

Sila-Bac[®] inoculant delivers improved animal performance and aerobic stability

Results from AAFC barley silage feeding trial confirm grower benefits of 11GFT

In 2009 and 2010, a feeding trial was conducted at the Lethbridge Research Center, Agriculture and Agri-Food Canada (AAFC), Lethbridge, Alberta. This study was conducted to evaluate the effects that treating barley silage with Sila-Bac[®] brand 11GFT had on animal performance and aerobic stability.

STUDY METHOD

- Whole plant barley was harvested in July 2009.
- Two Ag-Bag[®] silos were packed to a similar density, one treated with 11GFT and the other untreated for the feeding study.
- Samples were ensiled in parallel and evaluated for fermentation characteristics and aerobic stability.
- Twenty pens per treatment were utilized in the feeding trial.
- Diet consisted of 87% barley silage (as fed basis), 10% barley grain and 3% beef supplement for a period of 112 days.

FINDINGS

Findings indicate 11GFT offered improvements in several areas:

Improved silage fermentation characteristics

- Treated silage demonstrated higher concentration of acetic acid and lower acetic:lactic ratio.

Improved aerobic stability

- Treated silage was stable for 21 days compared to 6 days for the untreated – an improvement of 15 days.

Improved feed efficiency

- Steers consuming 11GFT-treated barley silage gained more weight per kg of ration.
- When compared versus check, 11GFT offered a **feed efficiency improvement of 8.9%**.

“In addition to improving ensiling and aerobic stability of silages, growing steers fed a diet containing 11GFT-treated silage had **superior feed utilization efficiency**. This indicates that this specific third-generation silage inoculant may have the capacity to reduce feed costs in feedlot operations.”

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| Item ¹ | Control | 11GFT | |
|---------------------------------------|--------------------|--------------------|------------------|
| Silage dry matter, % | 31.5 | 31.5 | |
| pH | 3.99 ^a | 4.43 ^b | |
| Lactic acid ² , % | 7.40 ^b | 3.85 ^a | |
| Acetic acid ² , % | 1.73 ^a | 4.24 ^b | |
| Acetic:Lactic ratio | 4.29 | 0.91 | |
| Butyric acid ² , % | 0.56 | 0.00 | Advantage |
| Aerobic stability ³ , days | 6 | 21 | +15 days |
| Number of pens | 20 | 20 | |
| Animal start wt, kg | 242.7 | 242.2 | Advantage |
| Dry matter intake, kg/d | 7.62 ^b | 7.14 ^a | -0.48 kg |
| Gain, kg/d | 1.29 | 1.31 | |
| Feed conversion (Gain/DMI) | 0.169 ^a | 0.184 ^b | -0.015 units |

¹ Values expressed as least squares means.

² Expressed on a DM basis.

³ Time in days for silage temperature to rise above ambient.

^{a,b} Treatment means within a row with different superscripts differ (P ≤ .05).