Animal Health International Inoculant Team Newsletter

ENHANCING FEED QUALITY

SPRING 26

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It did ferment, just not in the desired manner

When silage results don't meet expectations, the issue often isn't a lack of fementation but how it fermented. Explore the key factors that influence fermentation outcomes and how to improve next season.

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Why Didn't It Ferment?

Keith A. Bryan, PhD, Technical Services Specialist, Silage and Dairy, Novonesis

In the evaluation of several thousand forage samples in the past decade, one question consistently emerges when the fermentation profile does not conform to the dairyman's or nutritionist's expectations: "Why didn't it ferment?" The countless potential answers become secondary to the obvious answer, "It did ferment, just not in the desired manner." So, when sample reports come back from the lab and the numbers don't conform to expectations, the question "why" is posed. There are four main reasons why crops might not have fermented properly:

Lack of water-soluble carbohydrates (WSC)

Fermentation requires sugar. Generally, there is sufficient sugar for fermentation, but in the case of a rain event or even heavy dew, sugar may be washed away from the forage and may limit inoculant activity.

Lack of bacterial activity

Plants in the field have a significant population of naturally occurring microorganisms on them. These epiphytic microorganisms produce a variety of metabolites, some of which are detrimental to ideal fermentation of the crop. If the numbers of undesirable organisms are sufficient to "out-compete" with the desirable organisms, fermentation will yield undesirable end products.

There are a few other instances where the undesirable organisms may have an advantage during the fermentation process:

a) A research-proven inoculant was not applied. Instead, invest about $1.00 per ton of forage to positively shift the odds of a desirable fermentation.

b) The inoculant is mixed per the manufacturer's label instructions and put in the applicator, but it didn't get applied. Spend a few minutes of time ensuring that the applicator is functioning properly. It can mean the difference between average forage and good forage.

c) The inoculant was applied, but it didn't work. Investigate whether the inoculant lactic-acid bacteria (LAB) were alive when applied. Temperatures approaching 100°F kill inoculant LAB and therefore dead inoculant LAB will not ferment forage no matter how it's applied.

Buffering

There are times when a challenging fermentation is anticipated and a plan needs to be established accordingly; such is the case for alfalfa. The reason alfalfa presents challenges to fermentation is multifaceted but hinges on buffering capacity. Alfalfa is high in protein, calcium and other minerals, and generally low in WSC. Protein and minerals serve to buffer the crop from reaching ideally low pH with potentially high lactic acid levels.

It did ferment

Even when a focus is placed on reasons above to improve the likelihood of a favorable fermentation, the results may be unfavorable. Perhaps the crop was harvested at a sub-optimal maturity or moisture (too high or too low). Maybe sufficient packing tractor weight wasn't utilized to maximize dry matter density. Potentially, the forage sample did not represent the forage in the pile. Regardless of what might have happened, this information can be used to improve management practices for the next year.

Unfortunately, when asked, "Why didn't it ferment?" the response is probably, "It did ferment, just not in the way it was preferred."

novonesis

Renato Schmidt, PhD, Forage Products Specialist, Lallemand Animal Nutrition

Boosting Forage Inventories with Alternative Crops

Spring brings new planting decisions and for many producers the priority is more than choosing a crop. It's about protecting forage inventories in another year of unpredictable weather and economics. After several seasons of tight margins and regional droughts, flexibility remains essential. It's important for producers to explore different crops to produce more of their own cost-efficient feeds. Understanding strategies for growing, harvesting and ensiling alternative forage crops can help boost overall silage tonnage and maintain high-quality, home-produced feed.

Warm-season grasses: A reliable backup

Forage sorghum and sorghum-sudan grass hybrids are gaining traction as corn alternatives. These warm-season grasses thrive in drought conditions and can produce impressive yields. While sorghum silage offers about 85% of corn's feeding value, its protein levels are similar, making it a practical choice when water is limited. A new berry processor technology was brought to market, and research showed the in-situ starch digestibility increased 20 to 40 units in ensiled sorghum. Brown midrib (BMR) hybrids are recommended for improved digestibility. Harvest timing is key: aim for soft- to mid-dough stage or 32–37% dry matter. Because these crops can accumulate nitrates under stress, raising cutting height and waiting until after frost can reduce risks. Using a proven inoculant supports fast, controlled fermentation and minimizes losses, especially when feeding through warm months.

Small grains and mixtures: Quick turnaround

Small grains like rye, triticale and barley remain popular for spring forage. They fit well into double-cropping systems and can be harvested early for high-quality feed. Boot stage harvest delivers the best nutrient profile for lactating cows, while later stages suit dry cows and heifers. Mixing small grains with annual legumes such as peas boosts palatability and nutrient density. For example, oats combined with peas can raise relative forage quality (RFQ) significantly. Inoculation is critical here as well, as soil contamination and hollow stems can challenge fermentation and feedout stability.

Soybeans and corn stover: Extra options

Soybeans can be a practical choice for spring silage. Harvest at R3–R4 stages for high forage quality and chop to 3/8-inch for proper packing. Later harvests are possible but can be harder to ensile due to high oil and protein. Always use a homolactic inoculant and consider mixing soybeans with another forage crop that is more "ensilable" and palatable, such as corn or grasses to facilitate fermentation and increase feed intake. Corn stover can help stretch forage supplies for heifers and dry cows, freeing up higher-quality silage for lactating cows. Grind, rehydrate to about 50% dry matter, and treat with calcium hydroxide to boost digestibility before ensiling.

Key takeaways for 2026

1. Plan for diversity: Include warm-season grasses or small grains to reduce risk.
2. Harvest at the right stage: Boot stage for small grains, soft dough for sorghums.
3. Practice proper forage management: Pack tightly, cover promptly, and maintain plastic integrity.
4. Don't skip adding research-backed inoculants: Help drive fermentation control and improve stability at feedout.

For more information on forage inoculants, contact your Animal Health International representative or visit https://magniva.lallemandanimalnutrition.com/en/usa/

Felipe X. Amaro, PAS, PhD, Global Technical Support and R&D, Passion Ag

When Spring Weather Works Against Silage: Why Oxygen Exclusion Matters

In much of the U.S., spring-harvested forage crops such as small grains, ryegrass, and alfalfa are ensiled under wet, cool, and highly variable conditions. These factors can slow fermentation and extend the time silage remains vulnerable to oxygen, making management practices that accelerate oxygen exclusion crucial to achieve good silage.

One of the main challenges of spring silage is lower dry matter (DM) content at harvest. Frequent rainfall and limited field drying windows often result in forages being ensiled below recommended DM targets. Low-DM silage favors undesirable microbial activity, particularly clostridial fermentation, leading to butyric acid production and increased DM losses. Butyric fermentation is associated with excessive protein degradation, reduced palatability, and lower animal performance. Research consistently shows that wetter silages are at greater risk when oxygen exposure is prolonged during the early ensiling phase.

Cold spring temperatures further compound these risks. Lactic acid bacteria (LAB), which drive desirable fermentation, are temperature-sensitive. Cool conditions slow their growth and acid production, delaying the pH drop needed to stabilize the ensiled forage. At the same time, many spoilage organisms remain active longer when pH decline is delayed, extending the “fermentation lag phase” and increasing nutrient losses through respiration and microbial activity.

Because spring silage is often harvested wet and ferments slowly, efficient oxygen exclusion becomes the primary line of defense. Packing silage tightly to maximize density and covering the silo as soon as possible are critical steps to remove oxygen quickly and limit losses. These practices should not stand alone but rather be combined with a high-performance oxygen barrier system.

This is where Passion Yellow and Passion Combo play a decisive role. When used in association with tight packing and rapid sealing, Passion Ag’s oxygen barriers help rapidly establish and maintain anaerobic conditions, even under challenging spring conditions and shorter ensiling periods. By limiting oxygen penetration, oxygen barrier films reduce dry matter losses, preserve fermentable carbohydrates, and support faster LAB dominance, even when moisture levels are high and temperatures are less than ideal.

While spring weather may work against silage fermentation, oxygen is one factor that can be controlled. Combining sound management practices with Passion Ag’s silage solutions is a powerful strategy to counter the odds and consistently produce high-quality spring silage despite challenging conditions.

PASSION AG

Widen Your Baling Window in 2026

It has been said that to be a farmer, one must be an optimist. This is especially true for hay producers. When initial optimism is challenged by an inaccurate weather forecast, which management tools remain effective in steering the effort toward success?

1. **A properly set mower conditioner:** Work with an equipment dealer to ensure that the crop is crimped, mowed to the correct height and the swath width allows for maximum exposure for sunlight and wind. A properly set conditioner will help speed the first 20-30% of initial drydown.
2. **Raking and/or tedding:** Turn the windrow at the proper time to minimize crop loss but maximize exposure to sunlight/wind to finish the next 30% of drydown prior to baling.
3. **Installation of a preservative application system:** After mowing and raking, if the crop remains at too high of a moisture level to safely bale, a preservative such as Hay Guard can make the difference.

There are benefits to baling at a higher moisture level rather than waiting for a crop to become fully sun cured. A few examples of these benefits include:

1. **Widening the baling window:** Adding hours to the beginning or end of the day allows for more efficient use of labor and equipment. This means less time sitting and waiting on moisture conditions and more time baling and getting to the next field.
2. **Reducing damage to crop regrowth:** Completing the baling and removing bales from the field earlier allows the next cutting to regrow more quickly and increase the long-term life of the stand. Studies conducted by the University of Wisconsin show that each day of delay from 2 to 5 days resulted in an average 6% yield reduction in the following cutting. If the crop receives rain and baling is delayed several days as a result, the following cutting may have a yield reduction much higher.
3. **Improved nutrition and quality:** On-farm research conducted by ISF has shown that alfalfa harvested at 20% moisture resulted in an RFV of 181, compared to an RFV of 121 when harvested at 12% moisture from the same field. This demonstrates the value in quality, as well as tonnage, by harvesting at a higher moisture.

Hay Guard has several features that set it apart from competing products. It's available in both liquid and dry formulations that come ready to use with no additional handling or mixing. A variety of packing options exist to meet the needs of both small and large producers. It is manufactured from oxygen scavenging sulfite compounds that are non-corrosive, safe to handle and have a 3-year shelf life. Lastly, Hay Guard is readily available and priced competitively through your local Animal Health International sales representative.

HAY GUARD®

SALES MANAGER

Bill Younk | 970.381.4530 | bill.younk@animalhealthinternational.com

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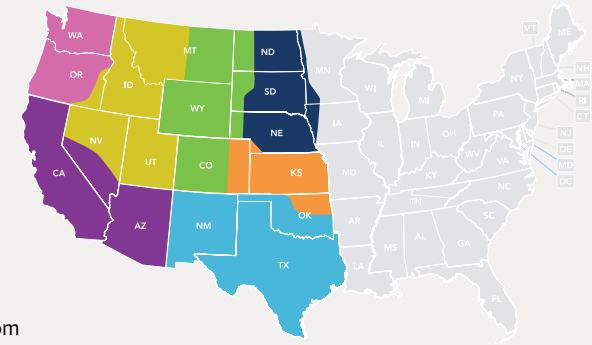

- Joe Bourn | 208.212.4449 | joseph.bourn@animalhealthinternational.com
- Colton Negus | 559.783.3780 | colton.negus@animalhealthinternational.com
- Bill Younk | 970.381.4530 | bill.younk@animalhealthinternational.com
- Layne Moore | 402.443.9621 | layne.moore@animalhealthinternational.com
- Eric Folkner | 817.807.5999 | eric.folkner@animalhealthinternational.com
- Bill Younk | 970.381.4530 | bill.younk@animalhealthinternational.com
- Wyatt Patterson | 620.805.2097 | wyatt.patterson@animalhealthinternational.com
- Courtney Hirai | 509.855.2454 | courtney.hirai@animalhealthinternational.com

For more information about our inoculant products and services contact your Animal Health International sales rep or visit our website.

800.483.7387 | animalhealthinternational.com/inoculants