

Proposal No. _____

2016 Integrated Research and Extension Planning Grants Program

Project Title: Developing a strategy for optimizing regional support for new and very-small local value-added food processors.

Team Members:

Team Member	Title and Institution/Agency	Area of Expertise
Elizabeth Andress, PhD (confirmed)	Professor and Extension Food Safety Specialist, University of Georgia Dir., Nat'l Ctr Home Food Processing & Preservation	Foodservice sanitation and HACCP; applied research and education for home food preservation.
Jason Bolton, PhD (confirmed)	Assistant Extension Professor/Food Safety Specialist Food Science and Human Nutrition University of Maine	Process review; Better Process Control School; HACCP (meat/poultry, seafood); sanitation;
Chris Callahan (confirmed)	Assistant Extension Professor of Agriculture Engineering, University of Vermont	Application of engineering practice to food systems.
Luca Carnevale (confirmed)	Executive Director of Operations Hope and Maine (RI Incubator)	
Ben Chapman, PhD (confirmed)	Assistant Professor, Food Safety Extension Specialist North Carolina State University	Food processing, food science, food safety.
Jen Fagel (confirmed)	Commonwealth Kitchen (MA Incubator)	
Diane Wright Hirsch (confirmed)	Senior Extension Educator/Food Safety Department of Extension University of Connecticut	HACCP (meat/poultry, juice, dairy); food preservation; GAP; resources for small processors
Amanda Kinchla (confirmed)	Extension Assistant Professor Food Science Dept. University of Massachusetts	Better Process Control School; food science and product development; resources for small-scale processors
Nico Lustig (confirmed)	Business Development Specialist Franklin County Community Development Corp. Western MA Food Processing Center (MA Incubator)	
Bonita Oehlke (confirmed)	Food System Planning and Market Development Mgr. Massachusetts Department of Agriculture	
Lori Pivarnik, PhD (confirmed)	Coordinator Food Safety Outreach/Research Program Dept. Nutrition and Food Sciences University of Rhode Island	HACCP (seafood, meat/poultry, juice), GAP, resources for small processors and foodservice, needs assessment protocols.
Jeff Powell (confirmed)	Owner, Ocean State Smoked Fish Company Chair, Economy Group, RI Food Policy Council	Foodservice; member of Hope and Main (RI Incubator); accepted into SEG Food Business Accelerator program in RI.
Nicole Richard (confirmed)	Research Associate/Food Safety Specialist Food Safety Outreach and Research Program University of Rhode Island	Food preservation; HACCP (seafood); resources for small processors and foodservice, needs assessment protocols
Team Leader		

Team Leader Contact Information:

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I. Mission and Goals of the Proposed Program

This project is designed to address the needs of food entrepreneurs adding value to local agricultural products in the New England (NE) region. These processors face unique challenges navigating regulations and developing a safe, high quality product.

Massachusetts and Rhode Island have successfully implemented a six hour product development workshop, which included food safety, process controls, product development considerations, and regulatory guidance. Workshop evaluations indicated that participants would like additional technical support related to the development of their products, specifically, shelf-stable acidified foods. These resources could facilitate the product development process, regulatory compliance, and alleviate some financial barriers associated with establishing process controls and validation. Other challenges highlighted by this audience include easy access to accurate and clear regulatory guidance for local/state and federal compliance and technical assistance for product development. More information regarding the challenges and opportunities faced by food entrepreneurs throughout the region is necessary to maximize the impact of programming. Therefore, the overall goal of this project is to discuss and outline methodology to conduct a needs assessment of NE food entrepreneurs, to outline a research protocol to address the issues associated with scheduled processes, and to build a strategy to enhance regional programming and training.

This proposal seeks financial support for an in-person meeting of multi-state partners, within and outside of the NE Extension network. This meeting will allow participants to network with key stakeholders and collaborators involved in the local food movement. It will provide an opportunity for sharing research and outreach capabilities of the Extension network, understanding stakeholder needs and challenges, and promoting regional collaboration. The goal is to *develop a strategy to maximize the impact and support for food entrepreneurs in NE*. This would strengthen the NE food system by increasing markets for local produce, promoting seasonal extension, supporting food entrepreneurs, and promoting the local economy. This planning strategy will specifically focus on:

1. **Outlining the protocol for developing and conducting a needs assessment of NE food entrepreneurs to determine training and resource needs.** The meeting will provide the opportunity for key members of NE Extension network, other Extension collaborators, and stakeholders to discuss the challenges and opportunities faced by food entrepreneurs. This meeting will facilitate the development of appropriate questions and topics to target in the assessment, it will promote identification of available networks to connect with food entrepreneurs for survey implementation (e.g. members of incubator kitchens and processing facilities), and overall implementation protocol.
2. **Development of methodology for conducting research-based process validation studies** to promote best practices and regulatory compliance for processors. Stakeholders have identified the need for guidance and protocols for processing shelf-stable acidified foods. The establishment of defined product formulations and processing parameters will promote best practices, streamline the product development process, and enhance the capacity of incubator kitchens /processing facilities to assist clients. *The meeting will include outlining appropriate methodology for conducting this research.*
3. **Build a strategy to enhance regional programming and training** to meet the needs of NE food entrepreneurs. Prior to the meeting, a summary will be prepared outlining

curriculum, resources, and services available to the target audience; highlighting research capabilities among the Extension network; and developing a current picture of the regional incubator kitchens/processing facilities/shared-use facilities. This will promote focused discussions. *The meeting will be used to build a strategy for expanding educational programming and training to maximize collaborative efforts.*

II. **Justification for the Program Relative to Stakeholder Needs and Sustainability**

Stakeholder Needs –Food entrepreneurs encounter multiple hurdles associated with establishing process controls and process validation to produce a safe product. They experience uncertainty defining quality control parameters, and confusion understanding what is needed to comply with regulations. Understanding the challenges and potential opportunities of food entrepreneurs and growers in the region will facilitate the development of a more cohesive strategy for optimizing support. A needs assessment is a necessary first step to clearly define and understand the needs of food entrepreneurs and growers in the region.

Stakeholder perspective

“We need standardized recipes. Every year, the markets are flooded with excess crops during short periods of time and there is a lot of food going to waste that could otherwise be utilized as a source of revenue. Standardized processes would allow us to better respond to the common agricultural needs, saving the farmers from wasting food, and creating solutions that keep dollars flowing to farmers year round.” - Western MA Food Processing Center

“Provision of baseline capability, including training, for product testing and quality control for early stage makers is an additional aspect of small batch processing that will improve compliance. Knowledge of how to test products for consistency and ensure products are falling within safe ranges would be of great benefit to small processors.”

- Hope & Main, food business incubator in RI

“There were a lot of unknowns and confusion along the way. There seemed to be a disconnect between the federal and state regulations. I had trouble figuring out how to register my scheduled process with the FDA and using their website to do this.”

- Food entrepreneur of pickled products, RI

Program Sustainability - There is a strong collaborative network among food safety Extension faculty and staff from all six NE states through historical NEED/NERA planning grants that have yielded regional grants. Recently, this network has formed the Northeast Postharvest Research and Extension Service Hub (NE-PHRESH) to facilitate the coordination and improvement of regionally-specific, scale-appropriate, research-based guidance on postharvest topics. This group identified a need to enhance available technical assistance support for small food processors in the region.

The goals of this project align with AFRI Foundational Program initiatives. Additionally, the recent development of the Northeast Center to Advance Food Safety is another potential funding opportunity. Many funding opportunities call for research and outreach education among multi-state teams. This project will allow collaborators to have a mechanism in place

prior to a “request for applications” and allow for a more successful approach to obtaining external funding.

III. **Activities to be Engaged in by Team Members**

This proposal intends to engage team members representing cross-sector stakeholders, such as academic and Extension researchers and educators, food processors, and processing facility staff who play a role in supporting food entrepreneurs. This will allow team members to discuss opportunities and barriers to growth of food processors and encourage and promote collaboration. Through the organization of an in-person meeting, team members can begin the process of defining and prioritizing regional research and education needs and establishing a mechanism for obtaining external funding.

IV. **Explanation of Roles of Team Members**

Project Leader/PI– N. Richard will provide organization of the activities of the project, including meeting logistics, facilitation, and communication. She will also be responsible for the financial administration of the project. **Project Team Members**– The entire team, as listed on the cover page, will be responsible for input prior to and during brainstorming sessions at the meeting. They will also be encouraged to identify other stakeholders with interest in future participation. **Proposal Committee**- A subset of the Project Team will work to formalize the output of this meeting into a cohesive proposal for funding and the continuation of collaborative efforts.

V. **Timetable for Completion of Planning Activities and Preparation of a Proposal**

April – June, 2016	<ul style="list-style-type: none"> • Research the regional landscape of incubator kitchens/processing facilities • Investigate grant opportunities (continuous process)
July – August, 2016	<ul style="list-style-type: none"> • Conference calls: plan meeting, discuss research methods and writing proposal
September – December, 2016	<ul style="list-style-type: none"> • Meeting: share/discuss project goals, develop methodologies and strategies • Project leader will consolidate meeting input and distribute summary. • Identify Proposal Committee
January, 2017- March, 2017	<ul style="list-style-type: none"> • Web-conference to finalize the project vision, scope, and proposal outline. • Prepare proposals to NIFA/AFRI or other appropriate source • Report on the project.

VI. **Budget for Planning Activities (travel, meeting expenses, etc.): \$3986**

Travel to meeting site	Lodging	Meals	Meeting supplies (printing, flip charts, markers, etc.)	Conference room rental	TOTAL
\$1270	\$1200	\$956	\$224	\$350	\$4000

VII. **Leveraging Resources**

The proposed budget is intended to bring together key collaborators. Other resources will be indirect, as this project will capitalize on the strengths of team members to efficiently expand the capacity of this network. Team member expertise includes conducting needs assessments, implementing food safety outreach intervention strategies, product development, knowledge of thermal process controls and acidification for canned foods, a Process Authority, and laboratory research capabilities. WebEx, a free sharing and conferencing service, is available to the project leader and will be used to facilitate all web conferencing necessary to complete the goals of this project.

VIII. **APPENDIX A – CV of Team Leader – demonstrating track record of successful external funding and leading cross-disciplinary and/or multi-institutional collaborations**

{attached}

NICOLE LEYDON RICHARD*Curriculum Vitae***PERSONAL STATEMENT**

As the Research Associate/Food Safety Specialist with the Food Safety Education and Research Program at the University of Rhode Island, my work includes research and outreach programming. I have been involved in numerous food-safety related needs assessment projects which resulted in the development of resources and programming for target audiences (e.g. home gardeners, educators, consumers, and seafood and produce industries). My lab-based research has primarily focused on the evaluation of biochemical and microbiological quality and safety parameters of seafood. I coordinate food safety outreach activities, which include food safety training for foodservice workers, home food preservation workshops and more recently, food entrepreneur workshops (a collaboration with UMass). I am involved with the Rhode Island Good Agricultural Practices training for local growers. I coordinate planning of the Rhode Island Food Safety Task Force's annual conferences. I enjoy the diversity of the research and outreach programming I am involved with at URI.

EDUCATION

2009 MS - Nutrition and Food Sciences, University of Rhode Island, Kingston, RI

2001 BS - Nutrition and Food Sciences, University of Rhode Island, Kingston, RI

ACADEMIC AND PROFESSIONAL EXPERIENCE

1/2015-Present	Research Associate/Food Safety Specialist, Cooperative Extension Food Safety Education and Research Program, Department of Nutrition, and Food Sciences, University of Rhode Island, Kingston, RI
8/2003-12/2014	Research Assistant/Food Safety Specialist, Cooperative Extension Food Safety Education and Research Program, Department of Nutrition, and Food Sciences, University of Rhode Island, Kingston, RI
9/2002-8/2003	Graduate Student Teaching Assistant, Department of Nutrition and Food Sciences, University of Rhode Island, Kingston, RI
5/2001-9/2002	Quality Control Technician, Autocrat Natural Ingredients, Lincoln, RI

ONGOING RESEARCH AND OUTREACH PROGRAMMING

- Impact of quality parameters on the recovery of histamine in fish.
- Home Food Preservation workshops include hands-on and demonstration formats. Target audiences: the general public, high school students. Continuously offered 4-6 times/year.
- Food entrepreneur training "Food Product Development: Beyond the Concept." In collaboration with UMass. Workshop held 9/2015. Hope and Main, Warren, RI.
- Processing Food for Sale from Your On-farm Residential Kitchen: A two day short course. RME-Northeast Center. PI: D. Hirsch, UCONN. Co-PI: **N. Richard**, URI. Workshops held 4/2015 and 5/2015, Haddam, CT and 4/2015, Kingston, RI.
- Defining and overcoming economic factors hindering adoption of food safety practices by small and medium sized farms in the New England region. USDA/NIFA/AFRI. PI: J Parker, UVM, Total: \$488,928. URI: \$48,408. 2/15/2015-2/14/2018.
- Planning a Regional Postharvest Research and Extension Center for the Northeastern USA. NEED/NERA Planning grant. PI: C. Callahan, UVM. New England region extension specialists' committee membership.

PUBLICATION & DOCUMENTS

MANUSCRIPTS

1. Pivarnik, L.F., Faustman, C., Suman, S.P., Palmer, C., Richard, N.L. Ellis, P.C., DiLiberti M. 2013. Quality assessment of commercially processed carbon monoxide-treated tilapia fillets. *Journal of Food Science*. 78(6):S902-910.
2. Hicks, D.T., Pivarnik, L.F., Richard, N.L., Gable, R.K., Morrissey, M.T. 2013. Assessing knowledge and attitudes of U.S. healthcare providers about benefits and risks of consuming seafood. *Journal of Food Science Education*. 12:75-80.
3. Pivarnik, L.F., Richard, N.L., Patnoad, M.S., Gable, R.K. 2012. Assessment of food safety knowledge and attitudes of managers of Residential Childcare Institutions (RCCI) in the Northeast. *Food Protection Trends*. 32(6):296-308.
4. Richard, N.L., Pivarnik, L.F., Ellis, P.C., Lee, C.M. 2011. Impact of quality parameters on the recovery of putrescine and cadaverine in fish using methanol-hydrochloric acid solvent extraction. *Journal of AOAC International*. 94(4):1177-1188.
5. Pivarnik, L.F., Faustman, C., Rossi, S., Suman, S.P., Palmer, C., Richard, N.L. 2011. Quality assessment of filtered smoked yellowfin tuna (*Thunnus albacares*) steaks. *Journal of Food Science*. 76(6):S369-379.
6. Hicks, D.T., Pivarnik, L.F., McDermott, R., Richard, N.L., Hoover, D.G., Kniel, K.E. 2009. Consumer awareness and willingness to pay for high-pressure processing of ready to eat food. *Journal of Food Science Education*. 8(2):32-38.
7. Richard, N.L., Pivarnik, L.F., Ellis, P.C., Lee, C.M. 2008. Effect of matrix on recovery of biogenic amines in fish. *Journal of AOAC International*. 91(4):768-776.
8. Pivarnik L.F., Patnoad M.S., Richard, N.L., Gable R.K., Wright Hirsch, D., Madaus, J., Scarpati, S., Carbone, E. 2008. Assessment of food safety knowledge of high school and transition teachers of special needs students. *Journal of Food Science Education*. 8(1):13-19.
9. Pivarnik L.F., Leydon-Richard N.L., Patnoad M.S., Handley D., Wright Hirsch D., Steen D., Violette C., Gable R.K. 2008. On-site interview of New England gardener to assess food safety knowledge and practices related to growing and handling of home grown fresh fruits and vegetables. *Food Protection Trends*. 28(2):115-124.
10. Pivarnik L.F., Patnoad M.S., Leydon N.L., Gable R.K. 2006. New England home gardeners' food safety knowledge of fresh fruits and vegetables. *Food Protection Trends*. 26(5):298-309.

DOCUMENTS

2015 Food Processing: Guidance for Rhode Island State and Federal Regulatory Requirements.

PROFESSIONAL SERVICE

- Council Member of the Rhode Island Food Policy Council and involved with the Council's Data and Evaluation Committee.
- New England Food Safety Coalition collaborator