

IMPLICATIONS

**What's the Catch?
New Jersey Seafood and
Healthy Living: Versatile
Seafood Educational
Programming**

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Abstract

In recognition of National Seafood Month and to support New Jersey's fishing and aquaculture industries during the COVID-19 pandemic, *What's the Catch? - New Jersey Seafood and Healthy Living* was developed and implemented as an Extension education program in October 2020 to deliver science-based information on sustainable seafood production and health benefits of seafood consumption. Diverse content connected seafood harvest and production methods with the health and nutritional aspects of seafood consumption to encourage increased purchasing and intake. Since its inception, this program has been offered annually in New Jersey and serves as a useful model for seafood programming nationally.

What's the Catch? New Jersey Seafood and Healthy Living: A Versatile Seafood Education Program

New Jersey is well known for the Jersey Shore, where marine ecosystems and resources support valuable fishing and aquaculture industries. In 2018, the commercial marine fisheries and seafood industries had a total economic value of \$3.6 billion and supported over 49,000 jobs, while the marine recreational fishing industry had a \$1.3 billion value and supported over 14,000 jobs (National Marine Fisheries Service, 2021). Seafood producers and resource managers in the state continue to implement responsible practices to ensure the long-term sustainability of New Jersey's marine resources while expanding consumer support (MAFMC, 2019; NJDA, 2022).

Regular seafood consumption has important implications for human health, including reduced risk for chronic disease. The

2020-2025 Dietary Guidelines for Americans (DGAs) recommend twice weekly consumption of varied seafood as part of a strategy to lower dietary saturated fat and sodium levels (USDA and USDHHS, 2020). For women who are pregnant, breastfeeding, or planning to become pregnant, consuming appropriate amounts of seafood lower in mercury yet rich in nutrients such as Omega-3 fatty acids contributes to infant health and wellbeing (FDA and EPA, 2019). While federal guidelines and information to help consumers make appropriate seafood choices are available, almost 90% of Americans do not eat the recommended amounts of seafood (USDA and USDHHS, 2020). Additional education is warranted to boost seafood consumption and foster associated health and socioeconomic benefits.

Extension education programs have improved consumer knowledge and intake of local seafood elsewhere in the U.S. (Abeels et al., 2015), but no previous programs existed for New Jersey. The objective of this program was to encourage increased seafood consumption among New Jersey residents by providing science-based information on responsible seafood production and the health and benefits of consuming local seafood.

Objective and Purpose

What's the Catch? - New Jersey Seafood and Healthy Living was designed as a two-part webinar series first delivered virtually in October 2020, during National Seafood Month, by Extension educators with expertise in fisheries, aquaculture, seafood, and health and nutrition. Statewide program participants were recruited via social media, print media, email, and university websites. Popularity of the program resulted in versatile follow-up programs in 2021 and 2022. In 2021, the program was once again a virtual presentation; however, in 2022, the program was delivered virtually and in-person simultaneously. To encourage attendance at the 2022 presentation, incentives were given to in-person attendees. The incentives included seafood seasonings and recipes along with Extension fact sheets and National Oceanic and Atmospheric Administration (NOAA) fishery handouts.

Through diverse content presented at each session, Extension educators connected the topics of seafood production

with the health and nutritional aspects of seafood intake. In the first 90-minute session in 2020 and 2021, two marine Extension educators discussed types of seafood produced from New Jersey's marine fishing and shellfish aquaculture industries. They shared responsible stewardship practices employed by industry and management practices required by state and federal agencies to maintain the long-term sustainability of New Jersey's marine resources, ecosystems, and coastal communities. During the second 90-minute session, four health and nutrition Extension educators shared important information regarding the DGAs and federal mercury guidance along with tips for purchasing seafood, with an emphasis on seafood produced in New Jersey. To fully equip consumers with the skills to properly choose and prepare seafood, this session highlighted interpretation of seafood labels, practicing safe handling practices, preparing seafood recipes, and understanding seafood mercury content. When in-person programming allowed for a hybrid program in 2022, the program was presented as a one-night, 90-minute program that included abbreviated coverage of the same topic areas as the two-night program delivered in previous years.

The nutrition, preparation, and purchasing portion of the presentation has been replicated by the Family and Community Health Sciences (FCHS) Educators who partnered to create the program. The success and interest in the program demonstrate the need for nutrition education that supports increased seafood consumption through lessons that provide purchasing, preparation, and overall knowledge of the benefits of seafood.

Background

To both encourage increased consumption and support the local economy during the COVID-19 pandemic, the educational program of *What's the Catch? - New Jersey Seafood and Healthy Living* sought to provide educational materials that would guide participants to better understand seafood production and health benefits. To overcome potential barriers to eating seafood, Family and Community Health Science (FCHS), Agriculture and Natural Resources (ANR), and other Extension educators involved in this collaboration highlighted topic areas to support safe purchasing and preparation, as well as beneficial nutrients and mercury recommendations for vul-

nerable populations. While the webinars highlighted specific topic areas, such as seafood's ability to assist with maintaining a healthy weight and providing Omega 3s, supplemental materials like recipes and recipe videos were developed to provide continual educational opportunities and to support behavior change. <https://njaes.rutgers.edu/fchs/recipes/recipe.php?NJ-Flounder-Mediterranean-Style>.

Evaluation responses and participant questions helped to annually improve programming. For example, questions from previous participants were used to enhance topic areas for future presentations, whereas, to address cost barriers, material was added about purchasing local, seasonal seafood and techniques for freezing seafood that could be purchased when pricing is lower. Additionally, suggestions on how to make seafood on a budget by selecting more affordable options were exemplified to assist participants who may need creative ideas to eat seafood on a budget.

Results

To evaluate success, a post-program internet-based Qualtrics survey was distributed annually via email to all participants (2020, n=94; 2021, n=31; 2022, n=35). In 2020, the Rutgers Institutional Review Board approved the survey instrument and evaluation process. Survey data were analyzed using IBM SPSS v.27 statistical software. Descriptive statistics were used to summarize participant demographics, evaluate overall program satisfaction, and measure intended behavior change. All survey respondents provided a positive evaluation of the overall program quality, organization, and delivery, with the majority rating these program aspects as "Excellent" (based on a scale of 1-Poor to 5-Excellent) in all three years. Almost all respondents indicated they were at least somewhat (33.3%) if not highly (55.6%) likely to consume more New Jersey-sourced seafood in 2020, and those figures improved with each year's program with 81.2% highly likely and 9.09% somewhat likely to eat more New Jersey-sourced seafood in 2021. In 2022, 50% of respondents indicated that they were highly likely or somewhat likely to consume more New Jersey-sourced seafood. Evaluation results from all years demonstrated an increased likelihood of increased purchasing of New Jersey-sourced seafood based on anticipated behavior changes, whereas, in 2020, 59% of respondents

reported intentions to purchase more seafood, in 2021 that number increased to 64%, and 100% of respondents in 2022, stated they were highly likely to purchase more seafood after program participation. Survey respondents also reported increased knowledge relative to New Jersey's recreational and commercial marine fisheries and aquaculture industries, as well as regarding nutrition and health benefits of consuming seafood. Median self-reported scores for knowledge gained and an improved understanding of all seafood-related topics were higher among participants after *What's the Catch? - New Jersey Seafood & Healthy Living*. Qualitative data from survey participants in the three years included: "Knowing which fish are local and where they can be bought was helpful." "I would like even more information on cooking seafood and food safety related to NJ seafood, please repeat this program yearly."

Summary

While pandemic restrictions prevented in-person programming in 2020, a webinar format was advantageous to enable attendance of participants and presenters from across the state. As pandemic restrictions were lifted and educational formats progressed toward hybrid formats to accommodate virtual and in-person participants, so too did *What's the Catch? - New Jersey Seafood and Healthy Living* programming.

Based on the positive reception, abridged versions of the nutrition education portion of *What's the Catch? - New Jersey Seafood and Healthy Living* were offered in other venues. For example, in 2021, the nutrition portion of the program was broken into two sessions during Wellness Wednesday with FCHS, with 231 attending the first week and 228 attending the second week. Once again in 2022, the abridged program was well-received during Wellness Wednesdays with FCHS, with 83 viewers in the first session and 79 attendees at the second presentation (Shukaitis et al., 2022). FCHS also used *What's the Catch? - New Jersey Seafood and Healthy Living* nutrition program materials as individual educational opportunities at libraries across the state.

This interdisciplinary, multi-departmental programming highlighted New Jersey's seafood industry while successfully educating diverse participants on the health advantages of

eating more seafood. The creation of the program during the pandemic warranted a virtual program that allowed professionals across the state to work collaboratively to create new programming. Barriers have included limitations on audience participation during National Seafood Month in October when New Jerseyans are entering colder months and less likely to eat seafood as coastal activities decrease. To combat this barrier in 2023, creators intend to deliver the program in warmer months when residents may be even more interested in the prospect of seafood consumption.

While *What's the Catch? - New Jersey Seafood and Healthy Living* focused on local seafood, the core content regarding both domestic seafood harvest and production along with the health and nutritional benefits of seafood are broadly relevant. FCHS educators throughout the U.S. can consider a similar model to engage geographically separated constituents. Educators can select regionally inspired seafood recipes to customize recommendations for their audiences. Non-coastal states with limited availability of fresh seafood can promote fresh or frozen domestic seafood choices for improved health and benefit to the U.S. seafood economy. This program model demonstrates implications for Extension professionals for multi-disciplinary work as well as the communities served by Cooperative Extension.

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Figure 1



What's the Catch?
New Jersey
Seafood and Healthy Living
2021



<p style="text-align: center;">October 14, 2021 * 6:30 - 8 pm</p> <p style="text-align: center;">New Jersey's Fishing and Aquaculture Industries</p> <ul style="list-style-type: none"> • Seafood Harvested and Grown in New Jersey • Responsible and Sustainable Fishing and Aquaculture Practices • Science and Management of New Jersey's Marine Ecosystems <p style="text-align: center;">Featured Speakers:</p> <p>Dr. Douglas Zemeckis, Agriculture & Natural Resources County Agent III, Rutgers Cooperative Extension (RCE), Ocean, Atlantic, and Monmouth Counties</p> <p>Lisa M. Calvo, Marine Scientist/Aquaculture Extension Program Coordinator, Haskin Shellfish Research Laboratory, Rutgers University</p>	<p style="text-align: center;">October 21, 2021 * 6:30 - 8 pm</p> <p style="text-align: center;">Health and Nutrition of New Jersey Seafood</p> <ul style="list-style-type: none"> • Health Benefits of Eating Seafood • Understanding Mercury in Seafood • Sustainability Labeling of Seafood • Selecting Affordable Seafood • Safe Handling and Recipe Preparation <p style="text-align: center;">Featured Speakers:</p> <p>Christine Zellers, Family & Community Health Sciences (FCHS) Educator/Asst. Professor, RCE Cape May County</p> <p>Joanne Kinsey, FCHS Educator/Professor, RCE Atlantic and Ocean Counties</p> <p>Rachel Tansey, Senior FCHS Extension Associate, RCE Monmouth County</p> <p>Lauren Errickson, Senior Program Administrator, RCE, PhD Candidate, Nutritional Sciences Graduate Program</p>
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***Register in advance for either or both webinars
by October 14th at:
<https://go.rutgers.edu/pibxkvqq>**

Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and Boards of County Commissioners. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.