

# BioStabil Plus improves grass silage quality and cattle profitability



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Making silage enables the farmer to store forage, providing a cost-effective feed when required. From silage making through to feeding out, however, the challenge is to ensure that valuable dry matter, energy and protein are not lost. Any losses would require supplementation from other sources at extra cost. In the case of protein, farmers would need to purchase additional soybean meal, for example, to maintain cow productivity.

## Clostridia: The Main Villain

One of the greatest challenges to making good silage is the presence of **Clostridia** bacteria, which can negatively impact animal health, performance and profitability. These bacteria pose a health risk to both beef and dairy cattle and can negatively influence cheese quality through the late blowing defect.

During the ensiling process, Clostridia break down protein, reducing silage nutritional value, and produce butyric acid, which decreases silage palatability and affects feed intake. Clostridia can easily enter through soil contamination and thrive in forage with low dry matter, high buffering capacity, or lower levels of soluble carbohydrates and nitrate.

# Negative impacts of Clostridia

- Health risk to cattle
- Reduced nutritional value of silage
- Declined feed intake, leading to diminished productivity
- Late blowing defect in cheese

## Trial results

A recent scientific trial by the Swedish University of Agricultural Sciences (SLU) tested the effect of [BioStabil Plus](#) silage inoculant on difficult to ensile grass-clover forage (28% DM) challenged with Clostridia. The research demonstrated a clear effect of BioStabil Plus on multiple parameters.

The application of BioStabil Plus to grass-clover forage resulted in:

- **Improved dry matter (DM) retention** (Figure 1)
- **Enhanced protein preservation** (Figure 2)

Both outcomes contribute to feed cost savings.

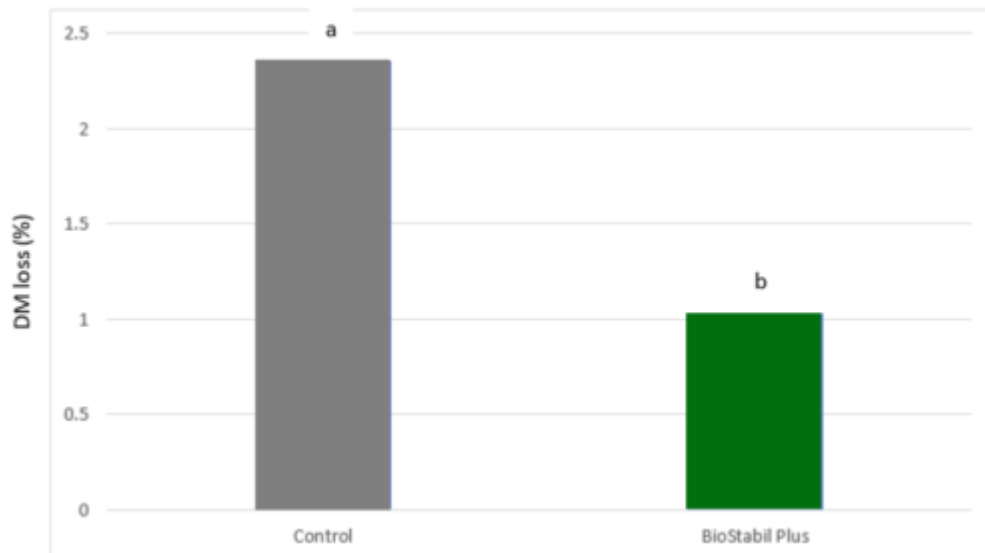


Figure 1. Significantly lower dry matter loss in grass-clover silage treated with BioStabil Plus (90 days past ensiling,  $P < 0.001$ ). Source: Swedish University of Agricultural Sciences and EW Nutrition.

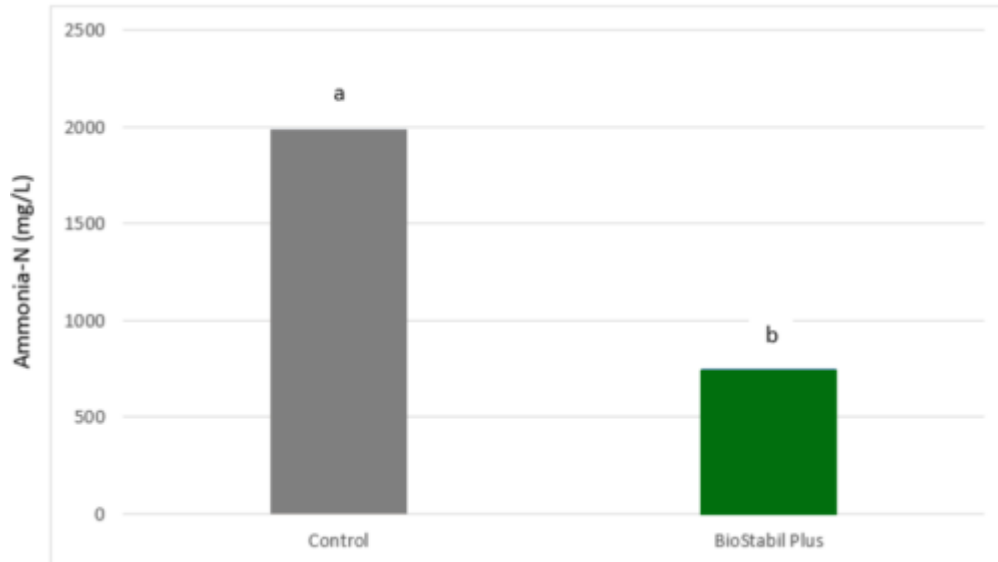


Figure 2. Less ammonia-N with BioStabil Plus, significantly higher protein preservation (90 days past ensiling,  $P < 0.001$ ). Source: Swedish University of Agricultural Sciences and EW Nutrition.

## Benefits of BioStabil Plus

**Protection Against Nutrient Loss** - BioStabil Plus protects against dry matter, energy, and protein losses in the fermentation period. It contains the rapid-growing lactic-acid-producing homofermentative strain *L. plantarum* DSM 19457, ensuring sufficient lactic acid production for a rapid pH drop in ensiled forage (Figure 3).

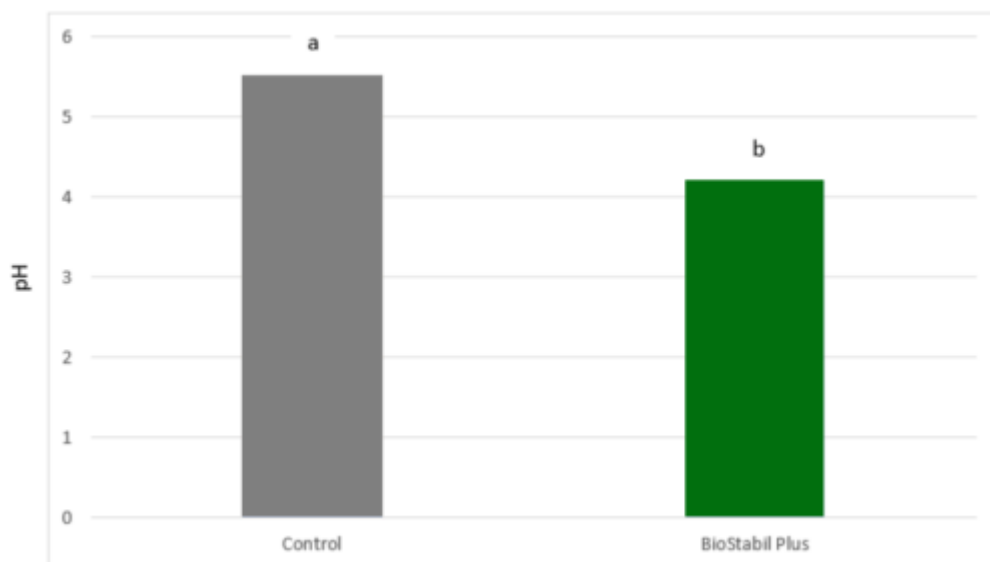


Figure 3. Lower pH in grass-clover silage challenged with Clostridia and treated with BioStabil Plus compared to Clostridia challenged forage without inoculant (90 days past ensiling,  $P < 0.001$ ). Source: Swedish University of Agricultural Sciences and EW Nutrition.

**Reduction of Clostridial Load** - BioStabil Plus reduces the Clostridial load as evidenced by significantly lower butyric acid production (Figure 4). Lower butyric acid content maintains silage palatability, feed intake, and avoids final dairy product quality issues.

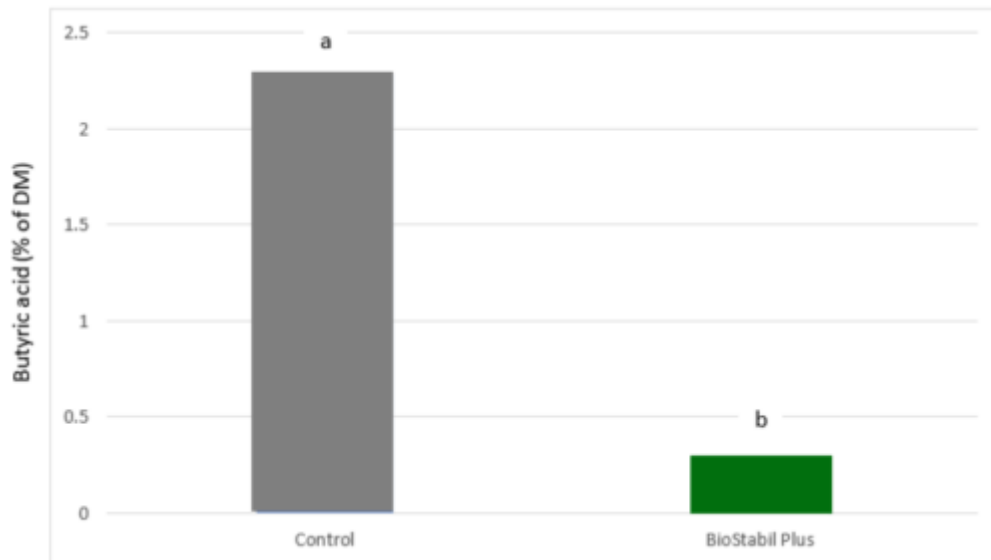


Figure 4. Significantly lower butyric acid with BioStabil Plus showing minimal Clostridia presence (90 days past ensiling,  $P < 0.001$ ). Source: Swedish University of Agricultural Sciences and EW Nutrition.

**Enhanced Aerobic Stability** - BioStabil Plus contains heterofermentative strains ***L. buchneri* DSM 19455** and ***L. brevis* DSM 23231**, producing an optimal level of acetic acid for enhanced aerobic stability during the feed-out phase. An EFSA scientific opinion on ***L. brevis* DSM 23231** specifically outlines its ability to reduce Clostridia risk.

## Protecting your profit margin

[BioStabil Plus](#) protects against the growth of undesirable bacteria such as Clostridia, yeasts and molds during and after ensiling, helping [prevent loss of valuable dry matter, energy and protein from the silage](#).

Producing high-quality, palatable, well-preserved silage ensures that the investment in silage making is not wasted. Most importantly, the preserved energy and protein maximize profitability through higher production of milk or meat and generate feed cost savings that support producers' margins.

**Contact your local EW Nutrition representative** to access valuable resources and advice on all aspects of optimized silage management.