

Arid Lands Aquaculture

A Joint Publication of
The University of Arizona Cooperative Extension Service
and the Arizona Aquaculture Association

VOL. XI NO. 1 <http://ag.arizona.edu/azaqua> April 2002

Aquaculture Field Day May 15, 2002

The University of Arizona and the Arizona Aquaculture Association will be hosting an aquaculture field day on **Wednesday, May 15** at the **Maricopa Agriculture Center**. The field day will include presentations on advances in aquaculture technology, equipment and techniques presented by University researchers and several producers in the state. Kevin Fitzsimmons will provide a state of the industry presentation reviewing changes at farms around the state, new markets for aquatic products, and significant events that are impacting aquaculture in the state. After a luncheon, provided by the University, we will have a tour of local fish farms. There will be no charge for the meeting but please contact Fitzsimmons at 626-3324 to register so we know how many sandwiches to provide.

May 15, 2002 Field Day Agenda

- 10:00 Introductions
- 10:05 State of the Arizona Industry
- 10:30 Free software for aquaculture
- 10:50 Aquaculture education in AZ
- 11:10 Aquatic health certifications
- 11:30 AZ Aquaculture Association
- 12:00 Lunch
- 12:30 New EPA Regulations
- 1:00 New markets for AZ products
- 1:30 Begin farm tour @ Maricopa
- 3:00 End tour in Sacaton

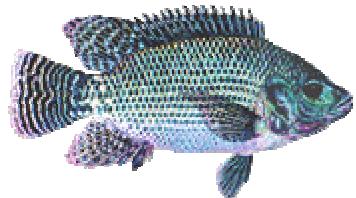
The intention of the field day is to provide an opportunity for all industry stakeholders to meet and discuss problems, solutions and opportunities. There are several important issues that are currently affecting the industry in the state and several more on the

horizon. Growers, government regulators, educators and the buyers of aquaculture products need to be aware of the serious issues affecting the industry. Aquaculture production continues to grow in the state and aquaculture products are flooding the shelves of grocery stores and menus of restaurants. Fee fishing continues to expand and more schools are adding aquaculture to their curricula and fish production systems in their classrooms. The University is attracting more students to the aquaculture program and well-trained graduates from the high school programs are beginning to take jobs in the local industry. Please attend this once a year event. It promises to be the best one day investment you can make in your industry.

2001 Aquaculture Production Figures

Aquaculture operations in Arizona produced approximately 1,646,000 lbs of whole fish and shrimp in 2001. This was a moderate increase in poundage from 2000. These products had a farm gate value of \$3,771,000. The farm gate value increased slightly from the year before. The increase should have been much higher based on the rapid increase in shrimp production. However, a decrease in prices for shrimp have kept the profits down from expected levels. Total shrimp harvest in Arizona was 324,000 lbs in 2001, just short of a 100% increase from 2000 production. All four farms are expecting to further increase production in 2002. New ponds have been built at two farms and experienced managers are expecting to make additional production improvements, increasing efficiency. The biggest news on the shrimp scene is the construction of a processing and cold storage

facility at the farm operated by Tark Rush in Dateland, Arizona. The plant will be able to process and store virtually the entire Arizona production if needed. This will allow farmers to better schedule harvests and provide the option to hold shrimp until the best prices are available.



New Environmental Protection Agency Regulations

Three years ago the EPA was sued by an environmental group for failure to develop national standards for several industrial and agricultural effluents. In the eventual negotiations, aquaculture was added to the list while other industries negotiated their way out. Although aquaculture discharges were already regulated under the Clean Water Act and many state based regulations, a federal judge ordered the EPA to develop a national plan as part of the settlement. Scientists at the University of Arizona have served on the national panels that have been active in the effort to inform the EPA regulators and their contractors of the actual impacts of aquaculture effluents, compared to the exaggerated claims commonly cited in the popular press. Domestic producers have been unfairly accused of causing the same kinds of environmental damage that has occurred in developing countries.

Reuse of aquaculture effluents for irrigation of field crops, as practiced here in Arizona, has been identified as one of the preferred techniques to handle effluents. Research results from University of Arizona projects and the Best Management Practices developed with Arizona Department of Environmental Quality are being considered for use on a national scale.

The proposed regulations are to be released in June of 2002. There will be a public comment period of six to twelve months. After which the EPA will revise the regulations. There are many questions regarding exactly how the agency intends to regulate, i.e. by species, by production method, by minimum production level or water use, or all of the above. It is also unclear as to which pollutants EPA will regulate. Virtually all water quality characteristics, drug residues and even exotic species have been considered in EPA's deliberations. Input from Arizona producers will be solicited at the Aquaculture Field Day.

Aquaculture Career Development Event - State FFA Field Day

The aquaculture competition was held on March 9 at the Environmental Research Lab. Twelve high schools from across the state competed. The students demonstrated the best set of skills we have yet seen in several years of competition. The grades were higher, the skills in filleting and plumbing exercises were better and many more students had high marks on the fish identifications. It is obvious that their teachers have raised their expectations and as more and more students gain experience in their school programs and in the competition it will rise to an even higher level.

Special congratulations go out to the team champion from **Flowing Wells High School** and their advisor, **Mr. Aaron Ball**. Flowing Wells had strong competition with Peoria and Mesquite High Schools close behind in second and third place respectively. The individual champion was also from Flowing Wells High School, **Justin Spiess**. Justin managed to finish only 3 points ahead of 2nd place finisher **Stephanie Pollard**, from **Mesquite**. **Ben Burnham**, from **Mountain View High**, finished in 3rd place only two points back.

Science Alive 2002 and 2003

During the first week of January of 2002 the University of Arizona and Flowing Wells High School hosted the Science Alive Conference. This event brought hundreds of science teachers and interested students to Tucson from across the country. Focal areas included aquaculture and hydroponics. The aquaculture section included three workshops held at the Environmental Research Lab. The participants learned how to design, build, and operate classroom scale recirculating systems. The workshop included tours of the ERL facilities and presentations on the research being conducted by faculty and students. Teachers were also introduced to Web based information sources and provided with the AQUACULTURE IN THE CLASSROOM CD-ROM developed by graduate students in the UA aquaculture program. The highlight of the workshops was the harvest, filleting and cooking of tilapia for the participant's luncheon. The teachers did their own preparation and cooking based on a couple of Kevin Fitzsimmons' favorite tilapia recipes. Comments were universally positive regarding the taste of the fish and ease of preparation. Many of the teachers intend to follow the same process for their classes back home.

The program has been scheduled to run again in 2003 on January 3 and 4. The 2003 program will add presentations by the publishers of the Aquaponics Journal.

Aquatic Nuisance Species

ANS continue to be a focal point of concern amongst government agencies, environmental groups, fish producers and other farmers. Proper recognition of domesticated, beneficial animals versus nuisance weeds and animals is important. Regulations must be written and enforced to protect the producers of beneficial plants and animals from unwanted exotics. The U of A is working

closely with the Department of Agriculture, Arizona Game and Fish, the US Fish and Wildlife Service and the National Fish and Wildlife Foundation to provide current information on how best to avoid infestations of unwanted plants, invertebrates and fish. Transporters of aquatic food products must be especially aware of unwanted hitchhikers on fish tanks and trailers.

Health Certifications

Arizona requires fish farms and importers and exporters of live products to obtain health certificates for their aquatic livestock. With cutbacks in funding levels for state agencies, technical support to obtain these certificates has diminished. Discussion of how to cope with the current situation will be one of the topics of consideration during the May 15 field day. Potential providers of these certification inspections are strongly invited to attend.

Grants and other sources of funding

The Department of Agriculture, Department of Commerce and National Science Foundation all support Small Business Innovation Research Grants. These grants are designed to support small business, including farms, to commercialize innovative technologies and products. The programs fund projects in two phases. Phase 1 grants usually are in the range of \$50,000 to \$60,000 for one year. This grant is to finalize the product or technology. Phase 2 grants are normally for two years and a total of \$200,000 to \$300,000. Phase 2 grants are normally used to bring the innovation to market. The technology remains the property of the inventors, although publications and disclosures are required.

Arizona Game and Fish - Heritage Grants AZG&F uses money from the State Lottery to support grants that support a variety of wildlife and fisheries projects. Call 602-789-3530 for details on how to apply.

Calendar of events -

April 23-28, 2002 World Aquaculture Meetings, Beijing, CHINA www.was.org

July 18-21, 2002 International Conference on Recirculating Aquaculture Roanoke, VIRGINIA
www.conted.vt.edu/aquaculture.htm

September 2-7, 2002 Acuamar International, Aquaculture meetings in Cancun MEXICO
www.was.org

Feb 18 - 21, 2003 AQUACULTURE AMERICA 2003 Location: Commonwealth Convention Center, Louisville, Kentucky,
www.was.org

May 19-23, 2003 World Aquaculture 2003. Bahia Convention Center, Salvador, BRAZIL. www.was.org

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Arid Lands Fish Production
Vol. XI No.1 APRIL 2002