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## RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

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**Title:** Economic and Risk Analysis of Tilapia Production in Kenya

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**Date:** August 3, 2009

Publication Number: CRSP Research Report 09-250

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**Abstract:** Commercial production of tilapia in Kenya has potential for expansion, but growth and development of the tilapia industry in Kenya will depend upon its profitability and the effect of associated risks. Data from pond experiments, on-farm trials, and farm surveys were used to develop enterprise budgets and a risk analysis for nine production scenarios. The nine scenarios include: 1) monoculture of sex-reversed male tilapia fed either rice bran, a pelleted experimental diet, or a pelleted pig finisher diet; 2) clarias monoculture fed with each of the three diets; and 3) tilapia-clarias (sex-reversed male fingerlings) polyculture fed with each of the three diets. Net returns/ha were highest for production with the pig finisher diet, with clarias in monoculture the highest followed by tilapia in monoculture and then the polyculture system. The lowest net returns/ha were obtained with clarias fed rice bran. Profitability was affected by feed cost and tilapia survival. Tilapia monoculture systems had lower probabilities of financial losses than either clarias monoculture or the polyculture system. Use of the pelleted diets also resulted in lower probabilities of financial losses. Lower yields from the rice bran feed scenario resulted in its greater sensitivity to fluctuating costs of rice bran and survival of tilapia.

This abstract is excerpted from the original paper, which was published in Journal of Applied Aquaculture, 21:1-23.

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**CRSP RESEARCH REPORTS** are published as occasional papers by the Management Entity, AquaFish Collaborative Research Support Program, Oregon State University, 418 Snell Hall, Corvallis, Oregon 97331-1643 USA. The AquaFish CRSP is supported by the US Agency for International Development under CRSP Grant No. EPP-A-00-06-00012-00. See the website at <[aquafishcrsp.oregonstate.edu](http://aquafishcrsp.oregonstate.edu)>.