

NOTICE OF PUBLICATION



RESEARCH REPORTS

TITLE XII POND DYNAMICS/AQUACULTURE COLLABORATIVE RESEARCH SUPPORT PROGRAM

Title: Evaluation of Soil pH-Percent Base Saturation Relationships for Use in Estimating the Lime Requirements of Earthen Aquaculture Ponds

Author(s): James R. Bowman and James E. Lannan
Department of Fisheries and Wildlife,
Oregon State University, Corvallis, OR. 97331-3803 USA

Date: 25 July 1995

Publication Number: CRSP Research Report 95-86

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

Abstract: The pH-percent base saturation relationships of selected subsurface soil horizons were evaluated by fitting theoretical and empirical models to published soils data. The selected models were validated by fitting them to an independent set of data. The selected models did not fit the second set of data as well as the original data, but they provide initial approximations for use in cases when real values can't be measured. Possible reasons for the poorer fit to the second data set are discussed. One possibility for increasing the range of soils to which suitable pH-percent base saturation models can be fit is to refine the soil classification system being used. Valid pH-percent base saturation models can be combined with on-site soil pH measurements and typical cation exchange capacity values to estimate aquaculture pond lime requirements on a broad range of soil types in the field i.e., without reliance on laboratory analyses.

This abstract was excerpted from the original paper, which was published in *Journal of the World Aquaculture Society* Vol. 26, No. 2, June 1995. pp.172-182.

CRSP RESEARCH REPORTS are published as occasional papers by the Program Management Office, Pond Dynamics/Aquaculture Collaborative Research Support Program, Office of International Research and Development, Oregon State University, Snell Hall 400, Corvallis, Oregon 97331-1641 USA. The Pond Dynamics/Aquaculture CRSP is supported by the U.S. Agency for International Development under CRSP Grant No.: DAN-4023-G-00-0031-00.

