

# MAGNIVA<sup>®</sup> SILVER

**IMPROVES DRY MATTER RECOVERY AND STABILITY DURING  
FEEDOUT FOR HIGHER QUALITY FEED**

DRIVE FERMENTATION	ENHANCE FEED DIGESTIBILITY	IMPROVE FEEDOUT STABILITY
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**MAGNIVA<sup>®</sup> Silver** combines two specifically selected strains of bacteria with high activity enzymes to drive the fermentation for the fastest pH drop, reducing up-front losses and preventing spoilage fermentations, along with producing some acetic acid to reduce heating when exposed to oxygen during feedout.

## USED FOR

- Grasses
- Legumes
- High moisture grains
- Whole cereal crops
- Low DM crops produced in challenging conditions

STRAINS	MAIN FEATURES	COLONY FORMING UNITS (CFU)
<i>Pediococcus pentosaceus</i> NCIMB 12455	Provides fast, efficient fermentation to maximize DM and nutrient recovery and prevent bad fermentations due to clostridia, listeria, enterobacteria, etc.	100,000 CFU/g fresh forage
<i>Propionibacterium jensenii</i> NCIMB 30081	Supports the enzyme-directed <i>P. pentosaceus</i> fermentation to reduce heating and spoilage for improved feedout stability	20,000 CFU/g fresh forage

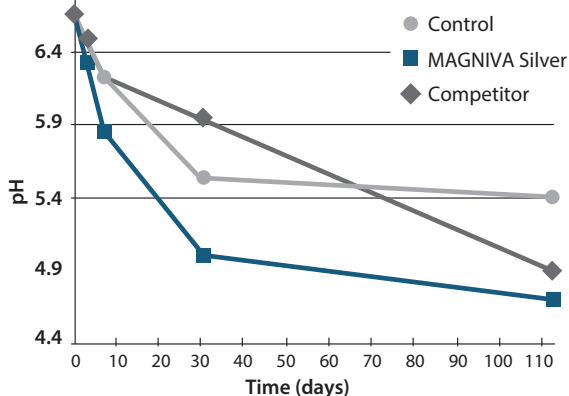
ENZYMES	MAIN FEATURES	ACTIVITY
β-glucanase (EC 3.2.1.6)	Drive and direct the ensiling fermentation and make fiber more available in the rumen.	5,863 units per gram
xylanase (EC 3.2.1.8)		5,330 units per gram
Galactomannanase (EC 3.2.1.78)		2,664 units per gram

one unit = one mg sugar released/minute

# PROVEN RESULTS

## FASTER pH DROP

The high activity enzyme formulation in MAGNIVA Silver drives a faster pH drop. In trials with 50-55% DM bermudagrass haylage at UF-Gainesville pH drop was significantly faster than the untreated control and a competitor inoculant.<sup>1</sup>



## PREVENTS HEATING IN HMC

In trials at the USDA Forage Research Center, treating HMC with MAGNIVA Silver gave a lower final pH and increased aerobic stability (time to heat) compared to the untreated control.<sup>2</sup>

Parameter	Untreated	MAGNIVA Silver
Dry Matter (%)	72.9	71.3
pH	5.4 <sup>a</sup>	4.6 <sup>b</sup>
Time to heat (h)	57 <sup>b</sup>	161 <sup>a</sup>

a, b Different superscripts in a row differ significantly (P<0.01)

## INCREASES FEED DIGESTIBILITY

MAGNIVA Silver treated silages had a significantly higher NDF-digestibility compared to untreated silage in *in-situ* digestibility tests.<sup>3</sup>

Time (h)	NDF digested Untreated	NDF digested MAGNIVA Silver	MAGNIVA Silver Treated Silage as % UT
0	8.4 <sup>b</sup>	10.7 <sup>a</sup>	127%
3	12.6 <sup>b</sup>	15.1 <sup>a</sup>	120%
8	24.3 <sup>b</sup>	28.9 <sup>a</sup>	119%

a, b Different superscripts in a row differ significantly (P<0.05)

## IMPROVES GAIN

In trials at Kansas State, finishing steers fed HMC treated with MAGNIVA Silver produced 6.8 higher average daily gain compared to the control.<sup>3</sup>

**+6.8%\***  
Improvement in average daily gain  
\*\*P = 0.01

	Control	MAGNIVA Silver
Number of steers	63	64
Average daily gain, kg	1.34 <sup>b</sup>	1.43 <sup>a</sup>
Dry matter intake, kg	9.21 <sup>b</sup>	9.62 <sup>a</sup>
Feed/Gain	6.89	6.76
Gain per tonne= DMI, kg	145.1	147.9

a, b Different superscripts in a row differ significantly (P<0.01)

## IMPROVES MILK PRODUCTION

Dairy cows fed corn silage treated with MAGNIVA Silver produced over 1.1 kg extra fat corrected milk (FCM) per day.<sup>4</sup> Also, cows fed treated grass silage produced significantly more milk yield and protein.<sup>5</sup>

MAGNIVA Silver Treated Corn Silage

**+1.1 kg\***  
per day (FCM) yield\*

MAGNIVA Silver Treated Grass Silage

**+1.7 kg\***  
Milk yield

**+9.5%\*\***  
Protein yield

\*P<0.05; \*\*P<0.01

## OUR GUARANTEE: WHAT IS ON THE LABEL IS INSIDE THE PACKAGE!

### MAGNIVA Silver Available Sizes

**200 g pouch** of water-soluble concentrate treats 100 tons of fresh forage (approximately 2,959 bushels of HMC)

**1 kg pouch** of water-soluble concentrate treats 500 tons of fresh forage (approximately 14,793 bushels of HMC)

MAGNIVA Silver is also available in a granular, dry applied format (50 lb bag treats 100 tons of forage).



**Always follow label directions:** The use of any forage additive cannot be expected to overcome poor management. Proper storage and handling is important to forage inoculant performance. Products should be refrigerated, and the whole package should be used at one time. Visit [www.QualitySilage.com](http://www.QualitySilage.com) for the latest information on silage management practices.

### REFERENCES: TRIAL SUMMARIES AVAILABLE UPON REQUEST

<sup>1</sup> Ariola et al. (2015), J. Dairy Sci. 98: 478-485. <sup>2</sup> (MVNAE016) Muck, R. Unpublished. USDA Dairy Research Center, Madison, WI. <sup>3</sup> (MVNAE021) Givens, D. I. Lallemand Unpublished, 1992. ADAS Drayton, Feed Evaluation Unit, UK. <sup>4</sup> (MVNAE054) Kreikemeier, K. K. and Bolsen, K. K. Effect of Treating High-Moisture Corn with a Bacterial Inoculant (Biotol) at Ensiling on Fermentation Efficiency and Growth Performance and Carcass Merit of Finishing Steers, 1995 Cattleman's Day, Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Report of Progress 745. <sup>5</sup> (MVNAE022) Leaver, J. D. Lallemand Unpublished, 1992. Wye College, University of London, UK. <sup>6</sup> (BTUSE042) Patterson, D. C. Lallemand Unpublished, 1998. Agricultural Research Institute of Northern Ireland, Hillsborough, UK.

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