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THE COLOSTRUM COUNSEL

Colostrum Beyond the First Feeding: Supporting Calves Through Diarrhea

Introduction

As the dairy industry continues to evolve under the pressure of antimicrobial resistance, producers are seeking alternatives to traditional antibiotic therapies, especially for common calfhood diseases like diarrhea. One promising solution is colostrum, not just as a preventive measure, but as an intervention during cases of diarrhea.

Diarrhea remains the leading cause of morbidity and mortality in preweaned calves, often triggered by a complex interplay of environmental, management, and pathogenic factors.

While prevention is paramount, ensuring adequate colostrum intake at birth, maintaining hygiene, and minimizing stress, supportive therapy is critical when diarrhea does occur.

Colostrum as a Supportive Therapy: Evidence from Research

A study conducted at a commercial calf-raising facility in Southwestern Ontario (Carter et al., 2021) evaluated the effect of colostrum supplementation, provided at the onset of diarrhea, on calf health outcomes. Calves were randomly assigned to one of three treatment groups:

1. Control (CON): Milk replacer only
2. Short-Term Colostrum (STC): Colostrum-milk blend for 4 feedings over 2 days, followed by milk replacer
3. Long-Term Colostrum (LTC): Colostrum-milk blend for 8 feedings over 4 days

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Calves in the LTC group showed clear benefits compared to CON, including:

- Diarrhea resolved 2 times faster
- Improved average daily gain (+98 g/day)
- Significantly larger body weights on days 42 (+4 kg) and 56 (+ 6 kg) post-enrollment

These findings support the therapeutic use of colostrum beyond the first feeding.

Its rich supply of antibodies, growth factors, nutrients, and antibacterial activity helps repair intestinal damage, support immune function, and restore gut health, without disrupting microbial diversity like antibiotics often do (Carter et. al, 2021)

Why Antibiotics Aren't Always the Answer

Because the most common causes of calf diarrhea are viral or parasitics, antibiotics can be ineffective, and their use can negatively impact the calf's gut microbiome.

Studies have shown that antimicrobial use can reduce microbial diversity and impair immune development (Urie et al., 2018; Oultram et al., 2015). Instead, effective management should prioritize fluid therapy as the cornerstone of treatment to prevent dehydration and support recovery.

Alongside fluids, colostrum offers a natural option that can aid recovery without compromising long-term gut health.

Key Takeaways

- Prevention is still the foundation: Ensure excellent passive transfer (≥ 300 g IgG within 8 hours of birth) and maintain clean, stress-free environments.
- Supportive care is essential: Isolate sick calves, hydrate, and respond quickly to symptoms.
- Colostrum is a versatile tool: Use it not only at birth, but also as a supportive agent during diarrhea episodes.
- Consult your veterinarian: Professional guidance ensures safe and effective treatment.

Colostrum is more than a first feed, it's a powerful, science-backed therapy that can transform how we manage calf diarrhea.

By integrating colostrum into both preventive and therapeutic protocols, producers can reduce reliance on antibiotics, improve calf outcomes, and support a healthier, more sustainable future for dairy operations.

References

Text summarized from:
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https://sccl.com/news/feeding-colostrum-as-a-therapy-for-diarrhea-inpreweaned-calves/

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