



TEAGASC

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Today's Farm

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COMMENT



Mark Moore
Editor,
Today's Farm

Meet the new head of KT

On our cover, we picture Dr Stan Lalor, the new director of Knowledge Transfer in Teagasc. In our interview with him (p6-8), Stan offers this advice to farmers:

Engage with technical information and training and put this into practice on the farm by setting targets and measuring performance.

Always be open to ideas, tools and practices that can help with farm management and farm performance and don't be afraid to try new things.

Build a good network of support around you through your advisor, discussion groups and other farming and business networks.

In these difficult times, it's perhaps the third point which is most important, as we endure these (hopefully) final months of the pandemic.

Cuir aithne ar cheann nua an Aistrithe Eolais

Ar an gclúdach tá grianghraf den Dr Stan Lalor, an stiúrthóir nua Aistrithe Eolais in Teagasc. Inár n-agallamh leis (lgh 6-8) bhí an chomhairle seo ag Stan d'fheirmeoirí:

Bain leas as faisnéis agus oiliúint theicniúil agus cuir i bhfeidhm ar an bhfeirm iad trí spriocanna a leagan síos agus feidhmíocht a thomhas.

Ná tabhair an chluas bhodhar do smaointe, uirlisí ná cleachtais nua a d'fhéadfadh cabhrú le bainistíocht agus feidhmíocht na feirme agus ná bíodh eagla ort triail a bhaint as rudaí nua.

Cothaigh líonra maith tacaíochta thart ort trí do chomhairleoir, trí phléghrúpaí agus trí líonraí eile feirmeoireachta agus gnó.



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Cover | Stan Lalor stays close to his farming roots by helping out on his brother's Laois dairy farm.



Ballyhaise College.

OPEN DAYS

Ballyhaise Virtual College Open Day – Forestry

March 2 2021

- Hear about the forestry courses offered at Ballyhaise College.
- Event time: 6pm.

Agriculture

- Hear about the agriculture courses offered at Ballyhaise College.
- Event time: 7pm.

Mountbellew Virtual College Open Day

March 3 2021

- Hear about Teagasc and GMT courses in agriculture offered in Mountbellew Agricultural College.
- Event time: 5-8pm.

Kildalton Virtual College Open Day - Horticulture

March 4 2021

- Hear about the horticulture courses offered at Kildalton College.
- Event time: 6pm.

Equine

- Hear about the equine courses offered at Kildalton College.
- Event time: 7pm.

Agriculture

- Hear about the agriculture courses offered at Kildalton College.
- Event time: 8pm.

Clonakilty Virtual College Open Day

Tuesday March 9 2021

- Hear about the equine courses offered at Clonakilty College.
- Event time: 7.30pm.
- If your Today's farm has arrived after these events please consult the college website where the open day presentations will be available

Gurteen Virtual College Open Day

Wednesday March 10 2021

- Hear about the equine courses offered at Gurteen Agricultural College.
- Event time: 9am-9pm.

College of Amenity Horticulture Virtual Open Day

Thursday March 11 2021

- Hear about the courses offered at the College of Amenity Horticulture at National Botanic Gardens.
- Event time: 12:30pm

ONLINE WEBINARS

Wicklow/Carlow/Wexford Region Drystock Webinar – Spring Grassland Management

Tuesday March 9 2021

- The drystock advisor team in the Wicklow/Carlow/Wexford region are running a series of online events focusing on management priorities for beef and sheep farmers.
- Event time: 8pm.

Sligo/Leitrim/Donegal Drystock Webinar – BPS

Tuesday March 9 2021

- The drystock advisor team in the Sligo/Leitrim/Donegal region are running a series of online events focusing on management priorities for beef and sheep farmers
- Event time: 8pm.

Teagasc Mayo Webinar

Wednesday March 10 2021

- The Teagasc Mayo region are hosting a series of online events which will consist of relevant and practical advice for farmers in the area.
- Event time: 8pm.

INFOGEST Special Webinar: Starch – An iconoclast view on amylopectin

Monday March 15 2021

- Event time: 11am.

Wicklow/Carlow/Wexford Region Drystock Webinar – Markets & BPS

Tuesday March 16 2021

- The drystock advisor team in the Wicklow/Carlow/Wexford region are running a series of online events focusing on management priorities for beef and sheep farmers.
- Event time: 8pm.

Sligo/Leitrim/Donegal Drystock Webinar – Preparing to grow your silage crop 2021

Tuesday March 16 2021

- The drystock advisor team in the Sligo/Leitrim/Donegal region are running a series of online events focusing on management priorities for beef and sheep farmers.
- Event time: 8pm.

Let's Talk Cattle – Current Beef Research for Future Challenges – Current Beef Research for Future Challenges

Thursday March 18 2021

- Event time: 8pm.

Sligo/Leitrim/Donegal Drystock Webinar: Education – Benefits and what are my options?

Tuesday March 23 2021

- The drystock advisor team in the Sligo/Leitrim/Donegal region are running a series of online events focusing on management priorities for beef and sheep farmers.
- Event time: 8pm.

Wicklow/Carlow/Wexford Region Drystock Webinar – Planning for successful breeding

Tuesday March 23 2021

- The drystock advisor team in the Wicklow/Carlow/Wexford region are running a series of online events focusing on management priorities for beef and sheep farmers.
- Event time: 8pm.

Teagasc Mayo Webinar

Wednesday, 24 March 2021

- The Teagasc Mayo region are hosting a series of online events which will consist of relevant and practical advice for farmers in the area.
- Event time: 8pm.

Let's Talk Dairy Webinar - Planning a successful breeding seasons

Thursday March 25 2021

- Relevant and practical advice to allow you make better management decisions on your dairy farm.
- Event time: 8pm.

Try Horticulture

Friday March 26 2021

- Focus on Level 6 course and opportunities.
- Event time: 12.30pm.

Teagasc Mayo Webinar

Wednesday March 31 2021

- The Teagasc Mayo region are hosting a series of online events which will consist of relevant and practical advice for farmers in the area.
- Event time: 8pm.

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Palmerstown, Kilkenny

Knowledge Transfer strategy

New Teagasc Head of Knowledge Transfer is a farmer's son at heart

Mark Moore
Editor, Today's Farm

Dr Stan Lalor re-joined Teagasc in November 2020 to take over the position of Director of Knowledge Transfer in the organisation following the recent retirement of Prof Tom Kelly.

Stan is no stranger to Teagasc, or indeed to many of our farmer clients and stakeholders, having worked in Teagasc previously in both advisory and research roles, before embarking on a period in the private sector with Grassland AGRO in 2014.

The role he now undertakes is a senior position with responsibility for both advisory and education services in Teagasc. I caught up with Stan to get some insights into the man himself, what he learned during his time in the private sector and how he sees some of the opportunities that lie ahead in his new role.

Tell me a bit about your background

I am a Co Laois native and a farmer's son. I grew up in Camross on a mixed farm in the foothills of the Slieve Blooms. At that time, the farm had a variety of enterprises including dairy cows, sucklers, finishing cattle, sheep, and we even had the occasional field in tillage with barley and fodder beet both grown regularly.



Knowing the daily workings of the farm at home has been invaluable to me in all the jobs I have had down the years

As the availability of family labour declined over the years, the farm became more concentrated on dairying. However, a beef component is still an important part of the system.

The farm is now being run by my brother, Albert. His teenage son Robert is showing great interest in farming as well. Having lived away from



Dr Stan Lalor has recently rejoined Teagasc as Head of Director of Knowledge Transfer. He previously worked in both advisory and research roles in Teagasc before spending the past six years in the private sector.

Laois for several years I was lucky to be able to move back home five years ago and live close to the farm again.

I have always stayed connected with the home farm and enjoy farm work and help out as much as I can. Knowing the daily workings of the farm at home has been invaluable to me in all the jobs I have had down the years. It keeps me grounded in the everyday issues and challenges that farmers are facing.

What were your previous roles in Teagasc?

My first job with Teagasc was as a dairy advisor, working initially in Kildare and later in Monaghan. I had studied soil science after finishing my agricultural science degree, so that gave me an opportunity to work in research at Teagasc Johnstown Castle in the areas of soils and nutrients.

I initially worked on slurry management, mainly on the Low Emissions

Slurry Spreading Systems (LESS). I gradually got more involved in broader soil fertility research and nutrient management planning over time.

Advisory experience was extremely useful as a researcher as it gave me an understanding of how to go about doing, and communicating, research in a way that advisors and farmers could use. In particular, the need for simple tools and messages was key.

The network of advisory contacts that I had built up was also invaluable as I was regularly able to get advisors' ideas and input into the research we were doing and to the tools we were developing. This helped the research to have an impact out on farms.

You have recently returned to Teagasc after six years in the private sector. What can Teagasc learn from your experience there?

Working in Grassland AGRO for six years was a brilliant experience. I had joined Teagasc straight out of college and I had no hands-on experience of working anywhere else. The opportunity to see how another organisation works and operates was refreshing. It gave me an opportunity to meet new people and gain experience in the industry from a different perspective.

I was involved in a lot of technical development and projects, but my primary role was commercial management within the business. I got a chance to work in all areas of the business including strategy development, financial reporting, people management, sales and marketing, customer relations and operations.

The private sector experience strongly highlighted for me the need to always consider the customer. No matter what you do, you are ultimately working for, or producing something, for somebody else. You need to consider the customer or end-user needs, and how best you can deliver a product or a service that matches those needs.



Continued on page 8



Stan highlights how helping his brother Albert on the farm at home has been of great benefit down the years, by keeping him in close contact with the everyday issues and challenges facing farmers.



Continued from page 6

The sustainability of farming and food production is an ever-increasing challenge. How will Irish farmers be asked to contribute?

This is a key area for the coming years. Teagasc is focusing on sustainability as a central and overarching priority in its Statement of Strategy for the next three years. It is an ongoing and serious challenge, but it is also an opportunity.

Farmers and the entire food chain have always been faced with the challenge of staying relevant to the needs and demands of its customers. This is no different to any business or sector in the economy. We are seeing a huge swing in the demands from the public around how food is produced, and the impact it may have on the environment. This is an evolving reality within the context of farming and food production activities.

We have challenges we must address. Water quality, greenhouse gases and carbon, and biodiversity are all high on the agenda, and agriculture has a role to play. We need to make sure our farming practices minimise any damage and lead the way in guiding this. We have tools, practices and technologies that can do this, and we need to continue to research and develop these and get them implemented on farms.

This is a job for every farmer to look at on their own individual farm. Solutions are complex, and often farm-specific. In Teagasc, one of our priorities is to provide this farm-specific advice to farmers so we can achieve the best outcomes.

We shouldn't lose sight of this being an opportunity as well. One thing I have noticed in recent years is the huge increase in awareness and interest at farm level in understanding these issues and challenges and wanting to react and deal with them. More and more farmers are recognising the need to integrate their farming with the nature around them and the soil under their feet.

Many farmers contribute to the environment in a hugely positive way. There are also numerous examples of innovating farmers, farmer groups and programmes that are making good progress.

Initiatives such as the Agricultural Sustainability Support and Advisory Programme (ASSAP) as well initiatives within European Innovation Partnership (EIP) projects and operational groups are showing the importance of local-level initiatives to address local challenges. Collec-



Supporting the next generation of farmers is critical. Stan helps his nephew Robert with grass measuring using the PastureBase Ireland app.

tively, these will make a difference to making progress on a national scale.

What would you say to a young person considering a future in farming?

This is an important question, as the education programme by Teagasc is also under my area of responsibility. To be honest, you could extend the question to ask it for "anybody" considering a future in farming, as there are opportunities there for more than just young people.

“ There are numerous examples around the country of innovating farmers, farmer groups and programmes that are making good progress

Teagasc has an ongoing programme already in place in colleges and with regional education courses on training young and new farmers. There has also been an increased focus in recent years on continuous and ongoing professional development and

training for more experienced farmers who wish to further deepen their farm business, people management and technical capabilities.

The development and coordination of more of these activities and programmes is a priority for the future.

I would always strongly encourage anybody to get involved in farming. Many people enjoy farming and appreciate the potential it can offer in terms of lifestyle, outdoor work and balancing family life. As a business, there are opportunities in every enterprise through optimising technical efficiency, business planning and being innovative.

If I were to give three simple tips to all farmers, but particularly to young people starting out, they would be:

- Engage with technical information and training and put this into practice on the farm by setting targets and measuring performance.
- Always be open to ideas, tools and practices that can help with farm management and farm performance and don't be afraid to try new things.
- Build a good network of support around you through your advisor, discussion groups and other farming and business networks.



**DON'T LEAVE
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*during early lactation

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zero** 

Don't blame the system

'The best system of milk production' is a topic for debate that has swallowed up hours during discussion group meetings. Focusing on performance indicators is likely to be more useful regardless of the system you're in.

Joe Patton
Dairy Specialist,
Teagasc Animal and
Grassland Research
and Innovation Programme



Aidan Cushnahan
Dairylink Advisor,
College of Agriculture,
Food and Rural Enterprise
(CAFRE)



Achieving a more defined sense of system can give an individual farm identity and better clarity as to what the most important metrics of performance are for their own circumstances. However, the opposite and corresponding risk, is that too much emphasis is placed on the sense of difference between farms, where everything can be explained away as "part of the system".

This often leads to confusion as to where the effect of "performance" ends and the definition of "system" begins. For example, is "autumn calving" a system? Yes, if it is implemented at good technical efficiency to maximise a return on a milk pricing structure. On the other hand, if

followed, because of a herd fertility problem. Then it is probably just reflecting technical inefficiency.

This distinction is rarely made when comparing systems at farm level. Similar problems arise when describing systems based on feed input per cow, without reference to a related metric like stocking rate. Applying arbitrary cut-offs to create systems out of such metrics is best avoided.

What does Teagasc Profit Monitor data reveal about different systems' performance?

Drivers of performance within a system, however defined, should be clear to help improve technical efficiency. Analysis of farm-level data across different systems is very useful for this purpose.

To illustrate, we recently looked at Teagasc Profit Monitor data from more than 900 farms, taking spring and winter production as examples of contrasting systems.

The aim was to see how measures of performance related to farm profit, and indeed if there were differences in what was important for profit within each system. Results are presented in Table 1, with profit measured as



margin per hectare farmed.

The data clearly indicate that these two "systems", so often debated, are essentially the same in terms of what drives profitability. Milk volume per cow is less important than milk solids. Feed input per cow predicts very little in terms of profit. This is partially explained by the large range in milk solids output for a given level of feed among the farms in the analysis.

The metric of grass utilised per hectare – a measure of milk solids per hectare adjusted for feed input – stands out as very important for each system. This is not to say that it is the be-all-and-end-all for farm profit, but rather that it ranks of equal importance for farm profit among winter and spring systems alike.

The similarity in the degree of relationships is notable and can serve as

Figure 1: Milk yield v gross margin

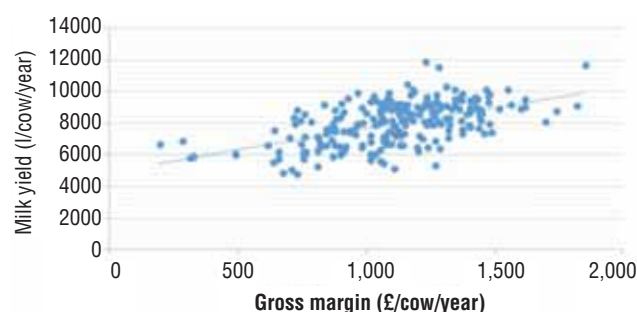


Figure 2: Concentrate v milk yield (2019/20)

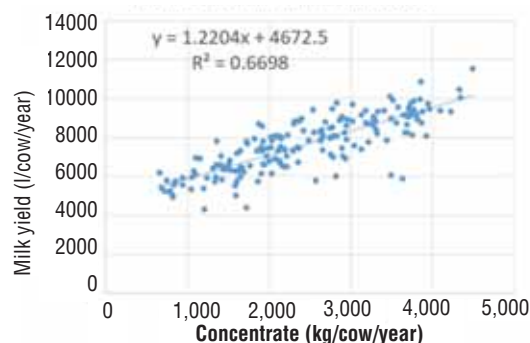




Table 1: Association between herd measures and profit for different dairy systems in eProfit Monitor

Herd measure	Spring herds	Winter herds	Comment
Litres per cow	11%	15%	Milk solids more important than volume
Milk solids per cow	21%	27%	
Feed per cow	0%	0%	Feed did not relate to profit
Fertiliser per ha	20%	21%	Better soil fertility?
Grass utilised per ha	63%	65%	Key measure for both systems

Results shown as a percentage rank. Under 20% denotes a weak association, 20% to 40% moderate, over 40% a strong association

Table 2: Summary of physical and financial performance of CAFRE benchmarked farms (2019/20)

	Average	Range	
		Bottom 25 %	Top 25 %
Physical performance			
Milk yield (l/ cow/ year)	7,696	7,201	8,186
BF %	4.09	4.04	4.09
Protein %	3.33	3.29	3.35
Replacement rate (%)	26.9	31.3	24.9
Concentrate (kg/cow/ year)	2,527	2,645	2,446
Financial performance			
Margin over concentrate (£/ cow)	1,440	1,221	1,616
Total variable costs (£/ cow)	942	999	879
Gross margin (£/ cow)	1,099	792	1,378

a common ground for progress among farms running ostensibly different systems. In other words, spend time debating the details and the practices, not how farms are “labelled”.

Joe Patton and Denis Nulty.

Feed efficiency and sustainability on Northern Ireland dairy farms

Dairy farming in Northern Ireland has operated de-facto in a “no quota” environment for over two decades now. In that time herd size, milk yield and concentrate input per cow have steadily increased.

Does forage utilisation also link to profit in this context? CAFRE benchmarking figures indicate that while improvements in net margin and sustainability on Northern Ireland dairy farms can be achieved through increases in milk output, such changes will only occur if this is accompanied by a focus on maximising feed efficiency.

Northern Ireland dairy farmers participating within the CAFRE Business Development Group programme have the opportunity to assess their physical and financial performance relative to peers, similar to Teagasc Profit Monitor.

Data is collected over a 12-month period and results are generally presented on a per-cow basis rather than per litre, as herd size and not milk quota is usually considered a limiting factor.



Continued on page 12

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Continued from page 11

A summary of the main physical and financial performance features collected for the 2019/20 season is given in Table 2, showing the performance figures for the average benchmarked farm as well as the top 25 % and bottom 25 % of recorded farms (based on net margin).

There is a range in performance across the farms, with the top 25% of benchmarked farms having higher levels of milk production, lower replacement rates and lower production costs, which in turn lead to a higher gross margin and net margin/cow.

Figure 1 shows that increases in milk yield/cow tend to be correlated with increases in gross margin/cow and this may help to explain the interest in increasing milk output in the Northern Ireland dairy industry.

It is also important to note that the efficiency with which milk is produced will significantly impact on financial performance.

In Figure 2 we see that while the average benchmarked farm fed 2,527kg concentrate/cow/year to produce 7,696l milk/cow/year, there was significant individual variation. Farms recording this level of feeding produced between 6,500 to almost 9,000l milk/cow/year. This had a major impact on the margin over concentrate/cow (MOC).



The efficiency with which milk is produced will significantly impact on financial performance

In general, farms exhibiting a higher MOC also tend to have a higher gross and net margin/cow. In terms of system of production, the data suggests that variation within systems is greater than the variation between systems.

Results from CAFRE benchmarking indicate that Northern Ireland dairy farms focusing on improving milk output must also ensure that feed efficiency is optimised to enhance the long-term sustainability of their businesses.

In effect, this means delivering more milk from better quality forages, and a more strategic use of feed supplements. This can be achieved through annual benchmarking and monitoring feed efficiency on a monthly basis; CAFRE provides an online feed calculator facility for this purpose.



Teagasc dairy advisor John Lawlor and Denis Nulty.

Farmer focus: Denis and Christy Nulty, Slane, Co Meath

A common trend among dairy farms is that they tend to repeat a similar version of their own system year on year. This is certainly not the case with Christy and Denis Nulty in Slane, Co Meath, who have steadily evolved their dairy enterprise through “two farms and four systems” since 2014.

In 2011, the father-and-son partnership were running a split-calving system combining feed inputs of grazing, maize/grass silage, plus approximately 1.8t concentrate per cow annually.

“The farming system had come about due to the volume-based liquid milk payment system in place and because of grazing land constraints around the parlour,” recalls Christy. “Our land tends toward heavy clay, so extra feeding is often needed in spring and late autumn.”

The grazing area was supported by external land used for replacement rearing, silage and maize.

Herd performance in those years reflected the excellent standard of management on the farm. Average milk production was 7,100l/488kg solids annually which at the time benchmarked in the top 10% nationally; the herd ranked similarly well in other management measures such as somatic cell count and age at first calving.

“The herd had the capacity for litres and delivered quite well on it,” recalls Christy.

“Our biggest challenge was getting cows back in calf. We were carrying over about 20% cows every year to keep them in the herd and that was probably taking about 800 litres per

cow off our annual milk sales.”

The first major step-change in systems came in around 2014-15, when their outside land block about 5km away was identified for development as a second milking unit for the post-quota era. “We had been talking for a while about a second unit versus further increasing home stocking rate,” explains Denis.

“A few things fed in to our thinking. Firstly, we had a good base in winter milk but knew this volume would be pretty much capped, so expansion was more likely to be spring based. Second, the milk payment had moved to A+B-C on all litres so we could still increase milk sales per cow in a grazing system. And, finally, when we did the figures, the cost of drawing home feed to support the extra cows would have been more than the cost of repayments on a new parlour.”

Taking all that into account, the Nultys set about equipping the out-farm with paddock and roadway infrastructure, a milking parlour, plus winter accommodation.

“This farm is fairly similar in scale to the main block, but on earlier ground,” notes Christy. “The whole farm plan gradually evolved into aiming for a block autumn calving system at home, with a block spring system away. We felt this would keep both units easier to run.”

As the development plans took shape, Denis and Christy had built cows numbers significantly in preparation for stocking the new unit. This resulted in a few seasons of running a very high stocking rate system of close to seven cows per hectare, albeit as an interim step.

“We ran that version for a while and gained a bit of experience of it,” Denis says. “I suppose for us, the big lesson was that grazing behaviour of the cows will often frustrate your

NULTY HERD PERFORMANCE

John Lawlor, Teagasc dairy advisor in Drogheda, notes that herd performance per cow has improved for the Nultys since the changes to system were made. "Milk solids output has actually risen to 560kg per cow on average" says John. "This puts the herd in the top 10% among its peers."

"It is difficult to get an exact split on the figures, but the estimate is that the autumn cows are sitting at around 600kg milk solids and spring cows at 535kg; meal input is about 1.8tonne and 1.1t, respectively, with maize silage also fed to the autumn group."

"In both yards, EBI has delivered more milk value per cow, while grass in the diet has cut the feed bill, despite what look like very different systems," he adds.

Does this tally with the trends in John's clients in Louth and Meath? "There is a strong base of higher input farms in this catchment area. Those who incorporated EBI and grazing have benefitted in terms of milk sales over feed cost. Why wouldn't they?"

attempts to feed the diet you have on paper, which over time leads to loss of confidence in grazing."

He explains further: "At that stocking rate you will be buffer feeding every day of the season. The cows get used to the notion of maize and meal, and on wet days especially they would often stand waiting at the gap rather than grazing."

"The grass can get soured over time with high stocking density too, and you won't be taking out any surplus paddocks to freshen the sward either, which all dampens grass intake. In hindsight, we may have been as well off keeping half the herd in, and letting the other half settle into routine grazing. It probably would have saved on the extra labour of buffering as well."

Once the new facility was ready to go, Christy and Denis saw their plan kick into place. The home farm now runs a block autumn calving herd (September to November) at around 3.7 cows per hectare grazing while the spring-calving unit runs at 3.4 cows per hectare; outside blocks continue to supply additional silage, maize and replacement heifers leaving the overall farm stocking rate at 2.25 LU per hectare. All cows calve at home

and spring cows are moved to the spring farm within five to 10 days after calving.

"The spring calvers are sent off to exile and the autumn calvers stay at home to be well looked after," smiles Christy.

"In truth, we were delighted with the change to more grazing across the farm. There was some concern about how our type of cow would function in a grass-plus-parlour meal situation, but they have beaten our expectations to be fair."

"Breeding through EBI for more medium size, milk solids and fertility has helped. You can see that coming in the younger cows. Fertility is slowly turning and we have brought calving interval back to 390 days. The same trends apply in the autumn group too."

In conclusion, having run four systems in 10 years then, what are Denis' three takeaway messages?

"Breed a high solids cow that is easier to put in calf."

"Cows aren't fed on paper – figure out the practicalities before ramping up stocking rates too much."

"It might be cheaper to move the cows to the grass than the grass to the cows."

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Breeding focus: Managing late-calving cows

George Ramsbottom

Dairy specialist Oak Park, Carlow.

Almost 390,000 dairy cows (more than one-quarter of spring-calving Irish dairy cows) calved later than April 1 in 2019 and 2020. What's worse is that almost as many calved in May and June as in April. It is challenging enough to breed an April-calving cow in the first three weeks of the breeding season, and impossible if she calves in May or June.

Does it matter? Absolutely, because achieving a high level of reproductive efficiency in the dairy herd underpins profitable grass-based milk production.

Target submission rates of 90% of cows and 100% of maiden heifers bred in the first three weeks of the breeding season are both desirable and realistic. However, the national average in 2019 was only 71% of cows and 78% of heifers bred during this period.

The reproductive cycle of the cow requires a period of rest and recovery before she is able to go back in calf again. Estimates vary, but a rest period of around 30 days after calving is considered the absolute minimum before commencing a treatment programme.

Cows calving within four weeks of the start of the breeding season warrant special attention to help ensure that they go back in calf. Later calving cows are typically in better condi-

tion at calving, because they generally have an extended dry period.

“ Late-calving cows are generally older, higher-yielding cows and thus more prone to rapid body condition loss

These cows also tend to be in calf to longer-gestation-length beef bulls and consequently are at greater risk of increased calving difficulty. This will in turn delay the resumption of the cycle required to allow them to be bred again.

Two strategies can shorten the interval between calving and breeding in such cows.

• **Once-A-Day (OAD) milking.** This approach is typically used on low SCC, late calving or thin (BCS <2.5) cows. It works on the principle that once a day milking reverses the trend towards body condition loss in early lactation, reducing milk yield (OAD typically results in 30% lower volume) compared to cows milked twice daily.

Late-calving cows are generally older, higher-yielding cows and thus more prone to rapid body condition loss after calving. Milking them once a day from calving speeds up the resumption of their reproductive cycle. They will also have a higher conception rate to first service.

Opinions vary as to when cows should revert to twice a day milking



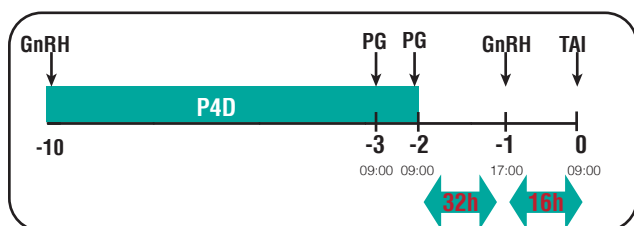
– some begin immediately after first service, while others wait until the cow has passed 'her three weeks'. Using the once-a-day milking approach, cows typically receive AI within 50 days of calving.

The loss in milk yield for a cow milked once a day for 40 to 60 days is approximately €55-€75.

• **The hormonal intervention approach.** Stephen Butler at Teagasc Moorepark has looked at a variety of hormonal treatments to induce heat in cows that have been calved 30 days or more, but are not cycling.

Details of the Teagasc Moorepark-

Promotes cyclicity in cows that are not yet cycling (should be >30 DIM at start of synch)
AI at fixed time, regardless of signs of heat



GnRH: Gonadotropin releasing hormone (e.g. Ovalein, Receptal)
PG: Prostaglandin F2a (e.g. Enzaprost, Estrumate, Lutalyse)
P4D: Progesterone device (e.g. CIDR, PRID)
TAI: Timed artificial insemination

Teagasc's virtual breeding week

Teagasc, in conjunction with the ICBF, will run a virtual breeding week starting on Monday 15 March. The podcasts, webinars and video clips released during the week will focus on the ways to achieve a high level of reproductive success and rapid genetic gain.



recommended protocol for synchronising heat in such cows are presented in Figure 1.

The advantage of the programme is that it promotes cyclicity in cows that are not yet naturally cyclic (however they should be 30 or more days calved

at the start of the synchronisation treatment) and they can be AI'd at a fixed time regardless of the signs of heat.

Careful adherence to the times of administering the prostaglandin and GnRH injections and AI at the end of

the protocol are absolutely critical to its success. Using this approach, late-calving cows are typically batched into groups and AI'd at an average of 45 days after calving. The treatment is approximately €40 per cow, excluding AI cost.

Breeding advice for spring 2021

- Know your herd's strengths and weaknesses. Refer to your ICBF Herd EBI Scorecard to help establish what these are.
- Select a team of high-EBI AI bulls that will improve your herd when breeding your dairy herd replacements. For a typical 100-cow dairy herd, a minimum of eight bulls should be used on your herd, with no more than 15% mating to any one bull – i.e. only 15 straws of each bull selected at a maximum.
- Target high-EBI females (typically maiden heifers, first and second calvers) to breed your next generation of dairy herd replacements. Lower EBI cows should be bred to beef AI from the start of the breeding season.
- Use the Dairy Beef Index (DBI) to select suitable beef AI sires for your dairy herd. A team of bulls should be

selected that suits the various dams in your herd (i.e. maiden heifers, young cows and mature cows) and the number of these that are selected for beef AI. Bulls with higher beef merit figures should be selected for older animals. Consider the use of vasectomised bulls in conjunction with beef AI as an alternative to beef stock bulls. Avoid using dairy 'sweeper' bulls.

- Use the ICBF HerdPlus Sire Advice Tool to help manage your breeding programme and simplify the process of sire selection. It will allocate your bulls to cows based on their strengths and weaknesses, as well as manage inbreeding. Cows designated for beef AI should be flagged to ensure that only the best animals are used to breed dairy herd replacements. For more information on this tool, please speak to ICBF HerdPlus,

your Teagasc advisor and/or your AI company.

- If using sexed semen, only use high-EBI sires and ensure that all sexed semen inseminations occur early in the breeding season. Any inseminations with Jersey or crossbred bulls should be conducted using sexed semen only.
- Pay careful attention to straw handling and AI procedures, as sexed semen contain fewer sperm, and these sperm are more fragile after the sorting process.

The breeding guidelines have been developed by a DAFM-led dairy calf welfare working group, consisting of key industry stakeholders. Members of the working group include the following: DAFM, ICBF, Teagasc, national AI companies, IFA, ICMSA, ICOS, Dairy Industry Ireland, Meat Industry Ireland, Bord Bia and Animal Health Ireland.

The BVD eradication journey



Maria Guelbezu AHI and Aidan Murray
Teagasc Animal and Grassland
Research and Innovation Programme.

The national BVD eradication programme started in 2013, following a voluntary phase during 2012. Prior to the programme, BVD was talked about, but advice on how to handle cases at farm level varied.

Individual farms that were well managed and had the virus suffered ongoing health issues in stock, such as pneumonia, scours, lack of thrive and even mortality. They often incurred significantly higher health costs. The other side of the disease that often went unnoticed was the mental torture that farmers endured as they struggled to treat sick animals and worried about the impact the disease would have on future cashflow.

Thankfully though, we have seen real progress in reducing the disease incidence on Irish farms. Animal Health Ireland (AHI) has played a central role in bringing this about, so I spoke with Maria Guelbenzu, BVD programme manager with AHI, and asked her a number of questions about the progress made to-date, the main hurdles in progressing eradication and what farmers can expect over the next few years from the BVD programme at farm level.

What progress has been made with BVD eradication since 2013?

The BVD programme has been really successful in reducing the number of BVD-positive animals in Ireland. In 2013, 66 out of 1,000 calves were BVD-positive, while in 2020, only three in 1,000 were. On 30 December

2020, there were only 13 BVD positive calves alive, three of those retained for over three weeks. This meant that many counties did not have any living BVD positive animals.

What have been the greatest hurdles in achieving progress?

The main issue since the start of the programme has been the retention of PI (persistently infected) animals on-farm. It was first noticed during the voluntary phase, and confirmed by subsequent studies, that the non-removal of these calves was one factor significantly associated with retaining herds having further BVD-positive births in the following year.

The BVD Implementation Group (BVDIG) reviews and enhances the programme every year, to further accelerate progress towards eradication. The focus is on the prompt testing of calves and removal of positive animals, prevention of onward spread from positive herds and testing animals of unknown status, including those born before 1 January 2013.

What can we expect to happen with the BVD programme between now and 2023?

Such has been the progress of the programme that the BVDIG plans to apply for the recognition of the Irish programme in Europe in 2021. For this, the programme must align with the new European Animal Health Law (AHL), which comes into force in April 2021.

This law sets out the requirements for recognition of a BVD eradication programme and BVD freedom at EU level. All being well, the proposal will be able to meet the conditions for 'freedom' by 2023.

This includes having negative herd status (NHS) for 99.8% of all herds (currently over 95% of breeding herds have NHS) representing at least 99.9% of cattle. Achieving this would



bring to an end compulsory tissue tag testing for the majority of herds after 2022. To achieve this goal, the BVDIG has developed a series of enhanced measures to:

- Maximise the proportion of herds (including non-breeding herds) with NHS.
 - Rapidly identify and resolve the small number of herds with positive/inconclusive results in 2021 and 2022 and minimise the risk of onward transmission of infection.
- Outlined below are key messages for all herds in 2021. The focus is on the prompt testing of calves and increasing the proportion of herds with NHS by testing animals of unknown status, including those born before the 1 January 2013.
- Tissue tag testing remains compulsory for 2021.
 - Tissue tag test all calves as soon as possible after birth. Where positive or inconclusive results are obtained, remove these promptly to obtain the higher level of financial support provided by DAFM. Confirmatory testing of these animals is no longer permitted.



- **Negative Herd Status** – Herds must be free of confirmed cases for 18 months instead of 12 months. This change is necessary to align with the AHL.
- **Test animals of unknown status** to obtain NHS – Around 5% of herds contain small numbers of animals that either do not have a valid test result or have not yet produced a negative calf. The presence of these animals prevents herds from attaining NHS and accessing lower cost testing. It is now a legal requirement to test animals of unknown status born before 2013, in addition to those born after this date.
- **Review biosecurity** to minimize the risk of accidental introduction of the BVD virus. Focus on the movement of animals, people (including the farmer) or equipment across farm boundaries.

If I get a positive result when I test my calves this spring, what will happen?

The small number of herds in 2021 that will have positive or inconclusive results will be subjected to a control plan that will include the following:

- **Immediate herd restriction and neighbour notification.** DAFM will restrict movement both in and out. While restricted, movements out of the herd to slaughter or to non-breeding herds may be granted on a case-by-case basis under permit by the RVO, provided that the animals move directly to their destination. Neighbouring herds will immediately receive a biosecurity notification informing them of their increased risk, and on a monthly basis thereafter, in the absence of the removal of animal(s) with positive or inconclusive results.
- **Isolation and removal** of all animals with an initial positive or inconclusive test result – re-testing of these animals is no longer permitted. They must be removed promptly to obtain the higher level of financial support provided by DAFM.
- **Cleaning and disinfection** of buildings and handling facilities that may have been contaminated as soon as practicable, but in advance of the next breeding season.
- **Restrictions will be lifted** following completion of each of the follow-

ing three measures by a nominated trained private veterinary practitioner (PVP). They will begin three weeks after removal of the animal with positive or inconclusive results, and are fully funded by DAFM/RDP.

• **Whole herd test.** Blood sampling and testing of all animals in the herd with negative results, or removal of any further virus-positive or inconclusive animals identified.

• **Epidemiological Investigation.** Conducted under the Targeted Advisory Service on Animal Health (TASAH) within the Rural Development Programme.

• **Vaccination** of all female animals aged 12 months old and above by the nominated PVP.

• **Continued herd measures.** Following lifting of restrictions, herds are required to:

-Continue to tissue tag test for a minimum of 24 months after the removal of the last animal with positive or inconclusive results.

-Continue the vaccination programme in the herd over the following year, with this again delivered by the PVP and funded by DAFM.

-Not sell any potential trojan female i.e. one that was in calf at the time of birth of the animals with positive or inconclusive results until its calf has been born and tested for BVD.

What is the current level of financial support for removing positive calves in 2021?

DAFM will provide the following financial supports to encourage the prompt removal of animals that test positive for BVD virus in 2021:

Beef Herds

A payment of €220 for each beef breed PI born in a suckler herd that is shown to be disposed of to a knackery, meat plant or abattoir within 10 days of the first test.

A reduced payment of €30 will apply in respect of such calves disposed of to a knackery, meat plant or abattoir between day 11 and 21 of the first test.

Dairy Herds

A payment of €160 for each dairy heifer or dairy-cross PI calf born in a dairy herd that is shown to be disposed to allow removal to a knackery, meat plant or abattoir within 10 days of the first test.

A reduced payment of €30 will apply in respect of such calves disposed of to a knackery, meat plant or abattoir between day 11 and 21 after the first test.

A payment of €30 for each dairy bull calf born in a dairy herd that is shown to be disposed of to a knackery, meat plant or abattoir, 14 days after the first test.

Basic Payment Application

– How important is it to your farm?

James McDonnell
Financial specialist,
Teagasc Rural Economy
Development Programme



1 Preparation

Every year, Teagasc advisors complete in excess of 40,000 BPS applications. Many advisors spend almost as much time completing transfer of entitlement applications. Appointments can take up to an hour, so it's a significant investment in time.

The process of completing the application can be onerous, but if you are 'on your game' it will ensure that you, and your advisor, get the task completed as efficiently as possible. COVID-19 restrictions prevent face-to-face meetings, and communication is harder over the phone, so it is important that you carefully check your completed application.

Do not make any assumptions when talking to your advisor – make sure all aspects of the application are discussed. The ANC, Straw Incorporation Measure, Organics, GLAS and Young Farmer Scheme all have elements on the Basic Payment Scheme application form.

A good protocol to follow is:

- Check with your advisor first about what you need to do. Then prepare well for the meeting by reading through the information DAFM has sent you.
- Make the most of your consultation – update the advisor on the general farm situation.
- Find yourself a comfortable location with good signal. A speaker phone is useful, as it frees your hands during the conversation. If you have an email account, you should have it open on your computer/tablet.
- If you wish to discuss other farm-related items, having a list of them will allow both you and the advisor to get maximum use from the consultation. You may want to review your farm plan, farm finances, increase the amount of silage conserved, or plan an investment. You may need to make a further appointment. If so, do it there and then.



2 The importance of the Basic Payment as income

The "cheque in the post" continues to be one of the most important sources of income for Irish farm families. See Table 1 – although average direct payments (DP) are lowest on cattle rearing farms at €14,562, the reliance on these payments and their overall

contribution to FFI was 162% in 2019, the highest on record.

This indicates that the average suckler farm, with DPs of €14,562, spent over €5,500 of those direct payments over the course of the year to cover the farm's operating loss. These are the average figures for 2019, so some farmers are much better off and oth-

Table 1: Average value of Direct Payments and Contribution to Family Farm income (FFI) 2019 (Source NFS 2019 results).

Farm Enterprise	Direct Payment	FFI contribution
Dairy	€20,360	31%
Cattle Rearing	€14,562	162%
Cattle Other	€17,775	129%
Sheep	€19,495	132%
Tillage	€24,775	76%
All	€18,325	78%



ers have significantly worse figures. If these payments are making up more than 100% of your income year after year, you really need to have a discussion with your advisor about how to improve them.

The 2021 application

It is important that the application and associated forms are completed on time with due diligence. In this article, I will discuss the completion of the 2021 Basic Payment Application form.

The Basic Payment Scheme application must be made if you wish to participate in other schemes such as GLAS, TAMS, and Organics etc.

There are other schemes also intertwined in the BPS application process it. Overall it encompasses:

- The Basic Payment Scheme itself.
- Greening Payment.
- Continuation of the Young Farmers Scheme if you were an applicant in 2017, 2018, 2019 and 2020.
- Aid for Protein Crops (Peas, Beans, Lupins).
- Areas of Natural Constraint.
- Straw Incorporation Measure.
- Commencing Organic production in 2021.

Making changes to the herd/crop/flock identifier

Every year, a significant number of farmers make changes to the herd/crop/flock number for one reason or another. For example, a herd number (identifier) in a single name was "joined" by a child to avail of the National Reserve and/or the Young Farmer Scheme. Registered Farm Partnerships and farming "compa-

nies" are other examples.

If you are planning to make changes to the herd identifier number, it must be completed in good time to allow the Regional Veterinary Office to process the application.

Making changes to the "identifier" can result in late or slow processing of the BPS application, as there are extra steps involved in this processing.

3 Farm succession

The average age of farmers is continuing to increase. This is not just an Irish trend, it is happening throughout the world. It is important that every farmer has thought about farm succession.

The first step is to write a will. This is vital in case you 'pass on' unexpectedly. Have a conversation with your advisor about farm succession. Succession is a complex area with lots to be considered. Leaving things to the last minute can result in things going

horribly wrong.

Early discussions allow planning to take place. There are taxation reliefs available to minimise the tax paid on succession transactions, but they have very specific conditions, relating to, for example, age or being an active farmer.

For more information, log on to the Teagasc succession page, where you can view a webinar at <https://www.teagasc.ie/rural-economy/farm-management/succession-inheritance/>.

National Reserve (NR)

This scheme is aimed at new entrants to farming. The National Reserve has also opened for applications. Successful applicants will expect to receive entitlements worth just over €180.

There may be a cap applied similar to previous years. On top of this, all of the applicants were also paid Greening, which was worth a further 44% (€77), and some of these applicants also qualified for the Young Farmer

For Herd Number changes, please note:

- If a change must be made, it should be completed immediately, to allow the RVO adequate processing time.
- The date the application is received becomes the date of change. (When making a change to the identifier, include a copy of the application and a Stamped Addressed Envelope and request the copy to be returned "stamped received." This should be given to your advisor to upload with the BPS application.
- If you don't receive correspondence from the RVO by the time of your

BPS appointment, you must inform your advisor of this fact, as a new blank online BPS application must be completed instead of the pre-populated one.

- The partnership registration office will not accept applications between 26 February and 1 June this year. This is to help make the BPS application process more efficient.
- If you are planning to make changes to your farm, be sure to consult with your Teagasc advisor early, so that all the relevant application forms and tasks can be lined up and completed in time.



Scheme (~€68).

The National Reserve scheme has two mandatory categories

- Young farmers.
- New entrants.

The full terms and conditions are available to download from your Agfood online account. Applications can be submitted through this online service also.

The Young Farmer Scheme

This scheme delivers a “top-up” to young farmers who have recently taken up farming, depending on when you started. To be eligible, you must have started in the last five years and you must be 40 years old or younger in 2021. Once you qualify, you can avail of the payment for up to five years.

The date your name appeared on the herd number is the year you started. If you start farming in 2021, you should expect to receive at least two payments – the final payments will depend on what happens in the next CAP negotiations.

The payment is payable on a maximum of 50 entitlements and is worth about €68. The terms and conditions are similar to last year. Applications can also be completed on the Agfood online web service.

Applicants who were successful in previous years must reapply for the next payment on the online BPS application system as part of the BPS

application. New applicants will have to complete a separate online YFS application.

Deadlines

The deadline for all schemes (BPS, NR and YFS) is Monday 17 May 2021. This will not be extended. As with other years, amendments can be made after submission of the application until the end of May.

•Reasons for making an amendment include:

- Correcting an obvious error (minor clerical error).
- Adding or deleting a parcel.
- Change of the use of a parcel.
- Ticking/un-ticking the ANC box.
- Ticking of the YFS box (where applicable).

All amendment forms will be acknowledged in writing.

Making the appointment:

Before you visit your advisor, review all the documentation you have received from the Department of Agriculture, Food and the Marine. If you plan to make significant changes to the 2021 application, state that you may require a longer appointment than usual, so that it can be completed in one call.

More complex cases may also involve a solicitor, accountant and valuer, and include some or all of the following transactions:

- Adding and/or changing the

name(s) on the herd number.

- Completing a partnership application.
- Transferring entitlements using the transfer application.
- Completing a Capital Gains Tax return.
- Completing a VAT return.
- Updating your will.

The next CAP.

Many of you will have questions about the next CAP. Unfortunately, negotiations are ongoing and there has not been much movement in the last year; due to COVID-19. Your advisor will not have the answer yet. The EU presidency is currently with Portugal, who would like to see it all agreed by 30 June 2021.

Entitlement values are expected to continue to converge towards the average figure. Greening is to become a voluntary eco-scheme, so some farm tasks might need to be completed dif to get this payment.

Land leasing scenarios are commonly discussed, given that the market is so buoyant at present. The lessors are concerned about losing entitlements and the lessees would like longer leases.

The definition of a “genuine farmer” when agreed, will answer many of those questions. Fingers crossed that it is all agreed soon, so that we all have time to adjust to the new CAP in 2023.



Michael Conroy and
Shane Moore.

New housing BETTER for man and sheep

Damian Costello
Sheep Specialist, Teagasc
Animal & Grassland
Research & Innovation
Programme, Mellows
Centre, Athenry



Michael Conroy
Teagasc Business & Technology
Advisor, Roscommon/Longford

Shane Moore has recently taken over the running of the family farm from his parents, having been actively involved from a young age. He is growing a lowland sheep enterprise which is run alongside a small spring-calving suckler-to-weanling herd.

The farm is located near Athleague, Co Roscommon, and comprises mainly good free-draining soil as well as an area of marginal land usually only grazed by the cattle. The owned land (34ha) is split in two main blocks approximately 5km apart with an

additional block of 4ha short-term rented land.

Farm plan

"When I joined the Teagasc Sheep BETTER Farm Programme in 2018, my key goal was to increase output from the sheep flock while controlling costs and ultimately increase profitability," says Shane.

To increase output per ewe, a high-genetic merit Belclare ram was purchased and mated with the best-performing ewes in the flock to produce replacements with good prolificacy.

The aim is to wean >1.70 lambs per ewe joined along while optimising the stocking rate of ewes on the farm within a primarily grass-based system.

Implementing key grassland management technologies on the farm such as improving soil fertility, use of temporary electric fencing and grass measuring have set the farm up for increasing ewe numbers. Sheep grassland systems work on the Teagasc Research Demonstration Farm has

shown that each ewe and her lambs require one tonne of grass dry matter per year.

"Through weekly measuring of grass heights across the farm and recording them on PastureBase Ireland, the potential to carry more sheep on the farm became clear," says Shane.

However, one major stumbling block to increasing stocking rate of ewes on the farm was the limited sheep housing available. Additional sheep winter accommodation was needed to manage the increase in ewe numbers and allow Shane to move to one, compact, lambing period commencing in early March.

As a young trained farmer Shane decided after careful consideration, to apply for 60% TAMS funding to erect new sheep housing to accommodate 200 ewes. This year, 145 mature ewes and 35 ewe lambs were put to the ram with plans to build the flock to 200



Continued on p22



Shane Moore.



From page 21

mature ewes plus replacements in the coming years.

Planning additional sheep housing

"When I was mulling over the idea of building a new sheep shed the first question I asked myself was: Do I really need it?," says Shane.

"Up to last year, the ewes were split between an early and mid-season lambing flock mainly due to the limited sheep housing available on the farm. We had an old shed in the yard and I was lambing 35 ewes in early January and the remainder in March."

As the shed was not able to house all the ewes, some were lambed outdoors. This led to a prolonged lambing period and a lot of work. Shane combines an off farm job with his farming activities making a labour-efficient system all the more important to him.

"Because the farm is fragmented, it meant coming home from work and bringing round bales to ewes at night which often took over two hours, so there was much less family time."

With the clock ticking on his time to qualify as a young trained farmer, Shane needed to apply for a grant in 2020 in order to avail of the 60% rate, as he would soon have been farming for more than five years in his own right (which would disqualify him).

Building design

When Shane had decided to build, he visited a number of farms to look at sheep sheds. "I wanted a shed with slatted and straw-bedded areas," he says. "The shed would be used to house ewes in the winter. The slatted area would be used for collecting ewes and lambs in the summer for dosing and other routine tasks by incorporating a mobile sheep handling unit."

The penning can easily be removed on the bedded areas and these can be used as storage, if required, in sum-

mer. In consultation with Teagasc, Shane decided on a design which consisted of a 3.5m bedded pen on to a 4.1m feed passage; on the other side of the feed passage was a 2.7m slatted pen. Backing on to this slatted pen was another 2.7m slatted pen, 4.1m feed passage and 3.5m bedded pen. The design was in compliance with Dept of Agriculture S146 specifications. There is a 600mm walkway joining one side of the shed to the other.

The tanks are 1.2m deep with a 1.8m sump at either end of the shed for ease of agitation. Plastic slats have been installed. All the ewes are fed along the two feed passages that separate the straw-bedded areas from the plastic slatted pens.

Individual lambing pens can be set up in the feed passages and bedded pens as they become available.

Steps to TAMS application

"It took six weeks to get plans drawn up and planning permission submitted," says Shane. "It took another three months to get planning permission granted. I applied for the TAMS grant on 10 March 2020 and got approved on 9 September 2020."

Shane says he would like to thank the Department of Agriculture, Food and the Marine staff both at local and regional level for their help in sorting out a few minor problems with the application. Construction commenced on 21 September and all the concrete work was completed and the shed erected in early December.

Due to COVID-19 restrictions and



Heavily pregnant ewes enjoy a strawed area.



Brexit there was a delay in getting all the penning and barriers installed. Even with the best planning these were circumstances that couldn't be foreseen. Shane initially applied for a grant on a six-bay shed. He constructed a five-bay which will house 200 ewes and any additional ewes or replacements will be housed in the existing shed.

The five-bay shed was costing in excess of €80,000 so he was getting no grant on the additional bay. "I wanted to fund the cost of the build over five years so my preferred repayment option for him was the five-bay shed.

"You have to take into consideration the cost of the bridging finance in relation to the grant and VAT which can be reduced considerably by good planning, having the work completed quickly and all the paperwork correct when making your grant application."

As Shane has not got all the invoices yet, he expects the cost of the shed before VAT to be in the region of €95,000 and he will get a grant of approximately €48,000.

Shane's advice for anyone planning a building development is:

- Plan a year in advance to allow time to obtain planning permission and TAMS approval.
- Look at a number of sheds and talk to their owners when deciding on a design.
- Do your costings carefully and have a sound financial plan to fund the development.

Both sides of the shed are accessible via a walkway. The shed has slatted areas, as well as areas bedded with straw.

Planning winter housing facilities for sheep

The provision of new sheep housing facilities is eligible for grant aid under TAMS II – 60% aid for the young trained farmer and 40% for all other applicants. The following are among the key considerations when designing new sheep housing:

- Sufficient feed space so that all ewes comfortably eat concentrates at one time being fed by one person without entering sheep pens (see Table 1).
- Adequate floor space depending on housing system – slatted or straw-bedded (see Table 2).
- Number of pen divisions so that ewes can be grouped by scanned litter size and expected lambing date, based on raddle colour.
- Ventilation that will help keep fresh air in the shed and remove many airborne pathogens and other harmful bacteria.
- Option of straw-bedded or slatted accommodation.
- Access to a suitable water supply in all pens.
- Easy access to individual lambing pens (ideally under same roof).
- Feed passages wide enough for machinery access and/or using for individual pens.
- Removable penning for ease of cleaning out and option to use building for other purposes during the rest of year.
- Suitable lighting and power sockets



Where all concentrate feeding is being done from the feed passage along front of pen, then relatively shallow pens of 2.5m to 3m will provide enough floor space. If pens are say 6m in width then walk through troughs will be needed to optimise number of ewes that can be accommodated in pens balancing floor space and feed space.

Table 1: Feeding space requirements

Type of ewe	Meal feeding mm	Roughage (hay rack)	Easy feed silage
Large (90kg)	600	200	200
Medium (70kg)	500	200	200
Small (50kg)	400	175	175

Source: DAFM S146 (2016)

Table 2: Floor space

Type of ewe	Slats m ²	Bedded m ²
Large (body weight 90kg)	1.2	1.4
Medium (body weight 70kg)	1.1	1.2
Small (body weight 50kg)	1.0	1.1

Source: DAFM S146 (2016)

How birds hedge their bets

Catherine Keena, Teagasc, and Niall Hatch, Bird-Watch Ireland, explain the fascinating and complex interaction between different bird species and hedgerows in farming landscapes

Catherine Keena
Teagasc Countryside Management Specialist

Niall Hatch
BirdWatch Ireland

Of the 110 species recorded in the Irish Countryside Bird Survey during the breeding season, 55 use hedges. Of these, 35 bird species nest in hedges that provide cover from predators, both overhead and on the ground. Hedges also provide food, shelter, song posts, perching posts and corridors along which birds can move.

Nesting

A great many species of bird nest in hedges. They make up one of the most vital habitats that we have. A very good example is the Dunnock, a common bird in Ireland, which used to be known as the Hedge Sparrow, and for good reason. They love the security of hedges, as they can hide behind thorns and brambles where they are secure from predators like foxes, cats, hawks, squirrels and rats.

Another bird that uses hedges to nest is the Wren, one of our most common birds – there are more Wrens in Ireland than human beings. They nest quite deep down, building a ball of a nest tucked away in the vegetation. Another classic bird that nests in hedges is the Robin, which likes to nest quite low down in locations that provide good vantage points, but that are still quite secluded.

The Blackbird is one of our most common bird species, seen all over the country. They know they will be able to get the worms just below the hedges, which means that they don't need to travel very far to find food.

The same goes for the Song Thrush, which like the Blackbird, is another member of the thrush family, though

a bit shyer. They like cover more than the Blackbird does. Their lives revolve around snails!

Some birds like House Sparrows use hedges as conduits to get from point A to B. They nest in and around them, but also use them to connect up nesting areas.

Food

Ireland's hedges are a vital source of food for so many different species of birds, because they support so many different kinds of life. Berries are the most obvious, such as haws and rose hips. Blackberries on brambles are a real lifeline for birds in autumn. Robins love the elderberries and Blackcaps rely on ivy berries.

Insects are attracted to plants in hedges. In particular, many species of butterfly lay their egg on the leaves, which then hatch out into caterpillars and in turn become food for Blue Tits, Great Tits and Coal Tits.

The Goldcrest is Ireland's smallest bird, weighing just over 5g, less than the weight of a 20 cent coin. They spend their lives trying to glean small flies, spiders and other invertebrates from the underside of leaves.

Sparrowhawks come to feed on the Blue Tits, Wrens, Robins and other small birds – part of the cycle of life. Barn Owls use hedges as a very important conduit when hunting, flying along the edges of them looking for wood mice and pygmy shrews sheltering below.

Kestrels hover alongside hedges, waiting for a mouse to dash out from cover. Buzzards use hedges as vantage points to find rabbits at the edges.

Song perches

The structure of a hedge is very important from a bird's perspective. Male Blackbirds sing from the top of

a hedgerow, using it as a song perch, and they want to be seen because they want to proclaim a territory. Very often, those hedges delineate the lines and edges of that territory.

So, bird territories are often divided up on the basis of where hedges are. Sedge Warblers, which normally nest inside reed beds and in dense grass-



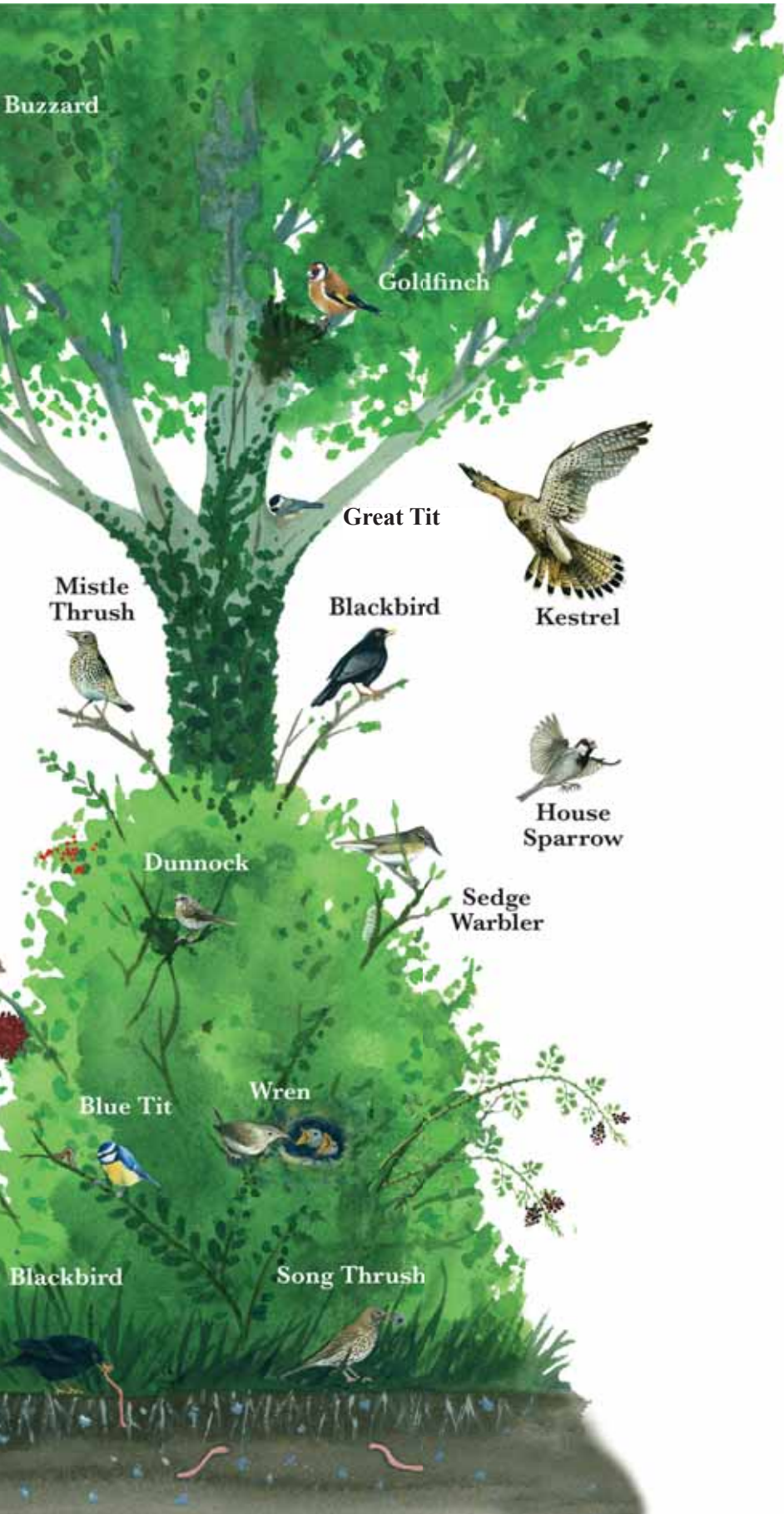
Sparrowhawk



Robin



- Hedges cannot be cut from now until the 1 September because it is the bird nesting season.



perch on top of hedges, scanning the countryside with their keen eyesight, looking for any small rodents or birds they can feed on. Hedges provide a really good perch for them where they are secure from predators, can see danger coming and where nothing can really get to them.

Trees in hedges

It's not only the hedges themselves that are so important, it's the trees growing above them. Mistle Thrushes like to nest in tall trees, and love to have a hedge below them where they can find food and shelter, and where they know their chicks will be able to find berries in autumn after they fledge from the nest.

Finch species, such as Chaffinch, Goldfinch and Greenfinch, will often nest in trees within hedges, such as willow, hazel or alder. They use the hedges as a larder, as shelter for their chicks and as a well-protected nest site.

Rare birds

The Yellowhammer nests in hedges – once very common, this colourful songbird has declined greatly in Ireland.



The Twite is a little Finch, which now only breeds in the northwest of Ireland, and hedges are essential for its survival.



land, use the tops of hedges as song posts, from where they perform song flights and then duck back into cover before predators come. Common Whitethroats do the same thing.

Perching posts

As well as using song posts in hedges, birds perch on the top of hedges for

many different reasons. Sometimes it is to keep watch over their territories, sometimes they are watching out for predators, keeping an eye out for danger while their vulnerable chicks and their mate are in a nest below them. Other times they are looking out for food.

Sparrowhawks and Buzzards

Repaired farm buildings: A key part of our heritage

The DAFM Traditional Farm Buildings Grant, available through the Heritage Council and GLAS, supports preservation of significant farm structures

Eimear Connery
Teagasc, Midleton

Jerry Manning runs a suckler farm in The Hermitage, Glanmire, Co Cork. As a current GLAS participant, he was able to receive funding for repairs to the lofted floors of old stone buildings within a farm courtyard.

The eastern side of the courtyard was constructed first (evident on the Historic Maps 1837-1842) and the western side sometime later – it is present on the 25" historic maps dating from 1888-1913.

The property was once owned by Captain Glen Browne, who was friendly with the Duchess of Westminster. She owned the famous racehorse Arkle, and stabled him in the courtyard as a foal. His skeleton is on display at the Irish National Stud in Kildare. The Hermitage gets its name from the remains of hermits cells. In early Christian times, hermits lived in these stone cells and they are still visible in the adjoining woods, which



Historic 25" map (1888-1913).

forms part of the local heritage walk in Glanmire.

"I applied for the grant for restoration of old farm buildings [which is only available to farmers in the GLAS scheme] and got through the first stage of the grant application process," says Jerry.

"The next stage was to attend an information day held by the Heritage Council in Tullamore, Co Offaly. The day delivered plenty of information on traditional farm building methods and carrying out the work with respect to wildlife."

Once Jerry had secured full grant approval, the first step was to carry out a bat and bird survey. No bats were present in the building, but there were swallows nesting in it, so work could only commence once they had graduated from their nests.

Anna Meenan, project manager with GLAS traditional farm buildings grant scheme at the Heritage Council emphasizes that: "An imperative part of the Heritage Council grant is that it promotes repairs rather than replacement, so whenever possible building materials are reused."

Grants awarded will not exceed 75% of the cost of the project, with a maximum grant of €25,000 and a minimum grant of €4,000. The aim of the grant is to restore these buildings to be structurally sound with minimum intervention. Grants are also available for other related structures, such as historic yard surfaces and landscape features around the farmyard like walls, gate pillars and gates. To be eligible for the scheme, buildings and



other related structures (constructed before 1960) must have architectural or vernacular heritage character, make a contribution to their setting and not be overwhelmed by large-scale modern buildings. The building must continue to be used for agricultural purposes.

Tom Daly of Duagh near Listowel renovated a coachhouse built by his grandfather around 1900 with support from the Heritage Council.

"The coach house is interesting, because it played a role in the war of independence in Kerry," says Jimmy Lyons of Teagasc Listowel.





Jerry Manning and Eimear Connery.

“Like any building project of this type, it can be a chore to repair the building with the appropriate materials. It is also skilled and painstaking work. Jimmy was lucky to find a builder able to take it on and meet the specifications laid down by the Heritage Council in Kilkenny.

“Another challenge was to avoid disturbing a small colony of bats which were in residence. It's now a fine building and has the advantage that as a coach house, it has relatively high ceilings, so it's a bit more versatile but it's still an agricultural building.”



Repair work carried out to lofted floor.



The lofted floor before repairs.

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Caitriona Foley
Teagasc advisor,
Dungarvan



After years assisting farmers apply for the Traditional Farm Building Grant within the REPS and GLAS schemes, I decided try my hand at securing funding for a building on our own farm. This building was the last remaining section in a traditional square farmyard.

It was dark, dull, damp, with crumbling walls and slates starting to slip. The timbers were wet looking with woodworm. There had been an electrical fire in the building 15 years ago and that had left its mark on the wooden rafters. In February 2020, we sent in our application and in March 2020 we received a letter that we were shortlisted. The grant is available for the conservation of traditional



farm outbuildings, including roofs, walls, structural repairs, windows and doors.

After this, we submitted our report by our conservation consultant, Aoife, of David Kelly Engineers, as well as a bat and bird survey, and were awarded funding for the project.

Construction started in mid-September with our local contractors C & H Builders and was finished by our end of October deadline.

Our builders and consultant carried out a sieve analysis of the old lime mortar, which turned out to be, un-



sually, mixed with clay.

By doing so, they were able to remake a similar mortar for the repointing of the stone. By the end of the project, we were delighted.

“What was once the ugly duckling in the yard is now the shining gem,” said Anna Meehan of the Heritage Council.

Traditional Farm Building Grant: Tips on filling up the application form

•What makes your building special?

Its history, stories and special features. There are many valuable resources online, such as archaology.ie and [Mapviewer on osi.ie](http://Mapviewer.osi.ie), which have a wealth of maps dating back to the 1840s. The online version of Griffith evaluation can tell you who lived on the premises, rates paid and what their occupation was.

My husband's family, the McCarthys, only moved there in the 1870s, so we learned about the tenants and landlord who were there at the time. It's unknown when exactly it was built, but it's at least 184 years old, as it is on the 1837 OSI 6inch maps. It was originally used as a store for apples with a large orchard beside it. After that, it was used as a piggery and calf house with outside exercise area.

•What essential repairs are required?

The GLAS Traditional Farm Building grant Scheme advocates minimum intervention i.e. what is needed to keep the building alive. Roofs, walls, timbers, doors and windows. Include photos of the necessary works.

•What is a conservation consultant?

A conservation consultant is someone who will oversee the project if your application is successful. A list of sources can be found under [https://www.heritagecouncil.ie/projects/traditional-](https://www.heritagecouncil.ie/projects/traditional-farm-buildings-grant-scheme)

[farm-buildings-grant-scheme](https://www.heritagecouncil.ie/projects/traditional-farm-buildings-grant-scheme) or ask your local advisor. You do NOT need to engage this person at the application stage.

•Cost.

Be realistic. High costs for unnecessary work may rule you out. Keep works to minimum intervention. A quotation or estimate of the works must go in with the application.

•Is there a public view or a public benefit to your project?

A public view may mean it can be seen from a road, near or far, or it may mean it can be seen from other public areas such as parks, golf courses and public walkways.

A public benefit is any good to the public. Will the current view of the area be enhanced if the building is repaired? Would using builders from the area and locally sourced material benefit the local economy? There are a wide range of possible answers to these questions.

•Is there wildlife using it?

Simple – check. Most old buildings have some birds nesting. If it's not swallows with their mud nests attached to the rafters, wrens or robins could be in little crevices in the stonework. Bats are common visitors and it's easy to check the floor for droppings. Perhaps you might be lucky enough to have some unusual visitors like owls.

•How do you ensure your project is environmentally sustainable?

We had hoped to re-use 50% of the old slate and rafters. However, due to our

careful builders, we managed to re-use 70%. They also sourced matching used slate to complete the roof.

Some stone was needed in areas where the wall had crumbled and they sourced this from a neighbouring yard that was undergoing a similar project on buildings of equal vintage. Have a good look at your building and estimate how much of the original materials can be kept.

•Any past maintenance carried out?

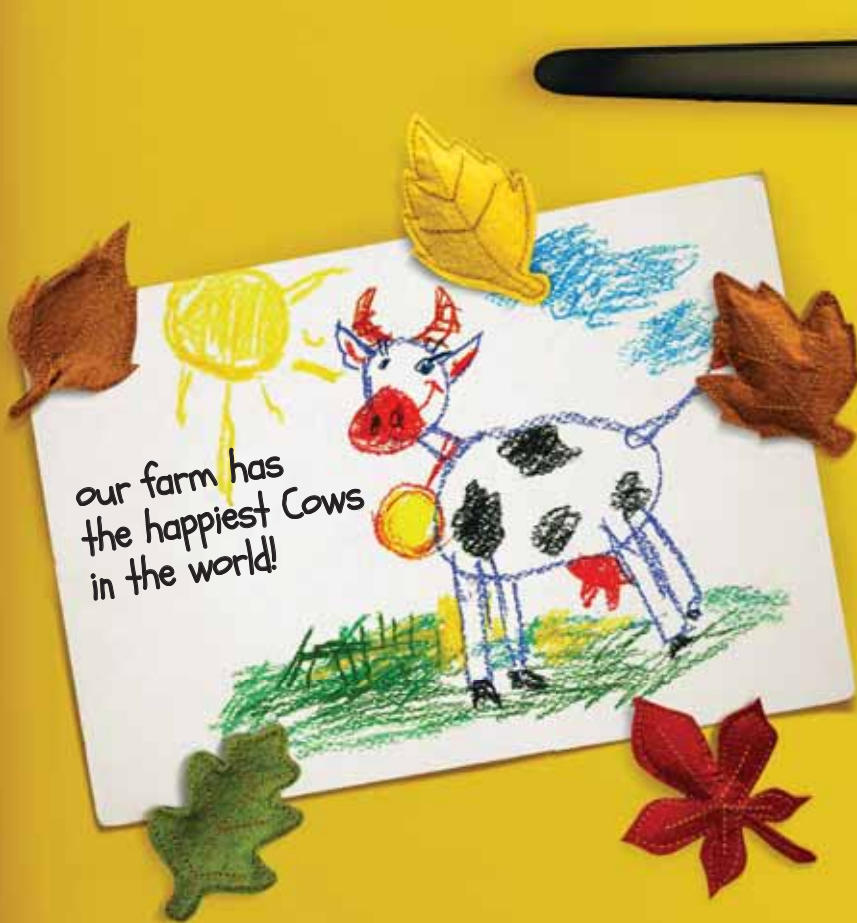
Were there any similar projects done in the yard back through the years out of your own pocket? It may be that you love repairing vintage machinery or maybe you have an old dwelling house or old stone boundary wall in fields that you have repaired.

•Photographs.

Include good, clear, quality photos, but not too many. You do not need several photos showing the same thing. Get help taking the pictures from a family member or neighbour if you need it. Most smartphones have good quality cameras. Ensure you have pictures that highlight:

- Front, back and sides.
- Main repairs to be carried out, both internal and external.
- View from a public setting.
- View of the building in its wider surrounding.

Be organised and on time. All documentation must be submitted with the application. Late paperwork is not an option. The 2021 scheme is going online and will be open for applications in early March.



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References: 1. Philippe-Reversat *et al.* (2017) *Acta Vet BRNO*. 86: 325–332 2. Metcalfe *et al.* (2020) *Vet Record Open* 7: e000429
3. Ellis *et al.* (2018) *Can Vet J*. 59: 1311–1319 4. Metcalfe *et al.* (2019) Poster presented at EBC, Den Bosch, Sept 19

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Accuracy when using fertiliser

Nutrition is fundamental to crop yield. Soil testing, fertiliser type, timing application, rates and accuracy of spread, all contribute to maximising the crop's potential.

Shay Phelan

Tillage specialist, Teagasc Crops, Environment and Land Use Programme.



Conor O'Callaghan

Tillage advisor, Teagasc, Naas.



Calculate the crop's needs before any fertiliser is applied. Over fertilising is expensive, potentially damaging to the environment and one of the leading causes of lodging. Once you apply it, you can't take it off.

Table 1 below shows the crop requirements for a 10t/ha winter wheat crop. Wheat and barley crops generally need approximately 3.8kg/ha of P and 10kg/ha of K for every tonne of yield grown, while oats have a slightly higher demand for K at 14.4kg/ha per tonne

Nitrogen Timing

Wheat, barley and oats require individual strategies due to their different growth habits. For example, we know that nitrogen is required in barley to form and maintain tiller numbers, as tiller number and ear number have a direct impact on final yield.

Table 1: P and K requirements kg/ha (units/ac) winter wheat crops at 10 t/ha - straw removed.

Soil index	P kg/ha (units/ac)	K kg/ha (units/ac)
1	58 (46)	127 (102)
2	48 (38)	113 (90)
3	38 (30)	100 (80)
4	0	0

In wheat, however, nitrogen is generally needed later in the life cycle with the final application usually around flag leaf stage. The top four leaves in wheat contribute approximately 80% of the final yield so the aim is to try to keep these leaves alive and protect them from disease.

In the case of oats, research work completed in Teagasc Oak Park shows that a 50:50 split of nitrogen gives the best result. The tables below show the recommended nitrogen timings for the three winter cereal crops.

Application accuracy

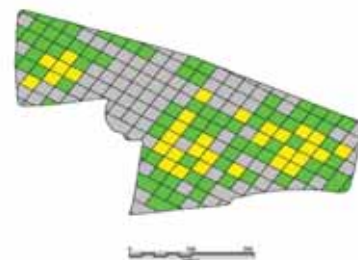
Fertiliser calibration and set up is very important to ensure accuracy, so consult the manufacturer's guidelines for details. Technology has improved in the last number of years, and with the use of TAMS, many farmers have been able to upgrade their fertiliser spreaders to ones that can now spread more evenly and accurately.

Whether it is the better headland management systems or the use of GPS technology, allied with yield and soil information maps, it is now possible to apply fertilisers more accurately than ever before.

Variable rate fertiliser applications are now becoming more common. This technology, using intensively soil tested fields and the maps gener-

ated (Figure 1), allows GPS-enabled fertiliser spreaders to accurately apply fertilisers depending on the soil test results and the crop requirement.

Figure 1.



While it doesn't always result in lowering fertiliser costs, it can help to apply the correct amount of fertiliser to different sections of the field, which may have different requirements. This should, in turn, lead to more even and higher-yielding crops.

Modern sprayers (TAMS grants have helped enormously) allow farmers to apply plant protection products such as herbicides, fungicides, plant growth regulators etc, more accurately and safely. A growing number





Conor O'Callaghan and Martin Ennis.

Field experience

Martin Ennis farms near the Naul in north Co Dublin. Along with his mother, uncle and cousin, Martin farms just over 400ha including cereals, grassland and a beef enterprise.

"We started to intensively soil test fields back in 2016, when we felt a block of 28ha wasn't performing to its full potential," says Martin.

"Under-yielding areas were compared with other parts of the field."

Each hectare of the 28ha block was tested on a grid sample system and it was revealed that there was a large variation in soil pH across the field. The grid system showed on a hectare basis that 55% of the land was less than 6.0 pH, while the remaining 45% was optimal at greater than 6.4 pH.

With this information, Martin started variable rate spreading of the lime on this block to solve the pH problem, as he didn't want to over apply for fear of locking up vital nutrients.

He says: "There was a sizeable saving on lime and the savings outweighed the cost of the sampling." Similar maps were also compiled for P and K indexes across the field, and these were variable spread by a contractor.

Since then, Martin has sampled 90% of the owned land and 50% of the rented land and he has seen significant improvements in soil pH and P and K indexes. Less than 10% of the original 28ha block is now below 6.1pH, with the remainder greater than 6.2pH. P and K indexes are also on the increase.

"Crops are yielding more evenly and there is less of variation at seed establishment and harvesting," concludes Martin.

Martin has since availed of a TAMS grant to purchase a new mounted variable rate fertiliser spreader and says that the change "has been straightforward and easy, as the maps are loaded on a USB key plugged into the control box of the spreader."

"The accuracy and precision of spreading lime and fertiliser has dramatically increased, and we believe the farm has become more environmentally friendly and sustainable into the future."

Table 4: Nitrogen strategy for Winter Oats.

Reference yield	Total nitrogen* Index 1	First application (GS30)	Second application (GS31-32)
8.5 t/ha	140 kg/ha	70 kg/ha N	70 kg/ha N

of farmers are now using their sprayers to apply nutrients in the form of liquid nitrogen products.

While this is not new, the move to wider tramlines on some farms – 30 metres or more – has resulted in some growers experiencing difficulty in getting fertilisers to spread accurately.

One solution is to use the sprayer to apply fertilisers, as there are no overlays and it is more accurate on headlands, right up to the margins with no losses.

Fertiliser quality

Fertiliser quality also has a significant impact on spreading accuracy as we move to wider tramlines. Whether you are using straight products, CCF or blends of fertilisers, low grade or dusty material can be difficult to spread and will result in uneven crops. There are some simple tests that farmers can use, such as sieve trays, which filter the fertiliser granules into different size grades. More details are available on <https://www.teagasc.ie/crops/soil-soil-fertility/>.

Table 2: Nitrogen strategy for Winter Barley.

Reference yield	Total nitrogen* Index 1	First application Late tillering	Second application GS 30-31	Third application Before GS 32
9.5 t/ha	200	60 kg/ha	100 kg/ha	40 kg/ha

Table 3: Nitrogen Strategy for Winter Wheat.

Reference yield	Total nitrogen* Index 1	Mid-March GS 30	Early-mid April (Before GS 31)	Early-mid May (Flag Leaf)
10 t/ha	230 Kg/ha	63 kg/ha	113 kg/ha	56 kg/ha

Fertiliser for silage:

Are you using enough?

Under-fertilisation of grass crops can hit the quality and quantity of silage available over winter. This simple tool can help you optimise your inputs

Joe Hand

Drystock specialist, Teagasc, Thurles.

Teaching advisor Joe Hand and Walsh Fellowship masters student Louise Pierce identified inadequate fertiliser application levels as one of the main reasons why farmers do not achieve adequate yields of silage at the time of year when grass quality is at its highest. They developed a simple worksheet to help farmers get their fertiliser programme correct (see Figure 1).

Poor-quality silage is a disaster. Feeding it means you will need to feed higher levels of concentrates to get animal performance, leading to higher costs.

If you decide not to supplement the poor-quality silage, your cattle will perform poorly, achieving low, or zero, levels of weight gain over the winter months.

Given that winter can last up to six months on some of the heavier land, this means that stock might gain no weight whatsoever for up to half the year.

Alan Dillon

Beef specialist, Teagasc Animal and Grassland Research and Innovation Programme.

Often, if faced with low yields, many farmers let the crop grow for another two to four weeks to allow the grass crop to bulk-up. This leads to an increase in the proportion of stem and a serious deterioration in feed value. Any increase in quantity is more than offset by the drop in quality.

Typically, land that is under-fertilised won't have generated adequate grass by mid-May, the target cutting date for quality grass. Using recommended rates of fertiliser on silage land can increase grass yields by 30%, enabling farmers to achieve quality and quantity by mid-May.

The recent Tipperary study by Louise Pearce and Joe Hand confirmed this. This can add up to 80kg on cattle over winter, with reduced costs.

Store cattle

The 80kg of weight gain valued at €2.00/kg liveweight amounts to €160

per head. A weight gain of 20kg (the result of poorly fertilised silage swards harvested late) comes to €40. For a typical beef farm of 100 store cattle, this amounts to an increase in liveweight worth €12,000.

Figure 1: Teagasc Fertiliser Worksheet for First Cut Silage.

Step A	Requirements from above (N, P, K)		N	P	K
	E.g. Index 2 (Units/acre)		100	24	124
Step B	Fertiliser Type	Quantity Applied			
	E.g. 24-2.5-10	3 Bags/acre	72	7.5	30
Step C	Total Applied (N, P, K)				
Step D	Deficit left to be applied (A-C)				
	E.g. Deficit from example above		28	16.5	94



Weanlings

A similar picture emerges when weanlings are housed, but they are usually fed meals in addition to silage, to achieve the target weight gain of 80kg. The level of meal fed will typically need to be increased from one kg per day on good-quality silage, to 3 or 4kg per day where the silage is of poor quality, at around 60% DMD.

Taking an average weanling ration costing €270/t at 16% protein over a 140-day winter, this will result in additional cost of €7,000 in meal where you are feeding 100 weanlings over the winter.

Table 1 summarises the recommended meal feeding rates for weanlings, depending on the silage quality, and



John O'Dwyer and his daughter Emma, who farm near Urlingford in Tipperary, took part in a detailed survey which proved the value of adequately fertilising grass crops for silage.

Summary

Winter finishing cattle is an expensive sport. For many years, factory prices have been insufficient to cover the costs. Farmers are working off tight margins and in terms of cost cutting, the only real area that is within a farmer's control is the quality of silage they make.

Farmers must aim for leafy silage in excess of 70% DMD to achieve weight gains of 80kg over winter. High-quality grass, cut in May and carefully ensiled, is essential to achieving this level of performance at economic cost.

High-quality silage delivers high weight gains at lower cost. This is because supplementation with meals, the only alternative, is hugely expensive.

Planning for this year's silage crop needs to begin now, if you are to have ground grazed and recommended fertiliser rates applied by late March. This will allow a mid-May cutting date.

Planning for profit is the key to success – start today.

of nitrogen.

The figures, in kg/ha, make the calculations very simple when ordering bulk fertiliser.

Also, some forms of 38% Protected Urea have sulphur fertiliser included, which can give a further increase in yield of up to 7%.

Return for 100 cattle

Farmers who have used this worksheet and followed its advice by applying the recommended rates of fertiliser have increased their yields by 30% and commenced harvesting their first cuts two to three weeks earlier than before.

The study showed that the increased winter weight gain is worth €10,000 from farm produced feeds, for just an additional €1,600 in fertiliser costs. Earlier after-grass is a bonus, which can help get you through a drought spell.

the cost of the meals.

Silage yields.

Farmers like to get a heavy crop of silage at harvest, which spreads the cost of harvesting over a larger number of tonnes. This makes sense,

providing you are harvesting quality grass.

This can be achieved by:

- Soil sampling the silage area to assess P, K and lime requirements.
- Applying the recommended amounts of fertiliser, including up to 100 units

Table 1: Recommended meal feeding rates for 80kg weight gain.

Silage Quality	Good 72% DMD	Average 68% DMD	Poor 62% DMD
Concentrate required (kg/hd/day)	1.0	2.0	3.0
For 100 weanlings			
140 day winter	14 Ton	28 Ton	42 Ton
Conc. Costs over winter	€3,500	€7,000	€10,500

Table 2: Recommended fertiliser rates in units per acre.

Soil Index	N	P	K	Fertiliser (bags/ac)	Nitrogen (bags/ac)
Index 1	100	32	140	4.5	2.66
Index 2	100	24	124	3.5	2.66
Index 3	100	16	100	2.25	2.66

Table 3: Recommended rates in kg per ha.

Soil Index	N	P	K	Protected Urea 38%	46% Urea
Index 1	125	40	175	550	340
Index 2	125	30	155	430	340
Index 3	125	20	125	280	340

What is a farm without its farmer?

Rachel Taylor
Teagasc, Naas

As Teagasc advisors we frequently speak to farmers about how the farm is performing in relation to its technical and financial efficiency. While these issues are central to attaining profit and minimising losses, they don't address one key element of the farm: the farmer.

An average of 26 farmers die by suicide in Ireland annually. Male suicide rates are highest in the 45- to 64-year-old category, according to CSO data. This age profile takes in more than half of all Irish farmers.

Farming is inherently a very solitary life, particularly for those without family. This, coupled with workload (particularly at this time of year when calving, lambing and sowing are in full swing), financial pressures and of course the global pandemic we are living with, can take a toll on anyone's mental health.

Social opportunities such as going to livestock marts or discussion groups, are often a farmer's only means of mixing with other farmers. These are now carried out on virtual platforms, and trips to the local co-op can no longer involve getting into lengthy conversations with neighbours you might have met along the way. Many farmers can go weeks without talking to or seeing anyone.

All of these elements combined can cause a decrease in farmer mental health, and in some cases the person themselves may be unaware of it.

While a farmer may not be having suicidal thoughts, they may be showing character changes such as a lack of interest in personal hygiene, lack of willingness to engage in a conversation, lack of interest in things that a person used to enjoy. Or they may have begun showing a negative outlook towards everything. These can all be signs of mental health issues.

One farmer I spoke with who has suffered with mental illness for more than a decade explained that the first warning signs for him were "having an erratic mood, a feeling of a dark cloud hanging over you, a lack of rhyme or reason and that things which should have improved my mood, didn't. It was a feeling of not being able to breathe or get relief from issues that constantly took over my mind".

Stigma

Stigma around mental health issues and asking for help can prevent people from seeking support early.

When talking to the farmer about what it is that makes addressing mental health with farmers, he said "aside from the isolation that farmers experience, it is the attitude that anything that isn't expressed as a strength isn't touched upon, it's brushed under the carpet."

"Farmers seem to think they need to be a tougher breed than outsiders and even their peers. I even experienced this in agricultural college among young farmers in their twenties."

“It's easy to get wrapped up in day-to-day life and forget that there are others out there who might not be dealing with their current situations as well as you might be

While help is available nationwide through many national and local groups, such as Aware, Jigsaw, Pieta House, turn2me and Mental Health Ireland, who in conjunction with Teagasc and IFA have a farm resilience programme, one particular campaign in Co Kildare has focused primarily on the mental health of males and

Rachel Taylor.



recognises that there is a particular issue within the farming community.

Heads Up, led by Niamh Keaveney, aims to encourage participants to make positive changes to their lives, develop resilience and offers support to access local services.

Depending on the needs of clients, Heads Up offers both one-to-one and group support. Niamh explained: "Not all men that contact us will be ready for the group programme, some may be struggling, have low moods, feel lost but not be aware their mental health has been impacted. They want something different and want to make changes but don't know what is driving this or how to go about it."

One service offered by Heads Up is an evidence-based group programme which consists of two mornings a week for 12 weeks. The programme focuses on four main areas; firstly, wellbeing and resilience which supports men to gain an understanding of their mental health so that they can build their resilience and respond positively to stress and stressful situations.

"It involves making men aware of their mental health, identifying

CONTACT DETAILS

- Niamh Keaveney: Heads Up, Kildare – 085 2845871, <https://www.countykildarelp.ie/programmes/headsup/>
- Mental Health Ireland in conjunction with the Samaritans: 116 123 free-text HELLO to 50808, www.mentalhealthireland.ie
- Aware: 1800 80 48 48, www.aware.ie
- Pieta House: 1800 247 247 or text HELP to 51444, www.pieta.ie
- Jigsaw (specifically aimed at 12-25 year olds): 01 4727010, www.jigsaw.ie
- Turn2me: provides online and in person support for both children and adults as well as the parents of children dealing with mental health issues, www.turn2me.ie

to scheduling events as similar as self-hygiene to give you routine which in turn helps you come out of the downward spiral quicker.”

He also outlined how the programme put him in contact with people who could “understand the pain and struggle but who also didn’t think less of you for it or talking about it, dispelling the same associated with mental illness. This lack of judgement in itself provides a release from the darkness.”

When asked for one piece of advice to give to someone who may be suffering with mental illness and not have confronted it yet, the farmer said: “Finding someone to express this to, a loved one, a stranger, a doctor, anyone is first step.

“You need to choose that person wisely so you can express your feelings safely. Someone who won’t judge you, someone that won’t do anything, just listen. It doesn’t even have to be in person. Online forums where you can remain anonymous can work; just some way of spreading the burden. I myself never started to truly recover until I shared it with my partner at the time, now my wife.”

Now more than ever people, farmers and non-farmers need to look after each other. It’s easy to get wrapped up in day-to-day life and forget that there are others out there who might not be dealing with their current situations as well as you might be.

Taking time out of your day to lift the phone and chat to someone you haven’t heard from in a while, or someone that is unusually less in contact with you, to see if they are alright, could provide the opening they need to share their burden.



changes that make them feel well or not well. It also helps to identify new coping strategies that work for them as not everyone will respond to the same strategies,” Niamh outlined.

The second area of focus is on life planning which “enables men to set their own personal goals and be supported to access relevant services in pursuing these goals. The men determine new pathways for themselves and are equipped with the tools, knowledge and information to progress. Sometimes people have an idea of what they want to do but feel like they have hit a brick wall and can see no way around it. This part of the programme can really help with that,” says Niamh.

The third area of focus is centred on physical activity. It has widely been proven that physical activity can positively impact your mental attitude and health.

“The programme tries to show men how being a little more active can improve mental health, how their mood can improve from feeling endorphins released during exercise and help build this into their daily routine,” Niamh adds.

The final area of the programme is developing social connections through the “creation of a male space to enable men experience support and connection. Many people may have happy marriages or good interaction with other people but are wearing a mask.”

“The group allows men to mix with others who, despite all having different stories or backgrounds, need the same safe place to allow them to take the mask off. This can have a positive impact on making changes to their own lives,” Niamh explains.

The farmer I spoke with partook in the programme and found it greatly beneficial to his mental health and quality of life.

Holistic approach

“The programme took a very holistic approach to strategies and tools to better equip yourself. It helped to identify warning signs of an imminent episode of depression earlier allowing me to put protocols in place so the outcome might not be as destructive to myself or people close to me.

“These protocols may just be activities, or going to someone to talk

Celebrating Ireland's

Tom Houlihan
Teagasc Forestry
Specialist.



Our forests provide us with great settings to connect with and appreciate nature, particularly in challenging times. In late September 2020, the Teagasc Forestry Development Department launched a photography competition, inviting participants to capture and celebrate our forests through images.

The competition featured four different themes over four consecutive fortnightly periods during October and November, highlighting some of the many benefits provided by our trees and forests.

The themes were **Forest Landscapes**, **Trees on the Farm**, **Forest Animals and Plants** and **Enjoying Our Forests**, respectively.

The competition really captured the imagination, with well over 1,000 wonderful images submitted by enthusiastic participants of all age groups across the country.

The comments and captions that accompanied the images were particularly gratifying, with many highlighting their uplifting experiences within the havens provided by their local forests. This article brings together a selection of captivating images from the competition, along with their captions and brief descriptions. The images themselves tell their stories in a most powerful manner.

Based on the success of this initiative, Teagasc plans to launch a new photo competition in 2021, which will incorporate new themes and further competition categories.

Category 1: Forest Landscapes

Forests can enhance our landscape and provide us with wonderful locations to enjoy. The images in this category reflect beautiful forest landscapes we can experience in every part of Ireland.

These photos capture tranquil scenes, stunning colours and leave us wanting to be in such places ourselves. The images clearly show why trees, in combination with other key landscape features such as water, are so important to our lives, our surroundings and our wellbeing.

cycle of birth and renewal.

Photo: Marty Guinan 'Apple of her eye'. Marty's photograph shows a heifer helping herself to an apple off the 'Apple Tree' on his



Photo: Jane Walsh 'The beauty around us'. Jane's overall winning photo presents a stunning image of "a simple yet beautiful walk on a gorgeous day in Hazelwood, Co Sligo."



Photo: Mary Hahn 'Enchanted Forest'. Mary captured "a beautiful magical walk through the forest at the Sally Gap, Co Wicklow. A clearing in the trees lets the light flood in, allowing the moss to grow and dress the trees in vivid velvet green"

Category 2: Trees on the Farm

The photos in this category provide fine examples of how trees, which represent a multipurpose resource, can fit in on the farm, complement

farming enterprises, enhance the farm aesthetics and biodiversity, and offer shelter for natural processes that are always a joy to behold.



forests – in pictures



Photo: Zita Power 'Feeding time under the oak tree'. Zita's category-winning photo, taken in Co Wicklow, captures the "wondrous sight of a piglet wrestling for milk against the backdrop of a lush oak tree."

She describes this simple but captivating farm experience as "a welcome and well needed break from the current chaos of the world." The image also reflects the turning of the season, as well as the

farm in Co Offaly.

Category 3: Forest Wildlife and Plants

The photos in this category bring us close up to a range of charming woodland species, some of which may be difficult to spot as they can be very

elusive. The featured image shows how trees and forest habitats can provide a home and refuge for our important wildlife species. Forests are one of the most important sources of life, colours, nature and beauty.

As eloquently described by Candela,

a young enthusiastic competition entrant: "Wherever you look, you will find different living things, incredible animals, exotic plants. The forest transmits calm and peace. With its smells, sounds and views, it provides wonderful space full of life. And



that's why it's one of the best topics to represent this world."

Photo: Tom Ormond 'Frosty morning'.

Tom describes how, on a frosty October morning in Killarney National Park, he heard this stag roaring in the woods and patiently waited for it to appear. Luckily for Tom, "it did not disappoint and when it roared in a cold

corner of the field, its breath vaporised and I captured this image."

Category 4: Enjoying Our Forests

The selected photo really brings out a sense of fun and enjoyment in a wonderful forest setting. It provides a great example of the recreational resource provided by our forests, which promotes physical activity, health and wellbeing for all ages.

Photo: Killian O'Driscoll 'Peek a boo!'

Killian took this photo while playing hide and seek with his son in the autumn leaves at



Spring Colour

Let's review plants that bring colour at this time of year, so you can incorporate them for future enjoyment in your own planted areas.

James Brady

Lecturer at the Teagasc College at the National Botanic Gardens.



The star magnolia, *Magnolia stellata* lights up the darkest of gardens with its lightly-scented white flowers in spring. A native of Japan, this deciduous shrub is suitable for small gardens where it can be grown as a small tree. Flowers emerge in early spring before the leaves, providing a spectacular showstopper. Choose a sheltered spot in well-drained soil. *Magnolia stellata* tolerates alkaline soils but not shallow chalky soils so bear this in mind before planting.

Daphne mezereum 'Rubra'



Daphne mezereum 'Rubra' is a deciduous shrub with highly fragrant purple/pink flowers borne on bare stems in February/March. This plant is sure to add a real pop of colour to a garden. Also known as the February Daphne, it is a compact shrub that prefers a sheltered site in partial shade, but will tolerate full sun once the roots do not dry out. This plant has the added benefit of stunning scarlet – albeit poisonous – berries after flowering.

An ideal area for planting *Daphne mezereum* is close to a door, window



Star magnolia,
Magnolia stellata.

or path where you will become intoxicated by its fragrance. The flowering stems also last well as a cut flower, perfect for bringing some spring colour into your home.

Crocus tommasinianus



Crocus tommasinianus is a reliable early flowering crocus, bearing stunning deep violet flowers from early March. Planted in autumn, crocuses are perfect for adding early colour to beds, borders or pots. They can even be planted through lawns and grassed areas where they can naturalise. To date, over 120,000 crocuses have been planted on the lawns at our Teagasc Ashtown campus by the students at the college of amenity horticulture, National Botanic Gardens.

The bulbs emerge each spring, transforming a green desert to a blanket of stunning colour. Once they've flowered, as for all bulbs, allow sufficient time for the foliage to die back naturally, so energy can be stored for next season's display. This usually takes six to eight weeks, after which you can mow the grass again.

Crocuses will grow in almost all soil types, except wet soils. Ideal locations include full-sun in rich free-draining soils, however they will grow in partial shade. *Crocus tommasinianus* has nectar/pollen-rich flowers, perfect for attracting bees into the garden.

Camellia × williamsii 'Donation'



Camellia × williamsii 'Donation' is an evergreen shrub with leathery, glossy, dark green leaves. 'Donation' is a strong-growing, large shrub up to 5m in height, with semi-double, light rose-pink flowers 12cm in width in late winter and early spring. 'Donation' can flower for a long period of time, even up to May.

Camellia sp. are best positioned in shade with acidic soils with plenty of organic matter. Avoid planting in cold, dry winds and early morning sun, as buds and flowers may be damaged by cold winds and late frosts.

Mulch with good-quality garden compost or well-rotted farmyard manure and feed in spring with an ericaceous feed.

If you decide to grow Camellias in pots, don't allow them to dry out, as this can affect the flowering buds. Water using rainwater if possible, as tap water can be too hard for the plants.

A common problem associated with Camellia sp. is yellowing of the leaves, which often indicates they are not getting enough iron or manganese. This happens in alkaline soil where the plant is unable to absorb these essential minerals. Sequestered iron can help this process, but ensuring you plant your Camellia sp. in acidic soil is best. Prune immediately after flowering, only if required.



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