

9. The harvesting of fish can be done through tank draining and use of scoop nets. Partial harvesting can also be done depending on the demand.
10. The fish is transported with the use of tin cans or tubs filled with small amounts of water to keep them alive. The containers are covered with bamboo slats to allow natural ventilation and prevent fish from escaping.

If catfish fingerlings are transported by air they are placed in polyethylene bags with a small amount of water (just enough to cover the fish) and provided with oxygen. The closed polyethylene bags are placed in cartons or styrofoam boxes.

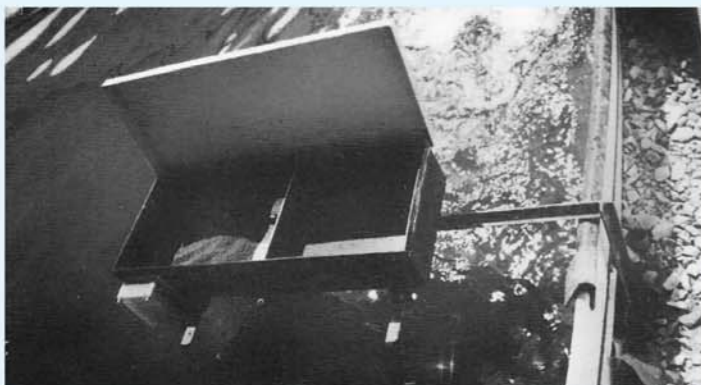


Fig. 3. Feeding tray made of wood, metal or plastic in a catfish culture tank.

11. The price of the fish depends on its size and quality. Fresh or live fish weighing 2–3 pieces to a kilo are sold at P60–80/kg in markets, hotels and restaurants in Metro Manila and in neighboring towns and provinces.

Table 1. Cost of constructing a 1- and 2-unit concrete tank^a.

Quantity		Construction Materials	Cost (P)	
1 ^b	2 ^c		1 ^b	2 ^c
175 pcs	353 pcs	CHB 36 at P5.50/pc	962.50	1,941.50
2 m ³	4 m ³	Sand at P450/m ³	900.00	1,800.00
1 m ³	2 m ³	Gravel at P400/m ³	400.00	800.00
6 bags	14 bags	Cement at P190/bag	1,140.00	2,660.00
5 pcs	10 pcs	Steel bar at P130/pc	650.00	1,300.00
10 pcs	40 pcs	Coco lumber (2x2x10) at P75/pc	750.00	3,000.00
1 kg	1 kg	CWN at P80/kg	80.00	80.00
2 bags	4 bags	Sahara cement at P25/bag	50.00	100.00
1 pc	1 pc	PVC pipe #3 at P100/pc	100.00	100.00
		Labor (40% of the construction cost)	2,015.20	4,712.60
Total			7,047.70	16,494.10

^a Based on figures as of CY 2012.

^b One unit measuring 5 m x 3 m x 1.5 m.

^c Two units measuring 8 m x 5 m x 1.8 m.

^d CHB –concrete hollow block.

^e CWN – common wire nail.

^f PVC – polyvinyl chloride.

Source:

Philippine Council for Aquatic and Marine Research and Development. Culture of freshwater catfish in concrete cylinders and tanks. *PCAMRD Currents*, 5(1): 8, April 2001.

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Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD)

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Culture of Freshwater Catfish in Concrete Cylinders and Tanks

Overview



The freshwater catfish, locally known as 'hito' in Tagalog and Bicol, 'paltat' in Ilocos, 'ito' in Pampanga, and 'pantat' in Pangasinan, Cebu, and Iloilo, belongs to the family of Clariidae. The hito is usually caught from its natural habitats, such as marshes, ricefields, swamps, streams, rivers, lakes, dams, irrigation canals, or freshwater ponds in the Philippines. Aside from the native catfish *Clarias macrocephalus*, two other introduced species are available in the country namely, the Thai hito (*Clarias batrachus*) and African catfish (*Clarias gariepinus*).

The hito has unique characteristics for it is equipped with special accessory organs which make it capable of surviving in a variety of water conditions. It tolerates low oxygen levels and survives out of the water for a long period of time. It is hardy and commands a high price when sold in the market alive. The fish has tender meat and good taste. With the

good consumer acceptance of this fish, its production has greatly increased.

The raising of the catfish in concrete cylinders or tanks is considered a profitable business. With good fish culture management, small cylinder/tank operators can earn as much as the earnings of large operators. The major costs of the operation include the cost of feed and the materials for the concrete cylinder/tanks. The fish grows fast and can reach a marketable size in 2–3 months of culture.

Hito fry and fingerlings are now produced in local hatcheries and can be obtained from such sources.

Rearing of Catfish Fingerlings to Marketable Size

The following are the steps for the rearing of catfish fingerlings:

1. The culture tanks or cylinders should be located in an area close to a water source.
2. The size of the tanks/cylinders can vary depending on the desired area to be constructed. An area of 15 m² or more with a water depth of 1–1.5 m is preferable for catfish culture.

If outdoor concrete ponds are used, the pond bottom should be covered with at least a 6-inch thick layer of good clay soil to create a natural habitat for the fish. The soil will also promote the growth of natural food inside the ponds.

To enhance the growth of nature food, one application of farmyard manure is made; but if the

fish grows well, no manure is required. Thirty (30) kg of manure per 100 m² of the pond is applied.



Fig. 1. Concrete tanks for rearing of catfish fingerlings.

3. The culture site should have a good drainage system. It should be accessible to transportation and close to market for easy transport of the harvest.
4. A water depth of at least 1 m should be maintained. As the fish grows, the water level should be gradually increased to a depth of 1.5 m.



Fig. 2. Concrete cylinders and concrete tanks for rearing of catfish fingerlings.

5. Fingerlings obtained from reliable hatcheries in Laguna or Bulacan with an initial size of 10 cm in length are stocked in the culture facility at the rate of 10–30 fish per m². Stocking of fish is done in the late afternoon or early morning.
6. Fish are fed with entrails of chickens and pigs, meat of the golden apple snail, termites, worms, ground fresh trash fish, slaughter-house by-products, dried or fresh freshwater shrimps, fish offals, by-products of canneries, and even left-over foods from the kitchen and restaurants or commercial feed. The feed is given at the rate of 10% of fish body weight twice daily. Feeds are combined with pollard or rice bran and the feed ration is adjusted weekly.

The feed is given slowly in handfals, usually on a platform or wooden tray, and spread directly over the ponds. The feed conversion ratio is estimated to be about 6:1 (wet weight) and 2:1 (dry weight).

When the supply of the above feeds runs short, it may be substituted with boiled broken rice mixed with vegetables or rice bran.

7. Culture the fish for 60–90 days until they reach the marketable size.
With growth rates of 50–100 g/month, the fish attains a market size of 250 g after three months of rearing.
8. There should be partial exchange of water of at least one fourth of the volume every month to prevent the water from being foul and polluted.