

SILO-KING[®]



FORAGE & GRAIN TREATMENT



*"CAPTURING THE NUTRITIONAL VALUE
IN FEEDS IS THE KEY TO PROFIT."*

SILO-KING[®]



WHAT IS SILO-KING[®]?

Silo-King[®] is Agri-King's forage and grain treatment program designed for use on many types of feeds, including corn silage, haylage, high moisture corn, alfalfa hay, grass hay and balage.

Silo-King[®] is the ONLY forage additive continuously researched, developed and manufactured by an animal nutrition company and specifically formulated to enhance the ruminant's feed efficiency.

The ingredients in Silo-King[®], which include antioxidants, enzymes and lactic acid-producing bacteria, work synergistically to enhance the ensiling process and help provide higher-quality forages.

With over 50 years of on-farm success, Silo-King[®] has been the standard for forage and grain treatment.



WHAT SETS SILO-KING® APART?

★
**LESS
HEATING**

Silo-King® uses antioxidants to scavenge oxygen within the forage or grain, minimizing respiration and heating to reduce dry matter loss and retain more nutrients.

★
**INCREASED
DIGESTIBILITY**

The enzymes in Silo-King® break down the cell wall and predigest stem fibers or grain, allowing the fiber or grain to be digested easier within the animal's rumen.

★
**ENHANCED
PALATABILITY**

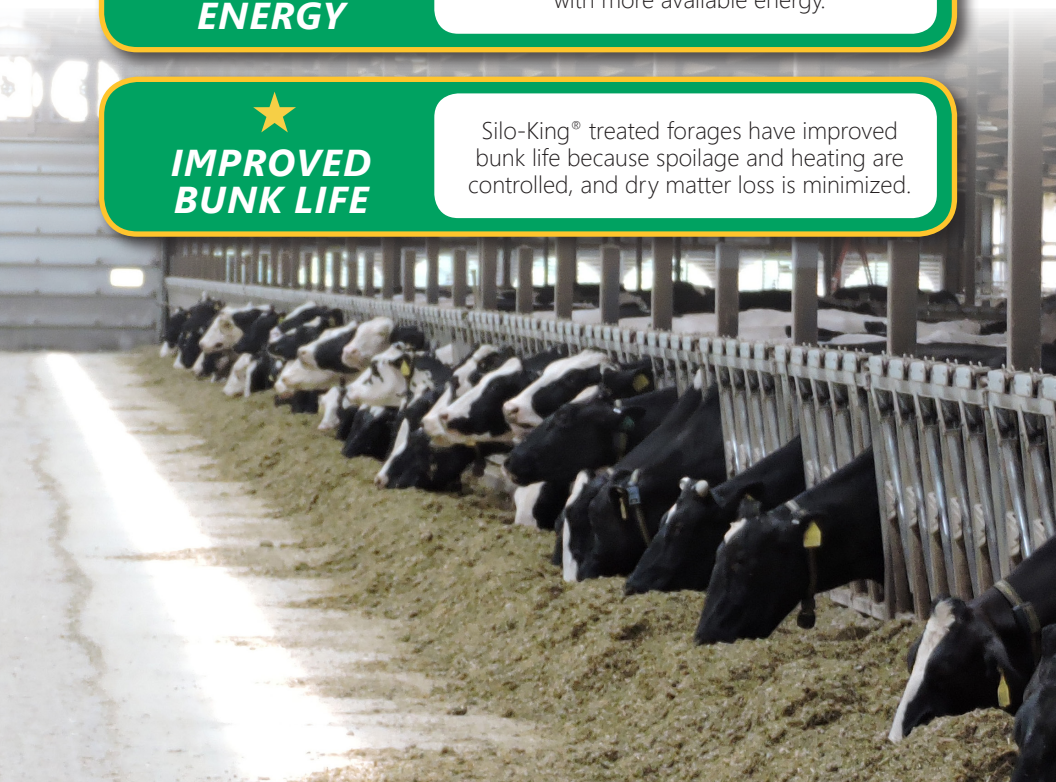
Silo-King® reduces spoilage, which retains sugars and improves palatability for livestock.

★
**MORE
ENERGY**

Silo-King® improves digestibility and nutrient retention, resulting in higher quality feeds with more available energy.

★
**IMPROVED
BUNK LIFE**

Silo-King® treated forages have improved bunk life because spoilage and heating are controlled, and dry matter loss is minimized.

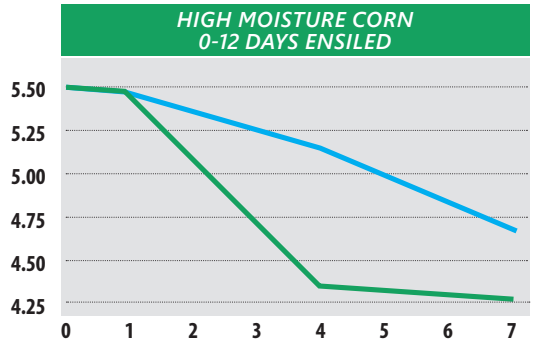


GET THE ENVIRONMENT RIGHT

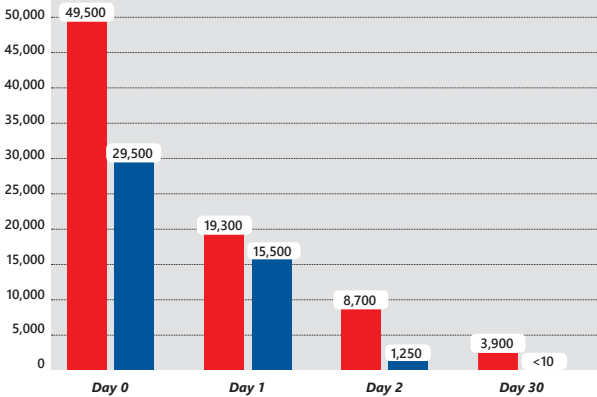
pH

The quicker the pH falls below 4.5, the less time for plant and microbial respiration to occur and more energy and nutrients are saved.

Treated **Competitor**



MOLD AND YEAST CONTENT (CFU/G) IN SILO-KING® TREATED CORN SILAGE



FLASH FERMENTATION

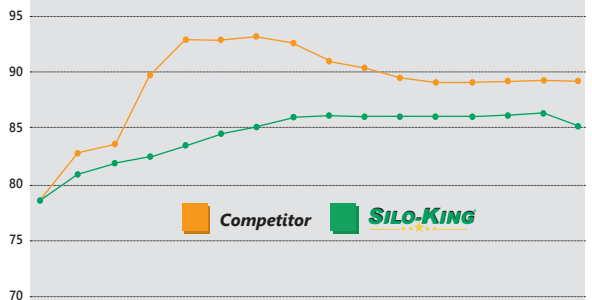
A rapid pH drop allows less time and a less desirable environment for mold and yeast to develop and thrive.

Yeast
Mold

TEMPERATURE

The antioxidants and bacteria in Silo-King® help minimize heating within the forage, resulting in less shrink and more retained nutrients for increased nutritional content within the feed.

DAILY HAYLAGE TEMPERATURE (°F)



THE ENZYME DIFFERENCE

Silo-King® contains enzymes (cellulases, amylases, xylanases, pectinases, etc.) that start a pre-digestion of fibers and starches in forages to make them more digestible within the rumen.

The enzymes in Silo-King® help to unlock the energy potential contained in the plant starch, plant cell wall and plant sugars. This increases the energy available for use by the animal, helping contribute to better overall production.

WHAT ARE ENZYMES?

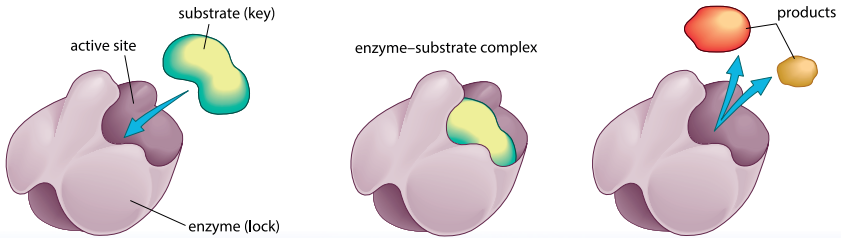
Enzymes are special proteins that cause and accelerate biochemical reactions within a substance. Enzymes are very specific to the substance they react with and catalyze. For example, amylases help change starches into sugars and lipases help break down fats.

HOW DO THE ENZYMES WORK?

The **active site**...

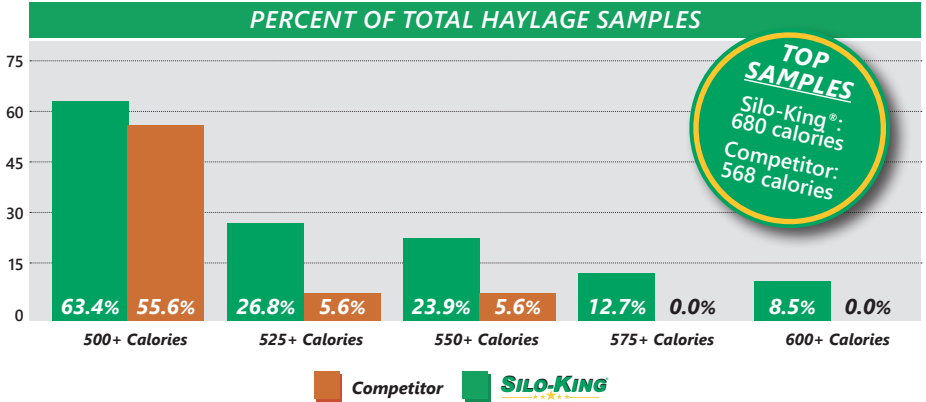
- Is a region within an enzyme that fits the shape of molecules called **substrates**.
- Contains amino acid R groups that align and bind the substrate.
- Releases **sugars** (products) when the reaction is complete.

How an enzyme catalyzes the breakdown of a substrate molecule into two product molecules



ON-FARM RESULTS

Over 100 samples of corn silage and haylage from central Wisconsin were analyzed comparing energy values between forages treated with Silo-King® and a competitor's product. On average, Silo-King® treated haylage produced 18 more calories per pound of dry matter compared to the competitor's haylage.



CORN SILAGE TRIAL - EAST WISCONSIN

	UNIT	TREATED	COMPETITOR	DIFFERENCE
Moisture	%	69.99	70.54	0.55
Starch	%DM	28.91	29.43	0.52
Starch Digest.	%	90.56	89.41	1.15
Sugars	%DM	12.69	12.12	0.57
IVDMD	%DM	72.12	71.13	0.99
NDFd-30	%DM	53.46	52.18	1.28
ADF	%DM	24.00	24.55	0.55
NDF	%DM	42.97	43.79	0.82
Lactic Acid	%DM	5.57	4.75	0.82
Acetic Acid	%DM	1.96	2.21	0.25
L:A Ratio		3.07	2.29	0.78
pH		3.74	3.79	0.05
Yeast	CFU/g	74,000	1,760,000	1,686,000
Mold	CFU/g	<100	4,000	3,900
Dry Matter Loss	%DM	4.5	6.6	2.1
Calories		617	606	11

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