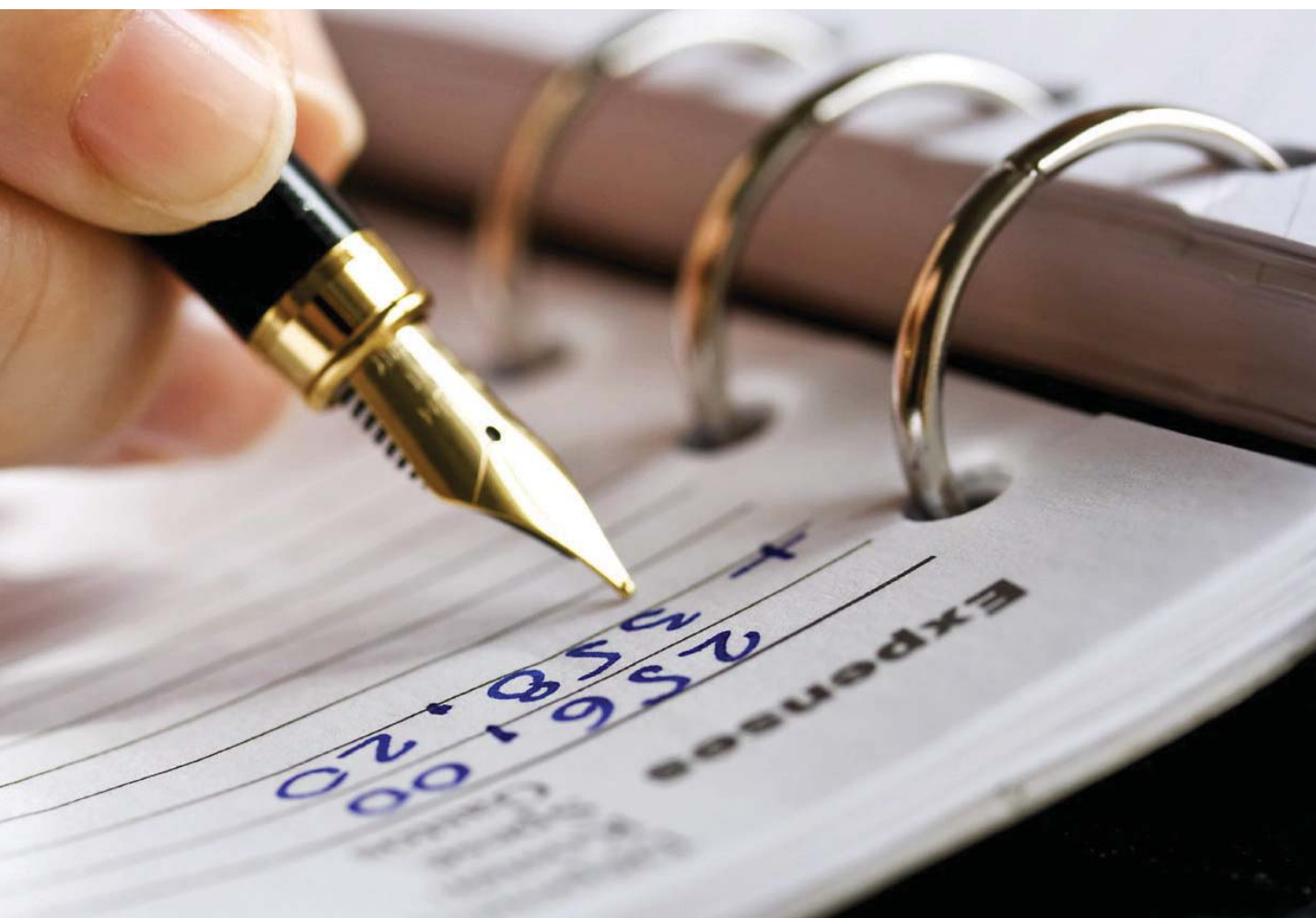
### ✓ They know what their main income sources are, both now and in the future, and they always look to safeguard these sources

For some households, farming is the main source of income. In others, non-farm sources and state transfers (social welfare and pensions) also make a contribution. Financially tuned-in farm families fully understand what is necessary to draw down these valuable cash inflows. Some of the income sources are easy wins as they can be drawn down with minimal effort and are reasonably safe and secure.

Examples here include the various annual farm direct payments, such as the new basic payment, which should be preserved as a matter of prior-







ity. When these payments are drawn down, it is important for farm households to consider carefully how this money is spent and, as far as possible, to target the spending towards farm or household investment decisions, which will give long term benefits.

When looking to the future, always plan ahead to avail of potential future income streams, such as state pensions by making sure that you are aware of, and meet, the rules around those schemes. Equally, consider alternative sources of income such as leasing out non-core land that is not contributing to farm profitability or researching the pros and cons of forestry or other diversification options.

Teagasc offers workshop sessions on diversification opportunities through its annual options programme:

• <http://goo.gl/0JozWB>

**✓ They know where to go to for information relating to business and personal finance**

Many farm families gather financial information from media and Teagasc technical newsletters. Public meetings and trade shows also offer valuable information on products or services which might improve the profitability of farm businesses. Discussion group membership not

only improves technical skills but members also often share information on the best deals for farm inputs. Some discussion groups have set up purchasing groups to avail of bulk-buying discounts.

Financially fit farm families always shop around for goods and services with many using internet comparison websites. They are also careful to ensure that they claim tax deductions for medical expenses or insurance.

**✓ They utilise the skills and time of all family members to assist in financial management**

If each member takes responsibility for one area of family finances, the burden is shared. Examples include:

- Putting one member of the family in charge of filing and bill management – the act of paying the bills should remain in the hands of the heads of the household.

- For annual bills such as health, car and home insurance – share the task of identifying the current spending and researching the best alternative deals available. If prudent, switch.

**✓ They plan for farm investments or major life events and commit these plans to paper**

For major farm investments, a written

business plan is a must. Teagasc advisers can assist here in the two-step planning process involving the My Farm-My Plan booklet and follow this up with a full financial plan using the Teagasc farm business planner: [http://www.teagasc.ie/advisory/farm\\_management/farm\\_planning/index.asp](http://www.teagasc.ie/advisory/farm_management/farm_planning/index.asp)

This planning process also takes into consideration the household budget implications where the farm's net cashflow is going to be affected. A child going to college, or getting married, or a family member retiring from an off-farm job may require a forward household budget plan. A savings schedule will ensure that there are funds available.

Committing plans to paper makes it easier to involve all members of the family and, if sufficiently detailed, the document will have the added benefit of fulfilling any prospective lenders' requirements.

Together with collaborating organisations such as training agencies, the banks, the co-ops and the farm organisations, Teagasc is hosting a series of financial fitness events nationwide.

See page 5 for dates and locations

# The importance of soil

Soil fertility is a key factor in delivering Food Harvest 2020 targets writes **Tim Hyde**, Environment Specialist, Teagasc Crops, Environment and Land Use Programme

**Table 1:** Overall and enterprise breakdown of soil sample results

Enterprise	% Soils with Good Overall Fertility	% soils >6.2 pH	P Index 1 or 2 (Low or very low)	K index 1 or 2 (Low or very low)
Overall	11%	35%	54%	50%
Dairy	12%	35%	52%	49%
Drystock	9%	30%	56%	51%
Tillage	12%	59%	55%	45%

In recent years because of changes in legislation, and the cost of fertilizer, volumes applied have fallen substantially (phosphorus down 45%, potassium down 43% between 2006 and 2009) and the products being used have changed too. In 2009 national phosphorus (P) and potassium/potash (K) fertilizer use was at the lowest level in 20 years. Teagasc maintains a database of the soil samples it analyses and has been in a position to analyse the trends in soil

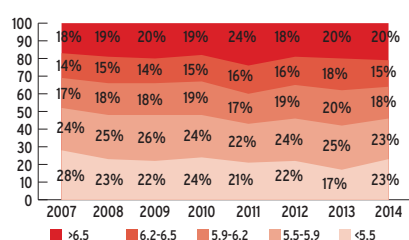
fertility that have emerged.

Soil fertility is the basis on which increases in productivity set out in Food Harvest 2020 will be delivered. Improvements in environmental outcomes, notably water quality, are also affected by nutrient management and ensuring soil fertility matches crop demand.

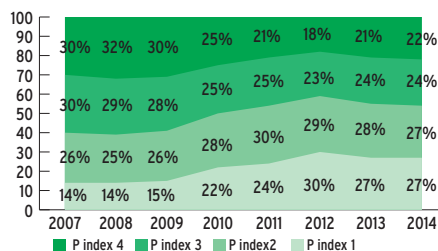
The graphs below are a representation of soil fertility trends over the last eight years based on Teagasc soil analysis results.

## Soil analysis status and trends

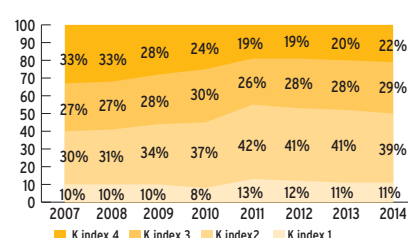
Percentage of all soils tested falling within defined soil pH ranges between 2007 and 2014



Percentage of all soils tested falling within each soil P index (1-4) between 2007 and 2014



Percentage of all soils tested falling within each soil K index (1-4) between 2007 and 2014



## Key messages

- 11% of soils tested achieved good overall fertility in 2014.
- 35% of soils have a pH of greater than 6.2. Soil pH has been relatively stable since 2007.
- The dramatic fall in soil P which took place between 2008 and 2012 has been halted and a small improvement has taken place since then.
- 54% of Soil P samples were below

optimum (index 1 or 2). This figure was 29% in 2008.

- 27% of soils are at Very Low P levels (index 1) in (10% in 2008).
- 50% of soils are at K index 1 or 2. K levels in samples fell between 2007 and 2011 but have recovered somewhat since then. 11% are at index 1.
- 53% of dairy samples had a P index of 1 or 2. The decline in P index was

more severe on dairy farms than on Drystock.

- 55% of tillage samples had a P index of 1 or 2. The gradual decline in P index between 2007 and 2012 has been reversed.
- Further information is available on the Teagasc website at <http://www.teagasc.ie/soil/analysis/results.asp>

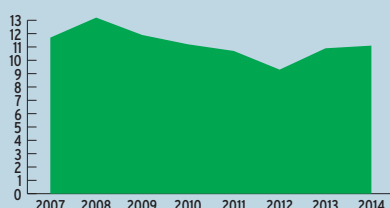


# fertility

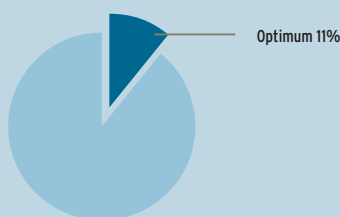
“ Before I got soil samples taken and a fertilizer plan I was only shooting in the dark. I didn't know what fields needed lime, P or K

– Shane O'Reilly,  
beef farmer,  
Ballinrobe, Co Mayo

Percentage of soils with good fertility



Good overall fertility: soil pH > 6.2; soil P and K index 3 or 4



## Summary

Good soil fertility means that a soil must include all three of the following:

- Soil pH > 6.2
- Soil P index 3 or 4
- Soil K index 3 or 4.

(Note: target soil pH range for grassland on mineral soils is 6.2 – 7.0, but for grassland on peat soils is pH 5.2 – 5.6)

## 5

### Simple Steps to Good Soil Fertility

Soil fertility management is critical to ensuring that soils have and sustain the capacity to meet the nutrient requirements of grass and crops. Teagasc is promoting five simple steps which can be followed on the farm to help achieve this:

**1** Have soil analysis for the whole farm.

**2** Apply lime as required to increase soil pH up to target pH for the crop.

**3** Aim to have soil test P and K in Index 3 in all fields:

- Index 4 (high fertility) soils are a resource – exploit them.
- Index 1 & 2 soils (low fertility) should be increased to the target fertility level of index 3.

**4** Start by using organic fertilizers as efficiently as possible, then top up with fertilizer as required.

**5** Make sure the fertilizer compound is supplying nutrients in the correct balance for the crop, the soil, and to complement other chemical and organic fertilizers being applied.

## Fertilizer planning

### Noel Meehan

Teagasc Agricultural Catchments Adviser, Ballinrobe, Co Mayo

As the Teagasc Agricultural Catchments Programme (ACP) was originally set up to evaluate the Good Agricultural Practice Regulations (Nitrates Directive), a key part of the evaluation focused on soil sampling and nutrient management planning (NMP). The ACP carried out a survey of farmers who participated in REPS and 50% indicated that they did not have a NMP.

As a result of this research, the ACP decided that it needed to ensure that farmers were provided with a fertilizer plan that they could follow and use effectively on their farms. Soil samples were taken on a field-by-field basis and sample areas did not exceed 2ha. This ensured a more accurate soil result for the farmer. A GIS mapping system produced maps of the farm and the soil sample areas and fertilizer plans were then produced using the Teagasc planner. Field-by-field recommendations were then produced and these recommendations were printed in each field on the map. The map was then printed off and laminated so that the farmers could bring them out on the tractor with them as they apply fertilizer/slurry.

The feedback from the farmers has been positive. Shane O'Reilly is a beef farmer in the Cregduff Catchment outside Ballinrobe, Co Mayo. “Before I got soil samples taken and a fertilizer plan I was only shooting in the dark. I didn't know what fields needed lime, P or K. Now I know exactly what fields need what and how much to fertilizer to put out. I can refer back to the map for the recommendation and apply accordingly; to be honest I couldn't work without it now.”

He has also gained an appreciation for the importance of lime to aid in the efficient use of fertilizers and optimum growth of grass. “When it was pointed out to me how much money I was wasting by applying fertilizer on low-pH soils and how poor the responses were I decided enough was enough and I have started spreading lime on the farm. It will take time to rectify the pH but it is obvious to me now the fields that need lime.”

What this has shown is that farmers will follow a fertilizer plan if it is presented to them in a user-friendly manner and can be followed easily. The benefits to the farmer and environment of having such a NMP are obvious and this should become more readily available to advisers and clients with the arrival of the new Teagasc online NMP later this year.

# Reaching new heights

In February 2014, Minister Simon Coveney invited Horse Sport Ireland, Teagasc and the Royal Dublin Society to create a strategy to 2025 for the Sport Horse Industry. The report "Reaching New Heights" was the outcome

## Declan McArdle

Equine specialist, Teagasc Rural Economy and Development Programme

**T**he aims of the strategy are to encourage job creation and sustainable enterprise development and facilitate, where possible, export-led growth.

Through extensive consultation with the industry and over 600 written submissions, the working committee collated opinions and ideas expressed into a strategy, which includes six key recommendations:

- Improve breeding structures to allow Ireland to produce more horses which are recognised in the top WBFSH rankings.
- Deliver an education and training structure to deliver on the goals of the strategy.
- Improve the marketing and sales capacity across the entire industry.
- Increase participation and improve the experience of participants in the sector.
- Develop and enhance the structures which improve the health and welfare of horses.
- Deepen institutional capacity to effectively deliver on the goals of the strategy.

Certain recommendations of the strategy are already in motion. A new discussion group scheme for horse

breeders will be launched later this year. Currently, there are only a few equine discussion groups around the country. This is a fantastic opportunity for more breeders to come together and share their knowledge with a view to increased commerciality and profitability of their breeding enterprises. The new scheme extends over three years and participating breeders will receive €750 per year. They will be required to complete plans, such as a breeding plan, for their enterprise. The group facilitator will assist.

In the most recent budget, Minister Simon Coveney allocated an extra €600,000 to the sport horse industry, which will be divided between a new marketing division within Horse Sport Ireland and extra prize money for the industry.

The strategy recommends a marketing agency similar to Irish Thoroughbred Marketing for the sport horse industry. This idea was put forward and discussed at all of the consultation meetings. Horse Sport Ireland has recently advertised for the role of international marketing director. This individual will establish and lead the new international marketing division.

It will be a major boost to the industry to have a marketing body promoting our sport horses and leisure activities abroad. However, we must not rely on this body to do all the "heavy

lifting". Individuals must take responsibility for their own enterprises. To attract foreign buyers, there has to be a quality, fit-for-purpose product available. For example, if a client is looking for a show jumper:

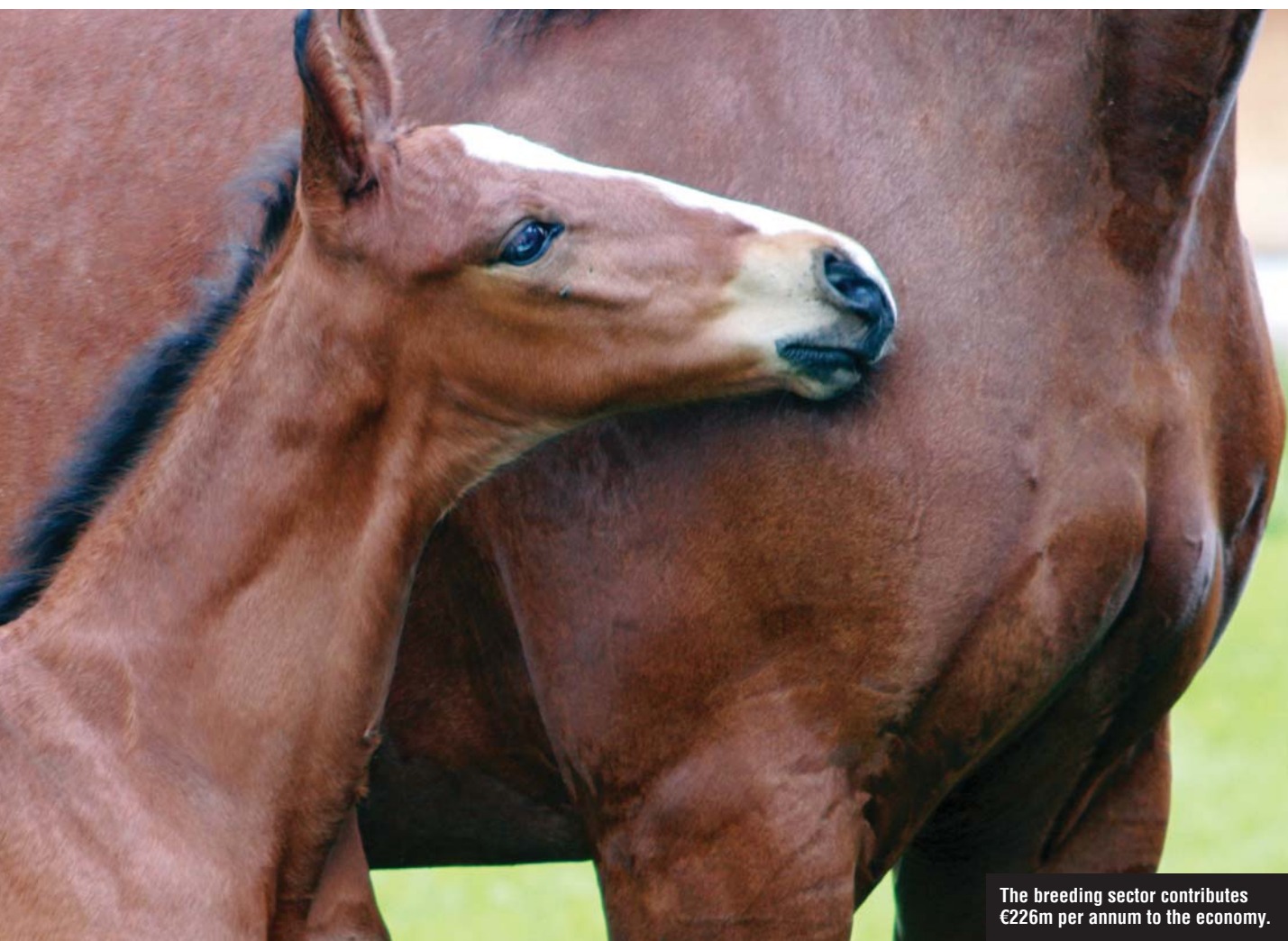
- Pedigree will be a factor: Has the animal been bred to jump? Is there evidence of show jumping performance success in the genetics of the dam and sire?
- How has the horse been produced? Is its training appropriate for its age? Has the horse been allowed time to develop and not been over faced or rushed?
- Has the animal been presented for sale in a professional manner? Video clips and photographs should show the horse at its best.
- Value for money: The buyer pays for a product and must get what they pay for. If buyers leave with a bad taste in their mouth due to a bad experience, that has huge consequences for the industry as a whole.

Of the increased funds being made available, €400,000 is to be spent on prize money. The strategy outlined that prize money would be required to aid best practice, as well as to incentivise mare owners to compete them in show jumping and eventing.

Discussing "Reaching New Heights" with Minister Simon Coveney are Prof Cathal O'Donoghue, chairman, Irish Sport Horse Industry Strategy Committee; Declan McArdle; Damian McDonald and Prof Pat Wall from Horse Sport Ireland.







The breeding sector contributes €226m per annum to the economy.

Breeder input at the consultation meetings highlighted expense as a barrier. This money will hopefully aid with costs, as well as a percentage of the prize money going to the breeder of the winners of these classes.

Concern was raised at consultation meetings regarding the production of young horses particularly the three, four, five and six-year-old classes. Many felt that the demands on young horses are excessive and good horses are being lost to the sport due to injury and being over faced too soon.

#### Young horse classes

The strategy recommends that young horse classes be reviewed and the calendar of events balanced over the year. This will require all competition providers to work closely for the good of the industry.

Licensing of riders who produce young horses is also recommended. Similar to the jockey licence in the thoroughbred sector, riders will have to complete a course, on best practice in producing young horses to obtain a licence to break and compete horses. The added advantage for a client then is that they have confidence that the producer they are sending their

horse to has achieved a standard. This licensing will be part of the proposed National Equestrian Education Pathway – a single progressive system for breeders, riders and those involved in the equestrian industry.

The strategy states that a vibrant industry requires the active encouragement and participation of young people in all aspects of equestrianism and breeding.

Minister Coveney has requested that an independent review be undertaken of Horse Sport Ireland and, where relevant, other organisations to fulfil the ambitions set out in the strategy. The report identifies that considerable progress has been made since the formation of Horse Sport Ireland in 2008 but recognises that the governance structure of Horse Sport Ireland and the number of separate structures of the sector is complex, making it potentially difficult to make decisions.

To take the industry to the next level, all participants must play a role. Working together and sharing knowledge will result in those involved making more informed decisions and increasing their profitability and further enhancing our global reputation.

## VALUE TO ECONOMY

The Irish equine industry is worth €700m to the economy

- Employs around 12,512 people directly and indirectly.
- Includes 124,000 animals.
- The breeding sector accounts for approximately 73,000 registered sport horses and contributes €226m per annum to the economy.
- The competition sector accounts for approximately 10,000 registered sport horses and contributes €135m to the economy.
- The leisure sector accounts for approximately 36,000 registered sport horses and contributes €119m to the economy. (UCD Report 2012).



# Attractive choices on

## Francesc McHugh

Forestry Development Officer,  
Teagasc Crops Environment  
and Land Use Programme

**A** new forestry programme will inject €262m into the Irish rural economy over the next five years and a further €220m in premium payments beyond 2020.

More than 1,300 people attended the recent series of information meetings on the new Forestry Programme 2014-2020 organised by Teagasc in association with the Forest Service. They heard details of the new attractive forest establishment and support grants and how the new forestry grants interact with other agricultural support schemes.

Jim Fitzharris, who farms near Bunclody in south Carlow, is one step ahead. Having planted five years ago under the previous afforestation scheme, he considered the new programme and decided to plant more land this spring.

"My main motivation to plant was to take the opportunity to make good use of what had been the most unproductive land on the farm," says Jim, who truly is a mixed farmer.

When this year's planting is complete, Jim will have one third of his land in forestry, one third in tillage and the remainder in grass for cattle and sheep.

Of course, the grants and premiums available made the option to plant more attractive.

Jim can look forward to a premium of €560/ha for his conifer plots, €575/ha for sycamore and €615/ha for beech. All are paid annually for 15 years. But Jim has a longer-term view. He looks forward to producing high-quality timber.

He also is passionate about providing habitats on his farm for wildlife, especially birds.

### Environmental benefits

Standing in Jim's field which is about to be planted by his forester Manus Crowley from ENFOR Ltd, it's easy to see that a strong objective was to develop a woodland that would be biodiverse and "bird-friendly".

Jim and Manus came up with a plan to plant many different tree species: sycamore, beech, birch with some rowan and cherry. A nearby plot will contain larch and Scot's Pine. Four-metre biodiversity walkways through the young trees are planted each side with native berried shrub species.



Jim welcomes groups from Bird-watch Ireland each year who appreciate the variety of birds that are drawn to his mixed woodland.

Under the Forestry Scheme, 15% of the forest area must be treated with particular regard to biodiversity. This can include existing hedgerows/scrub, setback areas from rivers, roads and archaeological features and also internal roads as Jim has done.

There are 11 measures in the new forestry programme, four of which are open for business so far; afforestation and creation of woodland, forest roads, reconstitution and the woodland improvement scheme. Others will open later this year.

### Afforestation and woodland creation

This measure provides funding to plant greenfield sites. Grants usually

**Jim Fitzharris and Teagasc Forestry Development Officer Francesc McHugh inspect Jim's five-year-old oak, while this year's planting gets under way in an adjacent field.**

i

See [www.teagasc.ie/forestry](http://www.teagasc.ie/forestry) for the contact details of your local Teagasc forestry adviser



# new forestry programme



**Table 1:** Afforestation and creation of woodland grant and premium rates

Grand and premium rates (GPC)	Total grant available (€/ha)	Premium (€/ha/yr)	Duration of premium (years)
GPC 1: Unenclosed	2,600	€185	15
GPC 2: Sitka spruce (SS)/lodgepole pine (LP)	3,545	€440	15
GPC 3: 10% Diverse (mainly SS)	3,650	€510	15
GPC 4: Diverse (conifers-not SS or LP)	3,965	€560	15
GPC 5: Broadleaf	5,435	€575	15
GPC 6: Oak	5,750	€615	15
GPC 7: Beech	5,750	€615	15
GPC 8: Alder	3,860	€575	15
GPC 9: Native woodland establishment (scenario one to three)	5,750	€635	15
GPC 10 - Native woodland establishment (scenario four)	5,435	€635	15
GPC 11 - Agro-forestry	4,450	€260	5
GPC 12a - forestry for fibre	2,450	€180	10
GPC 12b - forestry for fibre (Aspen)	2,165	€180	10

**woodland establishment:** The focus is on native species, minimal site disturbance and long-term close-to-nature management. It presents opportunities for planting in various environmentally-sensitive areas, eg NATURA sites.

• **GPC 11 - agro-forestry:** Initial stocking rate of 400 to 1,000 trees per hectare; equally spaced with a minimum plot size of 0.5ha and tree rows planted 20m apart. Acceptable species include oak, sycamore and cherry. Eighty percent of costs are covered. Grazing by sheep or young domestic stock is permitted in spring and summer for the first six to eight years. Trees must be protected and tree shelters checked regularly. Once trees are of a sufficient size, tree shelters can then be replaced with plastic mesh and larger stock can be introduced. Silage and hay production is also permitted.

• **GPC 12 (a and b) - forestry for fibre:** This scheme supports the growing of productive tree species to produce wood biomass yields in the region of 150-300m<sup>3</sup>/ha over 10 to 15 years. This scheme does not fund short-rotation coppice or Christmas trees.

Note: Land must remain under forestry and therefore is subject to a replanting obligation for all grant categories.

Jim Fitzharris says the land he decided to plant was "too hilly and stony" to farm. "Forestry offers a new, more-profitable land use with the added benefit of continuing to receive basic payments on forested land" (land planted since 2008 is deemed eli-

gible for SFP and basic payments into the future - some conditions apply).

So, what are the first steps?

- Talk to your agricultural adviser/Teagasc forestry adviser. Forestry is a permanent change of land use and can have an effect on other farm schemes.
- Inform yourself; forestry is new to most farmers. Talk to neighbours who have planted and maybe attend some forest walks/events in your area.
- Making an application. You must engage a registered forester to apply for forestry grants on your behalf. After approval is received; you can employ that forester to organise the planting or organise the work yourself.

## Other grants open for applications

### Forest roads

This measure provides support for the construction of forest roads at a rate of €40/m to a maximum of 20m/ha. Additional funding may be available in certain circumstances.

### Woodland improvement (thinning and tending)

A grant of €750/ha is available for the thinning and tending of young broadleaf woodlands. A cost-based grant may also be available for brushing operations to facilitate manual fertilizer application.

### Reconstitution scheme (chalara):

This measure provides support in relation to ash dieback (chalara). A site clearance grant of up to €1,500/ha and replanting grants of up to €5,000/ha are available.

cover the cost of site preparation, fencing, trees and tree planting. Grants are paid in two installments; the first to cover the main forest establishment and the second (maintenance grant) amounts to 25% of the total grant and is paid after four years following successful establishment.

There are many grant and premium categories (GPC), which are determined by the category of land planted, the trees species and area planted (Table 1).

• **GPC 1-8:** The main objective is to produce commercial timber (stocking rates at least 2,500 tree/ha). There can be other objectives also. Trees should be carefully matched to site type. Landowners must appreciate the difference between tree species and the different times to harvest.

• **GPC 9 and GPC 10 - native**

## botanic gardens

## Spring rewards

Some old and some very novel ways to brighten up a spring garden

**Chris Heavey**

Lecturer at the Teagasc College in the National Botanic Gardens

**S**pring has sprung and it's time to reap the rewards of bulb planting last autumn. Purple and yellow crocus are making their presence felt, along with the first daffodils. Bulbs are an easy way to inject colour into the garden without breaking the bank. Most multiply and can carpet an area of the garden in a few short years.

The smaller varieties of daffodil are a little more tolerant of March winds than their taller cousins. Always try to plant bulbs in groups of five or seven, odd numbers work better for some reason and are far more natural looking than those planted in straight lines.

The best way to tackle naturalising bulbs in a garden is to scatter them around and where they fall, just plant them in. For the most part, plant spring bulbs in autumn before the soil gets too cold and wet. Tulips can be planted as late as November

with no ill effects. If you want bulbs to last the pace and give you colour year after year, plant them deeply, especially tulips. Coronilla, with its vibrant yellow, pea-like flowers, has been in flower in my garden since last October and will continue for a number of weeks to come.

This is a plant that requires little care and attention, save a good prune back after flowering has finally finished. There aren't too many plants that offer such a long season of flowering, so consider this one to brighten up your spring garden.

No garden can do without a few old reliables and hellebores are exactly that, easy to grow and tolerant of colder temperatures. So long as you cut back the old leaves every spring to reveal their beautiful flowers, they will settle in well.

All the above-mentioned bulbs and plants tend to like a humus-rich but well-drained soil. They flower at a time when deciduous trees and shrubs are still dormant so they can show off without fear of competition.

On a recent trip to Altamont gardens in Carlow with a group of students, we were treated to the beautiful sight of thousands of snowdrops nodding gently in the spring sunshine. This most angelic of the spring-flowering bulbs, planted en masse as they were, creates such an impact.

Snowdrops are best planted "in the green", which means you divide an existing clump as the flowers are dying off and replant in odd numbers or as single snowdrops.

Most varieties will multiply readily, so within a few years you will have a great display.



## Essen ornaments

And now for something a little different. I was in Essen, Germany, recently at the biggest horticultural trade show around. Everything you could imagine for the garden was there and looking splendid. Garden ornaments, which can be a bit of fun, caught my eye. Okay, they're not everyone's cup of tea, but I think you will agree that these gorgeous ornamental sheep will be a big hit with children.

Shows like Essen give a good insight into how individual countries are progressing their brands and Ireland was represented at three stands by former colleague Dr Pat McDonald (now running Springfield Nurseries), FitzGerald Nurseries and Bord na Mona. All seemed to be holding their own against the world's best.





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1. BRSV: All-Ireland Animal Disease  
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