

Production of Low-Cost Fish Feed Pellets

As we are well aware, the cost of fish feed in current fish farming is relatively high, while the selling price of fish is often low. This has led many farmers to produce their own fish feed using locally available raw materials. Not only is this process complicated, but it also ensures high nutritional quality.

Points of Attention

When feeding herbivorous fish such as tilapia or carp, prioritize adding more vegetables, as these species prefer plant-based diets. Avoid overfeeding, as it can pollute the pond water and cause disease. For young fish, from the beginning of the farming period until they are one month old, it is recommended to use fresh feed. Once prepared, shape the mixture into small round pellets and place them in a feeding container submerged in the pond. After the fish reach one month of age, switch to dry feed.



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Date of publication: June 2025

Advantages

- Easy and inexpensive process
- Ensures high nutritional quality
- Natural foods promote natural food production: they boost plankton and floating plants

Recommendation for Small Fish

Use 1 kilogram of feed for every 4,000 fish, feeding once daily in the morning or afternoon.

From the beginning of the farming process until the fish are one month old, it is recommended to use fresh feed. Once the feed mixture is prepared, shape it into small round pellets and place them in a feeding container submerged in the fish pond. When the fish reach one month of age, switch to dry feed.

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This document has been produced with the financial assistance of the French Development Agency (AFD), the European Union (EU) and the French Facility for Global Environment (FFEM). The views expressed herein can in no way be taken to reflect the official opinion of the AFD, EU and FFEM.



Technical Leaflet RECIPE FOR CARNIVOROUS/HERBIVOROUS FISH FEED 2/2



Location of implementation
Sndin, Hongngoua, Phonemuag, nakha and
nanard Village,
Nasaythong District, Vientiane Capital, Laos

Agroecological system:

Zone	Main activities	Climate	Rainfalls	Temperature
Plain	rice/ vegetable	Seasonally tropical (rainy season: June to October)	~ 1300 mm/year	Avg max: 35°C - Avg min: 14°C

Formula 1 - Suitable for Catfish



Ingredients

- Dried snails: 2 kg
- Rice bran: 9.5 kg
- Fine rice bran: 2 kg
- Dried soybean meal: 1 kg
- Dried sticky rice bran: 1 kg
- Salt: 1.2 scoops
- Ripe bananas: 1 kg
- Fish sauce: 2 L

Steps

1. Weigh the ingredients as specified and grind them finely.
2. Mix the prepared ingredients thoroughly for about 30 minutes.
3. Gradually add hot water while kneading until the mixture is well combined.
4. Form the mixture into small balls and pass them through a pellet machine or sun-dry them.

Formula 2



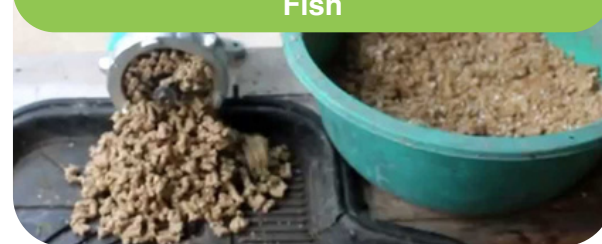
Ingredients

- Stakes (wooden poles) taller than the water level: 30 pieces
- Dry rice straw: 30 bundles
- Cow dung: 2 baskets/20 kg
- Fine rice bran: 1 basket/20 kg

Steps

- Take 30 wooden stakes and plant them around the pond in a rectangular shape as desired.
- Layer the raw materials in the following order:
 - Layer 1-3: Alternate between rice straw, cow dung, and fine rice bran.
 - Top layer: Cover with rice straw.
- Leave the setup for about 7 days. The rice straw, cow dung, and rice bran will gradually decompose, providing natural food for aquatic animals. This formula is suitable for fish aged 3 months and older.

Formula 3 - Suitable for Herbivorous Fish



Ingredients

- Fine rice bran: 2 baskets/20 kg
- Coconut meal: 1 basket/20 kg
- Soybean meal: 1 kg
- Effective Microorganisms solution 1 liter
- Molasses: 1 kg
- Vegetable oil: 1-2 L

Steps

- Mix 1 basket of fine rice bran, coconut meal, and soybean meal.
- Combine the EM solution and molasses with 20 L of water, then let it ferment for 12 hours.
- Mix the fermented solution with 1 basket of fine rice bran and 1-2 L of vegetable oil.
- Pass the mixture through a pellet machine and sun-dry for 2 days. The feed can be stored for up to 2 months.

Recommendations for Feeding Herbivorous Fishs

1 - Prioritize Plant-Based Feed

Catfish and common carp are naturally herbivorous or omnivorous, so their diet should mainly consist of vegetables, aquatic plants, and agricultural by-products.

Avoid excessive protein-rich feeds, such as meat or fishmeal.

2 - Avoid Overfeeding

Overfeeding leads to decomposition, causing water pollution with high levels of ammonia and nitrites, and oxygen depletion.

Poor water quality weakens fish immunity and can lead to diseases.

Feed small portions 2-3 times daily and observe if the fish consume all feed within 10–15 minutes.

Remove uneaten feed promptly to prevent spoilage.

3. Adjust Feeding Based on Season

Fish eat less in cold weather— reduce feed quantity.

Increase feed slightly during warm months when metabolism is higher.

4 - Regularly Monitor Water Quality Using Rapid Test Kits

Check pH, ammonia, and dissolved oxygen levels frequently.