
Nick Berni

Reducing the silage weather lottery

Paying close attention to achieving high quality fermentation will allow dairy farmers to produce better quality silage irrespective of the conditions at harvest.

According to Nick Berni, forage products manager with Biotal it is possible to reduce the impact of poor harvest conditions by understanding how different dry matter crops ferment and modifying crop management accordingly.

"The weather at first cut can play havoc with silage making and last year's wet conditions in mid and late May were blamed for some disappointing forages. Wet grass turned into low dry matter silage, with disappointing intake characteristics.

"Wet grass presents some specific fermentation challenges which if overcome, allow better quality silage to be produced."

Mr Berni points out that grass harvested in the wet will be low dry matter. These crops often have less opportunity to wilt and the quality of wilt will be reduced if ambient conditions are cool and damp.

"Grass harvested in the wet will have a low sugar content, especially if the weather leading up to cutting has not been particularly sunny. Furthermore, the natural populations of lactic acid bacteria can be unpredictable.

"This means the grass is short of the two factors essential for a rapid fermentation, yet in order to preserve lower dry matter grass and achieve a stable fermentation it is essential to achieve a much greater pH drop than for drier grasses."

A significant pH drop is necessary to prevent the proliferation of undesirable bacteria, such as clostridia, which are responsible for the secondary, butyric fermentation so often associated with wet silages. Rapid fermentation also reduces the breakdown of protein and so improves forage feed value.

To help ensure a rapid and effective fermentation, Mr Berni recommends using an additive formulated specifically for low dry matter crops such as **Biotal axphast gold** which contains high levels of lactic acid producing bacteria. *"Farmers should also look for an additive which contains enzymes which help breakdown fibre, improving forage digestibility and increase the availability of sugars."*

To ensure the fermentation starts quickly the clamp should be well consolidated and sealed, although it should not be difficult to consolidate and roll wet material.

Consolidation however can be a problem with silages at the other extreme of dry matter and Mr Berni believes dry silages present a different range of challenges.

"Higher dry matter grass does not require such a significant drop in pH to undergo preservation, the rule of thumb being the lower the dry matter, the lower the pH required to stabilise the silage.

"The big problem is actually ensuring aerobic stability as the crop is hard to consolidate and at risk from yeasts and moulds which will reduce feed value."

Mr Berni recommends an additive designed to work on drier silages. These will contain a high level of Lactobacillus buchneri *40788* which unlike most other inoculants produces a number of metabolites that combine to prevent the growth of yeast and mould in the clamp.

"With dry silages a high level of lactic acid can be a bad thing. When oxygen is introduced into the clamp yeasts actually use the lactic acid as a feed source and will multiply quickly, raising the pH and causing the clamp to heat up.

"If a dry crop is being made the aim must be to roll and seal the clamp well and weight it down effectively to prevent oxygen getting in. This combined with an additive like **Biotal axcool gold** *which ensures an effective pH drop and the control of yeast will lead to better quality forage,"* Mr Berni concludes.