



Advice on managing silage stocks for dairy diets

Debbie James

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Feed accounts for the biggest proportion of variable costs on a dairy farm. But that cost is often unnecessarily high because farmers fail to match silage quality to the needs of different stock groups.

Often, every animal on a farm is fed the same silage because clamp space is limited, says independent nutritionist Hefin Richards, of Rumenation Nutrition Consultancy.

“One size does not fit all when it comes to silage, but this is often what happens on an average farm, because there is not enough space to store all the [different types of] forage required and retain access to feed the silage of choice,” he explains.

See also: [8 ways to produce award-winning silage](#)

As herds expand, cows and cow accommodation tend to come at the top of the investment priority list, while additional silage storage to match the bigger feed requirement usually sits lower down the list, along with dry cow and calf facilities.

This often leads to clamps being overfilled, resulting in increased silage wastage and losses caused by failure to compact shoulders.

Lack of options

However, the biggest issue is that there is no flexibility on which silage to feed – it comes down to what can be accessed.

“The worst scenario is having a big lump of poor silage blocking access to good silage,” says Hefin.

“I have known situations where farms are harvesting maize when they are feeding their best-quality [grass] silage to milkers and have run out of space to store that maize.

“So they put the overspill in front of that silage, enforcing a sudden switch to what may be poorer quality material in other clamps.”

This means a big change in cow diet and an almost inevitable drop in performance, as well as the potential for metabolic health issues.

There is a direct cost too: “Farmers should be feeding their highest quality silage to their milking cows, not wasting it by feeding it across all the stock,” he advises.

The best silage should be targeted at early-lactation and high-production cows, he adds.



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Open-ended clamps

Farms operating a multicut system grass silage along with maize, and who house or feed a buffer year-round, have the challenge of juggling space while maintaining access to feed material that has had time to ferment and stabilise.

Hefin is an advocate of open-ended clamps – these can be filled at the front end, but the feed accessed from either end, allowing flexibility and all available space to be used.

“I often tell clients that the day they finish harvesting maize is the only time the clamps are completely filled, so it makes sense to plan well ahead in order to utilise space and avoid knee-jerk ration changes,” he says.

Recording where each cut is stored on, say, a whiteboard, showing the layout and dimensions of clamps, is also worthwhile.

Purposely making silage for different classes of stock is only beneficial if the cuts can be segregated, Hefin adds.

This may only be possible with clamps, by layering material across the whole floor area, or by the tactical use of bales.

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Milking cows

For milking cows, silage with a metabolisable energy (ME) of at least 11.3MJ/kg dry matter (DM), giving a digestibility (D) value of 70-plus should be the aim.

Crude protein (CP) is generally higher at this level too because of the more favourable leaf-to-stem ratio.

“If you are a spring calver with milkers in late lactation, then ME and D-value are not critical, but if the silage is for autumn calvers, it is very important,” he says.

Palatability is a priority too, as a palatable silage in conjunction with a high D-value delivers a double benefit:

“An animal will eat more of it and as every mouthful is more digestible, that frees up space in the rumen, so intakes are greater. The net result is that it will support several more litres of milk.

“For example, if silage has an ME of 11MJ/kg DM, and cows eat 12kg DM, this equates to 132MJ of ME.

“But if the silage has an ME of 11.7MJ/kg DM, and cows eat 13kg DM, the daily ME intake is 152MJ, which is enough for over 3.5 litres more milk, or can allow for a 1.5kg a day reduction in concentrate use,” Hefin explains.

Intakes are more challenging when grass is stemmy at harvesting – the resulting silage is more fibrous and sits in the rumen longer.

This type of silage should be restricted in the milking cow ration, he says, adding:

“It’s important to ensure there is enough rumen-degradable protein and fermentable energy to kick-start the fibre-digesting microbes.

“Molasses can be very effective, as can chopped fodder beet, and many yeast and other specialist additives have shown benefits in terms of increasing the rate of fibre breakdown and subsequent energy availability.”

Dry cows

Very fibrous silage is, however, a good fit for the dry cow, a stage of production when intakes of feed with higher energy and higher D-value should be controlled.

Overconsuming energy will cause health issues during transition, but supplying sufficient DM is vital, says Hefin: “Silage needs to be palatable but low in energy and protein.”

He stresses that low quality should only mean low digestibility, not poorly fermented, mouldy silage.

Forage with an ME as low as 9.7-9.8MJ/kg DM can be adequate, if it is well made, palatable and clean, to avoid waste.

Youngstock

Youngstock do not need the high-quality silage that goes into a milking cow ration but, as Hefin points out: "Neither should you expect sub-10ME silage to be good enough for a growing animal."

A heifer needs to grow at an average of 0.8-0.85kg/day (depending on breed) to be big enough to calve at two years.

He advises silage with 10.7-10.8MJ ME/kg DM and 13-14% CP as a good base for a youngstock ration, topped up with a small amount of concentrates and minerals.

"This is better for them than silage from very young, leafy grass, which will make them prone to scours."



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Clamp versus bales – the cost

It is generally cheaper to make clamp silage if there is existing storage, and when grass yields are on target.

Allowing crops to “bulk up” to reduce harvesting costs is a false economy, says independent nutritionist Hefin Richards, unless specifically for dry cow or youngstock silage.

“Contractors cost per bale, so if you have a cut that will only produce, say, 2.5 bales an acre, it will work out cheaper than clamp silage costed on an area-based fee.

“The lighter the crop, potentially the more cost effective it is to make bales,” he advises.

Bales deliver better value for money in later, lighter cuts and provide flexibility around feeding, he says.

However, many farmers fail to factor in the cost of hauling bales from the field and the additional processing required to use bales in a total mixed ration.

In addition, clamp silage is already chopped, unlike bales, so more diesel will be used to process them, and there will be more wear and tear on the wagon.