



Conclusion

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In the era of global food crisis, aquaculture stands as a sustainable approach to restore biodiversity and ensure nutritional security. The present study entails a broad spectrum of the society suffering from poverty, malnutrition and protein deficiency; cultivation and consumption of indigenous *C. batrachus* hold promising potentiality in uplifting the overall health status of the populace. The study of limnological features of a natural *C. batrachus* culture pond may provide an ideal seedbed for growth and development of the species. It also provides a handy guide to the catfish farmers to assess the culture condition for successful application of autochthonous probiotics. The study has critically evaluated the potentiality, biosafety and efficacy of selected intestinal isolates for probiotic properties. It also provides information on some inhibitors to be avoided for successful establishment of probiotics at the host intestine. The further analysis has also revealed that probiotic-supplemented feed has proved quiet beneficial for a good vigour of *C. batrachus*. The effectiveness is twofold; as it will be helpful as a much better nutritious food component, not to mention that delicious taste again. The feed supplemented with probiotic *L. sphaericus* PKA17 had significantly increased the nutritional quality of *C. batrachus* whereas *B. cereus* PKA18 had substantial role in growth promotion. The two bacterial isolates showed mutual compatibility and hence may be used together to have a synergistic effect on host. Finally, an intensive survey over freshwater fisheries of Bankura district was carried out. The outcome of the result depicts the present scenario, market trend, ecology and economy of *C. batrachus* with reference to other inland fisheries. This research strives to work upon the creation and mapping of fish diversity database for the entire region. A futuristic approach towards a semi-intensive mode of cultivation would be

a better choice for conservation of the species. Massive awareness program should be launched with immediate effect to provide scientific training and capacity building program for sustainable development of *C. batrachus* production as well as to defend the infiltration of alien *C. gariiepinus*. The Government must also step forward to provide technical guidance and economical support to the farmers. A holistic approach involving all concerned authorities, technical experts and local people is to be taken to restore the indigenous *C. batrachus*, before it becomes totally extinct.