



EXTENSION

SEGMENT TWO SEAFOOD HACCP

During the fall of 2021, the LSU AgCenter and Louisiana Sea Grant Seafood Extension Specialist hosted one and participated in two **Segment Two Seafood Hazard Analysis Critical Control Points (HACCP)** workshops. The first workshop was offered as an English/Spanish hybrid on September 9 and 10, 2021 in Eunice, LA at a crawfish peeling facility. The other two workshops were delivered in Spanish in Guayaquil, Ecuador from November 8 - 12, 2021. For these last two workshops Dr. Evelyn Watts collaborated with other two HACCP lead instructors under the direction of JIFSAN (Joint Institute for Food Safety and Applied Nutrition).

In 2020, the U.S. Food and Drug Administration (FDA) was mandated by U.S. Congress to form regulatory partnerships with countries with the largest contribution to imported shrimp. The identified countries were Ecuador, Indonesia, and India. As one of the initial steps to complete the regulatory partnerships, the FDA identified the need of training at these countries to help them understand regulations and prevent food safety issues. The FDA designated JIFSAN to coordinate and deliver trainings.



Fifty-six regulators and seafood processors attended the workshops. Based on an impact survey completed by participants, all attendees felt their knowledge and their confidence in completing duties associated with the presented material increased.



VIDEOS

- Seafood Processing Equipment Series – Band Saw. *Louisiana Sea Grant*. August 2, 2021. **Content Expert**. Online: https://www.youtube.com/watch?v=uolrtNpuw88&list=PLQ88m0vBBX0noYnR0sBCORx4m_Rz_RlOM&index=3
- Seafood Processing Equipment Series – Meat Grinder. *Louisiana Sea Grant*. August 2, 2021. **Content Expert**. Online: https://www.youtube.com/watch?v=wXap50csdec&list=PLQ88m0vBBX0noYnR0sBCORx4m_Rz_RlOM&index=2.
- Seafood Processing Equipment Series – Vacuum Packing. *Louisiana Sea Grant*. August 2, 2021. **Content Expert**. Online: https://www.youtube.com/watch?v=8onKn4rTMFI&list=PLQ88m0vBBX0noYnR0sBCORx4m_Rz_RlOM&index=1.

MEETINGS

Louisiana boasts one of the major freshwater fishery industries in the United States. In recent years, changes in seafood supply, coastal seafood products availability, development of aquaculture catfish, and massive imports resulted in a reduction of markets for inland fisheries in Louisiana. The Louisiana Fisheries Forward partnership between the LSU AgCenter, Louisiana Sea Grant, and Louisiana Department of Wildlife and Fisheries has been working to better understand the current status of this industry ([Status and Trends in Louisiana's Freshwater Fishery](#), 2019). The industry presents great opportunities with catfish, buffalo fish and invasive Asian carp, and while demand continues to increase, fishermen and processors need to adapt to maintain quality and increase convenience to meet consumers' needs. In the fall of 2021, Thomas Hymel (PI), and Evelyn Watts (CoPI) hosted three meetings with fishermen in Lettsworth, Cottonport, and Simmesport, LA on August 18 and 19, 2021. In addition, a dinner with Patrick Banks, Assistant Secretary of Wildlife and Fisheries, and freshwater fishermen was hosted in Harrisonburg, LA on August 19, 2021. The purpose of these meetings and dinner was to start building communication between industry, educators, and regulators. Fishermen had the opportunity to voice their thoughts and concerns. The outreach team was able to share resources available for fishermen to help

them adapt to changes in the seafood chain supply. Regulators were also able to express the interest of the agency to support the industry.



PRESENTATIONS

Watts, E., & K. Parraga. Webinar: Productos pesqueros: Oportunidades para la agroindustria en Panamá (Spanish for “Seafood production: Opportunities for the Panama agricultural industry”). Universidad Tecnológica de Panamá, LSU AgCenter, Louisiana Sea Grant, Centro de Producción e Investigaciones Agroindustriales (CEPIA), Virginia Tech, and Virginia Sea Grant. October 26, 2021. Online: [YouTube Video](#)
[Online](#)

A webinar poster with a purple and white color scheme. At the top, it says "Webinar en celebración del 30 aniversario del CEPIA". The main title is "Productos pesqueros: oportunidades para la agroindustria en Panamá". The moderator is "Dr. Jose Brandao". The organizer is "Centro de Producción e Investigaciones Agroindustriales (CEPIA) en conjunto con Dirección de Relaciones Internacionales". The date is "26 de Octubre" at "09:00 a.m. GMT-5". There are two speakers: "Dra Evelyn Watts" (Profesora Especialista en Mariscos - LSU AgCenter y Louisiana Sea Grant) and "Dra Kathryn Parraga" (Especialista en Inocuidad Alimentaria - Virginia Seafood AREC). The poster includes logos for LSU AgCenter, Sea Grant, Virginia Tech, Virginia Seafood Research and Extension Center, and Virginia Cooperative Extension. It also mentions "Powered by StreamYard" and social media icons for YouTube, Facebook, and Instagram.

RESEARCH

POSTER PRESENTED AT PROFESSIONAL CONFERENCE

1. Xu, W., **Watts, E.**, & Melissa Cater. Scope and challenges of Louisiana retail-foodservice businesses that perform specialized processing. Poster at International Association of Food Protection (IAFP) Annual Meeting. Phoenix, AZ. July 2021.
2. Parraga, K., Songy, H., Eseose, H., Corsino, II, R., & **Watts, E.** Enhancement of fresh catfish fillets quality by the application of a catfish skin gelatin and antimicrobial coating. Poster at International Association of Food Protection (IAFP) Annual Meeting. Phoenix, AZ. July 2021.
3. Touza, J., Parraga, K., Guerra, G., Morris, M., & **Watts, E.** Effect of lactic acid on shelf life of fresh crawfish tail meat. Poster at International Association of Food Protection (IAFP) Annual Meeting. Phoenix, AZ. July 2021.

4. Songy, H., Parraga, K., Eseose, H., Corsino II, R., Xu, W., Lively, J., & **Watts, E.** Catfish gelatin coating on shrimp as an antimicrobial agent. Poster at International Association of Food Protection (IAFP) Annual Meeting. Phoenix, AZ. July 2021.
5. Eseose, H., Songy, Parraga, K., Corsino, R., Lively, J., & **Watts, E.** Effect of Organic Acids-Enhanced Nano Size Ice Slurry Chilling Techniques on the Microbial and Physicochemical Properties of Black Drum (*Pogonias cromis*). Poster at International Association of Food Protection (IAFP) Annual Meeting. Phoenix, AZ. July 2021.



PEER REVIEWED PUBLICATIONS

1. Haddad, N., **Watts, E.**, & Lively, J. Evaluation of post-harvest procedures for quality enhancement in the Louisiana commercial shrimp industry. 2021. *Journal of Aquatic Food Product Technology*. <https://doi.org/10.1080/10498850.2021.2011811>.
2. Parraga, K., Murillo, S., Escalante, C., & **Watts, E.** Effect of Federal Inspection on Louisiana Wild-Caught Catfish Industry, Prevalence of Salmonella and Microbial Characteristics of Raw Wild-Caught Catfish Fillets. 2021. *Journal of Food Protection*. 84(10):1741-1748. <https://doi.org/10.4315/JFP-21-153>.

GRANTS

Dr. Watts has been granted funds (\$299,598) from the Saltonstall-Kennedy Competition, National Marine Fisheries Service, National Oceanic and Atmospheric Administration (FY21 SK – NMFS/NOAA) for the project “Improving U.S. wild catfish market opportunities through improved cold chain management and packaging.” The anticipated outcomes to this project are a) to allow U.S. wild catfish processors to receive fish after hours of operation, holidays, and weekends so they can process during approved hours of inspection; b) fishermen and processors will receive information about how appropriate cold chain and packaging technologies can improve fish quality, safety and marketability; c) fishermen will be able to space out trips to the fish house to deliver their catch, increasing safety as fishermen can now pick the best weather and time to fish instead of when processors are open; d) premium cold chain management will result in a higher quality and safer product, gaining consumers’ trust; and e) promoting better business practices to increase demand and quality of U.S. wild-caught catfish fillets.

TEACHING

In fall 2021, Dr. Watts participated as guest lecturer in the Food Safety class (NFS 3000), presenting three one-hour lectures on “Food Safety in Food Industry” & “Seafood Toxins.” In addition, Drs. Watts and Xu were invited to lecture “Fish Inspection and HACCP” section of the course Foods of Animal Origin (ANSC 2053).

UPCOMING EVENTS

SANITATION CONTROL PROCEDURES

- January 24, 2022 (@ LSU AgCenter)
- For more information and online registration visit [LSU School of Nutrition and Food Sciences website](#).

BASIC SEAFOOD HACCP

- January 25-27, 2022 (@ LSU AgCenter)
- For more information and online registration visit [LSU School of Nutrition and Food Sciences website](#) .

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