

Kemin offers a range of nutritional solutions for raising healthy animals. We understand your need to raise healthy livestock and poultry that give consumers the nutritional and health benefits they are looking for, while also returning a profit. Our products and services help you with nutrition, feed quality, gut health and pathogen control.



Reach out to your Kemin Technical Service or sales representative for more information.



Kemin Animal Nutrition and Health

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kemin.com/lysoforte-ca

LYSOFORTE®

A Natural Emulsifier to Enhance Lipid Digestibility



LYSOFORTE®

Improve feed efficiency and maximize profitability

Feed represents 60-70% of the total cost of livestock and poultry production and is critical to a producer's bottom line. It can be a balancing act to find ways to maximize efficiency or reduce input costs while still meeting the nutritional requirements for optimal animal performance. One way to address this balancing act is to include an emulsifier in the diet. LYSOFORTE, a lysophospholipid (LPL) based nutritional emulsifier, is designed to enhance digestion and absorption of energy-rich ingredients, including fats, oils and fat-soluble nutrients in livestock and poultry feeds.

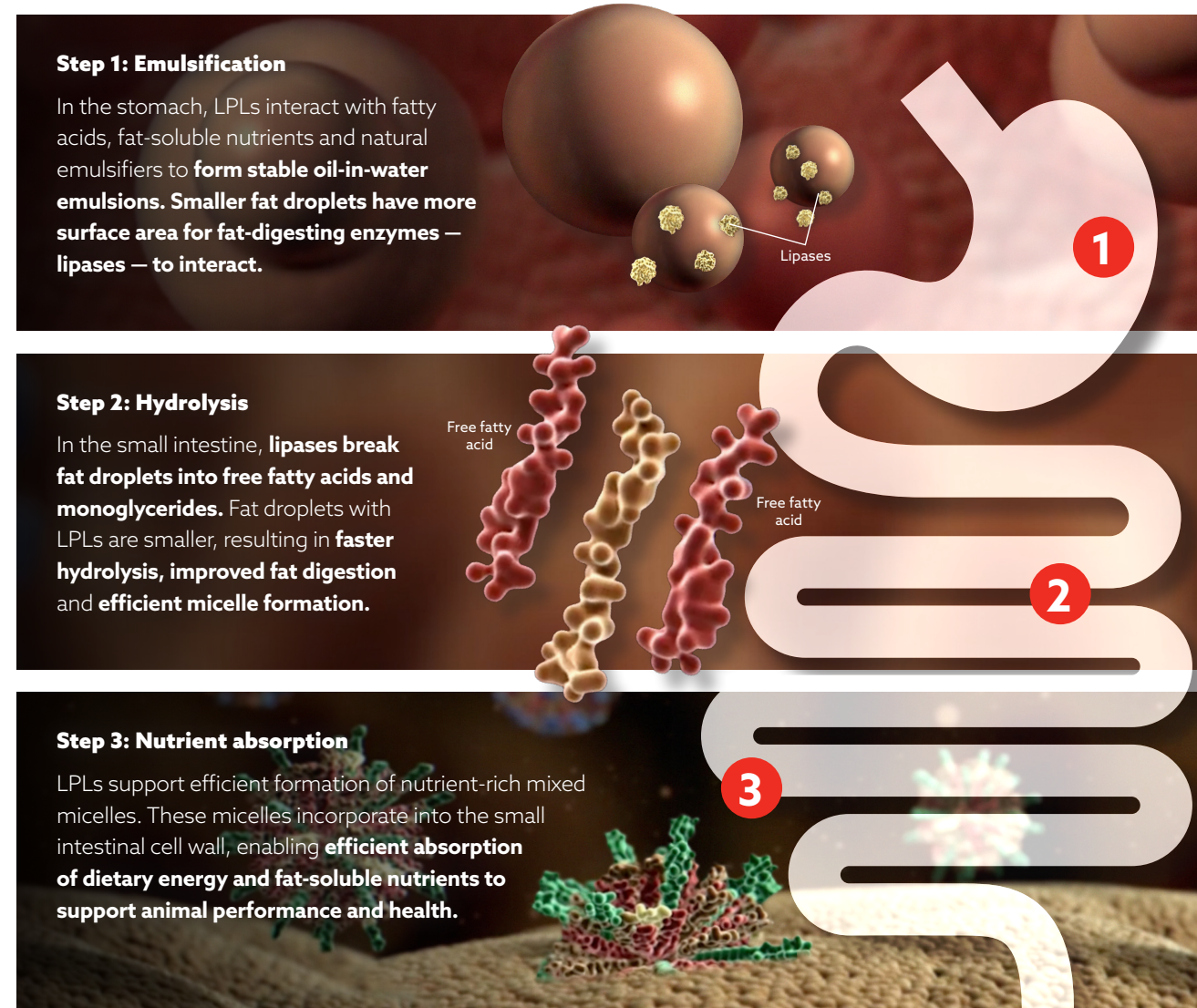
ANIMALS AND PRODUCERS CAN BENEFIT FROM LYSOFORTE

LYSOFORTE optimizes the use of fat in the diet by supporting digestion and absorption. This allows you to either optimize efficiency in your current ration or support animal performance in a reduced energy, lower-cost diet. These benefits are possible through:

- Supports fat emulsification and utilization
- Improved feed efficiency
- Enhanced nutrient absorption
- Better feed cost control

Mode of action

By understanding the mode of action of an ingredient, one can better predict how the animal will respond once it is fed. LYSOFORTE features a three-step mode of action that enhances digestion and absorption of energy and nutrients in feed.



How LYSOFORTE can benefit your operation



Two ways to use LYSOFORTE

Efficient and easy to incorporate in premix, concentrates or complete feeds, LYSOFORTE can be used in two ways:

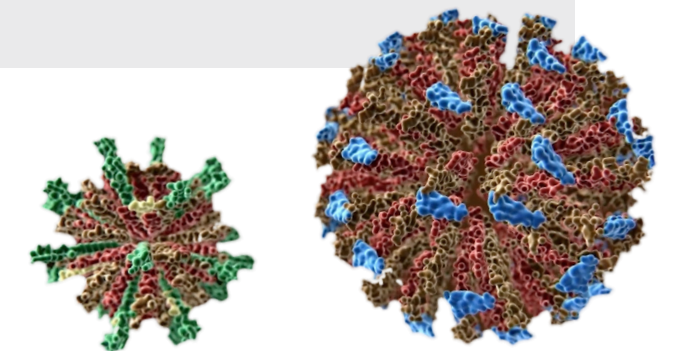
- Diets can be reformulated to use LYSOFORTE to save on feed costs by reducing the inclusion of dietary fat.
- OR
- Producers can add LYSOFORTE to existing diets, commonly referred to as "on top" of the formulation to improve nutrient absorption.

RECOMMENDED APPLICATION RATES IN FEED

- **Swine and poultry:** 0.5 - 1 kg/tonne of feed

DIVE DEEPER — LYSOFORTE LPLs

The primary active ingredient in LYSOFORTE is lysolecithin. Lysolecithin is produced using an enzymatic process where phospholipids (PLs) in soy lecithin are converted into LPLs.⁵ LPLs have increased hydrophilicity and are more fluid than PLs, which improves their capacity to support formation of oil-in-water emulsions. The LPLs in LYSOFORTE have unique physical and chemical properties, which enhance nutrient absorption and improve feed efficiency in multiple species.



LPLs (left, green) support formation of smaller, more stable micelles, better emulsification and better absorption than phospholipids (right, blue).

REFERENCES

- Wealleans, A.L., et al. (2020). The addition of lysolecithin to broiler diets improves growth performance across fat levels and sources: a meta-analysis of 33 trials. *British Poultry Science*, 61: 51-56.
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- Wealleans, A.L., et al. (2021). Fats and oils in pig nutrition: Factors affecting digestion and utilization. *Animal Feed Science and Technology*, 277: 114950.
- Joshi, A., Paratkar, S.G. and Thorat, B.N. (2006). Modification of lecithin by physical, chemical and enzymatic methods. *European Journal of Lipid Science and Technology*, 108:363-373.