

# NOTICE OF PUBLICATION

---

AQUACULTURE COLLABORATIVE RESEARCH SUPPORT PROGRAM



## RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

---

**Title:** Effects of Feeding Frequency and Handling on Growth and Mortality of Cultured Walking Catfish *Clarias fuscus*

**Author(s):** Brain J. Buurma and James S. Diana  
School of Natural Resources  
University of Michigan  
Ann Arbor, Michigan 48109-1115 USA

**Date:** 21 February 2006

Publication Number: CRSP Research Report 94-A3

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

**Abstract:** Two experiments were conducted to study the effects of feeding frequency on growth, and of handling stress on growth and mortality, in intensive tank culture of the walking catfish *Clarias fuscus*. In the first experiment, fish were grown from an initial weight of 37 g for 34 d. A fixed ration of 3.0% body weight per day was divided into either 1, 2, or 3 feedings per day, and fish were either handled weekly or left unhandled for the entire experiment. Fish given 3 feedings per day experienced 19% faster growth ( $P < 0.05$ ) than fish given the same ration in a single feeding per day. These differences in growth reflect differences in assimilation efficiency, assuming all other metabolic costs were constant among treatments. Handling of individuals caused decreased growth; however, there was no effect on mortality.

In the second experiment, fish were grown from an initial weight of 78 g for 29d. Fish were fed either 1 or 2 satiation feedings per day and were either handled weekly or left unhandled for the entire experiment. Fish fed 2 satiation feedings per day experienced 47% faster growth ( $P < 0.05$ ) than fish fed 1 satiation feeding per day, which was assumed to reflect a higher level of food consumption. No effect of handling on either growth or mortality was observed for fish in experiment 2. Multiple meals per day also reduced compensatory growth among individuals in both experiments.

This abstract is excerpted from the original paper, which was in *Journal of the World Aquaculture Society*, 25(2): 175-182.

---

**CRSP RESEARCH REPORTS** are published as occasional papers by the Program Management Office, Aquaculture Collaborative Research Support Program, Oregon State University, 418 Snell Hall, Corvallis, Oregon 97331-1643 USA. The Aquaculture CRSP is supported by the US Agency for International Development under CRSP Grant No.: LAG-G-00-96-90015-00. See the website at <pdacrsp.orest.edu>.