Title: A variable growth rate modification of von Bertalanffy's equation for aquaculture

Author(s): R.R. Springborn and A.L. Jensen
School of Natural Resources
University of Michigan
Ann Arbor, Michigan, USA

W.Y.B. Chang
Division of International Programs
National Science Foundation
Washington, DC, USA
and
Center for Great Lakes and Aquatic Sciences
The University of Michigan
Ann Arbor, Michigan, USA

Date: 1 December 1994
Publication Number: CRSP Research Report 94-67

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

Abstract: In aquaculture experiments of only a few months' duration, fish can approach their asymptotic size and growth rates may change greatly. One objective of aquaculture is to obtain a maximum economic return, and a growth model is needed to relate rate of growth to food consumption and other costs to find the optimum duration of growth cycles. Von Bertalanffy's equation is an asymptotic growth model which can be used for this purpose. A variable growth rate model was developed to describe fish growth oscillations observed in aquaculture experiments. This growth model provides improved estimates of von Bertalanffy's equation in aquaculture and can be used for an efficient evaluation of fish production during production cycles.

This abstract was excerpted from the original paper, which was published in Aquaculture and Fisheries Management 25:259-267, 1994.