



## **Upcoming National Aquaculture Conference Focuses on Aquaculture Extension Education across the Nation**

*Rossana Sallenave, Extension Aquatic Ecology Specialist*

The National Aquaculture Extension Conference, held approximately every 5 years, will take place this June (5-8) in Boise Idaho. This is an excellent opportunity for Extension people from across the country with all levels of experience in aquaculture extension education to meet, share information and ideas, and learn about aquaculture extension efforts throughout the nation. The conference, which is co-sponsored by USDA National Institute of Food and Agriculture's (NIFA) five Regional Aquaculture Centers and the National Oceanographic Atmospheric Administration (NOAA) National Sea Grant Program, provides a unique forum for professional development and growth in aquaculture extension education. The conference will include a plenary and technical sessions covering emerging issues in aquaculture extension, highlights on aquaculture research and extension projects throughout the nation, and a tour of the Idaho aquaculture industry.

Expanding aquaculture in the United States continues to be of critical importance in the quest for sustainable food production and increased food security. The world's population is predicted to increase to 9 billion by 2050. Experts agree that environmentally responsible and sustainable aquaculture can significantly contribute to global food security and economic growth. Wild fish harvests have declined globally, and environmentally sustainable aquaculture is increasingly recognized as a mechanism for either restocking depleted fish stocks, or for aquatic farming. Aquaculture is a highly efficient means of producing protein, as fish have the ability to convert a greater proportion of the protein and energy they receive from feed into human food (i.e. fillets) than what terrestrial animals can. These lower feed conversion ratios are because fish expend less energy on maintaining bodily processes than terrestrial livestock:

On a global scale, people are consuming more fish than in previous decades, with average worldwide per capita consumption hitting 43 pounds (20 kilograms) a year, according to the Food and Agriculture

Organization of the United Nations. Fish consumption is expected to grow even more in coming years. The American Heart Association recommends eating fish at least twice per week to prevent heart disease, lower blood pressure and reduce the risk of heart attacks and strokes. However over 90% of the seafood consumed in the U.S. is imported, making seafood second only to oil as the largest natural resource contributor to the U.S. national trade deficit. Over 50% of the imported seafood is grown on aquaculture farms that may not conform to U.S. environmental or food safety standards. Furthermore, economists predict that the U.S. will be faced with growing competition for that imported seafood as the economies of Asia and South America continue to grow. To meet the increasing demand for U.S.-raised fish and seafood, domestic aquatic farming capabilities will need to expand.

While arid states such as New Mexico do not immediately come to mind when you think of aquaculture, the wide range of climatic conditions, geothermal waters, and the vast supply of non-potable saline water in New Mexico could be used to develop a viable industry. Recirculating aquaculture systems (RAS) are especially suited to our arid climate because they use substantially less water than traditional aquaculture systems. RAS are closed loop facilities that retain, treat and reused the water within the system, and only replace a small percentage of the total water volume when the waste is removed. Aquaponics systems, a type of recirculating system that combines aquaculture (raising animals such as fish or prawns in tanks) with hydroponics (growing plants in water), are particularly attractive and have gained popularity in the state in recent years.

Aquaponics is an intensive food production system that grows fish and plants in a symbiotic environment. The waste produced by the fish is converted by nitrogen-fixing bacteria into plant nutrients which are taken up by the plants grown in the hydroponic component of the system. Compared to traditional agriculture aquaponics uses up to 97 percent less water than plants grown in soil. Produce is grown free of pesticides because these would be harmful to the fish. Aquaponics systems produce multiple cash crops year-round allowing growers access to fresh produce throughout the year. By combining an aquaculture and a hydroponic system, there is no need to discard any water or filtrate or add any chemical fertilizers for the plants. From a water consumption perspective, aquaponics are more efficient than either traditional recirculating aquaculture systems, which must discharge and replace 10 to 20% of the total volume of water daily to prevent the build-up over time of animal waste products, or hydroponics systems that also require frequent full water changes to replace nutrient medium. Aquaponics is particularly well suited to small farm producers that target local markets and agrotourism opportunities. It is being increasingly viewed as an avenue to help diversify

industries here in NM, increase food security, and provide a means for year-round locally grown pesticide-free produce and fish/seafood using a fraction of the water and chemical inputs of traditionally grown produce.

Growing aquaculture in the United States will continue to be a priority in light of the increasing demand for fish and seafood, declining wild fish stocks, and our growing dependence on imported seafood. According to NOAA, not only can aquaculture relieve pressure on fishing populations, but it can also promote economic growth. The upcoming conference in Boise is an opportunity to learn more about aquaculture extension efforts throughout the country and about the many research/extension projects underway across the nation. If you are interested in attending the National Aquaculture Extension Conference more information can be found at the following link: <https://www.regonline.com/builder/site/Default.aspx?EventID=1951472>. . Online registration will remain open until May 25, but people can also register at the conference on Monday June 5 and Tuesday June 6 if they miss the May 25 deadline.

### **References**

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<http://www.nmfs.noaa.gov/aquaculture/index.htm>

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The American Heart Association, “Fish and Omega-3 Fatty Acids”

[http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/HealthyDietGoals/Fish-and-Omega-3-Fatty-Acids UCM 303248 Article.jsp#.WRnaVuvyuUk](http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/HealthyDietGoals/Fish-and-Omega-3-Fatty-Acids_UCM_303248_Article.jsp#.WRnaVuvyuUk)

## UPCOMING EVENTS

**US Dairy Extension & Training Consortium  
May 17 – June 23, 2017 – Clovis, NM**

**US Beef Academy  
May 15 – 19, 2017 – Corona, NM**

**NM Youth Ranch Management Camp  
June 11 - 16, 2017 – CS Ranch in Cimarron, NM**

**State 4-H Conference  
July 10 – 13, 2017 – NMSU Campus  
Las Cruces, NM**



**Memorial Day HOLIDAY – Monday, May 29<sup>th</sup>  
Happy 3-Day Weekend**

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