AmpliSource™

TECH SHEET
- Utilization -

UTILIZATION OF AMPLISOURCE MAX™ IN BROILER AND LAYER RATIONS

AMPLISOURCE MAX™
A product consisting of pre-consumer products from the confectionary, baking, food manufacturing and candy manufacturing industries that provides a high-quality, nutrient-dense dry product that can be formulated and used in poultry rations.

FOOD MANUFACTURERS
AmpliSource works with food manufacturers to acquire long term, consistent sources of product that are continuously sampled, analyzed by outside labs and blended into a consistent feed ingredient that is high in protein, carbohydrates, sugars and fats that can be utilized to reduce diet costs while maintaining performance.

REPLACEMENT ENERGY SOURCE
Due to the levels of highly digestible carbohydrates and fats, AmpliSource MAX provides exceptional energy values that are generally higher than corn while also providing reasonable levels of digestible protein and amino acids, delivering value in every ton.

Accurate formulation requires accurate prediction of energy value. Dale, et al. (1990) initially acquired twenty-six bakery product samples, analyzed chemical composition, and conducted TMEn assays and developed a regression equation using chemical composition to predict TMEn . He then acquired 10 additional samples, analyzed chemical composition, and utilized the developed equation to predict TMEn and compared that to the results of a TMEn assay. Thru this process, he was able to further refine the prediction equation to reduce variation of predicted versus actual. The equation is TMEn (kcal/kg) = 4340 – (100 x Crude Fiber) – (40 x Ash) – (30* Crude Protein) =(10 x Ether Extract) R2 = .78. The equation utilizes product standardized to 90% dry matter to ensure consistency. Utilizing this equation, Al-Tulaihan, et al. (2004) was able to formulate diets with 0, 5, 10, 20 and 30% Bakery Meal replacing corn in diets while maintaining growth rate and feed efficiency. More recently, Torki and Kimiaee (2011) formulated diets for laying hens with a well characterized Bakery Meal replacing 50 or 100 % of the corn in the diet without sacrificing productivity or feed efficiency.

Mavromichalis (2013) suggested that poultry diets should be formulated at a maximum inclusion of 15% to prevent decreased performance due to product variability and to avoid wet litter due the osmotic impact of the high sugar content of the AmpliSource Max. However, Elgilani (2000) and Hussein, et al. (2017) examined the impact of providing sugar cane molasses in broiler and layer diets, respectively. In these trials, final diets contained up to 7.5% simple sugars from cane molasses. Results indicate that neither performance, feed efficiency, or mortality was affected by replacing corn with ingredients high in simple sugars. This indicates that utilizing AmpliSource MAX up to 30% will not result in simple sugar content levels that will affect performance.

Adequate amino acid analysis will also be required to accurately formulate with AmpliSource MAX. AmpliSource systematically analyzes incoming ingredients and final product to provide amino acid concentrations and variability. Ingredients are classified based on protein source to estimate amino acid digestibility.

AmpliSource MAX™ can provide a trusted, consistent, high quality source of energy and amnio acids allowing you to accurately formulate feed and reduce costs. Contact your AmpliSource Sales Associate to receive spec sheets and an up-to-date laboratory analysis to assist you and your team in implementing AmpliSource Max into your nutrition program.