## PUBLICATION

Title:

Effects of Water Depth and Artificial Mixing on Dynamics of Philippines Brackishwater

Shrimp Ponds

Author(s):

Arlo W. Fast and Kent E. Carpenter, Hawaii Institute of Marine Biology, University of

Hawaii at Manoa, P.O. Box 1346, Kaneohe, Hawaii 96744, USA

Victor J. Estilo and Hernane J. Gonzales, Brackishwater Aquaculture Center, University of the Philippines in the Visayas, Leganes, Iloilo City 5920, Philippines

Date:

10 January 1989

Publication Number: CRSP Research Reports 89-13

Price:

The CRSP will not be distributing this publication. Copies may be obtained

by writing to the authors.

Abstract:

The effects of pond water depth (0.5, 1.0 and 1.5 m) and artificial circulation on certain pond dynamic processes were evaluated in a factorial design. Deep ponds had more uniform temperatures, with less rapid temperature changes. greater whole pond respiration, and greater temperature and oxygen stratification. Artificial circulation reduced thermal and oxygen stratification. Sediment respiration, which was estimated using a new technique, was more than three times greater than plankton and shrimp respiration combined, regardless of treatment combination. Shrimp yields were not significantly different for any of the six treatment combinations.

This paper has been accepted for publication in Aquacultural Engineering 7 (1988) 349-361.