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# Long-Term Health Effects, Risk Perceptions, and Implications for Agricultural Markets: Modeling Consumption Patterns for Aquacultured Seafood

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Eighty-seven percent of the U.S. seafood supply comes from imports (NMFS 2009), with approximately 50 percent of those imports from aquacultured (farmed) sources. The U.S. aquaculture industry provides only about five percent of the total U.S. seafood supply (NOAA 2009). One factor affecting the competitiveness of U.S. aquaculture is consumer perceptions of long-term health risks associated with consumption of certain farmed species. Even though most farmed fish have very low concentrations of contaminants relative to other species, or even other foods, on a per serving basis (Mozaffarian and Rimm 2006), risk concerns are often magnified by media coverage of selected health risks, which often focus on a small number of high-profile studies, as well as overlapping, conflicting, partial, or misleading reports of risks. This is compounded by consumers' difficulty in processing risk information and the difficulty of communicating consumption risk and benefit information across different seafood species and sources (Nesheim and Yaktine 2007).

This study integrates economics and risk communication by developing information tools that present relative risk/risk information to consumers, then tests the effectiveness of these tools on stated and revealed demand for farmed seafood products. Enabling consumers to better differentiate risks and benefits will improve consumer welfare and may improve industry competitiveness. The project is in its initial phases.

Early results from two focus groups conducted in Rhode Island during July and September of 2010

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provide insight into consumers' seafood purchasing behavior, knowledge about seafood, and perceptions of health risks and benefits. Participants in these focus groups generally displayed a lack of knowledge about fish relative to other foods. Furthermore, in spite of often being frequent seafood consumers, consumers have mixed and conflicting perceptions of seafood as a healthy food option, while perceiving that seafood also carries risks due to contaminants. Consumers perceive that farmed fish have lesser health benefits and greater health risks than do wild fish. There is a lack of knowledge about where to obtain unbiased and objective information about seafood's attributes. As a result, consumers indicate that they have difficulty balancing health risks and benefits, in particular for farmed fish. One participant summed up the results of the focus groups aptly with by saying, "I make choices . . . based on what's a good value; I eliminate what's bad [for me], and buy what's good [for me] that's on sale because I have other choices."

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