

THE TRUTH ABOUT BLOOD MEAL VARIABILITY



KEMIN[®] | **USA**★
Lysine[®]

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Why Is Blood Meal Variable?

Blood meal is heated and dried while being processed. During this time, Maillard reactions occur, which bind sugars to amino groups, reducing the digestibility and availability of nitrogen or amino acids such as lysine. It is impossible to determine the extent of the damage without testing in the laboratory.

How Variable Is It?

It's common knowledge that blood meal is variable. The real question is, "How variable is it?" Kemin continually tests our customers' blood meal supplies using the in-house IVNIDA system to answer this question and the results are alarming. Even though blood meal may be inexpensive, customers are often not getting what they paid for. In some samples, the lysine was completely undigestible, meaning the lysine could not be digested by the cow and was simply excreted into the environment.

What To Do About It?

Using USA Lysine® to replace some or all of the blood meal in the diet provides a consistent, concentrated, cost effective source of MP Lysine that helps meet your cows' lysine requirements. Additionally, this creates space in the diet allowing for more fiber, energy or whatever else your cows require.

Misconceptions About Blood Meal Quality

- **If it's dark, it's burnt and therefore poor quality.** In fact, Maillard reactions can begin impacting the quality of blood meal before any noticeable color change. Variability in the source of the blood meal also impacts color.
- **If it's the same color as the last load, it's the same quality.** Color is not an indication of quality. Reddish, brown, black — it doesn't make a difference. You simply don't know until you test it.
- **Coarse blood meal isn't as good as blood meal with fine particles.** As shown by testing, blood meal with large, coarse particles may be highly digestible, meaning high quality, while smaller, finer particle blood meal may have lower digestibility.



Blood Meal Quality Is Not In The Eye Of The Beholder

One true indicator of blood meal quality is nitrogen digestibility. This indicates how much of the nitrogen contained in the blood meal can actually be digested and used by the cow. If a sample contains a high level of undigestible nitrogen, there is very little the cow can do except excrete the nitrogen into the environment. Nitrogen digestibility often correlates to amino acid digestibility as well, letting us know the levels of available lysine or methionine in the blood meal. The following samples were evaluated using the IVNIDA system and the results show visual inspection simply cannot determine blood meal quality.

Table 1: Similar color samples contain different amounts of undigestible nitrogen.

			
Undigestible Nitrogen	13%	41%	56%

Table 2: Samples with differing colors contain similar amounts of digestible nitrogen.

			
Undigestible Nitrogen	14%	13%	17%

Table 3: Dark colored samples with varying amounts of digestible nitrogen.

			
Undigestible Nitrogen	6%	14%	58%

Table 4: Coarse particle size does not ensure poor quality.

			
Undigestible Nitrogen	6%	17%	56%

To learn more about blood meal variability and how USA Lysine can help, visit [Kemin.com/USALysine](https://www.kemin.com/USALysine).

USA Lysine®

Kemin understands your need to raise healthy livestock that give consumers the nutritional and health benefits they are looking for, while also returning a profit. We focus our products and services to help you achieve optimal:

- Nutrition
- Feed Quality
- Gut Health
- Pathogen Control

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