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Title: Optimum harvest time in aquaculture: An application of economic principles to a Nile tilapia, *Oreochromis niloticus* (L.), growth model.

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Abstract: A simple method is presented for determining the optimum time to harvest fish and the effect of fertilization type on optimum harvest time for aquaculture. Optimum harvest time was similar for either maximizing fish yield or maximizing profit of fish harvested (price of fish times fish yield minus fish production cost), because the daily change in fish production cost was low for the low-input Nile tilapia, *Oreochromis niloticus* (L.), production system in Thailand. At a harvest time of 150 days for an organic fertilization treatment compared to an inorganic fertilization treatment fish yield increased from 1.505 t/ha to 2.295 t/ha, and profit of fish harvested increased from 15,657.1 baht/ha (US$ 590.8/ha) to 25,127.5 baht/ha (US$ 948.2/ha). For the organic treatment, optimum harvest time occurred at 191 days, with a fish yield of 2.328 t/ha and a profit of 25,520.5 baht/ha (US$ 963.0/ha), compared to the inorganic treatment where optimum harvest time occurred at 105 days with a fish yield of 1.536 t/ha and a profit of 16,035.4 baht/ha (US$ 605.1/ha).

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