

Healthy Cows.
More Milk.
Better Components.
The Power of Balance.



Dairy cows don't have a protein requirement—they have an amino acid requirement. Amino acids are the building blocks of protein, and amino acids are essential for:

- Milk production
- Immune function
- Reproductive performance
- Growth and body condition

When a cow's diet is deficient in key amino acids like Methionine, Lysine, Histidine, Threonine, and Tryptophan it can lead to:

- Lower milk protein levels
- Reduced milk yield
- Weakened immunity
- Anemia
- Poor fertility



That's why it's not just about how much protein you feed—it's about feeding the right amino acids in the right balance.

Rumen-Protected Amino Acids: A Smarter Strategy

Rumen-protected amino acids (RP-AAAs) are specifically designed to bypass the rumen and deliver directly to the small intestine, where they can be absorbed effectively. **By optimizing your ration with RP-AAAs, you can help:**

- Boost milk protein yield and quality
- Reduce feed costs by lowering crude protein
- Improve cow health and fertility
- Reduce nitrogen waste

AminoShure™-XM

Precision Release Methionine

Why Methionine Matters

Methionine is the first-limiting amino acid in dairy rations—if cows don't get enough, they can't build the proteins they need for milk production, immune function, or reproduction. But typical feed ingredients don't deliver enough methionine because it's mostly broken down in the rumen.

Supplementing the ration with rumen-protected methionine ensures cows absorb what they need for:

- **More milk protein** – Up to 0.10–0.25% increase in milk protein content
- **Better early-lactation performance** – Supports higher peak milk and smoother transitions for an increase of 0.5–2.0 kg more milk
- **Reduced nitrogen excretion** – Less nitrogen and phosphorus excretion from overfeeding protein

AminoShure™-XM Precision Release Methionine uses revolutionary X-Technology to deliver the methionine safely to the small intestine.

AminoShure™-L

Precision Release Lysine

Why Lysine Counts

Lysine is another essential, limiting amino acid. Cows cannot make it themselves—it must come from feed.

A recent meta-analysis¹ showed that feeding rumen-protected lysine can deliver up to:

- **Increased milk, milk fat and protein yields**
 - +1.8 kg/cow/day more milk
 - +2.5 kg/cow/day more Fat-Corrected milk
 - +2.4 kg/cow/day more Energy-Corrected milk
- **Improved feed efficiency and reduced nitrogen excretion**

Balancing rations with rumen undegradable lysine can lower ration protein levels, saving money and improving nitrogen efficiency.

¹Arshad et al., 2024



Unlock the Power of
Balance with Balchem

Better Balance, Better Performance

Feeding dairy cows the right balance of essential amino acids—in a rumen-protected form—is one of the cost effective ways to improve herd productivity.

Whether your goal is higher milk protein, smoother transitions, or reducing nitrogen waste, amino acid balancing offers a proven path to greater efficiency and profitability for today's dairy operation.



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