

Manufacturing Fish Feed Using Household Materials

Raw materials



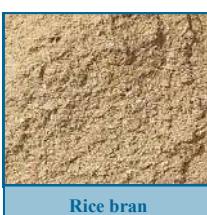
Dregs from gas wells

Dregs from biological gas wells or manure are often used to produce fertilizers for crops. But since they still retain some nutrients, it can therefore be used as a raw material in the making of fish feed.



Fish meal

Fish meal is a rich source of protein (about 55-60%); of which it is a complete protein to boot. In addition, it also contains fat (about 6-10%), provides good amounts of calcium and phosphorus, and has a pleasant odor which can stimulate the fish's appetite.



Rice bran

Rice bran can usually be bought in three forms: coarse, fine, and rice bran oil. Farmers should not use coarse rice bran in when making fish feed, as it contains husks and therefore add too much fiber.



Cassava

Cassava can usually be bought in 3 forms: culled, unculled, and flour. It is low in protein; only 1.5-2%. Do not feed the fish with cassava that have just been dug up, as they tend to be toxic, and can kill the fish.



Food waste

Food waste from households that are commonly used as part of making fish feed include rice, bananas, and vegetables; such materials are suitable and can be added to fish feed.



Grounded acacia leaves

Grounded acacia leaves contain beta-carotene, and therefore is a good source of vitamin A. Moreover, acacia leaves are also high in protein (20%) and fiber (11%).



Golden apple snail

Intestines from chicken or other animals, such as the golden apple snail, are high in protein and can be used as an ingredient to make fish feed. If using golden apple snails, boil them first, then remove the flesh and leave to dry, and then slice into small pieces before adding to the mixture. This can be used as a substitute for fish meal.



Blood meal

Blood meal is produced by slaughterhouses, and is high in protein. It is first baked and then mashed before adding it into the fish feed mixture.



Corn

Corn should be picked with care, avoiding those that might be contaminated with bacteria, as that will effect the health and growth of the fish.



Microbiological water

Microbiological water is a source of vitamins and helps to make the feed more appealing to the fish.



Soybean husks

Soybean husks are the leftovers when the oil has been extracted. It is considered high quality protein; composed of various amino acids. Soybean husks that are going to be used as feed need to have a moisture content below 12 percent. The shells need to be soft, textured, and not raw or burnt. It shouldn't smell rancid.



Broken-milled rice

Broken-milled rice is commonly used as an ingredient in fish feed; both broken-milled sticky rice or normal rice can be used.

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Feed recipe for Tilapia

Materials	Amount
Fine rice bran	3
Cooked rice or cooked broken-milled rice, and other food waste	6
Feed (can be bought at any vendor selling agricultural materials)	5
Soybean husks	3
Plain water	1-2



How to Apply

1. Mash the large raw materials into smaller pieces to make it more digestible for the fish.
2. Use nets to sift through each raw material; only the materials that passed will be used.
3. Bring all the materials in their respective ratios together and mix well.
4. Add a little bit of water and continue to mix until mixture becomes reasonably moist.
5. Bring mixture into the masher in order to pipe it out into strings, which are then left to dry.
6. After drying, store feed in a cool place or use within 2 weeks.

How to feed

1. Scatter or sow into the pond
2. Put onto pickup and place at the edges of the pond