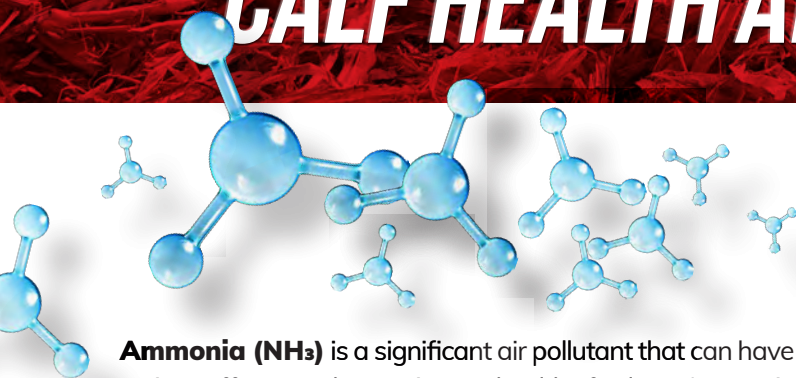




FIGHT AMMONIA FOR BETTER DAIRY CALF HEALTH AND PERFORMANCE



Ammonia (NH₃) is a significant air pollutant that can have serious effects on the respiratory health of calves. Ammonia present in the bedding of calf hutches or housing can cause:

- **Respiratory Tract Irritation:** Ammonia can damage the mucous membranes in the nose, throat, and lungs with prolonged exposure leading to inflammation, increasing susceptibility to respiratory infections.
- **Increased Risk of Pneumonia:** Calves in high-ammonia environments have a greater risk of developing bovine respiratory disease (BRD), including pneumonia. As ammonia irritation weakens calves' natural defense mechanisms pathogens can more easily invade the lungs.
- **Reduced Immune Function:** Chronic ammonia exposure can suppress immune responses, making calves more prone to bacterial and viral infections with slower recovery.
- **Impaired Growth and Performance:** Ammonia-induced respiratory distress can reduce feed intake, leading to poor weight gain and lower overall growth rates. Sick calves require more energy for recovery, reducing efficiency in weight gain and development.

THE POTENTIAL OF PROACTIVE ENVIRONMENTAL MANAGEMENT

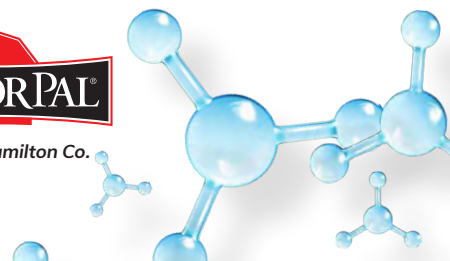
In recent years, many bovine veterinarians have taken a proactive approach to ensuring a smooth transition for calves including a focus on stress reduction, nutrition and preventative disease management. A key element of this approach is environmental management, ensuring ammonia levels are kept low (<5 ppm) to reduce respiratory disease risk and bedding is managed to prevent bacteria growth.

Attention to environmental management has the potential to:

- Reduce post-weaning respiratory disease (BRD), which is a major cause of mortality in young calves.
- Improve growth rates and future milk production by ensuring calves are not stunted by disease.
- Lower antibiotic use by preventing illnesses rather than treating them reactively.
- Enhance overall herd productivity by producing healthier replacement heifers.



by Jones-Hamilton Co.



ELIMINATING THE AMMONIA CHALLENGE FOR BETTER HEALTH

ParlorPal® is a safe and effective dry mineral acid that, when applied to bedding, activates immediately to neutralize ammonia, provide residual ammonia and odor control, and create a low pH environment that is unfavorable for bacteria growth. No ammonia means less stress and production losses due to compromised animal respiratory systems.

The potential of **ParlorPal** was put to the test on a dairy in South Dakota in 2024. Two weeks after calf placement, the hutches on the north side of the barn received weekly applications of ParlorPal while the hutches on the south side received no treatment. Additional product was applied on the north side pens, as needed, based on ammonia levels. All hutches were top dressed with new bedding weekly.

One week after relocation to transition pens, the lungs of all calves were assessed for the presence of lesions, with a 0 score indicating ideal lung health and a score of 2 or above indicating compromised lungs. The calves on the north side of the barn treated with **ParlorPal** had a statistically significantly greater number of 0 scores than the south side (**Chart 1**).

Calves raised in pens treated with **ParlorPal** also showed a statistically significantly lower number of 2+ scores as compared to the non-treated calves (**Chart 2**).

It is known that respiratory health can have a significant impact on the long-term health and productivity of a cow; therefore, the veterinarian at this farm will continue to follow the health and production levels of these two groups of cows through their first lactation to further assess the impact of improved lung health early in life. Connect with a **Jones-Hamilton** representative to be the first to hear about those findings.

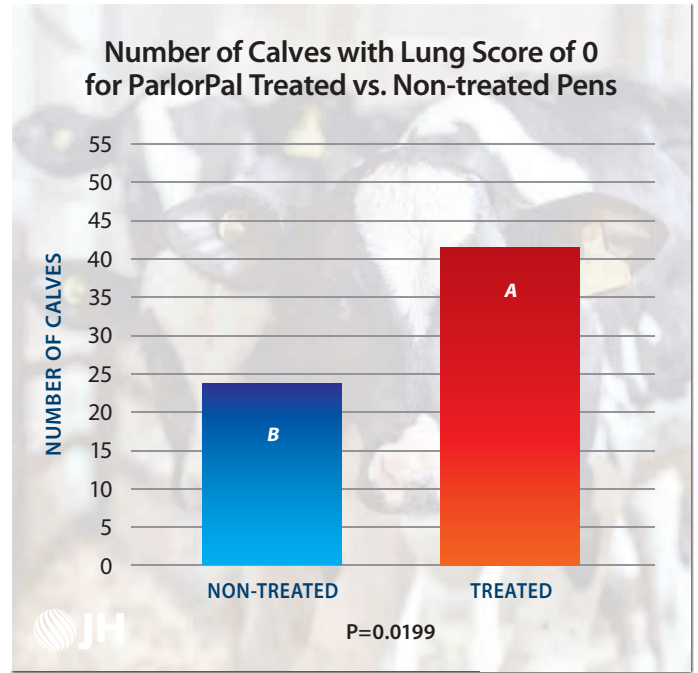


Chart 1

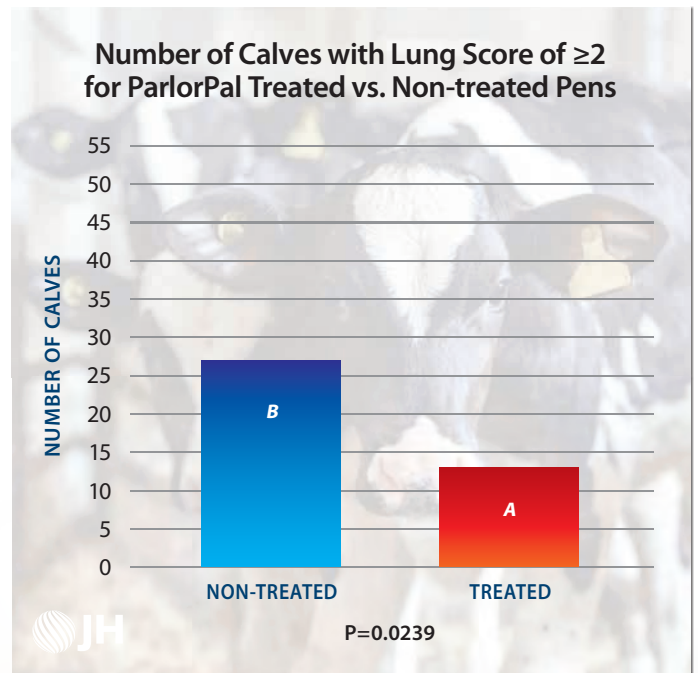
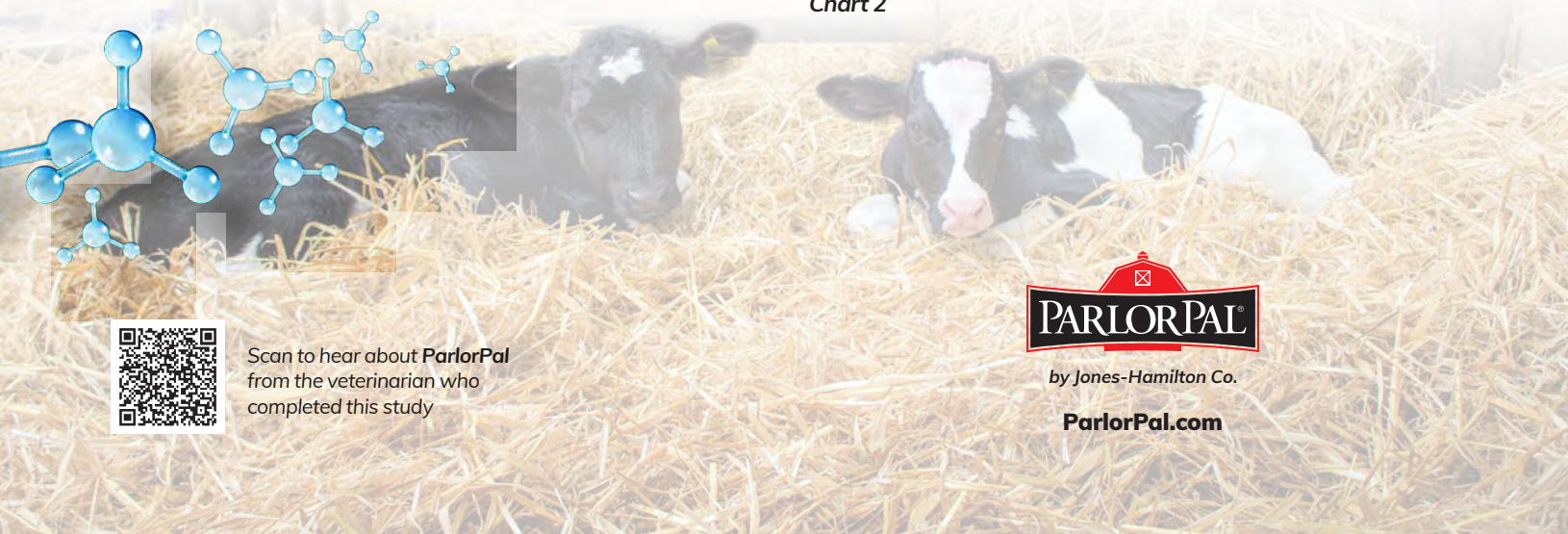


Chart 2



Scan to hear about **ParlorPal** from the veterinarian who completed this study



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ParlorPal.com