FARMER FRIENDLY METHOD OF BREEDING AND NURSERY REARING OF COMMON CARP (CC) IN TELANGANA

WELCOME

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Cyprinus carpio Linnaeus

- **Is a native of Asia has been introduced to every part of the world for food and Ornamental purposes.**
- **It is a torpedo-shaped fish golden-yellow in colour with two pairs of barbles and a mesh-like scale pattern.**
- **Body elongated and somewhat compressed, piggish mouth with Lips thick.**

CYPRINUS CARPIO (CC)





Natural Breeding

- **All Indian major carps (IMC) & Exotic Carps (EC) typically spawn in the spring.**
- **With response to rising water temperatures and rainfall in natural waters.**
- **Where eggs and larval stages of multi species get mixed up makes it difficult to separate for culture of interested species.**
- **Hence a Hatchery system for spawning and seed production of carps is prevailing.**

Hypophysation

- **A process called hypophysation is used; by injecting the Gonadotropic hormones/ Ovaprim, to stimulate gonad maturation and sex steroid production, ultimately promotes reproduction in commercial operations.**
- **Common Carp does not require hypophysation; can spawn multiple times in a season in any pond body.**

MATERIALS AND METHODS

BROOD STOCK SELECTION & MANAGEMENT

- **For breeding of common carp, brood fish weighing 300gm – 1000gm size were selected & maintained for 1 Month in earthen ponds during May.**
- **After doing sex wise segregation, kept in separate ponds, given maturation diets with ground nut oil cake + Rice bran + chicken egg yolk @ 5-6% body weight for 12 days in June'2014.**

NETTING FOR BROOD STOCK



BROOD STOCK SELECTION



CC
Brooder
Male





Female



Brood stock pond

Segregation ponds on site





BROOD STOCK POND 2

POND PREPARATION

- **The Cement nursery tanks filled with water were prepared by liming and manuaring to facilitate plankton generation.**
- **The micron mesh size Hapas having stitched at all sides and top open were inundated in water & tied in the cement tanks.**
- **The water plants like hydrilla and grasses / hey placed inside the hapa to facilitate the egg attachment after release.**





Suitable Water colour

Nursery hygiene



BREEDING HAPA



Breeding Experiment

- **6 pairs of Males and females in 2:1 ratio by number without hypophysation were introduced into 3 breeding hapas (2 pairs per Hapa).**

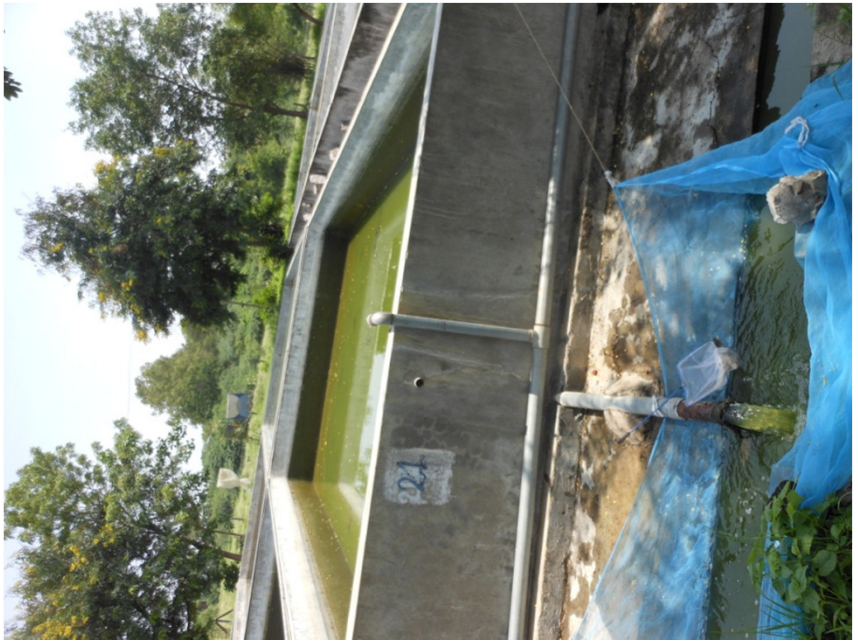
- **On the other hand 6 pairs of males and females with a single dose of Ovaprim injected @0.3ml/kg body weight were introduced into another tank (2pairs per Hapa).**

- **A total Number of 36 breeders were used for breeding experiment, and left over night in the hapas tied in cement tanks.**
- **Such that the treatments were followed with 3 replicates.**
- **Spawning occurred in 6-8 hrs, & all the fishes were observed for complete released of adhessive eggs till the morning.**
- **Later the spent fishes were removed and released into the spent fish tank.**

- **Hatching observed within 12-24hrs of egg release.**
- **After complete hatching, the hapas were removed from the tanks.**
- **The hatchlings depend for feeding on their yolk sac for 3days after hatching, and the the young ones prefer moina / plankton hence the tanks were already menured & inoculated with a prefered food for young stages to help their feeding/ survival**

Harvesting of 5days old spawn





FEEDING & NURSERY MANAGEMENT

- **A mixed diet of GOC (ground nut oil cake) and DOB (De-oiled rice bran) were fed to the fry from the 3day evening on wards.**
- **The Eggs and fry often fall victim to bacteria, fungi, and the vast array of tiny predators and insects, hence most care was taken to keep the pond environment clean to protect the eggs and hatchlings by applying Salt & soap oil emulsion in nursery ponds.**

Feeds / feeding trays/ Farm needs





Harvesting of Fish fry by Drag netting





Cyprinus carpio seedling size



Cup counting Method for fry





Bags filled with Oxygen

OXYGEN FILLING & PACKING





Results..

- **60,000 eggs obtained per kg body weight of the females Avg.**
- **75% hatching occurred**
- **The Nursery Phase was followed for 30 days.**
- **Out of the total hatchlings 40% survival of fry obtained**
- **And the nursed fry distributed to the farmers in Oxygen packing.**

Distribution & Method of Transportation







THANK YOU