

Fish hatcheries designing, construction and operations

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Introduction

- Circular hatchery has become more familiar for production of carp spawn in the recent years.
- The mixed quality, low availability and production uncertainty, carp seed production through induced breeding and bundh breeding in hatcheries through hypophysation has gained tremendous momentum, especially in the last two decades, reducing the collection of spawn from rivers.

Components

- The circular hatchery system consists of an overhead tank, spawning pool, incubation cum hatching pools and egg collection-cum-spawn collection tank.

- a) OVERHEAD TANK
- The overhead tank is made of R.C.C. and has a capacity of about 10,000 to 20,000 lit. with regular pumping facility from water source.
- b) SPAWNING POOL
- It is a circular cement tank of 8 to 9 meters in diameter and 1.2 to 1.5 meters in depth with 50 cubic meters of water holding capacity.

- c) INCUBATION-CUM-HATCHING POOLS
- The incubation-cum-hatching pools are circular in shape and constructed of brick and cement. Generally, two incubation pools are connected to one spawning pool.
- The incubation pool consists of two chambers. Inner diameter of the outer chamber is 3 to 4 meters and a depth of about 0.8 to 1.0 meter with water holding capacity of 9 to 12 cubic meters.
- The inner chamber is about 0.6 to 1.0 meter in diameter which is separated from outer chamber by a fine nylon screen. The incubation pool holds about 0.7 to 1.0 million eggs per cubic meter of water.

- d) SPAWN COLLECTION TANK
- It is a rectangular cement tank. The spawn is collected in a fine nylon hapa fixed the tank from where it is counted and transferred to the nurseries.