

A successful breakthrough on breeding of common carp (*Cyprinus carpio*) in highlands of Nepal: A hitherto unexplored bid

(Towards improving food security and nutrition of highland dwellers)

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Background

Poverty and associated malnutrition, particularly among children and women, is rampant in Nepal both from regional and global perspective. Hill and highland dwellers are suffering a major brunt from this poverty menace. Though fish is said to be the cheapest source of protein, it rarely reaches the table of upland people. Most of the ponds (94%) are located in terai of Nepal where warm climate prevails. The policy makers generally seem to believe that highlands fish farming is totally unsuitable and unrealistic, a complete waste of effort and resources. Thus, the production potentials of cold water aquaculture in highland areas have always been grossly ignored.

The purpose was to explore the possibilities of common carp culture and its breeding in such remote areas so that the supply of quality fish seeds is ensured which remained always daunting task impeding the overall development of aquaculture in highlands.

Methods

This experiment was conducted in Tatopani village of Jumla located at 2500 m altitude using the small cemented tank (6m²) of Mr. Bal Bir Mahat. 50 common carp fries were stocked on 21 June 2014 giving local feeds mixed with maize flour, rice bran and Jumli bean having 14% CP in overall. Some pellet feeds (with 26% CP) were given 1-2 months prior to breeding time to induce spawning. The brood stocks were reared for a period of almost 3 years while breeding was done following semi-artificial methods. The weight of the brood stock was almost 1 kilogram in average. Water quality and temperature was recorded as needed.



Figure.1: Mr. Bal Bir Mahat ((in the center above), ready to sell his common carp fries produced from his small tanks in three years of rigorous efforts (June 2014- April 2017)

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Results

The growth rate of these stocks was found satisfactory. The survival rate was 76% with mean growth of 0.54 g/day, and extrapolated gross fish yield 34.72 kg/ha/day. The feed conversion ratio was found to be 5.93 with a total feed cost of Rs. 297 per kilogram. The current market price is Rs. 500 per kilogram in Jumla. Similarly, 5000 hatchlings were produced for the first time during April/May 2017. The owner Mr. Mahat sold 2500 fries @ Rs.5/fry and received a gross income of Rs. 12,500 for the first time in the history of Jumla from 2500 m altitude.

Interpretation/conclusion

This indicates that common carps are most viable species for growing in colder regions. With this experiment, the obstacles have been identified and the worth of the enterprise has been proven beyond doubt. The stage is set for interested newcomers who is expected to enter the program. For this to happen, there must be immediate financial support in the form of specific aquaculture-flagged funding from the government and other donors.

Acknowledgement

The MDI research team is highly indebted with the technical advice received from Prof. Dr. Dilip K. Jha, Prof. Dr. Sunila Rai, Mr. Nabin B. Khanal from Department of Aquaculture and Fishery, Agriculture and Forestry University (AFU), Rampur, Nepal respectively. Similarly, the team is thankful with World Food Programme (WFP) for providing partial financial support through Maternal, Child Health and Nutrition (MCHN) programme in conducting this research works.

For more information please visit the links

http://mdinepal.org/pdf/RPT_breeding_of_common_carp_in_Jumla.pdf

NB: This paper was presented at Global Workshop: Nutrition-sensitive fish agri-food systems organized by WorldFish from 5-8 December 2017 in Siem Reap, Cambodia.