

## **Computerized visual assessment and validation technique in an Integrated Agriculture-Aquaculture System (IAAS)**

### **ABSTRACT**

Laboratory and artificial models are the acceptable way to find and explore the relationship among various compartments in an integrated system which combine many variables and practical results in the same or different condition. The purpose of this study is to improve the available visual IAAS (Integrated Agriculture-Aquaculture System) program for evaluation of freshwater prawn (*Macrobrachium rosenbergii*) and plant (*Lactuca sativa*) yields. Available data on *Macro brachium rosenbergii* yields, survival, nutrient concentration and plant production were compared to the predicted results by IAAS expert program. Results represent higher variation of survival, prawn and plant yields in abnormal culture system. Moreover the evaluation process demonstrated a good performance of IAAS expert program in predicting results for the optimized integrated culture system. In aquaculture, the success estimation of production depends largely on the state of physical and chemical parameters which define optimal culture conditions.

**Keyword:** Computerized assessment; Integrated culture system; *Macrobrachium rosenbergii*; Recirculating system; Validation