

Research Coordination
Fish Nutrition Researchers;
Free Feed Ingredients, Complete with Chemical Analyses

Announcing

Pilot program to characterize feed ingredients for the development of alternative feeds for aquatic species

This program is designed to assist researchers in evaluating soy products and other alternative ingredients to fish meal. Numerous studies, using a wide variety of species, have been conducted to reduce/eliminate fish meal from aquaculture feeds. However, variability in sources and inadequate chemical characterization of dietary ingredients has been cited as primary limitations when comparing results from these various studies. Recently, the Plant Products in Aquafeeds Working Group (PPA) developed a Strategic Plan to advance the development of fish-meal-free diets through improved research coordination. A primary objective of Goal #1 of that Strategic Plan is the standardization of feed ingredients used in research studies. This objective is difficult to achieve because the small quantities of ingredients needed by most research groups limit their ability to obtain consistent commercial products. Additionally, it is generally cost prohibitive for individual researchers to fully characterize both the nutrient and anti-nutrient profiles of each ingredient used in experimental feeds. For these reasons, this pilot program was developed to provide this service to the research community.

Small quantities (~25 kg/ingredient/shipment) of characterized ingredients will be made available to interested researchers. Three soy products including soybean meal (ADM Inc.), soy protein concentrate (Solae, Profine VF), soy protein meal (Hamlet Protein Inc., HP-300), as well as corn protein concentrate (Cargill, empyreal 75) and Menhaden Special Select fish meal (Omega Proteins) will be available.

Each ingredient will be supplied with an analysis of nutrients (proximate composition, and amino acids) and anti-nutrients (specific anti-nutrients dependant on ingredient). These analyses will include but are not limited to: trypsin inhibitor activity (ISO 14902) (AOCS, 1983); stachyose, raffinose, and oligosaccharides concentrations ; group A saponins(Shiraiwa et al. 1991a); group B saponins (Shiraiwa et al. 1991b), Hu et al. (2002), Dalluge et al, (2003); non-starch polysaccharides including ADF, NDF and crude fiber. Apparent digestibility coefficients of the products for rainbow trout also will be available.

There will be no charge for the ingredients or the analyses, but shipping charges may need to be covered by the recipient. The only obligation by the recipient will be to acknowledge the program sponsors on all publications using the material (see text below) and notify the program when results are published.

To request further information or to participate contact Rick Barrows at (rick.barrows@ars.usda.gov)

Suggested text for acknowledgement in publications:

The (list ingredients here) used in this trial, and the compositional analyses, were provided by a collaborative project of the United Soybean Board , USDA-ARS, USFWS, and the Plant Products in Aquafeeds Working Group,