

How our silage additives can be used.

1. Grass silage

Depending on the dry matter content, mal-fermentation (butyric acid fermentation) or heating up problems (moulding) are possible. Therefore a so-called "Sandwich silage" is well proven.



Sandwich silage means

combined application of ProFerm HC and BioCool Extra HC

2. Maize silage

Depending on the risk for heating up problems the whole silage or endangered parts should be treated.



a. Treatment of the whole clamp

Heating up problems are increasing with ambient temperature rise. If possible it is enough to treat the part of the silage, which will be fed out during summer.



b. Partial treatment

Often heating up problems and moulding starts in the upper layer. Therefore to improve the aerobic stability it can be enough to treat this upper layer (at minimum 0.75 - 1 m) with BioCool Extra HC.

Tips for high quality silages...

1. The right type of silo maize depends on location (soil, climate, condition).
 2. For high quality grass silage the crop should be harvested when ears are emerging. Stubble length should be between 5 - 6 cm for grassland and 6 - 7 cm for field grass. The right harvest time for maize silage is when the dry matter content is between 28 - 35 %.
 3. All machinery must be coordinated from the field to the clamp. As an orientation apply harvesting capacity : 4 = weight of the rolling tractor. All machines working on the field should not scrape the top soil.
 4. The optimal wilting degree for grass is 30 - 40 % DM. The wilting period should not exceed 8 hours. The best results are achieved in 5 - 6 hours.
 5. A short length, (grass < 4 cm and maize 4 - 7 mm), improves fermentation conditions, increases the availability of sugar and makes it easier to compact the silage into the clamp.
 6. Use silage additives (ProFerm HC, BioCool Extra HC) to improve silage quality and inhibit heating up problems.
 7. The profile of the clamp depends on the silage requirements per week. A feed out speed of approx. 1.5 - 2 m / week guaranteed in the winter % and 2.5 - 3 m / week in the summer .
 8. The clamp must be filled quickly. To achieve a high compaction in the clamp, the layer stored in the silo should not be thicker than 20 -30 cm.
- The clamp must be sealed air tight with suitable silo films (wall foil, sub foil and silo foil). Covering the foil with a protective grid gives additional safety. Covering materials are fixed with silo bags. Check regularly for air-tightness.
- During feeding out of the clamp, the aired clamp side shall be as small as possible. The clamp must be clean and free from spoiled silage.



Silage – Additives



– Grass



– Legumes



– Whole crop grain



– Maize



– CCM



– Corn

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Background

During silage production problems with mal-fermentation and heating up / moulding are possible. What kind of problems arise depends essentially on the fermentation characteristics of the raw material. Generally accepted, the less sugar, more protein and higher moisture content the more complicated the fermentation process, and mal-fermentation like butyric acid fermentation is possible. However if the plants have a high sugar or rather high dry matter content, problems with heating up and moulding are more probable, especially when silage is exposed to air. These two backgrounds are important for the right selection of silage additive. Silage additives, which are able to improve fermentation are not able to inhibit heating up problems and conversely.

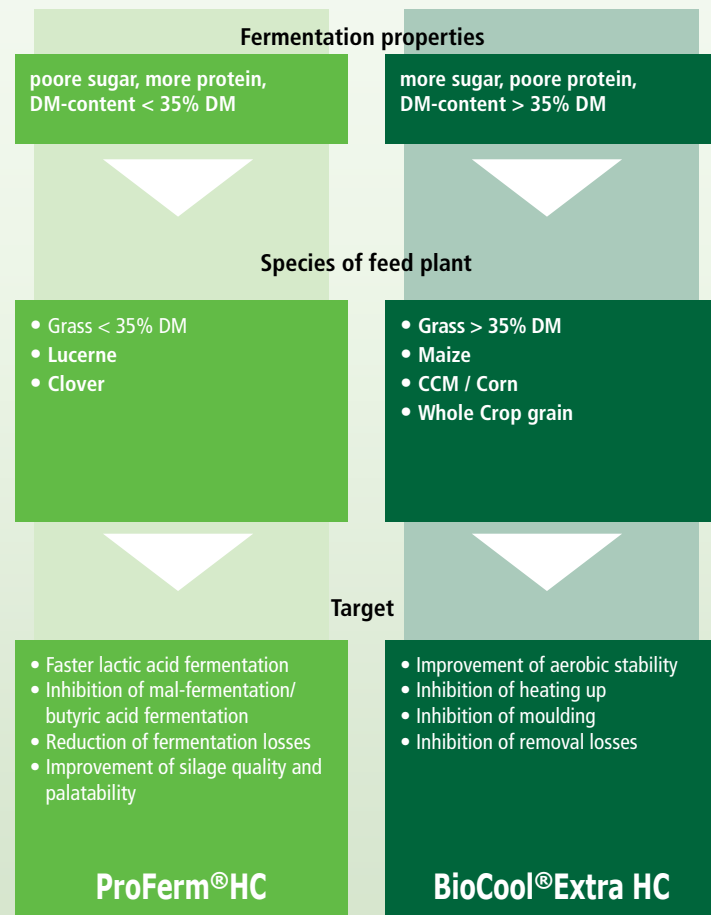
... the safe way to high quality silage

ProFerm®HC is a biological additive, which contains specially selected, extra efficient working homofermentative lactic acid bacteria. The special combination of different lactic acid bacteria controls the run of fermentation effectively and accelerates it. This results in a higher quality of treated silage and a minimization of the fermentation losses. Silages are more palatable, which results in a better feed intake.

... the solution for heating up problems

BioCool®Extra HC is a biological additive, which contains the specially selected, extra efficient working heterofermentative lactic acid bacteria *Lactobacillus buchneri*. *Lactobacillus buchneri* supports the natural lactic acid fermentation and simultaneously improves the aerobic stability of silages during feeding out of the clamp. Additional to lactic acid is *Lactobacillus buchneri* able to produce a few mould inhibitory substances. Well known are acetic acid and propandiol. Spoilage of silage, caused by yeasts and moulds are effectively inhibited.

Decision guidance for silage additives



Range of application:

Moderate to ferment silage

Especially: wilted grass < 35 % DM
lucerne
clover

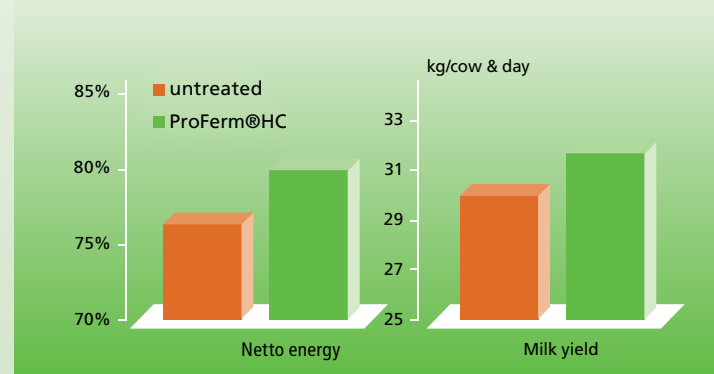
Application:

ProFerm®HC is mixed with water and can be used immediately. The application amount depends on the type of applicator. Standard application (0.5 – 2 l/t) as well as micro application (20 – 150 ml/t) is possible.

Dosage:

- 1.6 g **ProFerm®HC** / t silage crop
- 200 g sachet / 125 t or 200 m³ silage

ProFerm®HC treated silages are better in quality. Silages contain more nutrients and energy, which results, after feeding, in higher milk yields or daily weight gain.



Range of application:

Silages with heating up problems

Especially: Maize
Grass silage > 35 % DM
CCM and high moisture corn silage
Whole crop grain

Application:

BioCool®Extra HC is mixed with water and can be used immediately. The application amount depends on the type of applicator. Standard application (0.5 – 2 l/t) as well as micro application (20 – 150 ml/t) is possible..

Dosage:

- Silages made from grass, Maize, Whole crop grain
 - 4.8 g **BioCool® Extra HC** / t silage crop
 - 600 g sachet / 125 t or 200 m³ silage
- Silages made from CCM, high moisture corn
 - 12 g **BioCool® Extra HC** / t silage crop
 - 600 g per sachet / 50 t or 65 m³ silage

BioCool®Extra HC

improves the aerobic stability of treated silages after exposure to air. Moulding and heating up problems during feeding out of the clamp are avoided.

