

Polyphenols in Livestock Production: Nurturing Gut Health and Speeding Recovery

By Precision Health Technologies

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In recent years, the livestock industry has been exploring natural alternatives to traditional growth promoters and antibiotics. Among these alternatives, polyphenols have gained significant attention for their remarkable potential in bolstering livestock health and production. Below, we provide a high-level review of recent research on polyphenols and their transformative impact on gut health and acute care for animals.

What are Polyphenols?

Polyphenols represent a diverse group of naturally occurring compounds found abundantly in plants. Their well-established antioxidant properties have made them an enticing area of study in the world of livestock production and veterinary science. This class of compounds encompasses flavonoids, tannins, lignans, and phenolic acids, each with its unique characteristics and health benefits.

Nurturing Gut Health with Polyphenols

Gut health is the cornerstone of animal well-being, and recent research shows that polyphenols have shown great promise in this regard:

- *Microbiota Harmony*: Polyphenols actively encourage the growth of beneficial gut bacteria while inhibiting the proliferation of harmful pathogens. This harmonious balance in the gut microbiota is pivotal for efficient digestion and nutrient absorption in livestock.
- *Antioxidant Allies*: Oxidative stress can be a significant concern for livestock, resulting from factors like environmental conditions and dietary shifts. Polyphenols, functioning as potent antioxidants, counteract oxidative damage and thereby contribute to the overall health of the animals.
- *Anti-Inflammatory Action*: Inflammation can trigger a cascade of health issues in animals. Polyphenols exhibit anti-inflammatory properties that help mitigate inflammation, thus enhancing the overall well-being of the livestock.
- *Immune Fortification*: A robust immune system is vital for livestock to fend off diseases. Certain polyphenols have demonstrated the ability to fortify immune function, rendering animals more resilient to infections.

Harnessing Polyphenols to Accelerate Disease Recovery

Polyphenols not only establish a healthy gut but also come to the rescue in critical situations:

- *Speedy Recovery:* In cases of acute illness or stress, polyphenols can play a crucial role in expediting recovery. Their anti-inflammatory and immune-enhancing properties help sick animals bounce back more swiftly.
- *Gut Restoration:* Acute gastrointestinal distress is a common issue in livestock. Polyphenols aid in the restoration of gut health, facilitating the return to normal digestive function.

Overcoming Common Challenges with Polyphenols

Delivering the potential of polyphenols to livestock production is core to Precision Health Technologies' mission and innovation plan. We've designed our products to overcome many of the challenges previously experienced in using polyphenolic and related products.

In the past, two recurring challenges in using polyphenols with livestock were the poor absorption in the digestive tract due to their large molecules and varying potency and effectiveness. Precision Health Technologies has focused its R&D resources and field applications to resolve these challenges using:

- *Tailored Formulations:* Customized formulations can support specific needs in swine, ruminants, and poultry. They ensure that animals receive an optimized expression of polyphenols through a proprietary combination of phenolic extracts and other all-natural compounds.
- *Species-Specific Solutions:* At Precision Health Technologies, we've leveraged high-grade extracts from grape, green tea and pomegranate to create unique, species-specific formulations. These formulations are designed to maximize the benefits of polyphenols while addressing the distinct requirements of different livestock species.
- *Dosage Precision:* After more than 8 years of practical experience working alongside livestock producers, we've fine-tuned dosing plans to ensure precision. Our dosage recommendations are based on common use cases and production procedures ensuring that animals receive the optimal level of polyphenols for their well-being.

By proactively resolving these challenges, Precision Health Technologies brings the all-natural, antibiotic-free healing power of polyphenols directly to producers and veterinarians. Our commitment to innovation ensures that we will continue to lead the way in delivering sustainable and healthier practices to the livestock industry.

If you have questions or would like to learn more about how to use our products to support the health of your or your clients' herds, please contact us.

For more information contact Precision Health Technologies, at (605) 696-5606.