

Silage: short-term savings could prove costly next winter

Plan carefully for adequate silage supplies next winter.

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“**F**eed in the yard is money in the bank.” This is an old idea, but it remains a core principle of managing risk on dairy and drystock farms. Despite some commentary that carrying a feed reserve is ‘tying up capital’, the on-farm experiences of years like 2009, 2013, 2018 have repeatedly demonstrated the value of having adequate silage.

A rolling reserve of at least 400kg DM per livestock unit (equivalent to about two bales per cow) above normal winter feed requirements should be in place to cope with adverse weather.

With fertiliser N prices currently at very high levels, this year is clearly not ideal for building reserves. However, the requirement to plan ahead to secure enough feed is more important than ever, because the cost of filling silage shortages next winter is also likely to be prohibitive.

Feed supply on farms - insights from Teagasc Fodder Survey

Reasonable grass growth rates and good harvest conditions through most of the summer meant that 2021 was relatively straightforward in terms of silage production. This is reflected in the results of the Teagasc Fodder Survey, which reported an average surplus of around 20% for dairy and drystock farms (Table 1).

This level of surplus is welcome from a feed security perspective and it has had the effect of insulating farms to some extent against rising feed and fertiliser prices.

That said, the survey estimated around 8-10% of dairy and drystock farms had projected silage deficits of more than 20% for the winter.



Richard Bond, pictured with advisor Lorcan Dooley, recently won the Laois Quality silage award 2021/2022.

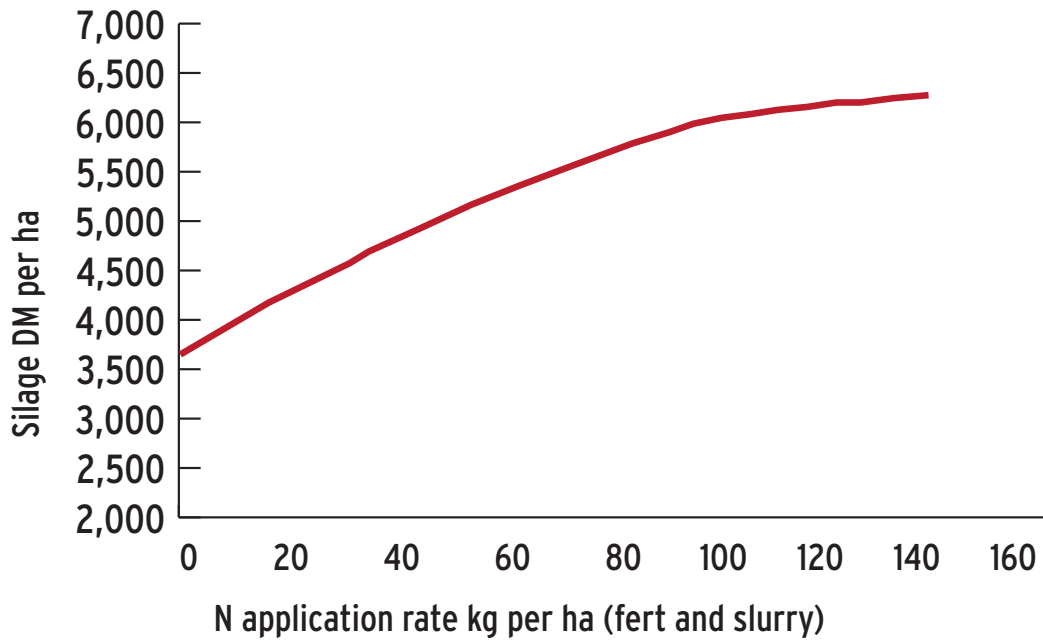
There was no obvious trend in the scale or location of these farms. This indicates that shortages were down to individual management decisions. In fact, the only pattern in this data was a tendency for the same farms to be repeatedly short of feed year after year.

These farms are very exposed to input cost rises and reductions in silage available to be purchased on the open market. With fertiliser prices likely

to remain high beyond the dates for first and second silage applications this year, there is an increased risk of tighter supplies and higher tonnage prices, especially if 2022 brings adverse weather events.

I would strongly recommend that farms with a history of fodder shortage issues in recent years take early steps to plan ahead for next winter. This simply means a combination of assessing current stocks, securing

Figure 1: Marginal silage DM rate yield response to increasing fertiliser N for first cut.



extra silage supply and/or reducing likely silage demand.

Assessing current stocks and likely demand

A good measure of whether you made enough silage last year is how much silage you have left over this spring. So, check your silage levels before looking at any tables of data or budgeting programs. To state the obvious, it is your starting point.

Other things you need to establish include:

- Will there be more stock on-farm compared to last year?
- Will you end up cutting less area than last year?
- Do you plan to reduce fertiliser input per acre?

If the answer to one or more of these questions is yes, then it is likely that your silage supply will tighten significantly.

Can the current silage reserves match this change? If not, then the farm stands a high risk of running into a deficit next winter.

It may seem too early in the year to

be discussing plans for next winter, however the decisions made over the next couple of months will determine the supply of feed at that time.

There are too many variables involved to make farm-specific recommendations, so the best advice is to contact your Teagasc advisor to run a simple silage forward budget based on your own figures.

The feed budget function in PastureBase Ireland offers an excellent means of developing a budget that can be updated during the year.

As part of this plan, you may need to consider offloading non-productive or marginal stock to reduce demand before the onset of winter next year. Carrying lower grade stock on very expensive silage is difficult to justify.

Fertiliser N for silage- should I cut back this year?

This is a big question for spring 2022 (see also article by Mark Plunkett on pages 16-17). Based on many years of research, current recommended total N rates are 125kg N per ha for first-cut, and 100kg N per ha for second-cut, as-

suming late May and late July harvest (these would be reduced by 20% for old pasture and/or low P and K index soils).

It is understandable that farmers will seek to make savings on fertiliser N, however there are two key points to consider;

- The marginal response to additional nitrogen.
- The cost of replacing any reduction in silage produced from the marginal N applied.

Remember that all of the other costs, such as a contractor, land charge etc, will remain essentially the same, so any cash savings on N fertiliser will have to match or exceed the value of the silage yield foregone.

Figure 1 illustrates a typical response curve to fertiliser N for first-cut silage. From a 0kg N application growing 3.7t DM, there is a high growth response to N applied, but at a declining marginal rate as the application approaches 140kg N per ha.

In other words, the amount of extra silage grown by the final 20kg applied

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Table 1: Winter feed balance by region and enterprise autumn 2021.

| Enterprise | Region | Winter fodder balance ¹ % | Approx. days short |
|------------|---------------------|--------------------------------------|--------------------|
| Dairy | Midlands north east | 106 | - |
| Dairy | North west | 110 | - |
| Dairy | South east | 116 | - |
| Dairy | South west | 122 | - |
| Drystock | Midlands/north east | 128 | - |
| Drystock | North west | 131 | - |
| Drystock | South east | 134 | - |
| Drystock | South west | 127 | - |

¹Based on planned winter feed demand minus current feed stocks. Simple (un-weighted) average of fodder balance per farm in sample.



The Sligo/Leitrim contract rearers group has placed increasing emphasis on silage quality in recent years.

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is much less than the first 20kg applied.

While the response curve will vary greatly between farms and years (due to soil type, weather etc), the average figure shown indicates that the extra silage DM grown by the marginal N applied is costing under €120 per tonne DM, up to 100kg N per ha (80 units per acre total N).

This is likely to be less than the market cost of replacing the additional feed, so the fertiliser N rate is justified.

However, at higher N application rates, or on lower grade silage ground, the economic response to the extra fertiliser may not be justified.

In such circumstances, it is espe-

cially important to complete a silage budget and examine the possibility of reducing total silage demand for next winter.

Should I delay taking first-cut to bulk up my silage crop?

This is a common question, but it is a false assumption that 'one big cut' will reduce costs and secure enough feed for the winter. It has been clear from recent fodder crises that farms which fail to cut first-cut silage by early June at the latest are much more likely to run short of silage in a bad year.

Why? A delayed heavy first-cut actually reduces annual yield and can create problems salvaging second-cut crops later in the year (remember, August is a surprisingly wet month). Farms that routinely take earlier

first-cuts have higher annual silage yields and better quality to boot.

Finally, it is often argued that spring-calving, pasture-focused dairy systems feed silage mostly to dry cows and do not require significant stocks of quality feed.

However, for a typical spring-calving herd stocked at 2.5 to 2.8 cows per ha, up to 50% of total silage will be consumed by milking cows.

This percentage will increase for farms at higher stocking rates, winter milk herds and farms operating on heavy land.

Furthermore, all young stock silage and 100% of recommended silage weather reserve (400kg DM per cow) should be of good quality.

This highlights the need to focus on silage quality as well as quantity, even in the face of high fertiliser prices.

Sligo group focus on silage quality

The quality of grass silage on cattle rearing farms in the west of Ireland often goes unmeasured and therefore overlooked. Priority is more often than not given to yield, which is important but should not be achieved at the expense of quality.

Silage can account for up to 40% of the total annual dry matter intake on cattle rearing farms. The Sligo/Leitrim contract rearers group has focused on silage quality over the last number of years.

The awareness that feeding 2kg of concentrates with moderate quality silage, where required, to reach a daily weight gain of 0.6kg/day will cost 70-80c per day increases the focus on silage quality.

The significant savings in concentrate associated with making 75-80 DMD silage for young growing animals has become a priority for the group. Between 60-80% of the heifers reared on many of the farms achieve the target daily winter gain without concentrate feeding.

Regular weighing, regrouping according to weight and facilitates targeting concentrate feeding only to the animals that require extra attention are key to achieving target weights.

On a moderate quality silage of 68 DMD, where 2kg of concentrates is required, over a 150-day housing period for 50 heifers and concentrates at €360/ton equates to a cost of €5,400.

Where over 75 DMD silage is made and only 20% of the heifers require concentrates, the cost reduces dramatically to €1,080, or a saving of €4,320 over the winter period.

-Tom Coll, Teagasc Ballymote



Great silage pays dividends.

Reseeding the secret to quality silage in Laois

Richard Bond recently won the Laois Quality silage award 2021/2022. The award, run by Teagasc Laois staff, looks at a number of Key Performance Indicators when assessing silage quality, such as DMD, intake value, protein percentage and UFL.

Richard's first-cut pit silage tested at 80DMD, intake value of 88.7, protein 12.2% and a UFL of 0.91.

Richie is milking 160 spring-calving cows. He places a big emphasis on making good-quality silage for the spring diet. Kelly Bros Monasterevin cut the award winning silage by precision chop on 30 May.

"We harvest 100ac of first-cut each year," says Richie. "About 25ac of this is newly reseeded, with the other 75ac having been reseeded in the last five years. The ground was in tillage prior to reseeded."

"Soil fertility is good, but K is an issue each year, with a need for regular soil sampling as it can drop quickly. The silage ground is typically zero-grazed at the start of the year and then cut twice followed by two more zero grazings."

"The majority of the silage ground was zero grazed up to St Patrick's Day. It got 2,500 gallons of slurry on 20 March and on 1 April it got three bags of 21-2-10 +2 S. The crop was left to wilt for 36 hours."

Richie says he places a big emphasis on cutting the silage in the right conditions and admits to becoming obsessed with weather apps around silage time.

"I'd also stress the need to contact your silage contractor in advance to give him plenty of notice," adds Richie.

"I typically call him two weeks in advance to give them an idea when I want the silage cut."

—Lorcan Dooley, Teagasc Portlaoise.

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