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## Maine Aquaculture Research, Development, & Education Summit 2020

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*Maine Aquaculture Innovation Center*

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# Maine Aquaculture Research, Development, & Education Summit 2020

Maine Aquaculture Innovation Center  
UMaine Aquaculture Research Institute





# Session Research Questions

**Workforce Development Programs** Chair: Scarlett Tudor, UMaine

- How do we find employees that possibly have experience in this field/are willing to always learn more about the industry and have a passion for this work?
- How do we hire a few full-time employees with benefits when the payscale is sometimes low and work is seasonal for these positions?

**K - 12 Programming** Chair: Jennifer Page, Hurricane Island

Things we need access to:

- Mentorship
- Journals read by industry and research
- Lab time and instrumentation
- space in commercial farms
- boat time
- real problems to solve

# Session Research Questions

**Oyster Farming** Chair: Gef Flimlin Bartlett, Rutgers Cooperative Extension

- Tumbling for small operators
- Tumbling frequency
- Cleaning Oysters
- Overwintering (timing to sink and raise)

**Microalgae Opportunities** Chair: Ike Levine, Lewiston-Auburn College

- More heterotrophic course content online
- Disseminate ATEC experience

# Session Research Questions

**Consumer Perceptions and Markets** Chair: Mary-Ellen Camire, UMaine

- What is the value of Maine vs provenance branding?
- How do we build trust within the industry?
- Can we investigate ethnic seafood preferences?
- What is the WTP for Maine Seafood?

**Aquaculture in a Changing Climate** Chair: Meredith White, Mook Sea Farms

- Accessibility to WQ data related to changes in the environment and pollution
- Management of impacts due to environmental change and improvement of management for rain closures



# Session Research Questions

## **Finfish Farming** Chair: Chris Bartlett, Maine Sea Grant

- Can we use a Maine specific cleaner fish to combat sea lice?
- Can we make a more sustainable fish feed with less fish meal?
- Can we develop new licensed vaccines for multiple finfish species?
- Waste utilization

## **The Role of Recirculating Aquaculture Systems (RAS) Chair: Jennifer Fortier, Whole Oceans**

- Social License
- Sustainable Feeds (insect and microbial)
- Waste utilization and processing infrastructure

# Session Research Questions

**eDNA Tools for Aquaculture** Chair: Heather Leslie, UMaine Darling Marine Center

Questions related to the biology and ecology of farmed species; **farm management**; citizen science; and how eDNA works. In terms of farm management in particular:

1. What are the most effective ways to share the tools and application possibilities with farmers and to enable use?
2. Can we monitor RAS systems, especially for pathogens and nuisance species?
3. Can we use eDNA to monitor fish farms for pathogens, e.g., mussels as biosensors?
4. Can we monitor emerging pathogens and fishing opportunities to facilitate adaptive management?

**Advances in Site Selection** Chair: Damian Brady, UMaine

How do we get info on who is fishing and waterfront access in potential sites?  
How do we get this data in the correct scale and in one place?



# Session Research Questions

## **Scallop Farming** Chair: Dana Morse, Maine Sea Grant

- How often/when to clean scallops (anti-biofouling)? Growth benefits of cleaning?
- What are effects of farm density on growth and reproduction?
- Timing of spawning? How do farms impact natural populations?
- Better understanding of biotoxin distribution and timing of toxicity
- Best shipping methods for live scallops
- How to improve capacity to test samples and/or transport? (\*\*\*)
- Branding of farmed product for Maine aquaculture?

## **Mussel Farming** Chair: Carter Newell, Pemaquid Mussel Farms

- How can we build small scale equipment for new entrants - rafts and processing?

# Session Research Questions

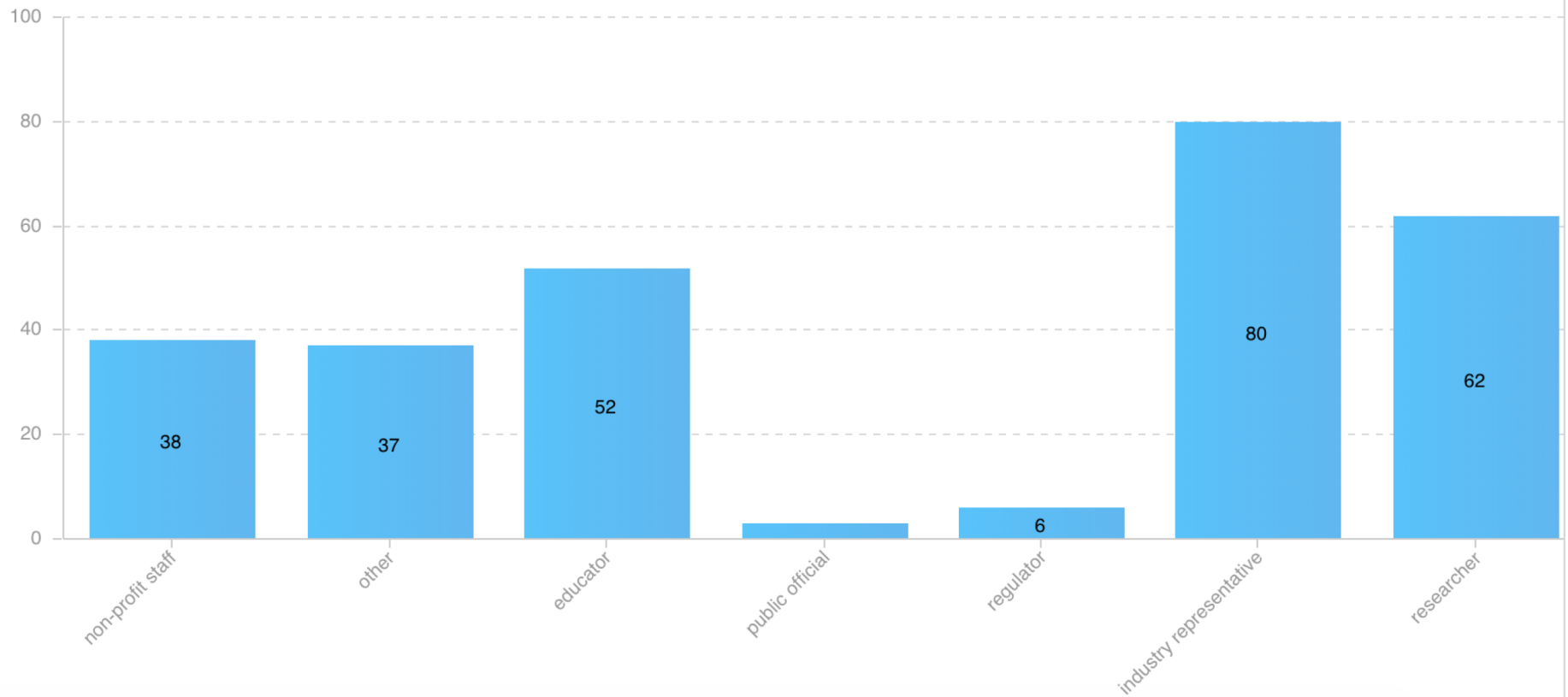
## **Sea Vegetable Value-added Products** Chair: Denise Skonberg, UMaine

- What are the energy costs of drying and what is the potential for energy recovery?
- What are the possibilities of colocation of drying and cold storage facilities?
- How can we promote the commercial use of the entire plant?
- What is the best way to insure broad market development of value-added products?
- Can we create a tasting notes of the top 10 Maine Seaweed species for chefs and home users.

## **Seaweed Farming** Chair: Jaclyn Robidoux, Maine Sea Grant

- Food safety - what methods can be used to evaluate microbes?
- What are the possibilities of colocation of drying and cold storage facilities?

# Summit Attendees





# Funding Opportunities

- **Maine Aquaculture Hub** - Address Barriers to the Growth of Aquaculture in Maine - LOI Due 2//12/20
- **Maine Technology Institute** -
- **Atlantic States Marine Fisheries Council** - Regional Aquaculture Pilots - Spring 2021
- **USDA/NSF- Small Business Innovation Research Program**
- **USDA - Northeast Sustainable Agriculture Research and Education** - Spring 2021
- **Maine and National Sea Grant**
- **USDA - NIFA Special Grants: Aquaculture** - LOI 2/19/20
- **Maine Aquaculture Innovation Center** - RFP coming soon
- **Maine EPSCoR Seed Grants** - eDNA used as tool for aquaculture - Seed Grant RFPs coming soon