SPECIFIC FOR YOUR SUCCESS

IN THE MIX #69

AUTUMN 2026

THROW BACK TO THE MID 90S

Silage preserved in time

OUR NEW OFFICE ADDRESS

SUITE 12, 84 WISES RD, BUDERIM, QLD 4556

SPECIFIC FOR YOUR SUCCESS

IN THE MIX #69

AUTUMN 2026

We're pleased to announce the appointment of Technical Services Manager **Ben Ree** to the team.

Based in **Tenterfield**, NSW, Ben provides nutrition and animal health advice to beef and dairy producers in Northen NSW. For the past five years, he has been a field advisor with Agsolutions Australia, a family-owned company focusing on soil regeneration and livestock nutrition.

Ben Ree

Prior to that, he spent seven years as store manager with Pursehouse Rural, Warwick, and AGnVET, Theodore NSW.

Ben holds a **Bachelor of Applied Science (Hons)** from the University of Queensland – Gatton.

Lallemand Animal Nutrition employs one of the largest and most experienced teams of livestock nutrition and animal health advisors in Australia, with 11 customer-facing Technical Services Managers.

Don't *FALL* behind this autumn

Key Dates for Autumn 2026

APR 15 - 17 Wagyu Conference (QLD)

MAY 12 - 14 Food with Purpose (QLD)

JUN 1,3 & 5 Calf Academy (VIC & QLD)

Welcome

Welcome to another edition of **In The Mix** and once again, it's packed with insight, updates, and stories from across our business.

We're operating in **a world that feels more uncertain** than anything most of us have experienced: global tensions dominating headlines, interest rates and inflation creating economic whiplash, share markets swinging, record-breaking rainfall in some regions while others remain stubbornly dry, and even fuel shortages for good measure.

But through all of this, one thing stands firm: **we work in the best industry** in the world. Every day, we contribute to feeding people - an essential, **noble responsibility** that continues no matter what the world throws at us. Long may it last, and long may it be appreciated.

Enjoy the read.

Alex Turney - Country Manager (AUS, NZ, RSA, IND)

The importance of UV protection for silage: seal, secure & protect your feed

Maintaining silage quality doesn't stop once the bunker is sealed. Day to day management plays a huge role in keeping feed clean, cool, and consistent, especially when sunlight, weather, and wildlife start to test your silage storage. Before diving into the science of UV protection, here are a few simple regular maintenance checks worth making part of your routine:

Regular maintenance tips

- **Walk your stack often:** Check for animal damage or small holes that are easy to miss from a distance.
- **Keep everything weighted and sealed:** Make sure gravel bags or tyres haven't moved off joins or edges.
- **Stop any flapping plastic:** Movement in the wind drastically shortens the life of silage film and your covers.
- **Avoid chemical drift:** Agricultural sprays can degrade plastics over time.
- **Store woven UV covers correctly:** Fold UV covers after use and keep them in the shed to extend their lifespan.

Why UV protection matters

Silage is one of the most valuable resources on many farms, and protecting it is essential for maintaining quality, efficiency, and profitability. While packing, inoculation, and sealing are all key steps in the ensiling process, one factor is often underestimated: UV radiation.

Sunlight may look harmless, but UV rays can break down important nutrients in silage, including proteins and carbohydrates. This not only reduces the feed value but can also encourage undesirable moulds and mycotoxins, both of which compromise animal performance and feed-out consistency.

How SilageKeeper UV covers help

SilageKeeper woven UV protection covers provide an additional layer of security designed to maintain silage integrity for the short, medium, and long term. These heavy-duty, reusable covers help by avoiding exposure to sunlight:

- **Preserving nutrients:** Minimising UV degradation to help maintain the nutritional value of your silage.
- **Reducing mould and mycotoxin risk:** Lower sunlight exposure creates a less favourable environment for fungal growth.
- **Supporting long-term silage quality:** Acting as a barrier against weather, wildlife, and physical damage.
- **Offering double-duty protection:** The tightly woven fabric prevents most animals, birds, and tyres from piercing or damaging your silage film, helping keep oxygen out.

Why this matters for your operation

A well-sealed, well-protected silage stack leads to more reliable, higher-quality feed. Over time, this contributes to:

- **Feed security**
- **Maintain and maximise animal production from conserved forages**
- **Lower feed costs through reduced waste**
- **Greater confidence in year-round feed quality**

Choosing a robust sealing system helps prevent short-term and longer term losses, and adding a UV protection cover helps ensure your silage remains fit for purpose. Sealed, secure, and protected throughout its storage life.

Now's a great time to inspect your pits

It's always worth taking a closer look at your silage area. A quick inspection today can prevent losses tomorrow, and help ensure your animals receive the high-quality feed they deserve.

Managing post weaning challenges: A streamlined toolbox for piglet success

David Saornil, Lallemand global swine application manager

The first week after weaning remains one of the most difficult transitions in swine production. Piglets face abrupt dietary, microbial and social changes while digestive and immune systems are still developing. With reduced reliance on antimicrobials and zinc oxide, producers are turning to natural, science based tools to support this critical phase.

Key Takeaways

- **Environmental microbiomes matter:** Applying a positive biofilm after cleaning helps stabilise nursery microbial ecosystems.
- **Gut resilience is essential:** Support microbial balance, immunity and oxidative stress control to improve post weaning outcomes.

A holistic toolbox for post weaning

Modern strategies integrate environment, gut health and nutrition to address the multifactorial stressors piglets experience after weaning.

From hygiene to microbial ecosystem management

Standard cleaning removes both harmful and beneficial microbes, leaving surfaces vulnerable to colonisation by pathogens such as E. coli and Clostridium. Lallemand researchers have introduced an additional step: applying beneficial Bacillus and lactic acid bacteria after disinfection. These organisms form a protective, positive biofilm that limits pathogen attachment and growth. Field results show this contributes to maintaining a safe microbial environment in the farm building, ultimately producing better piglet performance and lower mortality in the early post weaning period.

Building resilience before weaning

Sow gut microbiota influences piglet immune and microbiota development. Adjusting sow nutrition during gestation and lactation can enhance colostrum quality, support early microbial colonisation and reduce neonatal diarrhea (Figure 1). This combined with appropriate weaning age, vaccination and adequate birth weight further prepare piglets for the milk to feed transition.

Early exposure to solid feed before weaning—commonly referred to as creep feeding —encourages voluntary intake and facilitates adaptation to post-weaning diets. (Figure 2) This pre-weaning preparation reduces the temporary anorexia that often exacerbates digestive stress immediately after weaning.

More tips to include in your weaning toolbox.

Belgian trial: integrating gut health support

A 2025 Belgian study with 447 piglets tested microbial strategies to control gut inflammation. Supplementation with the probiotic yeast Saccharomyces cerevisiae var. boulardii CNCM I 1079 reduced biomarkers of intestinal inflammation (fecal calprotectin, salivary haptoglobin) and improved gut barrier function. Piglets also showed better feed conversion, daily gain and final weight, delivering a strong economic return.

Precision nutrition for immature digestive systems

During weaning, low stomach acidity and limited enzyme production increase the risk of undigested proteins fermenting in the hindgut. Hydrolysed yeast ingredients provide highly digestible peptides that young piglets absorb efficiently, and recent trials show they can boost intake by 17% in the first post weaning week[3].

Hydrolysed yeast also contain balanced fermentable fibre to support beneficial hindgut microbes and encourage production of SCFAs such as butyrate, which strengthen intestinal cells and immunity.

Managing oxidative stress

Weaning, viral challenges and social changes can trigger oxidative stress, weakening immunity and slowing post-weaning recovery. Selenium enriched yeast and natural sources of superoxide dismutase (SOD) help reinforce antioxidant defences, reducing mortality and improving performance under heat or viral stress[3].

Conclusion

Swine production is moving from chemical based approaches, toward strategies that work with natural microbiota and physiology. By combining improved hygiene, effective vaccination, strong biosecurity and precision nutrition, producers can build piglet resilience, enhance health and meet evolving regulatory and consumer expectations.

Figure 1: A holistic approach to address the multifactorial challenge of post-weaning

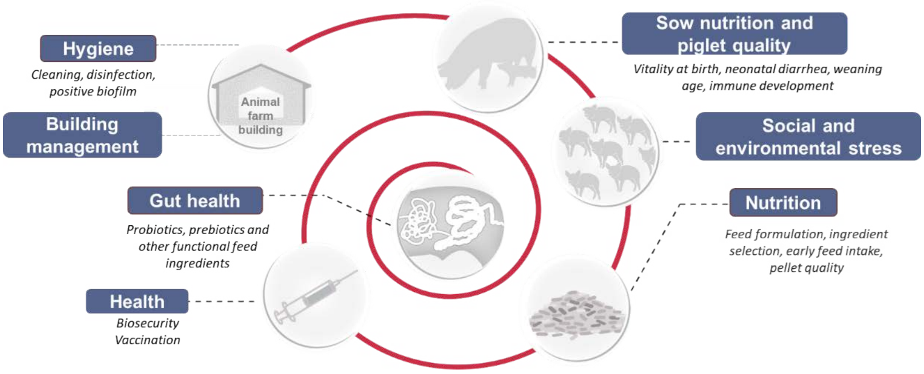
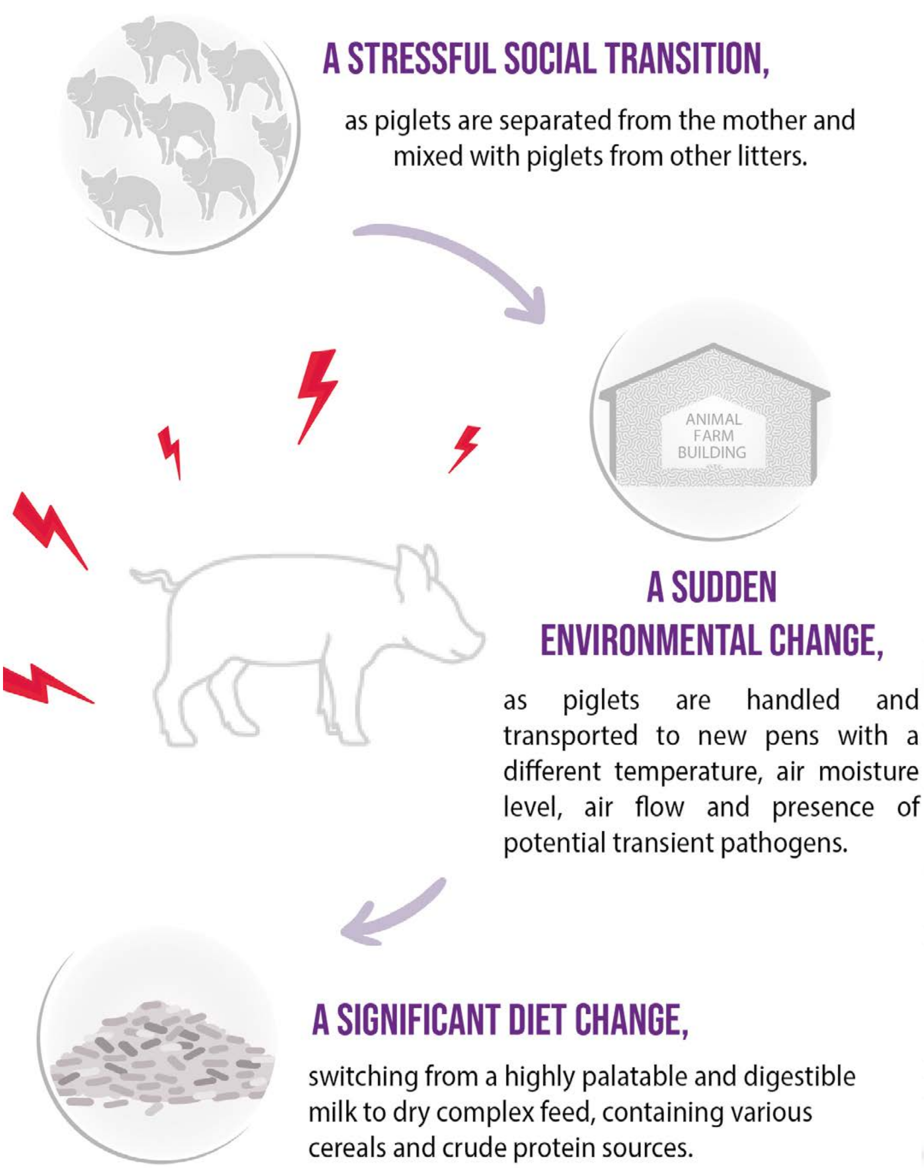


Figure 2. Serial external stresses around weaning



Expert Interview: Managing gut health in high-producing dairy cows

As part of our Expert Interviews series, we met with **Mike Steele**, Research Scientist at the University of Guelph (Canada), to discuss a critical topic: Digestive challenges in high-producing dairy cows during the transition period and effective management strategies.

Why is taking care of the total digestive tract crucial to ensure that high producing cows express their full genetic potential?

Well, firstly, the gastrointestinal track is really important for absorbing, as well as digesting nutrients. In addition, it's a barrier to diffusion from the gut into circulation. It's really critical to have a very healthy gut, not just the rumen and the fore stomach, but also the lower gut, the small and large intestine, in order to get more nutrients absorbed. It also ensures a stronger barrier to reduce inflammation.

What is the link between inflammation and early stage lactation performance?

If we have cows with high inflammation and they can't get rid of this inflammation quickly, they're going to have chronic diseases in early lactation. This is why we want to do everything we can to minimise inflammation in early lactation. Inflammation comes from stress. It can be gastrointestinal disorders or abrupt dietary changes. But it can also be an important change in their environment, or a really rough calving or mastitis. Stress can come from many different places. We have to do everything we can to minimise stress and try to resolve inflammation quickly in early lactation.

How can a farmer decrease inflammation?

Decreasing inflammation can come from many different areas. I focus on the gastrointestinal tract. We look at ways of adapting the diet from a dry cow diet to an early lactation diet to minimise what we call leaky gut. However, inflammation can come from everywhere. Stress from the cows' environment, moving their environments and pens frequently, an infection of the uterus or even the mammary gland. It can all contribute to inflammation. Thus, we have to take care not only of the nutrition, but also of the environment of the animal during the transition period in order to minimise inflammation.

How can intestinal health issues be detected on farms? Is it easy to identify?

It's very challenging to detect intestinal health issues on farm. One way is to look at the fecal matter of a cow and see if it's bubbly. That's an indication of bypass starch, which could cause inflammation in the lower gut. However, it's very challenging even experimentally, to determine if a cow is suffering from an intestinal disorder. A lot more work needs to be done in this area.

What feeding strategies can help improve gut health, particularly during transition period?

Making sure you adapt the diet properly. In early lactation, we can feed fresh cow diets, which can include specific additives to improve overall health, also having a gradual transition and even looking at the fermentability of the diet. Slower fermentation and early lactation appear to have a benefit to the rumen and the cow throughout its entire lactation.

Rumen Event: Back to school for calf rearers and the science to back it

We have extended our popular workshop series to cover calf rearing at the inaugural Calf Academy program to be held at Inverloch, Victoria (Monday, 1 June); Bendigo, Victoria (Wednesday, 3 June) and Townsville, Queensland (Friday, 5 June).

The program is the sixth to be presented by Lallemand Animal Nutrition in Australia over the past eight years.

Country Manager, Alex Turney, says the company is committed to providing unique learning experiences for livestock producers and advisors.

"We are particularly proud of this program, which aims to help dairy and beef producers to unlock the full potential of their calves from the day they are born right through to weaning, and ultimately, their first calf or finishing.

"Regardless of your particular situation and objective, it all comes back to developing a healthy and stable microbial population in the rumen, which is the driver of health, growth and fertility.

"We want to present cutting edge R&D and then translate that into practical, profitable practices that our customers can take home with them.

The comprehensive agenda features three speakers, who are each globally-recognised as leaders in the fields of calf and immune development.

Lallemand Animal Nutrition Global R&D Program Manager for Ruminant and Forage, Dr Clothilde Villot, will share global R&D perspectives on early life gut development and microbial nutrition in her presentations, Calf Physiology 101 and The Journey From First Colostrum to the Mature Microbiome.

Dr Villot holds a PhD from INRAE, France, and completed post doctoral research at the University of Alberta and the University of Guelph, specialising in rumen health and calf gut development.

Lallemand Animal Nutrition Ruminant Technical Services Specialist, Dr Tricia Wood, will present Calf Nutrition 101 and then the Commercial Realities of Putting Calves First,

Dr Wood has more than 15 years' experience in dairy nutrition and immune development, with degrees from Iowa State University focused on animal physiology and probiotic applications.

While University of Guelph Professor, Dr Michael Steele, will present Calf Performance 101, Performance Systems and insights into the Third Trimester and Transition of the Dam.

Professor Steele has authored more than 170 scientific papers and is a member of the Journal of Dairy Science '100 Club'. He currently serves as a Research Chair with the Natural Sciences and Engineering Research Council of Canada, with research centred on gastrointestinal health and development in cattle.

Rethinking bedding: Preserving Barn Hygiene with Microbial Solutions

Livestock bedding does much more than provide comfort. It acts as a living ecosystem where biological and chemical processes constantly take place. The microbial activity within bedding can affect animal health, air quality and even manure quality.

Bastien Frayssinet, Applications Manager for Animal Environment

Traditionally, bedding management has focused on moisture control, cleanliness and regular renewal. Interest is growing in biological solutions that harness natural microbial processes. Applying beneficial bacteria and enzymes helps maintain bedding quality, reduce odors and ammonia emissions, create a healthier environment for animals and workers, and enhance the fertilising value of manure.

How bacterial bedding solution works

Bacterial bedding solutions use carefully selected bacteria that can be combined with enzymatic compounds. When applied to bedding areas or surfaces, these microorganisms colonise the area and initiate a beneficial environment.

The enzymes—either added directly or produced by the bacteria themselves—break down fibrous organic matter into simpler fermentable sugars. Then, a highly concentrated blend of bacteria—including lactic acid bacteria and Bacillus—uses these fermentable sugars to promote robust bacterial growth and fermentation. The result is a more stable, balanced microbial environment where beneficial bacteria thrive and naturally limit the development of harmful ones (Figure 1).

Bedding quality and animal welfare

The bedding quality positively correlates with animal welfare and productivity (Figure 1). Dry, comfortable and microbially balanced bedding supports natural behavior and rest quality.

The impact of bedding quality extends across the entire production cycle. In young animals, stable microbial conditions can help limit early exposure to harmful bacteria and contribute to smoother growth and stronger immune development.

Whether in ruminants, swine or poultry, the same principle applies: when bedding is biologically active in the right way, it helps create a more balanced and resilient microbial environment.

Improving air quality and reducing ammonia

One of measurable outcomes of microbial bedding management is the reduction of ammonia (NH_3) emissions. Ammonia is released when urea and nitrogen-rich organic matter are broken down by undesirable microbial activity. Elevated ammonia can irritate animals' respiratory systems and increase susceptibility to disease.

By fostering beneficial fermentation, treated bedding helps prevent the loss through ammonia emission and retain the nitrogen. This means cleaner farm environment that supports livestock benefits and helps maintain the fertilising value of manure. Nitrogen retained in the bedding solution rather than volatilised as ammonia represents both a healthier farm environment and valuable nutrients preserved for soil application.

Implementation recommendations

For optimal results, consider these practical approaches:

Integration with management: Microbial solutions complement rather than replace good bedding fundamentals. Adequate bedding quality and quantity, proper ventilation and appropriate stocking density remain essential.

Application timing: Apply solutions early and regularly in the bedding cycle to allow beneficial bacteria to maintain the microbial balance of bedding.

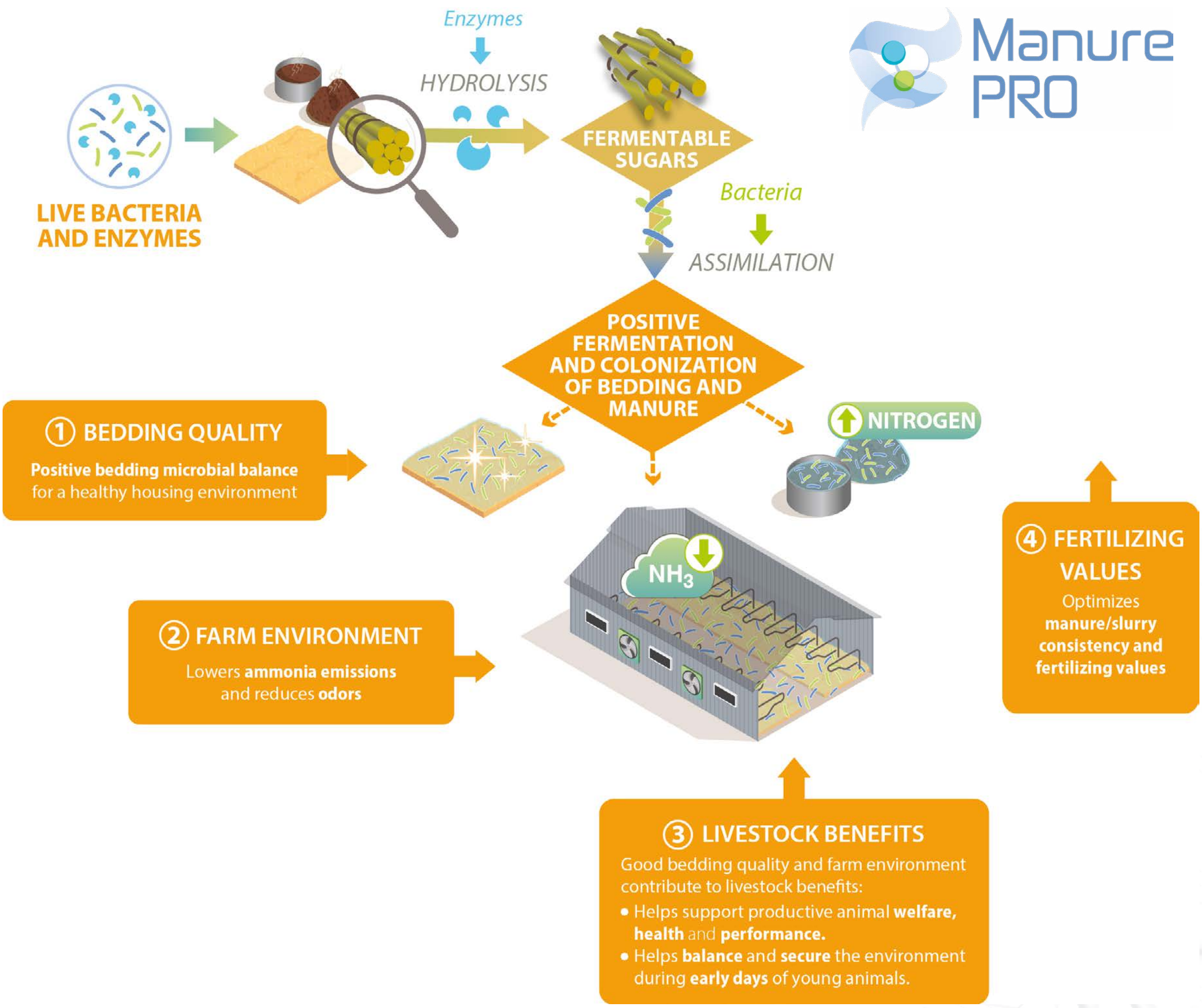
Looking forward

Microbial and enzymatic bedding solutions enhance rather than replace standard routines. Regular cleaning, ventilation and moisture control remain essential. Farmers adopting this approach often note longer-lasting bedding, fewer odor problems and more consistent conditions throughout the housing period. Ultimately, the combination of biological and practical management helps keep both animal comfort and farm efficiency while improving the long-term livestock systems.

Reference list

If you would like a copy of our reference list, please contact us as we would be more than happy to share them with you.

Figure 1. The mechanism of microbial bedding solutions



Australian feedlots examine probiotic BRD therapy

AUSTRALIAN feedlots have been quick to explore the role of a probiotic that has been shown to significantly reduce the incidence and severity of Bovine Respiratory Disease (BRD) in grainfed cattle.

According to Meat and Livestock Australia (MLA), BRD is responsible for between 50% to 90% of all feedlot deaths worldwide, with 18.2 % of all Australian lot fed animals found to suffer from at least sub-clinical disease.

Known for decades as 'shipping fever', BRD costs the industry an estimated to $60 million in lost production and treatment costs each year.

Common triggers shown to create an opportunity for BRD to occur include changes in the animal's environment, such as weaning, handling, transport, dehydration, ration changes, social mingling (boxed sale lots) and poor weather conditions.

Viral infections associated with BRD include Bovine Herpesvirus 1 (Infectious Bovine Rhinotracheitis), Bovine Viral Diarrhoea Virus, Parainfluenza 3 and Respiratory Syncytial Virus. Bacterial infections include Mannheimia haemolytica and Pasteurella multocida.

ProTernative is a strain-specific live yeast (Saccharomyces cerevisiae boulardii CNCMI-1079) that optimises gut health and boosts immunity in ruminants.

The yeast is also used extensively in human healthcare to restore native microflora populations in the gut after antibiotic treatment.

Its mode of action and beneficial effects have been documented in more than 600 scientific publications throughout the world.

Lallemand Technical Manager – Ruminants, Matt Bekker, says ProTernative is now being trialled in at least 10 Australian feedlots with many more in active consultation following the publication of the results of a large-scale commercial trial conducted earlier this year.

"These feedlots have a combined capacity greater than 100,000 head and range from some of the largest operators in Australia to small family-owned operations," he says.

"This inquiry follows directly from the outstanding results that Stockyard reported in 2025."

Stockyard examined the impact of ProTernative upon the incidence and severity of BRD in a six-month, 10,000-head trial under the supervision of its consulting veterinarian, Dr Matthew George of Bovine Dynamics.

The feedlot recorded a 37% reduction in pull rates; a 32% reduction in BRD cases; a 20% reduction in the number of cattle receiving any antibiotic treatment; and a 14% reduction in all-cause mortalities compared to the same six-month period the previous year.

BRD treatment costs were reduced by 44%.

These results are consistent with other large-scale commercial trials conducted in USA.

Matt Bekker says "ProTernative offers a number of important benefits to the Australian lotfeeding industry in terms of animal welfare, antibiotic stewardship and sustainability. It is also a consumer friendly solution the industry is backing with enthusiasm".

"Aside from the obvious health and performance effects, BRD outbreaks result in significant pen interruption with either identified cattle or complete pens being taken to the vet bay for antibiotic treatment. Today's best practice places greater focus on prevention using effective vaccination protocols and programes like animal pooling and assimilation pre-feedlot entry".

ProTernative®

"In fact, many feedlots now specify that backgrounded cattle must be pre-vaccinated.

"While being fed throughout growth to support immunity, ProTernative also compliments vaccination because it helps to prime the animal's own immune response system. The mode of action allows adequate response to the vaccine, while moderating the immune signalling response, allowing the animal to build robust immune defence".

Matt says probiotics are now extensively used in livestock production in Europe and North America with adoption growing beyond production capacity in some instances.

"Antibiotics create modified rumen and gut environment by removing unwelcome, introduced microbial species," Matt says. "This affects the entire microbial population with off-target microbial interruption".

"ProTernative probiotic achieves the same outcome by creating a desirable environment for the proliferation of beneficial microbes native to the host.

"ProTernative is known to prevent harmful pathogens, such as Clostridia spp., Vibrio cholera, Salmonella spp., Shigella spp. and E. coli, from adhering to the gut epithelium, reducing infection and inflammation.

"Remembering ruminant health and performance is not just about the rumen".

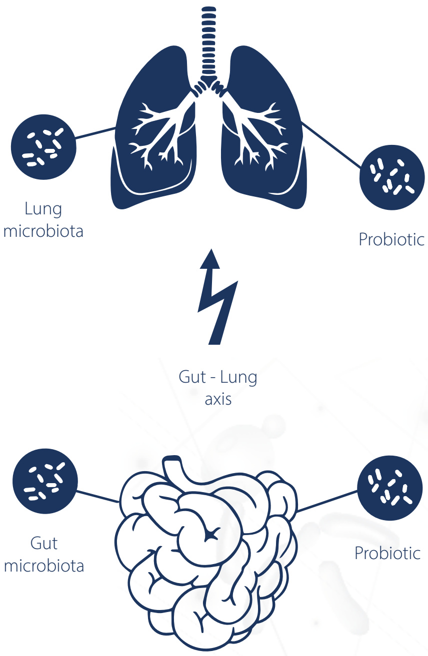
"There's another 47 metres of gut that is delicately protected by an epithelial barrier that is only one cell deep.

"ProTernative demonstrates the full suite of its immunobiotic properties when introduced to the intestine through feed. It activates the animal's immune system to reduce the negative impact of stress and supports systemic barrier integrity from the gut wall to the lungs."

Matt Bekker, Technical Manager, Ruminants, AUS & NZ

LOWER GUT HEALTH & BRD: THE HIDDEN CONNECTION

Strong **GUT**, Strong **Lungs**



Address **gut dysbiosis** and **leaky gut** to help decrease vulnerability to BRD.

The evolution of silage: From pits to precision and where Lallemand fits into the story

Silage has come a long way. The image above reflects a time when silage making relied on instinct, weather and available machinery. Today, it is a science backed, precision driven process. Throughout this evolution, Lallemand has helped farmers improve forage quality and consistency.

Where silage began

Preserving forage through fermentation dates back thousands of years, with early records from China and Europe describing chopped forage stored in pits. Modern ensiling emerged in the late 1800s and early 1900s alongside mechanical choppers and a better understanding of anaerobic fermentation.

In Australia, many farms through the 1960s–80s relied on dirt wall pits and basic machinery. As silage systems expanded, one lesson became clear: good fermentation doesn't happen by chance.

Heating, dry matter losses, mould growth and inconsistent animal performance drove research into what happens inside the stack. This work identified lactic acid bacteria (LAB) as the key drivers of fast, efficient and stable fermentation, marking the point where science reshaped silage.

Lallemand's role in modern silage

With more than a century of expertise in microbial fermentation, Lallemand recognised that the precision used in baking, brewing and bioscience could transform forage preservation. By developing specific strains of beneficial bacteria, silage shifted from an art to a controllable biological process.

Today, MAGNIVA forage inoculants reflect decades of research and on farm experience, combining targeted strains of *Lactobacillus, Pediococcus* and *Lactobacillus buchneri* to deliver:

- **Rapid pH drop** to preserve nutrients
- **Improved aerobic stability** to reduce heating and losses
- **Consistent fermentation** for predictable silage quality

This reliability is especially valuable under Australian conditions.

Today, advances in harvest technology, compaction, sealing films, oxygen barriers and science backed inoculants MAGNIVA have turned silage from "hoping for the best" into a highly managed, high return feed strategy.

Lallemand continues to invest in research, microbial innovation and practical on farm solutions to help producers maximise every tonne of forage they grow. Silage may have started with simple pits and ingenuity, but its future belongs to precision, and Lallemand is proud to be part of that journey.

In The Mix is published four times a year.
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