



Making Wise Choices When Direct Marketing Your Aquaculture Products

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Introduction

Producers who are ready to harvest their first crop of fish often ask, "Where will I sell them?" It is surprising how many producers ask this question so late in the production cycle.

To avoid certain failure of an aquaculture enterprise, producers must determine the marketplace as an initial step. Midwest farmers in traditional farming enterprises, such as corn, soybeans, beef, swine, and poultry use well-established markets that have been highly refined over the last few decades. For example, go to any rural town, regardless of its size, and you'll find a grain elevator or stockyard.

Aquaculture, unlike other agriculture enterprises, is in its infancy, especially in the midwest. As a result large-scale processing plants in the Midwest, solely for farm raised products are nonexistent. Fish and shellfish

farmers are forced to use alternative, poorly established, markets for their products.

Alternative markets have advantages and disadvantages. The main advantage in alternative markets is that producers become wholesalers, and in some cases, retailers. Consequently, producers have more control over the prices they set for their products, and they retain some portion of the profit, that would otherwise have gone to the "middleman." The main disadvantage is that considerable time must be spent analyzing and developing their markets, and in some cases, processing their product.

Many beginning aquaculturists believe that with the huge markets for fish in Chicago, St. Louis, Louisville and Indianapolis selling their products will not be difficult. But even though massive quantities of fish are marketed in those areas, such markets generally serve high-volume producers. New farmers producing relatively small quantities of food species should develop markets within a fifty-mile radius of their farm

This bulletin discusses general marketing concepts as applied to food fish and presents ideas for selling aquaculture products locally; Food fish production offers the greatest potential for aquaculture expansion in the Midwest: therefore most of this bulletin specifically address the process of marketing food fish. Many of the same marketing principles apply to other types of aquaculture products such as sportfish, bait fish, and ornamental fish

The producer of any aquaculture product should receive from this bulletin assistance in answering the following five questions.

1. Who will purchase my product?
2. Where do I have to deliver the product?
3. When do I have to deliver?
4. Upon what criteria will the product be evaluated?
5. What price will I pay I be paid and how is it determined

Know Your Competition

If you are considering aquaculture as a business because you think there is limited competition, then you should reconsider. The seafood industry is well-established and very competitive. It will become more competitive in the near future. Midwestern producers have to compete with wild-caught and farm-raised products of both domestic and foreign origin. By understanding current sources of seafood, the new producer will be more knowledgeable and better able to build a production and marketing program responsive to market opportunities. One which is able to endure adverse price fluctuations.

Native Wild

Competition from commercial fisheries for yellow perch, walleye, and crawfish exists in states around the Great Lakes region. Yields from each of these fisheries are being reduced due to overfishing. Overfishing of these species is allowing farm-raised yellow perch to compete with commercially caught yellow perch. Wild-caught minnows from Minnesota, particularly fathead minnows, also compete with farm-raised bait fish.

Ocean-caught fish such as cod, pollock, perch, and salmon account for a significant portion of U.S. sea-food consumption. They are often cheaper or more reliable than those from lake fisheries or fish farms. Once again, overfishing is resulting in more opportunities for farm-raised products.

Foreign Wild

Competing with seafood imports poses the greatest challenge to the aquaculture industry. In 1990, total edible seafood imports (mostly wild-caught) totaled \$5.2 billion. (Of the 15.5 pounds of seafood consumed annually per person in 1990, less than 20 percent was farm-raised.) Competition between farm-raised species and foreign-wild is greatest for catfish from South America and walleye from Canada. Farmers considering walleye production should also realize that Canada has a well-established commercial walleye fishing industry. They have hundreds of lakes which can be opened to fishing in order to maintain the country's market share by "flooding" the market. Due to this situation, prices could be reduced to the point that marginal farmers who cannot compete with the wild imports would be forced out of business.

Farmed Domestic

Midwest farmers raising food species such as channel catfish and rainbow trout must overcome competition from the large industries in southern and western states which have been producing these species for several decades. Even though pond-side prices of these two species will be lower than for locally grown products, higher shipping costs can make midwestern products more competitive. Shipping costs usually adds 10-20 cents per pound to the wholesale price.

Established aquaculture industries will force small-scale producers in the Midwest to rely more heavily on direct marketing until significant infrastructure is

established to provide Midwest farmers competitive feed and fingerling prices. In the meantime, small-scale producers rely heavily on the premiums that maybe paid for locally grown fish.

Farmed International

The competition from species farmed internationally is greatest for salmon from Europe, and increasingly from Peru and Chile. Tilapia, another product being farmed internationally in large numbers, could be imported cheaply into the United States. Organizations that are currently working to establish markets for tilapia in the U.S. maybe benefiting South American and Asian producers who could take advantage of the growing U.S. market for tilapia.

Selecting a Species

When deciding which species of fish or shellfish to farm, keep three things in mind.

1. Choose a marketable species. A good example is common carp. Common carp is easy to farm and is a candidate species if you have a strong ethnic market in your area. Otherwise, it is advisable to consider other more widely accepted species. Of the 60 or so candidate species for food fish aquaculture, only channel catfish and rainbow trout have established industries in the U.S. Other species such as Atlantic salmon, Coho salmon, crawfish, hybrid striped bass, tilapia, yellow perch and various sunfishes offer considerable potential in the Midwest.

2. Attempting to farm species with incomplete production information or production peculiarities is a very risky venture. Although species such as walleye, shrimp, and lobster have wide public appeal and are very marketable in the Midwest, each have production problems. For example, walleye producers recognize that fingerling survival is low due to cannibalistic behavior. Furthermore, most walleye are produced by state fisheries agencies and released as fingerlings. Few have been grown to marketable food size using commercial diets. This has resulted in little available nutritional information for market-size walleye. Faced with these production obstacles, a producer could easily fail to reach production goals. In any new business, and especially in aquaculture, cumulative short-term setbacks could lead to loss of farm investment.

Tilapia maybe a better choice because they are extremely hardy. They tolerate poor water quality and are easy to spawn. The only production drawback is their intolerance to low temperatures. A second, more serious problem with tilapia is in marketing. Because tilapia grown in the U.S. are non-native, the consumer does not recognize them as being a high-quality food fish. If adequate marketing research and promotion is provided, then tilapia offers great potential.

3. Finally, variety is extremely important to small-scale producers. Many marketing outlets prefer buying small quantities of more than one species. Production of more than one species may offer a competitive advantage over single species operations. If

production of a variety of species is not feasible, then pooling your resources with other producers will allow you to offer a variety of species.

The Four P's in Marketing

Product price, promotion, and place, classical points in traditional marketing, also apply to marketing aquaculture products. After potential producers determine their competition and choose the "best" species for their area, serious planning and research needs should be conducted on each point.

Product

Market size and product form are two important aspects of an aquaculture product. Different customers often have different ideas on what is the "best" size or form. Market size varies according to species and product form. Channel catfish are usually sold after reaching 1.25 to 1.5 pounds. At this size, one fish will yield two 4.5 oz. fillets. Yellow perch or bluegill are examples of fish served at a smaller size. Market size for either of these species may range from 0.25 to 1.0 pound.

The following is a discussion of definitions and specific information concerning various product forms. Your local and/or state department of health officials should be contacted to determine permit requirements before any type of processing is undertaken.

Live fish are those sold to live haulers who stock fee-fishing lakes or farm ponds or to consumers who prefer alive product.

Fish in the round are put on ice and sold just as they come out of the water.

Drawn defines fish with entrails removed.

Dressed fish are sold completely cleaned but with the head intact.

Headed and gutted fish means the head and entrails are removed. Fins and tails may be removed or left intact. Species such as channel catfish have the skin removed. For trout and other salmonids, the skin and scales are left intact, but gills are removed.

Chunks are cross sections of large dressed fish having backbone as their only bone. They are similar to beef or pork roasts.

Steaks are cross sections of dressed fish around one-inch thick. Larger catfish (2 lbs. or more) are usually sold as steaks.

Nuggets come from the belly flap after it is cut free from the fillet. Channel catfish nuggets are becoming more common in supermarkets. Part of this popularity may be a result of their lower cost.

Fillet are boneless pieces of fish obtained either as flank or butterflies.

Flank fillets are the two sides of the fish cut away from the backbone. Usually, they have no bones or waste.

Butterfly fillets are the two flank fillets held together by the belly flap. (Trout or yellow perch are examples of fish which are sold as butterfly fillets).

Fillet size will depend on an individual preference. Usually, fillets are cut to prescribed proportions which yield a single serving (6-8 oz.) from one or two fillets. As a rule, whole fish need to average around 1.25 to 1.5 pounds depending on the dress-out percentage of each species. For example, 1.5 pound channel catfish, hybrid striped bass, tilapia, or trout will have a fillet dress-out percentage from 35-40 percent.

Deboned fish means the rib bones and backbones are removed, but the body is left intact. Breaded fish, canned fish, fish sticks, and fish strips are value-added products and were not defined because all involve a high degree of processing.

Smoked fish is a value-added processing method which is becoming more popular, especially during holidays. Two smoking methods (hot and cold smoking) have been commonly used. Hot smoking is more like flavorful cooking of brined fish, and never produces enough drying to ensure safekeeping. Hot smoking involves temperatures of 250° to 300°F for a period of 4-5 hours. Cold smoking, on the other hand, preserves fish by drying. Cold smoking times may be as short as 24 hours or as long as three weeks at temperatures never exceeding 80°F.

Regardless of the product form you choose to offer, it is very important to establish and maintain a reputation as a reliable supplier. Be sure to gain an accurate understanding of each customer's needs regarding both volume and frequency of purchases before you deliver the first fish.

Remember, a customer is taking more of a risk when depending on you for fish supplies rather than relying on a local fish wholesaler or other established business. You need to take extra care to be reliable. This can be a major problem area for new or small-scale producers. One approach could be to join with other producers in forming a marketing cooperative.

Price

How much do you charge for your product? Real life implementation of this seemingly simple calculation is not so easy. Pricing a product is an agonizing, lengthy decision, and will likely need periodic adjustments to reflect new market realities.

So where do you start in thinking about price? Well, the lowest price you would ever want to charge is the price per pound that just equals your costs per pound, including both fixed and variable costs. The highest price would be what you could talk one or two people at most into paying for your fish. Your base price needs to be somewhere in between. Take into consideration such factors as:

- How are you going to position your product in the food fish market? (Is it a Chevy Chevette or a Cadillac Eldorado?)
- Who are your customers? (Are they individual consumers, upscale restaurants, or food wholesalers?)
- What species and prices are competitors offering?
- What are the quality perceptions, if any, associated with your chosen species?

As you may have figured out, pricing is not an independent decision. Many systems for determining the price of your product are used by marketers. From a small-scale retail marketing standpoint, only the most relevant systems will be discussed.

Cost-plus pricing simply adds a constant percentage of profit above the cost of producing a product.

Example One:

Product cost-\$1 per lb; 20% of gross sales are to be profit:

$$\text{price} = \frac{\text{unit cost per lb.}}{1 - \text{percentage}} = \frac{\$1.00}{1 - .20} = \$1.25 \text{ per lbs.}$$

The problem with cost-plus pricing is that it is difficult to accurately assess fixed and variable costs. This pricing system works fine in the absence of severe competition. But, if alternatives to your fish exist, you could price yourself out of a market with higher than average production costs or fail to obtain additional profits with lower than average costs.

Return on investment is similar to cost-plus pricing. It begins with an estimate of your annualized investment in your fish enterprise. Add on the percentage return you want to achieve and divide this new total by your annual production or expected sales, or the lower amount. Thus if you sell all you expect at the calculated price you will earn your target profit.

Example Two:

Annualized investment - \$10,000; desire 20% return.

$$\begin{aligned} \text{Price} &= \frac{\text{A.I.} \times (1 + \text{percentage})}{\text{pounds produced or sold}} \\ &= \frac{\$10,000 \times (1 + 0.20)}{7,500} \\ &= \$1.60 \text{ per lb.} \end{aligned}$$

Keep in mind that the same drawbacks to cost-plus pricing apply here.

Competitive pricing is probably the easiest, and in retail marketing, the most common form of pricing. In this system, producers gather market information on the prices and quantities of competing products and then price their products accordingly.

Penetration pricing is offering a product at a relatively low price in order to gain wide acceptance in the marketplace quickly. This pricing method is often used for unfamiliar species such as tilapia.

Skimming is the opposite of penetration pricing. It involves the introduction of a product at a relatively higher price for more affluent, quality-conscious customers. Then, as the market becomes saturated, the price is gradually lowered.

Discount pricing offers customers a reduction from advertised prices for specific reasons. For example, a fish farm advertises in the local newspaper that prices will be 25 percent cheaper if they bring the advertisement from the paper. Another example would be when a producer, who advertises on local radio, offers customers who mention the radio announcement a preset discount.

Loss-leader pricing is the offering of a portion of the product at a reduced price for a limited time. The goal is to attract more customers to the producer's place of business so that they might also buy non-discounted products as well. This pricing method is seen in farmers markets and supermarkets to introduce a new product or to create consumer excitement.

Psychological pricing involves establishing prices that look better or convey a certain message to the buyer. For example, instead of charging \$3.00 per pound, the producer charges \$2.99 per pound. This will make the product appear to be more of a bargain. Or, instead of charging a price close to production costs, the producer charges in a higher price range that buyers associate with higher quality or more desirable fish species.

Perceived-value pricing is positioning and promoting a product on non-price factors such as quality, healthfulness (clean water, no contaminants), or prestige. Then the producer must decide on a price that reflects this perceived value. This would be a good strategy for farm-raised versus wild-caught fish or any species you could pitch as having non-price attributes.

Product line pricing, in the case of food fish, means offering a variety of species and/or product forms. You would price the various products based more on targeting certain customers with certain products than on production costs.

Promotion

Producers promote their products to create customers. The best way to attract new customers is to develop excellent promotion strategies. Regardless of the advertising method chosen, producers should expect to spend a portion of time promoting the product(s). There are two general methods of promoting aquaculture products, generic and personal promotions.

Generic promotion is commonly performed by large marketing groups such the Catfish Institute. Because such groups are involved in generic advertising of specific species and do not focus on products from individual farms, we will discuss personal promotions.

What are the methods available to a small-scale retail marketer? One of the most common promotional methods is word of mouth. You convince a friend to buy from you. If satisfied with the quality and or price of your product the buyer will pass along word of your operation to others. The multiplying effect can be tremendous, but often word of mouth is not sufficient. Other common channels for advertising include: radio, newspaper ads, magazines, handbills, flyers, and posters.

Promotion is usually aimed at the consumer. The promotional message must be clear, to the point and focused. A small ad under farm produce in the classified section of your hometown newspaper might read, "farm-raised striped bass raised indoors free of contaminants; they are highly nutritious and priced to sell State Road 38 and 900 East in Tipp City, Sat. 8-12."

The form of promotion you choose as a new producer will depend on the scale of your operation,

available resources, availability of your product and geographic location of your farm. In addition to public advertisement, you should consider some on-site product promotion, both visual and verbal. This should accent the non price attributes of your product which will convince the consumer to be a repeat customer.

Place

There are many places and many markets for farmers to sell their food fish products directly, both at the retail and wholesale levels. A number of considerations must be taken into account when deciding what type of market, and specific business or locations, to market your fish (e.g., species, form, location, ability to process.

Farmers may sell their product directly to the consumer (retailing) or to other businesses which then sell to the consumer (wholesaling). The promotional principles discussed earlier usually apply to retailing directly to the consumer since most establishments where you may wholesale have their own forms of promotions.

Direct Retail Sales to consumers area good place to start if supplies are small or availability uncertain.

Farm side sales are appropriate if the farm is located within a short distance from urban areas. Specific dates can be reserved to make transactions. For example, Saturday morning from 8:00 am. until noon. Equipment such as change, accurate scales, ice, and transport bags, if not essential, will certainly make the purchases more convenient for the consumer.

Farmers markets are widely utilized in southern states by fish producers. Here in the Midwest the concept of selling fish at existing farmers markets is new. As a result, the producer usually has to convince the manager of the farmers market that the product will be live and safe for human consumption. Hauling tanks are positioned to create a stand or booth similar to other forms of produce. Equipment needs will be similar to farm side sales.

Roadside stands are often used to capture a percentage of the traffic flow along busy highways. Several states including Illinois and Indiana offer directories of roadside stands. Obviously location is important in alerting upcoming traffic to the opportunity they are approaching. Offering fresh produce either yourself or in conjunction with another farmer may increase your flow of customers. Equipment needs are similar to those for farmers markets.

Direct Wholesaling your fish to other wholesalers or retailers may be an excellent route to market your fish depending on the species and your supply situation. Some wholesale customers such as restaurants have a strong preference for steady, year-round supplies, but even this generalization does not hold true in every individual case,

It would probably be worth your while to set up an appointment with the manager of every restaurant, grocery store, and food wholesaler within a 50-mile radius of your production site. Find out beforehand, if possible, individual preferences for species, product form,

size, volume, availability, and prices. Have a strong sales pitch prepared and a sample of your product. Pricing in the wholesale market will likely be based on individual negotiation so be sure to be armed with a negotiation strategy. Some managers will immediately be interested, others won't. For those who are interested, the accurate, sensitive positioning of your product to fit their individual needs and your ability to convince them of your product's attributes could gain you a customer on a trial basis. Once that customer is gained, you must be extremely diligent to be a reliable supplier of the size, form, quantity, and quality of product that the customer expects. You must work hard to earn a good reputation and to maintain it.

Live haulers can be used if the producer does not own a transport tank. Live haulers will sell fish to fee fishing operations, farm pond operators, or processing plants. Selling in this manner would not require any investment, on your part, of time or equipment to process, transport, or sell your fish.

Restaurants can be a good place to start with smaller quantities of fish because they are usually willing to try new species (and suppliers) to fill their "catch of the day" specials or other such short-term menu items. The typical restaurant will take 10 to 80 pounds of a fish species per week (Oha, 1991) depending on product form (another advantage of producing multiple species and/or product forms). For regular menu items, restaurant managers tend to prefer weekly deliveries over monthly (Riepe, 1991).

When deciding which businesses to contact, remember that many businesses serving food are not necessarily identified as "restaurants." Don't overlook the country club, VFW, or corner pub. You might be just the right type of supplier or have just the right fish they want.

Once you successfully gain a restaurant customer, you should continually educate your client. How many times have you asked your waiter, when dining out, about the seafood item on special and were given a "song and dance" because he or she knew nothing about it? Educating the head of the serving staff and providing a short brochure or other printed information may be a key to continued success.

Supermarkets offer one of the best places to sell larger volumes of food fish products. It is quite likely that unless a supermarket is locally owned and operated that you would have to supply all or many of the stores in a chain. This may be a good situation for some producers, but others may have difficulty with the volume or other requirements. But here again, it is probably best to research and interview to determine the compatibility of the producer and the potential customers.

Staff education is likely to also be important in this case also in keeping customers. Staff may need information not only about how the fish are produced and their quality and such, but also about how to prepare them. Since the average consumer simply puts "fish" on the shopping list, a knowledgeable and enthusiastic staff member will be extremely valuable in marketing your product.

Specialty stores include ethnic groceries and health food stores. Fish is a more important part of people's diets in some cultures than in other cultures. Health food stores may be willing to try your product because the perceived quality of farm-raised products is usually higher than wild-caught. Ethnic markets usually are more willing to purchase whole fish.

Regulations

Regulations for marketing aquaculture products locally will focus either on permits allowing retail marketing at the farm, farmers markets, roadside stands, or the setup and use of small-settle processing facilities. In either case you should contact your local health department. The accreditation procedure for small-scale processing plants will involve assurances by the processor that the equipment can be disinfected and that the product can be properly refrigerated.

Inspection

Mandatory seafood inspection will soon occur. The United States Department of Agriculture (USDA), National Marine Fisheries Service (NMFS), and the Food and Drug Administration (FDA) have been competing for the right to perform the seafood inspection. As the inspection procedure is currently proposed, FDA will share the inspection program with NMFS and will use the Hazard Analysis Critical Control Point (HACCP) method for inspecting seafood. This method involves random inspections at critical points along the processing line instead of inspecting every fish.

Summary

In this bulletin general background information has been provided on direct retail marketing strategies. Marketing is as important, and in some respects more important, than actual production. Assuming that all you have to do is produce the fish and people will buy them will lead to certain failure of an aquaculture enterprise.

New farmers raising relatively small quantities of food species should develop their markets with the strategy that they will sell within a fifty-mile radius of their farm.

The seafood industry is very competitive and will become even more competitive in the near future. Midwestern producers have to compete with wild-caught and farm-raised products from domestic and foreign origin.

When deciding which species of fish or shellfish to farm, keep three things in mind. First, choose a species which is recognized as being marketable. Second, attempting to farm species having incomplete production information or production peculiarities is a very risky venture. Third, variety of species may increase your sales.

Product, price, promotion, and place are classical points in traditional marketing and will similarly apply to aquaculture products. The product refers to the degree of processing undergone by the fish or shellfish. Producers promote their products to create customers. The place or location chosen to sell your product will depend on the location of your farm and the method of advertising you chose. Three places to direct market your food fish products (farmside, roadside stands, and farmers markets) were discussed. Four places (live haulers, restaurants, supermarkets, and specialty stores) to wholesale your food fish product were described.

Regulations for marketing aquaculture products locally will either focus on permits to retail market at the farm, farmers markets, roadside stands, or setup and use of small settle processing facilities. As the inspection procedure currently is proposed, FDA and the NMFS will be the lead agencies and will use the Hazard Analysis Critical Control Point (HACCP) for inspecting seafood.

Suggested Readings

Avault James W. 1991. "Marketing in aquaculture— product, price, promotion and place." *Aquaculture Magazine*, Ashville, NC. May/June. pp. 68-75.

Avault, James W. 1991. "Analyzing the market and your market position." *Aquaculture Magazine*, Ashville, NC. July/August: pp. 56-75,

Capps, Oral and Johannes Adrianus Lambregts. 1990. *Analysis of a local retail market for catfish and crawfish*. Department of Agriculture Economics, Texas A&M University, College station, SRAC No.512:36pp.

Gilbert, Ronnie. 1989. *Small-scale marketing of aquaculture products*. University of Georgia Athens. SRAC No. 350:4 pp.

Harvey, David. September, 1990. *Aquaculture situation and outlook Report*. USDA. Rockville, MD. 42 pp.

Oha, Paul. 1991. New York "Co-op betting on new closed system, restaurant survey." *Water Farming Journal*, VO1.6, No. 8. August: pp. 13-14.

Riepe, Jean Rosscup and Marshall A. Martin. Unpublished, *Finfish purchasing behavior and perception of farm-raised species: Indiana restaurant survey*. Department of Agriculture Economics, Purdue University, West Lafayette, In.

Schrade, Lee F. and Jean Rosscup Riepe. 1990. "Marketing aquaculture products." *Proceedings: Regional Workshop on Commercial Aquaculture Using Water Reuse Systems*. Nov. 2-3. Illinois-Indiana Sea Grant Program. Department of Animal Science, Purdue University, West Lafayette, IN: pp. 44-48.

Seafood Leader. Bimonthly seafood marketing magazine. 1115 NW 46th St. Seattle, WA 98107-9977.

Stutzman, Curtis. *Marketing seafood products*. Kirkwood Rural Development Center. Kirkwood Community College. Cedar Rapids, IA: 6 pp.

