

SiloSolve[®] FC preserves corn silage after short periods of fermentation

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Periodic feed shortages are a fact of livestock production. When they happen, producers are sometimes forced to feed silage that is still in the process of fermenting. Once exposed to air, yeast and mold tend to grow more rapidly in feed that has not fully fermented, resulting in rapid spoilage and consequently, lower nutritional value and higher animal health risks.

To help producers better cope with feed shortages, we conducted a field trial to test the effect of SiloSolve[®] FC on corn silage that had been fermented for short periods of time, ranging from 2 to 32 days (ideally, corn silage should be fermented for 90 days). The results are good news for farmers:

No matter how long the silage had fermented, SiloSolve[®] FC significantly boosted aerobic stability and dry matter recovery — meaning the feed stayed fresher longer, even after being exposed to air.

“SiloSolve[®] FC significantly improved aerobic stability, regardless of how long time silage had fermented”

Study design

The study was conducted at the Lithuanian Institute of Animal Science to determine the effect of SiloSolve[®] FC on aerobic stability in corn silage that had been fermented 2, 4, 8, 16 and 32 days. Two treatments, replicated five times each, were included in the trial: the first consisted of untreated corn silage, while in the second, the silage was inoculated with SiloSolve[®] FC at a dose of 150,000 cfu/g of fresh forage. Within two hours of crop preparation, whole crop corn with a moisture content of 65% was ensiled in mini silos, sealed and fermented for 2, 4, 8, 16 and 32 days at a constant temperature of 68°F.

At each fermentation point, we determined chemical and microbial parameters and performed a seven-day aerobic stability test. Aerobic stability was determined by monitoring the temperature increase in silages stored in insulated PVC-tubes at 68°F ambient temperature.

Results

The findings of this first-in-kind trial substantiate the importance of fermenting forage for as long as possible to ensure the proper preservation of crops: the longer the fermentation, the better the quality and stability of the forage. In addition the results show that SiloSolve[®] FC significantly improved aerobic stability, regardless of how long the silage had fermented (Figure 1). As a result, for each of the fermentation periods tested, dry matter recovery for the treated silage averaged 2.4% higher than the untreated silage following the aerobic stability challenge (Figure 2).

Figure 1. Increases stability at early opening

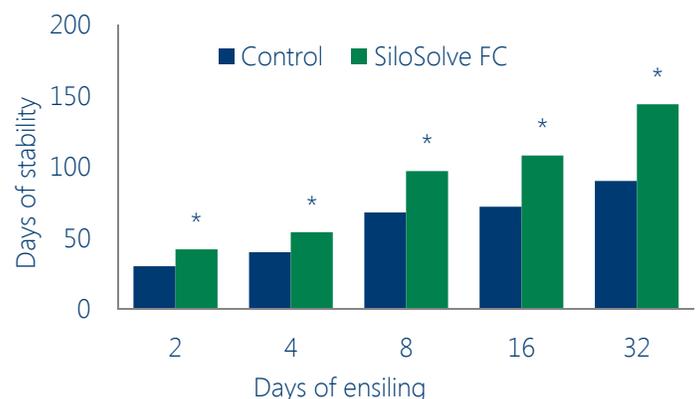
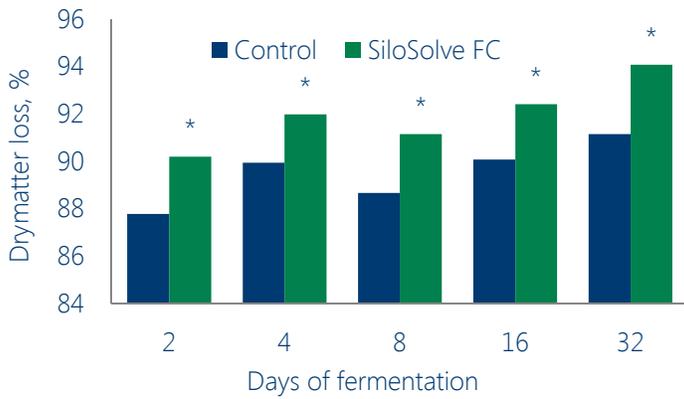


Figure 2. Higher recovery at early opening



Synergistic strains

SiloSolve[®] FC preserves feed by accelerating fermentation. The novel silage inoculant contains two bacterial strains that work synergistically to reduce spoilage: during fermentation, a new, patented strain called *Lactococcus lactis* 0224 prevents the growth of yeasts and molds by eliminating residual oxygen. In addition, *Lactobacillus buchneri* preserves silage by producing acetic acid, which controls the growth of spoilage microorganisms and increases aerobic stability. When forage shortages force producers to feed silage that has not yet fully fermented, the feed is especially susceptible to spoilage, so improving aerobic stability (thereby reducing spoilage) is especially important. As we've learned in this study, SiloSolve[®] FC works both during fermentation and at feed-out to keep silage fresher longer — regardless of how long it has fermented — making it a smart choice for dairy producers who want to be prepared for feed shortages.