NSGLC/CT Sea Grant
Seaweed Food Safety Project

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Seaweed Food Safety: Industry Panel
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Project Overview

• In 2019, the NSGLC & CT Sea Grant received funding from the NOAA National Sea Grant College Program to enhance coordination and cooperation among states to build policy consensus as to the preferred approaches for regulating the sale of seaweed in its whole form for food.

• Project Objectives:
  1) conducting legal research to identify and assess potential models;
  2) convening a collaborative learning workshop to engage stakeholders; and
  3) developing a model law, regulation, or guidance document for the sale of seaweed in its whole form as food.
Project Timeline

Grant Awarded
Conduct legal research into existing food safety models.
Form Workshop Planning Committee.

Workshop Planning
Workshop originally planned for Summer 2020. Delayed until 2021 due to COVID.
Webinar series to begin networking and information sharing.
Legal research continued. Draft White Paper.

2020

Workshop & Model Drafting
Workshop planned for Feb/March ’21: TBD.
Continue legal research to address questions that emerge from workshop.
Form drafting advisory committee and draft model guidance document.

2021

Release Guidance Document
Distribute guidance document and conduct outreach.

2022
Planning Committee

• Jeremy Ayers, Division of Environmental Health, Alaska Department of Environmental Conservation
• Steven Bloodgood, FDA Center for Food Safety and Applied Nutrition
• Jason Bolton, University of Maine Cooperative Extension
• Kristin DeRosia-Banick, Connecticut Department of Agriculture
• Michael Graham, Moss Landing Marine Laboratories
• Emanuel Hignutt, Jr., Office of Food Safety, FDA Center for Food Safety and Applied Nutrition
• Randy Lovell, California Department of Fish and Wildlife
• Jennifer Perry, University of Maine
• Caird Rexroad, Agricultural Research Service, USDA
• Mark Tedesco, Long Island Sound Office, U.S. Environmental Protection Agency
• Anoushka Concepcion, Connecticut Sea Grant
• Jaclyn Robidoux, Maine Sea Grant
Completed Research

Best Practices for Regulating Seaweed as Human Food

http://nsglc.olemiss.edu/projects/regulatingseaweed/index.html

Legal Research
- Presentation: Determining the Best Method of State Regulation of Seaweed as a Food Product
- Article: Navigating the Kelp Forest: Current Legal Issues Surrounding Seaweed Wild Harvest and Aquaculture
- Advisory Request re Regulation of Seaweed as a Food Source
- Inventory of State Laws Affecting Commercial Seaweed Aquaculture

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Food Safety 101

- Federal Food, Drug, and Cosmetic Act (FDCA) prohibits the introduction into interstate commerce of any food that is “adulterated or misbranded.” (21 U.S.C. 331).

- Basic strategies to protect against adulterated food:
  - HACCP:
    - FDA- Required for: Seafood, Juice
    - FDA- Voluntary for: Dairy Grade A
    - USDA FSIS- Meat and Poultry
  - Food Safety Plan

- “Farms” must comply with general requirements of FDCA.
Regulatory Gaps

How to regulate macroalgae? What models to look at for guidance?
Are seaweed farms “farms” for purposes of FDA regulation? Are they “processors”? 
Where do seaweed operations fit in?

FMSA

“Farms”

Not required to register with FDA

Not required to comply with 21 CFR Part 117 (hazard analysis, PC)

“Food Facility”

Must register with FDA

Must comply with 21 CFR Part 117, unless exempt.
“Farms” are defined as “an operation devoted to the growing of crops, the harvesting of crops, the raising of animals (including seafood), or any combination of these activities.”

- Regulatory definition does include some manufacturing/processing activities.
- “Drying/dehydrating raw agricultural commodities to create a distinct commodity ... packaging and labeling such commodities, without additional manufacturing/processing” (such as slicing)
Food Safety Modernization Act (FSMA)

• FSMA is applicable only to *food facilities* “engaged in *manufacturing, processing*, packing, or holding food for consumption...”

• *Manufacturing/processing* = making food from one or more ingredients, or synthesizing, preparing, treating, modifying or manipulating food, including food crops or ingredients.

  • Ex: cutting, distilling, drying/dehydrating raw agricultural commodities to create a distinct commodity, freezing labeling, packaging, trimming, washing, or waxing.
• A major requirement for food facilities under FSMA include Hazard Analysis and Risk-Based Preventive Controls

  • Exempt, with modified requirements: Average less than $1M per year in sales of human food plus the market value of human food manufactured, processed, packed or held without sale.

• How many seaweed facilities fit under this exemption?
Best model?

- With a lack of existing regulations for macroalgae, where should we look for guidance?
  - Seafood?
  - Plants?
  - Produce?

**Important Note**

Legal Definitions ≠ Scientific Classifications

Tomato = Vegetable (but it’s a fruit)
Seafood HACCP Plans

- Fishery product = “any human food product in which fish is a characterizing ingredient.”
- Fish = “fresh or saltwater finfish, crustaceans, other forms of aquatic animal life (including, but not limited to, alligator, frog, aquatic turtle, jellyfish, sea cucumber, and sea urchin and the roe of such animals) other than birds or mammals, and all mollusks, where such animal life is intended for human consumption.”
FSMA Produce Safety Rule

• Standards for the safe growing, harvesting, packing, and holding of fruits and vegetables grown for human consumption.

• Goal: reduce the presence of potentially dangerous bacteria in the food supply

• Produce = “fruits (the harvestable or harvested part of a plant developed from a flower) and vegetables (harvested part of any plant or fungus), which by definition does not include algae.”

• BUT USDA may address algae in future: “[a]s appropriate, we may consider issuing guidance on the topic of algae production for human food use in the future.”
Best model?

Best regulator?

Input from our industry survey can help inform our analysis.
Thank you! Questions?

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