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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Involving Women in Field-Testing of Periphyton Enhanced Aquaculture System for Nutrition Security

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Abstract: An on-farm trial of carp polyculture was carried out with participation of women farmers from Sundardeep Women Fish Farmer's Cooperative (15 women farmers) in Chitwan District and Mishrit Fish Farmer's Cooperative (22 women farmers) in Nawalparasi District to field-test the enhancing effect of periphyton on use of feed and fish production. The trial was conducted for 8 months from April to December 2015. Women farmers stocked six carp species and two small indigenous species (SIS) to ponds. Women farmers were divided into two groups. One group fed their fish with dough of rice bran and mustard oil cake, while the other group installed bamboo substrates in their ponds and fed their fish with half the amount of the feed used by the first group. Women farmers netted and weighed fish monthly to check fish growth and calculate ration. Women farmers were provided with a book to record fish harvested for consumption or sale and fish mortality. Final harvest was done after 8 months of culture. The netted fish were counted, weighed, and returned to the pond as the farmers wanted to keep fish for their biggest festival "Maghi" in mid-January. In aggregate, 84 % of farmers consumed fish at home, and 41 % of farmers sold carps. The trial showed that culturing carps with SIS with 50 % feeding amount and with bamboo substrates in ponds resulted in a 22 % higher fish production as compared to the culture of carps with normal feeding. More interestingly, the gross margin of the half-fed periphyton enhanced carp polyculture was almost two times as much as that of the normal fed polyculture system.

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Women farmers also benefited socially as well as economically from the interactions within the cooperatives, which increased their self-confidence and developed leadership skills in some members.

This abstract is excerpted from the original paper, which was in the Gender in Aquaculture and Fisheries: Engendering Security in Fisheries and Aquaculture, *Asian Fisheries Science Special Issue* (2017), 30S: 265-275.

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