NOTICE OF PUBLICATION

RESEARCH REPORTS
TITLE XII POND DYNAMICS/AQUACULTURE COLLABORATIVE RESEARCH SUPPORT PROGRAM

Title: On the role of urea in pond fertilization.

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Date: November 1, 1993 **Publication Number:** CRSP Research Report 93-59

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

Abstract: Two experiments were conducted to better understand the role of urea in pond fertilization. In Experiment 1, urea dissolved in pond water and incubated in aquaria at approximately 30°C disappeared at a rate of 303 μg urea-N l^{-1} day^{-1} under natural sunlight conditions, and 102 μg urea-N l^{-1} day^{-1} under dark conditions. Total alkalinity decreased in dark aquaria and increased in sun-exposed aquaria, consistent with stoichiometric expectations. Urea hydrolysis was negligible in distilled water exposed to light.

Experiment 2 was a toxicity test. Median lethal concentrations (LC_{50}'s) of urea at 24 and 96 h exposure were 19,700 mg l^{-1} and 16,800 mg l^{-1} for sex-reversed male Nile tilapia (*Oreochromis niloticus*) fingerlings, and 17,000 mg l^{-1} and 16,000 mg l^{-1} for silver barb (*Puntius gonionotus*) fingerlings respectively. All test fish survived 96-h exposure to 14,000 mg urea l^{-1}, whereas no fish survived 48-h exposure to 22,000 mg urea l^{-1}.

This abstract was excerpted from the original paper, which was published in *Aquaculture* 114:273-283, 1993.

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.