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## Farm to Food Security: An Impact Evaluation of Tilapia Researches under Thailand Research Fund

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### Abstract

Agricultural research plays an important role in addressing and solving current problems of farm and food security. Tilapia has become the third most important aquaculture fish after carp and salmon worldwide and has been the most crucial fish species in Thailand mainly for food security. The evolution of Tilapia aquaculture certainly has derived from the investment in research and development. Thailand Research Fund (TRF) has been principally investing in Tilapia research for a long period of time. The study aims to evaluate the past investment in Tilapia research. Accordingly, the data collected from 33 Tilapia research projects under the TRF support are assessed. In addition, 8 case studies are selected and intensely evaluated. The five important OECD research evaluation criteria i.e. relevance, effectiveness, efficiency, impacts and sustainability, are employed in the study. The economic evaluation is performed by using the net present value (NPV), benefit-cost ratio (BCR) and internal rate of return (IRR). The results indicate that most Tilapia research met the OECD criteria on relevance and effectiveness. However, to come across with the efficiency and impact indicators, users and adoption must play an important role. The sustainability indicator seems to be the most critical issue while farmers dis-adopt technology quickly after the project ended. In conclusion, the past Tilapia research projects under TRF support were worthwhile invested with a NPV of 2.75 million Euros; a BCR of 6.74 and the IRR equals to 55%. Thus, in order to extend the impacts from farm to global food security, future research on Tilapia should be targeted on users' adoption in order to initiate higher economic impacts throughout the value chain.

**Keywords:** Food security, impact evaluation, Thailand, Tilapia research