

Aquaculture and Fisheries

Aquaculture is currently one of the fastest growing food production systems in the world with production level increasing at an average rate of 11% per year over the last decade. In Pakistan too, the major potential for increase in fish production lies in inland aquaculture. Therefore, there is an increased interest in the development of aquaculture production not only for the food security but also for larger economic benefits.

Inland fish culture is currently characterized by low productivity. Therefore, there is need to increase per unit area production from fish ponds on sustainable basis. This can be achieved by introduction of fish with higher genetic growth potential, provision of necessary nutrition and effective disease control.

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- A total number of 2000 fingerlings of Channel Catfish (*Ictalurus punctatus*; mean size, 10.8g) were imported from Thailand for introducing value-added fish for aquaculture in Pakistan. After one year, a mean size of 1200g was achieved with good survival. Out of grown stock, healthy brooders were selected for breeding purpose.
- Bighead Carp (*Aristichthys nobilis*) can tolerate salinity of NaCl and CaCl₂ upto 15 ppt and 4 ppt, respectively.
- Carps fed on diet with 0.5% probiotics showed maximum growth followed by fish fed on 1.0% probiotics. *Cirrhina mrigala* had better growth than *Labeo rohita*.



A healthy brooder of Channel Catfish, *Ictalurus punctatus* at NARC



Effluents of Khazana Sugar Mill, Peshawar and Fauji Corn Complex, Jahangira (NWFP) draining into the river Kabul



- Ten bacterial genera were identified from pond water, sediments, gills and intestine of *Labeo rohita* cultured in pond at NARC.
- Several of the selected sites at Nala Lai and river Kabul and few sites at river Soan and Korang were found highly polluted. Heavy metal concentration was higher in gills, heart and liver.

KARINA, Juglote

- Research trials were conducted to enhance per year growth/survival rate of trout, reduce mortality and disease occurrence by providing cost effective feed.



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