

## Ensiling

# KOFASIL® DUO

### Biological Silage Additive for Improvement of Fermentation Quality and Reheating Control

The exclusive use of lactic acid-forming (homofermentative) bacterial products to improve fermentation quality has most widely prevailed in practice as an essential step in silage production. By means of inoculation with efficient lactic acid bacteria acidification speed is increased and thereby formation of harmful microorganism (such as clostridia and enterobacteria) is suppressed.

TM-losses are effectively reduced through an improved fermentation product spectrum (less butyric and acetic acid and more lactic acid). The resulting increase in the concentration of easily exploitable nutrients and their utilization leads to improved animal performance.

The disadvantage of using homofermentative lactic acid bacteria products is the fact that doing so has a negative impact on aerobic stability (reheating). This may result in large nutrient losses after opening the silos. This results in a reduced feed intake as well as a performance depression.

Increasing storage stability by means of heterofermentative lactic acid bacteria, which form antifungal acetic acid, is often insufficient particularly in silage made from grass and legumes because their acetification potential is often too low.

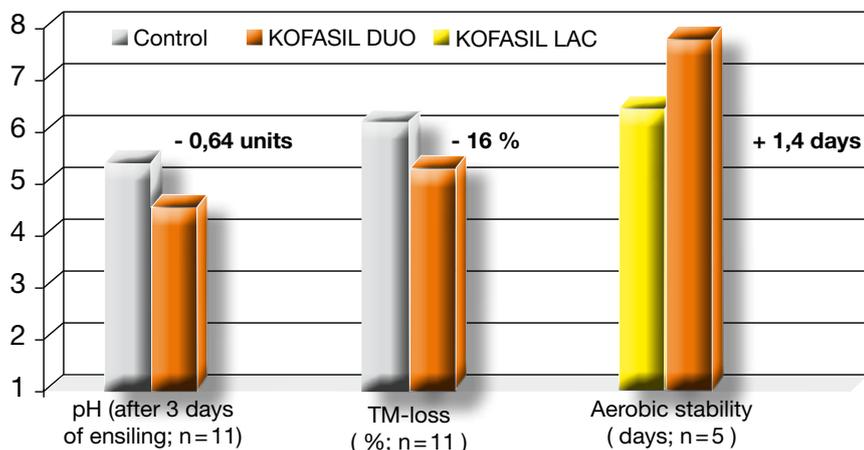


- avoids food and energy losses from the field all the way to the trough
- improves palatability and feed intake
- improves animal performance



With the combination of homo- and heterofermentative lactic acid bacteria a new way has now been found to link the positive effects of both groups. Through this combination especially in the case of silages with a higher dry matter content the susceptibility to reheating is reduced while simultaneously ensuring high fermentation quality. Numerous experiments with a wide range of forage (grass, alfalfa, red clover, whole-crop cereals) and TM-levels show the double effect of KOFASIL DUO (see illustration).

### Effects of KOFASIL DUO on acidification speed, TM losses during ensiling and aerobic stability of silage



(Source: LWK Niedersachsen, 2009; Humbolt University Berlin / ADDCON 2009)

### Ready to use

KOFASIL DUO is mixed with tap water and can be immediately used thereafter. We recommend a dose of at least 0.5 liters of solution per ton of silage. For optimal distribution, choosing a dosage from 1.0 to 2.0 liters per ton of silage is recommended.

### Scope

KOFASIL DUO is suitable for use in silage made from grass, legumes and grain plants.

### Energy grass silage

Grass silage as co-substrates for use in biogas plants have to be high energy and of hygienic quality. KOFASIL DUO ensures an optimum fermentation process and stabilizes the silage. Thus KOFASIL DUO promotes high gas yields and ensures smooth operation of the plant.

### Use in organic farming

Non-genetically modified bacteria (isolated from silage) can be used in organic farming under EU Regulation 2092/91 (and FiBL-list 2010).

### Dosage

KOFASIL DUO is directly dispensed on the harvester or loading wagon. We recommend our partner, the new Injection Dispensing SILA GmbH, Bitterfeld (see picture right).

With this dispenser, the KOFASIL DUO concentrate is continuously dispensed on a water stream and subsequently brought out. In case of bad weather one can easily shift to a chemical silage additive of effective direction 1 or 2 (for example KOFASIL LIQUID or KOFASIL STABIL).

## Technical Data

### Composition:

*Lactobacillus plantarum* (DSM 3676, 3677), *Lactobacillus buchneri* (DSM 13573); min. 2,0 x 10<sup>11</sup>KBE/g

### Inoculation Density:

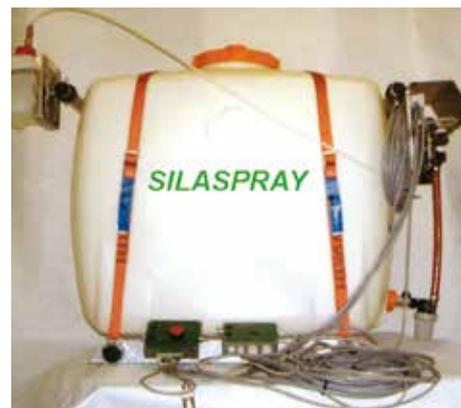
With proper application at least 200 000 bacteria/g forage

### Durability:

Store in a dry, cool and dark place. Minimum shelf life in sealed original packaging is 6 months at room temperature, in the freezer (-18 °C) three years. In water dissolved product should be used within 24 hours after preparation

### Fodder Judicial Classification:

The lactic acid bacteria in KOFASIL DUO are noted in the EU Regulation 1831 / 2003 in the category of technological additives, function group silage additives.



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