



# L-Threonine

FOR ALL ANIMAL DIETS

ADM meets our customers' growing amino acid needs with a worldwide transportation network, supplying the industry around the globe with high-quality, uniform feed-grade amino acids.

PRODUCT  
NO. 035600

ADM L-Threonine 98.5% Feed Grade is a highly purified, granular form of supplemental L-threonine. The use of L-threonine enables the animal's amino acids requirements to be met while lowering dietary crude protein, which decreases nitrogen excretion and improves nitrogen efficiency without compromising performance.

## THREONINE IN YOUR OPERATIONS

Many grains (especially wheat, barley, and sorghum) and other feedstuffs are low in threonine and require threonine supplementation to make up for the deficiency.

In swine diets, when reducing crude protein by 3-4 percentage units, it is generally accepted that threonine, methionine, as well as lysine, must be supplemented to maintain performance. Further research suggests that tryptophan (or possibly isoleucine and valine) becomes limiting as protein content of the corn-soybean meal diet is decreased by 4 or more percentage units.

In broiler diets, the efficacy of L-threonine supplementation to a methionine- and lysine-fortified diet is becoming more acceptable within the poultry industry.

The addition of L-threonine to aquaculture diets may allow a reduction in crude protein in the diet, and thus reduce nitrogen excretion.

**WHAT IS IT?** ADM L-Threonine is a high-quality product specifically manufactured for the feed industry. Produced from advanced technology, ADM L-Threonine is composed of 100% isomerically pure L-threonine, which translates into 100% bioavailability for swine, poultry, and other animals.

### Why Choose ADM L-Threonine?

- More than 30 years of fermentation experience
- Vertically integrated
- High-quality, uniform granular product
- Strict quality control
- Dedicated sales and technical support
- Global sales team
- Worldwide transportation network

### Benefits of Using Amino Acids\* For every 1% decrease in dietary crude protein level:

- Decreases N in manure by 10%
- Decreases  $\text{NH}_3$  emission into the air by 10%
- Decreases water consumption by 3%
- Decreases manure volume by 5% \*Kerr, 2003

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