

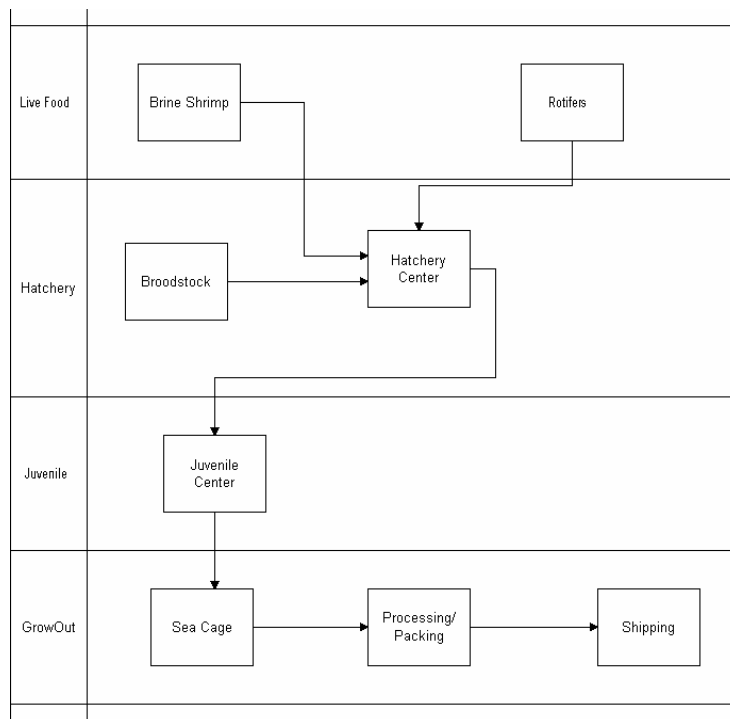
AN ECONOMIC AND OPERATION MODEL FOR THE GROW-OUT OF FLORIDA POMPANO *Trachinotus carolinus* IN RECIRCULATING AQUACULTURE SYSTEMS

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The objective for RAS is basically to sustain life without environmental impact. Specific performance goals which would lead to commercial application are more difficult and need to be quantified. Among the performance characteristics an adopter needs to know in order to make an investment are: capital and operating costs, growth rates, site requirements, and business viability. And, of course, these characteristics are needed for actual operation as a production plant.

Figure 1. Process Diagram for Pompano Plant

Process modeling and computer simulation are tools for evaluating and analyzing the performance of a plant without the costs and time required in an experimental approach. The use of modeling and simulation for a Sea Cage aquaculture plant was recently presented at the Aquaculture 2007 Meeting in San Antonio. A model for an RAS plant has now been constructed using the Sea Cage computer program. The commonality in approach allows comparisons between the key technologies in addition to plant optimization and economic/performance analysis.



The results of an RAS analysis are presented based on performance characteristics reported in the literature and obtained through personal communication. Key objectives of the study were performance quantification and identification of high value opportunities for technology improvement.