

# BIOENERGY

The newsletter for biogas production

## PRODUCING SUPERIOR WHOLE CROP SILAGE



Due to its structure, cereal whole crop silage tends to heat during feed-out, which is why the right silage management plays a decisive role in harvesting and ensiling.

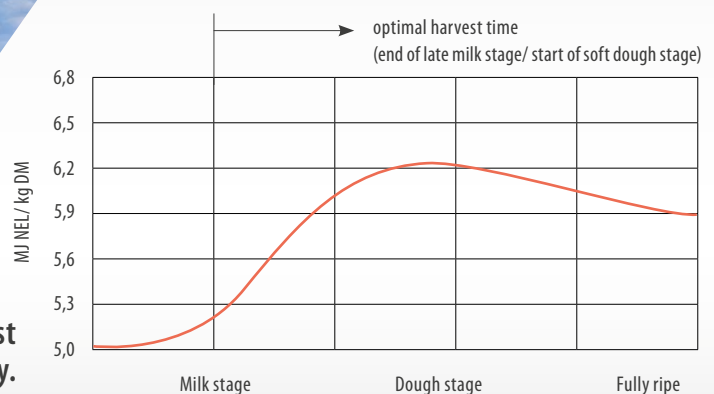


**Feedstock shortages due to last year's lean harvest have lead to many clamps currently standing empty. To fill the gap, more whole crop silage (WCS) is expected to be harvested this year than in recent years.**

Regionally, as there is often hardly any other feedstock available, large amounts of WCS (proportion of ration >50–80 % WCS and grass) are being fed to substitute maize. However, WCS at >40 % dry matter often causes thickening of the digester content and floating layers, frequently leading to a decrease in mixing efficiency and operational downtime.

For WCS, the time of harvest is difficult to determine. However, we recommend harvesting in a DM range between 32 % and 35 %.

**Start harvesting slightly below that if the size of the harvest area requires several consecutive days of cutting.** In this instance, we advise starting with a dry matter content of 30 % to end up with a DM in the target range.



Product recommendation: **SILASILENERGY<sup>XD</sup>**

For optimal compaction in the clamp, chop length should be between 6–10mm, minimizing the amount of air pumped into the clamp during compacting when forage gets “bouncy”. In order to maximize energy conservation, we recommend using a corn cracker to efficiently smash the grains.

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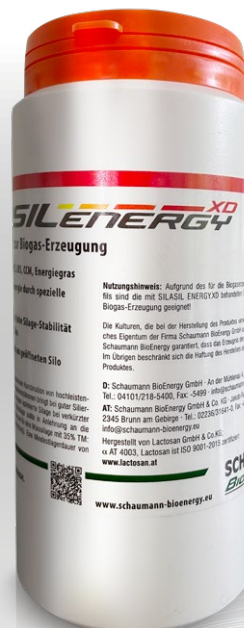
## Recommendation

Rapid acetic acid formation within the first few weeks of ensiling makes Silasil Energy XD a top recommendation for conservation of whole crop silage. Acetic acid protects the high energy content of the forage against spoilage moulds and yeast and against heating (see graph 2). Silasil Energy XD reduces fermentation time in the clamp to only two weeks while maintaining highest silage stability. Silasil Energy XD is the silage additive for more energy gain (see graphic 3).

## Risk of spoilage

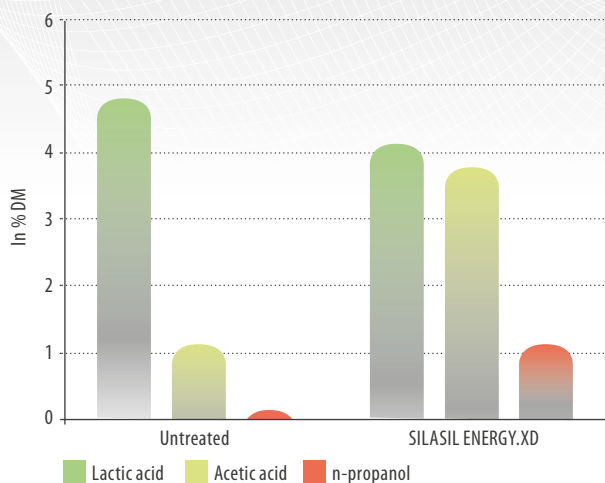
WCS requires rapid harvest and pick-up because spoilage of fresh forage progresses quickly and can be further accelerated by warm, dry weather. For this reason, the material does not require long wilting times and should be ensiled soon after cutting. In addition, wilting times should be kept short as wilting risks energy losses due to the proliferation of spoilage moulds and yeast. They later cause heating at the clamp face and can only be controlled by the use of silage additives with targeted acetic acid production.

On top of that, in appropriate weather, a dry matter increase of 4–5 % dry matter per day is possible. Therefore, the time window for superior WCS is limited.

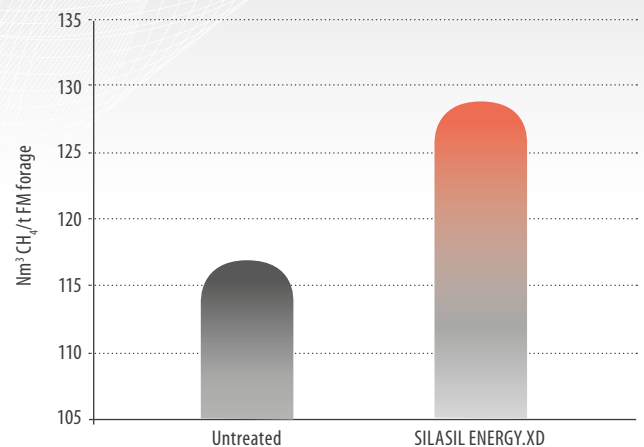


- // Reduces fermentation time in the clamp to two weeks
- // increases aerobic stability (DLG quality seal 2)
- // is the only silage additive that verifiably increases methane yield (DLG quality seal 6b)
- // improves digestibility of silage

**GRAPH 2:** Silasil Energy.XD optimises the fermentation acid pattern even after short fermentation periods of 2 weeks.



**GRAPH 3:** Stable silage with Silasil Energy.XD produces more methane.



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