EFFECT OF COW AND CHICKEN MANURES ON MILKFISH *Chanos chanos* (Forsskal) PRODUCTION IN BRACKISHWATER PONDS

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A B S T R A C T

A study using chicken and cow manures with basal application rates of 0.5 , 1,2 and 4 tons/ha was conducted. The effect of both manures on some selected physico-chemical properties of the pond soil and water, primary productivity, and milkfish *Chanos chanos* (Forsskal) yield were compared.

Using 8 treatments with 3 replicates each in a completely randomized design, 24 units of 40 m^2 ponds were stocked with 20 fingerlings/pond. The fish were cultured from September 22 to December 20, 1983 at the Brackishwater Aquaculture Center of the University of the Philippines in the Visayas College of Fisheries, Leganes, Iloilo, Philippines.

The differences among treatments in terms of all physico-chemical parameters monitored were not significant except for the reactive phosphorus. Primary productivity in all treatments was at its peak during the 5th week, after which, it declined gradually apparently due to the combined effects of cloudy weather and low concentration of reactive phosphorus in the pond water.

The highest mean net fish yield (680.9 kg/ha) and mean growth rate (1.54 g/day) were obtained in treatment 3 with 1 ton/ha of chicken manure. Treatment 2 (0.5 ton/ha of cow manure) had the lowest mean net fish yield (343.6 kg/ha) and likewise the lowest growth rate (0.80 g/day). The survival in all treatments was high, ranging from 95 to 100%. In general, chicken manure was superior to cow manure, however, fish production from the treatment with 2 tons/ha of cow manure was comparable to that of 2 tons/ha of chicken manure suggesting that cow manure could be used as organic fertilizer in brackish-water ponds for milkfish production.

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