Cat Fish Production Technique at TATRO Primary School Fish Farm in Anyiko, Kenya

Technique definition
Multiplying and rearing fish in pods in a controlled environment.

Purpose
- Reduce period of fish growth to maturity.
- Produce large numbers of cat fish within a short period.
- Produce fish of a size that can attract large market and of high nutritional value.
- Improve food and nutrition security for pupils through the school feeding programme.
- Generate income.
- Build capacity and hands-on skills on fish farming among the pupils and community.
- Proper use of wetlands to control diseases and undesirable pests.

Procedure
- Identify an appropriate site.
- Secure and plan the land for the various production activities and service needs such as pond, hatchery, water infrastructure, store and access within and outside the fish farming area.
- Register with relevant authority.
- Prepare the land, ponds and hatchery as appropriate.
- Undertake training on fish farm management practices.
- Source for required fish germplasm.
- Breed fish to obtain fingerlings.

Process of breeding cat fish
- Identify a male and female mature cat fish.
- Place the fish in tanks for them to relax for some hours.
- Crush the head of the male fish and dissect to harvest the pituitary gland inside the brains.
- Grind the gland carefully using a small hand-held mortar and pestle.
- Mix the gland with saline solution.
- Draw 2 ml of the mixture with a syringe.
- Cover the female fish head with a wet towel to allow fish to relax.
- Inject 1 ml of the gland hormone-saline solution on each side of the dorsal ventricle of the female fish at an angle of 45^0 to the body.
- Place the female fish in a tank with a little amount of water and allow it to relax for 11-12 hours.
- Open water from a perforated pipe into the tank to simulate an environment of rain like conditions.
- The fish should be having a bulging abdomen after 11-12 hours.
- Bring the fish out of the water gently and cover the head with a clean, moist towel.
- Gently press the fish abdomen from the upper side downward to get the eggs out.
- Collect the eggs in a sterile bowl.
- Take another male fish, kill it and cut open to remove the milt sac (testis).
- Pierce the testis, squeeze out the sperms and mix with saline water.

- Mix the sperm and saline mixture with the eggs in the bowl thoroughly. This results into fertilized eggs.
- Pour the fertilized eggs in a net tray and place in water to hatch. The eggs will start hatching within 24-32 hours.
- Leave the fingerlings in the tank for about 4 days before transferring to the nursery.
- Leave the fingerlings to grow for about 21 days before selling.
- Transfer after 21 days fingerlings not sold to fish ponds to allow for a free environment suitable for growth and maturity.

Advantages

- Improve fish supply for the school and community.
- Promote high productivity and fast growth of fish under controlled conditions.
- Ensure high survival rate of fish.
- Promote improved food and nutrition status of pupils through the school feeding programme.
- Source of income.
- Less labour requirement.
- Environmental friendly technique.

Disadvantages

- Requires technical expertise.
- High initial investment costs to put up the hatchery and provide appropriate equipment.
- Requires continuous monitoring to reduce fish mortality rates.

Dos

- Always use saline water as the medium for breeding.
- Maintain optimum temperature.
- Feed fish according to the stage of growth.
- Ensure there is an alternative power source in case of power failure.
- Ensure there are technical experts to undertake the breeding process.
- The male fish head is cut-off before conducting any operation on it.
- Guard against predators.
- Train the communities for project sustainability.

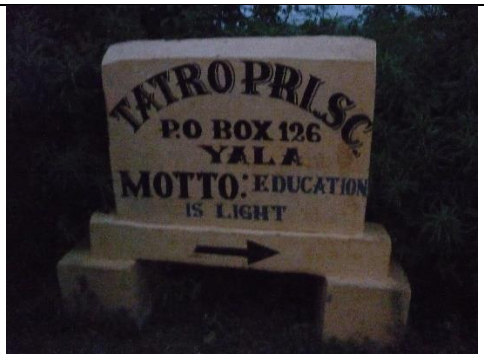
Don’ts

- Do not mix fish of different ages and different species.
- Do not breed fish before identifying the market.

Way forward

- There is need to up-scale the fish farming technique.
- Fish farming should be considered as a job opportunity for the youth.

Mr. Okong'o linking the natural water spring source, wetland, Tatro Primary School and fish farming



Tatro Primary School is located within the Millennium Village Project area

Tatro Primary School out grower fish ponds

Tatro Hatchery project supporting fish farming for the school and community at Tatro Primary School fish farm

Fish pond integrated with poultry farming

Fingerling breeding ponds

Breeding pond with Tilapia fingerlings

Mature male and female catfish placed in the tank to relax before breeding procedure

 Crushed male head to remove pituitary gland in the brains	 Releasing female eggs
 Opening the male catfish abdoment to expose milt sac (testis)	 Removing milt sac in the male catfish

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