



Tropentag, September 17-19, 2018, Ghent

“Global food security and food safety:
The role of universities”

Does the Loss of Homestead Fish Ponds in Bangladesh Increase Food and Nutrition Insecurity of Poor Consumers?

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Abstract

Fish is a vital component of food and nutrition security in Bangladesh. With the decline in capture fisheries, small scale aquaculture with home based fish ponds for a long time has been food safety net for the poor. Although producing small quantities, only for the consumption availability of fish made the poor less vulnerable to fluctuation in fish supply and prices. Recently, however government has been discouraging home based small scale fish farming and promoted commercial fish farming instead. This paper analyses the transition from home based fish ponds to commercial aquaculture. Using two waves of panel data covering five major geographical hubs in Bangladesh, a double-hurdle model is estimated to examine the commercial transformation of non-commercial fish farmers and its implication for livelihood and household food and nutrition security. A correlated random effect procedure with a control function approach is used to control for unobserved heterogeneity and potential endogeneity of explanatory variables. Our results reveal that households are characterised with moderate degree of market participation. The average share sold is 47 percent of their total fish production with an increase of 19 percent sold overtime. Market participation increases household income and generates a positive impact on their welfare. Almost 44 percent of the farmers are subsistence farmers, whereas transitory and commercial farmers constituted 33 percent and 23 percent respectively. Overall, 50 percent of the farmers change their degree of commercialisation overtime and become more market oriented. Production highly depends on carp species that carry less nutritional quality than small indigenous species, which are rich in micronutrients. Besides, commercialisation process of smallholders involved new risks with substantial transition challenges associated with price declines, production failure and investment risks. Therefore, smallholders need to provide positive support to face these potential challenges of commercialisation process for ensuring food and nutrition security at the household level.

Keywords: Aquaculture, Bangladesh, commercialisation, developing countries, food security, smallholders