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**THE NATIONAL COALITION FOR
FOOD & AGRICULTURAL RESEARCH**

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L u n c h ~ N ~ L e a r n S E M I N A R



**THE NATIONAL COALITION FOR
FOOD & AGRICULTURAL RESEARCH**

Program:

**ONE FISH, TWO FISH
FEED FISH, FOOD FISH**

*Meeting Nutritional Challenges in Aquaculture
and Aquatic Resources Management*

March 22, 2010

PROGRAM

Welcome

DR. DIANE BELLIS
NATIONAL C-FAR MODERATOR

Distinguished Speaker

DR. JESSE TRUSHENSKI
FISHERIES & ILLINOIS AQUACULTURE CENTER
SOUTHERN ILLINOIS UNIVERSITY CARBONDALE

Open Forum

Closing

DR. DIANE BELLIS

NATIONAL C-FAR IS a nonprofit, nonpartisan, consensus-based and customer-led coalition that brings food, agriculture, nutrition, conservation and natural resource stakeholders together with the food and agriculture research and extension community, serving as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural research, extension and education. For additional information, go to www.ncfar.org; or contact Tom Van Arsdall, Executive Director at tom@vanarsdall.com.

ABSTRACT

Aquaculture, the rearing of aquatic plants and animals, is the fastest growing agricultural sector worldwide. Currently, half of seafood consumed is farm-raised, and the contribution of aquaculture to global protein demand and food security will continue to increase. In the U.S., aquaculture is important in the private and public sectors. More than 304,000 MT of food fish were raised in the U.S. in 2007, contributing directly to domestic demand for seafood. In 2004, the U.S. Fish and Wildlife Service and state governments reared more than 20,000 MT (equating to 1.75 billion fish) for fishery enhancement and restoration activities. Indirectly, these hatcheries contribute to seafood supply in the U.S. by supporting capture fisheries, many of which would collapse without supplemental stockings. Although domestic aquaculture production is sizable, it is dwarfed by U.S. seafood imports: in 2009, we imported over 431,000 MT of trout, tilapia, and salmon alone. The U.S. ranks 3rd in capture fishery landings, but only 14th in aquaculture production and remains the 2nd largest importer of seafood—it is clear that domestic production must grow to fill the widening ‘seafood gap.’ Regardless of whether fish are raised at a private farm or a public hatchery, they need to eat; and aquaculture is constrained by the availability of cost-effective aquafeeds. Traditionally, aquafeeds were comprised largely of fish meals and oils derived from marine fisheries. Rich in protein, energy, and essential nutrients and historically inexpensive, marine feedstuffs were used because of their nutritional value and palatability to farm-raised fish. Unfortunately, the prices of fish meal and oil have grown by 400% over the last 20 years, including a two-fold increase since 2004. Rising costs as well as concern for environmental sustainability and human food safety incentivize the search for alternative feedstuffs, but success depends on our ability to understand the interrelationships between feed, fish, and food. This presentation will highlight the roles of aquaculture in the public and private sectors, identify challenges in the context of fish nutrition and aquafeeds, and propose strategies to strengthen aquaculture and seafood security in the U.S.

SPEAKER BIOGRAPHY

JESSE TRUSHENSKI, Ph.D., is an Assistant Professor at Southern Illinois University Carbondale where she heads a research team dedicated to aquaculture nutrition and fish physiology. Her primary interests are alternative feedstuffs, novel feeds and feeding strategies, and understanding the relationship between nutrients and performance of aquatic livestock. She maintains an active record of professional service to the U.S. Aquaculture and American Fisheries Societies, and is currently President of the AFS Fish Culture Section.