

Production of Low-Cost Fish Feed Pellets

As we know, the cost of fish feed in modern fish farming is relatively high, while the selling price of fish is often low. This has led many farmers to produce their own feed using locally available raw materials. Although the process can be somewhat complex, it ensures high nutritional quality.

Points of Attention

When feeding herbivorous fish such as tilapia or carp, prioritize 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 start 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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Advantages

- Easy and inexpensive process
- Ensures high nutritional quality
- Promotes natural food production by boosting plankton and floating plants

Recommendations for Small Fishes

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

From the start of the farming process until fishes are one month old, it is recommended to use fresh feed.

Once the food 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 food.

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Technical Leaflet RECIPE FOR CARNIVOROUS AND 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. Grind all the ingredient finely
2. Mix the prepared ingredients thoroughly for about 30 minutes.
3. Gradually add 6 L of hot water while kneading until the mixture is well combined.
4. Form the mixture into small balls and pass them through a pellet machine and sun-dry them.

Formula 2 for Catfish



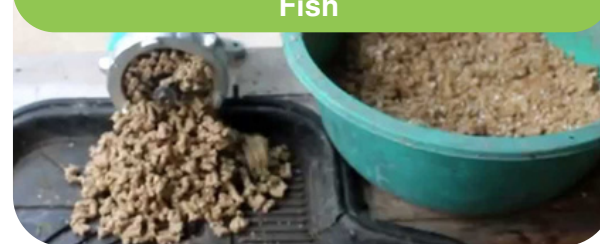
Ingredients

- Stakes (wooden poles) taller than the water level: 30 pieces
- Dry rice straw: 30 bundles (5-6kg/ bundle)
- 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 of 20 kg each
- Coconut meal: 1 basket of 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 fish meal.

2 - Avoid Overfeeding

Overfeeding causes decomposition, leading to water pollution with high levels of ammonia and nitrites, as well as oxygen depletion. Poor water quality weakens fish immunity and can result in disease. Feed small portions 2–3 times daily, and ensure the fish consume all feed within 10–15 minutes. Remove any uneaten feed promptly to prevent spoilage.

3 - Adjust Feeding Based on Season

Fish eat less in cold weather, so reduce the feed quantity in this case. During warm months, when their metabolism is higher, increase the feed slightly

4 - Regularly Monitor Water Quality Using Rapid Test Kits

Check pH, ammonia, and dissolved oxygen levels frequently.