



## BONSILAGE SPEED C – One of a Kind

**Aerobic stability and silage are topics that go hand in hand. When producers open their silage, the goal is to deliver a hygienic feed that remains aerobically stable.**

In the past, silage with improved aerobic stability could be achieved with the use of an inoculant containing a heterofermentative strain of *Lactobacillus buchneri*. One of the largest issues faced was that the *L. buchneri* organisms take time to produce acetic acid, the metabolite that aids in the improvement of aerobic stability. This means producers would have to wait approximately 6 to 8 weeks for the silo to ripen. Typically, farmers will plan for carryover, however, it is not always feasible, and situations arise where silage must be opened before an inoculant with *L. buchneri* has time to improve aerobic stability.

**BONSILAGE SPEED C**, as its name implies, speeds up the silo ripening time giving producers the flexibility to open their silos earlier and the peace of mind that the silage will remain aerobically stable.

**We introduce a new strain for faster aerobic stability.** **BONSILAGE SPEED C** uses a combination of hetero- and homofermentative lactic acid bacteria and is formulated with a combination of the following species: *Lactobacillus diolivorans*, *Lactobacillus buchneri*, and *Pediococcus acidilactici*. This formulation allows for a very short silo ripening time of 14 days and subsequently high aerobic stability after a short period of time.



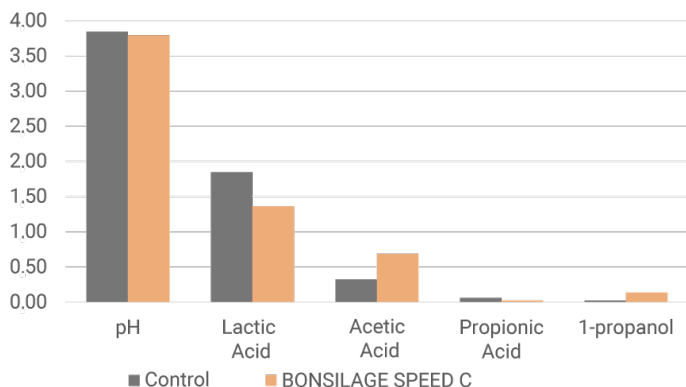


Figure 1. The fermentation profile of high-moisture corn, HMC (~65% DM) ensiled for 28 days and either not treated (Control) or treated (BS SPEED C). (Source: University of Wisconsin, 2020)

*Lactobacillus diolivorans* is a unique and key microorganism in the formulation of **BONSILAGE SPEED C**, being the first inoculant worldwide that contains this unique strain. After many years of Research & Development and proven efficiency on European farms, this strain has proven to be highly beneficial for fast silage fermentation. This key microorganism is the first silage additive strain to be added to the GRAS-list in many years. BONSILAGE continues to bring forth innovative and progressive solutions for silage management on farms around the world.

### How does it work?

The unique metabolic pathways allow for the rapid production of acetic acid and other end-products at the onset of silage fermentation. Other heterofermentative lactic acid bacteria

like *L. buchneri* metabolize lactic acid to acetic acid and 1,2-propanediol. *L. diolivorans* can metabolize multiple substrates to produce multiple beneficial metabolites including acetic acid, propionate, 1-propanol, and a small amount of lactic acid.

Rapid acidification takes place due to the ability of *L. diolivorans* to use carbohydrates such as glucose and fructose as substrates. High acetic acid formation at the beginning of fermentation gives the advantage of improved aerobic stability after a short period of ensiling. The fermentation profiles shown in both Figures 1 and 2 illustrate the high amounts of acetic acid after short ensiling periods. Additionally, there is the production of propionic acid, further supporting aerobic stability.

### → Fast acetic acid formation for improved aerobic stability

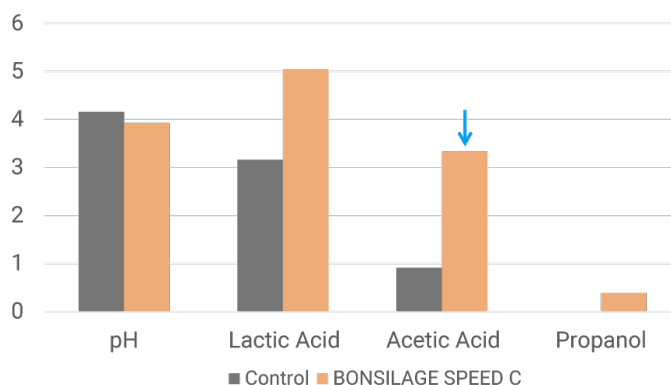


Figure 2. The fermentation profile of corn silage (~33% DM) ensiled for 14 days. Material was either not treated (control) or treated with BS SPEED C. (Source: ISF, 2021)



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