**The effects of microbial inoculation on short-to-long fermentation and aerobic stability of grass-legume silage ensiled in big bales**

**Objectives**
To evaluate the effectiveness of using a silage inoculant SiloSolve® FC on fermentation variables, microbial composition and aerobic stability of grass/legume silage after 8, 32 and 120 days of fermentation.

**Materials and methods**
Ensilaged into big bales grass/legume crop (red clover, alfalfa and timothy 50:20:30) wilted up to 35.9% DM
- 2 treatments: Control (CTR) and SiloSolve® FC (FC) from Chr. Hansen A/S
- SiloSolve® FC containing *Lactococcus lactis* DSM 11037/1k2081 and *Lactobacillus buchneri* DSM 22501/1k20738
- 30 big bales per treatment.
- Bales were opened at days 8, 32 and 120 of storage.

**Results**
- Temperature dynamics inside bales aerated for 8, 32, and 120 days
- Microbiological characteristics of silages after different storage periods and after aerobic exposure

**Conclusion**
The study indicated the potential of LAB mixture of *L. lactis* DSM 11037 and *L. buchneri* DSM 22501 to change the fermentation profile of big bale grass/legume silage, to decline pH, to reduce weight loss and dry matter loss and to improve aerobic stability along short and long storage periods. Inoculant was superior in to reduce ammonia, ethanol and butyric acid production and to control yeast and mould growth.

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