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AQUACULTURE & FISHERIES INNOVATION LAB

RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Impact of the adoption of BMPs on social welfare: A case study of commercial floating feeds for pond culture of tilapia in Ghana

Author(s): Yaw B. Ansah and Emmanuel A. Frimpong

Department of Fish and Wildlife Conservation, Virginia Polytechnic Institute and State University, 100 Cheatham Hall, Blacksburg, VA 24061, USA

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Best management practices (BMPs) are the most cost-effective means of mitigating negative impacts of pond aquaculture on the environment. The impacts of BMPs and other innovations on fish farm profits have been studied widely. This study estimates impacts of BMP adoption on social welfare. We employed the economic surplus model to determine net present value (NPV) of adopting the more expensive but less polluting commercial floating fish feed in the pond culture of Nile tilapia (*Oreochromis niloticus*) in Ghana. We also conducted a sensitivity analysis to determine which variables had the greatest influence on mean NPV. Our results indicate an NPV of US\$ 11 million from the adoption of commercial floating feed in pond farming alone in Ghana. The variables with the biggest impacts on NPV were level of change in tilapia yield, and level of change in production costs, with the adoption of the new feed type. We conclude that adoption of yield-enhancing BMPs and innovations in Ghana will result in significant social welfare benefits. We recommend that credit programs and other financial packages be set up by governments or nongovernmental organizations to help farmers meet the increased cost of fish feed and to accelerate diffusion of commercial fish feed in pond farming.

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