## NOTICE OF PUBLICATION



AQUACULTURE COLLABORATIVE RESEARCH SUPPORT PROGRAM

## RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Small-scale fish farming in Rwanda: Economic characteristics

**Author(s):** Nathanael Hishamunda<sup>1</sup>, Maria Thomas<sup>2</sup>, David Brown<sup>3</sup>, Carole Engle<sup>4</sup>, Curtis Jolly<sup>1</sup>

- 1. Department of Agricultural Economics and Rural Sociology, Auburn University, AL 36849-5419
- 2. Work/Study Program, Tuskegee University, Tuskegee, AL 36088
- 3. Humphrey High School, Humphrey, AR 72073
- 4. Department of Aquaculture and Fisheries, University of Arkansas at Pine Bluff, Pine Bluff, AR 71611

Date: 15 July 1998

Publication Number: CRSP Research Report 98-124

The CRSP authors will not be distributing this publication. Copies may be obtained by writing to the authors.

Abstract:

A survey was conducted of 156 cooperative and 111 individual Rwandan fish farmers to estimate the costs and returns of aquacultural and agricultural crops. Enterprise budgets were developed for both individually and cooperatively produced fish, sweet potatoes, Irish potatoes, cassava, taro, sorghum, maize, peas, beans, soybeans, peanuts, rice, and cabbage. With the exception of Irish potatoes, all enterprises showed positive income above variable costs and positive net returns to land, labor, and management. Fish production yielded the highest income above variable costs and the highest net returns if fingerlings could be sold. If only food fish could be sold, cabbage was the most profitable crop. Sweet potatoes produced the highest yield of carbohydrates and soybeans were the least expensive source of protein. This study demonstrated that the cash income per unit of land generated by fish production is superior to other crops raised in the marais in Rwanda. While aquaculture is often considered a source of animal protein for household consumption, a high potential also exists for cash income generation.

This abstract was excerpted from the original paper, which was published as CRSP Research Report 98-124 by the Information Management and Networking Component of the Pond Dynamics/Aquaculture Collaborative Research Support Program (PD/A CRSP).

**CRSP RESEARCH REPORTS** are published as occasional papers by the Program Management Office, Aquaculture Collaborative Research Support Program, Oregon State University, 418 Snell Hall, Corvallis, Oregon 97331-1643 USA. The Aquaculture CRSP is supported by the US Agency for International Development under CRSP Grant No.: LAG-G-00-96-90015-00. See the website at < http://pdacrsp.oregonstate.edu/ >.