

U.S. Soybean Meal

A CONSISTENT NUTRITIONAL BUNDLE IS A VALUE DIFFERENTIATOR

Soybean meal is typically purchased based on a limited set of information, such as crude protein, fiber and moisture. Often, buyers focus primarily on minimizing the cost of ingredients rather than evaluating other nutritional characteristics that impact diet performance. Within organizations, the buyer is often in a different position than the nutritionist that formulates the diet. As a result, key differentiators of end-user value tend to be overlooked when making decisions to purchase soybean meal from alternative origins.



While soybean meal is traded based on crude protein, the value of soybean meal in animal diets is determined by a combination of additional intrinsic meal characteristics, including a well-balanced amino acid profile, energy components, ash content and digestibility. In addition to the quality of this nutritional bundle, soybean meal end-users value consistency when evaluating the ingredients used to formulate diets. To a nutritionist, consistency relies on the quality, uniformity, composition, physical description and nutritional values of an ingredient meeting specified parameters, at all times.

Consistency can be evaluated by measuring the variability in a product over time. Minimizing variability is important because it gives confidence in the uniformity of an ingredient. Consider the standard deviation (a statistical measure of variation) in the following soybean meal quality parameters comparing soybean meal by origin.

This table summarizes data collected on daily samples of soybean meal analyzed from October 2018 through May 2021¹. Based on the most recent data collected from May 2021,

THE U.S. HAS AN ADVANTAGE CONSIDERING THE FIVE ESSENTIAL AMINO ACIDS IN SOYBEAN MEAL.

For the year to date (January through May 2021), the same advantage holds.

The U.S. also holds an advantage when considering the consistency (less variability) of the essential amino acids in soybean meal over time.

More consistent soybean meal results in better business performance (fewer claims, less conflict between business segments, and reducing risk). Consistent soybean meal also means improved diet formulation applications for nutritionists, leading to more sustainable usage of soybean meal and lower costs.

| Amino Acids - Median Value | | | |
|--------------------------------|--------|-------|-------------|
| Amino Acid (May 2021) | Brazil | USA | USA Benefit |
| Lysine, % of CP | 6.05 | 6.19 | 0.14 |
| Methionine, % of CP | 1.30 | 1.35 | 0.05 |
| Cysteine, % of CP | 1.43 | 1.43 | 0.00 |
| Threonine, % of CP | 3.85 | 3.92 | 0.07 |
| Tryptophan, % of CP | 1.33 | 1.35 | 0.02 |
| 5 EAAs*, % of CP | 13.96 | 14.24 | 0.28 |
| 5 EAAs, % of CP (Jan-May 2021) | 13.98 | 14.10 | 0.12 |

*5 EAAs include Lysine, Methionine, Cysteine, Threonine & Tryptophan

| Amino Acid Variation Over Time - Standard Deviation | | | |
|---|--------|------|-------------|
| Amino Acid (Oct 2018-May 2021) | Brazil | USA | USA Benefit |
| Lysine, % of CP | 0.16 | 0.10 | (0.06) |
| Methionine, % of CP | 0.04 | 0.03 | (0.01) |
| Cysteine, % of CP | 0.05 | 0.03 | (0.02) |
| Threonine, % of CP | 0.06 | 0.04 | (0.02) |
| Tryptophan, % of CP | 0.03 | 0.01 | (0.02) |

INGREDIENT CONSISTENCY GENERATES SUBSTANTIAL VALUE FOR END-USERS AND IS A KEY DIFFERENTIATOR OF U.S. SOYBEAN MEAL WHEN COMPARED TO SOYBEAN MEAL FROM OTHER ORIGINS.

¹Data obtained from Evonik and summarized based on international trading specifications and includes observations with crude protein values between 46.0-49.0% and fiber values between 3.5-3.9%.

To learn more about how U.S. Soy can enable your business, please contact your U.S. Soybean Export Council (USSEC) region or country representative; or submit your contact details via <https://ussec.org/contact/>.

ABOUT THE U.S. SOYBEAN EXPORT COUNCIL (USSEC)

Soybeans are the United States' number one food and agricultural export. The U.S. Soybean Export Council (USSEC) is devoted to building preference, improving the value, and enabling market access for the use of U.S. Soy for human consumption, aquaculture, and livestock feed in 82 countries across the world. USSEC is a dynamic partnership of U.S. soybean producers, processors, commodity shippers, merchandisers, allied agribusinesses, and agricultural organizations; and connects food and agriculture industry leaders through a robust membership program. USSEC is farmer-funded by checkoff funds invested by the United Soybean Board, various state soybean councils, the food and agriculture industry, and the American Soybean Association's investment of cost-share funding provided by U.S. Department of Agriculture's (USDA) Foreign Agricultural Service (FAS). To learn more, visit www.ussoy.org and www.ussec.org, and engage with us on [LinkedIn](#), [Twitter](#), [Facebook](#), [Instagram](#) and [YouTube](#).