Animal Health International Inoculant Team Newsletter

ENHANCING FEED QUALITY

WINTER
24-25

Lallemand's CleanFeed approach

Lallemand's CleanFeed Approach is a comprehensive strategy designed to maximize feed efficiency and milk production through scientifically backed products, expert-provided services, and on-farm assessments. Our internal experts and on-farm services can help guide you in optimizing your forage production and management from field to feed bunk. We regularly test your silage and follow up to ensure our solutions are effective, filling any gaps in your operation to boost productivity and profitability. We don't just provide products, we look at your farm holistically, working with your team to find the best solutions, whether through products or management practice optimizations.

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Animal Health INTERNATIONAL a Patterson Company

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Lallemand's CleanFeed Approach

Lallemand Animal Nutrition

Value beyond products

Lallemand's team helps translate science into best practices, offering tailor-made services and expert technical support to ensure optimal application of our solutions and make recommendations to address the challenges present on a farm.

Our services are customized to meet each farm's unique needs. With tools like Lallemand's Explorer Program, our team provides data and insights for informed decision-making about your forage and feeding program. The Explorer Program is a modern on-farm assessment that collects numerous data points to serve as a technical deep dive into your silage pile, management and feeding procedures.

Our team also helps facilitate regular on-farm monitoring and employee training, including pen audits evaluations and safety training, where we help identify areas for improvement and ensure best practices are followed.

The importance of hygienic practices

The CleanFeed Approach encourages on-farm hygiene to preserve feed integrity, support gut microbes, and enhance animal health and performance. Our experts highlight often overlooked management practices that can be simple, yet crucial for cattle health, feed efficiency and overall farm productivity.

Education and continuous support

Education is a cornerstone of the CleanFeed Approach. Lallemand offers ongoing training and resources to keep producers and their employees informed about the latest advancements in animal nutrition and farm management. From the latest research to in-depth handbooks, our team is always available to provide support and answer questions, ensuring farmers have the knowledge and tools they need to succeed.

At the end of the day, it is about using the resources you have in a sustainable manner that optimizes the forage supply and the health of your herd. By incorporating the right products, hygienic management practices and dedicating time to optimize your current program with the help of experts, your operation can have high-quality stable silage at feedout, and your herd is ready to perform to their genetic potential. Learn more about Lallemand's CleanFeed Approach on our website, www.cleanfeedapproach.com.

LALLEMAND

Valuable services and tools to enhance silage management

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At Novonesis we have an extensive portfolio of value-adding services and tools that has been expertly designed to optimize livestock feed quality and enhance farm productivity of silage. These services empower farmers with the insights and solutions necessary to meet modern agricultural challenges, ultimately improving animal health and increasing productivity.

One key among our offerings is the Micro Tracer Test, which assesses the proper mixing of Total Mixed Rations, ensuring nutritional and product inclusion consistency and uniformity. Additionally, our Fecal Screening service evaluates manure quality and digestion efficiency, allowing for comparative analyses before and after probiotic treatment. This provides valuable insights into digestive efficiency and overall animal health.

To maintain optimal feed storage conditions, we offer robust temperature monitoring solutions such as Time Series Temperature Determination and Single Point Temperature Determination. These tools enable repeated assessments of silage heating status and temperature fluctuations, which are critical for minimizing spoilage risks. Our industry-leading Nutrient Scorecard™ plays a vital role in capturing both objective and subjective evaluations of silage quality, while the Water Hygiene Test ensures a clean water supply for livestock health. Our Time Lapse Videography services provide insights into herd behavior and feeding effectiveness, allowing farmers to fine-tune their management practices for optimal productivity.

Additionally, the Silage Inoculant Wheel and Forage Moisture Testing services guide farmers in selecting the right inoculants based on crop dry matter. This is essential for feed quantity and quality. Our S.A.F.E. Program reinforces our commitment to quality by ensuring meticulous over-sight of critical control points during forage harvest, inoculant application, ensiling, and feedout. This program enhances the quality and safety of feed while reducing potential risks associated with silage management.

Combined with our Thermal Imaging service, which identifies feed quality and aerobic instability, farmers can ensure optimal storage conditions and improve silage management. Expert drone pilots capture not only thermal images, but precise measurements down to 1", allowing for inventory calculations, new pile planning, and other key metrics.

By integrating these advanced services and tools, farmers can improve feed quality, livestock health, and overall farm productivity. Our comprehensive approach allows for significant enhancements in livestock productivity and sustainability, paving the way for a more profitable agricultural future. Through our commitment to innovation and quality, we strive to meet the evolving needs of the agricultural sector, fostering a healthier and more sustainable livestock industry.

novonesis

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

In the beginning... how silage oxygen barriers came to be

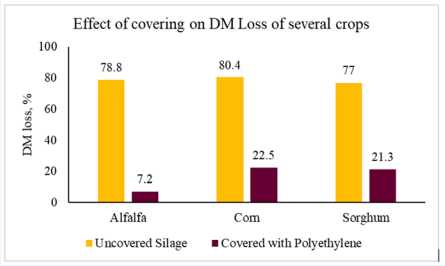
The evolution of silage cover technologies reflects significant advancements in preserving silage quality and reducing top spoilage. In the early days, silage was often stored in pits or piles without any form of cover, leaving it exposed to the elements. This exposure led to great losses due to weather damage, animal attacks, and most notably oxygen infiltration, which promotes spoilage through aerobic microbial deterioration. The lack of protection resulted in high dry matter (DM) losses, poor fermentation, and nutrient degradation. With the advance of technology and the need to preserve silage yield and nutrients to maintain high levels of animal performance, Passion Ag recognized the necessity for high quality oxygen barriers, now established as the gold standard in terms of silage protection. Passion Ag products are manufactured using premium quality materials and the latest production technology to guarantee minimum oxygen ingress and ensure maximum return on investment.

The early days: Dirt and crop residues

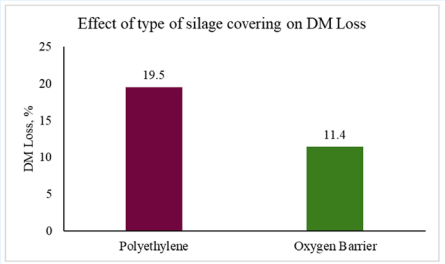
The first attempts to cover silage involved using readily available materials—dirt and crop residues. Farmers used soil to cover silage piles, creating a barrier that protected their silages against air and animals. This method had numerous downsides. Besides letting water through, dirt as a covering material was heavy, difficult to manage, and introduced contaminants into the silage. Crop residues like straw or corn stalks were also used but were less effective at excluding oxygen and allowed extensive spoilage and poor fermentation.

Polyethylene plastics: A big step forward

Real improvements came in the 1950s with the introduction of polyethylene plastics as silage covers, which drastically reduced the DM losses of silages. Markedly, there was widespread adoption and improvement in silage preservation because these materials were lightweight, easy to apply, and provided better barrier against the elements than dirt or crop residues. However, standard polyethylene plastic still allowed for oxygen permeability, leading to spoilage and poorer fermentation in the outermost layers of silage. This issue encouraged the search for more advanced oxygen barrier materials.



Adapted from Bolsen et al. 1993. Rate and extent of top spoilage losses in horizontal silos. J. Dairy Sci., 76 (1993), pp. 2940-2962.



Adapted from Wilkinson and Fenlon, 2014. A meta-analysis comparing standard polyethylene and oxygen barrier film in terms of losses during storage and aerobic stability of silage. Grass Forage Sci., 69 (2014), pp. 385-392.

Oxygen barriers: The next best thing

In the early 2000s, oxygen barriers made with different raw materials (resins) were the next step in silage cover technology. They offer greater resistance to oxygen infiltration than standard polyethylene plastic and can be incorporated into multilayered silage covers to improve their effectiveness. These multilayered films helped improve fermentation and reduce spoilage, particularly at the surface of the silage pile/bunker where exposure to air was greatest. However, not all raw materials are made the same, have the same quality standards or the same level of oxygen barrier protection. Passion Ag oxygen barriers are exclusively made with topnotch quality raw materials and the most recent and advanced technologies with the highest oxygen barrier level, which drastically reduces oxygen ingress, leading to minimal to no top spoilage and excellent preservation of silage yield and quality. Besides ensuring proper fermentation throughout the silage pile or bunker, reducing dry matter loss and preserving nutrients at greater extents than other silage covers, Passion Combo, our lead seller product, combines Passion Yellow (1.8mil oxygen barrier) and a white-on-white film (5mil polyethylene) in single roll for a tight cling and excellent toughness. It has a unique folding pattern that allows for covering silage piles and bunkers with a one-pull movement which minimizes labor and time, while the white-on-white film provides protection against the UV light and maximum reflectiveness. The ability to virtually block oxygen associated with the easiness of application and UV protection makes Passion Combo the most effective product for reducing top spoilage, enhancing silage quality, and saving time and labor required for silage covering, which allows farmers to protect their feed yields and maximize nutritional value for their livestock.

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