

CROP SPECIFIC SILAGE INOCULANTS

Products

MicroSile

Microbial: *Pediococcus pentosaceus*, *Pediococcus acidilactici*,
Lactobacillus plantarum
Carriers: sugars, manganese sulfate and calcium silicate

Early Sile Plus

Microbial: *Pediococcus pentosaceus*, *Pediococcus acidilactici*, *Lactobacillus plantarum* and *Lactobacillus brevis*
Enzymes: cellulase, hemicellulase and amylase
Carriers: sugars, manganese sulfate and calcium silicate

Early Sile Advance (Grass, Legume and Corn Silage Specific)

Microbial: *Pediococcus pentosaceus*, *Pediococcus acidilactici*, *Lactobacillus plantarum* and *Lactobacillus brevis*
Enzymes: xylanase, mannanase and cellulase
Carriers: sugars, manganese sulfate and calcium silicate.

Directions

Each formulation applies 3 grams of product per ton of fresh forage crop. Add contents of each jar to the specified amount of fresh, clean water and mix thoroughly. Apply the solution at 1 quart per ton of fresh forage.

Can also be applied through all low volume application systems at manufacturer's recommended rates.

Packaging

Available in sealed plastic containers sized to treat 50, 200 or 500 tons of fresh forage.

Storage

CONTAINS LIVE MICROORGANISMS AND ACTIVE ENZYMES.

Store in original sealed packaging in a cool, dry place below 50°F.

For more information on Micron's complete range of Bacterial Silage Inoculants and all other Micron products and programs, please visit our comprehensive website at www.micronbio-systems.com



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Forage Preservation and Improvement

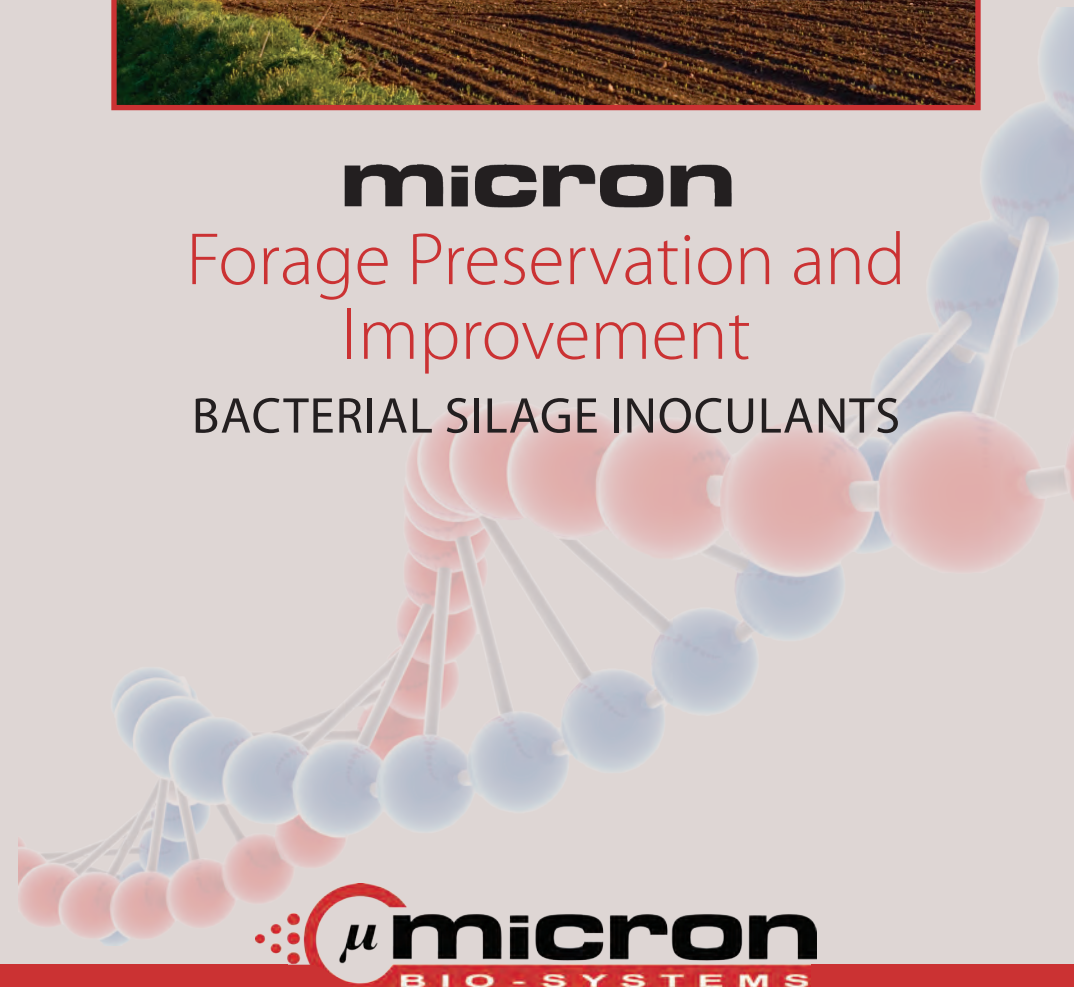
BACTERIAL SILAGE INOCULANTS



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BIO-SYSTEMS

FORAGE PRESERVATION AND IMPROVEMENT

The Basic Process

Ensiling is the process of preserving forage crops in an acidic, oxygen-free environment. The quality of the forage is as good as it will ever be the moment that it is cut. The process is all about managing the microbes that promote fermentation, stop degradation and achieve stability. Many factors affect silage quality at harvest including moisture, length of cut, rate of fill, density of pack, natural microbial populations, and storage systems.

Oxygen in the silage mass is reduced from packing pressure, plant respiration and microbial growth during the aerobic phase. During the lag phase, spoilage organisms are consuming nutrients, as lactic acid bacteria (LABs) begin to convert sugar to lactic acid. The LABs continue to produce lactic acid through the fermentation stage until the pH reaches approximately 4. At this point, spoilage organisms stop growing, the oxygen is gone and the mass is considered stable.

Bacterial Inoculants

Bacterial inoculants are intended to increase the number of LABs at the start, thus driving the fermentation process by dropping the pH sooner and reducing dry matter losses by spoilage organisms. Silage mass stability is achieved in a matter of days vs. weeks.

The Micron Program

Micron Bio-Systems has developed a Forage Preservation and Improvement Program designed to help producers achieve their forage management goals. Over 15 years of development have gone into the scientifically tested, quality controlled and manufactured silage inoculants that form the basis of the program.

Micron's primary focus is achieving a proper fermentation. A highly effective combination of lactic acid bacteria, chosen through a comprehensive selection process, forms the foundation of all Micron silage inoculants. Each subsequent enhancement to the basic formulation is intended to address specific situations on the farm and add only minimal cost to the farmer. Each additional organism and enzyme has been tested and selected under the same exhaustive criteria as the foundation bacteria.

Micron's second goal is to maintain stability of the crop and reduce spoilage at feed out. This is achieved through the use of a specific acetic acid producing bacteria. Acetic acid is produced when the silage is exposed to oxygen, inhibiting mold and yeast growth without adversely affecting palatability. The forage program also recommends the use of a dry propionic acid at ensiling on troublesome areas such as the end of bags and the tops of pits. The propionic acid kills mold and yeast in the early stages of the ensiling process, reducing the number likely to grow when oxygen is reintroduced.

The third goal of the Micron Program is targeted at improving the availability of what is locked in the forage. Recent enzyme technology developed by Micron has resulted in new enhancements to inoculants that separate the energy-containing cellulosic fibers from the lignin. This increases the digestibility, making more nutrients available to the animal. This technology gives an edge to well-managed programs, allowing the producer to put up quality silage even from mature stands. Crop specific formulations target the unique fiber configurations of common forages without compromising the structural integrity of the feed.



micron
MicroSile
SILAGE INOCULANT

MicroSile

Our Premium Standard Product. **MicroSile** contains three select strains of lactic acid producing bacteria and bacterial stimulants to control the conventional fermentation issues. **MicroSile** forms the foundation of the Micron Forage Preservation and Improvement Program.

Early Sile Plus

Designed to enhance the stability of forage at the storage unit face and in the feed bunk.

Early Sile Plus is our premium standard formulation with the addition of an acetic acid producing bacteria to give extra protection against aerobic spoilage organisms. This is the option of choice for troublesome storage systems or stressed forages. Acetic acid is produced when the silage is exposed to oxygen, inhibiting mold and yeast growth without adversely affecting palatability.



micron
early sile plus
SILAGE INOCULANT



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early sile advance
LEGUME SILAGE INOCULANT

Early Sile Advance

(New) Designed to unlock a silages potential.

The new enzyme formulation in **Early Sile Advance** is designed to separate the energy-containing cellulosic fibers from the lignin. This increases digestibility and makes more nutrients available to the animal.

Early Sile Advance is formulated in crop specific versions, including Corn and Cereals, Legumes, and Grass. A minimum storage time of treated forages is required to see optimum benefit. The **Early Sile Advance** line also contains the aerobic stability technology found in **Early Sile Plus**.