SEASONAL INTEGRATION OF WATER USE BETWEEN FISH PONDS AND ASSOCIATED HORTICULTURE-CHARACTERISTICS OF HOUSEHOLDS WITH DIFFERENT LEVELS OF ADOPTION IN MYMENSINGH, BANGLADESH.

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The benefits of integrated aquaculture are widely recognized but a wide range in the intensity of integrated water use between fish and associated horticulture occurs in Bangladesh. The factors that affect the level of integration were investigated in a baseline survey of 205 farming households disaggregated by well-being level in three rural and three peri-urban areas of Mymensingh district, Bangladesh. Households with access to ponds were identified as active or passive integrators based on a simple set of criteria and their resources and livelihoods assessed in comparison with non-pond households.

Both active and passive integrated households were found to consume fish more frequently than non-pond farmers. Fish is a staple food; over 70% of poorer households ate fish at least once daily, compared to more than 80% of better off households. Fish were more likely to be purchased in the market in rural households than urban, probably because purchase of substitutes was more common close to towns and household production was more intensive and likely to satisfy needs. Households with ponds were less dependent on the market for fish supplies than households without ponds.

Active integrated households’ fish and vegetable production were 33% and 84% higher than passive groups respectively. Significant differences were observed between sites and wellbeing categories for the percentage of fish retained for consumption and that sold.

Active integrating households have similar overall land holdings (0.966 ha) than passive (0.996 ha) but rice production of the former is higher and this could explain differences in fishpond management. Rice bran was the most commonly used pond input (80% of all pond households) but active integrated farmers applied rice bran more frequently than passive groups (91 compared to 63 times/season).

‘Ease of production’ was a major incentive for farmers to integrate fish and vegetable production and this opinion was related to household type i.e. active integrators were more aware and confident about the practice. The literacy levels of household heads, access to information and capital and contact with formal and informal institutions of active producers and the better-off households was significantly higher than other groups and poorer households respectively although this was not affected by location (urban/rural).