

## Kalabans

### *Bangana dero*(Hamilton, 1822)

- Kalabans, *Bangana dero*, an indigenous medium sized minor carp is a bottom feeder, inhabiting in streams and rivers of Gangetic belt and Indus river systems.
- The body of this species is ordinarily white and more linear having relatively small head.
- This herbivorous fish has potential for carp polyculture at mid hill altitudes. Browsing nature is helpful to control the excess periphyton growth in the pond.
- The brooders having the age 3+ years and body weight as 350-650g attained full maturity with egg release and oozing milt during the month of July - August in captivity at 18-22<sup>0</sup>C water temperature.
- Gonadosomatic index (GSI) remain in the range of  $3.324 \pm 0.143$  to  $14.115 \pm 1.214$  in captive reared females.
- The females are characterized by soft, enlarged and distended belly while males are identified by developed prominent tubercles on the snout coupled with the roughness of the pectoral fin.
- Hormone dose (Ovatide) of 0.6 ml kg<sup>-1</sup>body wt. for females and 0.3 ml kg<sup>-1</sup>body wt. for males is optimum for spawning with 80-90% fertilization.
- The spawning fecundity is 1,34,600-1,47,400/kg body weight with average egg size of 1.6-2.8 mm. One litre of volume contains creamy white, water swollen 40000 fertilized eggs.
- Eggs can be incubated in portable plastic carp hatchery at 18-22.8<sup>0</sup>C water temperature with 60-80% recovery of spawn.
- Yolk absorb in 70-84 hrs of hatching and swim up larvae starts external feeding at 4<sup>th</sup> day of hatching.
- Small polytanks having the size 4-10 m<sup>2</sup> with 60 cm depth may be used for larval rearing with stocking density of 10 larvae per L. Larvae attain length of  $34.2 \pm 2.0$  mm in 3 months.
- Fingerlings of the size 26-40 gm (6 months old) may be stocked in production ponds.

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# Photographs



**Male with tubercles on snout**



**Female without tubercles on snout**



**Portable carp hatchery**



**Fertilized eggs**



**One month old fry**



**Three months old fingerling**