

DETERMINATION OF TIME REQUIRED FOR MAXIMUM
GROWTH OF PLANKTONS AFTER FERTILIZING
WITH DIFFERENT CONCENTRATIONS OF DUCK LITTER

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Correct level of application of fertilizer required to optimize planktonic growth is essential for successful pond fish farming. Objective of this experiment was to determine the suitable level of duck litter as the base fertilizer in fish ponds.

10 cement tanks of area 0.25 m² each and 1.0 m in depth was used. Limed duck litter (dolomite:duck litter, 1:19) was applied at four concentrations, (Treatment 1: 5,000 kg/ha, Treatment 2: 7,500 kg/ha, Treatment 3:10,000 kg/ha Treatment 4: 12,500 kg/ha) randomly to eight of the cement tanks. Two tanks were used for the control.

Physico-chemical parameters and plankton numbers were monitored every other day during the first 18 consecutive days after fertilizing, without introducing fish into the tanks. Analysis of variance with Turkey's procedure was used for statistical calculations.

Morning water temperature, total alkalinity, total hardness, DO concentration, pH, BOD₅ and plankton density showed significant variation (P.05) in the ponds fertilized with duck litter (Treatments 1-4) when compared with the control ponds. Plankton numbers increased with time upto day 12 - 16 and after attaining maximum values decreased.

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