MAGNIVA® for HAY

STOP HEATING AND SPOILAGE FOR BETTER QUALITY HAY

DRIVE FERMENTATION	ENHANCE FEED DIGESTIBILITY	IMPROVE FEEDOUT STABILITY
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MAGNIVA® for Hay includes the proven yeast and mould preventing *Lentilactobacillus buchneri* NCIMB 40788 at the hay-specific application level. In trials at Lethbridge Research and Development Centre, MAGNIVA for Hay reduced heating, improved digestibility and increased dry matter intake.
Hay treated with MAGNIVA for Hay was noticeably greener and more sweet smelling than hays from control and propionic acid treated bales.

USED FOR

Hay baled at elevated moisture * in:

- Small square bales
- Medium square bales
- Big square bales
- Round bales

* Consult you local MAGNIVA specialist: typically hay can be baled at 5 points higher than the levels recommended for untreated hay

STRAINS	MAIN FEATURES	COLONY FORMING UNITS (CFU)
Lentilactobacillus buchneri NCIMB 40788	Selected for its ability to grow rapidly at low moisture levels across a wide range of temperatures and pH levels. Colonizes the hay to reduce the growth of spoilage yeast and molds	1,200,000 CFU/g fresh forage

ENZYMES		ACTIVITY
B-glucanase (EC 3.2.1.6)	Work in concert with the *L. buchneri* NCIMB 40788 to help improve digestibility and reduce the growth of yeasts and molds.	2,545 units per gram
α-amylase (EC 3.2.1.1)		2,545 units per gram
Xylanase (EC 3.2.1.8)		1,382 units per gram
Galactomannanase (EC. 2.1.78)		233 units per gram

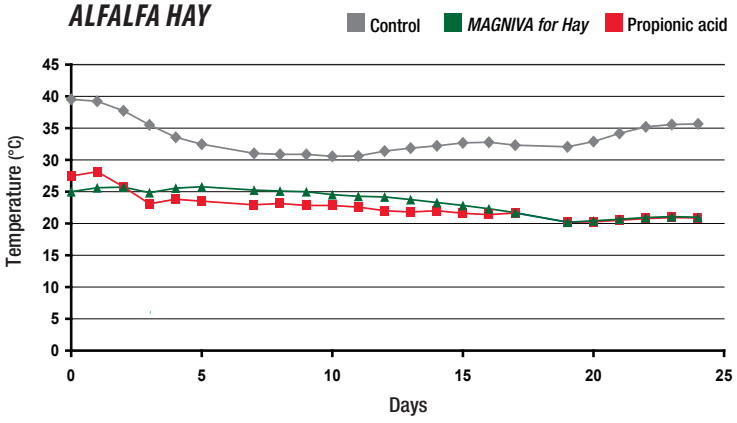
one unit = one mg sugar released/minute

PROVEN RESULTS

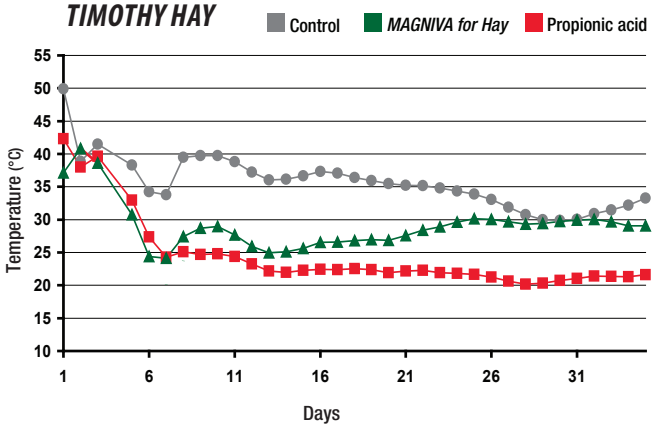
REDUCED HEATING

In trials at Lethbridge Research and Development Centre (LRDC), 17% moisture Timothy and alfalfa hays, high-density 500 Kg round bales treated with MAGNIVA for Hay remained cooler than the untreated controls throughtout storage, performing similarly to the bales treated with buffered propionic acid at 10 litres/ tonne. Hay from bales treated with MAGNIVA for Hay was noticeably greener and more sweet smelling than hay from control and propionic acid treated bales.

ALFALFA HAY



TIMOTHY HAY



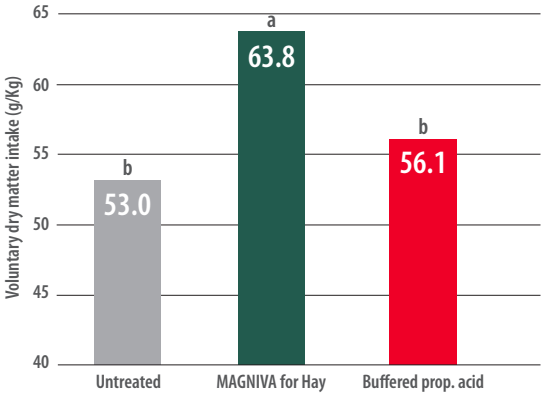
IMPROVED DIGESTIBILITY AND DRY MATTER INTAKE

Treatment with MAGNIVA for Hay significantly ($p<0.05$) increased *in situ* DM digestion kinetics compared to untreated and propionic acid treated hays (table below) leading to an overall trend to fractional rate of DM disappearance (digestibility). In feeding studies, MAGNIVA for Hay treatment significantly increased voluntary DMI of Timothy hay by 20.4% and 13.6% compared to the untreated and buffered propionic acid treated hays, respectively ($p<0.05$), see graph below.

HAY MOISTURE LEVEL & TREATMENT

		17% Moisture			19/20% Moisture		
Parameter	**Hay type**	**Untreated**	**MAGNIVA for Hay**	**Buffered prop. acid**	**Untreated**	**MAGNIVA for Hay**	**Buffered prop. acid**
Rapidly soluble DM (%)	Timothy	22.8^{b}	23.3^{a}	22.6^{b}	22.1^{b}	23.7^{a}	23.4^{a}
	Alfalfa	33.9^{c}	35.9^{a}	34.5^{b}	34.6^{c}	35.6^{a}	35.1^{b}
Fractional rate of DM disappearance (h-1)	Timothy	0.070^{b}	0.081^{a}	0.069^{b}	0.075^{b}	0.083^{a}	0.069^{c}
	Alfalfa	0.106	0.107	0.103	0.088^{b}	0.118^{a}	0.113^{a}
Effective DM disappearance (%)	Timothy	40.3	41.8	41.5	40.7	41.6	41.0
	Alfalfa	58.0	58.8	58.8	58.0	59.7	57.8

a, b, c - Numbers in the same dataset with different superscripts differ significantly ($P<0.05$)



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

MAGNIVA for HAY Available Size

165 g pouch of water-dispersible concentrate treats 10 tonnes of fresh hay.

Contact your Lallemand Animal Nutrition sales representative.

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 for the latest information on silage management practices.

REFERENCES: TRIAL SUMMARIES AVAILABLE UPON REQUEST

[1]Baah, J. et al. (2005) Asian-Aust. J. Anim. Sci. 18, 5: 649-660.

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