

Making best silage: Bale silage best practice

Be prepared

Dr. David Davies, Senior Research Scientist at IBERS points out, you need to be ready to seize the balewrapping moment.

“With increasingly unpredictable weather, it’s difficult to know when silage harvesting windows will occur – or how long they’ll last,” David says. “To maximise every opportunity to produce good quality baled silage, it’s essential you’re ready to wrap at short notice.”

This means carrying out pre-season checks and maintenance on balewrapping machinery now or alternatively, ensuring that you have your balewrapping contractor lined up.



In the know about nitrogen

The presence of residual nitrogen in the crop being baled can lead to bales with high levels of ammonia, acetic and butyric acids. This is due to the excess nitrogen giving rise to a poor fermentation. The net result is silage with a low intake potential that animals are less likely to eat. This can be avoided by limiting the application of inorganic fertiliser. The actual application of such fertilisers should be tailored to the specific soil requirements rather than based on what you’d usually apply.

Similarly, IBERS suggests leaving at least 6 and ideally 8 weeks between applying farmyard manure to a field and harvesting its crop for silage.

Preparing the ground

It’s advisable to prepare the area where your silage will be produced ahead of time. This means taking steps such as rolling the ground to reduce the chances of soil contamination as this can bring with it bacteria like Enterobacteria and Clostridia, which are undesirable, as well as Listeria and Bacilli, which are pathogenic.

Quantity versus quality

Bigger isn’t necessarily better when it comes to silage crop yields. As David explains,

“Increasing the yield of a given field leads to reduced digestibility and protein levels in the crop. This resultant silage can provide sufficient nutrition for in calf suckler cows but the same fodder wouldn’t enable a dairy herd, beef cattle or sheep to reach their full potential.”

As a result, IBERS recommends balancing the quantity and quality of a silage crop depending on the animals being fed.

Cutting, picking up and wilting

When the opportunity to start baling arises and if the weather is against you, baled silage production offers the opportunity to concentrate on one or two fields at a time rather than trying to take care of them all at once. It is also recommended that you spread the crop evenly after cutting to encourage wilting. It’s also advisable that you leave a maximum of only 24 hours from cutting to picking up. Any longer and the



Making best silage: Bale silage best practice



crop in-field dry matter losses increase dramatically. Extended wilts are also undesirable because they can be more difficult to ferment and are more prone to mould growth in the bale.

4 layers or 6?

In an experiment, bales wrapped with 6 layers rather than 4 showed better fermentation, reduced moulds, an improved oxygen barrier and also retained more of the silage as feedable dry matter. A further experiment under farm conditions gave a predicted milk yield gain of almost half a litre per cow - per day. Considering the size of some herds, the dividends of that could be enormous.

It's equally important that farmers and agricultural contractors follow other recommended procedures to maximise the ensiling process, such as ensuring a 50% overlap of each film layer, and that all areas of the bale surface receive the recommended number of film layers.

Storage

IBERS actually recommends wrapping at the site where the bales will be stored to minimise opportunities for damage.

"If this isn't feasible," says David, "you need to make sure that any stubble present isn't hard and likely to puncture the balewrap. A hole, no matter how small, reduces the oxygen barrier, helping mould to grow and disrupting the fermentation process."

Bale right. Store right

Having invested so much time and energy into producing baled silage, it seems a shame to squander that with improper storage. Yet many people do every year. To keep your bales in prime condition and to help the ensiling process, make sure you follow recommended bale storage advice.

This includes stacking bales as soon as possible after wrapping and certainly within 24 hours. Also do not stack more than three bales high, with those of lower dry matter in single or two layers. This ensures the bales on the bottom row aren't squashed by excessive weight causing them to 'blow' their balewrap seal. Finally, protect your bales from the birds with a close woven polypropylene net. Support the net so that it is not in direct contact with the surface of the bales where birds can reach through. Also be sure to secure the net at ground level.

Ultimately, these might seem like small steps but they can make a major difference. As David concludes,

"When it comes to the production of baled silage, farmers and agricultural contractors can lose around 10% of the dry matter between harvesting and feeding."

"Focus on attention to detail and this figure can drop to as low as 2%. That's a pretty big incentive to dot the i's and cross the t's."



Please see our Disclaimer below:

We strive to ensure that the information, recommendations and guidance on the use of our products ("Product Guidance") is correct and offers the best guidance which we, or third party experts whom we have consulted, can provide to assist farmers and growers in deciding which products are suitable for your needs and getting the best results from our products. However, Product Guidance is necessarily of a general nature and cannot be tailored for the specific conditions and requirements which each farmer or grower will have. Bespoke advice on the suitability of our products and guidance on their use for your individual requirements should be obtained by contacting customersupport@makingbestsilage.com.

Accordingly, we make no claims, warranties, representations or guarantees on the accuracy or completeness of the Product Guidance and we exclude any legal liability or responsibility (to the maximum extent legally permissible) for the Product Guidance or for the consequences, direct or indirect, of any farmer, grower or other party following, or deciding not to follow, the Product Guidance or any part of it. Our only liability is contractual liability to purchasers of products from us as set out in our Terms and Conditions of Sale, a copy of which is available upon request from customersupport@makingbestsilage.com.

This disclaimer of liability applies to makingbestsilage.com, any other member of our group of companies, our officers, directors and employees, and any third party expert or other person whose materials we have included in the Product Guidance.