

# Culture of Freshwater Fish *Channa punctatus* in Rice Fields

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## ABSTRACT

Rice cum fish culture is a cost effective practice for marginal and poor farmers, taking into consideration the cost effective benefits of rice and fish culture from limited land and water resource. Present studies were therefore conducted to evaluate the benefits of rice cum fish culture in Haryana. Fingerlings of *Channa punctatus*, candidate air breathing species for rice fish co-culture was stocked in rice fields. Five treatments were maintained in triplicates. In treatment 1 no fish, no pesticide were used; in treatment 2, fish in rice fields were stocked without agrochemical spray. Treatment 3 was comprised of fish and agrochemical exposure as per recommended doses; treatment 4, included fish with agrochemical exposure according to rice farmers whereas treatment 5 was of rice fields without fish but pesticide exposure according to farmers. Fingerlings of *Channa punctatus* with mean body weight of  $15.44 \pm 0.120$ g @ 1 fish per 3 sq. m after 10-15 days of seedling transplantation were stocked in the respective treatments. Results revealed significantly ( $P < 0.05$ ) high growth performance in terms of live weight gain, specific growth rate (SGR), growth percent gain in body weight in the group of fishes in treatment 3. Significant population of planktons were also built up in all the treatments indicating the presence of fish food organisms. The rice production was also significantly ( $P < 0.05$ ) high in treatment 3 and net profit was high in all the treatments where fish were stocked in comparison to rice monocultures. Results of the present study clearly suggest that better management of rice fields and water could significantly enhance the fish and rice yield.