## ABSTRACT

The golden mahseer (*Tor putitora*) is now threatened due to natural hazards and human interventions in aquatic ecosystems. This economically important and high valued fish has been successfully spawned artificially in Punjab, Pakistan, recently. Now there is a need to introduce this fish in aquaculture practice. To observe the survival and growth performance potential of golden mahseer in pond based aquaculture an experiment on polyculture of mahseer and Indigenous Indian major carps was carried out for 120 days with initial 15 days for acclimatization in nine earthen ponds of equal size (0.227 ha.). Three treatments with replicates of three each were used. $T_1$ with Mahseer only (100%); $T_2$ with Indian major carps, rohu 60%, mrigal 25% and catla 15% while $T_3$ with mahseer 20%, rohu 50%, mrigal 25% and catla 10%. The stocking density of fish seed in all treatments was 2000/ha. Size of fish seed was almost same for same fish species, but different species had different seed sizes due to limitations in their availability. Fish in all the experimental ponds were fed with low cost, low protein supplementary feed comprising of rice powder (66%), wheat bran (33%) and vitamin premix1% at the rate of 5% of the estimated body weight. Physico-chemical parameters like temperature, light visibility, dissolved oxygen, pH, total alkalinity and total hardness were within the acceptable range for fish culture. The mean weight gain of mahseer was 88.53±3.11g and 97.51±2.12g in $T_1$ and $T_3$ respectively. The mean weight gain of rohu, mrigal and catla were 489.06±6.34g, 438.94±5.14g and 1160.77±16.21g in $T_2$ and 411.74.±3.88g, 494.62±6.11g and 1106.8±22.14g in $T_3$ respectively. The survival rate of mahseer was 71% in $T_1$ and 91% in $T_3$. Survival rate of rohu and mrigal was 82% and 87% in $T_2$ and 81% and 77% in $T_3$, while the survival of catla was 100% in both $T_2$ and $T_3$. However the survival of mahseer remained significantly higher in polyculture ($T_3$) Weight gain of mahseer was slightly higher in $T_3$ than $T_1$. Final weight also followed the same trend. The FCRs remained high in catla followed by rohu, mrigal and mahseer. Similarly the SGRs were higher in mrigal followed by mahseer, rohu, and catla. Despite the absence of statistically significant differences among the two treatments, rohu gained higher weight in $T_2$ while mrigal gained higher weight in $T_3$ and catla gained almost similar weight in both $T_2$ and $T_3$ treatments. At harvesting the gross and net productions of all the treatments were 381 kg and 375, 3249 and 3069 kg and 2347 and 2226 kg/ha./yr. in $T_1$, $T_2$ and $T_3$ respectively. These results represent the first successful attempt to culture this threatened fish golden mahseer and Indigenous Indian major carps in Punjab, Pakistan.