# Micronutrition & Health Solutions Technical Article

## Navigating Vitamin E Shortages with Proviox™ 50: A Solution for Ruminant Nutrition

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The recent surge in the price of vitamin E has sent shockwaves through the livestock feed industry, leaving producers and feed formulators scrambling to find affordable alternatives. The situation has worsened with a looming shortage of vitamin E deliveries, creating a supply disruption that is significantly impacting costs. One product in Cargill's Micronutrition and Health Solutions portfolio, Proviox™ 50, offers a proven solution.

Proviox<sup>™</sup> 50 is a unique, global, and widely used solution, as well as a reliable and cost-effective option that can partially replace vitamin E in ruminant diets without compromising health and performance.

#### **Customer Challenges**

The recent market instability and supply disruptions surrounding vitamin E have created a significant challenge for livestock producers and feed formulators. With prices tripling in recent weeks and a shortage looming, producers are facing the difficult task of maintaining animal performance while adapting their feed formulations. The need for reliable alternatives has never been greater, as feed formulators scramble to find cost-effective solutions that won't compromise animal health. On top of these supply chain disruptions, formulators must also ensure accurate dosing, precise labeling, and maintain a steady supply of feed ingredients, all while grappling with the ongoing uncertainty of vitamin E pricing. Against this backdrop, Proviox™ 50 offers a proven solution that can alleviate these concerns and help producers weather the current challenges.

#### The Role of Antioxidants in Livestock Performance

Antioxidants play a crucial role in neutralizing reactive oxidants, also known as free radicals, which are naturally produced by all living organisms. Stressors such as heat, diseases, mycotoxins, transition period, and periods of high milk production can cause an increase in oxidant production, which can be detrimental to livestock health and performance. An optimal

balance between oxidants and antioxidants is essential for maintaining productivity in ruminants. The requirement in antioxidants increases also with increasing performance, gestation (for both the cow and the calf) , vaccination, and antioxidants can support milk and meat quality .

Proviox<sup>™</sup> 50 provides a unique formulation of plant polyphenols with high antioxidant properties that not only protect animals from oxidative stress but also support their performance during challenging production phases.

#### Proviox™ 50: A Proven Solution

Proviox<sup>™</sup> 50 is a scientifically backed antioxidant feed additive that can be used to substitute part of the vitamin E above the minimum level required in livestock diets. With over 100 in-vivo trials conducted across multiple species, including ruminants, the benefits of Proviox<sup>™</sup> 50 are well-established, including:

- Improving Oxidative Status: Proviox<sup>™</sup> 50 helps neutralize harmful oxidants, reducing the level of vitamin E required in the diet. In several trials in dairy cows, calves and beef cattle, the reduction of vitamin E with Proviox<sup>™</sup> 50 added to the diet didn't affect the performances.
- Providing immune support: Proviox™ 50 has been shown to support immunity, especially in young animals that have limited ability to metabolize vitamin E.
- Support meat quality in beef and in lambs: with an addition of Proviox™ 50 we have seen in trials a good impact in the meat color stability and in the shelf life.

### **Cost-Efficiency and Real-World Application**

The skyrocketing price of vitamin E has driven the demand for cost-effective alternatives. Proviox™ 50 provides a practical solution for feed formulators by reducing the reliance on vitamin E while maintaining animal health and performance. In trials where vitamin E levels were reduced by 50% and supplemented with Proviox™ 50, livestock performance remained consistent, making it a viable and affordable alternative for feed producers.

Proviox<sup>™</sup> 50 is composed of a carefully selected blend of plant polyphenols, known for their potent antioxidant properties. These polyphenols work synergistically to regenerate vitamin E in the body and protect animals from oxidative stress. The formulation has been rigorously tested to ensure the highest level of purity, stability, and efficacy, making it a trusted solution for producers worldwide. This combination of polyphenols in Proviox<sup>™</sup> 50 improves the synergy together with vitamin E to protect the body, prevent oxidative stress, and to improve product quality.

Proviox<sup>™</sup> 50 has seen global success, with proven results across species, including ruminants, poultry, swine, and aquaculture. With over a decade of market experience and ongoing research, Proviox<sup>™</sup> 50 continues to deliver measurable benefits for livestock producers seeking safe, reliable, and cost-effective solutions.

#### **Drive Performance with Proviox™ 50**

In a market where vitamin E price volatility continues to challenge the industry, Proviox<sup>™</sup> 50 offers a proven and affordable alternative. By leveraging its antioxidant properties, Proviox<sup>™</sup> 50 helps maintain optimal animal performance while reducing dependency on vitamin E. For producers looking for reliable solutions, Proviox<sup>™</sup> 50 is a valuable tool in driving sustainable success in ruminant production.

We know that optimal animal performance drives your success. Through our Cargill Micronutrition and Health Solutions business, we offer solutions that tackle your challenges with precision: delivering the right product, at the right time, in the right amount. To find out more about how Proviox™ 50 can help you and your animals thrive, and about our Micronutrition & Health Solutions portfolio, visit us online or contact our teams of experts across the world

\*Proviox™ is only approved for use in certain geographies, end uses, and/or at certain usage levels. It is the customer's responsibility to determine, for a particular geography, that (i) the product, its use and usage levels; (ii) the customer's product and its use; and (iii) any claims made about the customer's product, all comply with applicable laws and regulations. For more information on specific products in your location, please reach out to our local Cargill animal nutrition representatives. Contact Us

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