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LOTUS-FISH CULTURE IN PONDS: RECYCLING OF POND MUD NUTRIENTS

*Ninth Work Plan, New Aquaculture Systems/New Species Research 1 (9NS1)
Abstract*

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ABSTRACT

This experiment started in February 2000 and will be terminated in September 2000. The purposes of the experiment were to: 1) assess the pond mud nutrient recovery by lotus plants (*Nelumbo nucifera*); 2) assess pond mud characteristics after lotus-fish culture; and 3) compare fish growth in ponds with and without lotus integration. There were three treatments: A) lotus-fish integrated culture; B) fish alone; and C) lotus alone. Lotus plants were transplanted at 20 plants per pond in treatments A and C. Sex-reversed all-male Nile tilapia (*Oreochromis niloticus*) fingerlings were stocked at 2 fish m⁻² in ponds of treatments A and B. Treatment ponds stocked with tilapia (treatments A and B) were fertilized weekly with urea and triple superphosphate (TSP) at rates of 28 kg N and 7 kg P ha⁻¹ wk⁻¹. No fertilizer was applied in treatment ponds with lotus alone (treatment C). Fish growth and survival will be assessed only at the end of the experiment due to sampling difficulties. Fish and lotus plants will be harvested by draining. Nutrient budgets will be determined for all ponds. Partial budgets will be estimated for cost of inputs and value of fish and lotus.