

AQUACULTURE IN ACTION

J. Adam Frederick and Jacqueline U. Takacs

University of Maryland
Maryland Sea Grant Extension
P.O. Box 38
Solomons, MD 20688
takacs@cbl.umces.edu

Aquaculture has become an increasingly useful educational tool that offers a wide variety of advantages for the student and the teacher. Aquaculture is highly motivational and generates interest across all learning abilities, allows for integration across various curricula by involving students in “hands-on” applications of biology, chemistry, math, and physics skills, and promotes improvement of environmental literacy. Long-term aquaculture projects allow students to emulate the scientific method through the process of experimental design and data collection.

In Maryland, environmental education has advanced rapidly due to the large number of resources and professional development opportunities available to teachers relating to the stewardship of Chesapeake Bay and its watershed. Consequently, aquaculture has increased in popularity in the last 10 years due to the integrated nature of its content behind the science. In 1997, to meet the growing needs of teachers for information and resources about aquaculture, Maryland Sea Grant Extension established the K-12 outreach and education program *Aquaculture in Action (AinA)*. Its goal is to establish a network of Maryland teachers appropriately trained and equipped with the essential tools to incorporate aquaculture into their science classrooms. Biennial workshops utilize the expertise of master teachers and education specialists experienced with aquaculture in the classroom along with university research scientists to engage participants in a 5-day “hands-on” experience in aquaculture topics. A significant component of each workshop is the construction of a 270-gallon recirculating fish system that returns with participants to their schools. Currently there are 42 schools, representing 14 Maryland counties, Baltimore City, and 2 out-of-state schools participating in the program.

The *Aquaculture in Action* program employs the use of web technology and is the only program in the nation to house an online interactive database for the entry of research projects related to the use of aquaculture in K-12 science education (www.mdsg.umd.edu/Education/AinA). This feature facilitates the communication between teachers and students involved in projects and can be used to track project data. The site also allows connection to participating school web pages and links participants by E-mail through a common list serve. These links help teachers and students monitor and trouble shoot projects and strengthens educational partnerships throughout Maryland. An FAQ section allows teachers and students to access answers to common questions pertaining to aquaculture and tap into a variety of state and university aquaculture resources for additional assistance. The web site can be viewed by a wide audience that includes K-12 education, higher education and university systems interested in establishing a shared knowledge base on aquaculture and the preservation of our natural resources.