# TECH TALK

# Unsound Advice: The Hoof Isn't Your Sole Indicator of Lameness

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Lameness in dairy cattle isn't just a welfare concern; it's a costly drag on productivity. It reduces milk output, increases involuntary culling, and drives-up labor and treatment costs[1]. For today's nutritionists, tackling this challenge begins not at the hoof, but deep within the animal by supporting structural integrity at the cellular level.

Lameness affects a significant portion of the dairy cow population. A comprehensive review encompassing 53 studies across 3,945 herds and over 414,000 cows found an average lameness prevalence, defined as cows rating as 3 to 5 on a lameness score, of 22.8%, with some herds experiencing rates as high as 45%[2]. Financially, each case of lameness can cost between $90 and $300, as it can result in reduced milk yield, decreased fertility, increased labor, and higher culling rates[1]. And in today's heifer shortage, every cow able to stay in the herd and come into the herd at her optimum is money in your pocket. The prevalence and financial toll of lameness reinforces its status as a top-tier concern for dairy operations striving for both productivity and animal well-being.

## Nutrition's Role in Building Resilience

While footbaths, trimmings, and genetic selection all have a place, nutrition plays a pivotal role in building long-term structural resilience. Tissue integrity, joint function, inflammation levels, hoof, and hoof health are all influenced by trace mineral nutrition, particularly when the animal is under stress from calving, experiencing heat stress, or transitioning into lactation.

Trace minerals like zinc, copper, and manganese are instrumental in supporting hoof and joint structure, tissue regeneration, and inflammatory balance. But their value hinges on bioavailability and tissue absorption.

## Why Bioavailability and Absorption Matters

While it's well known that organic trace minerals are more effective and efficient than inorganic minerals, not all organic minerals are equal. With a confirmed 2:1 chelated structure bonding hydroxy analogue of methionine (HMTBa) to zinc, copper, or manganese, MINTREX® Bis-Chelated Trace Minerals are designed for digestive stability and reliable absorption. This bioavailability ensures that the trace minerals get where they're needed—fueling hoof integrity, joint strength, helping to reduce inflammation [3], and boosting overall resilience. MINTREX ® Bis-Chelated Trace Minerals have demonstrated in studies that minerals reach the site of absorption and show increased mineral tissue enrichment [3].

## Management Still Matters

Of course, nutritional solutions can't do it all alone. Housing conditions, cow comfort, bedding quality, and stall design all contribute to the stress load on hooves and joints. That's why integrating targeted mineral support with effective on-farm management can shift the paradigm from treatment to prevention.

Nutritionists can help producers get ahead of structural breakdown and when paired with practical improvements like mobility monitoring or improved stall length and bedding depth, this integrated approach doesn't just reduce the need for interventions. It supports greater comfort, and in turn, contributes to operational and herd longevity.

## The Long-Term Payoff

These performance improvements stack up: more productive days per cow, lower replacement costs, and healthier lactation cycles. That's not just a nutritional benefit—it's an economic opportunity.

With MINTREX® Bis-Chelated Trace Mineral, nutritionists can confidently shift the conversation beyond "price per ton" and toward measurable outcomes. When cows walk easier, the entire operation stands on firmer ground.

To learn more about MINTREX® Bis-Chelated Trace Mineral and how it can support structural integrity in your herd, visit novusint.com or contact your NOVUS representative.

Product availability varies by region. Contact NOVUS for availability. Regulatory conditions may differ by market.

References:


[1] *Ronk, E., & BJURSTROM, A. (2023). Economics of Dairy Cattle Hoof Health. University of Wisconsin-Madison Dairy Division of Extension. Retrieved June 5, 2025, from https://dairy.extension.wisc.edu/articles/economics-of-dairy-cattle-hoof-health/Opens a new window*

[2] *Thomsen, P. T., Shearer, J. K., & Houe, H. (2023). Prevalence of Lameness in Dairy Cows. The Veterinary Journal, 295, Article 105975. https://doi.org/10.1016/j.tvjl.2023.105975Opens a new window*

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