

Biological
ensiling agent



category 6b, 2 methane

A novel biological ensiling agent for energy crops

SILASILENERGY^{XD}

- ▶ shorter silage ripening time
- ▶ high silage stability
- ▶ reduced losses
- ▶ high gas yields

Synergetic effect due to a combination of 3 strains

Lactobacillus rhamnosus

Lactobacillus diolivorans

Lactobacillus buchneri

SCHAUMANN
BIOENERGY

Biogas expertise



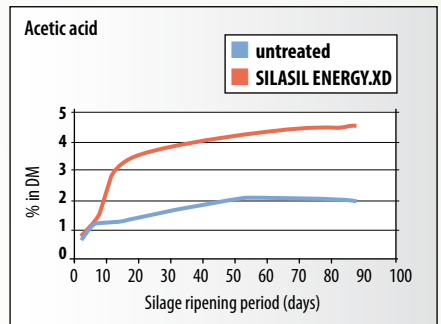
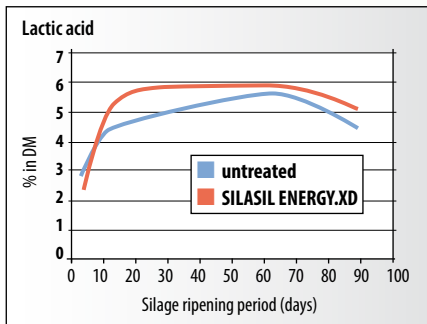
SILASIL ENERGY.XD for high-carbohydrate energy crops

Active principle of SILASIL ENERGY.XD

SILASIL ENERGY.XD combines the three lactic bacteria strains *Lactobacillus diolivorans*, *Lactobacillus rhamnosus* and *Lactobacillus buchneri* in a highly effective manner. Its production relies on special technology. The combination of these three strains provides a particular metabolic synergy that ensures that carbohydrate-rich energy crops are preserved more rapidly for biogas production. The metabolism of *L. diolivorans* lies at the core of the effectiveness of SILASIL ENERGY.XD. Short generation times and substantial competitive strength give the selected strains of

bacteria clear advantages over harmful natural microbes. The rapid formation of lactic acid in the early fermentation phase creates the basis for the synthesis of additional metabolites with preserving effects (e.g. acetic acid, 1-propanol). These heterofermentative processes ensure that high-quality silage can be protected substantially more quickly against energy losses caused by moulds and yeasts. All of the synergistic metabolic processes of this combination of bacteria strains only consume minimum energy themselves.

Typical development of specific fermentation products in maize silage treated with SILASIL ENERGY.XD



SILASIL ENERGY.XD – applications

SILASIL ENERGY.XD is highly recommended wherever shortened silage ripening periods of 2-6 weeks are required!

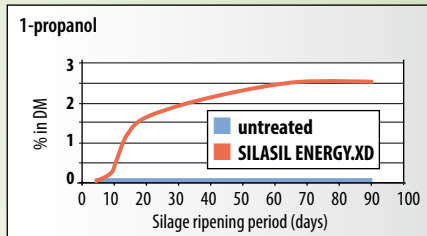
Maize whole crop silage	28–40 % DM
Maize grain products (e. g. CCM)	55–65 % DM
Cereal WCS (as energy plant silage)	28–40 % DM
Energy grass	30–45 % DM
Sorghum	> 25 % DM

SILASIL ENERGY.XD

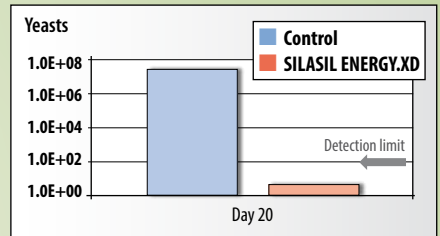
provides rapid protection against spoilage



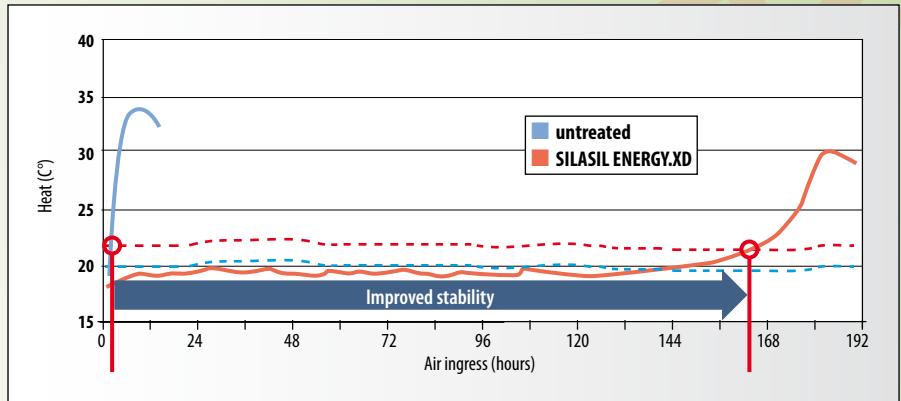
Characteristic fermentation product of *L. diolivorans*



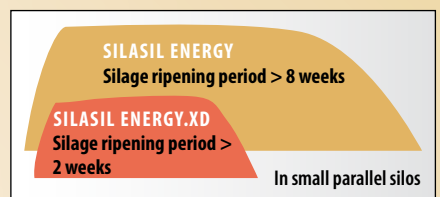
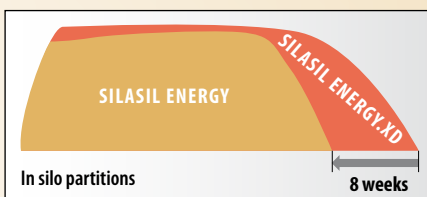
Strong inhibitory effect against yeasts due to the rapid formation of acetic acid



Aerobic stability after 20 days of silage ripening



Recommended use for accelerating silage ripening periods





SILASIL ENERGY.XD, a unique combination of bacteria for faster biological silage ripening:

- controls ensiling processes
- shortens silage ripening periods
- improves silage stability both at the face and in intermediate storage
- reduces process-related energy losses



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Recommended dosages for liquid application

SILASILENERGY^{XD}

2 g powder in 0.05–2.0 l/t, equivalent to at least 200,000 CFU/g silage

Package contents: 200 g for 100 t FM silage
The product is suited for using in micro-dosing units.

SILASIL ENERGY.XD is suitable for use in organic production according to Council Regulations (EC) No. 834/2007 and (EC) No. 889/2008.



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