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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Produccion y Aspectos Economicos del Cultivo de Tilapia en Estanques Fertilizdos con Gallinza

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Abstract: The production of male *Tilapia nilotica* (10000 fish/ha) in 0.1 ha earthen ponds fertilized with layer chicken litter was studied during the rainy and dry seasons at the "El Carao" Aquaculture Experiment Station, Comayagua, Honduras. For rates of chicken litter application were tested using completely randomized design; weekly applications of chicken litter application were tested using a completely randomized design; weekly applications of chicken litter, on a dry matter basis, were: 125 kg, 250 kg, 500 kg and 1000kg/ha. After a culture period of 150 days productions during the rainy season were, respectively, 1159 kg, 1589 kg, 1856 kg and 2229 kg/ha, while during the dry season the respective productions were 16 kg, 1399 kg, 1884kg and 2295 kg/ha. No seasonal differences in production ($P > 0.05$) were detected at any fertilizer level. Fish production increased significantly ($P < 0.05$) with an increase in manure input, and was described by the equation $Y = 832.693 + 2.813x - 0.0014x^2$, $r^2 = 0.893$. Income from the sale of fish produced ranged from L. 3674/ha³ to L. 7256/ha and total production costs ranged from L. 2364/ha to L.3846/ha for the low and high fertilization rates, respectively. The cost per kilogram of fish produced was L.2.13 at the 125 kg/ha* wk rate of chicken litter application and L. 1.75 where chicken litter was applied at 1000 kg/ha* wk. The lowest production cost (L.1.68/kg) was obtained at the 500 kg/ha*wk fertilization rate.

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