

Silage Inoculant Solutions That Work as Hard as You Do

At ProbioFerm, we combine **decades of fermentation expertise** with a **customer-first approach** to deliver silage inoculant solutions that drive results in the field. Whether you're looking for high-performance microbial concentrates designed for subsequent blending operations or ready-to-use, private-labeled products, our team is here to help you build a product that performs — **every time**.

Explore Our Proven Culture Portfolio

At ProbioFerm, every culture begins with science and ends with performance you can count on.

Our collection of **characterized microbial strains** is designed to support optimal fermentation, nutrient preservation, and feed quality across a variety of forages and operating conditions. Each strain is backed by real-world applications, ensuring consistent results from lab to field.

Below, you'll find a selection of our most trusted cultures, complete with **technical specifications** and **key benefits** to help you choose the best solution for your specific needs.

Concentrated Cultures

Our silage inoculant concentrates are available in a variety of formats and can be tailored to fit your exact specifications. From **single-strain cultures** to **multi-strain blends**, each concentrate is engineered to support consistent, efficient fermentation across a wide range of forages. Every formula is backed by science — featuring **highly viable homofermentative** or **heterofermentative microbial cultures** and **specialized enzymes** that help preserve nutrient value and improve silage quality.

Private-Labeled Silage Inoculants

Bring your brand to life with our ready-to-use silage inoculants. ProbioFerm offers both **dry-applied and water-soluble formulations**, packaged and labeled to your specifications. Our flexible production and packaging capabilities make it easy to scale — whether you're launching a new product or expanding an existing line. We take pride in providing **innovative, reliable, and cost-effective solutions** that help your brand stand out and your customers succeed.

Let's Build Better Cultures Together

Contact Us

 (515) 270-5250

 www.probioferm.com

 info@probioferm.com

Primary Inoculant Bacteria

Enterococcus faecium PF7100

Enterococcus faecium is a species of bacteria that has been characterized as part of the normal gastrointestinal microbial flora in domestic livestock, companion animals and humans.

Primary Role: Rapid initiator of fermentation. This strain is a rapid grower and produces lactic acid quickly to lower pH.

Strengths:

- Works quickly on fresh-cut forage, lowering pH in the critical first 24–48 hours
- Suppresses undesirable organisms like clostridia and coliforms
- Produces enzymes required for easier digestion of foods and dietary ingredients
- Inhibits growth of pathogens via peroxide, enterocin and organic acid production
- Scientifically validated efficacy when used in direct-fed and inoculant forms

Best uses: Highly effective across haylage, corn silage, and high-moisture grains where fast acidification is needed.

Benefits: Minimal shrink, improved protein preservation, and cleaner fermentation.

Lactococcus lactis PF7114

Lactococcus lactis was isolated from dairy fermentations and is one of the most well-known and studied lactic acid bacteria in food preservation. This strain was selected due to its natural ability to produce both lactic acid and antimicrobial compounds.

Primary Role: Dual-mode fermenter with antimicrobial effects

Strengths:

- Produces lactic acid while generating bacteriocins that suppress spoilage organisms.
- Particularly helpful in crops susceptible to clostridial fermentation

Best uses: High-moisture forages and legume silages where clostridia are a concern

Benefits: Cleaner fermentation, improved bunk life and reduced spoilage organisms.

Primary Inoculant Bacteria

Pediococcus acidilactici PF7103

Pediococcus acidilactici PF7103 was isolated and tested primarily for its effectiveness as a forage preservative.

Primary Role: Stress-tolerant lactic acid producer.

Strengths:

- Performs in a wide temperature range and under high dry matter conditions (ideal for drier haylage or hot harvests).
- Wide range pH growth. Maintains activity at higher pH levels, keeping fermentation on track and the ability to continue to grow and produce lactic acid under conditions of low pH.

Best uses: Heat-stressed crops, drier forages, or environments with fluctuating moisture levels.

Benefits: Consistent fermentation in tough conditions, reduced nutrient loss, and improved palatability.

Lactiplantibacillus plantarum PF7102

Lactiplantibacillus plantarum PF7102 was isolated from corn silage, tested for effectiveness as a forage preservative, and selected due to its natural prevalence, growth and lactic acid production at low pH silage conditions.

Primary Role: Core lactic acid fermenter.

Strengths:

- Rapidly converts water-soluble carbohydrates into lactic acid
- Drives a sharp pH decline, stabilizing forage quickly
- Powers lactic acid fermentation to preserve silage quality

Best uses: Universally effective in haylage, corn silage, small grains and mixed forages.

Benefits: Excellent nutrient retention, color preservation, improved palatability, and reduced run-off losses.

Primary Inoculant Bacteria

Lactobacillus buchneri PF7144

This organism was isolated from naturally occurring ensiled crops. This strain of *Lactobacillus buchneri* was selected due to its natural prevalence to metabolize different sugars and its ability to convert lactic acid into acetic acid.

Primary Role: Specialized for aerobic stability

Strengths:

- Converts lactic acid into acetic acid which aids in inhibiting yeast, mold and clostridia
- Extends aerobic stability at feedout, reducing heating.

Best uses: Large silage piles, bunkers or bags where extended exposure to air is expected.

Benefits: Longer bunk life, reduced spoilage losses and safer, more consistent feed during warm weather.

Levilactobacillus brevis PF7107

This organism was isolated from fermented kimchi. This strain of *Levilactobacillus brevis* was selected due to its natural prevalence to metabolize different sugars and its ability to produce lactic acid, acetic acid, and small amounts of ethanol and CO₂.

Primary Role: Specialized for aerobic stability

Strengths:

- Grows under acidic conditions. Produce lactic acid and acetic acid which aids in inhibiting yeast, mold and clostridia
- Extends aerobic stability at feedout, reducing heating.

Best uses: Large silage piles, bunkers or bags where extended exposure to air is expected.

Benefits: May help improve fiber degradation and palatability, especially when paired with *Lactiplantibacillus plantarum* or *Pediococcus* spp.

Primary Inoculant Enzymes

Hemicellulase

A type of enzyme that degrades the plant cell wall polymer hemicellulose. Hemicelluloses are polysaccharides – long chains of sugars – that are part of the plant cell wall. This enzyme is often used in combination with other enzymes that degrade plant cell walls or starches.

Best uses: Corn stover and corn silage, sorghum, warm-season grasses, small grain forages.

Amylase

An enzyme that breaks down starches into sugars making them more available for rapid fermentation and rumen digestion.

Best uses: High starch crops and grasses such as corn silage, sorghum, small grain silage and high-moisture grains.

Cellulase

An enzyme used to hydrolyze the carbohydrate cellulose, which is a long chain of linked sugar molecules that are the main component of plant cell walls. Cellulose is harder to break down than hemicellulose because of its crystalline and tightly packed structure.

Best uses: High cellulose crops such as warm-season grasses, corn residues and sorghum