Title: Nonparametric estimation of returns to investment in Honduras shrimp research

Author: Siddhartha Dasgupta and Carole R. Engle
Aquaculture/Fisheries Center
University of Arkansas at Pine Bluff
1200 N. University, Mail Slot 4912
Pine Bluff, AR 71601 USA

Date: 15 July 2001

Abstract: Economic returns to the investment in shrimp research in Honduras by Auburn University researchers, as a part of the Pond Dynamics/Aquaculture Collaborative Research Support Program (1993 to 1998), were estimated using a nonparametric approach. A survey of shrimp growers in Honduras provided data on yield, input application, and prices for their first year of production and for the year 1997. Research investment data included funding from both public and private sectors. Results showed that total factor productivity indices increased from 1995 to 1997 indicating technical progress due to research. When both private and public investment were considered, the internal rate of return to the investment in research was 46%. However, the internal rate of return to public-sector investment alone was above 6,681%. This indicated that the public funds invested in shrimp research in Honduras have been leveraged effectively with private-sector capital to generate technological progress.

This abstract was based on the original paper, which was published in *Aquaculture Economics and Management*, 4(3–4):141–156.