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## RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

**Title:** Supplemental Feeding of Nile Tilapia (*Oreochromis niloticus* L.) in Fertilized Ponds Using Combined Feed Reduction Strategies

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**Abstract:** The study was conducted in nine 500-m<sup>2</sup> earthen ponds at the Freshwater Aquaculture Center, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, to determine the effect of using combined feed reduction strategies on the grow-out culture of Nile tilapia in fertilized earthen ponds. There were three treatments with three replicates: (I) 67% daily feeding until harvest; (II) 67% daily feeding for 60 days, 50% daily feeding until harvest; (III) 67% daily feeding for 60 days, 100% alternate day feeding until harvest. Ponds were stocked with sex-reversed GIFT tilapia fingerlings at 4 fish m<sup>-2</sup>.

The study showed that Nile tilapia cultured in fertilized earthen ponds using different combined feed reduction strategy had no significant difference in terms of growth performance. Final mean weight and length of Nile tilapia in Treatment I were 183.1 + 77.1 g and 20.1 + 2.9 cm, Treatment II had 168.5 + 39.9 g and 19.9 + 1.4 cm and Treatment III had 183.1 + 16.0 g and 20.5 + 0.6 cm. Yield after harvest in Treatments I, II and III were 2,968.7 + 439.6, 1,980.7 + 541.8 and 2,024.7 + 329.0 kg ha<sup>-1</sup>, respectively. Net tilapia yield in Treatment I was significantly higher compared to the other treatments considering the higher survival of the treatment.

Treatment I gave the highest net return among treatments with a mean value of US\$705.90 followed by Treatment III with a mean value of US\$6.41 then Treatment II with a mean value of US\$-36.12. Net return was low among treatments because of the low survival after the study. Numerically, Treatment I showed the most profitable reduction strategy with the

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obtained survival, however, analysis of variance showed no significant differences in net return among treatments.

With this result, Treatment I seemed to have the best result for tilapia culture, however, previous studies also shows feasibility of the use of other feed reduction strategies if more viable survival is attained leading to better FCR and net return.

This abstract was excerpted from the original paper, which was published in Better Science, Better Fish, Better Life: Proceedings of the Ninth International Symposium on Tilapia in Aquaculture (2011) [Edited By: Liu Liping and Kevin Fitzsimmons] pg:268-274

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