

## **Fishmeal, Peptides, and the next El Nino- what happens then?**

In the fall of 2014, the Peruvian Ministry temporarily banned the industrial fishing fleet and fishmeal sky rocketed by 40% in just a few short weeks. That ban was a proactive choice at protecting the anchovy biomass during a year that was showing low/small fish counts. History has shown that the same increase in price should be expected if Mother Nature warms the waters off the Peruvian coast in 2015-16.

Many commodities, like grains and crude oil, are down 30-50% over the last 18 months and projections are for more of the same, yet fishmeal and fish oils are holding steady – *why?* The production of meals and oils has essentially been flat the last decade, yet demand from aquaculture has continued to climb. It's Econ 101 for these marine-based products and science is the driver. *Aquaculture needs the Omega-3s from fish sources as an essential nutrient and fishmeals have a “marine peptide” component often referred to as the UGF or Un-identified Growth Factor by nutritionists of decades past. Peptides are enzymatically digested fractions of proteins, which have numerous bioactive and biological effects on growth and gut health in poultry, piglets and aquaculture applications.*

### **What can you do to be ready?**

Harvesting of Omega-3s and *bioactive peptides* using new refining techniques is increasing the availability of marine bio-active components and producing products that can be blended with other refined proteins such as egg residuals, algal proteins, poultry hydrolysates, and grain protein concentrates. When combined at the right ratios, these products provide a blended alternative to fishmeal by bringing balanced amino acid profiles, Omega-3 levels, digestibility and micro-nutrients – *all at a stable price point, which is lower than fishmeal.*

If you are looking for a fishmeal replacement for your swine, poultry, shrimp or salmon diets, be sure you are using more than just poultry by-product meal, as it alone is **not** a true fishmeal analog. To have a true analog, make sure the formula you're using contains 10-20% marine peptides (not fishmeal, but true peptides) and preferably up to 50% of animal protein in non-denatured, peptide fractions.

Denaturing is a major consideration. If the crude protein is exposed to high cooking heat early in the process, then the opportunity for the bioactive peptides to be released via enzymatic processes will be diminished by up to 80%. *Note: standard poultry meals are fully denatured in the cooking process.*

You can also utilize marine peptides in their pure form. Their costs will be similar to Plasma type proteins and with similar functionality. When used in pure form, the peptides will go in at a lower inclusion rate than standard fishmeal. For weaning pigs, a 2-4% inclusion replacing plasma is typical, while for broilers a 0.5% to 1% is more common. Layers can utilize a full fat version of marine peptides, which include Omega-3s, to achieve Omega-3 claims on the eggs, in the 1-2% inclusion range.

Organic Diets: some manufacturers of marine peptides can also provide you a product that meets your needs for finished Organic feeds; applicable to layers, broilers, and swine.

Antibiotic-Free Diets: marine peptides can also have strong anionic and cationic charged ends, which have been shown through research to enhance gut health, especially important in antibiotic-free diets.

Preparing for the next El Nino or just deciding to use a more *sustainable alternative* to fishmeal without losing the performance can be accomplished today. The science and supply chains are in place and your decision to act now allows you to lead a new approach for your own ingredient security.

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