

Here Fishy Fishy: Aquaculture Systems

Making Fish Food with Soy

Why is soy needed for fish food?

Background

A market for over six million metric tons of soybean meal has been successfully created over the past 15 years through the development, field testing, and demonstration of all-plant protein, soymeal-based feeds to fish farmers in Asia (<https://thefishsite.com/articles/using-soy-in-aquaculture-feeds>). “There aren’t any other protein sources produced in large enough volume to meet industry needs. Our (USSEC International Aquaculture Program) primary objective has been to develop safe, sustainable, soy-based feeds as the aquaculture industry grows because there is not enough fish meal available to supply that need.” Dr. Michael Cremer (Taken from: <http://thesoyfoodscouncil.com/michael-c-cremer-ph-d-discusses-soy-fed-farmed-fish-and-global-aquaculture/>)

You will make your own fish food following this recipe, then create a schedule to feed fish to compare their growth using differing amounts of soy-based fish feed.

Materials

2 ½ cups soybean meal (Cargill, ADM, Feed mills)
2 cups ground corn (corn meal)
1/2 cup whole wheat flour
1 TBS garlic powder
3 eggs
1/2 cup dehydrated milk
Measuring tools
Bowls Spoons/stirring utensils
Oven Pan

Procedure

1. Mix dry ingredients together
2. Mix additional ingredients together into a bowl, slowly add to dry mixture. Add water as needed to make a damp clump-like mixture.
3. Spread mixture out evenly on a pan and place into the oven at 180° Fahrenheit for 2.5 hours, or until crumbles form. It will look like a crumble or a bunch of small pebbles when done.
4. Create a fish feeding schedule using a combination of fish food from an aquarium store and your recipe in various ratios. Compare to a control tank to see if your feed has an effect on the size of the fish.

Reflection

1. What is the importance of aquaculture?
2. How can soybeans help people become more sustainable fish farmers?
3. How can we reduce the impact of humans?

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