The controlled cultivation of fish for food is a rapidly expanding industry in the United States. For example, the catfish industry, the largest aquaculture industry in the nation, grew from less than 1,000 acres in production in 1960 to more than 160,000 acres today (Lee, 1979). In Michigan, the number of businesses oriented toward food fish production is growing, with over 60 percent of them starting within the past five years.

American consumption of fish and shellfish has increased from 12.5 pounds per capita in 1980 to 15.5 pounds in 1990, an increase of 25 percent (USDA, various years). In recent years, the low fat levels and high percentage of omega-3 fatty acids in fish have been linked with reduced incidence of heart disease. In addition, fish is high quality protein that also supplies essential vitamins and minerals. Increasing concern among Americans over health and food safety issues has led industry experts to project that annual per capita consumption will reach 20 pounds by the year 2000 (NOAA, 1988). If this occurs, an additional one billion pounds of edible fish and shellfish will be needed annually.

This increase in consumer demand for fish and shellfish products, coupled with the fact that world fisheries stocks are at or nearing maximum sustainable harvest levels (Broussard, 1990), presents an opportunity for aquacultural food fish businesses. Fish and shellfish industry experts uniformly state that aquaculture is the future source of most fish and shellfish products. Yet very little information exists to assist Michigan’s fish growers to take advantage of this opportunity.

This report is intended to provide Michigan food fish growers with useful information and advice to improve the marketing of their products, including a review of the food fish marketing system in Michigan, marketing business fish preferences and some marketing advice for growers.

The majority of the data used to prepare this report were collected in a rapid appraisal of fish marketing businesses in seven parts of Michigan: Lansing, Detroit, Grand Rapids, Battle Creek, Bay City/Saginaw, the northern Lower Peninsula and Marquette. These sites were selected because of their strategic positions around the state. The businesses were either telephoned (brokers and wholesalers) or visited (retail stores and restaurants).
Food fish marketing in Michigan

Food fish are fish produced for sale either to marketing businesses (brokers, wholesalers, retailers and restaurants) or directly to consumers for use as food (Fig. 1). About 50 percent of Michigan fish growers who were interviewed market food fish. The most commonly sold fish species is rainbow trout (approximately 75 percent of the growers), though brook trout, brown trout, catfish and yellow perch are also raised as food fish.

Brokers, wholesalers, retail stores and restaurants differ in their involvement in the marketing of food fish.

Brokers. Brokers don’t actually buy products but represent the products’ manufacturers or producers. A brokerage firm’s owner or the manufacturer’s representative usually decides which products the broker will carry.

Few brokerage firms market any fish products because of low sales volume, the perishability of the product and limited processing facilities. Only a few brokers in Detroit represent any farm-raised fish products, and those that do handle catfish exclusively. Those brokers that do represent farm-raised fish products were not involved in any other marketing activities (wholesaling, retailing or processing).

Wholesalers. Wholesalers usually sell to more than one client, mostly to retail stores and restaurants and, to a smaller degree, to institutions and consumers directly. Most wholesalers are involved in more than one marketing activity, with retailing and processing the most common. Most often the seafood manager decides which fish and shellfish products to carry, but in some cases it is the general manager or owner.

Wholesalers are located throughout Michigan, but those that buy and sell fish and shellfish are concentrated in Detroit and Grand Rapids. Some wholesalers buy and sell farm-raised fish products. Most of the farm-raised products they sell originate in the South (catfish) or in Idaho (rainbow trout).

Retailers. Retail stores buy fish primarily from wholesalers. The main exception is fish retailers in the northern Lower Peninsula and the Upper Peninsula, who buy lake fish from commercial fishers. Retail stores overwhelmingly sell their products to consumers directly. Those that do not exclusively sell to consumers have small wholesale operations that also sell to other retail stores and restaurants.
Retail stores vary in the amount they process fish. Most retail stores will fillet or steak fish, either before or after the sale.

In most of these businesses, the owner or general manager decides which fish and shellfish products to carry. In larger retail chains, the main office generates a list of products from which the store manager or seafood manager selects what he/she wants to purchase. Retail stores that currently sell Michigan farm-raised food fish products are located in the state’s more populous cities—Detroit, Grand Rapids and Lansing. Retail stores in cities near the Great Lakes—Bay City, Saginaw, Cheboygan, Mackinaw City and Marquette—less frequently handle any farm-raised products.

**Restaurants.** In most cases, the owner or manager decides which fish and shellfish products to carry. Two restaurants whose head chefs make purchasing decisions are known locally as premier seafood restaurants. Restaurants overwhelmingly sell their products directly to consumers.

Restaurants that currently sell Michigan farm-raised food fish products are located in the state’s more populous cities—Detroit, Grand Rapids and Lansing. Other niche markets can be found throughout the state. Retail stores in cities near the Great Lakes—Bay City, Saginaw, Cheboygan, Mackinaw City and Marquette—less frequently handle any farm-raised products. Most restaurants do not do much fish processing, either because they do not have enough labor or because they consider their staff unskilled, and unskilled labor results in too much waste.

### What brokers, wholesalers, retailers and restaurants want

**Awareness of aquaculture**

Marketing business operators’ awareness of the U.S. aquaculture industry was high. But their awareness of Michigan aquaculture specifically varied across types of marketing businesses. For example, almost all wholesaler and restaurant operators interviewed were aware that some farmers in Michigan raise fish for food. On the other hand, brokers and retailers in general were not aware of Michigan’s aquaculture industry.

**Experience with aquacultural products**

A majority of all marketing businesses, except brokers, have sold farm-raised fish, primarily catfish and rainbow trout. Some businesses have also sold salmon, tilapia, striped bass, perch, walleye and arctic char. Even though most brokers have never represented any farm-raised fish, all stated that they expect aquaculture to supply these products in the future.

The number of businesses that currently carry farm-raised fish varies by marketing business type. More than half of the wholesalers interviewed currently carry farm-raised fish products, primarily catfish and rainbow trout. Almost all retail stores interviewed currently sell fresh farm-raised fish, including catfish, rainbow trout and salmon. Less than a quarter of these firms interviewed sell frozen farm-raised fish. Retailers also reported that all of these fish originated from outside of Michigan. About a quarter of restaurant operators interviewed currently offer meals with farm-raised fish. These meals are mostly with rainbow trout, but a few restaurants also offer tilapia, salmon and walleye dishes.

### Demand trends and seasonality

**Trends**

Most brokers, wholesalers, retail store operators and restaurant operators have noticed an increase in consumer demand for aquacultural products. Reasons cited for the increase in consumer demand include that consumers want healthier foods, they are becoming more aware of aquacultural products, these products are being made increasingly available by growers, and consumers increasingly demand more variety.

**Seasonality**

The seasonal variability in farm-raised fish sales differed across marketing businesses. Wholesalers and restaurant operators say they
have observed little seasonal variability in consumer demand for farm-raised fish products, unlike demand for wild-caught fish and shellfish products. They report that wild-caught fish and shellfish products tend to have higher sales in winter and during holidays, and lower sales during summer. On the other hand, a majority of retail store operators interviewed noticed a similar change in the level of consumer demand for farm-raised fish products during the year.

Product preferences

Fresh or frozen

Most marketing business operators interviewed stated that their customers want fish that are sold fresh, or meals prepared from fresh fish. These businesses purchase fresh fish because their customers perceive them as having better taste and texture. These businesses therefore market their fish products on the basis of freshness.

Size

The preferred sizes of farm-raised fish varied across marketing business types. Brokers want uniform-sized fish that range from 4 to 12 ounces per portion. Wholesalers are less concerned about fish size, unless they are selling to a restaurant that is concerned with portion control. About half of the retail stores want a variety of sizes in fish they receive to give their customers more choice. The other retail stores want uniform-sized fish to simplify the purchasing decisions of consumers, as well as for display purposes. Restaurants had the strictest size requirements, including a 3- to 6-ounce portion for lunches and 8- to 10-ounce portion for dinners, depending on species. Uniformity is very important for restaurants because of their need for portion control.

Species

Most marketing business operators, except brokers, want growers to provide them with a more diversified line of fish species. This recommendation was mentioned by all marketing business operators in response to this question: "What can growers do to better meet your needs?" The fish species most often mentioned that they would also like to purchase for their customers are yellow perch, walleye and bluegills.

Form of processing

Most marketing business operators stated that they would like to receive most of the fish they purchase as fillets and, to a lesser degree, as fish steaks. Reasons cited include limited processing facilities of their own, a lack of skilled labor (too much waste) and the high cost of labor. Demand exists for a small amount of fish to be received whole or gutted, either for a specific market segment or for businesses that do their own portion control.

Timing of delivery and availability

Businesses want fish delivered on a schedule that is consistent with their customers' purchasing pattern. They want the grower or other marketing business to maintain a regular schedule of contact and to be flexible about delivery schedules.

All business operators interviewed want the fish they buy to be available year round. Not all were willing to purchase fish that are available only part of the year. Brokers, because of warehouse space costs and limitations, stated they would carry a product only if it had guaranteed year-round availability. About half of the wholesalers interviewed stated their willingness to purchase fish with seasonal availability, but only if the product was of high quality and if it had a fair price. Those wholesalers that do not want seasonal products stated that it is because they want to maintain good working relations with their major suppliers. Most retail store and restaurant operators stated they would purchase seasonally available products to run as a special only if the quality was high and it had a good price, to maintain variety for their customers or to try a new species.
What growers can do

Marketing business operators were asked what growers could do to better serve their needs. Their top eight suggestions were:

1) Maintain a consistent product. Operators of all business types stated that their reputations were based on consumer perception that they sell consistently high-quality products. They referred specifically to consistency in freshness, taste, texture, appearance and size uniformity.

2) Ask a reasonable price. Most businesses have a fixed rate by which they mark up the products they buy. They are, therefore, very concerned about the price they pay for farm-raised fish products.

3) Maintain a consistent delivery schedule. All the interviewees emphasized the importance of having a product available all year and delivered when they need it to meet their customers' needs.

4) Provide more variety in fish products. All marketing business operators mentioned their desire for a more diversified choice of farm-raised products, including (in order) yellow perch, walleye, bluegills and striped bass.

5) Improve communication with marketing businesses. Growers should work out with these businesses how to best serve their needs. The key is to be flexible and work around the needs of their clients.

6) Educate customers. All marketing business operators mentioned that consumers need to be educated about how to prepare fish and said that growers should play an active role in this.

7) Assist in product promotion. Marketing business operators also stated that growers should assist them in promoting farm-raised fish to increase consumer awareness of the industry and its products.

8) Other suggestions: It was also suggested that growers form marketing cooperatives, sell fish in smaller lots and actively lobby for a seafood inspection program to ensure consistent product quality.

Summary

The U.S. aquacultural industry, including Michigan growers, has the potential to supply farm-raised fish products to meet the expanding demand for fish and shellfish products. Aquacultural products can address consumer demands for convenience, quality, variety and value. Growers can improve their marketing through a better understanding of what marketing businesses want, mostly because these businesses have a greater knowledge of consumer behavior. Specifically, growers need to maintain a consistent product, ask a reasonable price, maintain a consistent delivery schedule, provide more variety, improve their communication with marketing businesses, help educate consumers and assist in product promotion.
Sources of Information

Extension bulletins
To obtain any of these bulletins, contact your county Extension office or the Michigan Cooperative Extension Service Bulletin Office (10B Agriculture Hall, Michigan State University, E. Lansing, MI 48824).

Fisheries
E-1179 Great Lakes Fish Preparation
E-1180 Freshwater Fish Preservation
E-1323 Commercial Freezing of Freshwater fish
E-1775 Making Plans for Commercial Fish Culture
E-1776 My Bluegills are Stunted, Help!
E-2028 Eating Great Lakes Fish
E-2016 Testing Contaminants—A Guide for Home and Farm
E-2109 Promoting Fee-fishing Operations as Tourist Attractions
E-2410 What Consumers Want: Advice for Food Fish Growers

Other related readings


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