ASSESSMENT OF WATER QUALITY AND PRODUCTION EFFICIENCY OF SHRIMP - FOREST MODEL INSIDE AND OUTSIDE THE SEA DYKES IN THE DISTRICT OF HOA BINH, BAC LIEU PROVINCE

Nguyen Thi Thuy Nhung, Truong Thi Nga, Le Nhat Quang

Summary

The study results showed with high density 7,000 trees/ha, the amount of chemical oxygen demand, ammonium, , higher phosphate inside of dike higher than the pond outside the dike, but dissolved oxygen is lower. In the inside area of the dyke, the pond had 7,000 densely forested trees/ha, then the water environment indicators such as chemical oxygen demand, ammonium, higher phosphate and dissolved oxygen content is less than 2,500 pond densely forested trees/ha. Most of the chemical and physical factors was not different with high tides and low tides, but had large fluctuations over time samplings: dissolved oxygen content decreased, but pH, salinity increases in February and April in the pond. In general, the water quality of models shrimp forest exterior dike promit for development of shrimp farming, if well-managed model. The physical and chemical characteristic of water of both sides were significant different. Productivity in the shrimp outside of the dike had no statistical difference with the shrimp inside of the dike. Productivity of natural shrimp, fish and crabs in the inside the dike was higher. Profits earned and capital efficiency model obtained in the model outside the dike also were high. Capital efficiency model obtained in the shrimp forests in and outside dike was still low. The study results showed that the density and water exchanged of forests affect water quality in ponds. Different farming conditions as exterior dike would affect water quality and production efficiency of the models.

Keywords: Shrimp - forest, sea dykes, inside, outside, water quality, production efficiency.