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Economic Viability of the Use of Homemade Ration in the Feeding of Tilapia in the State of Goias, Brazil

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Abstract

The objective of this study was to evaluate the economic feasibility of using homemade feed ration in the feeding of tilapia in Goias state, Brazil. The motivation for the study is that up to 60% of the total costs of tilapia production are related to feed. In addition, the production of the feed itself can solve an environmental problem related to the reuse of filleting waste from fish, after its treatment in the form of flour and fish oil. Currently, in Goias state, there are four fish farmers processing more than 1,000 kg per day of fish. Through a case study, the experiences of these four fish farmers located in Goias state, Brazil, were considered. Data were collected through structured interviews. The economic viability was evaluated using the indicators like Net Present Value (NPV), Internal Rate of Return (IRR) and Payback. Data was only available for fish farmers 1 and 2. Farmers 3 and 4 do not have data available yet, since they are new in business. NPV was considered using discount rates of 10 % (NPV10), 15 % (NPV15) and 20 % (NPV20) representing three levels of opportunity costs that apply for investments in Brazil. For fish farmer 1 we obtained: a) NPV10 of BRL 4,196,503.12, NPV15 of BRL 3,280,821.28, and NPV20 of BRL 2,543,481.48; b) IRR of 53.77 %; and c) Payback of 28 months. For fish farmer 2 we obtained: a) NPV10 of BRL 5,385,229.15, NPV15 of BRL 4,456,367.22, and NPV20 of BRL 4,017,135.42; b) IRR of 79.02 %; and c) Payback of 9 months and 7 days. Each US$ corresponds to BRL 3.42. The economic indicators demonstrate the feasibility of the use of the homemade feed ration, taking advantage of filleting residues. The fish farmers interviewed also show satisfaction in the possibility of using homemade feed ration.

Keywords: Economic viability, fish feed, use of waste

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