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Sustainable Aquaculture for a Secure Future

Title: Managing fertilizers for fish yield in tropical ponds in Asia

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Abstract: The purpose of this work was to develop a strategy for fertilizer application that improved predictions of yields. Pond productivity was analyzed relative to supplies of dissolved inorganic carbon (DIC), dissolved inorganic nitrogen, and dissolved reactive phosphorus. Phosphorus did not limit pond production in any of the treatments used. Algal productivity and yield of male Nile tilapia (*Oreochromis niloticus Trewavas*) were limited by DIC when low alkalinity ponds were fertilized with chicken manure or triple superphosphate and urea. In high alkalinity ponds with adequate DIC, nitrogen limited production when chicken manure was added. This was corrected with additions of urea. Fertilizer costs per kg of yield were US$0.07 for the chicken manure treatment and US$0.06 for the chicken manure + urea treatment.

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