Economic Analysis of Nile Tilapia (Oreochromis niloticus) Production in Tanzania

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Abstract:
In Tanzania, Nile tilapia culture is a promising aquaculture enterprise. Information on production costs could assist fish farmers in economic and financial planning. Economic profitability of small-scale Nile tilapia production in Tanzania is analyzed using a model that simulates individual fish growth and takes into account fish population dynamics in the pond. The results suggest that the current practiced mixed-sex tilapia culture without predation is not economically sustainable. Extension efforts should be geared toward developing a Nile tilapia production system that is based on a hand-sexed all-male tilapia. Meanwhile catfish can be introduced in ponds to control overcrowding in mixed-sex tilapia culture without predation. Studies to determine optimal pond sizes, availability of feed, and a quality fingerling supply chain are also fundamental for developing a sustainable Nile tilapia production system in Tanzania. Under improved Nile tilapia production systems, returns are high enough to justify investment through borrowed capital from formal institutions.

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