

I would like to make a few brief comments re. the USDA's support of research into alternative feeds for aquaculture. As a fish feed nutritionist, and a founding partner of the former fish feed business, Freedom Feeds, which introduced the first commercial fishmeal-free diets for trout and salmon in 2001, I have a great deal more to discuss on the subject than I will address here.

- 1) the biggest challenge to address is the substitution of fish oil from marine fish sources.
 - grain-derived omega-3 FA's may or may not be sufficient, either for fish nutrition, or for the humans consuming the fish. There appear to be important differences.
 - genetically modified grain sources must be examined as a sustainable source of fish oil replacements.
 - culture of algae-derived Omega-3 FA's is probably a less economical or practical approach

- 2) processed soybean meal can be a major ingredient for most fish diets (can be used to attain 90% of the growth rate seen with fishmeal diets).
 - higher growth rates can be achieved utilizing other livestock processing waste protein sources as supplements to grain-based diets.
 - should avoid using non-sustainable protein sources like krill and other ingredients subject to bad press from environmental NGO's (eg. "taking food away from whales", etc.).

- 3) the development of sustainable diets is the number one challenge to growth and profitability in aquaculture

It is unfortunate that my former business partners with Freedom Feeds were forced to close the fish feed business due to slow sales...one year before the price of fishmeal tripled in the marketplace!

Sincerely,
Dr. Dave Smith, Ph.D.
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