



Today's Farm

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The challenges and rewards of increasing cattle/hectare

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*Statham, J.M.E. et al. (2015). Reduction in daily milk yield associated with subclinical bovine herpesvirus 1 infection. Veterinary Record 177: 339.

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John and Michael Prendergast from Roundfort, Hollymount, Co Mayo, joined the Sheep BETTER farm programme in 2015. Since joining the programme, they measure grass regularly, weekly during spring and throughout the summer.

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COMMENT



Mark Moore
Editor,
Today's Farm

Transitions are hard

Several articles in this edition describe the challenges of moving from the current situation to a different, more desirable one. In Pat Blackwell and Pádraig Fitzgerald's article (page 12), they outline how hard it is financially to increase drystock numbers to boost output per hectare. They also show how financially rewarding it is once you survive the transition.

Hugh MacEneaney has a similar story in dairying where good cash-flow is also central to prudent expansion (page 10). A more productive agriculture is usually a more capital intensive agriculture as more stock means more capital is tied up in the business. In this edition, James MacDonnell describes a useful Government tax-break, which helps farmers to consolidate land parcels (page 18).

With interest rates at almost zero, another good scheme might be to offer farmers Government-backed, low-interest loans, which would help them to increase their stocking density. Provided the farmers maintain their own level of performance, the ongoing returns should allow the loans to be readily repaid from the higher income.

Ag dul ó seo go dtí sin

Tá roinnt alt san eagrán seo ina ndéantar cur síos ar an dúshlán a bhaineann le dul ó chúrsaí mar atá siad faoi láthair go dtí staid eile, ceann atá níos inmhianaithe. San alt ó Pat Blackwell agus Pádraig Fitzgerald, déanann siad cur síos ar a dheacra is atá sé ó thaobh chúrsaí airgid cur le líon an bheostoic chun an t-achur stoic thirim a mhéadú. Léiríonn siad freisin an tairbhe airgid atá le baint as an aistriú sin más féidir leat é a chur i bhfeidhm.

Is é an scéal céanna, a bheag nó a mhór, atá ag Hugh MacEneaney faoi leathnú ar fheirmeoireacht déiríochta. Tá sé ríthábhachtach sreabhadh airgid imleor a bheith ag duine. Tá roinnt smaointe agus moltaí úsáideacha ag an rialtas chun cuidiú le feirmeoirí comhdhlúthú a dhéanamh ar fheirmeacha ilroinnte... féach an t-alt ó James MacDonnell faoi conas cáin ghnóthachan caipitiúil a sheachaint nuair a dhíoltar talamh.

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Cover | Teagasc advisor Pat Blackwell and Limerick farmer Seamus O'Loughlin. Seamus says that part-time drystock farmers should increase their stocking rates if they want to enhance profitability.



Summer 2016 was characterised by two key events, Beef 2016 at Teagasc, Grange, and Farming and Country Life 2016, which took place at Mellows Campus, Athenry

BEEF 2016

At Beef 2016, Minister for Agriculture, Food and the Marine Michael Creed said that “supporting the Irish beef sector to realise its full potential is one of the priorities of this Government and mine as Minister for Agriculture. The need for a strong input from Teagasc is greater than ever, particularly in assisting the development of farm enterprises, achieving greater uptake of new technologies, delivering research and

environmental advice on farms, educating and training students and adult farmers and supporting science-based innovation in the agri-food industry.”

Profitability

“The four main variables influencing the profitability of suckler beef enterprises are grass production and its utilisation, animal performance, and stocking rate,” according to Teagasc Beef Enterprise Leader, Dr Eddie O’Riordan.

“Increasing grass production requires good soil fertility and pe-

rennial ryegrass dominant swards, while a good farm paddock system and the use of grass budgeting tools will increase pasture utilisation. To maximise animal performance, good fertility and reproductive performance is required, with the objective to produce one calf per cow per year. The breeding policy must also aim to maximise liveweight gain. Economic analysis of suckler calf-to-beef systems in Grange has shown that, where individual animal performance is high, stocking rate is the key driver of profitability.”

Farming and Country Life



Minister Heather Humphreys, who opened the event, said: "This event represents an authentic and accurate retelling of the story of local 1916 military events and Farming and Country Life of the era and it is very clear that a huge amount of work has been carried out by all involved to organise this event, and to transform the Mellows Campus into street and rural landscapes of 1916."

A commemorative plaque was unveiled by Teagasc chair Dr Noel Cawley as a tribute to Liam Mellows and the volunteers who took refuge in Mellows Campus during the Easter Rising.

Professor Gerry Boyle, director of Teagasc, said: "Farming and Country Life 1916 was an event that truly captured the imagination of all generations. The overwhelmingly positive feedback we have received from visitors is a testament to the months of planning and hard work all involved. I want to acknowledge the incredible efforts of our staff, volunteers, sponsors and all organisations that participated."

The event was organised by Teagasc, in conjunction with Galway County Council, as part of the 1916 commemorations. With seven distinct villages, the event was packed with all the activity of a 1916 town, from music, dance and drama to livestock, machinery and history. This event included demonstrations on the working horse and its role for the Irish household, exhibition GAA games in 1916 attire, sports day with traditional children's games and re-enactments of evictions, advisory scenes, school-house and cottage.



ABOVE: The event at Athenry included a large-scale representation of Dublin's GPO, actors in accurate-to-the-time costumes added to the scene.

“ Thousands of farmers turned out for Teagasc BEEF 2016, which was held at the Teagasc Animal and Grassland Research Centre in Grange in early July



Demonstrations of traditional skills such as broom-making and establishing potatoes with a "Loy" proved hugely popular.

Key metrics on efficient dairy farms

Fergal O'Mahoney, Teagasc/Dairygold joint programme discussion group facilitator, in east and west Cork, reviews some key management pointers in these challenging post-quota times

Once you have completed your 2015 Teagasc eProfit Monitor, you will be in a position to establish the profitability of your farming enterprise. This allows analysis on a whole farm basis, profit per hectare for each enterprise with more detailed information on costs per litre and per cow.

The two main enterprises on dairy farms are milk production and replacement rearing. It is important to ensure both are profitable, especially with heifer rearing costs running to €750 per unit.

Cross-check 2015 farm accounts with 2015 eProfit Monitor figures to give you an indication of its accuracy as all expenses listed on the farm accounts have come out of your farming activity in the 2015 production year and need to match figures used in your eProfit Monitor to allow for worthwhile future planning.

The farm accounts give important figures for living expenses, pension contributions, health insurance, life policy payments, tax payments plus your year-end balance sheet, all based on actual figures for your farm. This information should be your starting point to develop a business plan for your farm.

Stocking rate

Calculate the number of adjustable hectares available on the farm. Two figures need to be established:

- Total hectares available on farm.
- Area available for grazing by dairy cows (the grazing platform).

On efficient units, the planned stocking rate on the whole farm should be 2.5 livestock units per hectare.

This may not seem to be high, but it

is amazing how many farms have a very high grazing platform stocking rate and a lower overall stocking rate. The overall stocking rate may be as low as 2.1 livestock units per hectare due to inefficient production on land outside of the grazing platform. The dairy cow grazing platform stocking rate should be 2.5 livestock units per hectare for maximum use of grazed grass with an upper limit of 3.2 livestock units per hectare where the grazing platform is limited.

Higher stocking rates result in higher costs associated with the provision of additional ungrazed forage through silage or zero grazing.

Another stocking rate figure on efficient farms is 80% of land used by milking cows with 20% used for replacement heifers. This ensures adequate replacements and maximum land used for profitable milk production.

Labour availability

The availability of suitable labour is becoming a big issue (see Pat Clarke's article on pages 8 and 9). You need to establish how much additional labour you require. Work by the farm owner, plus 300 hours' part-time or family labour, should be sufficient for a 100-cow herd and a 23-unit replacement heifer enterprise. Make this calculation before you expand further, putting excessive pressure on your efficient system. In all cases when employing labour, allow for an adequate rate of pay, paid on time to ensure continued availability of quality operators.

As the farm owner, you should also value your own labour input and continuous personal learning when



The two main enterprises on dairy farms are milk production and replacement rearing.



The EBI is a great indicator of profitability on farms and gives valuable information for continued genetic gain on efficient family dairy farms



calculating a worthwhile financial return from a dairy unit.

Cow type

The efficient cow type in my group work tends to be black and white cows yielding 6,500 litres at 4.20% butterfat and 3.60% protein getting 750kg dry matter concentrates. These cows leave very profitable returns from their efficient production of 522kg solids of which 500kg are sold.

Co-op performance reports available on the ICBF website provide valuable information in relation to kilos sold per cow in the herd. It is important to check this figure as this is what you are paid on, not the milk recorded solids so many seem happy to quote. Target a calving period of 12 weeks starting on 25 January with a 75% to 80% six-week calving rate.

Economic breeding index (EBI)

The economic breeding index is a great indicator of profitability on farms and gives valuable information for continued genetic gain on efficient family dairy farms. The herd EBI report provides every farm with a figure

for the genetic potential of their dairy stock. It is my experience that well managed efficient herds are achieving the full genetic merit outlined in this very important report.

You should know this potential and breed your herd to a team of bulls that allow you to maintain genetic gain. Most of the efficient dairy farms I deal with tend to have a predicted difference (PD) for milk kilos of 150kg to 180kg and PD butterfat percentage and PD protein percentage of 0.11% and 0.08%, respectively. You need to be aware of these herd averages and use them to maintain milk yield kilos while greatly improving the level of solids using a suitable team of bulls for your herd. Even where milk yields are much higher with low solids, good bull selection allows efficient cows to be bred for your family dairy farm.

Land rental/purchased fodder

With the current low base milk price of approximately 22c/litre, it is important to have your figures done before taking on additional land or purchased fodder. What you can afford to pay will depend on numerous

factors. Let's take the efficient cow in this article to have costs of production of €1,235/cow or 19c/litre, leaving a net margin (allowing for replacements, cull cows and calf sales) of €455/cow or 7c/litre. If you rent an extra hectare at €620 stocked at 2.5 cows per hectare grazeable by cows, the net margin is now €205 per cow. But if it is not grazeable by cows and you have to bring the forage home as silage due to increased stocking rate on the grazing platform, the net margin becomes a loss of €75 per cow due to increased machinery input.

If the base milk price was 29c/litre, renting a grazeable hectare at €620 leaves net margin of €725/cow or, if bringing forage home, a net margin of €445 per cow. So, milk price has a significant effect on the potential to rent additional land or purchase fodder.

These are some of the management pointers I would recommend you consider on family dairy farms based on the successful, efficient dairy farms I have encountered as part of my work as discussion group facilitator on the Teagasc/Dairygold joint programme.

dairying

Preparing to employ staff

Before employing someone on your farm, there are a number of steps you should take

Pat Clarke

Dairy Specialist,
Teagasc Animal and Grassland
Research and Innovation Programme

Larger herd sizes have increased the workload on dairy farms, resulting in some farmers increasing their use of contractors and part-time labour. For others, it has involved hiring a full-time employee for the first time. This adds a new dynamic to any farm and preparation is required for this new and challenging situation.

The first step before employing someone is to be very clear on WHY you are doing so. You must be clear that at the scale you operate, you are no longer able to sustainably carry out the workload on the farm.

You must also be able to say that you have changed/adopted your system so that it is already as labour-efficient as possible. You must be clear that this person is going to add value (money, work/life balance) for your business/family. Employing someone to scrape yards or top paddocks is adding cost to already unproductive work.

Next, ask yourself: can I afford to pay an employee? Sit down with your advisor/accountant and do a six-year plan with the cost of labour included. This should create the clarity, that: "Yes, I can afford an employee even at the current milk price."

When you do employ someone, there is now another person in the yard. You need to interact with this person, so do your family members and other contractors. He or she is a new addition to the team and all must work together. This person will be talking to family/contractors and also making farm decisions, regardless of how small they appear initially.

What will you do each day and what will the employee do? It is a good idea to write down a list of tasks that you currently do each week, and then decide on an appropriate split. This will clarify the type of person you need,

and what skills they should possess.

This will identify three categories of skills for your farm employee: those that are absolutely necessary and those that are desirable (or can be developed) and unnecessary skills for your farm. When dropping tasks, you must also decide what activities you should spend more time on. These should be management tasks which will make your business more efficient, e.g. financial planning and grass measuring.

Currently, you probably have all the farming skills. Employing a person requires you to develop new skills, often referred to as "soft" skills. Virtually every farmer becoming an employer needs to improve communication and mentoring/teaching skills.

You will need to develop appropriate communication channels; they may be different for different tasks, e.g. written, oral, texts, and noticeboards. No business takes on an employee and puts them to work without mentoring/training them in the business's processes. You will not get an employee who already knows your farm and processes, so you must be prepared to spend some time and have patience.

Employees won't stay forever; you must create a job so that if a person leaves, it is an attractive position for a new employee to fill.

Employment law

You must familiarise yourself with employment law before taking someone on. Written terms and conditions of employment are the legal basis of the relationship. These give a clear understanding of what's agreed and protect both employee and employer. Employer and employee details, job title/nature of work, date of commencement of employment, rate of pay and pay intervals, hours of work (overtime/shift patterns/Sunday work), rest breaks, annual leave, sick leave, etc, should be included. A terms and conditions template and other basic information is available at www.workplacerelations.ie

It is essential that you update your Health and Safety statement with an employee in mind. You will be familiar with your animals, yard, machinery and operations. But looking at them from an employee's viewpoint, there may be changes needed.

FARMER FOCUS



John and Sylvia Powell have been employing staff for a number of years. They farm near Birr, Co Offaly. They emphasise the importance of having a simple system before employing labour. "You need to be able to work in a team," says John. "This is as important for the farmer as the employee."

Communication is a new skill you must develop according to John and Sylvia. Written instructions (laminated), paddock numbers and a large map (6ft x 6ft) which can be written on are a great help in communicating on the Powell farm. According to John, you need to be prepared to spend time with new employees. "We spend time training new staff on the operations of our farm, even the basics of putting on clusters in the parlour.

"Both myself and Sylvia have been employees so we've seen both sides," says John Powell. "I think a key point is to never assume anything. You should be absolutely clear about what the job's role and responsibilities are and prevent any confusion about how things are to be done. We will write down exactly the steps to be followed so that when a new person comes in they can see immediately what to do."

John says you should never ask an employee to do a job you won't do, treat staff equally, ensure they have adequate time off and if necessary provide accommodation.

"I like to employ young people who are enthusiastic and keen to progress, so they will often move on after a



Jason Armstrong, John Powell and Andrew Browne.

couple of years. We often get people from Ireland or overseas asking to work with us through word of mouth. I think as the need for staff grows, the industry will need to develop new ways to link up potential employers and suitable employees. If you get the right staff, everyone benefits enormously."

Denis Kenny farms at Kilmanagh, Co Kilkenny, employed a full-time labour unit for the first time in 2015. Denis emphasises the importance of planning work in advance and varying the work for the employee. "This keeps the employee involved in the running of the farm and not just on one or two tasks," he says. The milking on the farm is shared, with Denis doing six or seven milkings per week. He also emphasises the importance of technical efficiency in advance. You must be able to pay the employee in years like 2016 as well as high milk price years.

Denis's six-week calving rate is about 90%. This creates peak labour in February, but the benefits allow a labour unit to be paid for throughout the year. Denis now has different work priorities on the farm, "Time freed up needs to be spent managing a better business," he says. "You need to be prepared for this change in advance of employing labour."



I like to employ young people who are enthusiastic and keen to progress

– John Powell (pictured below)

FARM CHECKLIST

	YES/NO
I am clear that my farm needs additional labour	
I can afford to pay an employee	
I understand the consequences of adding another team member	
I have thought about the split of tasks for the employee/myself	
I will need to develop new skills	
I am aware of the basic legislation around employment	
My farm is a safe workplace	

You should be able to confidently state "yes" to all above. Then you are in a good position to start the process of trying to find the employee who will match your needs.

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dairying

Expansion means cash is king

Hugh MacEneaney
B & T Dairy Advisor,
Teagasc, Mullinavat

At current milk prices, expanding your dairying enterprise while still retaining cash is a challenge. Brendan Phelan is in the middle of significant expansion on his farm at Kilmacow in south Co Kilkenny. He milked 110 cows in 2014, he is milking 140 cows this year and plans to milk 170 cows by 2018.

"We have a 57ha milking platform but only 19ha of this is owned," says Brendan. "The rest is rented on leases with between two and 10 years remaining. We also own a 25ha outblock two miles away from the home yard."

There is no hired labour and Brendan does nearly all the work himself, taking a few weekends off here and there. Heifers are contract-reared, leaving the farm at 100kg and returning in-calf in November of the following year. Nearly all of the machinery work is contracted out too, so Brendan's primary focus is on managing the cows and grass.

Brendan is part of the Teagasc/Glanbia (GII) monitor farm programme. We recently examined the key areas of infrastructure to get right when expanding, but more importantly went through the financial impact of expansion and the low milk price on cashflow.

"With so much land around the parlour leased, I was a bit apprehensive about investing too heavily on the farm," says Brendan.

"Before 2013, most of the cows were out-wintered on the outside block, but we built a new cubicle shed on the milking block in 2013." Sixty cubicles were added to this last December, so Brendan now has cubicles for 160 cows.

The parlour was originally a six-unit, but over the years this increased to 12 and is currently a 16-unit, where cow entry and exit is inadequate. "We have plans to improve the parlour and build extra slurry storage on the farm

but these have been shelved for 2016," says Brendan.

The land is excellent quality and very free-draining. Over 14t of grass was grown per hectare in 2015, despite pH, phosphorus and potassium being below optimum on much of the milking block.

Planning

Brendan highlights the issues on the farm: "It is hard to plan ahead when a high proportion of the land is leased, but at least there are nearly 10 years remaining on most of the land."

The overall stocking rate is low at 1.7 cows/ha and the outside block doesn't contribute much as Brendan ends up selling silage off this land. That land could be leased in a long-term arrangement and Brendan could get tax-free income from it but he is slow to do so as it restricts his options. "I could use it to rear the replacements but then the whole labour dynamic changes," says Brendan. "The key issue is cashflow. We have done a budget, which shows that the farm will be in negative cashflow until October, presuming the current account had a zero balance at the start of January."

Brendan's eProfit Monitor from 2015 shows total costs of 22.93c/l (excluding own labour) and a net margin of 8.17c/l or €460 per cow. But there is a difference between profit and cash. You could have massive profits but no cash. The profit figure can be deceiving – "cash is king". The net cashflow in 2015 was €14,438. This is how much money was left over after drawings, tax, capital expenditure and loan repayments were made.

The calving start date in 2015 was 14 February – deliberately delayed to reduce a superlevy risk. It has since returned to 1 February, but production in 2015 was still excellent. An impressive 508kg of milk solids per cow were produced from forage and 600kg of meal. Granted, stocking rate was low but all cows were dried off by 14 December.

Brendan has been crossbreeding



for over a decade and the results are showing. The average fat and protein last year was 4.85% and 3.83%. By 2018, the stocking rate on the milking platform will be 3.1 cows/ha and the 170 cows should produce 529kg of milk solids each. Cash surplus in 2018, with a predicted base milk price of 28c/l (33.4c/l received), will be €48,989. This is effectively free cash drawings; tax and loans will have been paid beforehand.

Current year

The base milk price for this year has been revised down to 23c/l, which, with Brendan's higher constituents returns an average price to him of 28c/l. Between milk and stock rates and the BPS, the total farm income is expected to be €261,449 in 2016.

Total variable costs are estimated to be €107,701. Meal feeding is budgeted at 500kg per cow, with 240kg fed to date. Some savings are expected to be made into fertiliser with less lime, capital phosphorus and potassium spread; fixed costs are expected to be €67,524. This includes land lease and contract-rearing costs, as well as €10,000 for labour. This leaves €86,224 available for tax, drawings and loan



Brendan Phelan and Hugh MacEneaney.



Brendan Phelan has been crossbreeding for over a decade and the results are showing. Average fat and protein last year was 4.85% and 3.83%

Figure 1

Brendan Phelan's projected cashflow for 2016



Summary

Having a resilient farm system of high EBI Jersey x cross, selling high milk solids at a high price 0.5c/l above the base, has insulated Brendan somewhat against the fall in milk price.

"Completing a cashflow budget has given me some peace of mind," says Brendan. "I know what I can expect to take in on the farm and also what the outgoings are going to be for the current year. The budget can be altered at any stage as milk price changes."

Finally, Brendan should be commended for opening up his farm financial performance figures for the benefit of others.

repayments, which are expected to come in at around €77,000. This means that the cash surplus for the year will be just over €9,000.

"There isn't much more room to manoeuvre. We have cut back on meal and fertiliser but I'd be slow to cut back much more. I'm going to continue to use AI. We had stock bulls last year but, I'm not going to buy them this year," Brendan says. "Output is the big unknown – only time will tell how well the cows will produce."

Presuming the current account begins at zero, Brendan's cash position will be negative from January until October (Figure 1). At its lowest point in May, the farm was €45,000 in cash deficit. Brendan said that he would normally be cash positive in June or July, but the lower milk price is delaying it this year.

"The scary thing is that if the current account started out at minus €10,000 or more at the start of the year, then we would never get into a cash surplus position. If that was the case, we would be looking at capitalising some of the capital expenditure work done last year out of cashflow, which really should have been borrowed anyway," Brendan concludes.

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Part-time beef farmers rise to the challenge

Increasing output on beef farms is vital for profitability. These Limerick farmers show that the difficult transition is possible, and worthwhile

Pat Blackwell and Pdraig Fitzgerald
Teagasc, Kilmallock, Co Limerick

The National Farm Survey estimates that 56% of suckler farmers have an off-farm income. This may result from the farmer having a job, his partner having a job or in some cases both. Combining profitable beef farming with off-farm employment can be a challenge because:

- The price of beef is less than the cost of producing it on the majority of beef farms.
- Part-time farmers have limited time for farming. As a result, many reduce stocking levels.
- Low stocking rates result in low production levels. At low production levels, the fixed costs of running the farm can't be covered.
- Some part-time farmers are not driven by farm profit.

Seamus O'Loughlin who farms near Bruff, Co Limerick, illustrates the issue of part time farming. A number of years ago, Seamus changed from selling weanlings to finishing cattle. To improve his farm's financial performance, he needed to increase his farm's stocking rate.

He purchased extra dairy-bred animals rather than increasing his suckler cow numbers because he had limited housing and regarded higher numbers of suckler cows as a more labour-intensive system. His home-bred animals were grouped with the dairy-bred calves. All cattle were then held on the farm until they

were slaughtered at an average of 23 months.

Why do more farmers not change an unprofitable system?

During this transition, Seamus realised that the number of hours he needed to commit to farming was only one of the problems. Managing cashflow while expanding became his biggest headache.

The large increase in the stock numbers on the farm had a major effect on cashflow because the extra cattle being retained cost money to keep on the farm. Seamus is glad that he made the move but he remembers the three years it took to fully adjust as being difficult. "The problem was not in buying extra stock; the hard part was holding on to the cattle until they reached finishing stage," he says.

Preparing for a system change

Seamus completed a Teagasc eProfit Monitor in 2011, prior to changing his system. His gross margin was €141/ha, at the lower end of what we see in beef eProfit Monitors. The dramatic increase by 2014 was clearly worthwhile but was not easy.

"The biggest issue during the transition is cashflow," says Seamus. If it wasn't for my off-farm job, I would not have been able to make progress as quickly."

Some of the main costs which increased significantly are listed below. The presence of off-farm income allowed him to survive in the lean year that followed his decision to hold on to cattle and drive up the stocking



rate. Increasing the stocking rate will increase costs on the farm. The main increases are listed in Table 2.

These cost increases might look intimidating to farmers who are considering moving from a weanling system to a finishing system. The loss of farm sales in 2011 was a tough time and it was not until the end of 2013 that Seamus felt he was over the worst. "Some simple tools helped and I would recommend them to other farmers," he says.

- Seamus employed a professional accountant with a lot of agri experience to handle his accounts and tax affairs.
- He joined a local beef discussion group where he was able to discuss problems with other farmers.
- He completed a Teagasc eProfit Monitor each year and found the multiple-year report it creates a very important farm management tool.
- He set up a separate farm bank account, which deals with all farm sales and purchases and expenses.

Many farmers allow their off-farm income to mix with their farm

Table 1

Year	2011	2012	2013	2014	2015
Area farmed	26ha	26ha	26ha	26ha	26ha
Stocking rate LU/ha	1.18	1.37	1.78	2.16	2.14
Gross margin €/ha	141	431	592	867	952

Table 2

Year	2011	2012	2013	2014	2015
Cattle purchases	2,340	15,540	12,919	25,800	17,841
Purchased concentrates	1,280	4,520	7,080	6,651	6,120
Fertiliser	1,614	2,250	7,754	5,290	4,980



income and expenses. This can lead to overspending in times of cash surplus and a cash shortage situation during the periods of the year when a beef farm is not be creating sales.

Pat Blackwell and Seamus O'Loughlin.

Taking on the challenge of system change without going broke

Increasing numbers of young people are returning to farming post-Celtic Tiger. Like Seamus, many of these people work off-farm too. They are very interested in driving up farm production levels.

When a young beef farmer requests advisor assistance, we generally encounter a number of common issues:

- The farm is coming from a low production base.
- They are often married with a young family working off-farm and this creates time and labour constraints.
- They regularly have personal borrowings such as a mortgage or pre-existing farm loans.

The first step should be to perform a financial examination of the farm. Some farms are so significantly borrowed that a system change could trigger a cashflow crisis on the farm. How you manage your own specific issues will determine whether you increase farm profitability or run out of cash before you achieve your goal. The key is to plan and prepare before you embark.



Continued on next page

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Case study 1

Farmer at the beginning of a system change and how he is preparing for the move

Shane Gleeson is a part-time farmer who wants to make the move from weanling-selling to finishing. Shane is from Cappamore in Limerick. Shane has a young family and both he and his wife work outside of farming. Over the last 10 years, Shane has achieved a considerable amount on his farm.

- He has purchased land adjacent to his own farm.
- He has invested in cattle housing.
- He has increased suckler cow numbers on the farm from 30 to 50.
- He has completed reseeded on a large portion of the farm.

Shane was reared on a farm that sold weanlings and, as a result, he feels that he is short on experience to make this transition to finishing cattle.

To make the jump, he will need to learn the skills needed to finish cattle. Shane has also started a rigorous financial examination of his farm. He knows his stock sales need to increase significantly from their current base while retaining sufficient sales to cover farm loans and expenses. Other steps he has taken are:

- He is completing a five-year plan for the farm.

• He has completed 2013, 2014 and 2015 eProfit Monitors. These will be used as the base for completing the farm plan.

Shane needs to see a picture of stock figures over this period. This will allow him to plan sales and purchases. Using the farm plan, he can forecast his expenses and monitor his financial performance. Extra spending will be identified before it becomes a cashflow problem. Like many weanling sellers, Shane is currently operating at a low gross margin. The sales on the farm are covering the variable costs such as veterinary fees, contractor and feed costs. However, current sales only cover some of the fixed costs.

Table 3

Year	2013	2014	2015
Stock sales/ha	1,117	847	830
Variable costs	589	574	592
Gross margin	527	273	238

Direct payments are then used to cover the remainder. His recent Teagasc eProfit Monitor figures are listed below. His farm sales in the last two years have dropped as he has increased his cow numbers. 2016 should show an increase in farm sales as he plans to reduce cow numbers in order to retain weanlings for the year ahead.

As stated earlier, he needs to maintain a reasonable rate of cash flowing through the farm to meet all financial commitments. It looks likely that Shane will increase his gross margin at a slower and more steady rate than the rate of increase Seamus O'Loughlin targeted.



Shane Gleeson and his children.



Case study 2

Farmer aims to increase production but is facing obstacles

Cian McAuliffe is from Athlacca, Co Limerick. He also wants to increase farm production but is encountering different obstacles to those experienced by Seamus O'Loughlin and Shane Gleeson. Cian is a young trained farmer, married with a young family and he is also working off the farm. Cian has car-

Summary

The plans by Shane and Cian to increase farms profits are to be commended. Seeing a farmer like Seamus O'Loughlin who has successfully completed the move is a source of reassurance to them and to others that it can be achieved. However, it is difficult and you must plan carefully how you are going to increase output levels on your own farm.

As you can see with Seamus O'Loughlin, increasing stock numbers will increase costs. You will be worth more on paper but the amount of available cash will be tight as your money is converted into extra stock, which might not be readily available for sale.



Seamus
O'Loughlin

advises everyone making the move to finishing cattle to carry out the rigorous planning that Shane and Cian are undertaking

Personal drawings will be under pressure during the transition. Prior to changing his system of farming, Seamus O'Loughlin felt that he was in a fight to break even each year. Since 2013, however, he has been able to reinvest farm income developing the farm. It has allowed him to reduce his farm borrowings.

While it was not an easy journey he is glad he did it. He encourages others to change their system like he did. He strongly advises everyone considering the move to carry out the same rigorous planning that Shane and Cian are currently undertaking.



Cian McAuliffe and
Padraig Fitzgerald.

ried out a lot of development and improvement works on his farm in recent years. Cian purchased the farm in 2006 and had to develop all the animal housing on the farm as there were few facilities present when he took it on.

His system is currently suckler to weanling; selling the weanlings at the fall of the year. Teagasc eProfit Monitors completed over the years showed that the system was not covering the costs of keeping the cows and running the farm. Cian found himself dipping into his off-farm income to keep the system running. This was not a problem when Cian was single and had no family, but now these take priority

and often the farm is left running a deficit. Like the other case studies, Cian is coming from a low stocking rate of approximately 1.0 LU/ha. His 2015 eProfit Monitor showed a gross output of €599/ha with variable costs at €492/ha. This leaves €108/ha of a gross margin. Cian realises that output is the key to increasing the gross margin as his sales are too low.

He has identified eight key issues:

- A five-year plan must be completed and put into place.
- Access to funding will be necessary for the expansion. If he is expanding his stock numbers, he will need to hold on to stock or buy additional stock.

- Cashflow will need to be well planned so as not to run into difficulty in the future.
- Cian will need to implement a re-seeding plan on the farm to improve grass production for the extra stock and install a paddock system.
- Soil fertility must be improved as soil samples show low indices for P and K.
- Additional housing and slurry capacity will be required for the extra stock to be carried over the winter period or for finishing.
- It needs to be a flexible system so as to take advantage of market changes.
- Finding access to extra bank funds at a reasonable rate will be a challenge.

Measuring grass with a sward stick

Frank Hynes

Sheep Specialist, Animal and Grassland Research & Innovation Centre, Teagasc, Mellows Campus, Athenry, Co Galway

The sward stick described here is a simple, cheap method of measuring grass and the height can be correlated to dry matter yield. It is convenient and can be easily carried in your pocket or the toolbox on your tractor.

Farmer experience

Michael and John Prendergast from Roundfort, Hollymount, Co Mayo, joined the Sheep BETTER farm programme in 2015. They run a flock of approximately 300 ewes and 160 ewe hoggets, kept from last year's lamb crop with a view to increasing the flock size.

Since joining the programme, they measure grass regularly, weekly during spring and throughout the summer. John has used both the plate meter and sward stick to measure grass height. He says that by measuring grass height, there is no longer ambiguity as regards what something like 4cm or 6cm means.

Michael says what you do with the measurements is equally important. For example, when grass height is reduced to 4cm, sheep are getting hungry and should be moved to better grass. Similarly, when the average height in a paddock is 8cm to 9cm, it is important to know that the pasture is at risk of getting too strong and stemmy. John points out that by looking ahead at all of the paddocks, you can plan to remove surplus grass by making silage or by introducing extra livestock to ensure quality grass is available for livestock and to maximise animal performance.

Decisions based on grass height

Many grazing decisions can be made on grass height alone. For this reason, and for simplicity, the sward stick is colour coded.

To measure the grass, you simply

insert the sward stick into the grass, placing the bottom edge on the soil surface. Check to find what you think is the average height of grass making sure to take into account very short grass and bare patches on the ground. When grass height matches the green area of the sward stick, it should be allowed to grow until it reaches the upper end of this green area. At the upper end of the sward stick, the colour changes to yellow and then orange.

During the spring and summer, it is important to graze the grass before it grows past the green area. Otherwise, there will be a buildup of stem and dead material at the base of the sward and quality will deteriorate. However, grass quality does not deteriorate as quickly in autumn so you can allow grass height to increase. But even then, it needs to be grazed before going beyond the orange mark.

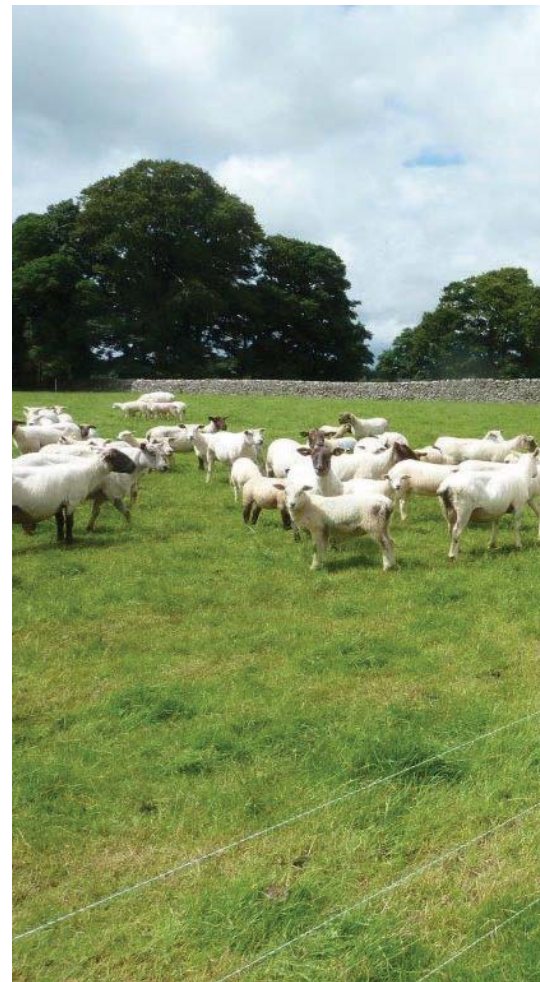
At the lower end of the sward stick, the colour changes to yellow, then orange, then red. As the grass height matches the yellow at the lower end of the sward stick, you should consider moving animals out from the paddock as grass is getting scarce.

In the early part of the season from early spring until late April or early May, you should graze below this, into the height marked by the orange colour. This is done to graze out the pasture and prevent a buildup of unwanted dead grass at the base of the sward early in the year. This is also advisable before closing paddocks for resting over winter.

The lowest end of the sward stick is coloured red. Animals should not be grazing grass at this height as they will not have enough to eat. If grass height is in this region, and you are forced to graze due to a shortage of grass on the farm, animals will need supplementary feed such as concentrates and/or silage.

Measuring grass yield

When we measure grass, we can quantify how much grass dry matter is available. We can then plan how we should graze it and how long it should



last. This is similar to calculating how much silage is left in the pit, how many bales of silage you have in the yard, or how much meal you have in store.

Once you know how much you have, you can calculate how long it will last, based on the amount your animals will eat each day or you may use this information to make other management decisions. What we expect to grow over the days and weeks ahead is also useful in planning a grazing rotation. There is a close relationship between average grass height and dry matter yield. By measuring the average grass height, you can estimate how much grass dry matter is available for your animals.

The sward stick

The sward stick on page 21 is marked in graduations of 1cm. Swards grazed by sheep tend to be thicker than those grazed by cattle. Therefore, there are two different scales, one on each side. You should use the most appropriate one depending on the sward you are measuring.

Corresponding yields

As grass regrows, when we measure grass height, we measure what is



John Prendergast and his father Michael from Hollymount, Co Mayo, joined the BETTER farm sheep programme in 2015.

available above 4cm. When the average grass height is measured, there will be some grass in the field above and some below that height. This is what gives rise to an average.

At an average grass height of 4cm, there is approximately 150kg of grass dry matter available. In pasture normally grazed by sheep, for every 1cm increase in grass height, there is an increase of approximately 300kg of dry matter per hectare. The corresponding figure per cm in cattle swards is 250kg of dry matter per hectare. These yields are reflected on the sward stick.

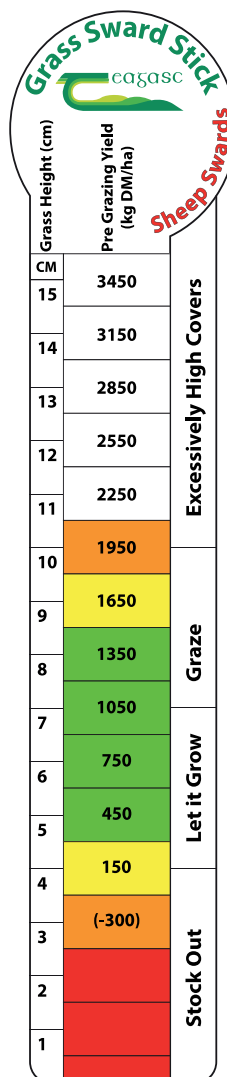
Taking a couple of examples, for a sheep sward, if we look at the 6cm mark, we read a corresponding yield of 750kg DM. This tells us that there is 750kg of grass dry matter available for grazing animals when the average grass height is 6cm. Similarly, if we look at the 8cm mark, we read a corresponding yield of 1,350kg DM indicating 1,350kg of grass dry matter is available when the average height is 8cm.

For cattle swards, if we look at the 7cm mark, we read a corresponding yield of 900kg dry matter available for grazing animals when the average grass height is 7cm.

To carry out the measurement

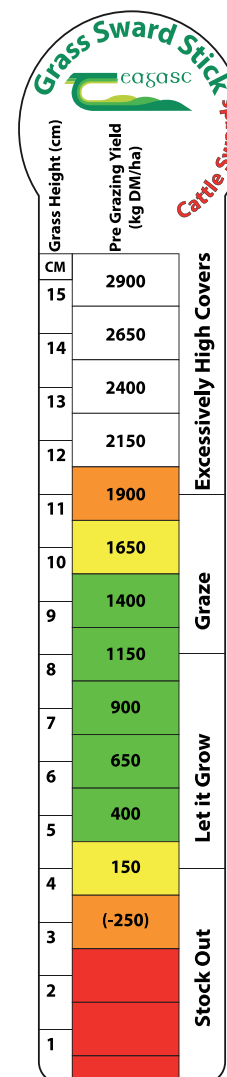
Front of ruler

(with bevelled edge)



Back of ruler

(flat back)



- Select the correct side of the sward stick, either sheep or cattle depending on the sward you want to measure.
- Insert the sward stick into the grass, placing the bottom edge on the soil surface.
- Find what you believe is the average height of grass allowing for very short grass and bare patches with no grass, bringing down the average height. Read the corresponding yield.
- Do this a number of times for each paddock, especially until you become familiar with taking the measurements.

On a sheet of paper, prepare a table like the one below and fill in the relevant details. Into the first column, write the name or number of the field or paddock. In the second column, write in the area in hectares. As you measure the grass height and yield, fill in the corresponding figure for each paddock. Multiply the area by the yield for each paddock and write this into column C. This gives the total yield for that paddock. By adding the figures in this column, you get the total yield.

Field number or name	A Field area (ha)	B Grass yield (kg DM/ha)	C Total kg DM (A X B)
Total			

business management

Avail of valuable tax reliefs for a fragmented farm

James McDonnell
Financial Specialist,
Teagasc Rural Economy and
Development Programme

Budget 2013 included a new relief on capital gains tax (CGT) for agricultural land transactions leading to efficient farm restructuring. The relief is aimed at improving the viability and efficiency of farm holdings. But you need to act soon or you may miss out.

Farm fragmentation is actually increasing in Ireland. Figures from the Central Statistics Office show that the average number of separate land parcels per farm in Ireland has gone from 3.1 in 2000 to 3.8 in 2010. In 2010, 80,000 farms consisted of three or more separate land parcels.

The size of the milking platform, rather than milk quota, has become the major limitation on dairy expansion. Tillage and drystock farmers considering a switch to dairying need to have a decent block of land to set up a milking platform.

Fragmentation means cows may not be able to walk to the parlour on dairy farms.

Regardless of the enterprise, fragmentation adds to costs and reduces the operational efficiency of the farm. Extra labour, travel time, stock movement and inspection, extra machinery and facilities and crossing roadways are among the issues that arise.

Farm restructuring

The Food Wise 2025 report has set a strong challenge to farmers and land fragmentation is one potential stumbling block to achieving these targets. New competitive challenges will also drive the need to reduce fragmentation and consolidate holdings.

But land transaction requires you to make a tax return, and the tax cost of selling land can be punitive. What's more, tax must be paid even if the proceeds of a sale are reinvested in land.

The new relief introduced in Budget

2013 reduces the taxes associated with buying and selling land. There are two taxes on land transactions:

- Stamp duty charges on land purchased (current rate is 2%).
- Capital gains tax on land disposed of during your lifetime (current rate is 33%).

Restructuring your farm may not be as straightforward as swapping a field with your neighbour. A transaction could involve 10 fields with five separate parties. This kind of transaction is difficult to organise, and a broker or intermediary could be used to help ensure that the transaction actually gets completed.

It is the individual's responsibility to familiarise him – or herself – with the amount of capital gains tax payable and any relief available. Taxation and legal advice should be sought prior to entering any transaction.

Capital gains tax

When a farmer "disposes of" farmland during their lifetime, by sale, gift or exchange to another person, CGT rules apply. CGT on the lands disposed of can be substantial if the land has been in your ownership for a significant time and has therefore risen in value.

Farmers over 55 years old may be eligible for CGT retirement relief if they satisfy a number of conditions. Check the CGT calculations with your accountant before disposing of land.

Indexation relief (adjusting the value of the lands for inflation) may also apply for lands owned prior to the first of January 2003.

CGT on agricultural land transactions

Budget 2013 included a new relief on capital gains tax for agricultural land transactions, leading to efficient farm restructuring.

The relief is aimed at improving the viability and efficiency of farm holdings. It provides a relief of capital gains tax where a farmer sells and purchases qualifying land in order to consolidate his/her farm.

The sale and purchase transactions for qualifying land must be within 24 months of each other and must also

be within the scheme period (1 January 2013 to 31 December 2016).

Pre-requisites for CGT relief

- 1) A parcel of land is sold by an individual farmer (or, where sold by more than one individual jointly, at least one of the individuals is a farmer).
- 2) Where a parcel of land is purchased by the same individual farmer (or where purchased by more than one individual jointly, at least one of the individuals is the same farmer who had sold a piece of land in 1)).
- 3) The sale and purchase occur within 24 months of each other and the initial sale or purchase of land took place in the period between 1 January 2013 and 31 December 2016.
- 4) The interaction of the sale and purchase together result in an overall reduction in the distance between parcels comprising the farm, including land that has been leased for at



EXAMPLE

Potential savings on CGT

- John sold parcel A (10ha), which is five miles away for €260,000 with disposal costs of €6,000, giving a net disposal value of €254,000.
- John purchases parcel B across the road from his farmyard (12ha for €270,000); both parcels are qualifying land.
- Parcel A was acquired in February 1982 for a cost (including expenses) of €30,500.
- This acquisition cost is adjusted upwards for inflation (indexation relief) using the CGT multiplier $€30,500 \times 2.678 = €81,679$.
- $CGT = €254,000 - €81,679 = €172,321$.
- Deduct annual CGT allowance €1,270.
- $CGT\ saving = €172,321 - €1,270 = €171,051 @ 33\% \text{ tax} = €56,447 \text{ tax due}$.
- He now qualifies for restructuring relief (by achieving less distance between land parcels) and obtains a farm restructuring certificate from Teagasc.
- The value of land sale exceeds the purchase all proceeds were invested.
- The saving in this case is €56,447.



Regardless of the enterprise, fragmentation adds to costs and reduces the operational efficiency of the farm.

least two years with a minimum of five years to run.

5) There is a reduction in the fragmentation of the farm and an improvement in the operation and viability of the consolidated farm.

The sale of an existing farm and the replacement of it by the purchase of another farm is not farm restructuring for the purposes of this relief.

What is a parcel of land for the purposes of the relief?

A parcel of land means an entire field or group of fields.

Qualifying land

Land sold and purchased as part of a farm restructuring must comply with the following conditions:

- The land must be in the Irish State.
- The land must be agricultural land as defined in Section 604B TCA. As the definition of agricultural land does not include afforested land,

peat land, or habitable dwellings, the value of these should be deducted by the individual claiming relief when the relevant chargeable gain is being calculated.

Note: Land sales under compulsory purchase orders will not qualify.

Conditions to satisfy

When applying for farm restructuring relief to the Revenue Commissioners, the farmer must sign a declaration that it is his/her intention for a period of five years from the date of execution of the deed of transfer to:

- Spend not less than 50% of his/her normal working time farming.
- Farm the lands purchased.
- Retain ownership of the lands.

Farm restructuring certificate (FRC)

The FRC is a certificate issued by Teagasc to the farmer restructuring his/her farm where the sale and purchase transactions meet the restructuring

conditions. If the restructuring conditions are not met, Teagasc will give reasons why it cannot issue an FRC and there is scope to appeal.

The farmer applies to Teagasc by filling out the FR1 application and supplying supporting documentation for existing lands owned and farmed and the sale and purchase transactions. Documentation required includes legal documentation, maps of the lands, LPIS numbers under the Single Payment System, etc.

Contact

Farmers who purchase/sell land parcels to restructure their farms may be eligible for valuable capital gains tax relief under the new Farm Restructuring Relief. If you are planning to restructure your farm, the first transaction must be completed by the 31 December 2016. Contact your local Teagasc office or www.revenue.ie for copies of the scheme documents.

A new era in pig research

Amy Quinn and Tomás Ryan
Teagasc Animal and Grassland
Research & Innovation Programme

Pig production in Ireland ranks third in importance behind beef and milk production, accounting for 8% of gross agricultural output. At least 1,300 labour units are employed on pig farms, with the total number employed in associated sectors such as pigmeat processing, feed manufacture, haulage and services estimated at 8,300. There are 290 commercial sow herds in Ireland and the June 2015 CSO Livestock Survey reported that there are 1.54 million pigs in Ireland, including 149,300 breeding sows.

In 2015, Ireland exported an estimated 230,000t of pigment, worth approximately €570m. The UK was the main Irish pigmeat market receiving 40% of the total, 25% was exported to other EU countries with the remaining 35% going to other international markets.

Teagasc Pig Development Department

The Teagasc Pig Development Department provides a knowledge transfer (advisory), research and education/training service to the pig sector.

The purpose of the Teagasc pig programme is to support pig producers by providing research, advice and education. "The focus of the programme is to improve profitability and increase productivity, while operating to the highest standards of pig welfare and to produce quality pigmeat while adopting best practice to protect the environment," says Ciaran Carroll, head of the Pig Development Department.

To secure and further improve its services to the pig sector, the Teagasc/IFA pig joint programme was established. Under the joint programme, producers contribute 10c per pig towards Teagasc pig research, knowledge transfer and education/training, over an initial five-year term which began in 2013. This money has funded two additional researchers, one research technician and three specialised advisors.

New research facility

To further enhance the Teagasc pig research programme, a new 200-sow pig research facility has been built and recently opened in Teagasc Moorepark. The previous facility was over 40 years old. The new, state-of-the-art facility will enable researchers to conduct cutting-edge research.

The unit comprises two new buildings, a breeding building and a separate finisher building.

The first of the new buildings is a 2,500 square metre structure, which will house the breeding stock as well as weaners. It has 62 farrowing places (six of which are suitable for loose farrowing research) and can house 160 dry sows and gilts on three electronic sow feeding stations. There are three weaner rooms, each holding 360 weaners.

As well as this, Teagasc also has some bespoke accommodation for more detailed research work such as a metabolism room for digestibility studies, an animal care room for detailed animal examinations and group feed intake recording equipment (FIRE stations).

Both weaners and sows have their own feed system and each system has two feeding circuits. This gives great flexibility in feeding frequency and delivery as dry sows and lactating sows can be fed different experimental diets at the same time.

Supplying these systems, we have 17 silos to cover a wide range of experimental diets and allow us to carry out multiple experiments concurrently across the building. The Moorepark herd will run as a seven-batch herd with farrowing taking place every three weeks.

The first of the breeding stock arrived at the unit on 6 June and the first batch has already farrowed. These animals had been artificially inseminated off site at a quarantined location and served in batches of 30 sows.

Finishers

In parallel to the sow and weaner building is a 2,000 square metre 'finisher' building. This

Pig production in Ireland ranks third in importance behind beef and milk production, accounting for 8% of gross agricultural output.



In 2015, Ireland exported an estimated 230,000t of pigment, worth €570m



Ciaran Carroll

CURRENT RESEARCH PROGRAMME

The Teagasc Pig Development Department has already started trials in the new facility, with many more due to begin in the coming weeks. In addition to these projects, the research team will continue several of its projects that are conducted off site on commercial farms. The current programme covers a broad range of commercially relevant topics, such as nutrition, performance, management, health and welfare. The current projects are investigating:

- The relationship between gut microbiota and feed efficiency.
- Feed enzymes as a means of improving feed efficiency.
- The use of NE systems in an Irish context when formulating pig diets.
- Feed strategies on Irish farms for the improvement of production and feed costs.
- Gilt rearing strategies on gilt health, performance, longevity and the offspring productivity.
- Methods to optimise annual output per sow by increasing the number of viable piglets born alive and minimising pre-weaning piglet mortality.
- The development of an economic model of pig production for the Irish industry.
- Respiratory pathology, risk factors and relationships with other pathologies, while developing low-cost diagnostic tools.
- The relationship between lesions identified in the slaughterhouse and welfare conditions on the farm.
- The relationship between antimicrobial usage and the welfare status of pigs.
- The problem of how to provide manipulable material to prevent tail and ear biting in slatted systems looking at straw use, and two more experiments looking at wood types.
- Aggressive behavioural pig phenotypes.



A 200-sow pig research facility recently opened at Teagasc Moorepark.



building will hold over 1,300 finishers divided into four rooms of 330 pigs. There are also individual pens for detailed research work as well as an indoor lairage area and finisher FIRE accommodation.

As in the breeding building, the finishers have their own feed system, which will allow several experimental diets to be fed at the same time. To the rear of this building are a further 10 silos supplying experimental diets to this area of the facility.

Alongside these new buildings, Teagasc also has two pre-existing buildings, which have been refurbished over the last few months. One of these buildings has just been fitted out with a new wet feed system. This feed system, coupled with a new 36 pen layout, allows us to carry out multiple diet experiments with a single batch of finisher pigs.

A walk-through of the new Teagasc pig research facility in Moorepark

took place on 30 May, with over 200 producers and industry stakeholders taking part.

This provided farmers and industry stakeholders with the opportunity to explore our new research farm and find out more about the research facility and the work we will be able to undertake here.

This was conducted prior to the stocking of the unit to preserve the biosecurity of incoming herd. We look forward to providing our industry stakeholders with the most up-to-date research possible for many years to come with the aid of our state-of-the-art research facility.

The Pig Development Department would like to thank the many pig farmers who have been involved in a number of its projects in recent times and the department looks forward to further collaborations and the dissemination of these research findings at national events and in publications.

Monitor, manage and move forward

Financial measurement and planning are key to profitable farming and crucial when aiming to expand

Kevin Connolly
Teagasc Farm Management and Rural Development, Monaghan

Establishing your current farm financial performance is the basis for understanding how your farm generates profit. The first step is to bring together all the financial information for the farm for the last year, so that a few measures can be established to “take the temperature of the business.” Taking the time to pull together income and expense information to track financial progress during a given period of time (typically 12 months) is well worthwhile when assessing how the farm is performing financially.

The seasonality of many cattle systems means there is often an overlap of batches of cattle on the farm and therefore assessing financial performance is seen as a difficult task but, remember, the information you need is often the same as that gathered together for the accountant every year.

Money comes in by way of stock sales and direct payments (Basic Payments and other premia) and leaves to meet stock purchase costs, as well as to cover farm running costs such as feed, fertiliser and veterinary costs, among others.

Teagasc has a very useful farm “cash in-cash out” recording tool called the Teagasc Cost Control Planner (CCP), which can be used on your computer to record your financial data during the year. By using the CCP throughout the year, all of the farm financial information required for your full-year financial analysis using the Teagasc eProfit Monitor will be easily available.

Looking for trends in your finances

The Teagasc eProfit Monitor system takes information on the income and expenses of your business and puts them in a suitable standard layout to allow you to check how the farm per-

formance compares from year-to-year and also how it might compare with other similar farms.

The maximum benefit from the information can be extracted if a number of years are looked at in sequence – trends in the figures can be seen and the influence of one-off rises or falls in livestock prices or feed/fertiliser prices can be eliminated and the underlying trends in performance observed.

A key advantage of the eProfit Monitor is that it also measures some of the non-financial characteristics of the farm such as total hectares farmed, stocking rate and cattle output measured in kilogrammes of animal liveweight.

The eProfit Monitor creates a link between these farm physical measures (hectares of land used/kilogrammes of liveweight produced with the financial measures (money received and spent).

The system breaks the financial story of the farm year into the broad categories of gross output, variable costs, gross margin, fixed costs and profit. The results that come back from the eProfit Monitor provide a picture of what happened in financial terms on your farm in the last year – what was sold, how much it cost to get it to sale and what it cost in overall terms to run the farm for the last year.

Awareness of your costs of production is vital in a business where profit margins are often tight. The knowledge of what your farm's costs are when expressed per kilo of output or per hectare will help you make decisions around:

- What production system is most profitable for your farm?
- Where you buy in stock, it can help you set your maximum purchase price so that you can generate a margin when the time comes to sell.
- At what input purchase price does it make economic sense to utilise high-cost inputs, such as concentrates, to help you bring stock to the point of sale?

Compare – benchmarking in action

However, just measuring the financial performance of your farm is usually not enough to give you the answers to the questions above. The next step is to compare (benchmark) your farm financial and physical measures against another set of measures to



Key messages

A Teagasc eProfit Monitor will help to:

- Establish current levels of performance both physical and financial.
- Benchmark own performance against others with similar systems.
- Monitor progress on your farm over time.
- Identify areas of weakness that need improvement.
- Guide you in setting realistic targets to improve future profitability.

ACTION

Targeting areas for improvement

Once you have teased out what makes your business tick financially, then you should start to think about putting a plan in place to improve the areas you have identified that are holding back your farm profitability. Your advisor can be of considerable assistance here in helping you to:

- Identify key areas for improvement.
- Set targets for what your financial performance should be and put a timescale on achieving these targets.
- Specify the actions needed to achieve these targets with an emphasis on key day-to-day farm management decisions that you need to follow.

To keep you on track during the year you can again use the Teagasc Cost Control Planner. By converting your targets into actual monthly cash in-cash out targets you can set up a cashflow budget to track cash income and spending during the year. As you record your income and expenses during the year, you can check to see if the actions you are taking to improve the profitability of the farm are having the effect you hoped for.

The final step at the year-end is to complete another eProfit Monitor and check by benchmarking against the previous year if you have made financial progress.

If you want to avail of the Teagasc eProfit Monitor service or get a copy of the Teagasc CCP, then contact your local Teagasc advisory office or contact us by email on profit.monitor@teagasc.ie



The Teagasc eProfit Monitor helps you to record expenditure on your farm, such as reseeding.

help you identify areas of difference, which you can then examine further.

The first comparison is often with your own farm figures from the previous year – that's if you have completed an eProfit Monitor for at least two years. This can tell you a lot – and it can help tune you in to how the figures in the eProfit Monitor reports relate to the year's events on your farm – events such as the number and type of stock sold, the regular spending on inputs, as well as the exceptional spending on items such as building investment and reseeding.

Explain – linking the financial to the physical

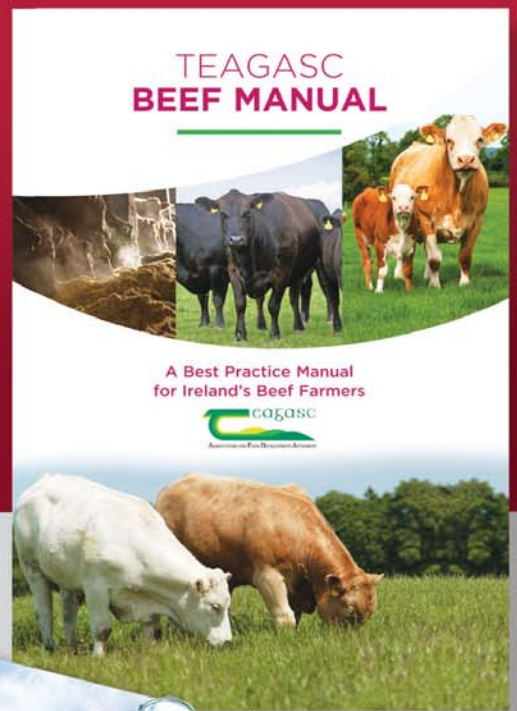
Once you have a reasonable understanding of the farm's financial progress during the year and you can link it back to the actual physical sales of stock and usage of inputs, then you are in a position to begin to compare the farm against other farms operating similar production systems on similar land types.

Those farmers who are members of discussion groups where the eProfit Monitor information is shared can look at performance of other group

members and gauge their own farm performance against them. This is very useful, especially if you can tease out what these other farms are doing differently that results in them achieving better financial results.

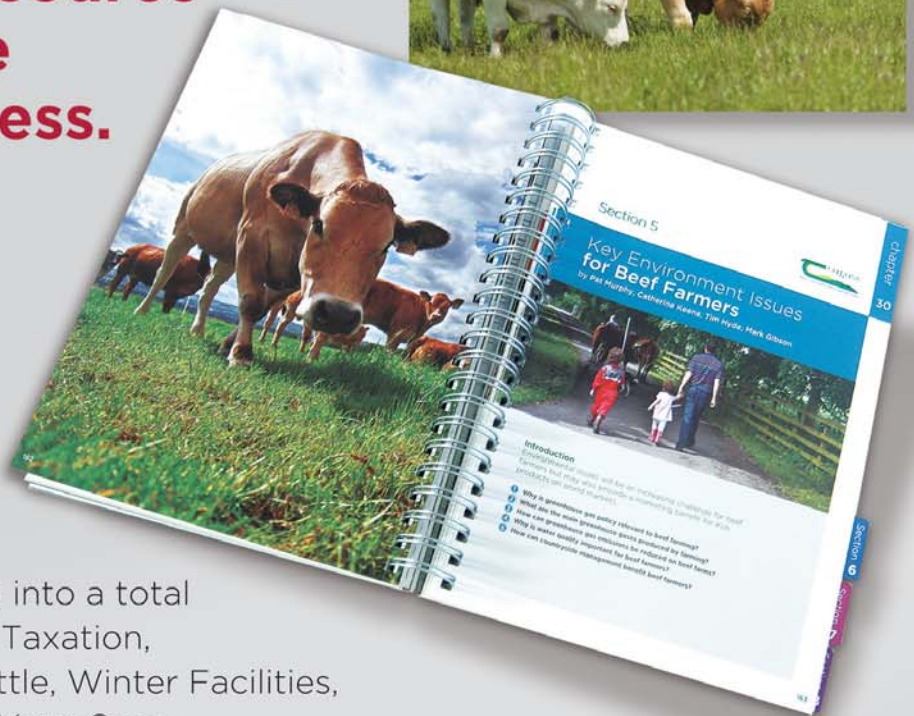
- If you are not a member of a discussion group, you can also get some guidance from the national annual summary Drystock eProfit Monitor analysis produced by Teagasc and available on www.teagasc.ie.

TEAGASC BEEF MANUAL



A comprehensive source of practical advice for any beef business.

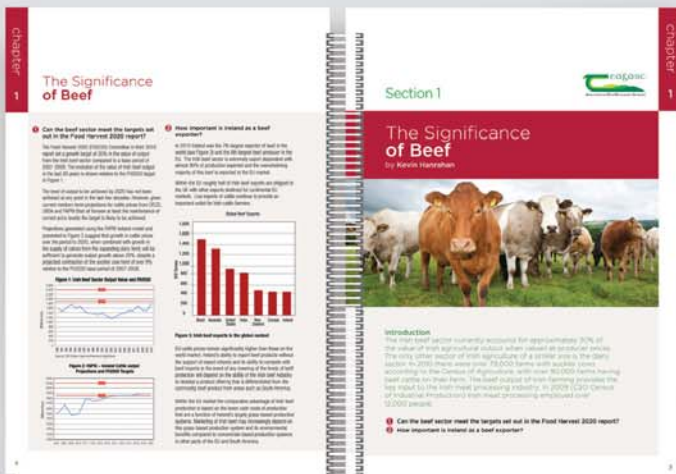
- Beef Farming
- Farm Business Management
- Beef Systems
- Breeding
- Soils & Environment
- Nutrition
- Animal Health
- Infrastructure



These sections are further divided into a total of 52 chapters with titles such as: Taxation, Making Money from Bought In Cattle, Winter Facilities, Feeding the beef 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 beef farming the 310-page Manual is produced using tear-proof, water-proof paper for real world conditions.



**REVISED AND
UPDATED
FOR 2016**

The Teagasc Beef Manual is available at Teagasc offices for €50. For a limited time Teagasc clients can purchase copies for €25.

Lime adds life to your land and profit to your pocket

This article looks at an initiative by Teagasc and Kerry Agribusiness to improve the low pH on farms in the southwest

Ger Courtney
Teagasc, Co Kerry

In conjunction with Kerry Agribusiness, Teagasc has embarked on a campaign to rectify the seriously low pH in soils on many dairy grassland farms in the southwest.

Soil analyses for 2015 (dairy farms) indicate that 80% of soil samples in Co Kerry and Co Clare are less than pH 6.3. More than 60% of soil samples in Co Limerick are also sub-optimal. The high annual rainfall in the southwest is a part of the problem, so is low rates of application. At least two tonnes/acre every five years are needed in high rainfall areas across the country simply to maintain pH.

Letting pH drop can lead to serious losses. At a pH of less than 5.5, biological activity is greatly diminished resulting in a poor response to applied fertilisers and locking up of applied phosphorus. The consequence is a significant loss in grass production, especially in the key spring and autumn periods.

Recent analysis from the Teagasc Heavy Soils Programme showed that grass growth increased by two tonnes DM/ha when the pH was increased from 5.5 to 6.3. So, what are the barriers to applying a simple, cheap product such as ground limestone on a regular basis?

In a recent survey of the Mid-Kerry Young Farmers Dairy Discussion Group, 42% indicated that weather opportunities were a barrier to applying required lime application, cashflow was cited by 30% and paddock availability by 28% of the group.

Clearly, lime needs to be planned as a key part of the annual fertiliser programme. Based on soil analysis, the tonnes of lime required can be established and the fields requiring lime clearly identified.

» Continued on next page



Lime needs to be planned as a key part of the annual fertiliser programme.

One of the group members Dan Daly, Milltown, Co Kerry, recently hosted a grassland farm walk and spelled out the benefits of lime application on his 40ha milking block carrying a herd of 100 spring-calving cows.

“Soil tests four years ago showed my farm needed over 400t of lime,” says Dan. “It wasn’t a priority for me, but I was seeing a lot of paddocks with poor grass growth. Last year, I took the plunge and applied 100t of lime in the spring, at 2t/acre. I’ve seen dramatic improvements in the grass and less dead material in the base. Grass looks healthier and grows faster, especially after nitrogen application.



Lighter soil types leach lime quickly

from the soil, but pH can also be corrected easily. The average pH increased from 5.4 to a pH of 6 on the paddocks that received lime

“I’ve been able to keep some grass in the cows’ diet every day since 10 March in this tough spring.”

The application was the equivalent of one tonne of lime for each cow in the herd. That is the level you need to apply if you are serious about correcting a deficiency.

Dan’s farm is a good free-draining soil type, but located in a high rainfall area (approximately 1,800mm). Lighter soil types leach lime quickly from the soil, but pH can also be corrected easily. The average pH increased from 5.4 to a pH of 6 on the paddocks that received lime.

Dan explains: “My parents put on lime every year but, in my development phase, I took my eye off the ball and didn’t see the benefit of spending money on lime... now, I see the way it has turned my paddocks. I will push on this year with a further application of 100t. I will finance it with a short-term loan rather than out of cashflow as the return on investment is clearly spelled out by Teagasc.”

What are the financial returns to lifting soil pH from 5.5 to 6.3?

The table shows that in years one to three after lime application, for every €100 spent you get back €300. Taking a longer-term view, from year one to year nine for every €100 you spend on lime, you get €600 back.

Not too many investments give that return in any walk of life.



Financial analysis: (KerryAgribusiness/Teagasc Lime brochure June 2016)

YEAR	1	2	3	4	5	6	7	8	9
pH	5.5	5.8	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lime applied (t/ha)	5		5	1	1	1	1	1	1
Extra grass grown (t DM/ha)	0.5	1.5	2	2	2	2	2	2	2
Cost of lime per ac (per ha)	125		125	25	25	25	25	25	25
Financial benefit from additional grass*	81	242	322	322	322	322	322	322	322

*assumes each additional t DM worth €161

End of year three	€250	Spent	Every € spent on lime returning: €3
	€644	Return	
End year nine	€400	Spent	Every € spent on lime returning: €6
	€2,576	Return	

Key questions on lime

Mark Plunkett
Teagasc, Johnstown Castle,
Teagasc Crops Environment and
land Use Programme

Soil test results show that, on average, 65% of grassland soils are below the target pH 6.3 and up to 80% of soils in some counties. There has been a dramatic drop in the use of lime over the last number of decades with lime usage only 50% of what it was in the 1970s and early 1980s. Liming Irish soils is very beneficial as our soils tend to be naturally acidic and require regular lime application to maintain their productive capacity.

Recent research from Johnstown Castle shows that grass yields can be increased by 1.0t to 1.5t DM/ha/year from liming acidic soils.

Increasing annual grass production has many benefits from reducing the need to purchase expensive concentrate feed to increasing livestock carrying capacity of land.

A recent survey shows that the major limitations to applying lime are land availability during the grazing season and trafficability over the winter due to weather conditions. Over the coming weeks and months, every opportunity should be taken to apply lime and correct low soil pHs when soil and weather conditions are favourable.

Frequently asked questions in relation to the application of ground limestone:

How do I determine the quantity of lime required to correct soil pH?

Check recent soil test results for recommended rates of lime.

What is the maximum rate of lime in a single application?

Apply a maximum of 7.5t/ha (3.0t/ac). Where more lime is recommended, apply the balance after two years.

Will my soils be more prone to poaching after liming?

Some soils tend to poach after liming

due to the breakdown of the old sod. On these soils, apply a reduced rate of lime on a regular basis and don't exceed 5t/ha in a single application.

Can slurry and lime be applied at the same time?

Firstly, applied lime can increase the loss of N to the air after slurry application. If slurry is first applied, leave a week before spreading lime. If lime has been applied, avoid slurry application for three months (the same rule of thumb applied to urea N fertiliser).

Will liming of acidic soils increase the release of soil N?

Yes, an equivalent of up to 80kgN/ha will be released for several years.

What effect will lime have on soil P levels on acidic soils (pH 5.0 to 6.0)?

Liming acidic soils will increase the availability of P for plant uptake.

How long will it take lime to work?

Fine ground limestone (35%) will work relatively fast, and the coarse lime particles will react more slowly and help maintain soil pH for a number of years.

How long should one leave between spreading 10-20 or CAN and lime?

There is no need to leave a gap with CAN or N P K

compounds.

What is the target pH for grassland where my land is in a high molybdenum (Mo) area?

Maintain a soil pH 6.2 on these soils.

When is the best time to apply lime to grassland soils?

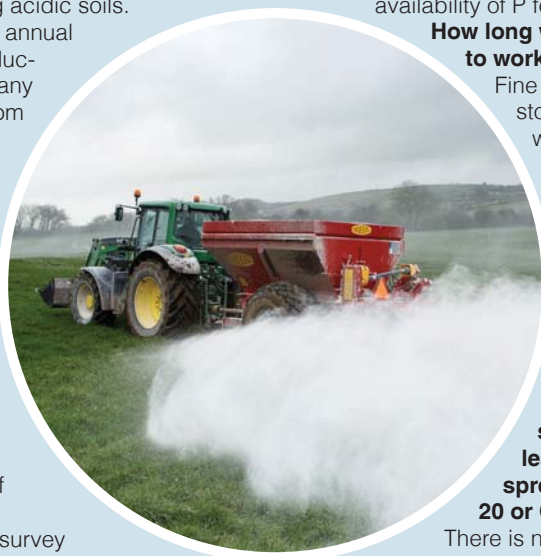
Now is a good time of the year as it allows time for the lime to work and reduces issues in early spring with slurry/urea applications.

When is the best time to apply lime to fields targeted for reseeding?

Ideally, apply lime as recommended on the soil test report one year in advance of reseeding. Alternatively, apply lime at time of reseeding and incorporate into the seedbed before sowing.

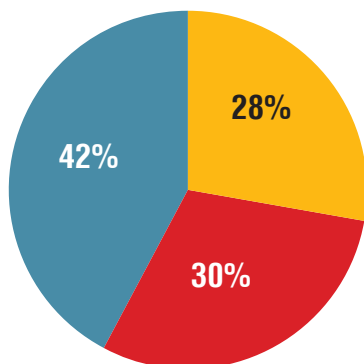
Will lime harm my cattle or sheep?

Once lime is washed into the soil, it poses no risk. Slight tainting to the grass leaves during dry conditions may cause slight scouring.



Teagasc advisor Ger O'Sullivan and Dan Daly.

Barriers to achieving required application



- Paddock availability
- Finances
- Weather

Drains need maintenance

Owen Fenton, Pat Tuohy, Daire ÓhUallacháin and Mairead Shore
Teagasc Crops Environment and Land Use programme



Maintenance improves the capacity and the lifespan of the drainage system

Open drains or in-field piped drains can greatly improve utilisation of grass on heavy soils. But the days of “one size fits all” are long gone. New drainage works should follow the guidelines of the Teagasc Manual on Drainage and Soil Management and involve site-specific designs, which are evaluated for financial viability, as well as technical feasibility before being installed. However, it is vital to maintain all drainage works as this will extend their lifespan, increasing the return on your investment.

The performance of a drainage system will inevitably deteriorate over time, due to a variety of blockages in both open and in-field drains. Maintenance vastly improves the capacity and the lifespan of the drainage system by increasing water flow, but also promotes sediment trapping and the retention of nutrients. Following the installation of a drainage system, a maintenance plan should be drawn up for both in-field and open drains, focusing on areas which are susceptible to blockages.

Open ditches can also provide an important habitat for a variety of plants and animals (including trout and salmon). Where work on open drains is necessary, this initial “big job” and subsequent maintenance should be

carried out between mid-May and mid-September in ditches likely to contain trout or fish eggs. Furthermore, hedgerows adjacent to drains should not be cut between 1 March and 31 August.

Causes of blockages

- Fine soil particles such as silt and clay are many times smaller than the aggregate (e.g. stone) around a pipe or the slits in the actual drainage pipe. This means they can get washed from the soil, through the aggregates, through pipe slits and eventually get shunted along the pipe where they may settle if water flow is low. This impedes flow through the pipes.
- Iron pans form in soil due to the downward washing of iron in the soil profile. This iron-rich material can accumulate in drains and impede flow.
- Plants and their roots can thrive in open channels, at the pipe outlet and deep within the pipe system causing blockages.
- Collapse/sedimentation of open drains, due to flow conditions, undercutting of banks or livestock damage can also cause impediments.

Avoiding blockages

Upgrade and deepen existing open drains before in-field drain installation to ensure good outfalls and consistent flows.

Prevent cattle access to open drains and outlets. Use simple layouts with few junctions to reduce the potential for blockages; use manholes as access points within the network, particularly at junctions.

The upstream end of field drain



REMEMBER

- Regularly clean out sediment from your open and in-field drains.
- Leave the spoil beside the open drain.
- Use the mid-May to mid-September window.
- Spread spoil on wetter parts of the landscape.
- Spread spoil on dry parts of the land away from the open drain.
- Spread spoil on P Index 4 soils.

Figure 1: Examples of where problems/blockages may arise

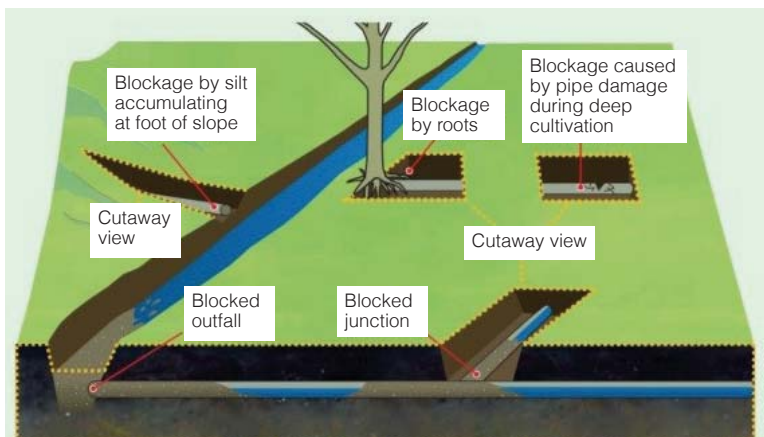
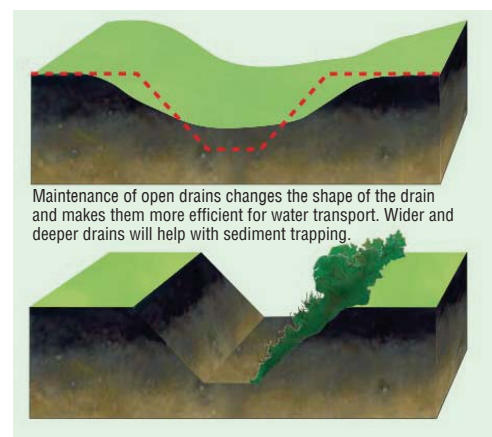


Figure 2: Maintenance of open drains



Maintenance of open drains changes the shape of the drain and makes them more efficient for water transport. Wider and deeper drains will help with sediment trapping.

What methods help to unblock field drains?

Jetting is an efficient way of cleaning piped drains. A hose, fed through the pipe washes and flushes sediment, iron ochre and debris from its internal walls, perforations and adjacent stone fill. Some models can extend to 300m up the pipe. Although rodding is also an option it is more labour intensive and a less effective alternative.



It is vital to maintain all drainage works as this will extend their lifespan, increasing the return on your investment.

IN-DEPTH INFORMATION

Land drainage booklet

A freely downloadable practical guidebook to land drainage is available via the Teagasc website, www.teagasc.ie/publications. Search "land drainage"

Land drainage manual

The Teagasc Manual on Drainage and Soil Management is available from Teagasc offices or can be ordered via the Teagasc website, www.teagasc.ie/publications. Search "Teagasc manual on drainage and soil management" (pages 107 to 110).

pipes can be brought to the field surface and capped to allow an access point for drain jetting. Mark the locations of field drain outlets and manholes in the field and on-farm maps as this will help to locate access points for future maintenance. Always use pipes in in-field drains to allow for maximum water flow and maintenance by jetting or rodding. Ensure that the aggregate used above the pipe is washed and 10mm to 40 mm in size. At present, there is no evidence to suggest that membranes on top of aggregate or around pipes help to slow sedimentation but they may impede water flow.

A focus on open drains/ditches

Depending on their landscape position, open drains conduct surface water (during and shortly after rainfall) and/or groundwater.

Open drains can flow during times of little or no rainfall if the water table intersects the drains or spring

lines are in contact with the drains. Open drains should be as deep as possible, to intersect groundwater and provide suitable outfall from in-field drains, and be formed with a graded profile to prevent collapse.

Maintenance of open drains changes the shape of the drain and makes them more efficient at transporting water.

The bank slopes of open drains need to be appropriately graded to prevent collapse. This will depend on how deep your channel is and how fast the water moves and, of course, your soil type. If grades as in Table 1 cannot be achieved then piping of new open drains may be necessary. At all times, open drains must be deeper than field drains and you should protect field drain outlets from damage. Importantly, spoil removed from such works should be spread on dry areas of land away from drains, to add to soil fertility and prevent it from getting back into the drain.

Table 1

Soil	Channel < 1.3m deep	Channel > 1.3m deep	Max. water velocity (m/sec)
	Horizontal: Vertical		
Heavy clay	0.5:1	1:1	1.5
Clay or silt loam	1:1	1.5:1	1.0
Sandy loam	1.5:1	2:1	0.75
Sand	2:1	3:1	0.75



Business strategy courses

Teagasc and the UCD Michael Smurfit Business School are again offering farmers a course in business strategy. But places are limited, so don't miss out

Over the past two years, three groups of farmers have completed a level 8 course in business strategy for farmers delivered by Teagasc and the UCD Michael Smurfit Business School.

Dairying, beef production, pig production and arable production have all been represented among the participants. The farmers (who have ranged from 25 to 65) each produced a strategy outlining where they are with their family business, where they would like it to be in the medium term and how they are going to get there.

The content of the course is focused around how they could do this. Components of the course include: how to create a strategy, risk management, working with other people, finance and investment appraisal, etc.

The topics are not delivered in a "Chalk and Talk" scenario like you might remember from primary, secondary, or even third-level education. This is executive education and the classroom is more like a forum for discussion between business people; a



forum led by top-class lecturers from UCD Smurfit.

"The way I describe it is that they didn't tell us how to invent the wheel, but they certainly made us look at the wheel in an entirely new way," says Simon Breen (pictured right), who farms 200 cows near Emly in Co Tipperary.

"As part of the course, you were obliged to think about your priorities and write them down in a structured way. I took a fresh look at how I was running my business and life gener-

ally. I reckon, as a result, I not only have a better work-life balance, but I'm also running my business more effectively."

The course is residential because getting away from the day-to-day chores enables participants to concentrate on developing their strategy. It takes place at the Lyrath Hotel in Kilkenny. The first module consists of three days, including two overnights. The second module is two days with one overnight stay and the final day takes place at the UCD Michael Smurfit Business School in Dublin. On this final day, the participants present their own strategy to a panel. By completing and presenting their strategy, participants earn a level 8 certificate from UCD.

"I really liked the fact that you had plenty of opportunities at coffee or over dinner or even breakfast to discuss some of the business ideas we had covered in class with other farmers on the course," says Simon Breen. "I found those kind of discussions and the connections you make really valuable."

One of the exercises in the Teagasc/UCD Michael Smurfit Business School course in strategy for farmers involves a plane crash. A hypothetical

James Foran, Pdraig Keane, Noel O'Keefe, Joe Leonard, Donnacha Tobin and Frank Clare with Ed Kenny in the background during the latest Teagasc UCD Michael Smurfit Business School strategy course for farmers. The class of 25 is broken into small groups like this to address specific tasks.



bring benefits to farmers



ABOVE: The first group of farmers to graduate from the Teagasc/UCD Michael Smurfit Business School course in Business Strategy at their graduation in UCD. Simon Breen is pictured second from the right.

one, of course. Divided into groups of five, the farmer participants are tasked with working out how they will survive this situation. A key learning from this particular scenario is the importance of teamwork and having a plan, a strategy, as to how you will try to get yourself out of this challenging situation.

What is involved in doing the course?

Participants are not left alone to complete their strategy document. During the course, Teagasc advisors act as mentors supporting participants to develop their strategy. Usually, this support comes in the form of small group meetings between the residential modules.

How much does it cost?

The fee to participate in the course is €2,000, slightly less if you are a Teagasc client. This covers all of your food and accommodation expenses as well as tuition, etc. It is a tax-deductible business expense. More importantly, it is an investment in your business and yourself. Of course, this is a considerable sum of money, but no participant has ever said the course was not good value for money.

Do you need qualifications such as a Leaving Cert to take part?

No. Applicants have to be approved to participate, but if you have been running a farm business for a number of years, this usually qualifies you to participate.

How you can get involved

Places in the 2016 Teagasc/UCD Michael Smurfit Business School course in strategy for farmers are limited.

Some people have already expressed their interest, so to participate, please email mark.moore@teagasc.ie before the end of July or contact me on 087-417 9131. Please do that soon or you may miss out. We will hold a meeting in August where those interested can meet some of the lecturers on the course and pose any questions they might have. If as a result of attending that meeting you feel the course is not for you, you are not obliged to proceed.

“You will receive a full accredited certificate from UCD for doing the course but, more importantly, you will have created your own unique medium-term strategy for your family business.”

Dates

Teagasc/UCD Michael Smurfit Business School Certificate in Business Strategy (farming) key dates:

- Module one: 26-28 September (2.5 days).
- Module 2: 25-26 October (two days).
- Finale day: 15 November (one day).

5 things to remember when planning your farmyard

Mairead Kirk
Drystock advisor, Teagasc, Monaghan

Have you ever looked at your farmyard and wished that a certain shed was in a different location? Or how many times have you wished that your slatted shed was just one link bigger to ease winter housing pressure? As an advisor, I often hear farmers say that they should have put more time into planning their farmyard. In the rush to meet tight grant deadlines, farmyard planning is often the forgotten piece of the jigsaw.

1 Future expansion plans >> All farmyard developments should be undertaken with an eye to the future. While you may think that the current shed being built will be big enough to hold all your cattle, time rolls by quickly and herds in an expansion phase can soon run out of space. Plan current developments, so that they can be added to easily and efficiently. While no further building may take place, leave yourself with options for future expansion.

2 Effect on the landscape >> Very few farmers give much consideration to how their farmyard affects the surrounding landscape.

However, the position and dimensions of your sheds can have massive implications on the landscape and this is all the more important if your farmhouse is adjacent to your farmyard. Try parking your tractor with the loader extended into the space where your proposed shed is to go. This will give you some idea of the visual impact that your new building will have.

3 Look at other farmyards >> Not all farmyards are the same. Think of the farmyards you have been on in the past 12 months. Were there some with better layouts than others? Speak to other farmers, neighbours or members of your discussion group. What do others think works well in terms of farmyard layout? The farmers using the sheds every day will have the best knowledge of which features are worth including in your farmyard development.

4 Speak to the professionals >> As in many aspects in life, there comes a stage when it is worth bringing in the professionals. Farmyard development is a costly business and you need to get it right first time. From an early stage in the project, you need to work with an architect or draughtsman that understands what your project is about and will produce plans that fundamentally meet your criteria.

5 Planning permission takes time >> Engaging the services of an architect or draughtsman is only the first step on the road to planning permission. Following submission of a planning application, the actual granting of planning permission can be a very slow process. Requests for further information or clarification are normal and should all be factored into the planning process. Ideally, the planning of a new shed should take place before the cattle have been acquired to fill it.

Padraig McNally farms with his wife Delores on the outskirts of Carrickmacross town in Co Monaghan. They run a 60-cow suckler herd with all progeny finished to beef and some additional stores bought in for

Padraig McNally (right) says that his background in dairying was an advantage in farmyard planning as dairy cows come into the yard twice daily to be milked and any weaknesses in farmyard design are quickly exposed. His new yard captures water falling on to roofs, hence the hose.



“ All farmyard developments should be undertaken with an eye to the future

finishing as well. In 2013, they won the FBD Livestock Farmyard of the Year Award, in recognition of their well laid out, immaculately clean farmyard.

Padraig says: “Farming right on the edge of a town brings its own challenges and we have always striven to ensure that our farmyard is as visually pleasing as possible.”

When Padraig took over the farm in the 1980s, there was a dairy herd in place and cows were milked prior to the changeover to suckling in 2007. Padraig says that the background in dairying was an advantage in farmyard planning as dairy cows come into the yard twice daily to be milked and any weaknesses in farmyard design are quickly exposed. According to Padraig, the importance of cow flow is also critical when moving large groups of suckler cows around a farmyard.

Since joining his local suckler discussion group, the Nighttime, Evening and Weekend Suckler (NEWS) group, Padraig has placed a big emphasis on tightening his calving pattern. In spring 2016, he calved 62 cows over an 11-week period. Ideally, he likes to get cows to grass as soon as they calve but in a wet spring, such as the one just past, this can prove difficult. Over a short space of time, Padraig has a requirement for bedded calving boxes and calf lie-back areas.

According to Padraig, some flexibility in shed usage is crucial and at peak calving time, machinery sheds can be converted into temporary accommodation to ease the pressure.

Raising a young family beside a modern farmyard is not an easy task but Padraig and Delores have always had a focus on farm safety, in particular when their children were very young.

Creating a designated area where young children can view the farmyard but are secure and safe from farm machinery and livestock is an ideal solution. As Padraig says: “Handling beef cattle, particularly bought-in animals, can be dangerous at the best of times. We have tried to lay out our farmyard and handling facilities in such a way that the risks of injury have been reduced. Farm safety is our top priority.”

Padraig McNally with Mairead Kirk near Carrickmacross, Co Monaghan.

Five generations producing floury spuds

Matching production to market needs is key to the success of the Flynn family

Shay Phelan

Tillage specialist, Teagasc Crops, Environment and Land Use programme

The five Flynn brothers – Gerry, Laurence, Vincent, Paul and Fergal – are the fifth generation of the family to farm in Co Dublin. In the heart of vegetable and potato-growing country, the family first started growing potatoes in the 1800s.

The Flynns grow a variety of crops on the farm which is based in Rush, but now extends all over north county Dublin and into Meath. They grow winter and spring cereals in rotation with their potato crops. They also run a straw business, which supplies mushroom composters.

“We produce early, maincrop and seed potatoes,” says Gerry. Varieties grown include Premier, “Rush” Queens, Kerr’s Pink, Markies and Rooster. “Harvesting starts with the first earlies in May with the first new-season Irish potatoes, which are

grown in the glasshouse. Harvesting continues all the way through the summer and up to the end of October. The British Queens or “Rush” Queens, as they know, are the main variety that is grown on the farm. These are harvested and sold from the end of June until September. “We usually start with the maincrop variety Rooster in August and aim to finish marketing them by December,” says Gerry.

The Flynns deal with greengrocers and corner shops, in counties such as Donegal, Galway, Sligo, Meath, Cavan and Kildare, where people are looking for a traditional Irish potato.

Some Irish people were turned off by the British tag, so the lads’ father, Paud, long ago took to calling his potatoes “Rush Queens”. It was a stroke of marketing genius – sales doubled almost overnight. The term caught on with other growers in the Rush area as they could also see the benefit from adopting the brand.

Paud’s own grandfather had started growing potatoes on a few acres in the 1880s, at a time when they were sown and harvested by hand, with the help of a spade and a pair of horses.

The farm now extends to nearly 1,000 acres, across north Co Dublin and Meath. There are now three generations of the family involved in the business with four of Paud’s grandchildren working on the farm; making them the sixth generation.

Though Paud retired in 1994, he admits to still being involved from time to time. “I am the gofer,” he says. “They tell me: “Go for this, go for that.” His five sons – Laurence, Gerry, Vincent, Paul and Fergal – now run the business. “It took five of them to replace me,” says Paud, smiling.

Marketing strategy

A good marketing strategy, coupled with quality produce, is what the Flynn’s pride themselves on. The Queens have to have a floury texture; otherwise, their customers will not be happy. The crops, therefore, are tested for dry matter before anything is harvested – 20% DM is the minimum acceptable. While sales of Queens nationally are in decline, the Flynns



The Flynns grow winter and spring cereals in rotation with their potato crops



In the past, some Irish people were turned off by the British tag in Queens potatoes, so Paud Flynn called his product “Rush Queens”.



Paul, Laurence, Gerry, Fergal, Eoghain, Eric and Vincent Flynn.



are able to maintain their sales due to the excellent quality and having a recognisable brand.

“Attention to detail during the growing season is vital to producing a quality product,” says Gerry, who is responsible for applying all the pesticides to the crops. “We are constantly looking out for Blight and Blackleg in the crop. If there is a rotten potato in the bag, the consumer will think twice about buying them again.”

The Flynnns take a zero-tolerance approach to both diseases, which helps to reduce the amount of potatoes that are returned to the farm from shops.

Great care is taken when harvesting Premier and Queens as the skins are not set yet and the tubers are very susceptible to bruising. Drops during the harvesting process are reduced below two feet and cushions are used, where possible, to further reduce damage.

The crops are dug into boxes and left to dry out for approximately 24 hours before they are graded into bags. This drying process should help the lads to identify rots or bruises, which can then be removed at the inspection table on the grader. Up to six people

are involved on the inspection table to remove any blemishes, rots, cracks etc, in an effort to ensure that only the best potatoes make it into the bag.

The Flynnns use their own-branded bags for their potatoes so that they are easily recognisable in the shops. “If we produce good-quality potatoes, the customer is more likely to look for the same bag again,” says Gerry.

The brothers have recently decided to colour-code their bags according to the variety inside. For example, Rooster will have a red colour, Queens will be green, Kerr’s Pink, obviously pink, and Markies will be yellow. “It’s another method of distinguishing our product from our competitors,” says Paul. “We also use Social Media quite a bit to inform our customers when our spuds will be ready.”

While the early varieties are selling well for the Flynnns, they realise that the market does not stand still, so they are currently investigating other potential markets. 2015 saw the first Markies being grown on the farm for chipping. Almost 1,000 tonnes per week of processing potatoes are imported into Ireland. “It is a very specialised

market as the chip shops are very particular about fry colours,” according to Laurence, who is responsible for marketing of the potatoes. “We are only dipping our toes in it but, so far, our customer is very happy with the fry colour in our potatoes.”

The Flynnns are aware that modern farming has changed significantly over the past generation and will continue to do over the next and keeping up to date with modern trends when it comes to selling potatoes is crucial. “Gone are the days when you could grow your crop and look for a market afterwards. Now you have to look at the market and grow for it. We will only grow what we know we can sell,” says Laurence. “We don’t have any spuds here after Christmas.”

Repeat business from their customers is key to the Flynnns’ success and the potatoes must eat well. Paud and the lads will always cook them first and carry out their own taste tests so that they know they have what the consumer wants. After all, the slogan on the back of the bags reads: “We love our potatoes and we want you to love them too.”

Future-proofing the potential of your forest

Early management is key to realising a forest's potential

Noel Kennedy,
Teagasc Forestry Development Officer,
Roscommon

Each year, thousands of hectares are planted with new forests. Huge numbers of small trees face a range of threats. Ensuring their survival, promoting growth and, ultimately, the establishment of a healthy quality crop is the objective of early forest management.

Identifying and managing the challenges facing young forest trees was the focus of a recent series of forest walks organised by Teagasc, in co-operation with The Forest Service, DAFM, and attended by almost 350 forest owners and aspiring owners.

The nationwide walks encompassed different tree species – both conifers and broadleaves – planted across a range of land types and site characteristics posing different management challenges. The one common feature across all forests was their very young stage of development, typically one to two years old.

Back to basics

The presentation and content of the walks aimed to demystify early forest management for forest owners and bring things back to basics. This began by describing how the planning and design of a new forest attempts to counter specific site characteristics, which can develop into threats to early tree growth.

The choice of ground preparation, drainage requirements, tree species selection, environmental features, biodiversity measures, fencing needs and assessment of browsing pressures are unique to each forest site and must be reflected in planning and design by the registered forester.

New forests that are properly designed and well planted have achieved

the first step to successful crop establishment. With the completion of plantings comes the challenge of early management.

Vegetation control

Competition from vegetation is the biggest threat to the survival of young trees and effective control is crucial on most forest sites. Incomplete weed control is the most common cause of poor tree performance and plantation devaluation.

Take-home message: Effective early vegetation control during the first four years is critical for young trees to remain healthy, grow vigorously and establish successfully. Talk to your forester.

Sustainable Use Directive

The Sustainable Use Directive (SUD) has implications for the use of herbicides and other pesticides in forest management.

Since 26 November 2015, only a registered professional user can apply pesticides authorised for professional use. A professional user is any person who applies/sprays professional use products, regardless of quantity or method of application, including operators, technicians, employees and self-employed people, both in the farming and other sectors.

Take-home message: If you plan to apply herbicide in your forest using a knapsack sprayer, you must register as a professional user through www.agfood.ie. In order to register, you must be appropriately trained in pesticide application. To register and for information on training, please see <http://www.pcs.agriculture.gov.ie/sud/professionalluserssprayeroperators/> or contact Pesticides Registration and Control Division, DAFM on 01 6157552

Tree numbers

There will always be a small number of tree deaths due to natural causes in very young forests. Failures need to be



replaced as early as possible, ideally within the first two years. Tree numbers should be maintained as close to 100% stocking as possible to optimise forest development, maximise timber production and to avoid unnecessary additional management costs.

Take-home message: Replace failures as soon as possible to maintain uniform forest development and avoid potential delays on grant and premium payments. Talk to your forester.

Tree health

Trees grow more slowly on less fertile soils where there may be lower levels of N, P and K – the most important nutrients for tree growth. The most common symptoms of nutrient problems are changes in the colour of leaves and needles and reduction in needle length/leaf size.

It was stressed that forest owners need to be aware of the potentially serious implications of poor tree health on longer-term forest growth and prompt identification and



'No different to farming'

Roscommon beef farmer Gerry Jordan (pictured) planted 10ha of forestry in 2013 and 2014 on his farm near Ballagherreen. He had been thinking about forestry for a number of years, but after attending a local Teagasc forestry clinic in 2013, he made the move. The land was planted by Western Forestry Co-Op and is maintained under a four-year forest maintenance contract.

Gerry is a contented forest owner "I'm delighted with the trees' progress. I planted marginal land and I'm amazed how well the trees have done in such a short time.

"Looking after trees is no different to farming and looking after stock. Treat them right and they will treat you right." Ever since planting, Gerry has been regularly walking his plantation and pulling grass from around trees he feels are under pressure. "I get tremendous satisfaction from freeing up trees – it's just the right thing to do and I feel I am making a real difference."

To learn more about forest maintenance, he has attended a number of Teagasc events – most recently, a forest management walk in Elphin. "I'm getting a better understanding of different maintenance issues but I am definitely on the right track. I would advise all forestry owners to get more involved – it's in their interest and it is very rewarding."

remediation of the situation is essential. Owners should have a basic understanding of what an unhealthy tree looks like, but it is important to remember that other factors apart from nutrients can produce similar symptoms such as poor drainage, frost etc.

Take-home message: Poor tree health needs to be identified early and remedial works carried out promptly to get young trees back on track. Talk to your forester.

Shaping broadleaf trees

Many young forests include plots of pure broadleaf trees. It is common for trees to be forked or have large side branches. Early removal of forks and large branches by formative shaping is important to improve longer-term timber quality. Failure to shape is likely to result in poor quality, low-value trees. For grant-aided broadleaves, an initial shaping is required by the time the trees are four years old.

Take-home message: Shaping is necessary to grow good quality broadleaf trees and it is required by year four for afforestation grant payment. But you can learn how to do this yourself. Talk to your forester and Teagasc forestry advisor.

Frost damage

The group noticed that some conifer trees had new shoots that had turned brown and died. Late spring frost damage was identified as the culprit. Frost damage to young trees is common but unpredictable. Most healthy trees will recover strongly with no significant after effects. But repeated damage may compromise future timber potential.

Take-home message: Don't panic! In most cases, trees will recover fully from frost damage, but be vigilant and if you notice new growth that is wilted and brown consult your forester.

Fire risk

The weather for the first week of the walks was dry and warnings about

increased risk of forest fires were being issued. Assessing the risk and management planning for forest fires was discussed including the importance of having your forest insured against fire.

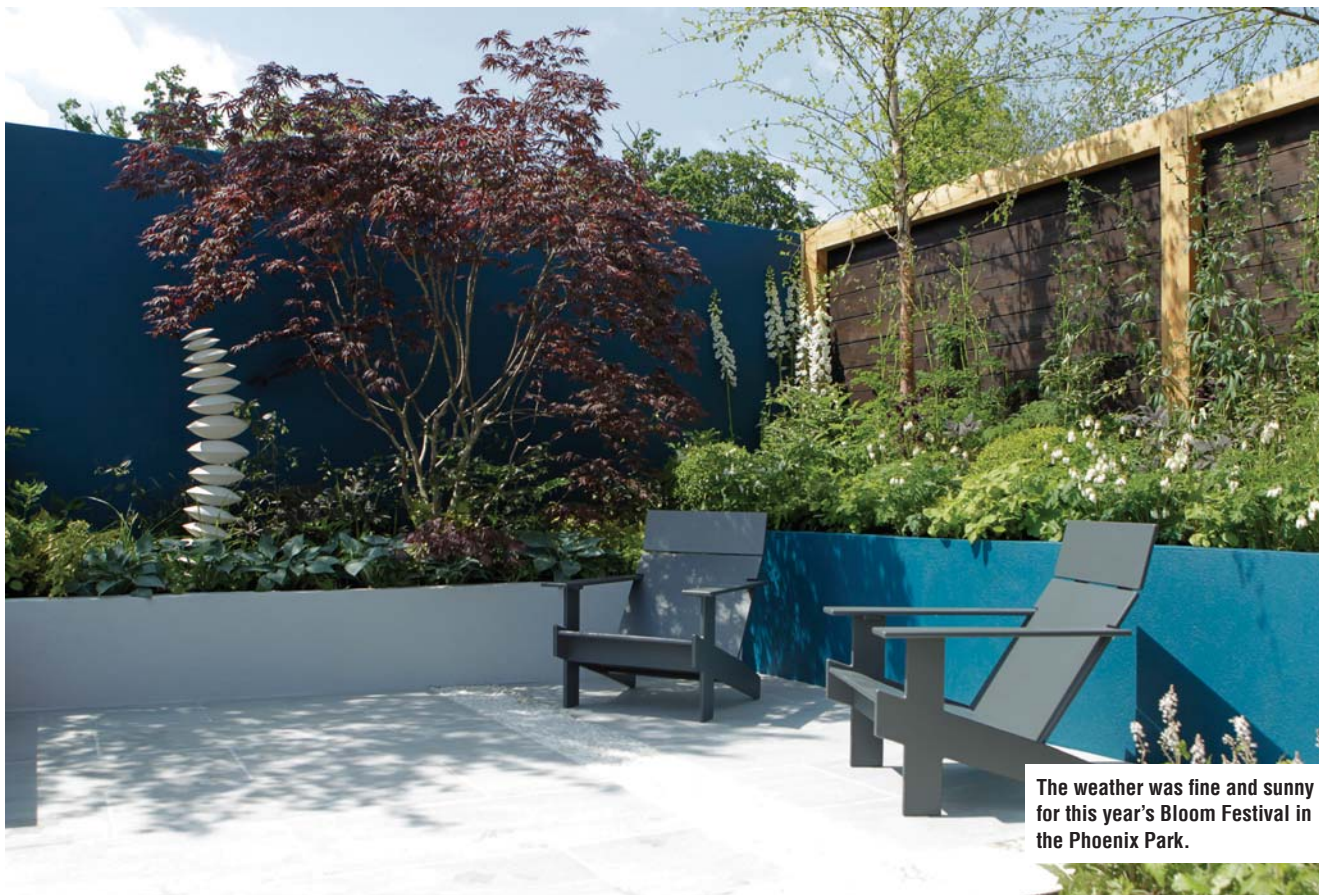
Take-home message: To protect you and your forest in the event of a forest fire, insure your forest and have a fire plan.

Afforestation grant and premium

Good management is essential to promote strong development in young forests. It is also central to the payment of the remaining afforestation grant and future premiums by achieving establishment standards by four years old.

Take-home message: Proactive and knowledgeable forest owners are in a much stronger position to protect their forest and financial interests.

For further information and downloads on a range of forest management topics, please see www.teagasc.ie/forestry



The weather was fine and sunny for this year's Bloom Festival in the Phoenix Park.

Stay safe in the sun

Eileen Woodbyrne
Teagasc College,
National Botanic Gardens

At the time of writing, I am looking back on a very successful – and very sunny – Bloom Festival in the Phoenix Park. Hopefully, you are reading this on a hammock in similar conditions. This year's festival attracted well over 100,000 visitors and was a great family day out for gardeners and non-gardeners alike. Given the fine weather, though, it is important to remember that sunshine brings its dangers. According to the Irish Cancer Society, skin cancer is the most common type of cancer in Ireland, and the main cause of skin cancer is UV radiation from sunlight.

You may be at a higher than normal risk of skin cancer if you have fair skin that freckles or burns easily; if you had severe sunburn or blistering as a child or if you have been exposed to sunlight all your life. This latter point has particular relevance for people who work outdoors – so take note, gardeners and farmers. People who have moles on their skin, or who

have a family history of skin cancer, may also be at greater risk.

How to protect ourselves

- Avoid the sun between 11am and 3pm.
- Wear protective clothing (covering arms and legs), a broad-brimmed hat and sunglasses – eyes can also be damaged by sun.
- Wear sunscreen.

When it comes to clothing, dark or vibrant colours are better at absorbing UV, and protecting the wearer, than whites or light colours. Some fabrics, particularly those used in sportswear, are now labelled with an ultraviolet protection factor (UPF). This relates to the weight and colour of the fabric and the tightness of the weave (rays can penetrate the spaces between loosely woven fabrics). A UPF of 50, for example, allows only one-fiftieth of the sun's radiation to reach your skin. A thin white T-shirt would have a UPF of about five. Remember, too, that worn or threadbare clothes won't protect as well, so if your work clothes have seen better days, perhaps it is time to replace them.

For sunscreen to be effective it

should be applied 30 minutes before sun exposure, thickly and evenly, and should be reapplied every two hours, regardless of what it says on the label.

At least SPF 15 is recommended for daily use; at least 30 for prolonged exposure to sun – so people who work outdoors should go for factor 30 or higher. Studies have shown that many people apply too little sunscreen, reducing the protection it provides. When considering the risk of sun damage, remember that the back of your neck and the tops of your shoulders are particularly vulnerable to sun damage. Don't forget your hands – ideally, wear gloves when working outdoors or at least use a high SPF sunscreen.

The Irish Cancer Society reports that some UV rays can pass through glass. While UV radiation through windows probably isn't a major risk for most people, if you spend a lot of time in a tractor or in a glasshouse, you should protect your skin.

So, enjoy the sun, but make sure you protect yourself. The added bonus is that protecting yourself from sun damage won't just help to keep you safe from skin cancer; it will keep you looking young and gorgeous too.

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