



In this issue, I am including research accomplishments since September 2017, extension activities since January 2017, teaching engagement since fall 2017, and partnerships since January 2017. My research efforts focus on the evaluation of technologies to improve the Louisiana Seafood Industry by enhancing quality and expanding shelf life of wild caught and/or farm-raised seafood products. My extension efforts include teaching food safety workshops, developing and reviewing fact sheets and other mass media publications, participating in professional and clientele targeted conferences, assisting the local seafood industry, collaborating in private/public partnerships, and collaborating with local, state, and federal institutions.

Research

I am currently working on four research projects. The first project is evaluating the impact of USDA/FSIS catfish inspection on local wild-caught catfish processors. I finished collecting information from interviews with processors during the Siluriformes regulation transition period. The next step is to complete a similar interview process after six months of full USDA/FSIS enforcement. Findings from this project will provide information on how Louisiana wild-caught processors adapted to USDA/FSIS inspection. Policy makers can then use these findings for future rule changes.



Figure 1. Shrimp samples preparation for melanosis evaluation. Theriot, LA. November 9, 2017 (Photo Evelyn Watts).

I am also part of the research project, "Shrimp quality enhancement through plate freezing: New Market Opportunities." My role in this project is to assist evaluating vacuum packing vs. cardboard boxes to reduce black spot development of plate-frozen shrimp during thawing. We have completed two thirds of this phase of the research

(Figure 1 & 2). As part of this project, I mentored an undergraduate researcher on the proposal, "Impact of Reduced Oxygen Packaging on Melanosis Development on Gulf of Mexico White Wild-Plate-Frozen Shrimp (WPFS)." The main objective was to evaluate and compare the effects of vacuum packed and cardboard boxed storage on melanosis development during thawing of WPFS. LSU College of Agriculture funded this proposal, and the existing results were presented at CoA Open House 2018.

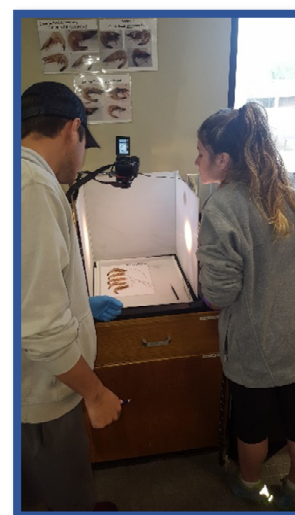


Figure 2. Shrimp melanosis evaluation (Photo Evelyn Watts).

I completed a short-term study evaluating domestic frozen crawfish tail meat. The objective of this study was to determine frozen crawfish tail meat weight loss after a freezing and thawing cycle. The main outcomes were to standardized weight loss (fat loss and drip loss) protocol for frozen crawfish tail meat, and an expected weight loss (fat and drip loss) of crawfish tail meat after one freezing and thawing cycle. This study was conducted in collaboration with the Louisiana Department of Agriculture and Forestry/Weights and Measures (LDAF), the Crawfish Processors Alliance, and Riceland, LLC. I am currently working on a characterization of Louisiana crawfish tail meat. Throughout this project, we will 1) assess net weight evaluation protocols for fresh and frozen crawfish tail meat, 2) determine percentage of fat naturally attached to fresh crawfish tail meat and determine weight loss in frozen crawfish tail meat, and 3) determine meat yields of crawfish at different stages during the harvesting season. I am currently collecting samples to address objectives one and two (Figure 3). Objective three will be addressed during the 2019 crawfish season.



Figure 3. Crawfish tail meat weight loss evaluation. Breaux Bridge, LA. March 13, 2018 (Photo Evelyn Watts).

Louisiana Sea Grant/Undergraduate Research Opportunities Program funded my research proposal, “Black Drum shelf life comparing three packaging technologies.” The objective of this study is to evaluate the shelf life and quality of Black Drum using three different packaging technologies: polyethylene bag (not airtight), vacuum packed, and Modified Atmosphere Packaging (MAP).

In April 2018, the Board of Regents, Industrial Ties Research Subprogram funded my research proposal, “Characterization of slurry ice as chilling technology for fresh seafood.” The overall goal of the proposed project is to evaluate the benefits of using slurry ice as chilling technology for seafood in the Gulf of Mexico.

Extension

My extension efforts have focused on three main areas: USDA/FSIS catfish compliance, crawfish weights and measures, and training and workshops. As result of my extension programs, I developed and reviewed several fact sheets, wrote and reviewed articles to publish in newsletters, participated in a podcast, and created a curriculum. In addition, I coordinated and led nine food processing and food safety workshops, and assisted teaching on one food preservation workshop. Moreover, I participated in eight exhibits and displays. I was also invited to present at four conferences. Additionally, I have visited over 40 seafood processors in Louisiana.

Since March 1, 2017, all domestic and imported Siluriformes processors are under USDA/FSIS inspection. Full enforcement has been in place since September 1, 2017. I assisted twelve local wild-caught catfish processors with developing and implementing their food safety programs. All assisted processors are compliant with USDA standards and were able to continue processing catfish without interruption. At present, I am helping them complete their 90-day validation documentation (Figure 4).



Figure 4. Catfish cold chain management program validation. Kenner, LA. October 30, 2017 (Photo Evelyn Watts).

From the short-term study on evaluating domestic frozen crawfish tail meat, I shared findings with LDAF and crawfish processors. This will allow regulatory agencies to review crawfish tail meat evaluation protocols and processors to comply with weight and measures regulation

In 2017 and 2018, I was invited to present at four professional and clientele targeted conferences. I presented at the Louisiana Food Processors Conference, School of Nutrition and Food Sciences, LSU AgCenter (Baton Rouge LA on February 15, 2017), at the Association of Food and Drug Officials South States (AFDOSS) educational conference (New Orleans, LA on August 21, 2017), at Louisiana Fisheries Forward Summit (Kenner LA on March 6, 2018), and at the Louisiana Sea Grant Advisory Council meeting (Baton Rouge, LA on March 16, 2018).

Since January 2017, I have lead three Basic Seafood HACCP workshops and three Sanitation Control Procedures for Fish and Fishery Products workshops. Ninety-nine seafood processors participated in the workshops.

A big part of my success as a Seafood Extension Specialist has been due to the support and team efforts of the Louisiana Fisheries Forward and Louisiana Direct Seafood group. In December 2017, we received the Denver T. and Ferne Loupe Extension Team Award during the LSU AgCenter's annual conference (Figure 5).

Teaching

I currently serve as co-advisor of two Ph.D. students, as a member of one M.S. committee, and as a mentor of two undergraduate students.

Partnerships

Since January 2017, I have been collaborating in multiple partnerships through my research and extension work. I have collaborated with US Food and Drug Administration, US Department of Agriculture, Louisiana Department of Agriculture and Forestry, Louisiana Department of Health, Louisiana Department of Wildlife and Fisheries, Audubon Gulf United for Lasting Fisheries (G.U.L.F.) Responsible Fisheries Management Certification Program, Port of Delcambre, Crawfish Processors Alliance Inc., Riceland Crawfish LLC., Randol's, King's Fish Market, Coco's Seafood & Fish Market, The Bait Shop, Bordelon's Fish Market, Freshwater Seafood, Crapell's Fish Market, Guillory Fish Co., Outlaw Katfish Co., B & C Seafood Inc., Harlon's LA Fish, NanoICE, Seafood Analytics, and PointFive.

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Figure 5. The 2017 Denver T. and Ferne Loupe Extension Team Award was given to the fisheries and sea grant agents called the Louisiana Fisheries Forward and Louisiana Direct Seafood team during the AgCenter's annual conference in December 2017. Left to right, the team includes: Evelyn Gutierrez Watts; Leslie Davis ; Vice President Bill Richardson, who presented the awards; Anne Dugas; Kevin Savoie; Julie Falgout; Mark Shirley; Julie Anderson Lively; Rusty Gaude'; Carol Franze; Thomas Hymel; and Dominique Seibert. Not pictured is Thu Bui. Photo by Olivia McClure (Source: Louisiana Agriculture Magazine Winter 2018 edition).