



Today's Farm

Business, production, environment and countryside issues www.teagasc.ie



Secrets of success in farm tourism

New beef breeding indices
What's in your fodder cupboard?
Sheep: avoiding worm resistance
Looking forward to Moorepark Open Day
Winter rape, why a good start is key
Forestry, botanic gardens and more...



Schmallenberg Virus

Spread by midges that travel up to 20 miles per day.

Are you at risk this summer?



Schmallenberg virus was first diagnosed in Ireland in October 2012 and has been confirmed in most counties since.

Schmallenberg virus can cause devastating losses in cattle and sheep.

The clinical signs include:

- Abortions in cattle and sheep
- Foetal abnormalities including twisted neck, domed skull and contracted limbs
- Severe milk drop in dairy herds

Contact your veterinary surgeon for more information about Schmallenberg vaccination, or go to www.msd-animal-health.ie

4-5 Etc

7 Upcoming events

Drystock

7-9 Using the new beef indices.
10-11 Calm, happy and profitable.
12-13 What's in the fodder cupboard?
14-16 Sheep: a strategy to beat anthelmintic resistance.

Dairy

17-24 Moorepark Open Day.
25-26 Silage: second cuts and beyond.

Farm Management

29-31 Rural Tourism

Tillage

32-33 Winter oilseed rape, getting a good start.

Environment

34-35 Protecting water.

Forestry

36-37 Reasons to visit your forest.

Botanic gardens

38 Making best use of water.

NEW BEEF INDICES
One to five-star ratings make it easy to compare animals
>> 7-9



Today's farm is a bi-monthly publication produced in a joint venture between Teagasc and the Agricultural Trust, publishers of the *Irish Farmers Journal* and *The Irish Field*.

Editor: Mark Moore | Editorial team: Alison Maloney, Joanne Carroll, Eric Donald
Chief sub-editor: Leslie Horgan | Sub-editor: Brian Murphy
Cover design: Design at DBA | Imaging: Owen McGauley
Printing: Boylan Print Group, Drogheda, Co Louth | Advertising: Frank McGouran
All Media Matters (01) 4941071 086-8111567 sales@allmediamatters.com

All editorial enquiries to: Teagasc, Oak Park, Carlow
Tel: (059) 9170200 Fax: (059) 9183498
e-mail: mark.moore@teagasc.ie | web: www.teagasc.ie

The publishers do not accept responsibility for any private and trade advertisements or advertising insertions included in this publication. Occasional reference in this magazine to trade names and proprietary products may be inevitable. No endorsement of named products is intended, nor is any criticism implied of similar products which are not mentioned.

Cover | Dorothy Landers at Tulla in Co Clare says people who stay in her B&B are looking for 'experiences' and activities such as fishing, biking, traditional music sessions etc., as well as top quality accommodation and food. Her donkeys are a major hit with many visitors.

COMMENT

Don't hold back



Mark Moore
Editor,
Today's Farm

The Teagasc Moorepark Open Day is imminent. It offers farmers the chance to learn about the very latest findings in dairying at first hand. In our dairy section, we have summarised the key points from many, but not all, areas to be covered on the day. These key points are just the 'gist' of it. Attending on the day will get you the full open day booklet and direct access to the huge team of young researchers.

To get the most from your visit, think strategically. Decide what you want to get out of it – maybe you'll have a question or two in your mind.

At the end of each of the short open air presentations, there will be scope for discussion. Don't hesitate to challenge the speakers, they love to get instant feedback and know their topic inside out. I've often regretted not asking a question, I've never regretted asking one.

Ná coinnigh siar

Tá Lá Oscailte Teagasc Pháirc Uí Mhórdha ag teannadh linn. So-láthraíonn sé deis d'fheirmeoirí foghlaim ar an láthair faoi na torthaí is déanaí ar fad i gcúrsaí déiríochta. Inár rannóg déiríochta tá achoimriú déanta againn ar na Príomhphointí ó go leor réimsí, ach ní gach réimse, atá le clúdach ar an lá. Níl sna príomhphointí seo ach 'léargas achomair'. Má fhreastalaíonn tú ar an lá gheobhaidh tú leabhrán an lae oscailte iomlán mar aon le rochtain dhíreach ar fhoireann ollmhór na dtaighdeoirí óga.

Chun an méid is mó a bhaint as do thuras – smaoinigh go straitéiseach. Déan cinneadh ar an méid a theastaíonn uait a thógáil as – b'fhéidir go mbeidh ceist nó dhó id' aigne agat gur mhaith leat a chur. Ag deireadh gach ceann de na láithreoirachtaí gearra amuigh faoin aer beidh scóip le haghaidh díospóireachta.

Ná bíodh drogall ort dúshlán a chur faoi na hurlabhraithe, is breá leo siúd aiseolas láithreach a fháil agus fios a n-ábhar acu go huile is go hiomlán. Is minic gur cúis aiféala dom í nár chuireas ceist, ach níorbh riamh cúis aiféala dom í ceann a chur.



Sino - Teagasc agreement

Teagasc has agreed a memorandum of understanding (MOU) with the Chinese Academy of Agricultural Sciences (CAAS) which will facilitate scientific collaboration and scientific exchange between the two agencies.

The MOU was signed by Mr Tang Ke, the director general of the Department of Science and Education, from the Chinese Ministry of Agriculture, on behalf of CAAS and by Professor Gerry Boyle, director of Teagasc, in the offices of the Department of Agriculture, Food and the Marine in Dublin.

The signing was witnessed by the Chinese Vice Minister of Agriculture, Mr Zhang Taolin, and by Minister of State at the Department of Public Expenditure and Reform, Mr Brian Hayes.

The MOU will encourage and develop scientific exchange opportunities between both agencies in the areas of animal breeding and genetics, dairy production, sustainable agricultural production, including relationship with climate change, food safety and residue analysis, and veterinary medicine.

Survey results

A sincere thank you to the more than 400 recipients of Today's Farm who were asked for their views of the publication over the phone. The survey was conducted by an independent polling organisation which ensured that the group surveyed was nationally representative and statistically rigorous – as they say in the polling industry! Analysis of responses indicated that satisfaction with Today's Farm at c.85% is extremely high. Satisfaction proved highest amongst cattle farmers with dairy farmers close behind. Satisfaction was marginally higher amongst those aged 35-54 and those living in Leinster. The average respondent reads close to four articles in every issue of Today's Farm. While these results are very positive there are no grounds for complacency and we will work hard to try to continually improve Today's Farm. Feedback and suggestions are always welcome.

New vegetable guide

A new revised sixth edition of the *Teagasc Guide to Vegetable Growing* has just been published. Please email Stephen Alexander at stephen.alexander@teagasc.ie for a free copy. It's also available as a PDF download from the Teagasc website.

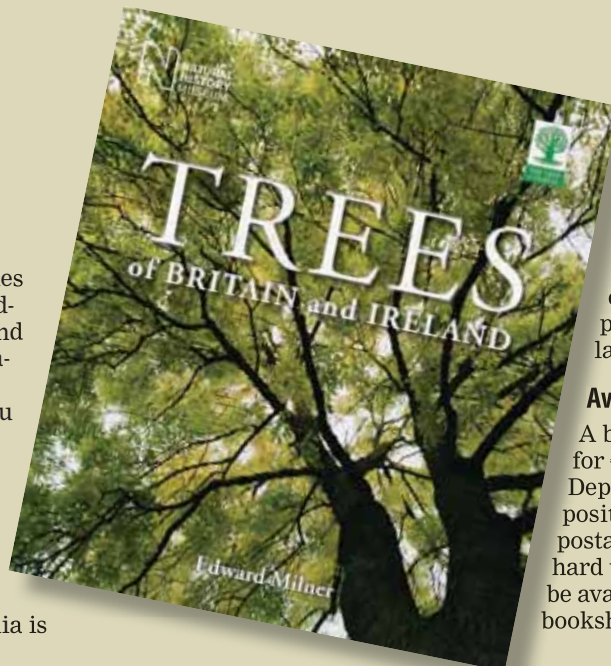


BOOKREVIEW

Trees of Britain and Ireland

By Edward Milner
(Natural History Museum, 2011)

This guide to every native tree species in Ireland and Britain is both a handsome book packed with ecological and historical information and a celebration of the islands' trees and their contribution to our culture. Here you will find essential facts about where different trees grow naturally, the insects, fungi, animals and folklore that are associated with them, how they are managed and what products are obtained from them; just read what it says about lime trees and you'll realise that Wikipedia is not the fount of all knowledge.



The ecologist Edward Milner has been writing and making films about the natural world for over 40 years and in this book his knowledge is distilled into clear prose across 224 pages, backed up by the latest research.

Available

A book as valuable as this for €15.19 from The Book Depository (www.bookdepository.co.uk), including postage to Ireland, would be hard to better. It should also be available from any good bookshop.

- Sean Sheehan

TEAGASC DAIRY MANUAL

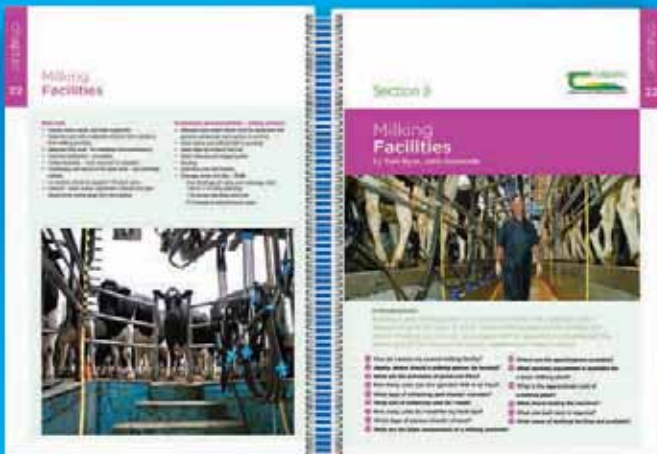
A comprehensive source
of practical advice
for any dairy business.

- Why dairy farming?
- Business management
- Dairy facilities
- Dairy farming and the environment
- Milk quality
- Feeding dairy animals
- Dairy breeding
- Dairy animal health

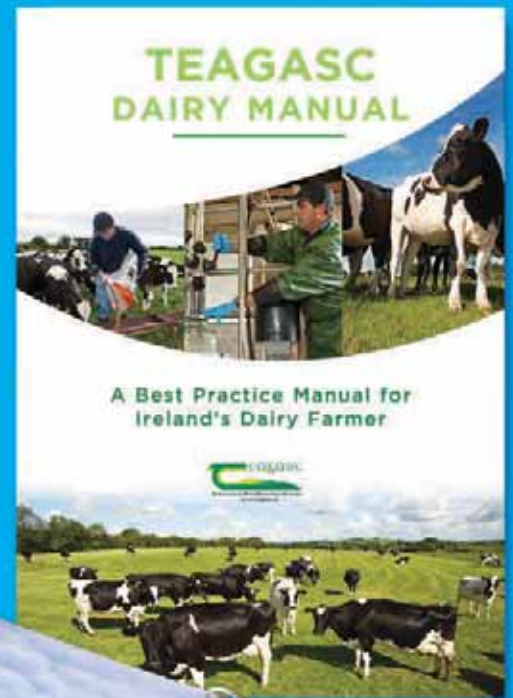
These sections are further divided into a total of 49 chapters with titles such as: Creating a Business Plan, Winter Facilities, Feeding the Dairy Cow, Managing Your Grass, Replacement Heifer Management etc.

The information within each chapter is built on feedback from farmers and is laid out as Questions and Answers, How-to's, Key Performance Indicators, Key risks, etc. making the Manual extremely easy to read and use. The Manual will be of particular interest to anyone planning to expand over coming years.

A must for anyone with an interest in dairy farming the 310-page Manual is produced using tear-proof, water-proof paper for real world conditions.



Available at the
Moorepark'13
Open Day



The Teagasc Dairy Manual is available from your local Teagasc office (**clients €25, non-clients €50**). Alternatively contact **Therese Dempsey (059 9183422)** who will send you a copy by post (**p&p €7.50 extra**)

**MOOREPARK OPEN DAY
WEDNESDAY 3 JULY
10AM-5PM
THE IRISH DAIRY INDUSTRY –
POISED FOR GROWTH**

World demand for dairy products is expected to increase further due to global population growth and increases in per capita disposable income, especially in developing countries.

The abolition of milk quotas in 2015 gives many dairy farmers scope to increase milk production for the first time in 30 years.

To ensure success, dairy farmers must be able to plan, finance and deliver expansion in an efficient manner, while at the same time confront issues such as volatility in milk price and difficult weather conditions like that experienced in 2012.

Expansion in the dairy farm business should only be undertaken if it increases profit and provides a better lifestyle to the farm family.

When the EU milk quota is abolished, farm profitability will be dependent on maximising profit per hectare, i.e. stocking your farm to match grass supply.

This major open day will provide the roadmap to deliver these goals for the Irish dairy industry.

Moorepark is located off the Cork

– Dublin Motorway (M8) on the R639, and is approximately 5 km from Fermoy on the Mitchelstown side. Exits off the M8 Motorway are Exit 13 from the North and Exit 14 from the South.

2013 ORGANIC DEMONSTRATION FARM WALKS JULY AND AUGUST

JULY

- Tuesday 2 July 2pm Paddy Tobin, Main Street, Johnstown, Co. Kilkenny Cereals, Fieldscale Crops
- Tuesday 9 July 2pm Gerard & Sylvia Langan, Ballisnahyna, Ower, Headford, Co Galway Horticulture, Beef, Sheep, Direct Sales
- Friday 12 July 2pm John Curran, Moygrehan, Fordstown, Navan, Co. Meath, Beef, Sheep
- Tuesday 16 July 2pm (DAFM BTAP approved) Oliver Dixon, Ahena, Claremorris, Co Mayo Beef, Cereals
- Thursday 18 July 2pm, Thomas Kinsella, Munny, Askamore, Gorey, Co Wexford Cereals, Sheep
- Friday 26 July 2pm, (DAFM BTAP approved), Pat Booth, Heath, Kilone, Stradbally, Co. Laois, Beef, Cereals
- Wednesday 31 July 2pm, Gerry Fitzsimons, Mullahoran, Kilcogy, Co Cavan, Beef

AUGUST

- Tuesday 13 August 2pm, John & Sara Devoy, Garrane, Roscarbery, Co Cork, Horticulture, Poultry-eggs, Eco-tourism, Direct Sales
- Friday 16 August 2pm, Kay O'Sullivan, Garrynagarragh, Mournabbey, Mallow, Co Cork, Beef, Sheep, Cereals
- Thursday 22 August 2pm, Alan Jackson, Lacka House, Riverstown, Birr, Co. Offaly, Beef, Cereals
- Friday 23 August 2pm, Pat Mulrooney, Manganstown, Kilsheelan, Clonmel, Co. Tipperary, Dairy
- Wednesday 28 August 2pm, (DAFM BTAP approved), Mark Duffy, Bellview, Clogher., Ballybay, Co Monaghan Beef

TEAGASC SHEEP BETTER FARM PROGRAMME OPEN DAYS

See the real gains achieved in productivity and profit on these farms. Since joining the programme the average gross margin on lowland farms increased by 130%. In hill flocks gross margin increased by 70% up to 2012. The key areas focused on these Open Days will be:

- Performance of the farm to date
- Breeding
- Grassland management
- Parasite control.

Lowland flock

- 4 July John Kelly, Saundersgrove, Baltinglass, Co. Wicklow
- 9 July Brendan O'Sullivan, Upper Liss, Caherciveen, Co Kerry
- 24 July Andrew Maloney, Rathgreedon, Edenderry, Co Offaly
- 29 August Brian Nicholson, Tullyvolty, Johnstown, Co Kilkenny

Hill flocks

- 5 September Colm O'Donnell, Monalea, Aclare, Co Sligo
- These are STAP qualifying events



This major open day will provide the roadmap to deliver these goals for the Irish dairy industry.

See also Pages 17 to 24

MANAGEMENT AND THINNING OF OAK AND CONIFER MIXTURES WEDNESDAY 10 JULY 2013, KILRUANE MCDONAGH GAA CENTRE, CLOUGHJORDAN, CO TIPPERARY

With the management of oak, tending and thinning are essential operations to ensure the production of valuable hardwood timber and to optimise returns.

This is very important especially in oak / conifer mixtures, where without the necessary intervention the conifer will outcompete and smother the oak.

REDSTART

FORAGE SOLUTION

New
Kale/Rape
Hybrid



- Is a **NEW** kale/rape hybrid forage variety
- Has **HIGH YIELD** potential
- Has **HIGH ENERGY** and **HIGH PROTEIN** content
- Has good grazing characteristics with **EXCELLENT CROP PALATABILITY**
- Can be **ENSILED** and **GRAZED** after cutting
- Is **FAST GROWING** with **SUPERB REGROWTH** potential
- Is **EARLY MATURING** - graze 70-90 days after sowing
- For **WINTER GRAZING** - sow from July onwards

Minimise the risks of feed shortages next winter by growing REDSTART.

We have introduced this new brassica hybrid variety for farmers who want to boost winter feed supplies cost effectively.



Available in
**25kg packs from all
Co-ops and merchants**



GERMINAL SEEDS

Tel: 0504 41100
info@germinalseeds.com
www.germinalseeds.com

Star Rating (within Limousin breed)	Economic Indexes	€uro value per progeny	Index reliability	Star Rating (across all beef breeds)
★★★★★	Maternal	€149	53% (Average)	★★★★★
★★★☆☆	Terminal	€97	67% (High)	★★★☆☆
☆☆☆☆☆	Dairy Beef	€	% (N/A)	☆☆☆☆☆

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: 4.75%, All breeds ave: 4.99%	2.50%	69% (High)	
★★★☆☆	Docility (1-5 scale) Breed ave: -0.07, All breeds ave: -0.01	-0.10 scale	65% (High)	★★★☆☆
★☆☆☆☆	Carcass weight (kg) Breed ave: 22.88kg, All breeds ave: 22.43kg	17kg	84% (V High)	★★☆☆☆
★☆☆☆☆	Carcass conformation (1-15 scale) Breed ave: 2.13, All breeds ave: 1.91	1.72 scale	82% (V High)	★★☆☆☆

Expected daughter breeding performance

	Daughter calving difficulty (% 3 & 4) Breed ave: 4.65%, All breeds ave: 5.19%	4.9%	25% (Low)	
★★★★★	Daughter milk (kg) Breed ave: -0.28kg, All breeds ave: 0.49kg	4.02kg	31% (Low)	★★★★★
★★★★★	Daughter calving interval (days) Breed ave: 1.58 days, All breeds ave: -0.02 days	-.21days	32% (Low)	★★★★★

Using the new beef indices

Pearse Kelly
Head Teagasc Drystock Knowledge Transfer
& **Michael Fitzgerald**
Teagasc adviser Wexford

Use the indices

Now that we have both a Terminal and a Maternal Index, suckler farmers should use them when selecting either their next stock bull or AI straws.

Use these indices to narrow your choice and then look at the key profit traits to see why a bull is particularly good for either one or both of them. Keep a close eye, though, on the reliabilities before making any decision.

If you are keeping some of your own heifers as potential replacements, check out their figures also, especially for daughter milk and calving interval.

Last autumn, after extensive consultation, ICBF launched two new beef breeding indices that replaced the single Euro-Star beef index that has been in place since 2007.

As with the old index, these new indices are measured in euro. The euro figure represents the potential change in profit the genetics of a beef animal can influence.

The indices also have one to five star ratings to make it easy to compare animals.

Suckler farmers now have a Terminal Index to compare the potential progeny of beef animals on features such as: how difficult they are to calve, the rate at which they will grow and how lean and well shaped they

are at slaughter.

They also have a Maternal Index which compares the potential daughters of beef animals for their own fertility traits but also the beef traits in the calves that these daughters may produce.

With a Terminal and a Maternal Index, suckler farmers now have the option to concentrate heavily on carcass traits, if a bull is not needed to breed replacements, or on maternal traits if he is being used to produce potential replacements.

The Cooley farm

Joan and Patrick Cooley operate a mixed farm just outside Ramsgrange in south-west Wexford overlooking the scenic Hook peninsula. Their farm is typical of many farms in Wexford with a mixture of cattle,

» Continued on Page 8

sheep and tillage. They operate a 35-cow suckler herd with all progeny finished – bullocks at 24 months and heifers at 20 months. In recent years, they have increased output by double suckling the cows with calves bought in from nearby dairy farms.

The results from profit monitor data in 2012 show an output of 925kg/ha liveweight (target 750kg/ha) and a gross margin of €800/ha.

Both of these figures look set to rise in the future as the full effects of the increased output associated with the double suckling becomes evident.

The key to achieving this high output is a strong emphasis on good grassland management and breeding. The suckler herd consists of mainly Limousin x Friesian cows.

Cooley stock bull

In 2008, Joan and Patrick bought their current Limousin bull (see **Page 9**), Galbally C 451 from the well-known Co Wexford pedigree Limousin breeder, Trevor Masterson (Galbally herd).

To date, this bull has proven very successful for the Cooleys with over 80 calves registered to him. AI is also used on the farm with mostly Limousin and Belgian Blue straws used.

On latest ICBF indices (April, 2013), Galbally C 451 is showing up to be 4.5 stars within the Limousin breed for the Maternal Index and 1.5 stars for the Terminal Index – see *Figure 1*.

Whenever you are looking at index values, it is important to also examine the reliability figure attached to these values.

As this stock bull has a number of calves already (45 of which have slaughter data) the reliability figure for the Terminal Index would be considered high for a non-AI bull at 67%. With fewer records available, the reliability of the maternal index will



Joan Cooley, Teagasc adviser Michael Fitzgerald, and Patrick Cooley.

not be as high but it is still a reasonable figure at 53%.

While the Terminal and Maternal Index give the overall index values for a bull, the key profit traits give the detail that explains why a bull is high or low for the indices.

With this bull, you can see that his Terminal Index is only 1.5 stars because even though he is an easy calving bull, his potential to produce heavy carcasses is below the Limousin breed average (+17kg vs. +22.88kg) and this is putting him in the bottom 20% (one star) for this trait. Also, he is in the bottom 10% (half a star) for conformation within the Limousin breed.

When it comes to his daughters' key profit traits, it is easy to see why he is a 4.5 star Maternal bull. Within the Limousin breed, he is in

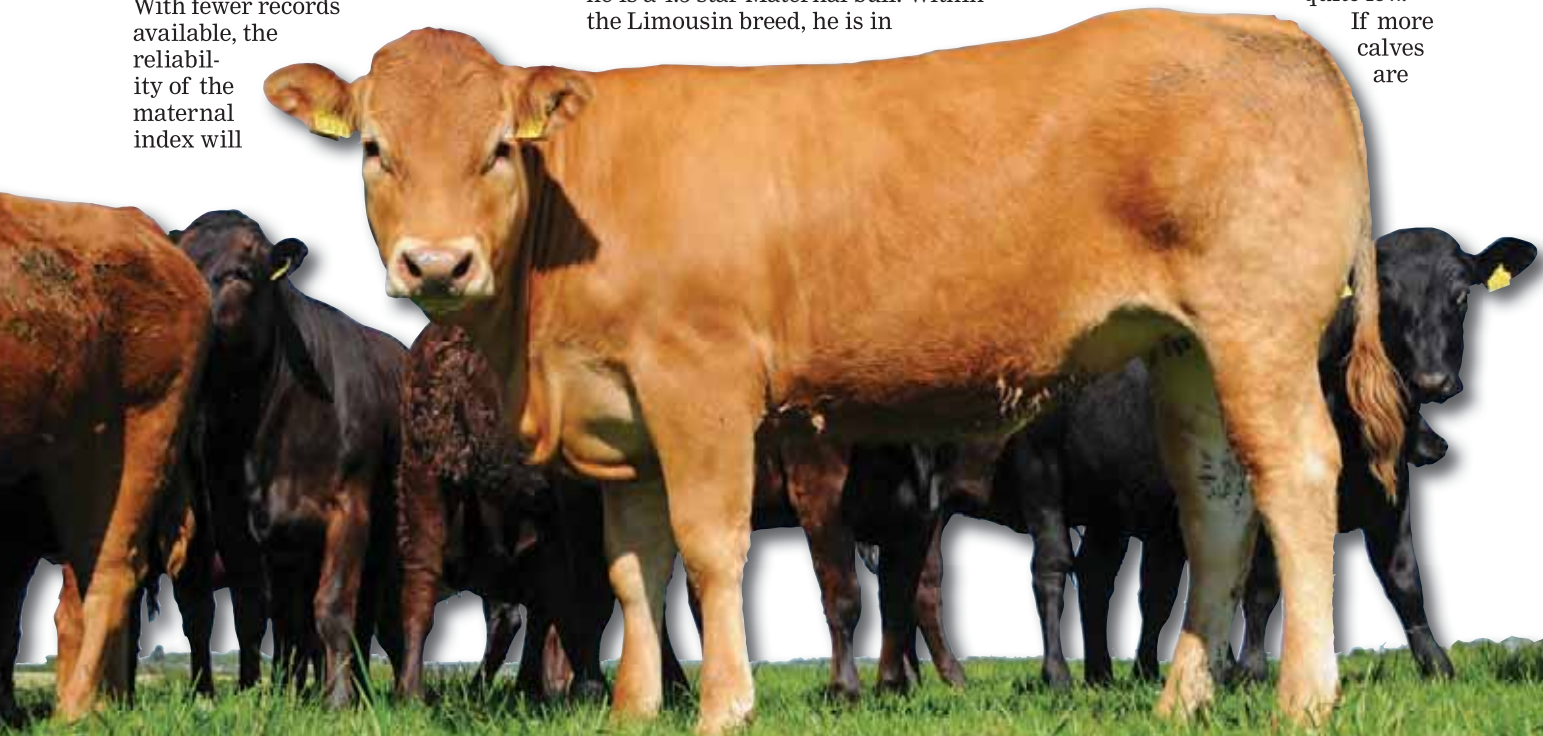
the top 10% (five stars) for daughter milk and the top 20% (4.5 stars) for daughter calving interval. The daughter milk figure is based on the extra weight his daughters' progeny will weigh at weaning compared to the breed average (+4.02kg vs. -0.28kg).

The daughter calving interval for this bull is saying that, on average, this bull's daughters will reduce their calving interval by 0.21 days each time they calve.

This may seem low but for a lot of bulls this figure is going in the wrong direction, i.e. their calving interval would be increasing by days with each calving.

Once again though, a warning needs to go with these figures because the reliabilities associated with them are quite low.

If more calves are





weighed around weaning on farms, the reliabilities of the daughter milk key profit trait should start to increase for bulls, due to the extra data going into the database. The Cooleys chose the weighing of their weanlings as one of their two BTAP tasks which will increase the reliability of their own cows' figures more quickly than if they were not to do it.

Heifer values

The new Maternal Index values will be just as important when it comes to looking at the values of potential replacement heifers as they are on bulls.

Table 1 shows the Maternal Index values for the seven Limousin heifers that were born in 2012 in the Cooley herd and bred by Galbally C 451. All of these heifers are still on the farm.

Heifer number 494 (see picture on Page 8) is a good example of one of these heifers. She was born on 1 February 2012 and has a Maternal Index Value of €151. This is giving her 4.5 stars for this index which would put her in the top 20% across the country.

Table 1: 2012 Born Daughters by Galbally C 451 (pictured above)

Heifer No.	Date of Birth	Maternal Value	Star Rating	Reliability
497	26-Feb-12	€188	5 Stars	20%
509	24-Nov-12	€177	5 Stars	20%
492	30-Jan-12	€171	4.5 Stars	22%
494	01-Feb-12	€151	4.5 Stars	19%
503	04-Oct-12	€150	4.5 Stars	14%
493	01-Feb-12	€143	4 Stars	23%
498	27-Feb-12	€138	4 Stars	22%

However, the reliability of this figure is only at 22% which means it may well change in value (either up or down) if she is kept in the herd and more data is fed into the ICBF database on her.

While the reliabilities are low for all of the values on 2012 born heifers, if the Cooleys were to breed from all of them, it is highly unlikely that they would all drop in value over time. Some would increase in value and others would decrease and, as a group, the average would not likely move considerably.

In comparison, if they were on average two stars as a group (with low reliabilities), the same would apply, i.e. after a number of years they would still, in all likelihood, be on average as a group, two stars.

This year (2013), there were nine Limousin heifers born on the Cooley farm by Galbally C 451.

Again, they are mostly four and five star heifers for the Maternal Index, with an average value of €164 and as a group of heifers would be ideal candidates to breed as replacements.

Calm, happy and profitable



This farmer breeds for docility and ease of management but profitability is not forgotten

Adam Woods
BETTER Farm adviser, Teagasc,
Grange, Co Meath
/Mark Moore

When a stranger arrives in a field of cows with calves at foot, there's a natural tension as the animals weigh up their options – fight, flight or ignore. On a recent visit to Sheplands farm, the animals showed no indication, whatsoever, of anxiety.

A friendly nonchalance and a little mild curiosity were the only visible emotions among the Limousin/Hereford animals who were, admittedly, enjoying a fresh paddock in a field not long since re-seeded.

As well as the leafy grub, two other factors contributed to this almost eerie calm: the equable personality and character of Heinz, the farm's manager for many years, and his policy of breeding for docility and ease of calving. "My goal is to have



Heinz Eggert

Table 1: Breeding targets

	Sheplands farm spring herd	National average
Calving Interval	364	396
Mortality at birth	1%	5%
Mortality at 28 days	4.1%	6.12%
Calves per cow per year	.94	.85
% heifers calved between 22 and 26 mths	100%	16%

Table 2: Profit progress 2008-2011

Year	Stocking Rate	Output Kg/ha	Gross Output	Gross Margin
2012	1.93	625	1,422	591
2011	1.92	620	1,447	649
2010	2.10	722	1,395	436
2009	1.91	553	1,038	284
2008	1.83	565	986	4

a highly productive system which is easy to manage," says Heinz. "So we breed for docility generally and use a Hereford bull on maiden heifers for ease of calving." Anyone who doubts you can't breed for calmness in cows should visit Sheplands farm.

"We've built up suckler cow numbers from 72 in 2008 to 100 in 2013," continues Heinz. "The original foundation cows for the herd were Limousin x British Friesian and these cows are crossed with maternal Limousin bulls to produce replacements. I like the Limousin breed and choose to stick with them because of their ease of calving and good conformation."

Replacements are only kept from quiet cows. Heifer calves that are off good mothers, i.e. good conformation, good milking ability, docile, proven breeding record and a good calving interval, are earmarked as replacements. "We weigh the progeny from the cows on a regular basis during the summer months so it's quite easy to pick out the cows that are not doing the job I want at the end of the year," Heinz adds.

Grazing infrastructure

The land is roughly divided up into

two blocks with the main road separating these two blocks. Heinz has had the farm GPS mapped into paddocks so he knows exactly the area of each field on the farm. The farm is divided into 18 permanent divisions with each of these divisions further sub-divided two to three times when grazing.

Breeding efficiency

Calving takes place over eight weeks in spring. Easy calving bulls are used on both cows and heifers. All birth weights are monitored and any bull seen to be producing heavy calves at birth is culled straight away – no questions asked.

"In my experience cows that have difficulty calving are generally slowest to resume cycling and too many of these will have a negative impact on fertility figures," says Heinz.

The majority of the cows calve in March and April and body condition score targets are closely monitored to avoid calving difficulty. Cows are turned out to grass soon after calving so they are on a rising plane of nutrition which helps them to resume cycling. Close monitoring then takes place during the breeding window.

A TEAGASC/IRISH FARMERS JOURNAL INITIATIVE, SUPPORTED BY INDUSTRY SPONSORS:





Three bulls on the farm are turned out and these bulls are rotated mid-way to help guard against infertility. A pre-breeding scan is used to confirm that all cows are cycling.

Heinz says: "I believe the pre-breeding scan to be good value, as last year we picked up three cows that we were able to take corrective action with. If we did not scan, the cows would have been culled."

Two-year-old calving

Heifers were originally calved down at more than two years old; Heinz

felt that this was proving inefficient and moved completely to two-year-old calving. Sixteen heifers that came into the herd in 2013 were 24.2 months. "I don't believe in letting heifers go to 30 or 36 months to calve anymore when they can be in production at 24," Heinz says. Heifers are only bred at 15 months if they have reached their target weight of approximately 400kg.

These heifers are bred to a Hereford bull for the first time to ensure easy calving and are also treated as a separate group after calving – which also

prevents tension with older cows.

"The heifers calved at 24 months go on to have very good longevity in the herd," says Heinz. Heifers calve before the main herd to allow them extra time to come into heat within the breeding window. Heinz's breeding efficiency figures place him in the top 20% in the country when compared to the national data from ICBF. "In our experience, a relatively easy to manage system is not incompatible with profitability. Calm animals can perform just as well as their more nervous cousins," concluded Heinz.

Farm open day

Farm manager: Heinz Eggert

Address: Sheplands Farm, Sherlockstown, Sallins, Co Kildare

Farm size: 67.5 Ha (7.5 Ha of which are leased)

Stocking rate: 1.93 L.U./Ha in 2012

Stock details: 100 suckler cows; Finishing heifers at 20-22 mths; Selling bulls as forward stores at 16 months

On Tuesday 13 August a national open day will be held on Sheplands farm which is managed by Heinz Eggert, Sherlockstown, Sallins, Co Kildare.

The farm is easily accessed off either

the N7 or N4 with the farmyard located about five miles from the Junction 7 on the N7 and about 10 miles from Junction 7 off the N4.

Heinz has been a participant in the Teagasc/*Irish Farmers Journal* BETTER Farm programme since 2009 and many changes have taken place on the farm since joining.

On the day, many of these changes will be highlighted, with special areas of focus on drainage, breeding, financial analysis and a specific fodder focus stand in the farmyard area.

Teagasc nutrition specialist Dr Siobhan Kavanagh will be available on the day to go through options available to farmers this winter in terms of fodder supplies.

Another major focus on the day will be drainage and Dr Pat Tuohy from Teagasc, Moorepark, will go through the latest research being carried out as part of the Teagasc heavy soils programme and also properly identifying drainage issues and how to go about rectifying them.

This is a registered BTAP event so any participants in BTAP will be credited as having attended once they register in the yard area with Teagasc staff on the day of the event.

Admission is free and ample car parking is available on the farm.

There will be two farm tours, one at 2pm and one at 6pm. Attendees are asked to come to either session.

What's in the fodder cupboard?

Some simple sums now will give you a good measure of your fodder stocks

By the end of winter 2012/13 the cupboard was bare on most farms. The small surplus carried over from year to year was gone and many farmers were forced to buy in fodder or concentrates as the winter dragged on into 2013.

By assessing the situation for the upcoming winter now, you can take steps which should help minimise the risk of another costly fodder shortage after Christmas.

What should you do?

The fodder budgeting sheet on the right hand page has been developed by Teagasc nutritionist Dr Siobhan Kavanagh to assist farmers to get a good measure of where they stand in terms of fodder.

First, get hold of a calculator – your mobile phone almost certainly has one on it, and a straight piece of timber which can make an accurate measuring tool, (two metres equates to six foot, six inches).

How do you use the sheet on the opposite page?

The sheet simply offers a structured way to do what farmers have always done – estimate fodders stocks and compare the 'inventory' with the number of animals to be held over the winter.

Example: Let's consider a farmer with a dairy herd.

Firstly, he will add up the number of animals he knows he will have on the farm over the winter:

- 60 cows
- 10 animals under a year old
- 12 animals under two years.

For the cows he will need:

- 60 by 1.6 tonnes – that's 96 tonnes.
- For the under one-year-olds: 10 by 0.7 tonnes – that's 7 tonnes.
- For the under two-year-olds: 12 X 1.3 – that's 15.6 tonnes.

In total: 118.6 tonnes needed each month!

The next two tasks are to:

Estimate the length of the winter – the number of months your animals will be housed. Say five months (mid-October to mid-March).

Calculate how many tonnes of



silage you have – To calculate the volume of silage in your pit, you need to measure the length, the width and the height in metres. The width and the length are straightforward – the height may vary so you may need to estimate the average height. If the walls of the pit are narrower at the top than at the bottom, measure the width at the base and from the inside of the wall – this may mean you have very slightly more than you calculate.

Multiply the length by the width by the average height.
That could be 20m X 10m X 3.4m, totalling 680m.

But we're not finished yet – you need to divide by 1.35 to get the number of tonnes, so our farmer has just over 503 tonnes.

We calculated earlier that he needs just over 118 tonnes per month for five months (a total of just under 600 tonnes (for the five month winter). So he is nearly 100 tonnes short.

But let's say our farmer has made 55 bales of silage from paddocks when there was a surplus during the grazing season.

Each bale is equal to about 0.9 tonnes of pit silage, so he has the equivalent of another 49.5 tonnes of pit silage.

Our farmer is still short of 50 tonnes of silage and has no buffer, so he must either grow more grass, buy silage, buy meals or alternative forages, or consider reducing stock numbers.

Some key points to bear in mind:

- **No one can predict how long the winter will be.**

- **Measuring exactly how much fodder you have is tricky.**
- **Predicting exactly how much your animals will eat is difficult.**

Things you can control:

- **The steps you can take to either grow more forage or buy in forage pre-winter: more grass silage? Crops such as fodder turnips etc.**
- **The number of animals you carry over the winter.**
- **Whether you seek advice – if in doubt contact your Teagasc adviser.**

In short

A careful assessment of how much fodder you will have is valuable and will help you decide what additional steps, if any, you need to take now to avoid needing to buy forage or additional concentrates during the winter. The chart opposite will help.

If possible, it is advisable to enter the winter with a fodder 'buffer' a little extra in case the winter is harsher or longer than average. So the figure you calculate using Siobhan's chart is the minimum you need. If silage is made from carefully ensiled good quality grass it will easily last several years if not needed.

Always aim to have animals out as early as grass growth and conditions allow. Freshly grazed grass is the most cost effective and nutritious feed.

FODDER BUDGETING SHEET

Farmer details

Name	Enterprise
Herd number	Land type
County	

SECTION 1: What fodder is required on the farm?

Animal type	A No. of stock to be kept over winter	B Number of months	C Pit silage needed/ animal/month	Total tonnes of silage needed – multiply AxBxC
Dairy cows			1.6	
Suckler cows			1.4	
0-1 year old			0.7	
1-2 year old			1.3	
2+ year old			1.3*	
Ewes			0.15	

Total tonnes needed Tonnes X

or or

Total bales needed (tonnes multiplied by 1.1) Bales Y

* This figure can be adjusted based on the farmer's judgement of the animals over two years old.

SECTION 2: How much silage is in the yard and/or to be harvested?

Farms with pit and bale silage	A	Pit silage – currently in the yard ¹	
	B	Pit silage – to be harvested (acres multiplied by 7t/ac)	
	C	Total pit silage (A+B)	
	D	Bales – in the yard/to be harvested	
	E	Bales, converted to equivalent of pit silage (Multiply D by 0.9)	
	F	Total silage (C+E)	F

Farms with bale silage only	A	Bales – in the yard	
	B	Bales – to be harvested	
	C	Total bales (A+B)	C

¹ Pit silage (length x breadth x settled height) metres ÷ 1.35 = tonnes (t) equivalent.

SECTION 3: Surplus or shortage?

Surplus or deficit	Using pit and bales Deficit in tonnes (F-X)	Using bales only Deficit in bales (C-Y)
	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
What's the % deficit? (Deficit/X (or Y) *100)	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>

If you are using alternative feed sources, please contact your adviser.



Detecting wormer resistance: it's worth the EFFORT

Developing a worm control strategy for your flock requires EFFORT

Tom Coll

Teagasc Drystock Adviser Sligo/Leitrim/Donegal

- E** Early Detection
- F** Faecal Egg Count
- F** Future Quarantine Procedures
- O** Optimum Dosing Technique
- R** Resistance Awareness
- T** Targeted Treatment

E is for Early Detection

The reality is that very few farmers in Ireland actually know, or have found out for definite, if they have an anthelmintic resistance problem on their farm or not. Ideally, a drench test should be carried out for the three main drug types used on Irish farms. Early detection of resistance to one or more products, before there is a significant loss in production, allows for management practices to be put in place to maintain good worm control in the flock.

F is for Faecal Egg Counts

Faecal egg counts (FECs) should be used to determine whether lambs require a dose or not. Randomly collect 10 individual faecal samples from lambs in the field, place in plastic air-tight containers or sealable plastic bags. Do not mix samples from different lambs. Ensure the samples are fresh 'steaming' samples. Walking through the flock and lifting the sample when deposited by the individual lamb ensures there is no mix up with samples from adult sheep.

Package appropriately and post as

soon as possible to an approved laboratory. Consult with your local veterinary surgeon or Teagasc adviser on the best protocol for your flock when you receive your results report.

F is for Future Quarantine Procedures

When you buy in sheep, you can also be buying in resistant worms. Treat all bought-in sheep with a moxidectin injection and a 4-AD monepantel drench, i.e. Zolvix which will kill scab and resistant worms. Pen in a yard for 24 to 48 hours after dosing and turn out to a field that your own sheep have grazed recently and keep isolated from main flock for three weeks.

O is for Optimum Dosing Technique

Good drenching technique is essential to reduce the risk of resistance. Weigh lambs and dose to the heaviest lamb in the group. Ensure that your dosing gun is delivering the correct amount of dose by using a graduated cylinder or 10ml syringe to calibrate. Ensure dose is delivered over the back of the tongue and completely swallowed by the animal.

Vigorously shake all products before use, especially white drenches.



Early detection of resistance to one or more products, before there is a significant loss in production, allows for management practices to be put in place to maintain good worm control in the flock.



Ensure that products are in-date and have not been frozen or exposed to direct sunlight. Over-dosing, i.e. dosing every four to six weeks, without the use of FEC or under-dosing the heavier lambs in the group all contribute to the establishment of resistance within a flock.

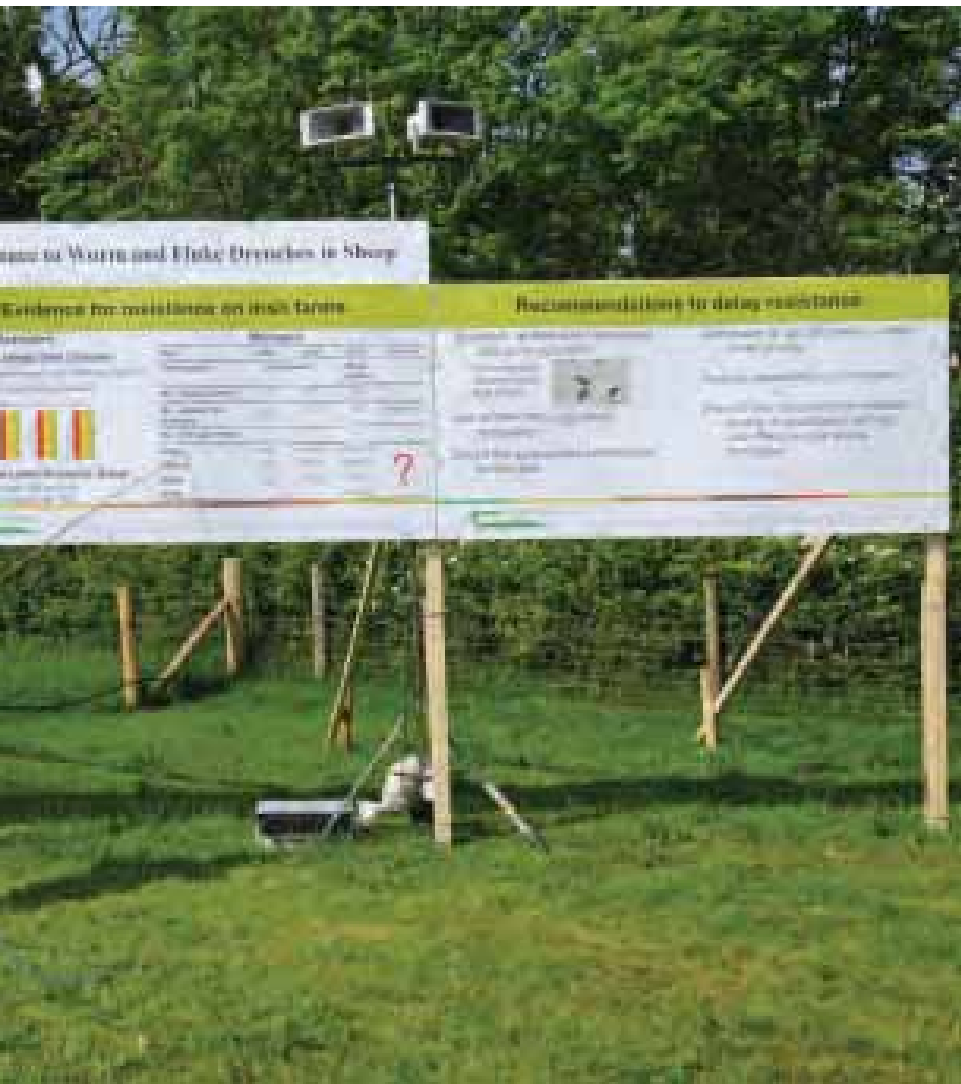
R is for Resistance Awareness

Resistance is the heritable ability of the worm to tolerate a normally effective dose of the anthelmintic. The worm is considered resistant if it survives exposure to the recommended dose of the anthelmintic and the ability to survive is passed on to its offspring. A drench test is used to detect resistance.

Resistance occurs when the anthelmintic kills less than 95% of the worms in your sheep or when the faecal egg count reduction between pre and post dosing is less than 95%.

Lamb growth rates will be relatively unaffected until reduction levels fall below 80%.

When less than 80% of the worms are killed, lamb performance will suffer and wormer will be obviously not effective.



LEFT: Tom Coll addressing some of the 1,200 farmers who attended the Teagasc open day in Athenry.

because your lambs are scouring doesn't necessarily mean they have a heavy worm burden.

Lambs that have heavy worm burdens may not show signs of scouring, however growth rates may be affected. Knowing the parasite that is threatening your lambs, for example, *Nematodirus*, coccidiosis or strongyle worms, enables you to target treatments.

The first dose for March born lambs is for *Nematodirus* or coccidiosis, or in some cases both based on farm history. Farm history, weather conditions, lamb observation and DAFM *Nematodirus* warning should be used to predict when the first dose is required.

A white (BZ) or yellow (LV) drench should be the drug of choice at this stage. While there may be resistance to these drugs among the strongyle worms on your farm, there are no known cases of resistance to *Nematodirus* in Ireland at present and so these drugs should be effective against *Nematodirus*.

An outbreak of coccidiosis may require treatment with a coccidiostat and consultation with your local veterinary surgeon. From June onwards, strongyle worms are a threat and FECs should be used to determine when to dose and a drench test will determine what drug to use on your farm.

When dosing in mid-season for strongyles, 10% to 15% of lambs, i.e. the fast growing and healthy ones, should be left untreated. This will increase the number of susceptible worms on the pasture, creating a large dilution effect and thus delay the development of anthelmintic resistance. Make the effort to develop a worm control strategy for your farm.

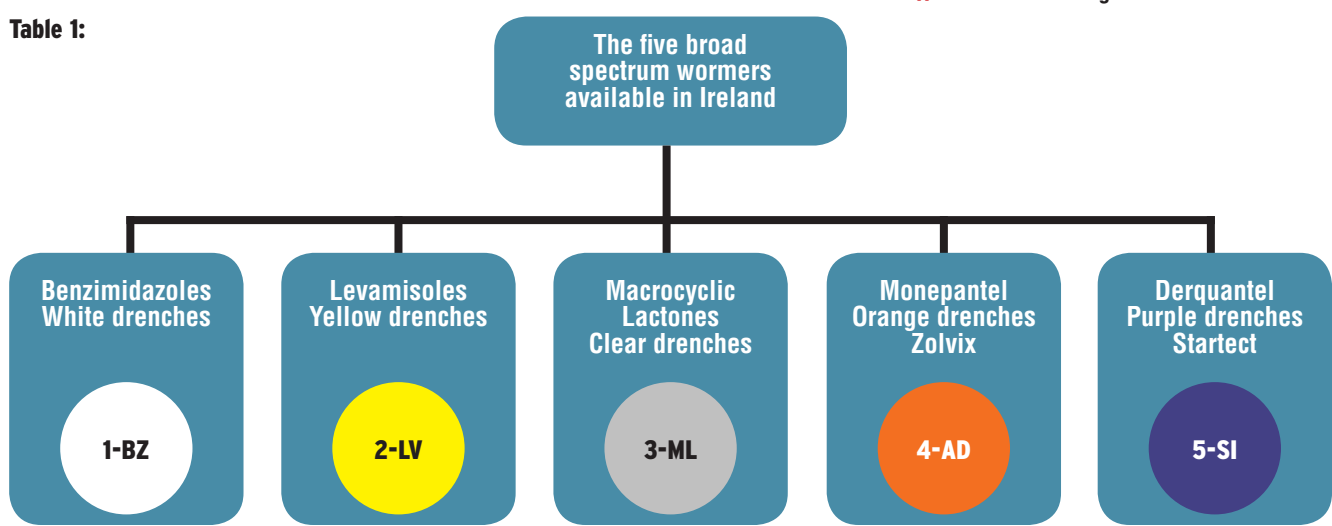
» Continued on Page 16

T is for Targeted Treatment

There are now five broad spectrum groups of anthelmintics for use in Ireland (Table 1). The two new anthelmintics now available, Zolvix and Startect, are prescription-only medicines. With the availability of these new compounds, it means we have a chance to extend the life of the original groups, but only if we avoid

the practices of the past and select less heavily for resistant worms. The use of anthelmintics only when they are necessary will protect their long-term efficacy. Dosing on a routine basis every four to six weeks leads to over-use and speeds up the development of resistance. Farmers need to know what they are dosing for and what to dose with at different times of the year. Just

Table 1:



Task 3 – Sheep Technology Adoption Programme

The objective of this measure is to carry out a STAP faecal test to help establish if there is a level of parasite resistance to the commonly used anthelmintics (i.e. White drench; Benzimidazole (1-Bz), Yellow drench; Levamisole (2-LV) and clear drench / injection Macrocytic Lactone (3-ML) (includes Ivermectin).

This must be carried out between 1 June 2013 and 20 September 2013, in accordance with *Appendix 1*. This test is for lambs only, not ewes.

Farmers must allow at least six weeks to elapse from any previous treatment with an anthelmintic before they start Stage 1.

Faecal sampling (Stages 1 to 3) and drenching of lambs must be carried out in accordance with the full procedure set out in *Appendix 1*.

APPENDIX 1 – PROCEDURE FOR FARMERS STAP FAECAL TEST INSTRUCTIONS

Stage 1 – Collect Faecal Samples INSTRUCTIONS FOR FAECAL SAMPLING LAMBS

NOTE: All faecal samples collected must be fresh. Care should be taken not to include samples from adult sheep and that the same group of lambs are tested pre and post wormer treatment

- 1. Farmer must contact laboratory requesting empty sample containers, and also arrange a payment procedure.
- 2. Place lambs (minimum of 15) in a clean pen. Leave them undisturbed for a couple of hours (to defecate). Remove lambs from pen.
- 3. Using gloves, collect fresh faecal samples at random from at least 10 different faecal deposits and place them separately in the containers provided. (It does not matter what amount you collect as long it is more that a 'teaspoonful', is fresh and each sample is kept separate. Large amounts are not desirable either:).
- 4. Place all filled containers in the plastic zip lock bag provided.
- 5. Complete form STAP 3A and put in envelope, along with zip lock bag of samples.
- 6. Put in the post as soon as possible, preferably on the day of sampling. If there is a delay in posting, then store the samples in a cool place preferably in a fridge (DO NOT FREEZE or PLACE IN DIRECT SUNLIGHT).



Mick Tully who farms at Tullylagan in County Longford with his daughter Breege (right) studies worms under the microscope at the recent Teagasc Sheep Event in Athenry.

Stage 2 – treat sheep with anthelmintic

DOSING GUIDELINES

- 1. Choose an anthelmintic that you wish to use – See *Table 1*.
- 2. Dose in accordance with manufacturer's recommendations.
- 3. Check calibration of dosing gun/ syringe.
- 4. Check expiry date of drug.
- 5. Shake bottle/container well.
- 6. Weigh the three heaviest lambs in the grazing group being tested.
- 7. Dose all lambs at rates according to the weight of the heaviest lamb in the group.
- 8. Record the name of the product you used and which anthelmintic class it belongs to (see *Table 1*)

Stage 3 – Re-sample lambs post treatment to test efficacy of the anthelmintic used

- 1. Seven to 14 days post drench, depending on the product used,

gather the lambs for faecal sampling. **Check Table 2 below.**

- 2. Place the same group (minimum of 15 lambs) in a clean pen. Leave them undisturbed for a couple of hours (to defecate). Remove from pen.
- 3. Using gloves, collect fresh faecal samples at random from at least 10 different faecal deposits and place them separately in the containers provided. (It does not matter what amount you collect as long it is more that a 'teaspoonful', is fresh and each sample is kept separate. Large amounts are not desirable either:).
- 4. Place all filled containers in the plastic zip lock bag provided.
- 5. Complete form STAP 3A and put in envelope, along with zip lock bag of samples.
- 6. Put in the post as soon as possible, preferably on the day of sampling. If there is a delay in posting, then store the samples in a cool place preferably in a fridge (DO NOT FREEZE or PLACE IN DIRECT SUNLIGHT).

Table 2:

	Wormer groups	Timing of 2nd sampling
White	Benzimidazole (1-Bz)	14 days post treatment
Yellow	Levamisole (2-LV)	7 days post treatment
Clear	Macrocytic Lactone (3-ML) (includes Ivermectin)	14 days post treatment

MOOREPARK OPEN DAY

Wednesday 3 July 10am-5pm
Irish Dairying: Harvesting The Potential



Moorepark'13

IRISH DAIRYING | HARVESTING THE POTENTIAL

OVERALL SPONSOR: **FIBD** Trust



John Roche

Resilient farming systems for an expanding Irish dairy industry

John Roche and Brendan Horan

Key points

- In future, the milk price and input prices will be more variable than they have been in the past.
- Existing farms and those intent on expansion will need to be resilient; this requires a solid farm system foundation with the technical expertise to make appropriate day-to-day decisions.
- Farm businesses must be business focused; they must be designed with land production capacity, soil characteristics and rainfall in mind; they must be based on elite high performance animals, and they must be highly efficient per unit of land, labour and capital.
- Such businesses should:
 - provide a reasonable rate of return on the owner's capital.
 - be environmentally sustainable and deliver high animal welfare.
 - allow for an enjoyable and rewarding lifestyle.
 - allow opportunities for training and personal development.
- The key pillars of a resilient farm business are efficient use of natural resources, a 'fit for purpose' animal, strong business acumen, effective management, and a policy of continuous improvement for staff at all levels of the business.

» Continued on Page 18



Positioning the dairy farm for expansion

Padraig French and Laurence Shalloo

Key points

- The end of quotas will mean dairy farmers can expand their farm business.
- Before expanding, examine current farm performance and identify areas where productivity and efficiency could be improved – first optimise efficiency, then expand.
- Only plan to expand if expansion is likely to result in increased farm profitability and improved livelihoods for the family running the farm.
- Any business plan for expansion should include realistic performance projections and a contingency for unexpected capital expenditure.
- A plan listing the possible risks to the expansion plan, and the ways in which you will reduce or manage the risk, will help prevent financial problems later.
- The combined annual cost of labour, drawings, debt and tax should not be more than €700/cow on the most efficient farms (top 10% on Profit Monitor) and €400/cow on the farms operating at an average level of efficiency.
- Invest first in areas that will give the maximum return based on current performance, investment costs and profit response. Areas that will help reduce risk to the business should also take priority.



Change before you have to

- business guru
Jack Welch

EBI to fuel expansion

Donagh Berry, Frank Buckley and Margaret Kelleher

Key points

- The EBI is selecting for the ideal cow in a non-milk quota environment.
- Increased herd milk production with the EBI is achieved through each of the following:
 - Increased genetic merit for milk solids yield/cow.
 - Longer lactation lengths through better fertility.
 - Achieving herd mature yields through greater animal survival.
- The additional benefit of hybrid vigour (€100/lactation in the first cross) will be maximised where the best available genetics (high EBI sires of an alternative breed) is used.

Growing more grass

Michael O'Donovan, Emer Kennedy and Stan Lalor

Key points

- Grazing management, reducing poaching damage, managing soil fertility and increasing sward perennial ryegrass content are the four key aspects of increasing grass growth on farms.
- Grazing management factors that increase grass production include: spring grazing, targeting the correct mid-season pre-grazing herbage mass and post-grazing sward height.
- Poaching damage needs to be minimised on all soil types; on wetter soils, grass production can be reduced by as much as half when severely poached.
- Increasing soil pH (by applying lime to reduce acidity) will increase the capacity for grass growth.
- If you don't actively manage soil fertility, the soil's P and K status will move from higher and more productive Index three or four, to low fertility Index one or two.
- On commercial farms, the perennial ryegrass content of swards is too low.
- As farmers aim to produce more milk from the grazing platform in the future, pasture growth will be the first factor that limits productivity. Investing in soil fertility improvement and increasing sward perennial ryegrass content will pay dividends in the coming years.



What you need to do to achieve 90% calving rate in six weeks

Stephen Butler

Key points

- Carefully analyse herd fertility at the end of the breeding season. Establish your herd's current performance.
- Recognise that calving pattern drives farm profitability.
- Work on heifer rearing and heifer reproductive management which are critical to achieving the optimum herd calving pattern.
- Restrict the breeding season to 12 weeks or less. Identify strategies to maximise both submission and conception rates during the breeding season.
- Manage body condition score during the dry period, early lactation and breeding period as this is a vital component of herd nutrition and reproduction management.
- Identify non-cycling (anoestrous) cows early, in time to take appropriate action.
- A compact calving pattern allows longer lactations, greater grass utilisation, and increased profitability.

Achieving a healthy herd

Riona Sayers and John Mee

Key points

- Know your herd health status – through good stockmanship and by using new laboratory screening tests.
- Use biosecurity to help prevent disease coming onto your farm – talk to your local vet about what tests are advisable on bought-in stock.
- Prevent disease spread by vaccination – discuss how to get maximum value out of the money you spend on vaccines with your local vet.





Feeding the dairy cow at pasture:

Stocking rates for Irish grazing systems

Brian McCarthy and Brendan Horan

Key points

- Stocking rate (SR) is the key driver of milk production in dairy systems based on grazing.
- As farmers increase SR, total milk output from the dairy farm will be limited by grass growth so excellent grazing management to optimise grass production and quality will be critical.
- Grazing (and nutrient) management to support higher SR post milk quotas will be concerned with achieving adequate soil fertility, reseeding under-performing swards and grazing intensity.
- The ideal SR for any farm will result in high rates of grass consumption and high levels of milk production per cow and per hectare.
- With long term farm profitability in mind, the ideal overall farm stocking rate should be closely aligned with the growth capacity of the farm's swards. As a rule, the farm must grow 4.5 to 5 tonnes of DM/ha for each one cow/ha. At SRs higher than the farm's growth capacity, little additional profitability will be gained from these extra animals in the longer term.
- At high SRs, winter feed production will be a key limitation so excellent grazing management and feed budgeting are essential to realise the full benefits of high stocking rates.

Planning for expansion

Tom O'Dwyer and Fintan Phelan

Key points

- Successful business growth requires strategic, operational and financial planning.
- A strategic plan will clarify the future direction for the farm business while anticipating changes in the outside world.
- An operational plan will identify what needs to happen and improve the decision-making process.
- A financial plan will forecast future cash flows and identify funding requirements.
- In future, being a top-class 'operations manager' will not be enough; you will also need to be able to think and plan strategically and financially.

Growing more grass with soil fertility management

Stan Lalor, David Wall and James Humphreys

Key points

- Soil test the whole farm to know soil fertility levels.
- Apply lime to acidic soils to increase the pH.
- Use the soil index in each field to guide fertilizer P and K and slurry application.
- Use slurry so as to maximise the benefit from the nutrient value in it.
- Use bagged fertilizers that are correctly balanced for N, P, K and S to meet the needs of each field.
- These simple steps for soil fertility management will go a long way to ensuring that the production potential of the farm is being realised, and that fertilizer inputs are being utilised as efficiently as possible.



Michael Egan

» Continued on Page 20



Exploiting the potential of white clover

Deirdre Hennessy, Michael Egan and Daniel Enriquez-Hidalgo

Key points

- Including white clover in grass swards receiving up to 250kg N/ha as fertilizer nitrogen can increase total annual herbage production by 1.1t DM/ha.
- Sward white clover content varies across the year; it is lowest in spring, increases to a peak in late summer, and then begins to decline during autumn.
- Annual milk solids production can be increased by up to 12kg milk solids/cow when average annual sward white clover content is 23%.
- Frequent tight grazing (down to 4cm to 4.5cm above ground level) of grass-clover swards will encourage clover persistence in grazed swards as it allows sunlight into the sward, optimising clover growth.

Grass as a feed for dairy cows

Eva Lewis

Key points

- Grass dry matter intake is low at the start of lactation but increases as lactation progresses.
- Good quality grass is a highly nutritious feed with high crude protein and energy concentrations and enough fibre to maintain rumen function.
- In a grass deficit, low crude protein, high energy concentrate should be offered.
- In a severe grass deficit, forage, as well as concentrate, must be offered.
- The total diet should meet requirements for phosphorus and other minerals.

The grass economic index

Mary McEvoy, Dermot Grogan, Michael O'Donovan and Laurence Shalloo

Key points

- The grass economic index applies monetary values to a grass cultivar based on its seasonality of dry matter production, quality, persistency and silage dry matter production.
- The generated sub-indices within the grass economic index will identify the most suitable cultivars for individual systems.
- The grass economic index with rankings for individual cultivars will be released in 2014.



Grassland reseeding

Philip Creighton and Frank Kelly

Key points

- Reseeding is one of the most cost effective on-farm investments.
- There is little difference between reseeding methods once a firm, thrash-free seed bed is established.
- The timing of reseeding will be influenced by feed budgets and weather conditions.
- With spring reseeding, there is no loss in dry matter production in the establishment year compared to permanent pasture.
- Management after reseeding is just as important as decisions made at sowing.





PastureBaseIreland - national grassland database

Vincent Griffith, Anne Geoghegan, Michael O'Donovan and Laurence Shalloo

Key points

- PastureBaseIreland is a new online grassland management application which stores grass data recorded by farmers in a centralised grassland database.
- PastureBaseIreland includes a user-friendly decision support tool to increase the precision of grassland management.
- The data stored by PastureBaseIreland in the centralised database will allow future research to benefit from an increased understanding of a whole range of factors that affect grass growth on farms in Ireland.
- PastureBaseIreland will result in the development of more robust grass growth models, more accurate grass cultivar evaluation and an increased understanding of the factors affecting grass growth at farm level.
- PastureBaseIreland is designed to allow the transfer of data from commercial software providers.
- PastureBaseIreland has the potential to add value to the data collected by individual farmers and will ultimately result in significant advances towards gaining a greater understanding around grass growth in Ireland.

Filling a deficit in winter feed supply

Eoghan Finneran and Siobhán Kavanagh

Key points

- Early planning of the winter feed budget is key to limiting the cost of imported winter feed.
- There is no single option that will suit all farmers in filling a deficit in silage stocks. The cheapest option on paper is not necessarily the cheapest option in practice.
- Risk factors that must be considered include yield and quality potential; storage and handling facilities needed, labour requirement and the cost of balancing for energy, protein and minerals.
- A target post-grazing height of 3.5cm is recommended during the first grazing rotations to achieve high milk and milk solids production in early lactation as well as high grass utilisation. It will also guarantee excellent pasture quality for subsequent grazing rotations.
- From mid-season onwards, post-grazing height should be increased to 4cm to 4.5cm to achieve adequate animal performance while maintaining good pasture quality.

Crossbreeding to increase profit

Frank Buckley

Key points

- Moorepark research indicates that crossbreeding in the dairy herd can very quickly improve traits such as fertility and productivity, thus having significantly favourable effect on profit-generating ability.
- Economic analysis undertaken using biological data generated from research studies indicates superior profit generating potential with a herd of first cross Jersey×Holstein-Friesian and Norwegian Red×Holstein-Friesian cows compared with their contemporary Holstein-Friesian cows, equating to approximately €18,000 and €13,000, respectively, based on a 40ha unit.
- Independent research undertaken by ICBF has indicated a potential benefit from crossbreeding of some €100/lactation in the first cross over and above that explained by EBI. Note, this added performance is not reflected in the EBI values of either bulls or cows. It is due to additional performance benefits.
- Heterosis alone will not guarantee success in a crossbreeding programme. The key must be to utilise the best available genetics (high EBI) to maximise the benefit and ensure genetic improvement.



Mary McEvoy

New developments in grass cultivar evaluations

Mary McEvoy and Michael O'Donovan

Key points

- Sward structural differences between cultivars can impact animal performance.
- Leaf and stem proportion influence sward digestibility and therefore milk production.
- Compared to diploids, tetraploids produced 4% higher milk yield and 5% higher milk solids yield due to their increased leaf proportion, higher digestibility and increased utilisation compared to diploid cultivars.
- On-farm evaluation trials will quantify long term yield and persistency of cultivars.

» Continued on Page 22



David Gleeson

Sexed semen – has it a role in Ireland?

Ian Hutchinson and Stephen Butler

Key points

- Sexed semen is usually sorted to 90% purity (i.e. 90% heifers, 10% bulls).
- Conception rates with frozen sexed semen are lower than for conventional semen.
- Evidence from other countries indicates that fresh sexed semen has a smaller reduction in conception rate compared with frozen sexed semen.
- Economic modelling indicates faster and more profitable expansion by using sexed semen.
- A major field trial was conducted in spring 2013 to determine the performance of fresh and frozen sexed semen in Irish dairy herds.

What is the ideal post-grazing height?

Elodie Ganche, Emer Kennedy and Michael O'Donovan

Key points

- Target post-grazing height of 3.5cm during the first grazing rotations to achieve high milk and milk solids production in early lactation as well as high grass utilisation.
- Post-grazing height of 3.5cm will also guarantee excellent pasture quality for subsequent grazing rotations.
- From mid-season onwards, post-grazing height should be increased to 4cm to 4.5cm to achieve adequate animal performance while maintaining good pasture quality.

Genomic selection, past, present, future

Noirin McHugh and Donagh Berry

Key points

- Genomic selection uses DNA information to supplement pedigree information to more accurately identify genetically elite animals.
- Retrospective analysis of genomic predictions since 2009 shows that genomic selection is 10% to 20% more accurate than using pedigree alone and this improvement in accuracy is improving with time.

The effect of genetic merit for fertility traits on uterine health in dairy cows

Stephen Moore and Stephen Butler

Key points

- Uterine infection reduces cow fertility.
- Moorepark research indicates that cows with good genetic merit for fertility traits have a quicker recovery from uterine infection after calving compared with cows with poor genetic merit for fertility traits.
- Selecting sires with a high fertility sub-index will improve uterine health and reduce the requirement for treating 'dirty' cows.

Replacement heifer rearing

Emer Kennedy, Frank Buckley, Fergal Coughlan, Steven Fitzgerald and John Paul Murphy

Key points

- Achieving target weight is critical in any successful heifer rearing programme.
- Heifer weight needs to be continually monitored to ensure they achieve target weight.
- Large variations in weight gains from different winter feeding diets exist.
- Higher weight gains are achieved from grass so early turnout is critical in achieving target weight at mating start date.

The next generation herd

Frank Buckley, Sinead McParland, Aidan Brennan and Margaret Kelleher

Key points

- Genetic gain in the national herd is steadily increasing.
- The establishment of a next generation herd represents a futuristic national herd, and is a strategically important resource providing a 'forward view' of the implications of high EBI herds under varying grazing intensities.
- The next generation herd will allow the impact of selection for EBI on traits not currently included in the EBI to be quantified. This will further enhance the EBI, and provide more precise direction for sustainable genetic gain in the future.

Rearing healthy calves

Emer Kennedy, Muireann Conneely and John Paul Murphy

Key points

- Feeding sufficient high quality colostrum to calves is vital to ensure they remain healthy and survive.
- Colostrum quality is greater:
 - In cows in their third or greater lactation.
 - When the interval between calving and milking is short (less than nine hours).
 - In early calving cows (January/February/March).
 - In lower yielding cows (irrespective of lactation number).



Shane Fallon (left) and Patrick Cashman (right)

Calf mortality – latest results from Moorepark research

John Mee and Jonathon Kenneally

Key points

- The primary causes of calf deaths are problems at calving, not before or after calving.
- The main calving problems currently contributing to calf losses are prolonged calvings, malpresentation calvings and hard calvings, in that order.
- There was a surprisingly high incidence of abnormal calves in this three-year study.

Schmallenberg virus and calf mortality

John Mee

Key points

- Schmallenberg virus (SBV) was first detected in Ireland in October 2012.
- The virus causes abortions and deformities in calves.
- A survey of Munster dairy herds in spring 2013 found that the majority of the deformed calves were malpresented and this caused serious calving problems.
- The most common deformity was arthrogryposis (fused leg joints) and the most common malpresentation was calves presented backwards at calving.



» Continued on Page 24



Harvesting high quality milk:

Guidelines on using cleaning products and avoidance of harmful residues in milk

David Gleeson and Bernadette O'Brien

Key points

- Teagasc has analysed a wide range of products used for the cleaning of milking equipment. The chemical content, working solutions and registration status of these products are available on the Teagasc dairy webpage.
- Ineffective cleaning or issues with chemical residues in milk can occur if the detergent is not mixed at the recommended levels.
- The cleaning product chosen should be based on the washing procedure applied.
- Cleaning solutions containing chlorine (detergent-steriliser) should be rinsed from the milking system immediately after the main wash cycle, while the stain of non-chlorine cleaning solutions should be left in the plant between milkings.
- Powder detergent or liquid detergent-steriliser solutions may be reused on one occasion.
- Higher product usage rate is required with cold cleaning.
- Use at least 14 litres/unit (three gallons) to rinse out both milk (before the main wash) and detergent (after completion of the main wash).

Labour efficient milking

Bernadette O'Brien and John Upton

Key points

- The milking process is a function of the interaction of three key elements – cows, people and facilities, and all three elements must interact well.
- Choices of alternative milking infrastructure depend on herd size, preferred pre-milking routine, desired milking time, and available capital for investment.
- Greater throughput in larger parlours is associated with a decrease in operator idle time. The milker should not be waiting for the milking equipment (e.g. cluster) to become available.
- Milking parlour output can vary from 42 to 129 cows/hour (one to two operators) depending on the efficiency of the milking equipment, pre-milking routine, and operator ability.
- Over-milking should be limited to two minutes, which has implications for milking management in large parlours.



CellCheck – the national udder health programme

Finola McCoy Animal Health Ireland

Key points

- Poor udder health will restrict opportunities for expansion in Ireland.
- CellCheck is a multidisciplinary and collaborative programme, involving all relevant industry bodies.
- CellCheck is providing the knowledge, tools and support to enable farmers to take control of mastitis in their herds.
- CellCheck is not new science, but allows existing science to be used in a new way.

Reducing dairy energy costs

John Upton and Tom Ryan

Key points

- The average cost of electricity measured on 22 commercial dairy farms was 0.51 cent per litre of milk produced. There is large variation in energy costs on dairy farms, from 0.26 cent/litre up to 0.89 cent/litre.
- The main drivers of energy consumption on dairy farms are milk cooling (31%), the milking machine (20%) and water heating (23%).
- The average farm in this study could save €1,800/year through a combination of altered management strategies and energy efficient technology.

Farming post – quotas:

Increasing productivity of heavy soils

Ger Courtney, James O'Loughlin and John Maher

Key points

- Approximately 30% of milk produced in Ireland originates from farms classified as having heavy soils.
- Increased herbage production should be the central focus on farms challenged with heavier soils:
 - Soil fertility – pH, P and K indices need to be at optimum levels.
 - High levels of ryegrass to increase productivity on milking platform and out farm.
 - Farm infrastructure – good paddock access, roadways and wintering facilities essential.
- Match stocking rate to grass production capacity:
 - Taking a three year cycle.
 - Risk management requires building silage reserves in good grass growing years.

Winter milk production – key drivers of profit

Joe Patton and Aidan Lawless

Key points

- In a post-quota environment, winter milk systems could be employed to adjust overall milk supply profile if product processing requirements dictate. The viability of such an approach would depend on any additional market value of product exceeding increased farm-level and processing costs.
- Purchased feed and labour account for most of the cost differential between winter and spring calving systems. However, there is also a large range in profitability within each category.
- Increasing grass utilised per hectare, and milk produced from forage, are very important drivers of profit for winter milk herds.
- Tight control of calving pattern and herd calving interval are essential for profitable winter milk production. A high EBI sub-index for fertility and good management of submission rates are required.

This is just a sample of the topics to be covered at the Moorepark open day. Sustainable Intensification and Teagasc Food Research are two key areas which will also be covered.

The first cut is the heaviest...

But in yet another 'untypical' year, you may be considering a second or even third cut of silage. Here's what to bear in mind.

Padraig O'Kiely

Teagasc Animal and Grassland Research and Innovation Programme, Grange

Yield

Two key areas which are under your control and can influence second or later cut silage yields are: (1) soil fertility, and (2) the length of grass growth prior to harvest.

The normally recommended inputs of nitrogen (N), phosphorus (P) and potassium (K) for second or subsequent silage harvests where soil is at index 3 prevails for P and K are 100kg N, 10kg P and 35kg K/ha (assuming N and P inputs are in compliance with SI 378).

In this case, slurry can provide much of the P and K requirement (15 tonnes undiluted cattle slurry/ha or 1,500 gallons/acre provides 13kg P and 72kg K/ha), but its contribution of N is usually quite low when there is warm, dry weather in mid-summer.

Spread slurry on bare stubble to reduce the risk of contaminating regrowing grass. This means it should be spread within a day or two after the preceding cut.

The bagged N should then be applied after four to five days, with the subsequent silage harvest being provisionally scheduled for about seven weeks later. This will allow adequate time for the applied fertilizer N to be fully utilised to promote increased grass growth.

Another benefit of seven weeks' growth is that the fertilizer's effect of reducing the sugar content of grass will have declined. If you plan to harvest in less than seven weeks, then the rate of N being applied should be reduced accordingly.

Sulphur (S) deficiency can occur around the time of second cut silage, particularly on sandy, free-draining

FACT

• In some situations, it may be convenient to cleanly collect and feed silage effluent. On average, 18 litres has a feed value equivalent to 1kg rolled barley grain.

soils with low organic matter. To prevent this, spread 20kg S/ha after the first cut, as part of the N or compound fertilizer input.

Finally, most mineral soils require a pH of about 6.3 for optimal grass growth, and a plan for lime applica-

tion may be needed where pH values are lower.

Growth rates

Grass managed for silage production normally grows fastest before the first cut and grows progressively slower before second and later cuts. See Table 1 where dry matter (DM) yields for a perennial ryegrass and two old pasture swards during a five year period are averaged.


The same fertilizer input and harvest dates were used for each sward type. All soils had satisfactory values for P, K and pH, and the stubble was

» Continued on Page 26



Spread slurry on bare stubble to reduce the risk of contaminating regrowing grass. This means it should be spread within a day or two after the preceding cut.


More milk, more profit, more free time...



Swiftflo Swing

DairyMaster Swiftflo Parlours are the ultimate in performance, cow comfort & efficiency.

- Studies show 5% more yield.
- Typically 1 minute quicker per cow.
- Natural milking.
- Excellent milk out.



DAIRYMASTER

DairyMaster has a system that is right for you. We can help improve efficiency & maximise profits on your farm!

Call us for a brochure today...

100% IRISH

Call: 1890-500-24-7

www.dairymaster.com

Distributors Nationwide

Milking - Feeding - Cooling - Manure Scrapers - Heat Detection

bare at the start of each growth. Two harvest schedules were used – one to harvest leafier grass and the other to take fewer harvests with heavier yields.

Grass growth rates of around 80kg DM/ha/day can be expected for the second cut under normal weather and good soil fertility conditions; 50kg to 60kg DM/ha/day before later cuts.

In each case, were harvesting to be deferred, the growth rates shown should continue for a number of weeks after the harvest date indicated.

Note, these are yields of grass, and values for silage DM consumed by livestock should be at least 75% of these values.

Digestibility

The digestibility of grass drops as it gets stemmier/heads out. The rate of decline in digestibility is normally fastest leading up to the first cut and falls more gradually in the regrowth (*Table 1*). Grass for later cuts has a slower rate of decline in digestibility because it is far less likely to go to seed.

There are two exceptions. Drought can trigger grass to become stemmy and sacrifice leaf production, leading to a faster rate of decline in digestibility. Secondly, if a long stubble is left behind after the preceding cut, as can easily happen with tossed or lodged meadows, and this straightens up with the regrowth and is eventually harvested with it, it can reduce the digestibility of the next harvest by several percentage units.

Ensilability

Grass crops vary considerably in the ease with which they preserve as silage, even when they are harvested cleanly and quickly stored in air-free conditions. This range reflects differences in their buffering capacity but more particularly their sugar content which can be influenced by weather conditions.

It is definitely worthwhile having representative grass samples assessed for sugar content by your Teagasc adviser shortly before silage harvesting. In normal years many second cuts



A day's wilting under good drying conditions will improve the preservation of crops with a lower sugar content.

harvested during July and August have sugar contents greater than 3% and moderate buffering capacities, and are therefore relatively easy to preserve. A day's wilting under good drying conditions will improve the preservation of crops with a lower sugar content.

Cuts harvested into September or October can be more difficult to preserve, especially if they have a high content of white clover. They tend to be very leafy, vegetative crops, with high moisture contents and buffering capacities.

The cooler nights (heavy dew) and shorter days make successful wilting more difficult. If these crops have low sugar content, then they will require either an adequate wilt or treatment with a sugar or acid based additive.

Harvester systems

Second or later cuts of silage can be equally successfully made with a precision-chop harvester, a pick-up wagon or baler systems, provided that the principles of good silage making are followed in each case.

If grass yields are light, bales may be a more economical option. Of course, bales made with moist leafy

grass can literally weigh a tonne and be difficult to handle.

In addition, any effluent released from bales may be tricky to collect securely. Consider baling grass harvested in late autumn and then feeding these bales to livestock immediately after they are housed.

Grazing paddocks

Top quality silage can be made from grass removed from paddocks that were surplus to the immediate needs of grazing cattle. This grass will usually benefit from a quick wilt, and is often best utilised as baled silage.

Wastage

More care than usual will need to be applied to covering and sealing grass in silos (and bales) this year in order to minimise the amount of waste. If 10cm packed grass rots on the top of a 2.5m high clamp, that's 4% of your feed lost. If silage heats noticeably at the silo face or feed trough during feedout, that could readily represent another 5% loss of feed. These losses are preventable by attention to detail when properly covering/sealing silos and when managing the silage face during feedout.

Table 1: Yield (DM – dry matter) and digestibility (DMD%) of grass swards managed for silage production

Harvest date	Days from closing, or previous harvest	Yield (tonne grass DM/ha)	Growth rate (kg grass DM/ha/day)	DMD% (grass)	DMD% (change per week)
Schedule A					
22 May	49	5.42	111	75.5	-2.4
3 July	42	3.37	80	74.9	-1.1
14 August	42	2.08	49	74.2	-0.6
16 Oct.	63	3.45	55	75.3	-0.3
Schedule B					
12 June	€	€	€		
12 June	70	7.77	111	68.4	-2.4
14 August	63	4.73	75	70.6	-1.1
16 Oct.	63	3.71	59	75.0	-0.3

Source: Teagasc Grange

Second cuts of silage – needed again?



Pat Clarke

Dairy specialist, Teagasc Animal and Grassland Research and Innovation Programme

First cut yields were below average. In many cases, a second cut will be required to make up the deficit.

In recent years, many farmers have moved away from a planned second cut, relying instead on taking surplus grass in summer. These bales help control grass quality and add to the first cuts already in the pit.

This system means cows were stocked at lower levels during summer, fertilizer was reduced and surplus grass was baled if growth was good. This year, a planned second cut is a more definite, and in many cases, necessary way to get extra silage in the yard rather than hoping that surpluses will arise.

What stocking rate for July to mid-August?

Freeing up ground for second cut silage in July to early August will de-



This year, a planned second cut is a more definite, and in many cases, necessary way to get extra silage in the yard rather than hoping that surpluses will arise.

LIQUID MINERAL SYSTEM
complete with a full range of tailor-made minerals!



- COMPUTER CONTROLLED SYSTEM
- AUTOMATICALLY COMPENSATES FOR ALL WEATHER CONDITIONS
- EXTREMELY COST EFFECTIVE • ADJUSTABLE ACCURATE DOSING
- TAILOR-MADE PRODUCTS FOR YOUR HERD
- ALL YEAR ROUND COVERAGE
- UK'S LEADING LIQUID MINERAL SYSTEM



Take the guesswork out of minerals

www.terraliquidminerals.ie sales@terraliquidminerals.ie
Padraig 087-216 5374 Tom 086-851 0872

» Continued on Page 28

pend on what stocking rate the farm can support during that period. This, in turn, depends on the grass growing ability of the farm. Farms with high growth performance will usually have the following:

- Good soil fertility (phosphorous and potassium index).
- Desirable pH level (no lime needed).
- Should have a high percentage of perennial ryegrass (probably with a good number of recently reseeded swards) in swards.
- Fields that were well fertilized with appropriate Nitrogen levels.
- No damage due to waterlogging or poaching from earlier grazing.

Where all these factors are in the farm's favour, it is possible to stock up to 3.5 cows per hectare during the second cut period. Where conditions are less than ideal, less grass will be grown and therefore stocking rates must be reduced.

Stocking rates could be increased by feeding extra meal. Where there is over 50% to 60% fodder already in the yard, there is little point in feeding meal to cows at grass in order to make additional silage. It is more economical to save the meal, produce milk cheaply, save on silage costs and feed the meal directly to the cows as a substitute for roughage next winter.

Grass demand

Grass demand is 51kg grass Dry Matter (DM)/ha/day when stocked at 3.0 cows per ha during summer, assuming an intake of 17kg of grass per animal per day. This would require growth of 55kg to 60kg per day. At 3.5 cows per ha, the demand would be 60kg/day, requiring a growth rate of 65kg to 70kg.

Grass growth

Grass growth on two of the Teagasc research farms, Moorepark and Ballyhaise, will typically be around 80kgDM/ha in mid-June, dropping to 65kg in mid-August. See *Figure 1*.

Second cut – Farmer experience

Sean O'Donnell is milking 88 cows just outside Ballina. The Mayo farm could be described as one third peaty, one third dry and one third mixed. Last year, the farm grew 11.5 tonnes of grass per ha. Overall farm stocking rate is 1.92 livestock units per hectare on the 50ha holding. Heifers (one to two-year-olds) are contract reared. To make enough winter feed, Sean has closed 14ha for a second cut. This will increase stocking rate to 2.7 cows per hectare on the farm while the second cut area is closed off. Most of the farm has been reseeded within the last five years. Last year, soils were tested and lime, phosphorous and potassium are being applied according to the soil test results.

"I completed a fodder budget with Brendan Garry of Teagasc, Ballina," said Sean (pictured right). "Even with a small third cut, we'll still have a winter feed deficit on the farm (about 10%). The plan is to have six months feed for the cows in the yard for the start of winter. We'll buy in bales to fill the deficit."

Figure 1

Average grass growth rates for Moorepark and Ballyhaise from mid-June to mid-August

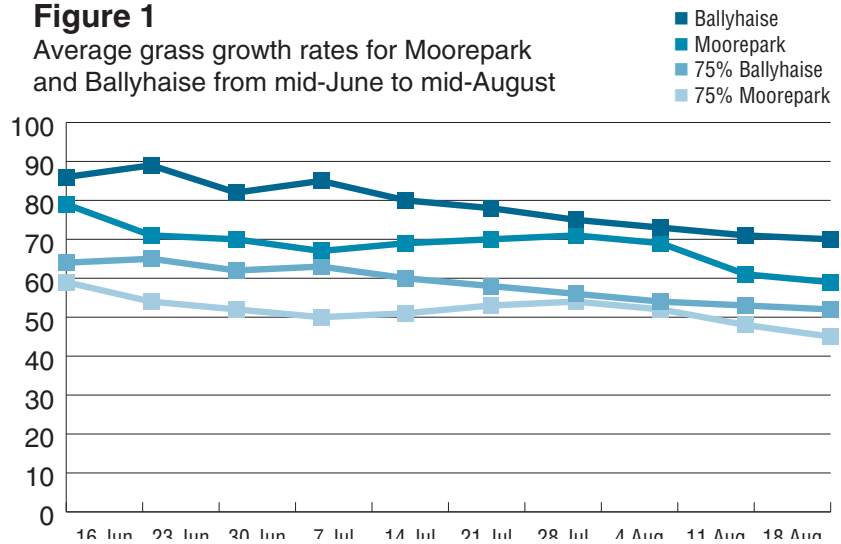


Table 1: Nitrogen fertilisation rates for different stocking rates during July and August

Stocking rate (LU/ha) July & August	Fertilizer N kg/ha (u/ac.)			
	June	July	August	September
<2.00		17 (14)		17 (14)
2.0 – 2.5		26 (21)		25 (20)
2.5 – 3.0		34 (28)		34 (28)
3.0 – 3.5	34 (28)		26 (21)	25 (20)
>3.5	34 (28)		34 (28)	34 (28)

These farms have good soil fertility, high proportions of perennial ryegrass, are fertilized with appropriate N, and soil structure has not been damaged from earlier grazing. Under these conditions, stocking rates of up to 3.5/ha can be supported during this period. At 75% of these growth rates, which may represent more mixed farm types, stocking rates could be increased up to 3.0 during this period. Most farms should be able to close 15% to 25% of the area for a second cut depending on stocking rate.

Nitrogen

Nitrogen application is essential regardless of stocking rate. At low

stocking rates, little N is needed but as stocking rate increases, each grazing must be followed with a nitrogen application. Where farms are stocked at over 3.0 cows per hectare, 34kg N/ha (28 units/acre) is needed in July.

Sulphur

Trials have shown up to 50% grass growth reduction where sulphur was deficient in some soils. Those most likely to show deficiencies are sandy, free-draining soils with low organic matter content. Sulphate leaches readily, so it is not worthwhile attempting to build up soil S levels. On grazing ground, apply 20kg/ha during the grazing season.





Have you thought about rural tourism?



Become familiar with the strengths and unique qualities of your area and use this to differentiate what you have to offer.

Tourism is flourishing and can offer farm families useful additional income and repeat business – providing the quality is high and the visitors have plenty to do

Maria Heneghan

After a temporary blip due to the international recession, tourist numbers are growing again. In 2012, just over six million visitors generated €5.7bn in revenue for the Irish economy.

Growth is predicted to continue and even a tiny share of this huge sum would help offset weakness and volatility in farm incomes.

Rural Ireland has rich potential for the kind of experiences national and international tourists are seeking.

Considering the options – identify what makes you special

Tourists aim to buy a 'holiday experience' which includes a place to stay but more importantly something to do. Become familiar with the strengths and unique qualities of your area and use this to differentiate what you have to offer.

Beautiful scenery, remoteness, peace and tranquillity, forest walks – any of these could become your unique selling point. Backbreaking work on the bog might be something we'd prefer to forget, but for the tourist a visit there can be a unique and wonderful experience.

Select the option which generates the best income

Accommodation gives the biggest return for a lower volume of tourists. On average, the charge per person staying is €35 to €40, against €5 to €10 per person for an activity on your farm.

» Continued on Page 30

Ideally, you should supply both, but the activity does not always have to be a pet farm. What about all the scientific experiences on your farm, e.g. growth of crops, the story of farming and how technology has transformed the life of the farmer over the last 100 years?

In Ireland, we charge less for B&B accommodation than hotels, whereas in the USA, staying in a family home is regarded as a special experience and is much more expensive. The local hotel only becomes your competitor when you offer exactly the same thing, 'a bed and a breakfast'.

Hotels can't offer the opportunity to take a walk on the farm, watch the cows being milked, calves being fed, collect eggs or the experience of the birth of a baby lamb or calf.

Staying on a farm allows visitors to have fresh vegetables and fruit, homemade cakes and bread direct from the farm or the farm kitchen. Meeting local people in the village pub or the farmers' market also adds to the uniqueness of the farm holiday experience.

Accommodation options include:

- Bed and breakfast on the farm, with extra income generating possibilities such as afternoon tea, evening supper, dinner, or homemade snacks.
- Self-catering cottages, lodges, apartments, where the tourist caters for themselves and may buy fuel, cakes and vegetables from your farm
- Hostels, caravans and camping
- Yurts, wigwams, hobbits and Sheppard's huts

Activities: What to do – a key feature of the holiday

When considering any activity, think about:

- Variety of activities – what do you plan to offer on the farm?



Key figures

For a Fáilte Ireland approved B&B, you need at least three available bedrooms after the family are accommodated. Three bedrooms can generate €210 per night, six guests at €35 per person sharing. A 50% occupancy is common giving an income of €882. Costs are calculated at 30% so the potential income from a B&B at 50% occupancy can be €441 per week. The average season is four to six months.

In self-catering accommodation, the week starts on a Saturday. The average charge for self-catering goes from €200 per week to €400 depending on what's on offer. Extending the season is every tourism provider's aim and this is achieved by good marketing and promotion. Grant aid is available through the rural development companies in every county.

How can the experience vary from year to year so as to ensure it does not get stale? How do you extend the season?

- The cost of keeping animals over the winter when there are no visitors.
- Volume – can you generate the volume of visitors needed to generate enough income? How many visitors will you need at €5 to €10 per head to be viable?
- Do you have an urban area close by? It may have the volume of visitors for your activity.
- Schools, regularly identified as a potential market – school children need a lot of activity and variety from one year to the next and the season is very short.

Angling, paint balling, boat trips, kayaking, trekking,

Pet farms can be a good option but only if you have access to a very large pool of potential customers.

equestrian, cookery schools, painting classes, gardening classes, craft classes, farm shops, conference facilities in rural areas, all have potential but remember volume of visitors is vital for viability.

Developing your Rural Tourism Idea

Step 1 – Decide what you want

- Increased income to make the farm viable and attractive to the next generation?
- Income to replace a job?
- Improved asset value of your farm?
- To make use of redundant buildings on the farm?

Step 2 – Generate your idea

- Very few people have a eureka moment, spend time researching and carefully developing your idea.
- Visit successes in the business and picture yourself in the rural tourism enterprise. Find out what they are doing well. What would you expect as their customer? What markets are they catering for? What are the key success factors?
- Take a short training course to explore the various elements of your proposal.
- Find out what agencies can assist you with training, development, funding and marketing.
- Develop confidence and conviction about your idea.

Step 3 – Evaluate your idea

- Most people will tell you you're 'daft' and everyone will be full of reasons why your idea won't work. A well researched concept will topple any negatives and help you when preparing a business plan and proposals for funding.
- Without conviction, one's idea can very easily be torn apart by the views of the amateur.
- Draw up a business plan.

Where are the customers?

Our biggest market is Britain with 2.7 million tourists in 2012;

next is mainland Europe with 2.3 million arrivals. This is followed by North America at 1.0 million. A good website is essential to reach these markets, as well as good links with Fáilte Ireland.



EXAMPLE 1

East Clare B&B with lots going on

Dorothy Landers, her husband Michael and children, Daniel and Bláthnaid, who live on their 43 acre farm, work hard to ensure a quality rural holiday experience in Tulla, Co Clare, for all their guests. They are quick to point out that without another enterprise, they would not be able to make a living from their farm.

Top quality food and accommodation are a given on this award-winning B&B and self-catering business. Dorothy achieves well over 50% repeat business and she says that activities play a key part in bringing visitors back.

"Over 40% of my visitors come for the fishing and 20% mention our 12 donkeys as a key attraction," says Dorothy. Her warmth and readiness to accommodate visitors is also key – for example, she is a skilled angler and personally provides lessons on local lakes to visitors for a modest charge.

"Facilitating activities is key," says Dorothy. "We provide bikes and storage areas for fishing equipment and bait, which is a great help for visitors who fly in."

The rich music culture of east Clare is also a draw and Michael, an accom-



plished musician, will often help visitors to find the best local 'sessions'.

An excellent website, good marketing and constant improvement of the product are central to the business's success. "I try to add something new every year," says Dorothy. "This year, it's a hot tub. You have to invest to reach the top end of the market and offer something new to repeat visitors."

Johan Boquet from Belgium has been returning to the Landers' farm for seven years. "It's a combination of things which make east Clare attractive – the fishing, the friendly atmosphere but the quality of the accommodation and Dorothy's hospitality is also key," he said.

www.clondanaghcottage.com

EXAMPLE 2

Language students – another farm tourism option

Based in Charleville, Co Cork, Bernie Carroll runs Student Programs Ireland Ltd (SPIL), bringing in over €2m to the rural economy each year. Coming from a farming background, Bernie focuses her business on rural Ireland, setting herself apart from most companies that co-ordinate language-learning homestay programmes for foreign students.

The market for English language learning in Ireland is very competitive, but almost all the companies are based in cities. Increasingly, students see the benefit of the rural experience, where the foreign student has little chance to speak their first language, delivering much better results.

SPIL help young people of secondary school age to improve their English through structured language learning classes and the experience of living in the Irish countryside with an Irish farm family.

SPIL is always looking for farm families to take foreign students in Cork, Limerick, Kerry, Tipperary, Clare, Mayo, Kilkenny and Waterford. This is a real opportunity for farm families to get a



taste for rural tourism and the income is attractive.

Most students like to stay in a farm family home with children around their own age group. Host families are asked to provide the student with their own room, a quiet place to study, breakfast, lunch and dinner, packed lunch on school days and on days they have school tours.

One German student described their stay with an Irish farm family: "It was a wonderful experience for me. I came from a big city and ended up in a very rural area. At first it was daunting, but once I settled in, I just loved it and began to appreciate the countryside and nature."

www.spil.ie

tillage

Winter oilseed rape: early season tips

Site selection, a good seedbed and early season management are key if a winter oilseed rape crop is to achieve its potential.

Mark Plunkett
Teagasc Crops, Environment and Land Use Programme
& **Martin Bourke**
adviser, Teagasc, Wicklow

Soil fertility

Select fields suitable for OSR production and identify any soil fertility issues before the crop is sown. Check soil test results and plan nutrient applications in advance or during crop establishment.

Tip: Where soil samples are more than five years old, or not available, fields should be soil sampled as soon as possible.

Soil pH & liming

Winter oilseed rape prefers soil pH 6.5 as this is required for early crop development and sufficient nutrient supply. Where soil magnesium levels are low, apply magnesium limestone.

Tip: Where there is a lime requirement, apply at or before sowing and work well into the seedbed.

Crop fertilizer

Choose fields with good soil P levels (6-10mg/L) and ensure they are fertilized at sowing time with adequate levels of P, based on soil test results



(see *Table 1*). Potassium (K) advice for WOSR is shown in *Table 1*; crop K requirements are lower than for cereal crops. Nonetheless, crop K uptake during the growing season can be as high as 200kg K/ha. Aim to maintain soils at Index 3 to ensure good K supplies throughout the growing season.

Where soil K levels are very low to low (Index 1 or 2), apply recommended rates of K at sowing time. Adequate levels of available P and K in the seedbed are essential for fast and even crop establishment.

Tip: Apply P and K at sowing time, 10-10-20 for example is a well balanced fertilizer.

Organic manures

Pig / cattle slurry, poultry manures or spent mushroom compost are valuable sources of N, P and K. Oilseed

rape can take up and utilise N over the winter. Crops can take up in the region of 100kg to 150kg N/ha. High N organic manures such as pig or poultry manure can supply all crop P and K requirements plus a proportion of the N requirements. Apply manures evenly, at the correct rate, and incorporate rapidly to reduce N losses.

Tip: Aim to apply approximately 15m³ to 30m³/ha of pig slurry or 5t to 7.5t/ha of poultry manures where available.

Micro nutrients

Boron (B) is important in the production of oilseed crops. Light soils tend to have low levels of soil B. Where soil B levels are low (<1mg/L), apply B at the onset of spring growth.

Tip: Test soils for B and apply B as per soil test results.

Table 1: Phosphorus and potassium advice for winter OSR

Soil Index	Soil levels (mg/L)			P and K advice (kg/ha)	
	Soil P	Soil K	Soil Mg	P	K
1	0-3.0	0-50	0-25	35	65
2	3.1-6.0	51-100	26-50	30	35
3	6.1-10.0	101-150	51-100	20	25
4	>10.0	>151	>100	0	0



Had to resow?...tips to avoid it happening again

Unfortunately, some growers had to plough up failed winter oilseed rape crops this spring. In some cases, it was just headlands or parts of fields, in other cases it was the whole area.

Sowing date

Sowing a crop on 15 September with the same variety and sowing method in 2011 and 2012 gave two completely different results. The 2011 sown crop rooted really well, and bounced back from pigeon grazing in the spring of

“ Unfortunately, some growers had to plough up failed winter oilseed rape crops this spring. In some cases, it was just headlands or parts of fields, in other cases it was the whole area.

2012. A cooler wetter autumn meant that the 2012 sown crop never got a chance to develop a strong enough root system, and pigeons came to visit three weeks earlier than the previous year. The lesson? Sow earlier!

Tip: Aim to sow between 16 August and 1 September. A forward crop can be manipulated later in the season with growth regulatory fungicides. Consider selling some winter wheat this year as wholecrop to livestock farmers. Harvesting wheat two to three weeks earlier for wholecrop would ensure an earlier sowing date for the following oilseed rape.

Weed control

Katamaran provides excellent control of most broad-leaved weeds and annual meadow grass if applied within 48 hours of sowing. When you see the rows of oilseed rape at cotyledon stage, it's too late for effective weed control.

Post-emergence application of this product just doesn't offer sufficient weed control in the event of severe pigeon grazing. A crop which has been extensively grazed by pigeons in autumn/winter has little chance of recovering in spring if weeds start to out-compete it.

Lack of herbicide options in early spring can lead to the rape being completely taken over by broad-leaved weeds. Volunteer cereals and wild oats are much easier to control as there's a choice of graminicides, and a wide window of opportunity to control them.

Tip: Don't sow unless you are sure that the next 48 hours of weather will allow you the chance for pre-emergence weed control of broad-leaved weeds. If it's a bad field for charlock, consider a different field. If charlock is not too bad, an application of Salsa should control it, provided the charlock is small, actively

growing and weather is mild. Take out strong flushes of volunteer cereals early in the autumn. Any weeds competing with the crop in September/early October will lead to less leaf development and poorer root development in the autumn before the pigeons arrive.

Sowing method

If using a deep-leg cultivation system or min-till system, be prepared for increased risk of slug damage, particularly if you sow late. Monitor slug numbers and apply slug pellets where required. If ploughing, don't assume that slugs won't be a problem. Monitor slug numbers at early cotyledon to first true leaf stage. Ensure that whatever sowing system is used, that sufficient soil covers the seed to allow pre-emergence application of the Katamaran.



A grower's experience

Sylvester Bourke farms just outside Arklow, Co Wicklow. His 180ha tillage enterprise consists of a mix of winter and spring cereals, oilseed rape and beans. "25% of my winter oilseed rape area had to be re-sown this spring," says Sylvester, pictured left with Catherine and Sylvester junior. "Due to the late harvest and wet ground conditions in 2012, it wasn't possible to sow this year's rape until 15 September.

"A combination of harsh wind, water-logging and relentless pigeon grazing last autumn prevented the crop from developing a sufficient root system. The coldest March on record put paid to any chance of a spring recovery."

Headlands on Sylvester's farm were worst affected, and had to be re-sown with spring barley (below).



Farming to protect water quality

Mark Gibson

Environment specialist, Teagasc Crops, Environment and Land Use Programme, Mellows Campus, Athenry

Farmers in Ireland are working hard to reduce the impact of their activities on the quality of our rivers, lakes and groundwater. The good news is that all of this effort is having a positive impact. Recent figures published by the Environmental Protection Agency show that water quality in Ireland is improving. From an Irish perspective, it is important that this trend continues as the granting of Ireland's Nitrates derogation is closely linked to increased water quality.

In 2006, the Nitrates Regulations were implemented in Ireland as a means of controlling nutrient losses from agriculture, thereby improving water quality.

Farmers are now required to provide adequate manure storage, spread fertilizers to meet crop requirement and only spread manures during certain times of the year.

In addition, tillage farmers are required to minimise field losses by retaining green cover over winter. As a result, significant changes have occurred in Irish farming.

Some recent trends

Figure 2 shows how fertilizer use in Ireland has declined over the past 10 years. The usage of P and N fertilizers has declined significantly.

P fertilizer use has declined by 55% for grassland and 16% to 30% for arable crops between 2003 and 2008. Over the same period, N fertilizer use has declined by 24% for grassland and 2% to 10% for most arable crops.

Teagasc has observed a corresponding decline in soil fertility during the period. While there is no doubt that the price of fertilizers is a major contributor to these trends, anecdotal evidence suggests that limits set out under the Nitrates Regulations may also be a factor.

In its submission to the current review of Ireland's Nitrates Regulations, Teagasc has put forward a number of practical proposals to help redress the decline in soil fertility levels.

Another area where there has been

“ In its submission to the current review of Ireland's Nitrates Regulations, Teagasc has put forward a number of practical proposals to help redress the decline in soil fertility levels.

Figure 1

Percentage of stations with average P <0.05mg/l

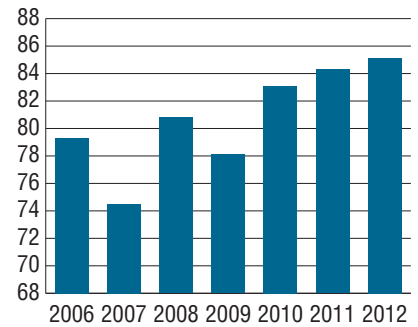
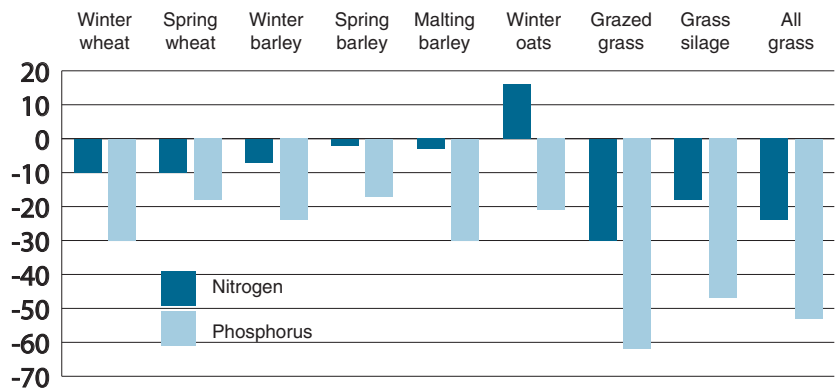


Figure 2

National nitrogen and phosphorus fertilizer use trends between 2003 and 2008. (Lalor et al., 2010)



significant progress is in the timing of slurry spreading on Irish farms. A study carried out by Teagasc in 2009 revealed that more than half of all slurry was applied between the end of the closed period in January and 30 April 30. This contrasts with a 2003 survey which found that just over one third of slurry was applied in the spring. This change means that farmers are getting more benefit from the nutrients in organic manures.

RIGHT: The Nitrates Regulations were implemented in Ireland as a means of controlling nutrient losses from agriculture, thereby improving water quality.



Farmer Focus

I recently visited Stephen Morrison in Kill, Naas, Co Kildare, to discuss how he is protecting water quality on his farm. Stephen and his wife Heidi have four children. The farm is in a single block and covers 120 hectares. The soils are relatively free-draining, lying on mainly limestone bedrock. Stephen operates a suckler to beef system (74 cows) alongside a sheep enterprise (175 sheep) with 21 acres of spring barley. He is a member of the Bord Bia Beef and Sheep Quality Assurance Schemes.

In 2009, Stephen joined REPS 4. From a water quality perspective, a number of changes were made on the farm to comply with the scheme requirements. Over the past number of years, Stephen has worked closely with his Teagasc B&T adviser, Christy Watson, to develop the infrastructure and fertilizer management on the farm.

This included the conversion of a large straw bedded shed to slats, all watercourses were fenced and a detailed fertilizer plan was developed for the farm.

"Under REPS, I had to fence off all the watercourses on the farm. I decided to put in a piped water supply to all of the fields," said Stephen. "This was expensive at the time but it allowed me to subdivide fields and make better use of grassland."

Stephen has developed a fertilizer plan with Christy that allows him pinpoint the fields low in P and K. "I recently soil sampled the entire farm to find out where I need to target manure to get best value from it. I heard recently someone calling slurry a waste product. This thinking needs to change.

"If you have a value placed on it, you're going to try to spread on the fields where it's of most benefit. My stock numbers have gone up

so I need to know exactly where I need to be targeting fertilizer. With the price of fertilizer the way it is, there's no point spreading P and K where you don't need it."

When I asked Ste-



phen about his views in relation to the closed period for spreading manures, he takes a very pragmatic approach. He said: "No farmer wants to go out with slurry in December when the grass isn't growing but there can be extreme situations and flexibility is needed to allow for this." On the subject of phosphorus he believes that there needs to be more flexibility on low index soils.

Christy Watson believes that soil fertility and pH are key to producing quality silage.

He said: "Quality home produced silage is one of the best value winter feeds available. This year those farmers who applied the right amounts of fertilizer are getting the results."

Stephen has made significant changes to the timing of slurry spreading on the farm. He said: "Up until a few years ago, we spread our slurry after the silage was cut. Christy has been advising about the benefits of getting it out earlier in the year so now we spread about half of our slurry in spring and the remainder goes out after silage. This has supplied a lot of the P and K for the silage fields."

Stephen has a strong commitment to further developing his farm. He is examining the option of dairying in the longer term but in the meantime is investing in his suckler herd. It is obvious that Stephen takes great pride in quality of his farm and that he is keeping a close eye on the environmental and economic sustainability of his operation.



Christy Watson (left) and Stephen Morrison (right).

Reasons to walk in your woods

Frances McHugh
Teagasc Forestry Development Officer,
Oak Park Carlow

As an adviser, when visiting farm woodland, I find it quite easy to gauge the interest the owner has in his/her forest investment. On approaching the forest boundary, I hear statements like 'I think we can get in down here' or 'there used to be a gap here'.

Other times, I might hear a more enthusiastic: 'I bring the dog down here most evenings; I don't know which of us enjoys it the most!' or 'I want to show you a section near the bottom; it's not doing as well as the rest.'

When taking a walk in your woods you can achieve a great deal.

Supervise your newly planted forest

You may have sub-contracted the management of your plantation for the first four years, remember, however that it is your land, you own the trees and it is in your interest to keep informed of what needs to be done.

Look out for

- Competition from vegetation
- Unhealthy colour/reduction in vigour which might indicate nutrient deficiencies
- Assess failed trees which will need to be replaced next winter
- Weaknesses in your boundary fence/damage from browsing animals
- Risk of forest fire

Are your trees in good shape?

Bring a secateurs on your walk! Summer time is a good time to shape young broadleaves (three to 10 years old approximately). A top quality tree needs one single stem.

Every tree that you improve by shaping is one good tree more than you had before! It is important that you know how: see www.teagasc.ie/forestry for guidelines on shaping your broadleaf trees.

Check your ash

This summer is critical in the eradication of ash dieback in Ireland. To date, this disease has been found in trees associated with imported stock and there is no evidence yet that it has spread beyond this material.

Forest and land owners are being asked to be vigilant for the disease and to report (with photographs if possible) any sites where they have concerns about unusual ill health in ash.

Symptoms associated with ash dieback include; foliage wilt (black/brown leaves retained on trees), shoot dieback with brownish to orange discolouration, often multiple shoots and elongated diamond shaped stem lesions.

See www.teagasc.ie/forestry/advice/chalara_disease.asp

Report any concerns to Forest Service, DAFM by email forest.protection@agriculture.gov.ie or by phone 01-6072651.

Look up – check for competition – in your broadleaf woodland

When you walk through your trees,



are you knee high in vegetation or has it disappeared? Trees are planted at close spacing to provide some healthy competition. There comes a stage, however, when trees are competing to a point where it affects their growth; their crowns are touching and light cannot reach the forest floor – hence the vegetation dying back.

If you see evidence of this increased competition; when trees are at least 8m tall, it's probably time to remove competing trees from around your best quality trees to allow them to grow on unhindered. Remember, you must have a felling licence before any trees are removed. There may be a grant available to carry out this operation.

In conifer woodland

When conifer trees begin to compete, it becomes difficult to walk through them. As lower branches die back, inspection paths should be cut in order to gain access and assess the trees. Inspection paths allow owners/forest managers to identify optimum timing





of thinning and allow potential buyers to view the crop.

Paths should be cut every 25 to 50 rows apart allowing access to all area of your woodland; good and bad.

Consider risk from fire

Fire can pose a significant risk to your forest. February to May is the high risk period but any prolonged dry spell can provide favourable conditions for forest fires. When you walk your forest, check fire breaks are in place and kept these vegetation-free. Also, consider access to your forest; if it is difficult for you to reach your trees, how would the emergency services manage?

First thinning is just the start

You may have already carried out a thinning in your forest. If so, you should still keep an eye on your trees. Make sure drains are not blocked following heavy machines working in your forest.

High pruning can be carried out on

Upcoming event

Management and Thinning of Oak and Conifer Mixtures: Wednesday, 10 July 2013, Kilruane MacDonaghs GAA Centre, CloughJordan, Co Tipperary.

Arrive any time between 11am and 12.30pm. Guided tours will leave every 20 minutes, and the demonstration will take approximately 2.5 hours. This is an outdoor event so please bring appropriate footwear and rain gear. All are welcome. Attendance is free.

The event will demonstrate to participants the optimum time to commence

tending and removing competing conifers within the crop. How to mark the better oak stems as potential crop trees will also be shown and discussed.

Other important topics to be discussed will include chainsaw felling and safety, timber presentation for extraction, removal methods and potential uses for the timber. Details on preparing for thinning will also be presented: felling licences, broadleaf thinning grants and road access will be covered.

your best trees. Monitor tree growth post thinning. A second thinning may be required within three years. Ensure you have a valid felling licence as you approach second and subsequent thinnings.

...and maybe the best reason of all!

Walking in woodland is good for your mental wellbeing as well as your physical fitness. Many say this is a great way to beat the stresses and anxieties of daily life.



Nerine bowdenii



Acanthus spinosus



Echinops ritro

Water, water everywhere or maybe not?

Eileen Woodbyrne
At the Teagasc College, National Botanic Gardens

It may seem a little odd to think about conserving water, given the amount of rain we've had this year and last, but with the issue of metering for householders on the agenda, and the spell of scorching weather we had at the start of June, perhaps it's something we should consider.

The Royal Horticultural Society estimates that in Britain, gardeners use two-thirds of the domestic water supply during dry spells. As gardeners, there are lots of ways we can reduce the amount of water we use.

- Choose plants that are able to tolerate some drought, particularly in parts of your garden where you know that the soil tends to be dry, or for very sunny positions. Perennials such as *Acanthus spinosus* (bear's breeches), *Echinops* (globe thistle) and *Eryngium* (sea holly) will do well. Bulbous plants such as *Nerine* and *Muscari* (grape hyacinth) will also tolerate drought, and shrubs such as *Lavandula* (lavender), *Garrya*

elliptica (silk tassel bush) and *Cistus* (rock rose) thrive with relatively little water.

- If you use containers, position pots under hanging baskets so that water dripping from baskets does not go to waste. In dry spells, move pots out of direct sunshine. Check your hose connections – a drop of water leaked every second quickly adds up to many litres per day.
- If you must water, use a watering can, not a hose (depending on water pressure and hose diameter, a hose can use as much as 1,000 litres of water in an hour). Use the can without a rose attached; more of the water will go where it's meant to. If you do use a hose, fit a trigger to control the flow.
- Water early or late – in the heat of the day a lot of water is lost to evaporation. Only water plants that really need it – established plants may be able to survive relatively long periods without water. Watering 'little and often' is not a good idea as the water does not penetrate deeply enough into the soil and you will encourage roots to develop close to the surface, leaving the plants more prone to drought damage in the long-run.

- Is it really necessary to water your lawn? Even if it goes a little 'off-colour' in dry spells, it will generally recover.

- Mulching can help to retain water in the soil – place a layer of material (bark, woodchip, garden compost, or inorganic material such as gravel) on the surface of the soil. A layer 5cm to 10cm deep will dramatically reduce evaporation.

- Water used in the home for washing can be used for most plants, especially if you have not used harsh detergents. The most efficient system is to install an outlet pipe that feeds the water to butts.

- Rain water can also be collected; ideally by diverting water from downpipes into a butt or barrel. Fittings are readily available and easy to install. They will prevent the butts from overflowing by directing water back to the drains once the container is full. (Remember the need for safety around water butts; they should be covered, particularly where children may have access.)

And remember, one millimetre of rain on one square metre of roof equals one litre of water – it all adds up!

CARLOW

Carlow (059) 913 4600
 Dave Bermingham
 Claire Walsh

CAVAN

Cavan (049) 4361301
 Conor McGovern
 Fergal Brady
 Adrian Grimes

CLARE

Ennis (065) 68 22300
 Ide O'Keeffe
 James McInerney

CORK

Midleton (021) 463 2366
 John Ryan
 Kevin Whittle

Cork (021) 4544299
 Jim Cleary
 Des O'Regan

Mallow (022) 22591
 John Paul Aherne
 Gerard Cott

Bandon (023) 8842588
 Jim Cleary
 John O'Donovan

Skibbereen (028) 21688
 Mary Crowley

DONEGAL

Letterkenny (074) 91 26299
 Diane McGarrigle
 Peter McGinley
 Michael McHugh

GALWAY

Athenry (091) 844110
 Tommy Kelly
 Val Daly
 Patrick Kelly

Galway (091) 778070
 Richard Geraghty
 Des Fahy

KERRY

Tralee (066) 71 22185
 Michael Kerins
 Margaret Maunsell

Killarney (064) 6636148
 Mike O'Donoghue

KILDARE

Naas (045) 876101
 Brian Scully
 Kenneth Garry

KILKENNY

Kilkenny (056) 772 1300
 Joe Nolan
 Brian Prout

LAOIS

Portlaoise (057) 8621694
 Pat Maher
 Paul Cuddy

LIMERICK

Limerick (061) 491 400
 Assumpta Leahy
 Anton Roche

Newcastle West (069) 61577
 Richard Lanigan
 Kayo Galvin

LOUTH

Drogheda (041) 9836384
 David Ryan
 Carol O'Connor
 Alan Ludlow

MAYO

Castlebar (094) 90 21955
 Tom Byrne
 Fred Flynn
 John Lyons

MEATH

Navan (046) 9031637
 Noel Hickey
 Barry Clarke
 Paraic McGuinness

MONAGHAN

Monaghan (047) 82033
 Elaine Malone
 Ciarán Harte

OFFALY

Tullamore (057) 9321707
 Bill Meaney
 Amanda Brennan

ROSCOMMON

Roscommon (090) 66 26344
 Tommy Grehan
 Anne-Marie Conry

SLIGO

Sligo (071) 91 44164
 Fintan Kennedy
 Declan Clarke

TIPPERARY

Nenagh (067) 31 989
 Maureen O'Meara
 Peter Cosgrove

Thurles (0504) 23299
 John Costigan
 Brid Harrington

Clonmel (052) 6126537
 Willie Phelan
 Jackie Dunne

WATERFORD

Waterford (051) 850377
 Kathleen Murphy
 Michael Colivet

WESTMEATH

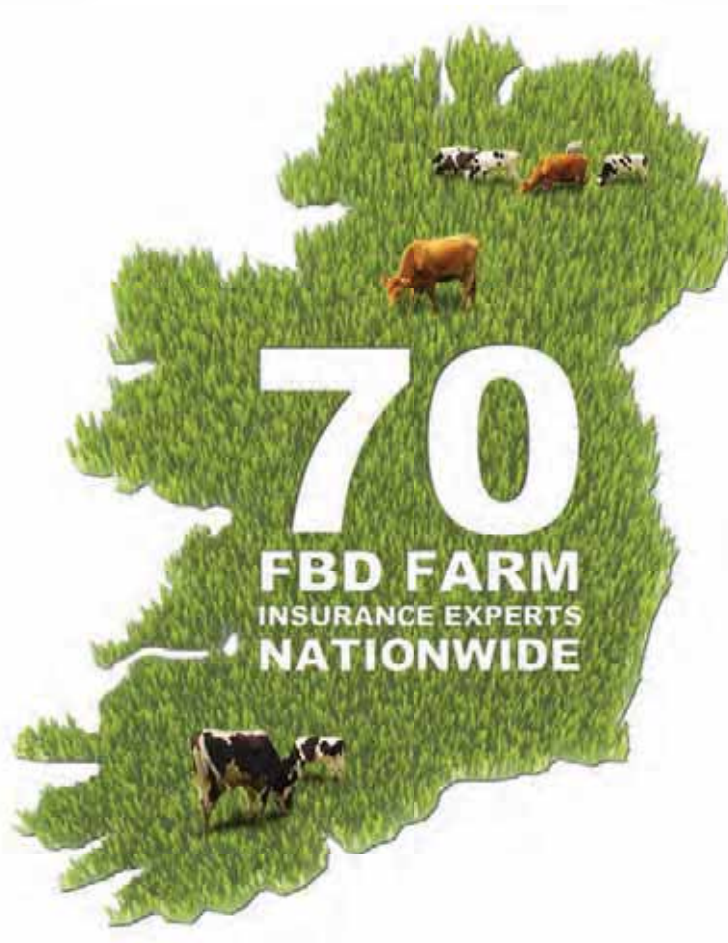
Mullingar (044) 9348867
 Barbara Allen
 Pdraig Murtagh
 Louis Belton

WEXFORD

Wexford (053) 91 68200
 Joe Kavanagh
 Gerry Kearns
 Barry Kinsella

WICKLOW

Wicklow (0404) 68465
 Carolyn O'Hara
 Darragh Killoran



**There's a
 qualified
 farming
 expert nearby -
 just call**

**Contact your local FBD office
 and we'll call out to you.**

F|B|D

Supporting Irish Farmers

www.fbdforfarmers.ie

FBD Insurance plc is regulated by the Central Bank of Ireland.

RISPOVAL[®]

Your choice of IBR Vaccine

NEW
LICENSED CLAIM



**The Only Vaccine Range
to offer 12 months IBR immunity
from a *single* booster!****

RISPOVAL[®] **IBR**

Marker Live

RISPOVAL[®] **IBR**

Marker Inactivated

For further information please contact your veterinary surgeon or Zoetis, 9 Riverwalk, Citywest Business Campus, Dublin 24. Tel 01 467 6650.

*GfK Kynetec: Vet Trak Veterinary Sales Statistics. 2012. **Booster vaccinations: Animals should be given a single dose booster vaccination 6 months after their initial vaccination course. Animals initially vaccinated with Rispoval IBR-Marker Live may be given a single dose booster vaccination with either Rispoval IBR-Marker Live to provide 6 months of protection or Rispoval IBR-Marker Inactivated to provide a duration of immunity of 12 months of protection.

Legal Category: **POM-(E)** Use Medicines Responsibly. www.apha.ie

zoetis[™]