Using the fishpond as an improved nutrient trap for recycling nutrients on farm in North East Thailand and Mymensingh, Bangladesh

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Abstract

Various experiments were conducted in Bangladesh and Northeast Thailand to evaluate the use of fishponds as nutrient traps in integrated farming systems. All ponds accumulated nutrients, but the amount accumulated was influenced by the types of inputs, the species stocked and densities used. Results suggest, that the higher the percentage of input nutrients retained in fish production, the better the cost: income ratio. The latter is very important, especially for poor farmers in the prevailing cash constrained local economies. Pond farming systems used by poor farmers yielded a higher cost: income ratio than systems applied by better-off farmers due to the polyculture and to the use of the pond sediment on the crops at the dyke. However, more nutrients accumulated in the sediment of better-off farmers, due to the additional application of feed. This higher pond sediment nutrient content makes it a better fertiliser for dyke-based crop production. How to reduce the labour demand for the use of pond sediments for crop production is an important topic for further research.

Keywords: fishpond, dyke, nutrients, sediment, profit