

DRY GRANULAR PRO-STORE PRODUCTS

Bacterial and enzyme inoculants for use in granular applicators. Three products are available, two with the addition of BHT and Potassium Sorbate.

Ingredients

Pro-Store 0.3

(45 pound bag treating 150 Tons)

Calcium carbonate, potassium sorbate, butylated hydroxy toluene (BHT), diatomaceous earth, roughage products, dried *Lactobacillus plantarum* fermentation product, dried *Pediococcus acidilactici* fermentation product, dried *P. pentosaceus* fermentation product, dried *Enterococcus faecium* fermentation product, dried *Lactobacillus brevis* fermentation product, dried *L. casei* fermentation product, dried *Streptococcus lactis* fermentation product, dried *S. cremoris* fermentation product, dried *S. diacetylactis* fermentation product, dried *Bacillus subtilis* fermentation extract (source of enzyme), dried *Aspergillus oryzae* fermentation extract (source of enzyme), whey, sodium silico aluminate.

Ask your ANC Consultant about
special Pro-Store pricing...

USAGE: Recommended for all types of high moisture forage. PRO-STORE should be used in accordance with good silage management practices. Moisture recommendation: Not greater than 70% or lower than 50%. Use proper application equipment, harvest and cut at proper maturity stages and length.

DIRECTIONS FOR USE

PRO-STORE 0.3

466,700,000,000 CFU's per pound
applies 154,000 CFU's bacteria per gram of treated forage
All Haylages/Silages from 55% - 70% Moisture... 0.30 lb./ton

PRO-STORE 1/T

140,000,000,000 CFU's per pound
applies 154,000 CFU's bacteria per gram of treated forage
All Haylages/Silages from 55% - 70% Moisture..... 1.0 lb./ton

STORAGE:

For maximum shelf life, store in sealed bags or sealed 5 gallon buckets in a cool, dry area. Always try and use inoculant products within 1 year. For carry over to the next year, store in a freezer.

DRY GRANULAR HAY PRODUCT

PRO-STORE DH (for use when propionic acid is not an option for baled hay)

WATER SOLUBLE PRO-STORE PRODUCTS

PRO-STORE WS 50 (foil packages treat 50 tons)
PRO-STORE WS 250* (pail of 10 units of WS 250)
PRO-STORE WSC 50 (foil packages treat 50 tons)
PRO-STORE WSC 250* (pail of 10 units of WSC 250)
PRO-STORE WSB 50 (foil packages treat 50 tons)
PRO-STORE WSB 250* (pail of 10 units of WSB 250)
PRO-STORE HMC (propionic acid producing bacteria for high moisture grain)

PRO-STORE PRODUCTS are formulated for use on Corn Silage, Alfalfa and Grass Haylage, Wheatlage, Ryelage, Pealage, Oatlage, Sudan or Sorghum Silage and other forages.

STORAGE: Upright Silos (Oxygen Limiting and Conventional), Bags, Bunkers, Piles.



PRO-STORE

Dry Granular Forage Inoculants

0.3 & 1/T PRODUCTS

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How Does PRO-STORE Work?

A specific combination of bacteria and enzymes are formulated to provide maximum protection against negative fermentation that can occur during silage making. Here's what they do:

LACTOBACILLUS PLANTARUM & CASEI can be active under lower pH and are formulated to produce extremely high quantities of lactic acid, which helps preserve the energy value of the forage.

PEDIOCOCCUS PENTOSACEUS is a fermentation initiator that works well in cooler temperatures before the heat of fermentation occurs, extending the temperature range for good fermentation.

PEDIOCOCCUS ACIDILACTICI begin multiplying in the first half hour of ensiling and work at a higher temperature. They reduce oxygen and shut down plant metabolism which reduces heating.

STREPTOCOCCUS and **ENTEROCOCCUS SPECIES** help prepare the way for Lactobacillus bacteria by rapidly reducing the pH in the first 10 hours of fermentation. These bacteria remain active in silages for many months, which helps to reduce spoilage if secondary fermentation occurs.

LACTOBACILLUS BREVIS is a heterofermentor which helps extend bunk life (exposed forages in bunkers and bags).

ENZYME ACTIVITY: BACILLUS SUBTILIS and **ASPERGILLUS ORYZAE** Cellulase, Xylanase and Hemicellulase aid in the breakdown of fibers to simple sugars. Amylase converts starch to simple sugars, providing energy for rapidly growing bacteria.

POTASSIUM SORBATE is a mold and yeast inhibitor.

BHT: (Butylated Hydroxy Toluene) is an antioxidant (oxygen scavenger) which minimizes harmful aerobic bacterial growth, reducing rancidity and butyric acid.

Economics of Bacterial Inoculants

Increased net income per ton of corn silage fed > \$6.67, per cow, per year.....>\$27.45

Increased net income per ton of haylage fed >\$14.95, per cow, per year.....>\$57.95

Total net income per cow, per year.....>\$85.40
(*\$12.50/cwt milk, \$1/ton inoculant cost, 11.2 lbs DM alfalfa haylage, and 11.4 lbs DM corn silage fed/head/day.*)

"Finally, if producers are already doing a good job, but using a bacterial inoculant for the first time, they will probably not see a dramatic difference in their silage. But the benefit will be there---additional silage DM recovery and significantly more beef or milk production per ton of crop ensiled."

(Data and quote from proceedings of the 6th Western Dairy Management Conference, March 12-14, 2003, pages 27-29)

Forage Preservation Using Inoculants

A low pH (3.7 in corn silage, 4.5 in haylage) is needed to preserve feeds. The growth of undesirable bacteria, mold and yeast is inhibited in low pH silages. Inoculation helps lower pH which reduces ammonia, nitrogen, water soluble carbohydrates, and spoilage when the fermented forages are exposed to oxygen.

Some inoculants contain high numbers of bacterial strains that lead to excessive acetic acid production. A high level of acetic acid may, in fact, increase bunk life, but only at the expense of increased dry matter loss, reduced digestibility, and lower potential dry matter intake.

Testing for organic acids and pH will help to determine the quality of fermentation that occurred in your forages. High lactic acid improves digestibility and lowers pH.

Inoculant Economic

MORE TONS TO FEED: Even under ideal conditions, dry matter loss can be reduced by 1.25 - 2.5%. Milk value gained from this additional forage will more than pay for the cost of PRO-STORE, and reduce the need for purchased feeds.

FASTER FERMENTATION, HIGHER LACTIC ACID, MORE ENERGY: Research shows that PRO-STORE treated silage has produced as much lactic acid in 4 days as untreated silage does in 90 days! PRO-STORE treated silage provides fermentation insurance, as various temperatures and harvesting conditions can cause significant fluctuation in bacteria levels. Feeding inoculant treated silage reduces the drop in production cows experience when switching to different silos or bunkers.

INCREASED DRY MATTER INTAKE & FEED EFFICIENCY: Better quality silage leads to increased feed efficiency. Cows get more value out of each pound of feed. Higher intakes are observed when comparing to forages fed that have undergone an unstable fermentation.

MORE MILK: Research shows that 14-16 pounds more milk is produced per ton of inoculated forages fed. See "6th Western Dairy Conference".

LONGER BUNK LIFE: A stable fermentation reduces the formation of ammonia and water soluble carbohydrates. This controlled fermentation results in increased lactic acid and a lower pH. The silage stays fresh and palatable longer after exposure to air whether this occurs in storage or after removal.

LESS WASTED FEED: Dairymen will have less spoiled feed to dispose of when forages are treated with PRO-STORE!