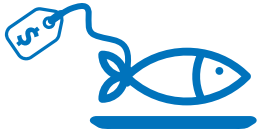


Consumer Attitudes Toward Wisconsin Farm-Raised Fish

Public Opinion and Marketing Recommendations

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Public Opinion Insights and Marketing Recommendations

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Preface

In order to assess consumers' perceptions of Wisconsin farm-raised fish and their behaviors related to purchasing and consuming locally farmed fish, our team developed and conducted a consumer survey with funding from Wisconsin Sea Grant. This survey was sent to multiple members of the aquaculture community for input. We also gathered feedback from the University of Wisconsin–Madison Division of Extension, the University of Wisconsin–Stevens Point, the University of Wisconsin Sea Grant Institute, the Wisconsin Department of Natural Resources, the University of Wisconsin–River Falls Survey Research Center, and several Wisconsin fish farmers and consumers. In total, 18 individuals representing the public and aquaculture community provided feedback. We adjusted our questions based on their input. We are grateful for their participation. The purpose of this report is to help Wisconsin fish farmers grow and sustain their businesses.



Sara Stathas/Wisconsin Sea Grant

Kyle Woolever, aquaculture manager in Hixton, Wisconsin, with a farm-raised salmon.

Introduction

While the demand for local food products in Wisconsin is strong, many Wisconsin consumers are still unaware of the availability of local, farm-raised fish.

Parts of the local food movement are thriving in Wisconsin, and more people want to know the source of their food. Indeed, many are willing to take extra steps to purchase local food in order to support producers in their communities, such as visiting a farm or farmers market, cooking seasonally, or even paying a premium for local food.

While the demand for local food products in Wisconsin is strong, many Wisconsin consumers are still unaware of the availability of local, farm-raised fish.

Aquaculture helps meet the world's demand for fish, and is sometimes called "fish farming." In the United States, aquaculture may also be an important part of fostering our domestic supply of edible seafood and reducing the trade gap between imported and exported seafood. This matters, as approximately 90% of the seafood people in the United States consume is imported from other countries.

The farm-raised fish industry is still relatively small in Wisconsin, and there is much potential for growth. To help Wisconsin fish farmers expand their businesses and capitalize on the trend for local food, while also being responsive to consumer concerns, we researched consumer perceptions about farm-raised Wisconsin fish and the consumption of fish more generally.

Report Highlights

Our data find that there is a generally high level of trust in Wisconsin fish farmers by consumers, that respondents see few potential causes for concern of farm-raised fish, and that consumers perceive a number of benefits related to Wisconsin farm-raised fish. Key highlights from the survey and recommendations include the following:



- Respondents ate fish less frequently than other commonly consumed meats such as chicken, beef, and pork. However, 57% of respondents still reported consuming fish at least once per week, and 84% of respondents reported eating fish at least once a month.
- Respondents generally had positive attitudes toward eating fish, with the majority reporting that they like the taste (84%) and enjoy eating it (87%).
- People mostly buy the fish that they prepare at home from the grocery store or supermarket. Sixty percent of respondents reported that, when purchasing fish to cook at home, they "often" or "always" buy from a grocery store or supermarket.
- There were general trends toward people preferring to purchase fish that was wild-caught over farm-raised. Respondents were also more likely to report that they would pay more for wild-caught fish. The preference for wild-caught fish is one potential challenge for the fish-farming industry.

- Respondents preferred fish that was harvested in Wisconsin or the United States over imported fish, regardless of whether it was wild-caught or farm-raised. Packaging and imagery should clearly identify farm-raised fish as from Wisconsin.
- The aquaculture industry should emphasize the benefits of Wisconsin farm-raised fish, such as relieving pressure on wild fisheries and the sustainable production methods used by Wisconsin fish farmers.
- Fish fries are among the more common venues in which respondents regularly consume fish. The aquaculture industry has an opportunity to capitalize on the cultural tradition of fish fries by emphasizing species commonly served at Wisconsin fish fries and grown by local fish farmers, such as yellow perch and walleye, and by promoting fish such as tilapia that are grown by Wisconsin fish farms.
- Respondents who believed that fish was hard to prepare ate fish less often. This suggests that communicators should emphasize easy-to-prepare recipes for eating Wisconsin farm-raised fish.
- Ninety-three percent of respondents reported that, when thinking about fish, taste was “very important” or “extremely important.” “Freshness” was also an attribute rated as highly important. While nutrition and sustainability are likely very important to some segments of consumers, farmed fish will need to be seen as both fresh and tasty to be appealing.
- Sixty-nine percent reported that price is an important consideration when purchasing fish, suggesting that fish farmers may want to emphasize the value of their products relative to other options for buying meat. Countering the perception that fish is expensive may be an important step in encouraging consumers to try Wisconsin farm-raised fish.
- Most respondents felt uncertain regarding concerns about fish farming in Wisconsin (e.g., contaminants, contributing to environmental problems, quality concerns). This suggests that the Wisconsin aquaculture industry has an opportunity to proactively respond to public uncertainty by highlighting how their production methods protect the environment and create products that are safe to eat.
- Respondents reported higher levels of trust in Wisconsin fish farmers’ ability to keep fish safe to eat as compared to the ability of government agencies, grocery stores, and non-local fish farmers to do the same. Wisconsin fish farmers may be important advocates in continuing to communicate this message.



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The aquaculture industry has an opportunity to capitalize on the cultural tradition of fish fries by emphasizing species commonly served at Wisconsin fish fries and grown by local fish farmers.

Methods

SURVEY DISTRIBUTION

Our team wrote a survey focused on perceptions of fish, with an emphasis on Wisconsin farm-raised fish. We worked with the University of Wisconsin–River Falls Survey Research Center to field the survey. In July 2018, the Survey Research Center mailed the paper survey to a random sample of 3,000 households in Wisconsin. The mailed packet included the survey, an introductory letter to the survey, and a prepaid self-addressed envelope. Those who did not respond to the survey after two weeks were sent a reminder postcard and a second survey.

A total of 548 surveys were returned for a response rate of 18%. This report is based only on responses from primary household grocery shoppers, or respondents who reported doing half or more of the food shopping for their households, and who also answered more than half of the survey questions. Our data are consequently based on a sample of 508 individuals. Given the adult population size in Wisconsin, the final sample size is sufficient for a typical margin of error, verified using the online sample size calculator recommended by the American Association for Public Opinion Research.

RESPONDENT CHARACTERISTICS

In our final sample, 62.2% of the respondents were females, 94.1% were White, and 37.5% lived within approximately 30 miles of a Great Lake (Lake Michigan or Lake Superior). The mean and the median of age for the sample were closest to the response choice of “55 to 64,” which was also the most often selected response category. The mean and the median of level of educational attainment for the sample were closest to the response category of “completed a 2-year degree,” which was above “some college” and below “completed a 4-year degree.” The most commonly selected education category, however, was “completed a 4-year degree.” The mean and the median of annual household income for the sample were closest to the response choice of “\$50,000 to \$74,999,” which was also the most often selected income category. Lastly, turning to political ideology, 41.6% of the respondents identified themselves as conservatives or conservative-leaning, while 34.6% identified themselves as moderates, and 23.7% as liberals or liberal-leaning.



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Consumption Frequency

Our first set of questions asked respondents how often they ate fish as compared to other types of meat. We found that respondents ate fish somewhat less often than pork, and quite a bit less often than chicken or beef. Roughly 57% of respondents reported eating fish at least once a week, with 84% eating fish at least once a month. In comparison, 64% of respondents reported eating pork at least once a week, 87% of respondents reported eating chicken at least once a week, and 83% reported eating beef at least once a week. More details can be found in Figure 1.

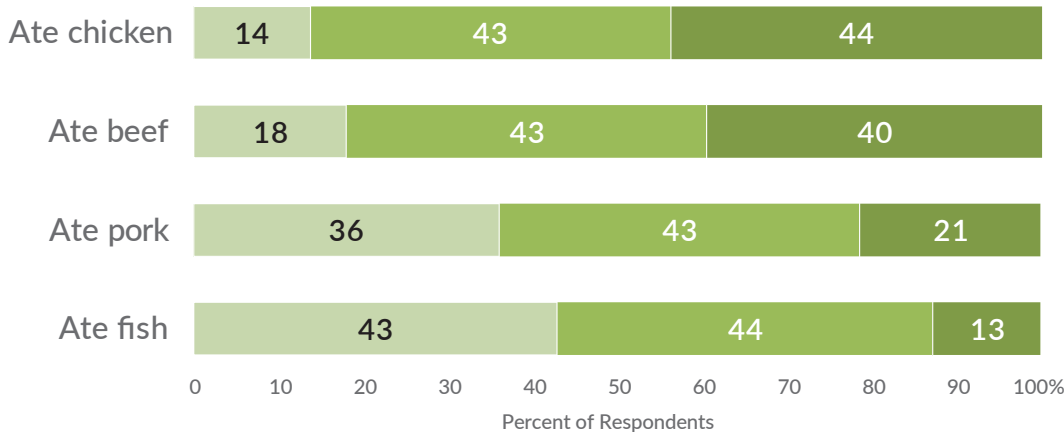
Roughly 57% of respondents reported eating fish at least once a week, with 84% eating fish at least once a month.

Only a small number of respondents, about 4%, reported that they “never” ate fish. This was close to the same number reported for pork (4%), chicken (2%), and beef (3%).

FIGURE 1

In the last year, how often did you do the following things?

■ Less than once a week (%) ■ About once a week (%) ■ More than once a week (%)



Numbers may not add up to exactly 100% due to rounding to the nearest whole number.

Food Shopping & Cooking

Eighty-three percent reported that they sometimes, often, or all of the time bought fish from grocery stores.

Respondents were also asked where they bought their fish when they ate fish at home (Figure 2). People mostly bought the fish that they prepare at home from the grocery store or supermarket. Eighty-three percent reported that they sometimes, often, or all of the time bought fish from grocery stores. Messaging that prompts individuals to seek out Wisconsin-grown fish at their local grocery store or supermarket would be a way to emphasize the compatibility of eating local fish with existing shopping habits. The next highest category of fish eaten at home was caught by the respondent or someone they know with 41% saying that they got their fish that they cook at home this way. Next respondents reported that they sometimes, often, or all the time get their fish from warehouse stores (e.g., Costco® or Sam's Club®) with 21% obtaining their fish this way. The other outlets where people could obtain fish were used less frequently.

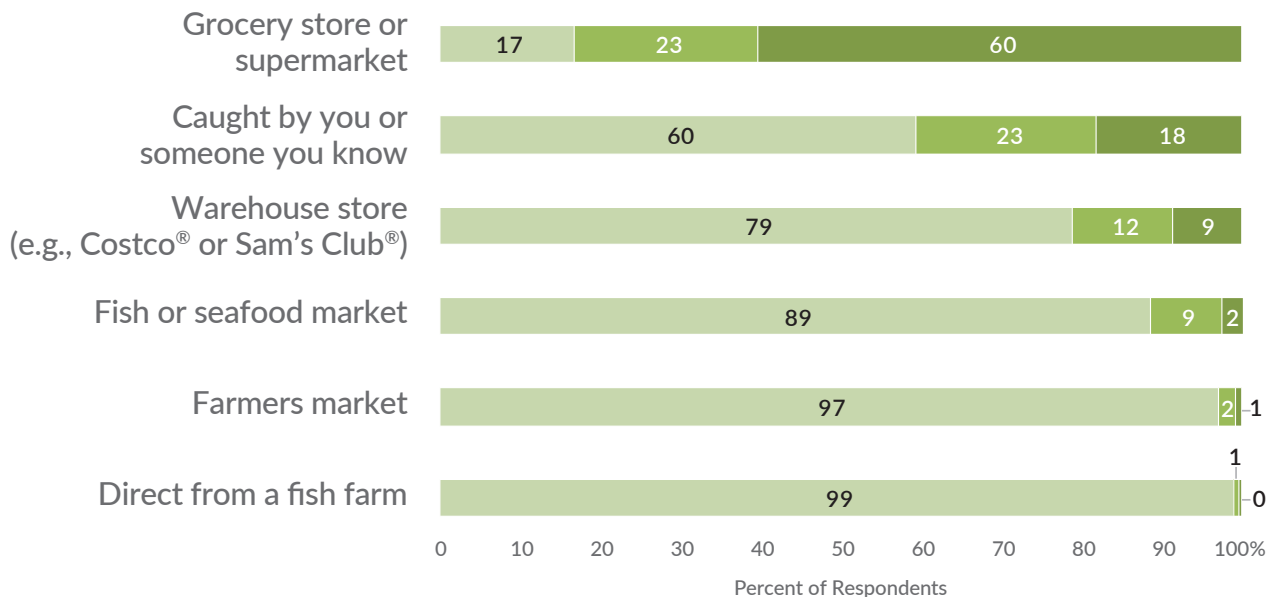


People mostly buy fish they prepare at home from a grocery store or supermarket.

FIGURE 2

When you ate fish at home, how often was it from these places?

Never or rarely (%) Sometimes (%) Often or all the time (%)



The traditional Wisconsin fish fry is another common cultural culinary experience that may be a part of the overall enjoyment associated with eating fish. An overwhelming majority of respondents, 84%, reported going to a fish fry at least a few times a year. About 42% reported going to a fish fry about once a month, and 14% reported going about once a week. Given that a fish fry is a food-based tradition that often involves time spent with family and friends, it is reasonable that a portion of the experience of eating fish may be related to the communal and celebratory context that surrounds these cultural experiences. The aquaculture industry has an opportunity to capitalize on the cultural tradition of fish fries by emphasizing species commonly served at fish fries and grown by Wisconsin fish farmers such as yellow perch and walleye.

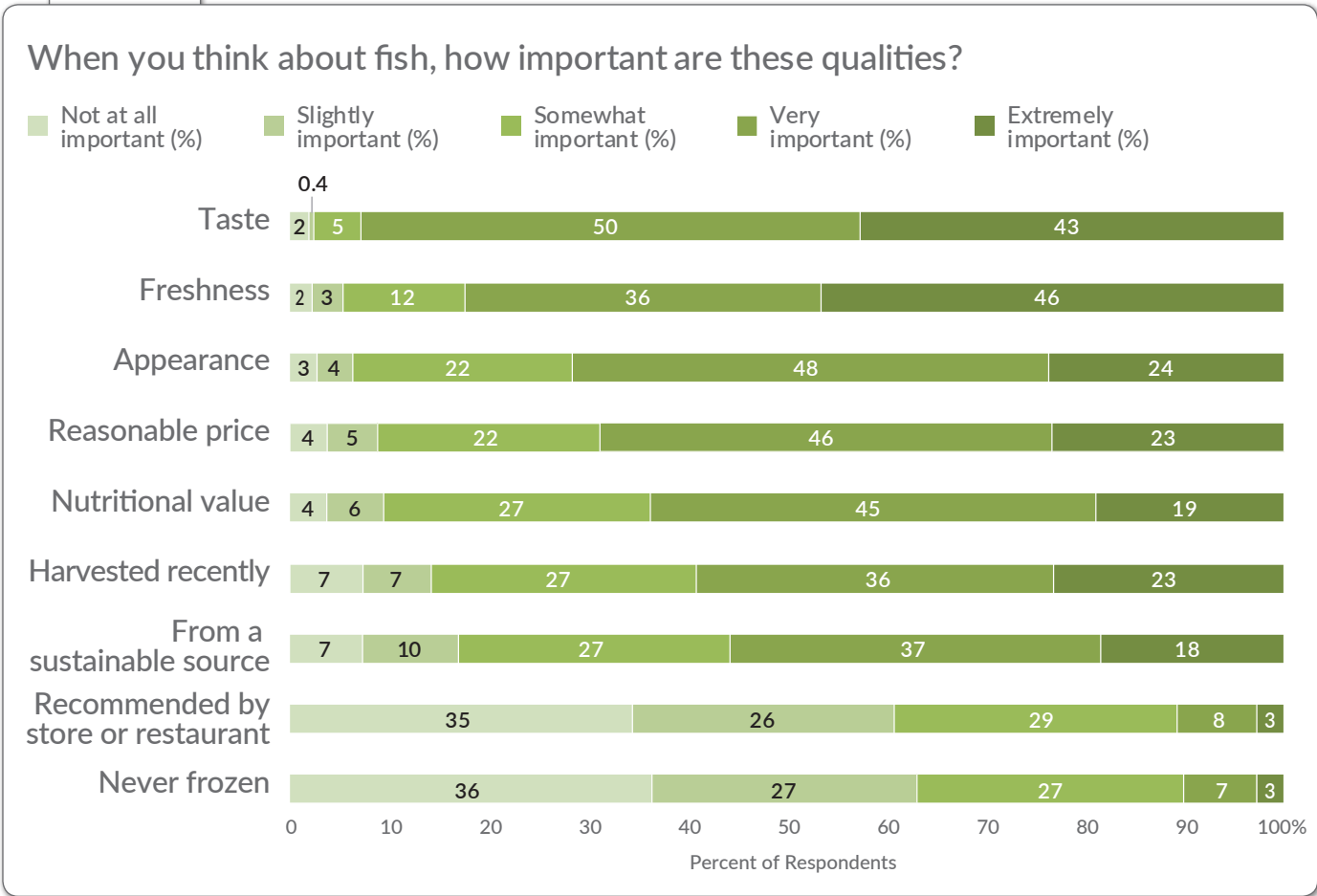


A large majority of respondents reported going to a fish fry at least a few times a year.

TASTE IS THE MOST IMPORTANT ATTRIBUTE OF FISH

When considering individual attributes of fish, taste, freshness, appearance, and price are relatively more important than other factors. Figure 3 shows that an overwhelming 93% of respondents reported that, when thinking about fish, taste was “very important” or “extremely important.” About 82% of respondents reported the same for freshness, 72% reported the same for appearance, and about 69% reported the same for price.

FIGURE 3



Numbers may not add up to exactly 100% due to rounding to the nearest whole number.



Taste, freshness, appearance, and price are the most important attributes when people think about buying fish to eat.

Nutritional value, how recently the fish was harvested, and sustainability were also important considerations, but were secondary to taste, freshness, appearance, and price. Fish that has never been frozen and recommendation from a store or restaurant were less important to survey respondents.

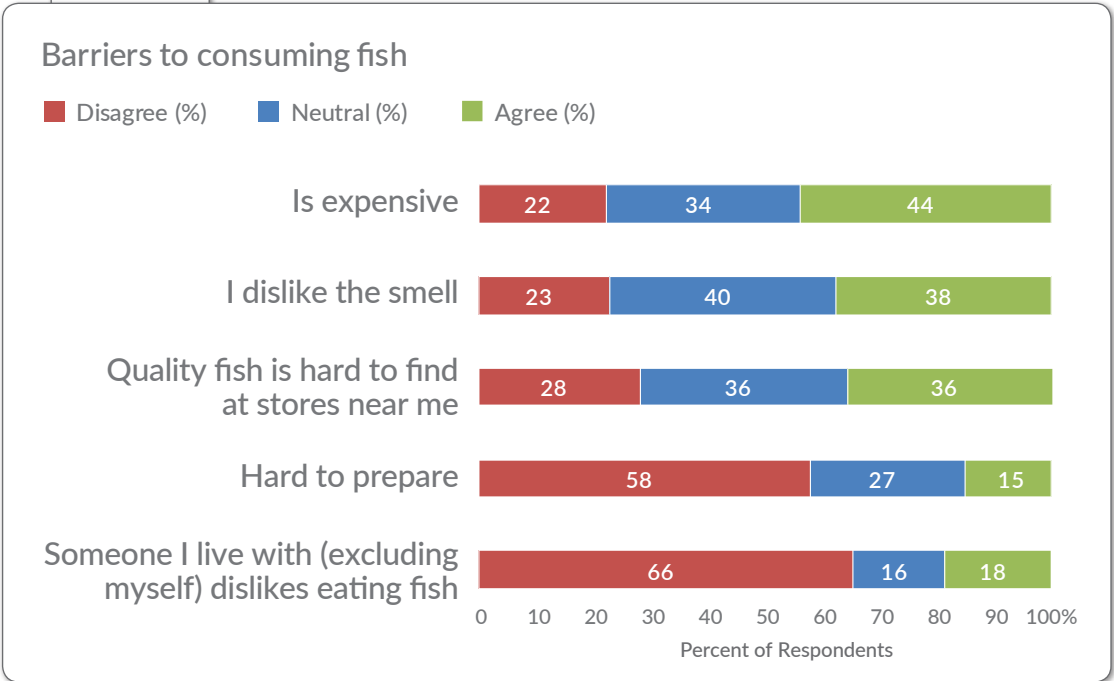
Fish farmers and others who communicate about fish farming in Wisconsin should keep in mind the importance that consumers place on taste and freshness. While nutrition and sustainability are likely very important to some segments of consumers, farmed fish will need to be seen as both fresh and tasty to be appealing.

Furthermore, the fact that “freshness” ranked much higher than either “harvested recently” or “never frozen” suggests consumers have a more abstract or intuitive way of thinking about what fresh means, and promoting farm-raised as fresh may be more a matter of using images or providing a mental shortcut (e.g., that the fish was harvested nearby) to help audiences understand that their fish is fresh, rather than only information that relates to traditional definitions of fresh (e.g., never frozen or the date of harvest).

PRICE IS A POTENTIAL BARRIER TO CONSUMPTION

Respondents were also asked about barriers to purchasing or eating fish (Figure 4). The highest percentage of respondents, 44%, agreed that fish is expensive to buy. Addressing this perception may be an important step in encouraging consumers to try Wisconsin farm-raised fish. Positioning local, farm-raised fish as an affordable alternative to more expensive seafood is a strategy Wisconsin fish farmers might pursue.

FIGURE 4





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People who think fish is hard to prepare eat it less often. Emphasizing “quick-and-easy” recipes may increase demand for Wisconsin farm-raised fish.

Messages focused on cooking fish as being “quick and easy” may help to increase demand for Wisconsin farm-raised fish.

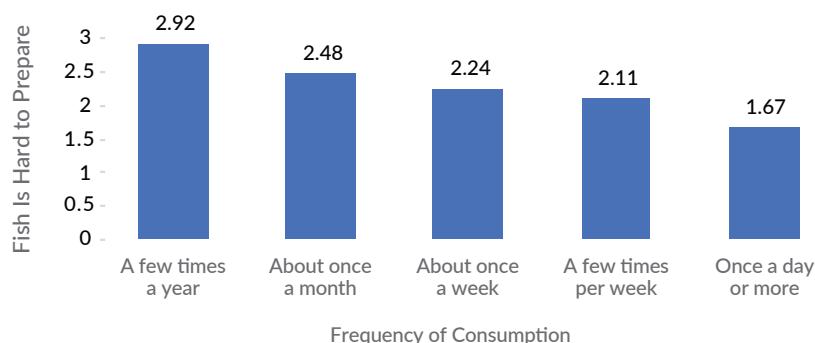
About 38% of respondents agreed that they don’t like the smell, while just over a third (36%) said that quality fish is hard to find at stores near them. The majority of respondents disagreed that fish is hard to prepare (58%). About 18% said they don’t cook fish because someone they live with dislikes eating fish.

If we look closer at the data, we can see some trends related to the frequency of fish consumption. Looking at Figure 5, we can see that fish consumption is related to individual perceptions that fish is hard to prepare. In other words, agreement with the statement “Fish is hard to prepare,” is related to less frequent consumption.

As may be expected, those who disagree that fish is hard to prepare tend to consume fish more often. This finding suggests that businesses selling Wisconsin farm-raised fish should emphasize easy-to-prepare recipes for cooking fish at home. Messages focused on cooking fish as being “quick and easy” may help to increase demand for Wisconsin farm-raised fish.

FIGURE 5

Frequency of fish consumption by perception of how hard fish is to cook



Fish Origins, Potential Concerns, & Possible Benefits



Respondents preferred their fish from Wisconsin over the rest of the United States and imports. Packaging and marketing material should emphasize that Wisconsin farm-raised fish is locally raised.

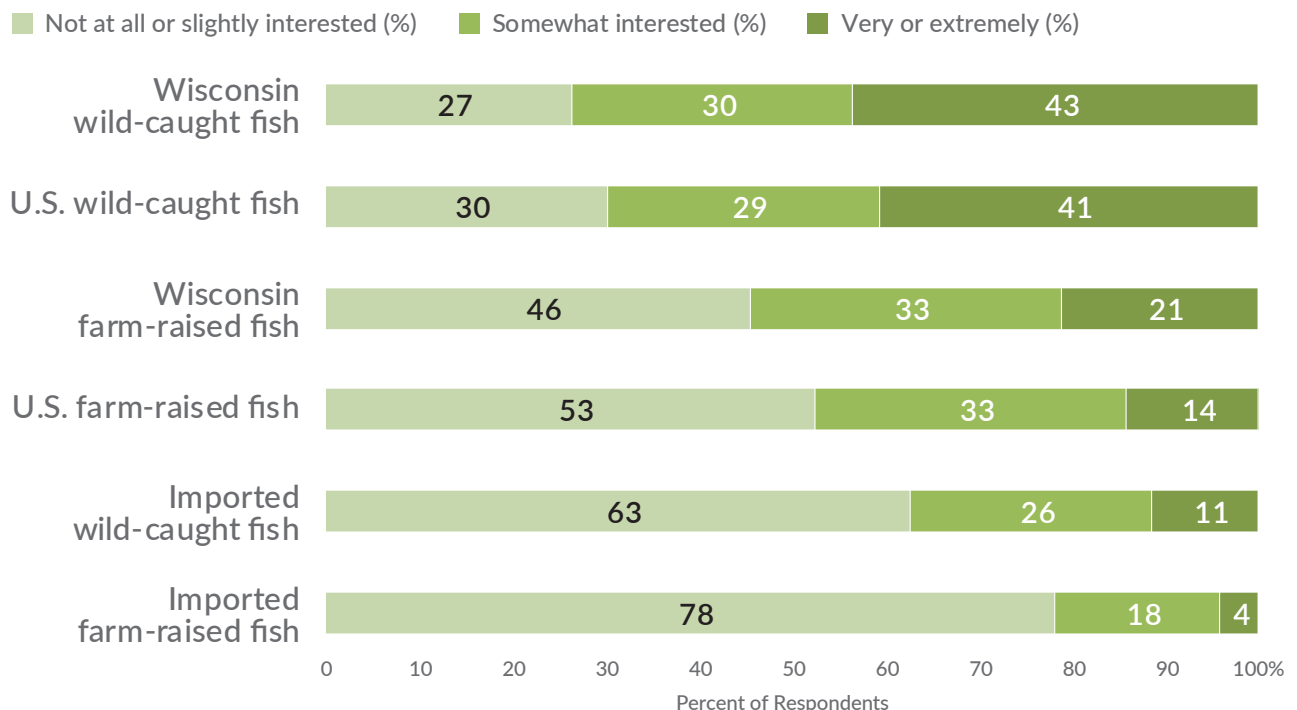
“Eat Wisconsin Fish” is a marketing campaign created by Wisconsin Sea Grant to help increase awareness of farm-raised fish in Wisconsin.

RESPONDENTS PREFER WISCONSIN FISH OVER FISH FROM OTHER SOURCES

The possibility of discovering a difference in consumer attitudes and preference for fish from Wisconsin were two of the primary reasons for this study. We asked respondents if they were interested in purchasing fish sourced from different places, and if they had a preference for fish that was farm-raised or wild-caught. Figure 6 shows that there were general trends toward respondents preferring fish that was wild-caught and respondents preferred fish that was harvested in Wisconsin or the United States over imported fish. Topping the list of preferences was Wisconsin wild-caught fish with 73% of respondents saying they were at least somewhat interested in purchasing this type of fish, followed closely by 70% stating that they were at least somewhat interested in buying wild-caught fish from the United States. The next highest categories were respondents expressing they were at least somewhat interested in purchasing farm-raised fish from Wisconsin (54%) and from the United States (47%). Respondents were less interested in buying imported fish, whether it was farm-raised or wild-caught. Specifically, 37% were at least somewhat interested in buying imported wild-caught fish and 22% were interested in purchasing imported farm-raised fish.

FIGURE 6

How interested are you in purchasing the following?



Given these positive feelings about Wisconsin, packaging and imagery should clearly identify fish as from Wisconsin. This may have other benefits as well, as our other results (discussed later on in this report) find that consumers have more trust in Wisconsin fish farmers relative to other sources, and see benefits of fish farming for the state.

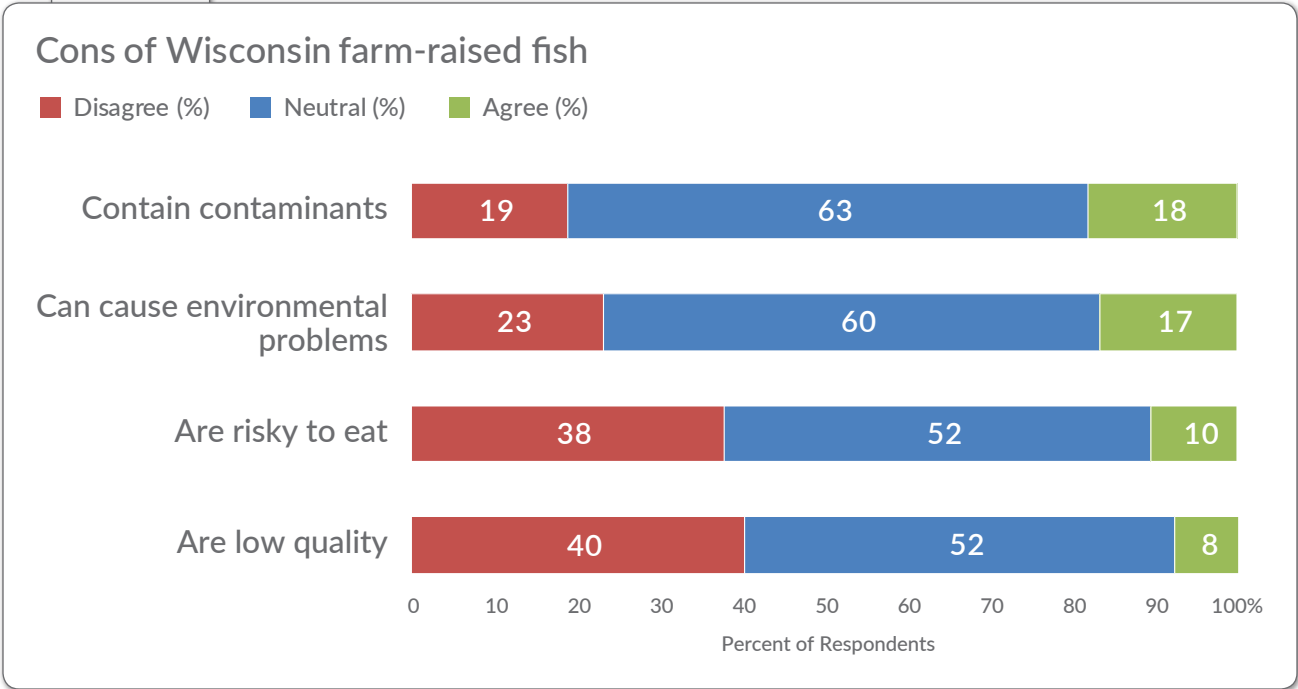
RESPONDENTS SEE FEW POTENTIAL CONCERNS

A number of stakeholders in Wisconsin’s aquaculture community raised concerns over public misperception of Wisconsin farm-raised fish. As a result, we developed a number of questions designed to address possible public concerns (Figure 7).

For each concern assessed, the neutral option was the most commonly chosen response, suggesting that there is significant uncertainty about potential concerns regarding Wisconsin farm-raised fish. This also suggests that the Wisconsin aquaculture industry has an opportunity to proactively respond to public uncertainty by highlighting the work they do to assure that their production methods protect the environment and create products that are safe to eat. Notably, respondents consistently were more likely to disagree with potential concerns about Wisconsin farm-raised fish as compared to those who agreed with those concerns, especially as it relates to food safety and quality issues.

The neutral option was the most commonly chosen response, suggesting that there is significant uncertainty about potential concerns regarding Wisconsin farm-raised fish.

FIGURE 7



The uncertainty surrounding some of the benefits of Wisconsin farm-raised fish provides an opportunity for the aquaculture industry to communicate and educate the public.

RESPONDENTS SEE BENEFITS OF WISCONSIN FARM-RAISED FISH

Along with the desire to address potential public concerns, stakeholders in the aquaculture community were also curious as to whether the public perceived any benefits from Wisconsin farm-raised fish.

Figure 8 shows that, generally, there is broad agreement that Wisconsin farm-raised fish aquaculture supports Wisconsin jobs (68%) and is “good for Wisconsin” (55%). While respondents tended to agree that Wisconsin farm-raised fish were healthy to eat (52%) and safe to eat (48%), they tended to be more neutral about the environmental benefits, with 60% expressing a neutral position about whether Wisconsin farm-raised fish are environmentally sustainable, and 60% expressing a neutral position about whether Wisconsin farm-raised fish can relieve pressure on wild fisheries. Encouragingly for the Wisconsin aquaculture industry, while many were neutral about the potential benefits of Wisconsin farm-raised fish, few specifically disagreed about the potential benefits. The uncertainty surrounding some of the benefits of Wisconsin farm-raised fish provides an opportunity for the aquaculture industry to communicate and educate the public about the benefits that aquaculture brings to the state’s citizens.



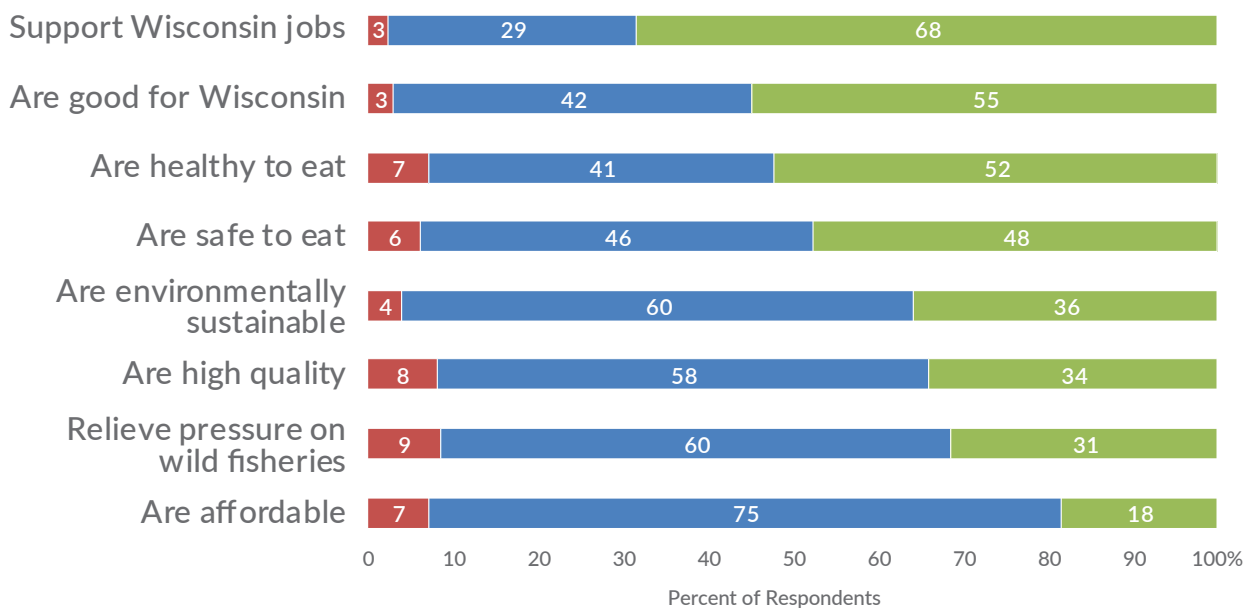
Emma Wiernaa/Wisconsin Sea Grant

Respondents believed farm-raised fish was good for Wisconsin and supported jobs in the state.

FIGURE 8

Pros of Wisconsin farm-raised fish

Disagree (%) Neutral (%) Agree (%)



Trust & Wisconsin Farm-Raised Fish

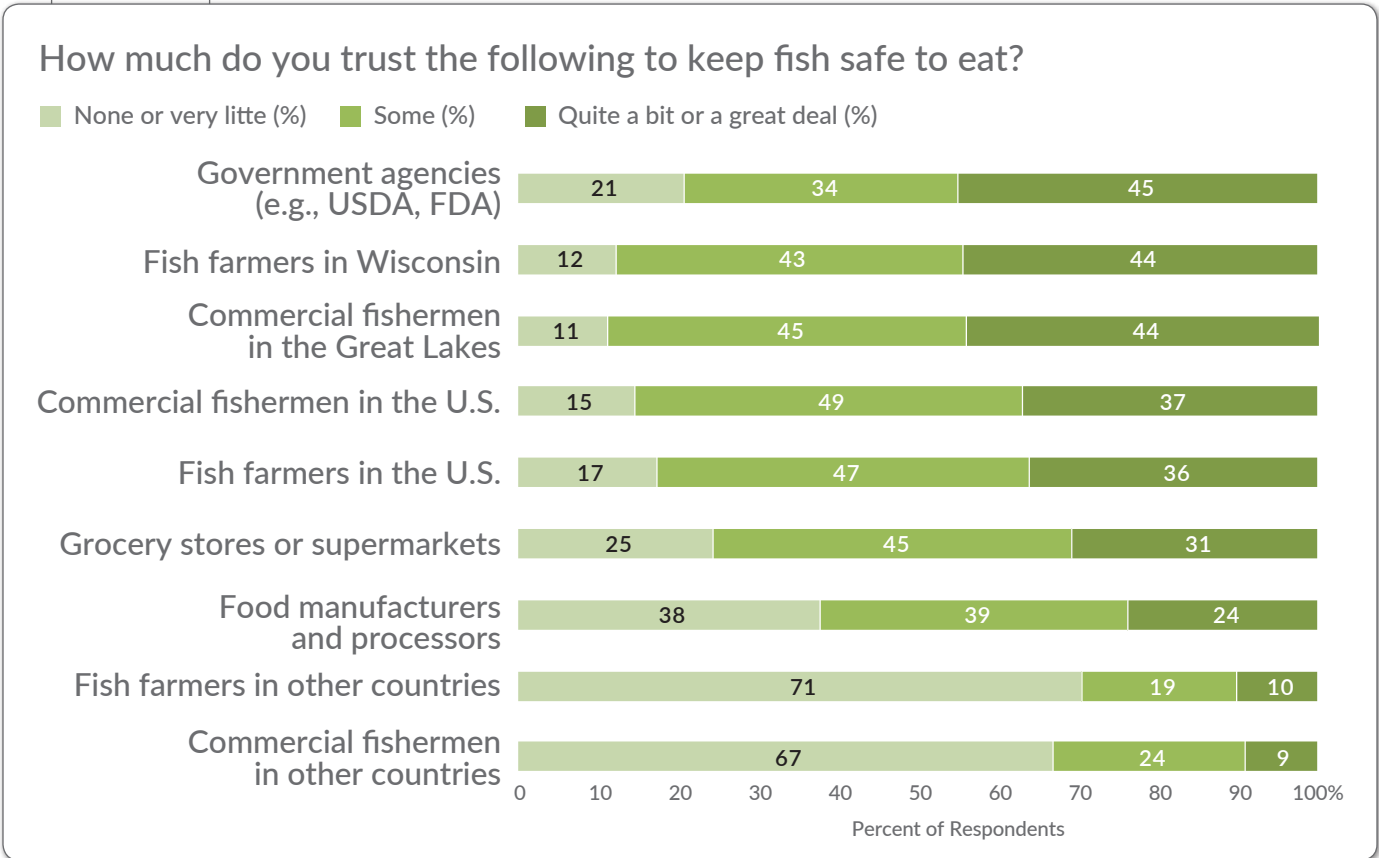
RESPONDENTS EXPRESS GREATER TRUST IN WISCONSIN FISH FARMERS

Fish farmers in Wisconsin are trusted more often than most other groups considered in this survey for keeping fish safe to eat. About 44% of respondents reported that they trust fish farmers in Wisconsin “quite a bit” or “a great deal.” About 45% of respondents reported that they had “quite a bit” or “a great deal” of trust in the government to keep fish safe to eat. About 31% reported the same for grocery stores or supermarkets (Figure 9). In comparison, 36% reported the same for fish farmers in the United States, and only 10% reported the same for fish farmers outside the United States. That number rises to 87% respondents reporting that they trust fish farmers in Wisconsin when the “some” category is added, as compared to 83% for U.S. fish farmers and only 29% for fish farmers outside the United States.

Based on the results of this survey, there may be a rationale for emphasizing fish farmers as important communicators about aquaculture and fish safety. Additionally, from a sales and marketing perspective, the results illustrated in Figure 6 indicate a possible competitive advantage for fish raised in Wisconsin as compared to those raised elsewhere.

We caution against directly promoting a message that Wisconsin farm-raised fish are safe, as this may inadvertently underscore the potential for risk. Instead, we suggest focusing on specific implicit aspects of aquaculture safety, such as the quality and cleanliness of aquaculture facilities, existing levels of trust among consumers, and the extent to which the aquaculture community cares for its customers.

FIGURE 9



Numbers may not add up to exactly 100% due to rounding to the nearest whole number.

Next Steps

This survey serves as an important step toward learning how to more effectively communicate with consumers in Wisconsin about fish farming. We hope future work can add depth to these results to increase understanding about specific messages that will resonate best with Wisconsin consumers. We also note that awareness of aquaculture is generally low, and perceptions among Wisconsinites about risks and benefits of aquaculture may change as it becomes a more prominent issue. Continuing to gather consumer feedback, and encouraging dialogue between consumers, fish farmers, regulators, and researchers is important to helping the industry grow with public support.



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