TEAGASC

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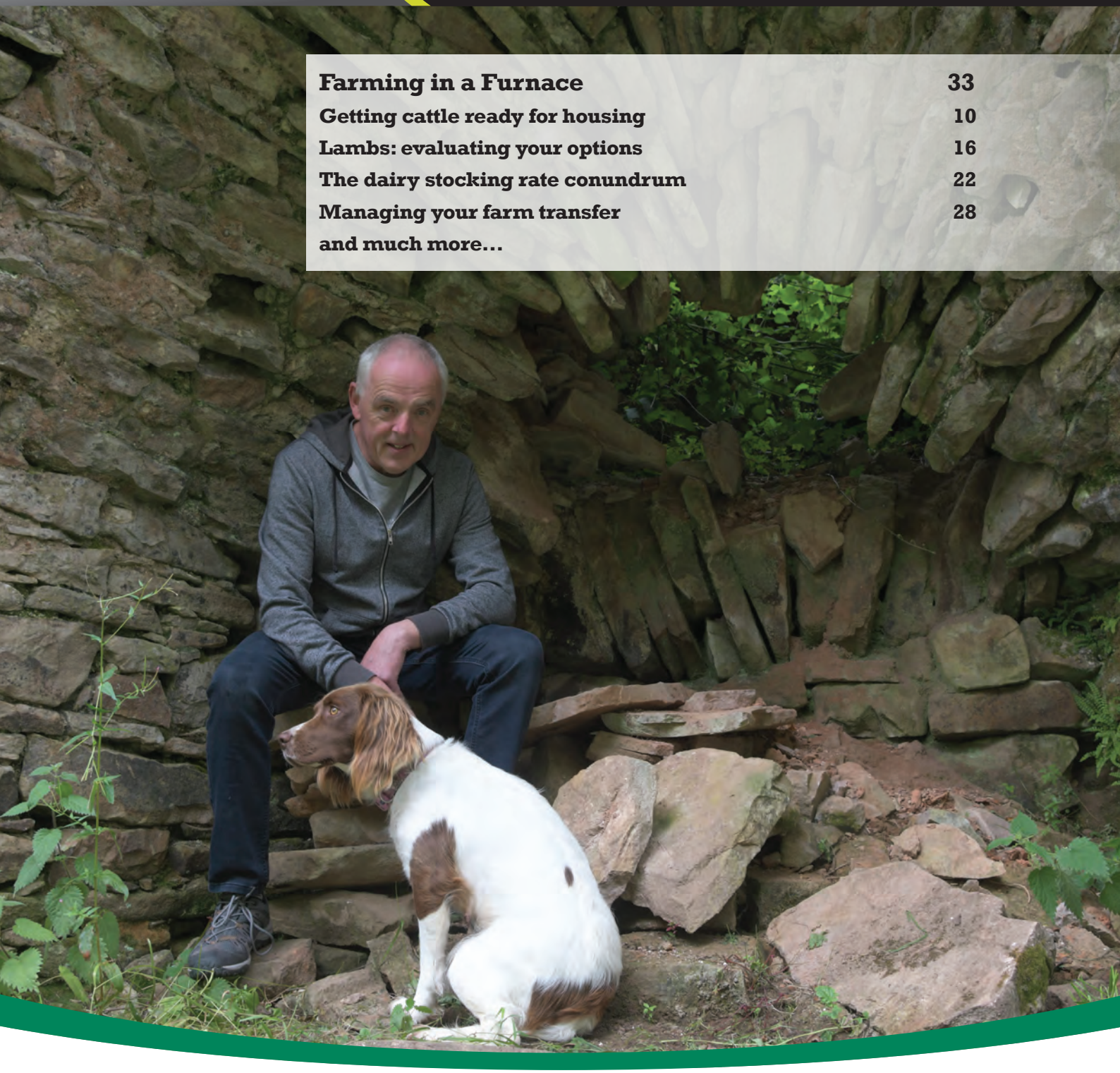
Today's Farm

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



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IFI
Palmerstown, Kilkenny

contents

Helen and Tom O'Connell with Dan O'Mahony and Stuart Childs.

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

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Paul Maguire, pictured with Fiadh, farms in Furnace near Partry in Co Mayo. The farm has always been a hub for innovation and is home to a 300- year-old furnace. The fairly well preserved remains were once used to create iron from ore in nearby hills. Paul farms part-time and farming is part of a portfolio of income generators which includes 'social farming', Speckled Park cattle, a considerable forestry enterprise and some spectacular areas of bog. / Mark Moore

COMMENT

Mark Moore
Editor,
Today's Farm

Get out, and give out

Who'd be a farmer? This year has seen winter drag into spring with animals eating silage during what the calendar says are 'summer months'. For some this will lead to uncomfortably tight fodder supplies for next winter.

The cost/price ratio remains a challenge and ever increasing environmental regulations, while essential, add to the growing demands.

The best way to relieve some of this stress is to get out and meet fellow farmers and industry professionals... at a discussion group, a Transferring The Family Farm event, perhaps the National Ploughing Championships.

This will yield two key benefits: you'll discover that other farmers are 'in the same boat' and gather information or insights that will help you successfully address the myriad challenges in farming.

Téigh amach, tabhair amach

Cé a bheadh ina fheirmeoir? I mbliana chuaigh an geimhreadh ar aghaidh is ar aghaidh agus is ar éigean a bhí earrach ann. Bhí ainmhithe fós ag ithe sadhlais i 'míonna an tsamhraidh', dar leis an bhféilire. Fágfaidh sé sin go mbeidh roinnt daoine gann go leor ar fhodar an geimhreadh seo chugainn.

Is dúshlán fós é an cóimheas costais/praghais agus cuireann níos mó agus níos mó rialacháin chomhshaoil, cé go bhfuil gá leo, leis na héilimh atá ag dul i méid i gcónaí.

Is é an bealach is fearr le cuid den strus sin a choinneáil ó dhoras ná dul amach agus bualadh le feirmeoirí eile agus le gairmithe tionscail… ag pléghrúpa, ag imeacht 'Transferring The Family Farm', nó ag an gComórtas Náisiúnta Treabhdóireachta fiú amháin.

Beidh dhá phríomhbhuntáiste i gceist leis sin: Feicfidh tú gurb ionann an cás ag gach feirmeoir agus gheobhaidh tú faisnéis nó léargas a chabhróidh leat do bhealach a dhéanamh trí dhúshláin uile na feirmeoireachta.

Teagasc/UCD Michael Smurfit course in business strategy

This course, accredited at level 8 by UCD, requires a total of just six contact days (in three modules plus some homework) to complete, offers farmers the opportunity to bring world-class business management skills to bear on their farm business.

"I found it excellent and it really tuned me in to what I needed to do to move my business forward," is how Meath dairy farmer Peter Mongey described the experience. The course is delivered by Smurfit Business School professors in collaboration with Teagasc and is held at Horse and Jockey in Tipperary.

The course will take place again this autumn (on October 15, 16, 17 and December 3, 4) with participants staying overnight in the Horse and Jockey Hotel. The group will consist of about 15 farmers from all over Ireland. There is no requirement for points or Leaving Cert, etc, to join the course.

Ger Reidy farms 200 acres in Co Clare and is involved in beef production, renewable energy and rural tourism: "I really enjoyed it. The camaraderie in the group and the support provided by both the Smurfit and Teagasc staff was exceptional.

"What it gives you is the confidence to look at aspects of your business, and business generally that you might not be so familiar with. Any farmer who puts their mind to it could do it."

Executive education

The course is classified as executive education and the entry requirement is that you have been running your business for at least five years. The teaching style is informal and requires active engagement and sharing of business experiences by participants.

There are no exams but participants are required to produce a strategy document for their business using learnings from the course. Delivering the document earns the 'students' a professional certificate in Business Strategy, which is QQI level 8.

"It made me look at our enterprise as more of a business than a family farm," said Waterford pig producer Jason McGrath.

"I particularly liked the material on how to manage negotiations." Topics addressed during the course include: insights on managing yourself; working with others be they family or staff; investment analysis; finance; preparing for a negotiation; strategy formulation and more.

Participants are expected to complete assigned readings from texts, case-studies and articles. Participants will also work in small project teams between modules. Teagasc staff will mentor participants. If you would like more information, please contact Mark Moore at mark.moore@tegasc.ie.

Placing a value on 'the shadow wage' of family labour on dairy farms

A study by Teagasc and the University of Galway estimates the 'shadow wage' of family labour on Irish dairy farms. The study was done using data from the National Farm Survey (NFS), which operates as part of the EU Farm Accountancy Data Network (FADN). In the NFS, in line with FADN methodology, farm family labour is technically referred to as being unpaid with the return to labour accounted for in the definition of Farm Family Income (FFI).

Emma Dillon, Senior Research Officer at Teagasc, explains: "To obtain the shadow wage measure, we use a concept from economics called a production function. This assumes that the amount of farm output – milk and calves, for instance – depends on several factors: capital – money and equipment; labour – paid and unpaid hours; land; and other miscellaneous inputs. Each of these factors contributes a certain percentage to the total value of farm output, which is referred to as the production coefficient."

Emma continues, "We determined how much each hour of unpaid family labour adds to the value of farm output. This calculated value is known as the shadow wage of labour."

Using data from 2019, the researchers calculated that the average shadow wage of farm family labour (including for the main operator) was €30.97 per hour.

The average shadow wage value of family labour on dairy farms is €30.97/hour according to a Teagasc/NUIG study.

They found that, as farm size increases, so does the shadow wage. For smaller farms (<43 cows), the shadow wage is €12.17, and for larger farms (>86 cows), the shadow wage is €43.94.

Value of education

The findings indicated that agricultural education influences the value of the shadow wage. The average shadow wage of farmers with formal agricultural education is almost twice that of those without, at €34 and €19 respectively. Consequently, the return of agricultural education on shadow wages is approximately €15 per hour.

This illustrates that the returns to family labour increase as the level of agricultural education increases highlighting the role agricultural education in enhancing farm viability. (TResearch)

Unlocking the potential of faba-lous beans

In response to global concerns about food security and climate change, there has been a significant shift towards plant-based diets.

Ireland has witnessed a sharp increase in beans and peas production, rising by almost 24% from 2022 to 2023, as reported by the Central Statistics Office.

Faba beans, in particular, have a high growth potential due to our agro-climatic conditions. It's a combinable crop (crops cut using a combine harvester) and well-suited in Irish rotations as a break crop for cereals (to break the cycle of pests and weeds). Their exceptional nitrogen fixation capacity naturally enriches the soil with inorganic nitrogen compounds, reducing the reliance on synthetic fertilisers.

Animesh Singh Sengar, a Walsh Scholar from the Food Industry Development Department at Teagasc Ashtown, is working on the Teagasc-funded Shift+Enter project that aligns with the deliverables of the Department of Agriculture, Food and the Marine-funded U-Protein (Unlocking Protein Resource Opportunities To Evolve Ireland's Nutrition). "Our focus is to identify and characterise faba bean varieties that will best grow in spring and winter seasons of Ireland," he explains.

Faba beans are well suited to Irish conditions.

Shivani Pathania, Senior Research Officer on the project, adds: "The project is fostering strong interdisciplinary collaborations by establishing feedback loops between the processing and crop research teams at Teagasc Oak Park."

Irish pulse protein

A scalable structure-forming technique, i.e. high-moisture extrusion of Irish pulse protein, is currently being assessed to develop a cross-linked and elongated meat-like fibrous network. Four spring varieties (Tiffany, Lynx, Fanfare and Cartouche) and four winter varieties (Vespa, Irena, Tundra and Augusta) of faba beans have been assessed for their agronomic behaviour and yield.

The bean flours were systematically characterised, feeding into a comprehensive database that takes into account their nutritional profile, functional properties and thermal suitability for processing.

The project also explores the isolation and characterisation of proteins for the development of high moisture meat alternatives.

The high protein content of faba bean flours was evident from their 28-33% protein concentration, with winter varieties exhibiting higher protein content than spring varieties. "All the faba bean flours are rich in lysine amino acid, which has potential to lower cholesterol levels," says Animesh. "Their functional properties are comparable to the other commercially popular legume flours. Our findings reveal that Irish faba bean flours could serve as a viable source of alternative proteins." (TResearch)

TEAGASC EXHIBIT AT THE NATIONAL PLOUGHING CHAMPIONSHIPS 17-19 SEPTEMBER

Better Farming – Better Environment – Better Living

Teagasc has research backed solutions to address sustainability challenges

Financial: production, cost control, farm management
Environmental: water, climate, soils, biodiversity, forestry
Societal: education, succession, Health and Safety, food

A wide range of interactive exhibits will ensure visitors have a fun as well as informative experience in our marquee. These include: 3D virtual tours of milking parlours, Virtual Reality visits to forest landscapes, a hands-on welding simulator, a food digestion exhibit and several scale dioramas exhibiting farm landscapes and yards. A new science engagement desk will focus on second level students.

Outdoor exhibit

In our outdoor exhibit area there will be live cattle and sheep demonstrations. There will be a major exhibit on protecting water courses on both tillage and livestock farms. The outdoor dairy exhibit will use a professional quality scale model to demonstrate how farmyard design is key to protecting the environment. Crops of clover and mixed-species swards will demonstrate how mineral nitrogen levels can be reduced. Biodiversity, Greenhouse Gas reduction and forestry are also key themes on the outdoor exhibit.

As always, Teagasc specialists and advisors will be present to answers questions on production of everything from pigs to potatoes, education (including full-, part-time, distance education and apprenticeships) farm management, diversification, organic farming, health and safety, succession etc.

Teagasc stand Block 2, row 12, stand 201

FUTURE BEEF FARM WALK

Wednesday 11 September
Opportunities in Beef Farming
Venue: Shane & Grainne Keaveney's farm, Ballybane, Ballinlough, Co. Roscommon. Eircode: F45 W599
Time: 6pm

TILLAGE FORUM

Wednesday, 11 September
Venue: Keadeen Hotel, Newbridge, Co Kildare. Eircode: W12 T925
Time: 2pm

GROWING ORGANICS FARM WALK

Tuesday September 26
Organic Suckler to Store Farm Walk
Venue John O'Hanlon, Tipper, Ballymahon, Co. Longford.
Time 2pm

INDUSTRIAL HEMP: OPPORTUNITIES FOR AGRICULTURE

26 September 2024
Event Time 9:30am - 3:30pm
Venue Teagasc Ashtown Food Research Centre, Ashtown, Dublin 15. Eircode: D15 DY05.
Teagasc, in association with TCI (Textile & Composite Industries PTY Limited), Victoria, Australia are hosting a conference focusing on Industrial Hemp: Opportunities for Agriculture and Other Sector

TRANSFERRING THE FAMILY FARM CLINICS

Limerick: Tuesday 1 October
Venue: Fitzgerald's Woodlands House Hotel & Spa, Knockanes, Adare, Co. Limerick. Eircode: V94 F1P9. Time10am.

Cork: Wednesday 2 October
Venue: Corrin Mart Conference Centre, Fermoy, Co. Cork. Eircode: P61 EE37. Time10am.

Wexford: Thursday 3 October
Venue: Riverside Park Hotel & Leisure Club, The Promenade, Enniscorthy, Co. Wexford. Eircode: Y21 T2F4.Time 10am

Donegal: Tuesday 8 October
Venue: Inishowen Gateway Hotel, Railway Road, Buncrana, Co. Donegal. Eircode: F93 PPH9. Time10am.

Mayo: Wednesday 9 October
Venue: Knockranny House Hotel, Knockranny, Westport, Co. Mayo. Eircode: F28 X340.Time 10am

Laois: Thursday 10 October
Venue: Abbeyleix Manor Hotel, Cork Road, Abbeyleix, Co. Laois. Eircode: R32 VE24.Time10am

DAIRY CALF-TO-BEEF INTERNATIONAL CONFERENCE

Wednesday, 16/17 October
Venue: Clayton Whites Hotel, Abbey Street, Wexford, Y35 C5PF
Teagasc with the support of the British Society of Animal Science (BSAS) and ABP is hosting an International Technical Conference on the 16th, and 17th of October 2024 focusing on the production of beef from the dairy herd.
National and international scientists will compare:
• intensive concentrate-based and pasture-based dairy-beef systems and their impact on financial and environmental sustainability;
• the impact of new developments in beef cattle genetics targeted for use in the dairy herd;
• nutrition of dairy-beef calves in early life;
• health of dairy-beef calves in intensive and pasture-based systems as well as measures to support better vertical integration of the dairy-beef industry.
Registration fee: delegate rate: €250 | student rate: €200
Registration fee includes attendance at the two day event, lunch on both days, tea/coffee breaks, gala dinner and proceedings booklet.
For more information about this event, please contact: ellen.fitzpatrick@teagasc.ie or margie.egan@teagasc.ie

BEST PRACTICE IN MILKING COURSE - CORK

30-31 October
Event Time 9am - 4:30pm
Venue Teagasc Moorepark Advisory Office, Fermoy, Co. Cork. Eircode: P61 C996
The theory exam takes place on Tuesday, 12 November.
Milking Process Routine - QQI Level 6 Certification on successful completion of course and individual assessment.
The course cost is €300.

Winter Feed 2024 Act now if supplies are tight

Joe Patton
Teagasc Animal and Grassland Research and Innovation Programme

On average, grass growth this year is down by 0.75 to 1 tonne grass DM per hectare (or 2 tonnes fresh grass per acre) compared to the long-term average.

This drop is mostly due to lower supply of background nitrogen from soil mineralisation, arising from less solar radiation (sunshine…) during May, June and July.

Fertiliser rates are also back somewhat which will have played a part. The fertiliser type used, however, had no impact on grass yield.

The net effect is that more dairy and drystock farms than usual have reported winter feed budget shortages, and a greater risk of feed problems next spring. From previous surveys, we usually see 10-15% of dairy and drystock farms go into the winter short of feed with an intention to buy on the open market.

The figure was closer to 25-30% in our provisional survey in July this year. This means that demand for purchased forage is likely to be higher than usual.

Many farms that were initially tight have taken remedial steps like taking third-cut silage. This should close the gap to a fair extent.

However, for those farms still in a deficit, action to save or source feed is urgent.

It would be unwise to rely on benevolent spring weather or to assume feed will be available at an acceptable price next February.

Eddie Mulligan, Teagasc Grange.

Five key actions to take

1 Find out where you stand by completing a simple winter feed budget

There are numerous options available. There's a dynamic feed budgeting tool in PastureBase Ireland or you could use a simple paper version as outlined in the example. The objective is simple: to quantify any gap between supply and demand.

Once you have gathered stock numbers, counted bales and measured pits your Teagasc advisor will help with the calculations. Do not ignore seemingly small gaps in the budget because they could prove very significant by the end of the winter. Aim for a 10% reserve rather than being content with a 10% shortfall.

2 Make a feed plan using available options

Once the size of deficit is calculated, consider your options. Start sooner rather than later, particularly if shortfalls are 15% or more. It is easier and less stressful to sort out any problems before winter starts.

Consider the practicalities of different feed options as well as the cost per tonne. If there will be extra labour, transport and machinery costs involved, these should be factored in.

For example, feeding 2-3kg of straight concentrate ingredients may mean extra feed space is needed. Some farms are not be set up to feed out extra concentrates at the feed barrier. Remember that to make forage savings, forage intake must be restricted on a 1:1 dry matter basis, e.g. 1kg hulls should replace 4-5kg fresh silage.

Cows will not significantly restrict their silage intake in response to 3-4kg concentrate, so there is a good

Figure 1
Dry cow diet options

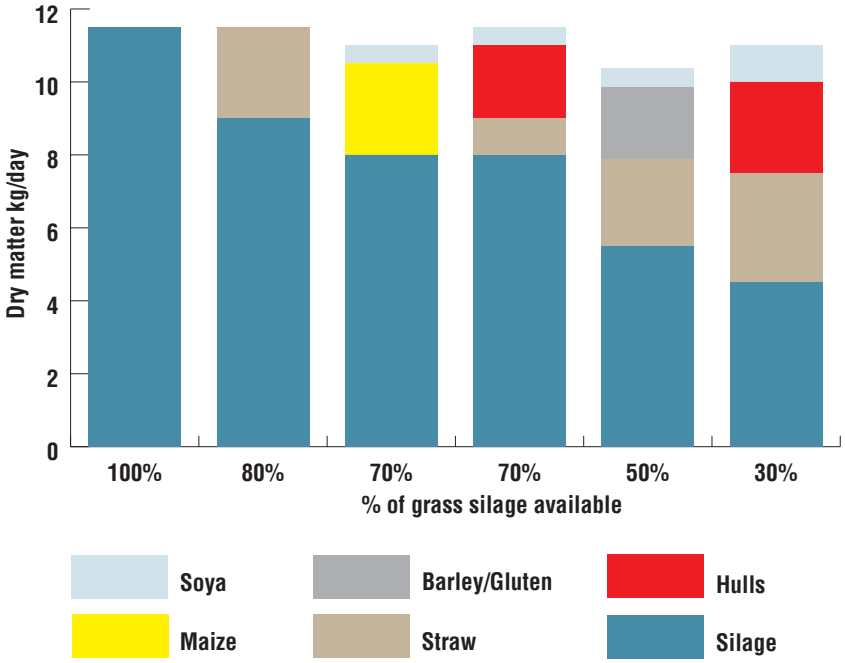

Figure 2
Section 1: What fodder is required on the farm?

Animal Type	A No. of stock to be kept over winter	B Number of months	C Pit silage needed/ animal/month	Total tonnes of silage needed- multiply AxBxC
Dairy cow				
Suckler cows				
0-1 year old				
1-2 year old				
2+ year old				
Ewes				
Total tonnes needed				Tonnes
or				
Total tonnes needed (tonnes multiply by 1.1)				Tonnes

Section 2: How much silage is in the yard?

Farm	A	Pit silage	
With pit	B	Bales-in the yard	
And bale	C	Bales converted of pit silage (Multiply B by 0.9)	
Silage	D	Total silage (A+C)	
Farm with Bale silage only	E	Total bales	

[1]Pit silage (lenght x settled height) metres 1.35 = tonnes (t) equivalent

chance you will end up with over-conditioned cows and little saving of silage. In short, it's not easy to restrict silage and replace it with concentrates.

Allow for up to 10% spoilage and losses with wet bulk feeds. What looks like cheap feed could be expensive when all costs have been accounted for. In most circumstances, the simplest and most practical means of filling a forage gap is with more purchased forage – pit silage, maize, bales, hay, etc. Compare costs on a dry matter, and quality, basis.

A big risk with purchasing forage of poor quality is that animal performance will suffer.

Keep the feed energy and protein targets for each class of stock in mind, and make sure diets meet the required spec.

In Figure 1, a range of diets are shown that meet the energy (8.5 UFL), protein (650g PDI) and fibre (>30% NDF) needs of dry dairy cows. Each option will deliver the correct diet for the herd. The decision as to which diet to use will depend on the individual farm's circumstances and feed availability. Always test your own and purchased forages to make sure your diets are correct.

3 Consider early culling

Earlier offloading of animals already marked for culling will certainly help to address a feed deficit. It is not a popular suggestion with some farmers, but it should always be considered before paying out cash to buy feed.

Early culling is a tactical or short-term step, with a view to restoring numbers once feed availability issues are resolved. The key question is the value of retaining animals versus the cost of purchasing feed to retain them for longer.

The savings on feed can be significant. Selling five cows in mid-September will save about 60 tonnes of forage compared to culling next March, which is very significant for a farm with a severe shortage.

The economics of early culling are more favourable where purchased feed is expensive and of low quality, and/or the daily productivity of the stock is low.

4 Manage autumn grass with next spring in mind

Where late autumn weather conditions are good and forage supply is tight, there is always a temptation to continue grazing into November, especially with milking cows or lighter stock. However, this ignores the value of having a good cover of spring grass in a few months' time. Even in a very bad spring like we had this year, the value of having spring grass in the diet was evident.

Farms on free-draining soils should have 65-70% of area closed by 1 November. Farms with heavier soils should be at 80%. Do not re-graze in November, instead deal with any forage shortage issue and keep the grass in reserve for spring.

5 Address any cash issues

Finally, a key outcome of our survey this summer was that a high proportion of farmers had cashflow concerns, and felt that cash was the main limitation to taking action on feed budget issues.

This may mean that some farms will postpone taking corrective actions due to a lack of cash. In such circumstances, the finance issue will need to be resolved before a winter feed deficit is tackled. Remember, there are always options, and two heads are better than one so, again, contact your local Teagasc advisor.

Give your stock a clean start before winter housing

Eliminating parasites at housing will ensure optimum livestock performance over the winter

Niall Kerins
Teagasc
Beef Specialist

Longer nights and shorter days. The All-Ireland finals long gone. Children back at school. Winter housing around the corner. We can't do anything about the change of seasons, but you can give your animals a better chance to perform well over the winter with a parasite treatment plan.

Grazing is where cattle usually pick up internal parasites including worms and fluke. Housing is when external parasites like lice and mites thrive. Treating animals who have a parasite burden at housing can reduce the negative effect on health and performance – providing the product works effectively.

This year, especially given the mixed weather conditions over the past few months, there may well be a build-up of internal parasites that requires treatment at housing. Effective treatment means cattle are virtually free of worms and liver fluke until they go back to grass.

Careful planning, prior to housing, and assessing the results of diagnostics tests taken during the grazing season will help you to make informed decisions around dosing.

Peter Bennett dosing animals at Teagasc Grange.

Faecal egg counts

The starting point to assessing internal parasites is completing faecal egg samples from all categories of livestock. Faecal egg sampling can indicate the worm burden in livestock and also the presence of mature fluke.

Faecal egg samples can be relatively cheaply tested and analysed through your local vet or laboratory. The process of taking faecal egg samples is straightforward. Select 10-15 animals, at random, from a group of cattle. Put the animals in a clean concrete yard and allow them to stand there for one hour.

Afterwards collect a fresh faecal sample. Send it to be analysed promptly – delaying the process may result in the eggs hatching and giving an inaccurate result. Faecal samples that are being sent away to be analysed should ideally be posted the day they are collected.

Results

Where possible, avoid completing the task on a Friday or over the weekend. This can mean samples are not tested immediately which, again, can lead to incorrect results. Generally results can take two-three weeks to be issued so consider completing this task as soon as possible to have the test results available when selecting a dosing product.

The presence of worms on a faecal egg test is expressed in eggs per gramme. Animals require a worm dose when the results show a count of greater than 250 eggs per gramme. This outcome indicates a high prevalence of worms living within the animal. As a result the animal's daily liveweight gain will be compromised.

To determine if resistance to wormers is present on farms some farmers have implemented a faecal egg reduction test or drench test. This is the same process – collecting faecal egg samples – from a batch of 10-15 animals before dosing, then applying the dose and re-taking faecal samples 7 to 14 days later (7 days if a yellow product, 14 days if a white or clear product).

A reduction of 95% of eggs per gramme in this test will indicate that the product is working effectively while <95% reduction indicates that resistance to the product is an issue.

Animals recently sent for slaughter usually receive a beef health check report along with the factory cheque. This report gives a score for liver fluke and is a reliable indicator of its presence on your farm.

Faecal sampling should be carried out regularly throughout the grazing period. However, faecal egg counts do not always reflect the presence of inhibited larvae of the stomach worm Ostertagia at housing. Consult your vet about the results prior to dosing. It is important to note that levamisole is not effective against inhibited larvae and is therefore not a good option for a housing dose.

Lungworm

Lungworm is a very common internal parasite that affects the lungs of an animal and can be problematic for all categories of livestock. Lungworms cannot be detected in a standard faecal egg test. If a large proportion of the herd are found to be coughing at grass this can be an indicator of lungworm.

Lungworm usually becomes an issue during the second half of the grazing season and can remain a problem right through to housing. Pastures can become infected with larvae that stick onto the grass sward. Grazing animals pick up larvae with grass and, when digested, the larvae moves from the gut into the lungs.

From there the larvae produce eggs which again hatch and these larvae are passed through the animal in the dung. Sometimes eggs can be coughed up by the animal, and in warm moist weather conditions these eggs may hatch into larvae on grassland.

The grazing pasture can become infected again with new larvae and the cycle continues. Heavy lungworm burdens damage the lungs and airways of cattle. This damage coupled with the stress around housing can trigger the onset of respiratory disease.

Treatment for lungworms is widely available in the form of oral drenches, injectable form or pour on type products. The majority of products that treat for lungworms will also treat for gut worms/round worms.

Fluke

Liver fluke infection has been shown to reduce the finishing weight of steers. Fluke requires the mud snail to complete its lifecycle which is why wetter soil types or areas with high levels of rainfall favour the habitat of mud snails and can result in higher prevalence of fluke in cattle.

Treatment needed for liver fluke varies from farm to farm. Some farms treat for fluke at housing every autumn as there have been issues with the parasite in the past while other farms might not have treated for fluke for many years.

With the wetter weather witnessed this year and regardless of soil type, there may be more farms that need to treat for liver fluke at housing.

Faecal egg testing and reviewing beef health reports from animals slaughtered are the most effective steps to detect the presence of fluke in the herd. Liver fluke are classified as early immature (<6 weeks old), immature (6-12 weeks old) and mature (>12 weeks old).

Be mindful – faecal samples only reflect the presence of mature liver fluke, a negative sample does not always mean that an animal is free of fluke.

There are several products available to treat liver fluke. Triclabendazole is the only active ingredient available on the market to treat all stages of fluke while other products may treat one or two stages of the liver fluke cycle. Resistance to Triclabendazole has been documented in sheep, as it is the same fluke in cattle

Continued on p12

Continued from p10

and sheep.

This should be considered when choosing a dose. When using a product that does not kill all stages it may be useful to delay treatment until after housing to allow all of the fluke present to mature so that the product is effective.

Alternatively, a treatment can be given at housing with a repeat treatment 12 weeks later.

External parasite control

External parasites such as lice, mites and other external parasites can spread rapidly on livestock that are housed. External parasites typically spread between animals that are in close contact with each other, so at housing time external parasites can spread rapidly within a group.

Animals with hair loss, excessive scratching around gate posts, are signs that external parasites are active.

Products for treating external parasites can come in both injectable and pour on forms.

The majority of pour on type products on the market will treat for biting or sucking lice/mites on cattle but won't treat for eggs.

A large infestation may require a second treatment three to four weeks after the initial product was administered. Eggs living on the animal's back may hatch and cause a recurring issue with external parasites.

Treat all animals in the same group at the same time. If animals are added to the group they too should be treated without delay.

> A large infestation may require a second treatment three to four weeks after the initial product was administered

Pour on type products require good skin contact on animals for an effective uptake. Clipping animals along their backs will ensure a better uptake of the product. Furthermore, clipping helps keep body temperatures cooler during mild weather conditions.

Selecting a product

There is no one product that can treat everything on your farm. Treating external or internal parasites can involve administering two products at different times. Antimicrobial resistance is becoming a major issue on farms and this is predominately down to incorrect use of products.

This includes overusing certain products, incorrect levels of product used based on liveweight, or using a product not required in the first instance. Recent weighing gives the best indication of how much product is required per animal.

Rotation

Consult with your vet on best practice for dosing products. Rotate different dosing products to prevent resistance building up. Some products may have a different name but contain the same active ingredient.

Selecting a product with a different active ingredient will help prevent antimicrobial resistance. Only use combination products if it is necessary to target multiple parasites.

Products can have varying withdrawal times so be conscious of this if using products on cattle intended for finishing. Of course, after getting a clean start at housing the animals will almost certainly finish sooner.

Products for treating external parasites come in both injectable and pour on forms.

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High beef production and environmental targets go hand-in-hand on Shane Keaveney's farm in Roscommon.

Gabriel Trayers
Teagasc Business & Technology Advisor

Shane Keaveney farms full-time, with help from his wife Grainne and three children in Granlahan, Ballinlough, Co. Roscommon. After working in construction Shane took over the farm in 2014.

"At that time, the children were young and one of us needed to be around," says Shane. "The building industry slowed down and Grainne had a permanent job as a nurse, so we decided that I would stay at home full-time. We also decided the farm needed to become profitable!"

Shane started full-time in 2017 with just five Saler in-calf heifers. He has since grown the suckler cow herd to 37. The farm comprises 35 hectares, including eight ha rented, and it is fragmented into four blocks.

The main grassland block of 18ha is approximately half a kilometre from the farmyard. Most of the soil on the farm is a mixture of clay and peat, and is classed as 'heavy'. The farm is stocked at 140kg organic nitrogen/ha.

"The production system is simple," says Shane: "It's a spring calving herd with males finished as bulls and heifers sold or slaughtered before the second winter."

The cows are mainly Limousin x Saler, and a terminal Charolais bull is now used on the mature cows. All cows are calved in February and March.

"I used to calve over five to six months and found it tiring as I had multiple groups of stock which meant there was no proper system for the farm," says Shane.

In the early years, he used a Saler stock bull to breed functional replacements that had plenty of milk. The downside was that Shane found it difficult to sell the males to the live trade.

"Nobody wanted weanling Saler bulls so I looked at the option to finish them as under-16 month-old bulls and it worked out." Shane has continued with the bull system as it has consistently delivered profit.

Since switching to a Charolais bull, Shane has had to re-think the replacement policy. He is now using AI and sexed semen to breed heifers from within the herd.

The main grazing block is in paddocks and he measures grass weekly on PastureBase. In terms of grassland management, the overall aim is to make high quality silage and to maintain high-quality grass swards in front of the herd over a long grazing season.

Breeding performance

Shane's cow type can be described as 'very functional' with plenty of milk and the ability to rear a heavy calf. The herd has an average Replacement Index of €110. In 2023, the male calves weighed 307kg at 200 days of age while the heifers weighed 280kg.

The breeding performance of the herd underpins the overall profitability of the farm. Shane is hitting all of the key performance indicators (KPI's) and is in the top 10% of herds nationally.

Bull management

A key driver of any profitable system is kilograms sold off the farm. Shane aims to sell 20 bulls annually. The target carcase weight is 380-400kg, 2 + fat cover at u 16 months of age.

"Once the cow has her job completed by rearing the bull to 280kg, it is my responsibility to manage them to reach 700kg as efficiently as possible," says Shane.

"To reduce stress, the bulls are weaned outdoors using easy-wean nose pads – I have moved away from

weaning in the shed. I also vaccinate for IBR and pneumonia in autumn as I have had issues in the past."

He introduces meal for four weeks before weaning and the bulls will get 2.5kg before housing. In the event of a poor back-end, the bulls are the first group housed as they perform better in a settled environment. They are straw-bedded for the winter and have plenty of lying space.

Red clover silage

The bulls are offered a high quality red clover silage plus three kg of meal until Christmas. "I sowed 4.5 acres of red clover last year," says Shane. "I need a high quality feed to push liveweight gain."

Last winter was Shane's first experience feeding a red clover silage. "I got it tested and it came back at 76%DMD and 16% crude protein and I was very happy with that. The red clover silage was fed until the bulls went ad-lib plus straw." He has sowed another 1.5 acres this year.

Improving the performance of the bulls from weaning until the finishing period has reduced the slaughter age from 15.9 months to 15.5 months in 2024. "It just required some small tweaks, better weanling management," says Shane. "The red clover silage has definitely helped."

'The ACRES measures are protecting water quality and adding biodiversity on the farm – and I get paid to do it.'

"I am aiming to reduce the overall emissions of the farm and I have adopted most of the actions like using protected urea and reducing the overall chemical fertiliser usage by sowing clover," says Shane (pictured) who has put in measures to protect water quality.

"Kieran Kenny, Teagasc ASSAP advisor, drew up a plan to prevent losses from vulnerable areas of the farm. The dungstead was upgraded and I was advised to plant a hedge beside a main drain to act as a buffer or trap for any losses.

"Charlie Devaney my local Teagasc advisor put me into Acres and a lot of the actions like fencing watercourses and riparian margins help protect water and also add to the biodiversity of the farm. And I get paid to do it."

In the last few months a new Farming for Water EIP (European Innovation Partnership) scheme was launched which will provide €50 million to some 15,000 farmers up to the end of 2027.

Farmers in specific water catchments will get paid to implement a range of measures designed to help improve water quality. It provides funding for measures such as stream fencing, alternative water supply, nose pumps, solar pumps, fenced margins, riparian buffer zones, hedge and tree planting etc., for farms within Priority Areas for Action.

There are over 40 measures to choose from which include completing a rainwater management plan, a farmer training course and a Nutrient Management Plan.

Shane's farm is located in the Islands river catchment which qualifies under the scheme and he is hoping to join. "To make money out of the farm, I have to have both an efficient farming system and capitalise on relevant schemes," he says.

Weighing up store lamb performance

Preparing a budget, targeting weight gain from grass, and deciding on an estimated slaughter date should be the main autumn priorities for store lamb producers

Frank Campion
Teagasc Research Scientist

Damian Costello
Teagasc Sheep Specialist

Farmers who run a breeding ewe flock are assessing their options for lambs remaining on the farm. With a reasonable store lamb trade many will be considering whether to sell stores or finish.

Factors to take into account include the number and weight of your lambs, estimated time to finish, availability of grass, availability of suitable housing if needed to finish indoors. Your cash flow/credit situation is also key.

On the purchasing side, farms that run a store lamb finishing enterprise are figuring out what they can afford to pay for stores and still allow for a decent margin.

The two main factors that determine profit margin in finishing lambs are:

- Current price of store lambs vs expected price for lamb carcass.
- Cost efficiency of carcass gain during the finishing period.

Prepare a budget

Whether finishing homebred lambs or buying in lowland or hill lambs to finish the first important step is to have a plan. While the price received is largely outside of your control, the cost of getting the lamb to the point of sale can be.

A useful tool to estimate the cost of finishing store lambs on a grassland only farm is the Teagasc Store Lamb Calculator. It also gives a good estimate of when lambs will be fit for market. This programme allows you to input figures such as the weight and price of lambs, concentrate price per tonne as well as standard costs for veterinary, transport etc.

The estimated finish date, along with total concentrate required, will be calculated with slaughter value of lamb being based on historic prices paid in previous years on the predicted slaughter date.

Damien Costello, Teagasc Athenry.

The programme has recently been updated and is available on the Teagasc website by following the QR code link, or from your local Teagasc advisor.

When calculating a budget it is important to accurately assess what lambs are left on the farm by weighing remaining lambs (or at least a representative proportion) and dividing them up into weight categories i.e. <30kg, 30-35kg, >35kg.

Subdividing the lamb flock will allow you to assess how much time and feed it is going to take to finish the lambs. Equally, when purchasing lambs it is important to consider that with lighter lambs vs heavier lambs you will have to adjust the number purchased to allow different residency periods on the farm.

What are the dietary options?

The main options are grazed grass, ad-lib concentrates and forage crops. No single option will suit every farm/system and sometimes a combination of some or all the options will work best.

Key considerations for each of the three main diet options are outlined below.

Grazed grass

If we assume grass availability is not an issue, the most economic system to finish lambs is to achieve as much gain as possible from top quality grazed grass followed by a period of meal supplementation, either indoors or at grass.

The aim should be to have lambs going into covers of 1,500 to 2,000 kg dry matter per ha (grass height 8 – 10cm). Studies have shown a positive impact on performance from moving lambs on when grass height reaches 6cm. In other words you shouldn't force lambs to fully graze out swards.

Temporary fencing optimises utilisation and allows fresh grass to be offered to lambs every three to four days. It is also important that any flock health issues such as parasite burden, lameness etc are properly addressed and are not allowed to reduce lamb performance at grass.

As outlined in Table 1, with excellent management there is potential for lambs to gain 1kg per week live weight during this period on a grass only diet.

For example light lambs weighing 25 to 30 kg in August should be approaching 40kg after 12 to 14 weeks of good grass and ready to start the finishing period.

Table 1: Typical performance of lowland terminal sired lambs on good quality pasture

Time Period	ADG (g/day)	Kg gain per week
Aug/Sept	160	1.1
Oct/Nov	115	0.8

Ad-lib concentrates

Concentrate supplementation is the biggest cost in any lamb finishing system. Aim for high quality ingredients and ensure the feed is specifically intended for intensive finishing of lambs. It should be balanced for minerals and include 0.5% ammonium chloride to help avoid issues with urinary calculi.

Most finishers will look for a good value for money commercial ration in pelleted form. The pelleted feed is less attractive to birds. It also prevents lambs sorting and selectively leaving behind certain ingredients as can happen with a coarse ration.

There is an opportunity for significant savings per tonne where buying in bulk is an option. Where lambs are to be finished on ad-lib concentrates, it is important that they gradually build up to ad-lib feeding levels.

Increase the amount offered by 200g/day every three days until lambs are ad-lib feeding. Where lambs are housed indoors ensure that the sheep house is well ventilated and adequately bedded where necessary.

Performance will vary by breed and sex but, on average, lambs will be growing in excess of 200g/hd/day or putting on 1.5-1.8kg live weight per week.

Regular weighing will ensure lambs are drafted at the correct weight and assessed for muscle and fat cover prior to being drafted for slaughter.

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Forage crops

Lambs grazing on forage crops such as forage rape and hybrid brassica won't perform as well as lambs housed indoors on ad-lib concentrates. But they can perform satisfactorily and finish on these crops where properly managed.

Hill cross lambs will grow at approximately 140g/hd/day once adapted onto the crop and kill out around 44-45% depending on breed and the sex of the lamb.

Grazing forage crops in the winter for lamb finishing requires careful management and lambs need to be weighed regularly once approaching target weights.

Fields should be divided into blocks to allow lambs access to fresh forage every 2-4 days. Ensure that lambs are not forced to overgraze the stalks of the crops as this will reduce animal performance.

Check the correct guidelines for grazing these crops in terms of lie back space and buffer margins for compliance purposes. Where lambs are grazing forage brassica crops the following guidelines are essential to maximise performance:

- Introduce lambs slowly, over 7-10 days, to brassica crops to avoid digestive upsets. It will take three to four weeks for gut fill changes to take effect in the lambs.
- Measure crop yield and allocate grazing area accordingly, average utilisation will be approx. 60% but this will vary with weather and pre-grazing yield.
- If running short on forage consider feeding concentrates with the crop to boost performance.

Estimated date of slaughter

The aim is to reach the maximum carcass weight that meat processors are paying on at the time of slaughter. Regular drafting, as lambs come fit, is essential to ensure the target carcass weight is not being exceeded. This is particularly important where high levels of concentrates are being fed.

In terms of adding value through a carcass price rise, late February to April has been a good time to slaughter hoggets in recent years. In the case of lighter store lambs in September this is a good period to aim for in terms of a finish date to avail of the higher carcass price.

Some producer groups have arrangements with factories to finish smaller framed hill breeds at lighter carcass weights.

An information booklet on Store Lamb Finishing is available for download from this QR Code link.

Growing resilient organic farming systems

A new Teagasc-led organic farming research project is currently underway in conjunction with University College Dublin. The project is funded by the Department of Agriculture Food and Marine and aims to address the current research gaps in organic farming while demonstrating to farmers technically efficient organic systems of beef and lamb production.

A key part of this work will be building on previous work investigating options for lamb finishing using both forages and cereal based diets. This work will take into account effects on animal performance, environmental impact and economic returns.

Starting this year lowland lambs are being finished in Teagasc Athenry under organic management using either:

- A high legume based system incorporating white and red clover to provide high quality grazing and silage for lamb finishing.
- A high legume plus forage crop system incorporating white and red clover and forage crops sown to finish lambs.

Hill lamb finishing systems

Hill lamb finishing systems will also be looked at with lambs finished under organic management indoors or outdoors.

Outdoors, lambs will offered either forage rape or hybrid brassica crops which have been grown under organic management and will be grazed during autumn/winter months by hill lambs purchased from hill farms and brought to Teagasc Athenry.

Indoors, hill lambs will be offered one of the following three diets with all components grown under organic management:

- High quality grass silage and concentrates
- High quality red clover silage and concentrates
- Barley/Oats/Peas combination whole crop forage

A store lamb finishing enterprise properly planned and well managed with attention to detail has the potential to leave a good margin as well as providing an injection of cash flow in the early part of the year.

Philip Creighton, Teagasc Athenry.

How to protect soils from the impact of machinery

Modern tillage farming practices make soils more vulnerable to the impact of heavy machinery and traffic volumes, but tillage land can still function well if handled with care

Dermot Forristal
Teagasc Crops, Environment and Land Use Programme

Dermot Forristal examining the impact of machinery on soil.

Until the 1970s, virtually all tillage happened on mixed farms. Typically, fields were in grass for seven to ten years followed by three years' annual crops, before returning to grass. This resulted in resilient soils with high organic matter levels.

Today, as result of specialisation, most tillage fields are cropped for 40 to 50 years. This leads to lower soil organic matter levels and greater vulnerability to soil structural damage.

Soils can still function with low organic carbon levels; but they must be managed with great care. In particular, we need to bear in mind:

- Soil moisture at the time of working.
- Machine weight and axle load.
- Tyre size, type, inflation pressure and ground pressure.
- Traffic management in-field and on headlands.
- Crop choice: cultivation requirement and timing of machinery operations.

Soil moisture

Soil moisture is the most critical factor. Very dry soils resist damage to their structure. But as they get wetter, soils become weaker and are more easily compacted. Machinery, or animal, traffic can cause compaction.

Within the soil profile compaction is what happens when the aggregates are forced together shrinking the empty pore spaces between them. Even more serious structural damage occurs where the aggregates themselves are broken down.

So when is it safe to work on soil? This is not a straightforward question. Growers usually judge conditions by gauging how 'sticky' the soil is on a spade, a boot, or in the hand; with the soil's texture (sand, silt and clay content) influencing the result.

Often, however, moisture in surface layers may not be a good indication of moisture levels down the profile. Heavy axles can have their greatest impact on wet soil layers well below the surface.

In autumn, the soil can be drier underneath. A plough and one-pass sowing system can often work well in these circumstances. As soils wet-up over the normal autumn sowing period however, there are challenges for

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all tillage systems.

In spring after a wet period, the drying top soil can often mask wetter conditions below. In this situation, which was common in 2024, it would be better to wait –but for how long? Most growers will work the ground when they gauge the tillage tools won't damage the soil.

While this is good practice, we cannot ignore the further impact of machinery weight, through the tyres, both in the field, and particularly on headlands. This type of soil damage must be prevented as remediation by further tillage e.g. subsoiling, can leave the soil vulnerable to serious damage from subsequent traffic.

Headlands

Field headlands are a particular cause for concern. They experience greater traffic with machines turning for the next field pass. Axle loads are greatly increased where mounted implements are raised for turning. A 120kW tractor could typically have four tonnes on its rear axle in the field. This could increase to eight tonnes on the headland.

In a Teagasc Oak Park research study carried out over 40 growers' fields, Mark Ward found that parts of the headland had yield reductions of 44% in winter wheat and 31% in spring barley (Figure 1) .

While this was not all caused by compaction, the loss caused by compaction alone was about 15%. Survey work at the same period found headland axle loads varied from six to more than 16 tonnes depending on the establishment machinery being used.

Field headlands can amount to a sizeable part of our fields' total area. For example with an approximately square field of 5ha, two of the headlands at 24m wide will have most traffic and account for 1.1 ha or 22% of the field. The 3rd (side) headland will have some additional turning depending on the field shape adding another 11%.

In total, one third of the area could be impacted by headland traffic to some extent. It is imperative that we try to minimise damage to headlands by carefully managing traffic there.

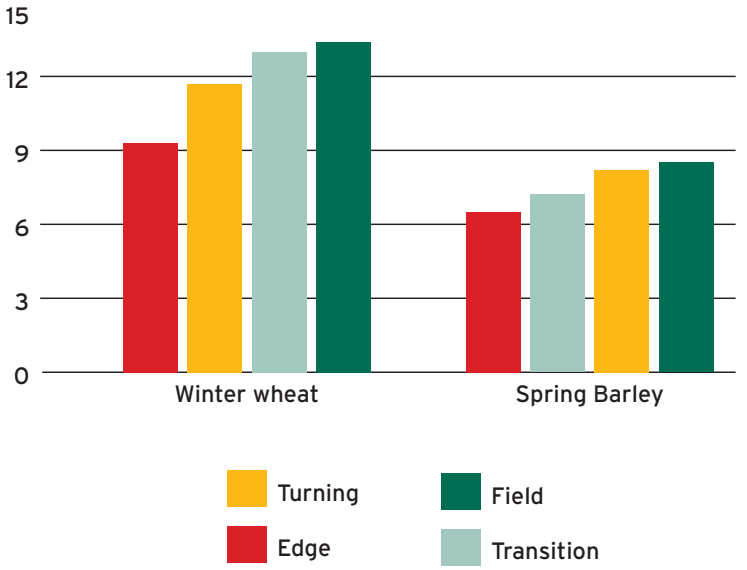
Reducing machinery ground pressure

The ground pressure exerted by a wheel can be reduced by decreasing the load or weight on the wheel, or by increasing the tyre size or contact area between the tyre and the ground.

Loads can be decreased by reducing machine size and this should be carefully considered when selecting machines. We sometimes seem to be pursuing scale to reduce labour at all costs. This may not always make sense with our field sizes and distances between fields and land blocks.

While the manoeuvrability of mounted equipment is a benefit in smaller fields, the use of trailed equipment can greatly reduce axle loads. Unfortunately, much of the trailed equipment available is not designed for manoeuvrability in small fields or trafficability in wetter conditions.

Figure 1: Crop yield in three headland areas (edge, turning, transition) compared to in-field area in winter wheat and spring barley fields



Larger tyres, lower pressures, less soil stress.

Big tyres are expensive, but they are essential with our heavier machines. They can carry loads at lower inflation pressure. Consequently they will exert a lower ground pressure, reducing the stress on the soil.

Tyre size is relative. A 600/65R38 would have been considered large when fitted to a 80kw (105hp) tractor 25 years ago, but is totally inadequate on a 135 kW tractor (185 hp) today.

We can use the required inflation pressure of a tyre as a guide to ground pressure. So how do we select tyres?

Table 1: Tyre options and pressures; 120KW tractor and 5F plough, 8t axle load, 30kmh

Tyre options	Inflation pressure bar
520/85R38	1.6
650/65R38	1.2
800/65R32	1.0
VF 650/65R38	0.9

An example of a 120kW tractor and a five furrow mounted plough is given in Table 1.

The target ground pressure/inflation pressure depends on the condition of the soil when working but for ploughing it may be 1.0 bar pressure. It would be less (0.8 bar) for sowing and drilling. With a rear axle load on the headland of 8t, four tyre options are considered.

The first 520/85R 38 requires 1.6 bar pressure to carry that load, resulting in considerable soil stress. A change to wider 650/65R 38 tyres reduces the pressure to 1.2bar which is still too high. Selecting a 800/65R32 tyre would allow the 1.0bar target to be achieved, but this would be a very wide tyre for ploughing.

The last option is a VF 650/65R38 tyre which allows a pressure of 0.9bar to be achieved meeting our target. But what is a VF rated tyre?

New Tyre technology: VF and IF tyres

A tyre's contact area is determined by its width and diameter, and the inflation pressure within the tyre. The inflation pressure is determined by how much sidewall deflection that is allowed.

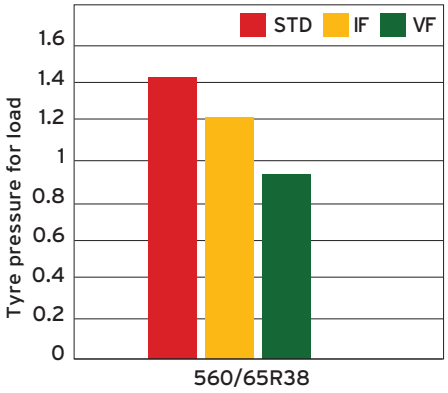
In the past, all manufacturers used similar inflation pressure guidelines for specific tyre and load combinations. But 20 years ago, more flexible carcasses capable of running at lower pressures without damage, were developed by Michelin, and designated IF or VF. Today most major manufacturers have VF or IF tyre options available.

These allow lower pressures and larger (longer) contact patches. The

reduction in ground pressure is up to 40% with VF tyres and 25% with IF tyres. In Figure 2 the pressure reduction for IF and VF tyres of the one size is illustrated for an 8t axle load at 40kmh speed.

While currently expensive, this technology will help dissipate some of the extra load imposed on the soil.

Fig 2: Standard, Vf and IF tyre pressure for 8t axle load (650/65r38 at 40kmh)



Traffic management

In addition to avoiding working and driving on the soil in wet conditions, further traffic management options are possible. These include:

Cultivating and sowing headlands last. This allows machines to turn on uncultivated soil.

Switching the headland to the other sides of the field, or setting up a turning headland inside an existing headland, to allow damaged headlands to repair, possibly following loosening.

Controlling traffic paths using auto-steer and accurate GPS, restricting compaction to tightly controlled zones/paths and having more gentle turns by skipping passes when turning.

Crop choice

Finally, crop choice can also play a role. Oilseed rape for example is sown in August and harvested in July, ensuring that the main machinery operations are carried out when the soil is likely to have good carrying capacity.

Conversely, vegetable crops requiring excessively cultivated seedbeds, compounded by destoning, and with contract-determined harvesting dates (e.g. carrots), should only be considered on light textured soils on free-draining sites, with good field access, to reduce the risk of damage.

As we look out at seemingly incessant showers it seems we will never be short of water. Whether we continue to have six inches of well-structure topsoil is in your hands.

Crop choice plays an important role. Oilseed rape, above, for example is sown in August and harvested in July, ensuring that the main machinery operations are carried out when the soil is likely to have good carrying capacity.

> We owe our existence to a six-inch layer of topsoil and the fact that it rains – broadcaster Paul Harvey 1978

Where is the dairy stocking rate sweet spot?

Higher milk output doesn't always translate into additional profits if stocking rates aren't matched by a farm's grass-growing capacity

Stuart Childs
Teagasc Moorepark

Nora O'Donovan
Teagasc Dairygold Joint Programme Monitor Farm Advisor

Adrian O'Callaghan
Teagasc Mallow

Donal Patton
Teagasc Ballyhaise

In January 2015 at the Irish Grassland Association Conference, Prof. John Roche asked the audience: "Post quota: will you make money from milk or milk from money?" His data showed that while the average dairy farmer in New Zealand had increased their milk output by 40%, they were making no additional profit.

The New Zealand farmers had expanded but lost sight of what was driving profit – the ability of their land to grow grass - the most cost-effective feed source on the planet.

The law of diminishing returns shows that once the point of optimal efficiency is passed, the return from additional units of production will drop and potentially generate a negative return. So, beyond a certain point, overall profit falls.

How does this relate to stocking rate? If you take stocking rate on either the milking platform or the whole farm to beyond the optimal point, the financial return will begin to decline. This is because the emphasis begins to shift to alternative feeds to complete the feed budget for the increased number of animals.

Michael Egan and his group at Teagasc Moorepark have shown greater intake earlier in lactation than previously observed. Higher overall dry matter intake also, in the order of 19kg DM/head/day of a herd average assuming a 20% replacement rate. Therefore, cows need at least 19-20kg DM per head per day to be fully fed and deliver on their genetic potential.

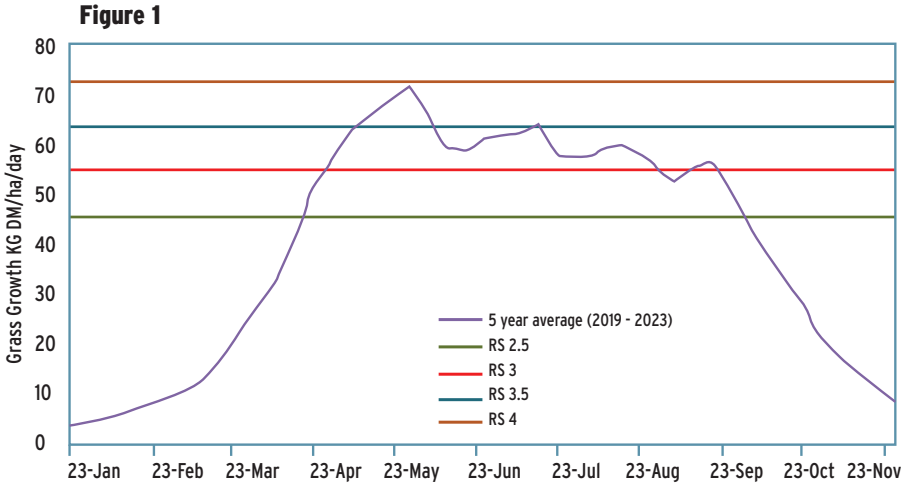
Average national grass growth

Figure 1 shows the average grass growth figures from PastureBase Ireland for the last five years. From it you can see that while there is a peak growth of 71 kg DM/ha/day in late May, it is short-lived.

The green line which represents a stocking rate (SR) of 2.5 cows/ha intersects with the average growth curve at a growth of 46kg DM/ha/day in mid-April and stays in surplus until early October.

Depending on the layout of the farm and whether long-term silage is being taken from the block, one could argue

Figure 1



that this stocking rate is too low, as there is too much surplus to deal with during the main season.

Surplus of silage

More silage would have to be removed from the platform to maintain grass quality than is needed to meet the feed budget. A surplus of silage is not a bad thing, but repeatedly generating excessive surpluses is counterproductive.

The red line (SR = 3 cows/ha) meets the average growth line at 55kg DM/ha/day approximately a fortnight later than the 2.5 stocking rate and stays largely in surplus until the end of September. This surplus of growth over demand enables the farm to remove bales to manage grass quality. It also allows reseeding to ensure that sward quality is maintained.

The blue line (SR = 3.5 cows/ha) exceeds demand for approximately a month from early May to early June. There is higher demand than growth for the remainder of the year.

The orange line representing a stocking rate on the platform of 4 cows/ha is similar, with the exception that it never grows enough grass to meet demand.

Costs

How does the cost of an excessive stocking rate manifest itself?

Firstly, the cost of feeding the cow increases through increased concentrate feeding to keep the loop closed in the absence of adequate grass growth during the main growing season (see Table 1 below).

Poorer milk production performance can also occur as there is an underestimation of the intake capacity of the cow. At higher stocking rates, they have to 'make do' with less. An increase in silage in the milking diet at the shoulders of the grazing season will also occur.

The stocking rate on the platform creates such a level of demand that the farm has to be almost at full tilt of growth to meet demand and in some cases will never achieve it (Orange line, Figure 1). The result is cows being fed silage as far as mid to late April when growth can surpass requirement.

Building cover

Building cover in August is a key grazing management practice. It ensures there's a wedge of grass available to be grazed when growth dips below demand again during October and early November.

As we have already outlined, the stocking rate of 2.5 cows/ha effectively builds a cover despite itself, as growth is exceeding demand. With some minor intervention, the stocking rate of three can create a wedge of grass to graze in October and November.

At a high milking platform stocking rate, it is inherently difficult to build cover and is limited by the fact that 2,000-2,200 kg DM/ha is the highest cover that can realistically be grazed well at that time of the year.

On heavier land, these heavy covers can be particularly challenging to graze. The consensus is to not let them to build to greater than 1,800 kg DM/ha. Consequently, at higher stocking rates, we either:

- Start feeding silage early to stretch the grass for as long as possible or
- Run out of grass faster and end up on silage full time sooner.

Therefore, it should be clear that at higher stocking rates:

- Silage is removed from the diet later in the spring;
- Silage needs to be introduced in August if cover is to be built to extend autumn grazing;
- Silage has to be introduced earlier in the autumn to stay out at grass; or cows are fulltime on silage earlier than farms that are stocked to match the growth capacity of the farm.

At higher stocking rates, it is difficult to remove poor quality paddocks during the grazing season as it may result in a deficit the following week.

> At higher stocking rates, cows have to 'make do' with less – an increase in silage in the milking diet at the shoulders of the milking season will also occur

Reseeding

Figure 1 shows that growth only exceeds demand for a month at a stocking rate of 3.5. Target turnaround time for reseeding is two months so it is extremely difficult to contemplate reseeding in a high stocking rate scenario.

Without reseeding, swards age and grass growth reduces over time resulting in even lower growth rates than the farm requires.

The argument is often made that there is more money coming in and this is true: turnover will be higher. But what about the costs associated with generating this extra income? These cows are marginal at best in many cases.

This is even before we look at housing capacity, slurry and soiled water storage requirements, milking parlour and bulk tank capacity and labour availability.

Cost of production

It is important to know the cost of production. This has increased in recent years as people know only too well. This cost increase has been very unforgiving where farms are highly reliant on bought in feeds.

Yes, the cost of growing grass has also increased but it is still the cheapest feed source. Matching stocking rate to your average growth rate will maximise output while minimising input cost. This is the key to maximising profit.

In summary, farmers need to know the growth capacity of their farm to set their stocking rate. What is the average level of growth that is required to meet the stocking rate that you have and can your farm consistently deliver this?

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Table 1: Growth rate (kg DM/ha) required to sustain different stocking rates with varying levels of fresh weight concentrate input (assuming 20kg total DM intake per day)

Stocking Rate (LU/ha)	Growth (kg DM/ha) Required 2kg Concentrates	Growth (kg DM/ha) Required 3kg Concentrates	Growth (kg DM/ha) Required 4kg Concentrates	Growth (kg DM/ha) Required 5kg Concentrates
2.5	46	44	41	39
3	55	52	50	47
3.5	64	61	58	55
4	73	70	66	63

STOCKING RATE CASE STUDY: TOM & HELEN O'CONNELL, INNISCARRA, CO CORK

We are never short of silage – it's a key objective for us to have a surplus'

Helen & Tom O'Connell with Dan O'Mahony and Stuart Childs.

THE O'CONNELLS are monitor farmers on the Teagasc Dairygold Joint Programme. The farm is run with the help of farm manager, Dan O'Mahony, and farm assistant, Lucien T Cotoara, plus relief milkers. In 2023, they milked 322 cows on a milking platform of 91ha (SR 3.54 cows/ha). This year, they have added a further six hectares to the milking platform.

With that now reseeded and available for grazing, the 320 cows have access to a milking platform of 97ha which is a stocking rate of 3.3 cows/ha. Total farmed area is now 197ha and the whole farm stocking rate is 2.3 LU/ha. Herd EBI is €248 with genetic potential for protein at 3.93% and fat at 4.84%. Last year the herd delivered 488kg of milk solids at 3.82% protein and 4.79% fat from 1,217 kg of meal. This was down from 521kg in 2022 at 3.83% protein and 4.68% fat from 1,457kgs of meal

The farm has changed in recent years from being driven by high levels of perennial ryegrass (PRG) swards grown on allowed chemical nitrogen allowances to 65% grass clover swards with the balance still receiving their maximum allowed

chemical nitrogen.

Tom and Daniel measure their grass cover very regularly throughout the year and are well positioned to know that the reduction in growth experienced on the farm is not down to this change. Grass clover swards on the farm are performing similarly to those that receive full rate chemical nitrogen. The farm has excellent soil fertility with 82% of the land area correct for lime, phosphorus (P) and potassium (K). The remaining 18% is deficient in a small amount of lime and 14% of the land area requires additional K. This is being worked on through 2024.

RESEEDING

Reseeding on both the grazing platform and outblocks is prioritised with at least 10% of both completed annually.

"In recent years we have found that during the summer, we come under pressure to keep the herd fed on grass and concentrate only," says Tom. "This is creating extra work at a time of year when things should be a little quieter." Spring is very busy as the farm calves 89% of the herd (five year average) in six weeks. "There are plenty of jobs to be done during the summer without the added complication of having to feed silage to cows," adds Tom.

"We decided to review our stocking rate. We are never short of silage as it is a key objective that we have surplus silage in the yard to deal with any unforeseen circumstances."

Tom's motivation to examine the stocking rate was driven from a financial performance and ease of farm management viewpoint rather than any feed deficit challenge. This was the subject of discussion at a recent monitor farmer group meeting and subsequent monitor farm walk held at the O'Connell farm in July. Figure 2 shows the demand of a high milks solids herd plotted against demand on the O'Connell farm. Total demand per hectare is significant and relative to the growth on Tom's farm is greater than can be delivered.

This is exacerbated by the emphasis that the O'Connells place on spring reseeding which removes area from the grazing platform. There are fewer hectares to grow the required grass and quality remains a critical requirement.

AI START DATE

Another factor that needs consideration is the AI start date of the heifers. "We have switched to using a very significant level of sexed semen in our breeding plan and to facilitate the synchronisation brought the AI start date of the heifers forward," says Tom. "This was to help AI technicians get the job done before the main AI season kicked off. It would also mitigate against the risk of poor conception rate, something that hasn't actually been an issue since we started using the sexed semen."

(back): Helen & Tom O'Connell, Stuart Childs and Dan O'Mahoney; (front) Maria, Eileen and Mairead O'Connell. Their sister Sarah is not pictured.

However, an unintended consequence of this change has been a 17 day shift in the median calving date of the heifers in the herd in 2024 to January 25th. This has created a significant demand for grass right from the start of grazing in the first rotation and also means that half the heifers are hitting peak milk ahead of significant grass availability on the farm.

In summary, the observations and outcomes of the O'Connell's discussion on their stocking rate are:

– High level genetics of the herd and excellent fertility are driving grass demand in spring and throughout the grazing season. In light of this, the farm needs to reduce the demand pressure to allow for the maximum utilisation of grass. It will allow reseeding to take place as normal without undue impact on the grazing platform demand.

– Outblocks must be managed to deliver the very high quality silage needed to supplement the milking herd early in the year and late in the season. And, if necessary (although hopefully this will not be the case in future), through the main grazing season.

– Calving pattern is excellent but the start date has moved earlier indirectly in recent years. This increases grass demand early in the first rotation and delaying calving start date should be considered for future breeding seasons.

– Stocking rate will be driven by the grass growing potential of the farm and the profitability driven by high grass utilisation on the farm.

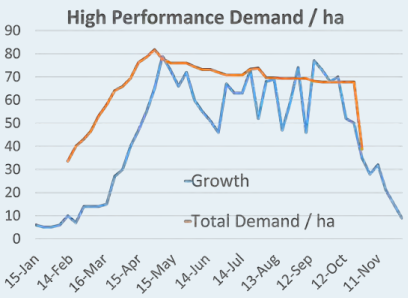

Figure 2. Total demand per hectare versus growth on the O'Connell farm.

THE OUTCOME

Despite increasing their milking platform area in 2024, the O'Connells have decided to reduce cow numbers for 2025 to 310 (milking platform SR 3.2). In this situation, even with reseeded ground out (approximately 5-6% at two different stages during the season), stocking rate in 2025 will not be greater than 3.4 cows/ha.

Tom and Dan are confident that in normal grass growing years, the farm is capable of growing 65kg+ DM/ha/day which will be sufficient to meet this demand with 2-3kg of concentrate.

The hope is to return to delivering on the herd's potential for milk solids production from a predominantly grass based diet and concentrate levels of 750-800kg.

Hold your horses on sowing winter barley

Sowing date for winter barley is crucial. Early sowing, while tempting if conditions are right, generates risks that can impact yield, quality, and overall crop health

Shay Phelan
Teagasc Tillage Specialist

Growers would euphemistically describe their experience with winter barley in 2024 as 'mixed'. Most of the poorer crops were a consequence of the excessive rainfall last autumn. Seed beds were a nightmare, leading to poor establishment and reduced performance.

Some growers are suggesting that they are willing to drill early to avoid repeating the experience, but growers need to be mindful of the following risks.

Increased disease pressure

One of the primary risks is the heightened exposure to disease, particularly foliar diseases such as rynchosporium, net blotch and powdery mildew.

These diseases can establish more easily when the crop is in the ground for longer, especially in the mild and damp autumn conditions typical of Ireland. Early sown crops can act as a reservoir for these pathogens, leading to more severe infections that can reduce yields and grain quality.

Take-all, while often seen as a lesser issue in winter barley, can be a problem. Be particularly careful in high risk situations such as second cereal after a break crop or where drilling early. Most growers now opt not to grow second wheats due to the costs, preferring barley instead. These winter crops will be at high risk of take-all infection and will benefit from later drilling.

BYDV

Aphids, which are vectors (carriers) of Barley Yellow Dwarf Virus (BYDV), are more likely to infest crops that have been sown early. The mild autumn weather allows aphids to survive longer and reproduce, increasing the risk of BYDV, which can stunt plant growth and reduce yields.

Research in Teagasc Oak Park over a number of years tells us that September drilled barley generally requires two insecticides while crops drilled in October usually need only one. The extra application runs the risk of increasing the levels of resistance among the aphid population. This could lead to problems in the future.

Monitoring and managing aphid populations can be challenging and may require increased use of pesticides, leading to higher production costs and potential environmental impacts. As stated earlier, early sowing benefits aphid populations.

While there are now varieties available that can help to reduce the risk of BYDV infection, this doesn't mean that it is a good idea to sow these varieties early as the other issues that can affect early sown crops will also be present.

Weed competition

Early sowing provides a longer window for weeds, particularly grass weeds such as sterile brome and blackgrass, to establish and compete with the barley crop. Weeds that emerge simultaneously with, or before, the crop compete for light, nutrients, and water, ultimately reducing barley growth and yield.

Managing these weeds often necessitates additional herbicide applications, which can increase costs and the risk of developing herbicide-resistant weed populations.

Lodging

Sowing winter barley early can result in excessive vegetative growth before winter. This excessive growth can increase pressure on the plant's ability to stand regardless of your growth regulator strategy.

> The excessive rainfall last autumn meant some seed beds were a nightmare

Higher input costs

Managing the additional risks associated with early sowing often leads to higher costs. In 2024 the Teagasc Costs and Returns Booklets showed that the estimated input cost for winter barley was €765/ha (€309/ac) using standard agronomy packages.

There may be small savings to be made on seed costs by sowing early; all other costs will almost certainly be higher.

In Teagasc Oak Park we have seen that where multiple insecticides are used to control aphids the risk of developing resistance almost doubles while the number of cases of grass weed resistance is also increasing year on year.

RISK MITIGATION

To reduce the risks associated with early sowing, farmers should consider the following best practices:

- **Optimal Sowing Dates:** Adhering to recommended sowing dates can help balance the benefits of early establishment with the risks of disease, pests, and adverse weather. Typically, the ideal window for sowing winter barley is from late September to mid-October.
- **Integrated Pest Management (IPM):** This includes regular monitoring of pest and disease levels, using resistant barley varieties, and applying biological controls where feasible. IPM can also be used to prevent resistance building up to the available pesticides. This is likely to become more important in the future.

Teagasc is currently monitoring the risk of BYDV infection on a number of farms around the country to build up a bank of knowledge about the different environmental conditions that can affect aphid movement and subsequent infection.

As mentioned, early drilling is one such factor. There are over 20 farmers who trap and submit aphids each week to Teagasc Oak Park. Over time, this will give us a better picture of the factors that encourage aphid movement and the subsequent levels of BYDV in crops.

Craig England and Ciara O'Donovan view a variety of crops including winter barley and spring barley on his farm in Ballynoe, Co Cork.

'We saw very little infection in any of the tramlines this year'

Craig and Meghan England, who are based in Ballynoe, Co. Cork, are among the farmers who trap and submit aphids each week to the Teagasc research centre in Oak Park.

"We grow a variety of crops including winter barley, spring barley, spring beans, winter rye and oats," says Craig. "On October 10th last year we planted Pixel and Tardis winter barley and in one field we carried out a tramline trial. Along with three other farms, this was part of an EU project looking at the use of a decision support tool to assist growers in determining when is the best timing to use an insecticide to control aphids."

Trial treatments

The trial treatments consisted of applying an insecticide at the normal timing two-three leaf stage to one tramline; leaving another tramline untreated; and, in a third tramline, applying an insecticide according to a decision support tool called Acrobat. These tramlines were harvested with a combine harvester that has GPS enabled technology and so can record the live yield on each tramline.

Yield mapping

The yield is then mapped for each tramline and these can then be analysed and compared to one another.

"We saw very little infection in any of the tramlines this year," says Craig.

"The field was ploughed on October 9th and the morning of ploughing the field I noticed there was a very high number of slugs.

"I was going to be planting winter rye in this field but because of the slugs I swapped fields and put winter barley there instead. I'm planning on sowing a little earlier this year, with a BYDV tolerant variety barley for around the last week of September."

Succession is inevitable, the sooner you start the 'journey', the better.

How to manage the farm succession process for everyone's benefit

James McDonnell,
Teagasc Farm Management Specialist

Transferring farm ownership and management from one generation to the next is rarely easy. There are legal, financial, emotional and social dimensions, each of which can complicate or delay the succession process.

For most farm families succession is not a single event but a journey, with many staging posts along the way.

Sad to say it, but farmers, as a cohort, are ageing. Fewer young people are entering farming as urban job opportunities and higher education draw potential successors away from rural life.

The demands and uncertainties of agriculture can deter young people from taking over family farms.

The financial viability of farms is also a consideration for potential successors. Many farms operate on narrow profit margins, making it challenging to support the needs of multiple generations.

The extremely high cost of land and the capital required for modern farming equipment further exacerbate these issues.

Successors may be reluctant to take on the financial burden associated with farming, especially where alternative career paths can offer stable and potentially higher income.

Family dynamics

Beyond the tangible challenges, farm succession is deeply entwined with family dynamics and emotional considerations.

Attachment to the land and the family legacy can create strong emotional bonds, but it can also lead to conflict and difficult decisions.

There is often a powerful desire to have the family name attached to land. Open communication within

10 steps to a smooth farm transfer

1 Start early: begin the succession planning process as early as possible. It's essential to have open and honest discussions with family members about the future of the farm and their roles in it. By putting it 'on the long finger', you might find that some taxes become unavoidable, placing an unnecessary financial burden on the successor. Make or update your will. The will then becomes the "backstop" should the 'unforeseen' happen before the succession plan is completed.

2 Assess goals and objectives: identify the goals and objectives of the farm succession plan. Consider factors such as preserving the family legacy, ensuring financial security, and maintaining the viability of the farm for future generations.

3 Understand legal and financial considerations: familiarise yourself with the legal and financial aspects of farm succession, in particular the tax and inheritance laws. Navigating the rules requires careful planning. Seek professional advice from solicitors, accountants and your local Teagasc advisor.

4 Identify successors: determine who will take over ownership and management of the farm. This may include one or more family members. Over the last decade, DAFM Registered Farm Partnerships have become an important stepping-stone in the succession process, especially where the generation gap is short, and the farm succession plan is a staged process. There are also attractive incentives to use this model (higher grant aid and tax credits).

5 Develop a succession plan: create a detailed succession plan outlining how the transfer of ownership and management will occur. Include provisions for decision-making, asset distribution, and the roles and responsibilities of each party involved.

6 Communicate effectively: maintain open and transparent communication with all family members, particularly those directly involved. Discuss expectations, concerns, and any potential conflicts openly in order to address them early and find mutually agreed solutions. Mediation services help families discuss their goals, expectations, and concerns in a structured and neutral environment. This process can prevent disputes and foster a collaborative approach to succession planning. Mediators can also assist in developing formal succession plans that outline roles, responsibilities, and timelines, providing clarity and reducing uncertainty.

7 Taxation: Irish capital taxation is complex. However, for the majority of farms, there will be little or no tax due if the transfer is well planned. There are good tax reliefs available (see Table 1), but they have conditions attached. Talk to your local Teagasc advisor, who can help you prepare for a meeting with your tax advisor.

8 Address financial security: ensure that the retiring generation has adequate financial security and retirement planning in place.

Consider options such as pension plans, savings accounts, and investments to provide income during retirement. Long-term care and the "Fair Deal" scheme, should also be considered. Family settlements sometimes create a huge burden on the successor and hold back the farm.

Catering for siblings of the successor needs to be carefully managed so that the financial sustainability of the farm is not undermined.

9 Document and review the plan regularly: it's highly advisable to put the succession plan in writing. It should be reviewed regularly to accommodate changes in family circumstances, farm operations, or legal requirements.

Too many plans are completed only when there is a sudden, life changing illness, or other major family event. Consequently, they are rushed. This can lead to tax liabilities and family disagreements.

10 Seek professional guidance: seek professional guidance throughout the farm succession planning process. Transferring the family farm clinics, organised by Teagasc offer one-to-one consultations with experts in legal, financial, mediation, and farm management fields. These help families understand their options and make informed decisions. Check out the events page to book into one near you in October 2025.

Table 1: Irish capital taxation

Tax on farm transfer	Paid by	Relief available*	Rate
Capital Acquisitions Tax	Transferee	Agricultural relief	33%
Capital Gains Tax	Transferor	Retirement relief **	33%
Stamp Duty	Transferee	Young Trained Farmer relief 0%	7.5%
		Consanguinity relief 1%	

*With all reliefs there are both qualification criteria and 'terms and conditions' to be aware of.
** The ceilings available reduce from 1 January 2025

the family which addresses expectations, roles, and responsibilities is essential.

Establishing a shared vision for the farm's future can help avoid potential conflict and ensure a smoother transition.

When you find yourself on the succession 'journey', what are the key considerations? By following the steps outlined in the above panel, you can create a comprehensive plan that meets the needs of your family and ensures the long-term sustainability of the farm.

While there are significant challenges, proactive planning and leveraging tax reliefs will help you navigate the financial complexities of succession.

Mediation services and your Teagasc advisor can offer vital support in addressing family dynamics and planning needs. I wish you well on your journey of creating a future for your farm successor.

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Have you considered all **potential successors**?

There's significant scope to increase the number of women farmers, writes **Kevin Hanrahan**, Head of the Teagasc Rural Economy & Development Programme

Today's Irish and European agriculture sector faces a generational renewal challenge. As Figure 1 illustrates, close to one-third of farm managers in Ireland and the European Union (EU27) are 65 years of age or older and less than 15% of farmers in Ireland and across Europe are younger than 40 years of age.

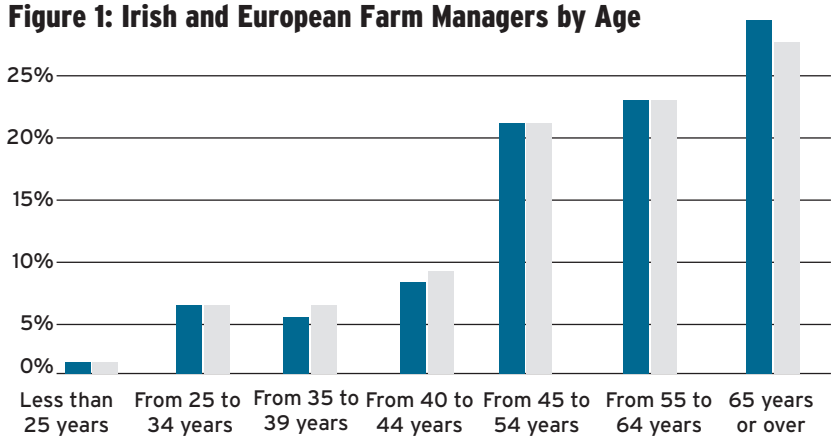
Generational renewal on Irish and European farms is important both for the continued sustainability of existing family farms but also for the wider sustainability and vibrancy of rural areas. The vast majority of today's farm holders acquired their farms from their parents. Current farm management and ownership reflects farm succession and inheritance decisions made by farm families in the past.

Successfully addressing the generational renewal challenge will involve changes in the decisions by Irish families around farm succession and inheritance that are supported by public policy and agricultural advisory services.

Farm family attitudes to female farm succession and public policy and societal support for female farm succession may be important aspects of successfully addressing the farm generational renewal challenge in Ireland.

Census of Agriculture data from 2020 shows that less than half of Irish farms (46%) had a succession plan in place. Of those farm families with a succession plan, the vast majority (82%) had identified a male successor. Only 16% of farms with a succession plan had identified a female successor (Figure 2).

Figure 1: Irish and European Farm Managers by Age



The predominance of males among identified successors reflects well established cultural norms and people's understanding of male and female gender roles in farming. The continued dominance of males among today's identified successors, if reflected in actual farm succession and inheritance outcomes, would do little to alter the gender composition of Irish farm managers.

In 2020 only 11% of Irish farm managers are female. The very low share of female farm managers in Ireland is similar to that observed in other northwestern European counties such as Germany, the Netherlands and Denmark. Central European and southern European countries generally had significantly higher shares of female mangers of farms.

The continued dominance of males among identified successors may increasingly be a barrier to the successful generational renewal of Irish farms.

Irish farm households, like households in Ireland more generally, are declining in size.

In 2023 the average size of farm household in the Teagasc NFS was 2.9 persons, whereas in the year 2000 the average farm household had 3.6 members. With fewer children in modern Irish farm families, the pool of potential farm successors has narrowed and will continue to narrow in the future.

Redefining gender roles in agriculture, empowering women to be farm managers, as well as workers on farms, will be an important part of addressing the generational renewal problem in Ireland and preserving the Irish family farm model.

Figure 2: Gender of Identified Successor of Farm Families with a succession plan
(CSO Census of Agriculture 2020)

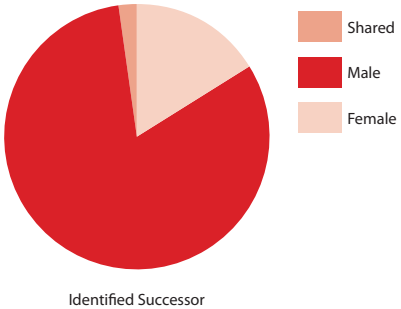
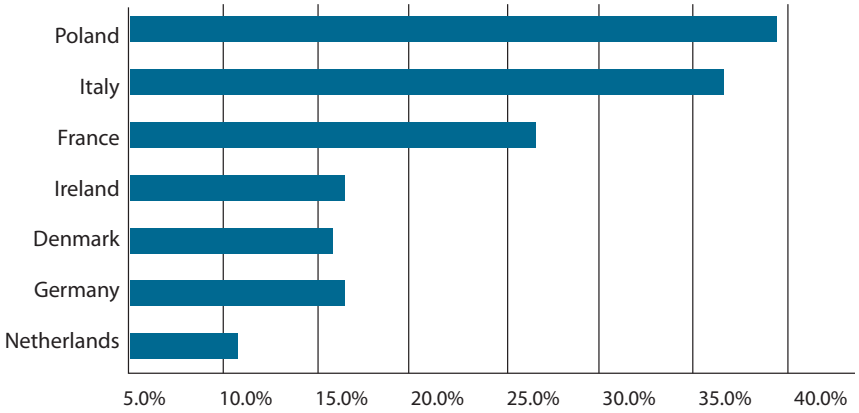


Figure 3: Share of Farms with Female Manager in selected EU member states



Quality horses need quality grass

Grass management is an unglamorous but vital part of the equine business

Sean E Keane
Teagasc Equine
Specialist

Workshops on equine pasture management were hosted recently at Bert House Stud, Co Kildare and Kenilworth House Stud, Co Tipperary.

Bert House Stud which is owned by Richard Young, and managed by Kirsty McCann, extends to 58 acres of limestone land. Stocking density is low and breeding, foaling and boarding thoroughbred and sport horses are the main activities. A sheep flock aids grass management.

Kenilworth House Stud which is managed by Gerry Ross, and owned by Diana Vasicek is a 200-acre farm, also on limestone land. National hunt thoroughbred horses are bred and raised there.

A herd of 16-18 broodmares and cattle on loan from a neighbouring farmer are available to assist grazing management. "I like to keep the horses out as much as possible," says Gerry. "We place high value on grass quality which is determined by soil fertility and pasture management."

Soil testing

Soil sampling is the first step to achieving good grass cover on your equine paddocks and the most important stage in managing soil fertility.

Soil samples are easy to take and indicate your soil's pH and make up. Correct soil pH (6.2-6.5 unless high Molybdenum soil) and liming practices underpin nutrient availability and fertiliser effectiveness.

If your pH is too low you will not get the full benefit of applied fertiliser. A tonne of ground limestone per acre should increase the pH of a paddock by 0.3.

Many horse paddocks have not been tested in a long time so testing is key to improving your soil fertility. And, if the pH results are good, you'll have peace of mind.

Fertiliser and farm yard manure

The grazing demand and requirement for forage conservation will dictate fertiliser requirements. Index 2 for Phosphorous (P) and Potasium (K) is adequate for lower stocked grazing whereas forage ground should be at Index 3 for P and K.

On equine paddocks, you shouldn't be using a lot of nitrogen as this can cause some joint issues for young stock. Use 10-10-20 or 18-6-12 on paddocks where needed.

Applying slurry and well-composted farmyard manure is beneficial. Check for parasites as well as nutrient quality before spreading.

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Weed control

Weeds can be a major problem on horse pastures. Combat them with good land and soil management. A pH range of 6.2-6.5 will allow the grass to grow and prosper and stay ahead of the weeds.

Don't overstock or overgraze paddocks as poaching and inadequate grass cover will give weeds time and space to grow. Compaction can also contribute to weed problems. Aerating and using appropriate rollers or harrows will help.

If you are still struggling to control the weeds you may have to spray. Adhere strictly to the instructions on the label and, if necessary, get a qualified person to spray for you.

Make sure the spray you are using treats the weeds you are targeting. After spraying, keep your horses off the paddocks for longer than the recommended time, just to be on the safe side, especially with pregnant mares. Any use of chemicals should bear in mind environmental protection and preservation.

Hygiene

The most common mistake is to overstock or overgraze pasture. The importance of hygiene both in the stable yard and within the paddocks can't be highlighted enough.

High traffic zones and especially those occupied by young and vulnerable foals are of the upmost importance. Rhodococcus is extremely prevalent in the country at the moment and other diseases such as Rotavirus are highly contagious.

Fencing off poached and dusty areas in paddocks and renewing surfaces in gateways and around water troughs will help protect the health of foals and others. Cleaning water troughs and maintaining good grass cover will help prevent disease. Disinfect where necessary using a product that covers viruses, bacteria and fungi.

These steps are relevant on all farms, no matter how big or small, and can help you avoid the need for expensive veterinary treatment.

Grassland management

Having started with your soil tests and appropriate fertiliser plan you also have to manage the grass. A good way to address the issue of too little grass is to rest the paddock rather than grazing down too low and poaching the ground.

Try and maintain grass cover as well as possible and don't allow it to get too bare. 'You need grass to grow grass.' Aerating may be an option. Avoid compaction from heavy rolling or heavy machinery.

Horses don't like grass that is gone to seed so keep grass at a height that is nicely palatable. You can manage the grass by closing off some ground for hay, allowing you to manage the other fields better.

You can also cross graze with other livestock. If you don't have any, there are always farmers looking to graze ground with sheep or cattle.

Another option is topping. This can be useful if you didn't want to run your horses with cattle or sheep. You could also top the field and run the cattle in for a couple of days to eat the toppings.

It's not a good idea to cut and leave the toppings on the surface. This can inhibit grass growth.

Keep in mind that some horses are prone to laminitis. These animals shouldn't be in big lush fields of grass. You can also employ a muzzle or adopt strip grazing.

Teagasc group at Bert House stud. (L-R): Rachel Taylor, John Brophy, Patrick Farrell, Peter Doolan, Margaret Farrell, Martha Charles, Sean Keane, Richard Young (owner).

> Don't allow the grass cover to get too bare – horses don't like grass that is gone to seed so keep grass at a height that is nicely palateable

Wormer resistance a growing concern

Resistance to wormers is a concern as there are no new wormers coming on the market. So do the right thing when it comes to worming.

Firstly, keep stables and paddocks clean as possible. That means good mucking out and also poo picking if possible, in your smaller paddocks with high volume. Paddock sweepers may also be used.

Manage stocking densities, rotate and rest grazing paddocks and cross graze with other livestock where possible.

Measure and treat worm burdens as follows:

- Test by taking a dropping sample and getting it analysed
- Talk with your vet and treat, if needed, with the most appropriate wormer
- Retest after two weeks to see if the wormer has been effective

Work with your vet to identify high shedders and come up with a plan. Blanket worming is not only a waste of money but is also counterproductive.

Incoming horses should be tested immediately for worms and treated accordingly before being allowed to graze with your other stock. They could be a high shedder and you could have a big problem in a short space of time.

"Managing your paddocks effectively is a key part of grazing top quality animals," concludes Kirsty McCann.

Efficient, well laid out equine paddocks.

Paul Maguire sitting in the remains of a furnace, with Fiadh on his Mayo farm. Pictures: Mark Moore

Forestry, farming ...and a furnace

Diversification into forestry, biodiversity schemes and heritage projects is helping to secure the future of the Maguire family's small farm in south Mayo

Noel Kennedy
Teagasc Forestry Advisor

Most mornings before his long commute to work, Mayo farmer Paul Maguire follows a simple routine. Having checked the stock and walked the dogs, he steps into his forest for five minutes.

In that short time he immerses himself in the calmness of the trees ahead of a day's work in social care with the Brothers of Charity in Galway, where he supports adults with intellectual and mental health challenges.

Paul has been farming for 30 years in Furnace, located near Partry, on environmentally sensitive land situated along the Cloon river, which flows into Lough Mask. Inherited from an uncle, it was a traditional small west of Ireland cattle farm – small fields, marginal land and low income.

In the early years Paul remained faithful to the suckler farming model he inherited. But over time, while juggling a full time job and starting a family, the realities of this type of farming became clear. Business as usual was not viable. To stay farming he needed to diversify.

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Forestry

Forestry appealed to Paul. Between 2007 and 2011 he availed of Afforestation grants and premiums to plant 30 acres of commercial conifers and broadleaf trees. Trees provide a better and more secure return from his most marginal land and will in time yield income from timber.

But Paul also values the ecosystem benefits the trees provide in complementing the farm's existing native woodlands and blanket bog –two of Ireland's most ecologically important and threatened habitats.

Since 2019, new life is being breathed into the farm's ancient oak, birch and hazel trees under the Woodland Conservation Scheme. This is helping to secure the woodland's long-term future by encouraging natural regeneration and planting a new generation of trees This forms part of Paul's vision to manage all his forests using a Continuous Cover Forestry approach for long-term tree retention. The active integration of his farming and forestry enterprises saw Paul enter the 2024 RDS Teagasc Farm Forestry Awards, where he was shortlisted in recognition of his achievements to date.

Farm diversification

On his farming land, Paul has consolidated his economic and environmental ambitions by participating in successive agri-environment schemes. In 2021, he joined the NPWS Farm Plan – a targeted five-year scheme for farming in areas of high conservation importance. This scheme is aimed at protecting water quality and biodiversity and prioritising the management of species rich grasslands.

With a reduced grazing area and strict grass management rules, Paul has changed his cattle enterprise and stock in recent years.

He now rears Speckled Park heifer calves, which he hopes to keep as cows. He also plans to keep Droimeann cattle – a rare Irish cattle breed suited to this sensitive environment.

Blanket bog

The blanket bog has been largely untouched since turf was cut there during there Second World War, and with this period of recovery it appears in rude health, festooned with flowering heathers, bog cotton and bog asphodel. Its wet, spongy soil is an ecological jewel as well as an increasingly valuable carbon store, adding another unique facet to this

Paul Maguire with Teagasc forestry advisor Noel Kennedy; (below) Paul has switched his stocking to Speckled Park heifer calves, which he hopes to keep as cows.

Exploring other options on the farm: 'the spirit to survive and thrive burns brightly'

The land in Furnace weaves its own magic and is a special place for Paul and his family. Appreciating this wonderful place they call home and how it can support positive health and wellbeing, Paul is exploring other diversification opportunities to share his land of which he is a guardian and contribute towards a sustainable future.

Forest bathing - Taking time to connect with the forest and absorbing all it has to offer through all the senses - sight, hearing, touch, smell and taste - is at the heart of forest bathing or shinrin-yoku, which originated in Japan.

Paul has already welcomed a number of groups to his woodlands to experience forest bathing and hopes to welcome many more.

Social farming

In 2016, Paul was one of the pioneers of social farming in Mayo, a practice which allows people with intellectual and physical disabilities to be part of everyday farm chores from feeding and caring for stock to vegetable planting and dry stone wall building.

It was this experience with social farming that opened the door for Paul to begin a career in social care.

Woodworking

Having returned to education as a mature student in 2003, Paul qualified with a degree in furniture design from Letterfrack College of Furniture Design. As a skilled woodworker, Paul is also hoping to offer woodworking classes as part of a social farming service.

Knowledge Transfer Groups

This year, Paul has already hosted groups of fellow forest owners to his woodlands for peer to peer learning as part of DAFM funded Forestry Knowledge Transfer Group Scheme.

Long-term vision

As the guardian of the farm in Furnace for over thirty years, Paul Maguire has achieved so much. But he is the first to admit that his vision for environmental enhancement, social inclusivity and cultural appreciation has to be built around a sustainable farming model.

Innovative diversification streams and determination will be central to the future of this small farm in Mayo which is so dear to the Maguire family.

But have no doubt: the spirit to survive and thrive burns brightly like the furnace that was working here two centuries ago.

A rare relic from the early industrial revolution in Ireland

The townland of Furnace contains one of the oldest surviving examples of a blast furnace in Ireland and Britain – hence the name of the area.

Built in 1738, this rare structure from the early industrial revolution produced pig iron, using locally mined ore, for over a century. It is believed that peat and wood from local bogs and woods were used to burn the iron ore found on the Partry mountains.

A unique feature of this furnace is the remarkable condition of the sandstone lined chimney and the furnace's intermediate zone, (known as a 'bosh'), both of which remain free standing and a testament to those who built it 286 years ago!

Since 1992 Paul has been protecting and highlighting the cultural and industrial significance of the furnace. Having hosted several Heritage Week events and recently welcomed a group from Westport Civic Trust, he is actively seeking support from relevant state agencies to refurbish parts of the furnace and allow him to offer more structured tours of this unique historic site.

Useful links

2023-2027 Afforestation and forest management schemes: www.teagasc.ie/crops/forestry/grants/:

General forestry information www.teagasc.ie/crops/forestry/

To enter 2025 RDS Teagasc Farm Forestry Awards (closes 9th September 2024) see the forestry news section on www.teagasc.ie, or follow this QR code link.

Dairy Calf to Beef: it's good to talk

Discussion groups specific to Dairy Calf to Beef farmers are now running in Teagasc regional units across the country.

Gordon Peppard
Teagasc DairyBeef 500 Programme

The membership of the new discussion groups comprises farmers within a fairly close geographical area who operate dairy calf to beef systems. They meet regularly (every one to two months) on a participant's farm and typically have 10-15 members.

The meetings are facilitated by the local Teagasc technical beef advisor in conjunction with a DairyBeef500 program advisor. As with all discussion groups the idea is to share first hand experience and adopt new technologies.

What are the benefits?

• **Problem solving** As with most discussion groups there is a range experience and knowledge present. Depending on the time of year different technical topics arise.

Challenges encountered by individual farmers have generally been experienced previously by their colleagues. Current topics are discussed by group members and Teagasc facilitators.

• **Information at the right time** The aim is greater efficiency, sustainability and profit. Hearing the details of new technologies from facilitators and or participating group members, allows individual farmers to complete tasks and adopt the technologies quicker.

• **A social network** Many farmers work on their own, sometimes in isolated parts of the country. When coupled with difficult weather conditions, poor market prices and other challenges, this can make farming a difficult occupation. Getting out of your own yard, sharing experiences, seeking solutions and realising that many others often face the exact same challenges can be reassuring.

From left: Liam Walsh, Martin Kirby, Chris O'Hanlon, Andy Phelan, Áine Butler (Teagasc advisor), Declan Byrne, Eoghan Byrne, Paddy Jones, Peter Hanrahan, Seamus Purcell, Tom Dermody, Oliver Power, Gordon Peppard.

• **Positivity and planning** Many group members feel a lot more positive having received support and reassurance from fellow farmers that what they are doing is right. Where changes are required, having the knowledge that they have worked on other farms is useful.

Well-functioning discussion groups plan meetings, locations, topics etc well in advance. Individual members often align their own farming practices with the group plan's targets on, for example, setting a date to weigh their cattle and having a cut-off date for buying in calves.

This gives more structure to the farming year, improves performance and helps with work/life balance.

•**Benchmarking** Group meetings and discussions allow farmers the time and opportunity to benchmark themselves against others in the group. This doesn't have to be a competitive exercise but a chance for each individual to assess where their performance is going well or to identify areas that require improvement.

A good example is where farmers are all weighing cattle and animals of a similar age but have quite a discrepancy in their weights.

Once this is discussed by the group, corrective action can be taken to improve weight gains on a farm that may be slightly behind.

GROUP IN FOCUS: South Kilkenny

The South Kilkenny calf to beef discussion group recently met on the farm of DairyBeef 500 programme farmers Peter and Thomas O'Hanrahan, Thomastown, Co. Kilkenny. Following an assessment and good discussion on the pros and cons of Peter and Thomas's recently built calf shed, the group went out into the fields to view this year's bull calves.

"We run a dairy calf to steer beef system where animals are slaughtered between 22 and 24 months," says Peter.

A lively discussion on the previous and current management of the calves ensued, facilitated by local Teagasc beef advisor and group facilitator Aine Butler, in conjunction with the O'Hanrahan's Dairy Beef 500 program advisor Gordon Peppard.

On the day, group members also viewed yearling cattle in a nearby paddock. "We hope to have these Friesian steers weighing a minimum of 500 kg by September 1," said Peter. "Steers will be grouped by weight, the cattle at target weight will be fed 5kg of concentrate for approximately 90 days – the aim is to slaughter them at 600kg around the beginning of December."

Benefits: members have their say

During the meeting Gordon Peppard asked participating farmers why they joined the discussion group and what benefits they felt they received.

Thomas Dermody, said he enjoyed the camaraderie within the group. "At virtually every group meeting I learn something new," he said. "The information I pick up keeps me up to date on my own farm.

"Discussion group meetings have a social element which allows me make friendships with other like-minded farmers. At the meetings it is reassuring to know that many others in the group are in the same situation and are facing the same challenges."

Andy Phelan agreed and added: "Each day the group goes to a different farm and you always see something different and can see another way of doing something and bring that idea back to your own home farm."

Paddy Jones commented that he enjoyed the discussion group meeting as it allowed him to learn something new, knowledge is shared within the group, and he often finds other members are able to provide solutions to problems he may have on his own farm.

"Group meetings are an excellent way of keeping up to date with what is happening on farms at a particular time," commented Oliver Power.

"If there are management decisions to be made at that time of the year the answer to my concern often comes up in discussion without me even having to ask the question."

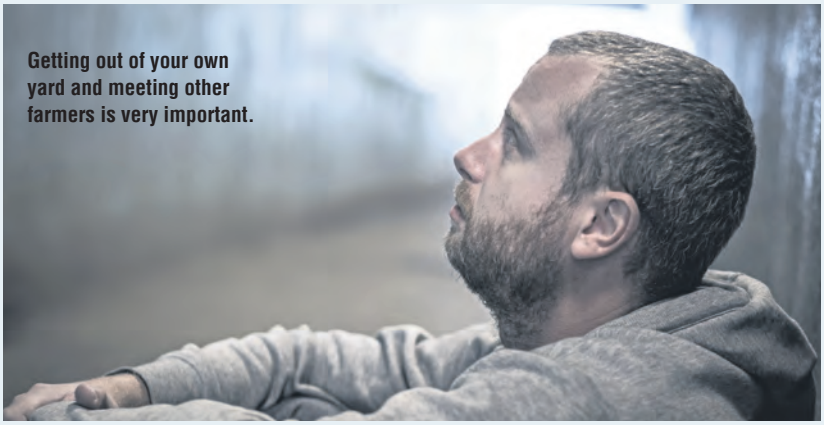
Martin Kirby said that he enjoys attending group meetings as the group is light hearted and no one comes with a set agenda. There is nonetheless room for an air of seriousness to get the answers needed at the time.

"All farmers in the group are like-minded and there is always something to be learned from one another," he added.

Meeting regularly is an excellent way of keeping up to date and a great opportunity to see how other farmers are managing and doing things," remarked Liam Walsh.

"Often you can see other systems or ways of doing things that can make life easier on your own farm."

Chris O'Hanlon felt that getting out of your own yard and talking and meeting other farmers with similar systems is very important. "There is a social benefit," said Chris. "Your own yard can be very isolated if you don't make an effort to get out and see other farms and systems."



Getting out of your own yard and meeting other farmers is very important.

A recent Teagasc study found that one in eight farmers are experiencing chronic stress.

Are you constantly under stress?

John McNamara & Francis Bligh
Teagasc Health & Safety Specialists

Finola Colgan
Mental Health Ireland

A recent Teagasc study has shown that 12% (almost one in eight) farmers are constantly under stress. Are you one of these? Stress is the mind's way of responding to an excessive demand or threat. Constant, negative stress can damage your health, quality of life, relationships and productivity.

In contrast, positive stress helps us to be focused and alert. The term 'wellbeing' refers to positive emotions and also the capacity to function effectively in both individual and social aspects of life. Recent Teagasc research found, unsurprisingly, that high on-going stress levels are generally associated with lower wellbeing scores.

As for all sectors of society, stress levels among farmers change over time depending on circumstances. Numerous stressors can arise in farming including: adverse weather, excessive workload, livestock health along with management and financial issues. Increasingly, farmers are becoming employers. Managing staff, particularly if not used to it, can be stressful.

It is important to recognise your stress levels and to employ strategies to maintain your wellbeing. To assist farmers to achieve positive mental health, Mental Health Ireland (MHI) and Teagasc co-produced a new guidance leaflet : 'Sowing the Seeds of Support: Positive Mental Health Guidance for the Farming Community'.

A key theme running through several recent Irish research studies is that farmers were unsure of where to seek support for mental health.

Finola Colgan Mental Health Ireland Development Officer, explains that the best support for maintaining positive mental health, lies within each person.

"A key step is to recognise and acknowledge that you are under stress, identify its source, and respond positively to the challenge it poses," she says.

Positive strategies

There are many practical and achievable suggestions to minimise stress. These are set out in the Teagasc/ MHI leaflet under 'social involvement', 'health related goals', 'farm management' and 'leisure activities' sections.

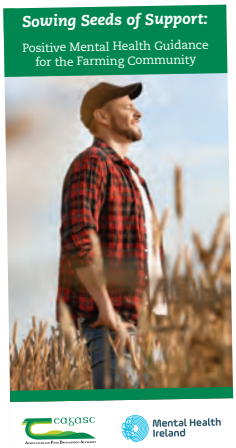
"Mental health and mental illness are often confused as being one and the same," says Finola Colgan.

"Having a mental health challenge is where a person has difficulty dealing coping with the stresses of normal life, working productively, or contributing to their community. Mental ill health on the other hand is a health condition requiring medical care."

Focus on specific changes

The key practical approach for farmers experiencing negative stress is to identify and focus and work-on the specific changes needed on an individual farm basis. The second half of the year is a good time to plan and make changes in advance of the busy spring period.

Positive changes are optimised through engagement with others such as advisors, vets and fellow farmers. Psychologically, positive action has been shown to lead to well-being. Planning and achieving goals is good for stress reduction. Managing what is within your personal control gives a sense of empowerment. Whether you feel excessive stress or not, one positive action would be to get a copy of the leaflet.



The 'Sowing the Seeds of Support' leaflet can be obtained at Teagasc offices or downloaded online from www.teagasc.ie/media/website/publications/Positive-Mental Health.pdf

Transferring the Family Farm Clinics

A farm succession plan is essential for the future viability of your farm business!

Our upcoming Transferring the Family Farm clinics are designed to help farm families through the process of and all aspects that need to be considered when transferring the family farm.

Tuesday, 1 October | 10am
Fitzgerald's Woodlands House Hotel & Spa, Adare, Co. Limerick

Wednesday, 2 October | 10am
Corrin Mart Conference Centre, Fermoy, Co Cork

Thursday, 3 October | 10am
Riverside Park Hotel & Leisure Club, Enniscorthy, Co. Wexford

Tuesday, 8 October | 10am
Inishowen Gateway Hotel, Buncrana, Co. Donegal

Wednesday, 9 October | 10am
Knockranny House Hotel, Westport, Co. Mayo

Thursday, 10 October | 10am
Abbeyleix Manor Hotel, Abbeyleix, Co. Laois

Scan the QR code to book a place!

or visit

www.teagasc.ie/farmtransfer

teagasc
Agriculture and Food Development Authority

Rispoval® 2

THE ONLY LIVE INJECTABLE RSV AND Pi3 VACCINE IN IRELAND

Vaccination Progamme Advice

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[1]All Island Animal Disease Surveillance Report (2022). Rispoval® 2 contains modified live Bovine Pi3 virus (strain RLB 103) and BRSV (strain 375). POM(E). For further information see SPC or contact your veterinary surgeon or Zoetis (www.zoetis.ie). Use medicines responsibly (www.apha.ie). MM-35208 (Aug 2024)

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