

Alaska Seafood Marketing Institute

Date: April 29, 2020

To: ASMI Board of Directors

From: John Burrows, ASMI Seafood Technical Program Director

Program Update: Activities from 5/2020

Program Objectives

- Support efforts that ensure safe, quality Alaska seafood products reach the consumer.
- Position program as the lead technical and scientific information source for seafood quality, safety, nutrition and health benefits, and sustainability.
- Encourage projects that incorporate innovative approaches to developing seafood products from Alaska.
- Provide outreach to educate and inform the market, trade, and consumers on the technical aspects of Alaska seafood.
- Promote the developing seafood technical field and promote studies with Alaska seafood.

Background

The goal for the program is to connect with the industry and provide resources to industry, trade and consumers in multiple technical categories including: seafood safety, seafood quality, nutrition, utilization, traceability, sustainability, and promoting innovative opportunities for Alaska seafood. An important component of the technical program is to provide support for the marketing programs on technical matters and to aid in developing technical materials for all of the programs.

Seafood Technical Program Overview



Applied Investigations

Research opportunities related to the quality and value of Alaska seafood

- seafood safety, nutrition, and quality
- quality processing, utilization



Supplied Materials

Outreach and educational material related to Alaska seafood

- develop content, materials and provide guidance for technical topics to industry, trade, and consumers
- develop materials for industry on quality and processing techniques



Trade Education

Outreach and educational opportunities in seafood technical issues for the industry

- support educational opportunities to promote the seafood technical field

Projects

Projects of interest for the technical program were determined by direction from the seafood technical committee and other ASMI committee requests.

Applied Investigations

- **Oregon State University- PCCRC Pollock and Yellowfin Sole Milt Utilization Grant**
 - The technical program collaborated with research staff from Oregon State University (OSU) and University of Alaska Fairbanks (UAF) and was awarded a \$107,000 Pollock Conservation Cooperative Research Center (PCCRC) grant to fulfill objectives from the research proposal, ‘Development of Value-added Market Opportunities for Pollock and Yellowfin Sole Co-products.’ This multi-year project has employed one graduate student to extract nucleotides from milt samples and analyze nutrient information and an undergraduate student to identify market opportunities for nucleotide content. This in turn was a continuation of the nutritional work of the previous student on roe/milt, but looking at nucleotide content for supplement creation rather than general nutrient content. **The study sought to understand which types of nucleotides are present and how processing impacts the nucleotide content, by comparing nucleotides present in unprocessed roe/milt with roe/milt which has been processed in various ways.** It was found that milt is especially rich in nucleotides, and far exceeded the contents of roe for pollock. This trend held or is likely to hold in other species such as salmon, which according to consulted research nearly doubles the nucleotide content found in pollock. The study is also connected to other research staff at OSU to **look for bioactive peptides in roe/milt in order to test for anti-inflammatory affects and looking into nucleotide degradation through processing in drum drying.**

- **Oregon State University-FFAR Seafood Byproduct Utilization Grant**
 - The technical program contributed matching funds (**\$10,000 USD**) to the forthcoming study to recover protein from various seafood processing by-products with the purpose of developing viable, marketable food items. The study is set to occur over a span of three years with a total funding of \$667,000, half of which is comprised of matching funds. ASMI’s match correlates to the grant awarded by the Foundation for Food and Agriculture Research. **The researchers (comprised of experts in food chemistry, nutrition, food processing, product development, and sensory evaluation) will extract, purify, characterize functionality, and assess the nutritional content of the protein isolates of various**

species. The nutritional efficacy and health impact of the generated protein isolates will be assessed in an animal model compared to protein isolates such as whey and soy. Subsequently, seafood protein isolate will be utilized to develop multiple prototype products including dietary supplement products, novel food products, and food aid fortification formulations, with the culinary potential for products containing seafood protein isolates being assessed by a panel. **The study begins this Spring and should have initial results of beginning phases in the fall of 2021.**

- **University of Connecticut/Seafood Industry Research Fund – Alaska salmon consumption and reduced inflammation for breast cancer survivors –**
 - o We collaborated the Seafood Industry Research Fund (National Fisheries Institute) to support a study by the University of Connecticut to gather key information regarding dietary fish consumption patterns in breast cancer survivors experiencing symptoms of persistent pain and fatigue. The 2-year investigation uses the USDA dietary guidelines as a basis to assess the consumption of more fish consumption for improved dietary intake patterns for breast cancer survivors. Consumption of omega-3 fatty acid in fish, and not in supplements, is encouraged as a component of the Nutrition and Physical Activity Guidelines for cancer survivors. **A specific aim of the project will be to look at the effects of high and low DHA diets on inflammatory load and persistent pain and fatigue severity for breast cancer survivors. There are 150 participants in the study who have personalized meal plans of frozen Alaska salmon fillets 2-3 times a week for a period of 6 weeks. Due to COVID closures from February 2020-December 2020, the study’s latest recruitment phase was delayed and the finalization is now expected in December 2021.**

- **Oregon State University Food Innovation Center –Chef Sensory Evaluation of Frozen Alaska Seafood**
 - o ASMI is partnering with the Food Innovation Center at Oregon State University **to conduct a sensory evaluation of frozen Alaska seafood with chef participants.** Test data will be collected using the Qualtrics and/or Compusense data acquisition systems. Sensory test results will be analyzed at the 95% confidence level and raw and summarized data will be presented in a summary report. Event timing was originally scheduled for Fall of 2019 and delayed due to COVID pandemic. **Due to the technical committee’s request of avoidance of direct comparison of fresh and frozen product, the initial study design is being re-examined with OSU with a tentative start in fall 2021.**

- **Alaska Department of Environmental Conservation (ADEC)/USDA Agricultural Research Services – Developing a contaminant and nutrient database for Alaska seafood**
 - ASMI and ADEC are working together **to develop a database for Alaska seafood nutrient and contaminant data to improve value and marketability of Alaska fish, shellfish and kelp products.** Currently, the Alaska seafood industry offers disparate data from independent nutrient analyses specific to processors and marketing companies and their product and not representative of a comprehensive approach to a robust study collecting nutrient and contaminant data on Alaska seafood species. We will also work collaboratively with USDA on establishing Alaska seafood in the Foundation Foods database, a federal nutrient database that isolates nutrient information of our foods to specific season (commercial harvest) and geographic locations (Alaska). At present, ASMI is awaiting word on whether the projects Saltonstall-Kennedy Grant application has been accepted.

- **Oregon State University- Consumer Acceptability and Shelf-life Assessment of Frozen Seafood**
 - ASMI technical is supporting a forthcoming study by OSU which is funded by a Saltonstall-Kennedy Grant **to determine shelf life (nutrient density, oxidation, texture) and consumer acceptability of ~four types of frozen seafood stored in two different freezers (commercial/industrial and home), and to develop and pilot educational outreach efforts about frozen seafood.** The project timeline is two years from January 2021-January 2023, with the shelf life testing over an 18-month period within that 24 months. ASMI is supporting by serving as a member of the study’s Advisory Committee and sourcing product.

Supplied Materials

- **ASMI Species Fact Sheets**
 - The technical program is producing a new suite of Alaska seafood species fact sheets for buyers of Alaska seafood. We have completed the majority of Alaska species and will be moving forward to complete the few remaining this fiscal year. These are available in print to order as well as a download pdf on the .org website. This year, Dungeness, red king crab, gold king crab, bairdi, opilio, Atka mackerel, halibut, and Pacific cod were completed.

- **ASMI Technical Fact Sheets**
 - We are developing fact sheets on technical topics that relate to Alaska seafood. These are business-to-business and business-to-consumer fact

sheets are for use by ASMI programs as well as industry and trade relations. We have completed a hatchery, chalky halibut, and freezing quality fact sheets (as well as a jellied sablefish and shipping live crab that remain as non-circulating, internal use documents).

- **ASMI Brochures**

- We completed updates of the Salmon and Whitefish Buyer's Guides
- We have overhauled the Alaska Seafood 101 Guide (formerly the A-Z Guide) with new branding, photos, and information.
- We have begun development of an update to the existing roe brochure.

- **ASMI Quality Material**

- We developed quality Alaska seafood videos on general quality and handling, as well as for salmon processing, tendering, gillnetting, trolling, seining, and frozen quality videos and will be developing an additional utilization video.
 - These videos are for use by industry and trade promoting the good quality processing aspects of Alaska seafood processors and harvesters.
 - Shareable social versions of these videos have also been created.
- We are developing associated tutorials on aspects of quality handling for different gear types and species (i.e. how to bleed, how to ice, how to transport) at the harvester level. The first project for this, a bleed tutorial, has been completed.
- We are working to update, organize and develop quality resources on the .org website ahead of the migration to the new ASMI site.

- **ASMI Nutrition Material**

- Developed a 'Diet Matrix' sheet which describes the utilization of Alaska seafood in common, named dietary patterns such as Mediterranean, ketogenic, etc.
- Developed a 'Label Claims' sheet which outlines the requirements and stipulations necessary to utilize specific claim language on product packaging aimed at retail use.
- We developed an ASMI infographic for healthy moms/babies to supplement the functional nutrition white paper of the same subject.
- We are developing a functional nutrition addressing the various functional benefits offered by Alaska seafood products, focusing on the types of benefits offered, the nutrients responsible, the species those nutrients are found in, and practical advice on how to incorporate AK seafood into nutritional plans.

- **Additional ASMI Materials**

- We collaboratively produced a new Sustainability White Paper with NOAA, ADF&G, and SeaShare among others. This was meant as an

available deeper-dive for the five pillars of Alaska's sustainability story and for use as a resource by industry and trade.

- We worked with ASMI domestic to produce H&G salmon POS material highlighting cooking methods and preparation (filleting and steaking).
- We piloted and created a 'Research Rolodex' on the .org website hosting scientific literature which utilized or studied Alaska seafood.

ASMI Technical continues to contribute to development and updates for various publications/technical issues for staff and industry throughout the year.

Trade Education

- Provided support for KSMSC training including:
 - HACCP, Better Processing Control School, Alaska Seafood Processor Leadership Institute, Roe Workshop, Smoked Seafood School and Seafood Processing Quality Control Training.
- Speaking panelist on James Beard Foundation Smart Catch webinar discussing frozen Alaska seafood.
- Speaking panelist on webinar for International Corporate Chef's Association's Innovation Series regarding seafood distribution for foodservice.
- Copper River Prince William Sound Marketing Association invited the ASMI seafood technical director and the committee chair to present over zoom a salmon quality handling overview to the fleet.
- Provided federal comments:
 - to the USDA regarding the Dietary Guidelines for Americans 2020-2025,
 - to the FDA regarding the proposed requirements for additional traceability records for certain foods,
 - to USDA Foreign Agricultural Service (USDA FAS) regarding China's new import and export regulations and USDA FAS's draft response,
 - to the USDA in response to their request for information regarding the labeling of foods comprised of or containing cultured seafood cells,
 - to USDA FAS regarding Indonesia's regulation for the implementation of Halal product assurance and,
 - to USDA FAS China's revised hygienic standard for cooked meat products.
- Member of the National Fisheries Institute and Seafood Products Association.
- In addition to the ASMI technical sheets, we are working to create a suite of collaboratively produced technical fact sheets with entities such as ADEC and Sea Grant for industry outreach. This year we assisted in the creation of ADEC's shellfish safety sheet, and we are working on parasites, traceability, utilization,

frozen shellfish, environmental issues, and various other technical topics that the industry would like outreach material on.

- Participant in Alaska Research Consortium's *Alaska's Seafood Future* project to develop the seafood workforce and applied research opportunities.

Other Activities

- Created new technical species photos for species of rockfish, flatfish, herring, and sea cucumber to be used in campaigns and outreach material.
- Collaborated with GAPP, NFI, ASPA, and PSPA to coordinate Alaska's reaction to USDA's request for information for the labeling of wild fish as organic.
- Collaborated with other ASMI programs, industry members, and trade associations to respond to misinformation resulting from a prominent docudrama.
- Currently working with ASMI International to identify and apply for grant funding opportunities with meetings occurring on a bi-weekly basis.
- ASMI Technical supports day-to-day vetting of information utilized by ASMI marketing programs.
- The technical committee met via Zoom in March 2021 to approve the budget and discuss projects for FY22.