Cost of processing fish at a small scale

Catfish processing in Kentucky for commercial sales must be done in HACCP-approved and Kentucky Department of Public Health-inspected facilities. There are several small-scale fish processing facilities in Kentucky where most of the work is done by hand, without any mechanized help.

While building a processing facility is usually expensive, farmers have found less-costly alternatives such as converting an existing room into a fish processing area. A processing room has specific requirements, which are outlined in this manual: www.ksuaquaculture.org/Pubs.htm Process & Market.pdf. A schematic diagram of a fish processing area can be found in the following publication: http://www.ksuaquaculture.org/Pubs.htm/AquaNews%20web%20W-07.pdf.

Since processing operations are costly, they add to the cost of the final product, e.g., fish fillets. The following publication lists the costs of processing catfish at $0.71 per pound (Small-Scale, On-Farm Fish Processing, Southern Regional Aquaculture Center Publication No. 442).

This publication reported that the total fillet weight per fish (aka fillet dress-out) was 53% of the whole fish weight. If the cost of producing a food-sized catfish was $1.20 per pound, the cost of producing the fillets was ($1.20 ÷ 53%) + $0.71 = $2.97 per pound. Therefore, catfish fillets must be sold at prices higher than $2.97 per pound for producers and processors to realize a profit.

References

1. Catfish production manual: Dr. Terefi Tsegaye, Associate VP, University. Extension Program at Kentucky State University. For more information, contact: Dr. Sid Dasgupta and Mr. Richard Bryant. The Acquiring Farmland Fact Sheet is part of a series prepared by the Cooperative Extension Program at Kentucky State University. Dr. Terefi Tsegaye, Associate VP, Agricultural Extension and Land Grant Programs, and Dean.

Basic catfish farming concepts

Catfish farming is a viable option for small farmers and is a good marketing opportunity for those already in the catfish farming business. Catfish are easy to farm and are a good source of income for many farmers who wish to enter the business. Catfish farming is a viable option for small farmers and is a good marketing opportunity for those already in the catfish farming business. Catfish are easy to farm and are a good source of income for many farmers who wish to enter the business.

Catfish specialists near you

Beginning farmers would benefit from consulting with catfish specialists before starting production. Kentucky State University catfish specialists include Mr. F. Byrne (production), W. Wurts (production), Dr. R. Durborow (production, disease, and water quality), and Dr. S. Dasgupta (economics and marketing); their contact information are at www.ksuaquaculture.org. The Southern Regional Aquaculture Center, a USDA-funded organization, has a website with many fact sheets about catfish production at: https://srac.tamu.edu/index.cfm/CategoryDetails? whichcategory=3.

Mississippi, Arkansas, Kentucky & Alabama have Land Grant institutions with specialists who will assist beginning farmers.

Educational programs of the Cooperative Extension Program serve all people regardless of race, color, national origin, sex, religion, age disability, political beliefs, marital or familial status. This fact sheet was partially funded by the United States Department of Agriculture, National Institute of Food and Agriculture, Beginning Farmers’ and Ranchers’ Development Program. Grant Number 2012-49400-19680.
Acceptance of catfish fillets by farmers’ market patrons

Farmers’ markets are an obvious outlet for locally-grown fish. However, there are questions about how well catfish will be accepted in Kentucky’s farmers’ markets.

To address these issues, a Kentucky farmers’ market survey was conducted in 2012 that obtained information about the perceptions of patrons towards fresh, locally-produced catfish fillets. The survey elicited data from 71 customers, who had the opportunity to taste the fillets and then respond to questions asked by an interviewer.

The data showed that the farmers’ market patrons were familiar with catfish fillets: more than half of the respondents cooked fish at home either weekly or twice monthly, 39 percent cooked catfish at home, and another 24 percent ate catfish in restaurants. The flavor of locally-grown catfish was well received: a total of 59 percent of respondents said that they liked the catfish.

The survey also obtained information about how much farmers’ market patrons were willing to pay (WTP) for catfish fillets. Most respondents were willing to pay between $6 and $8 per pound, the average willingness to pay was $7.14 per pound. Therefore, farmers’ market patrons were willing to pay a modest premium over the retail price of fillets.

Perceptions of catfish fillets by CSA patrons

CSAs (community-supported agriculture) are an increasingly common form of local food marketing where individuals can prepay for a supply of fresh produce during a growing season by a producer or a group of producers. While most CSAs are known for fresh vegetables, many are diversifying into sales of animal protein such as eggs, poultry, beef, and sheep. Some CSA owners expressed a willingness to diversify into offering fish fillets to their customers. This motivated a marketing study where we elicited CSA patrons’ perceptions of locally-grown catfish fillets.

Four Kentucky-based CSAs participated in this project and their patrons were provided with a pound of fresh locally-grown catfish fillets, with an easy-to-follow recipe, for their convenience. These patrons were asked to cook and taste the fillets and answer a questionnaire that was also given to them. Useful data were obtained from 80 patrons.

The survey data showed that 93 percent of the respondents liked eating freshwater fish. Seventy-three percent of respondents wanted catfish fillets to be a regular item at their CSA.

The average WTP was $6/pound, with 55 percent wanting to pay between $6–$8 per pound. This showed that the average WTP was comparable to the retail price of catfish fillets. Only 15 percent of respondents did not want to buy catfish.

Selling whole catfish to Hispanic consumers in Kentucky

The Hispanic population in Kentucky has been expanding rapidly. In 2000 it was 59,939 (1.39% of Kentucky population); in 2013 the estimated Hispanic population was 145,044 (3.30% of Kentucky population) (U.S. Census Bureau). If Hispanic consumers are willing to buy food directly from farms, they could be an important direct marketing resource for Kentucky’s producers.

Anecdotal evidence from poultry and small ruminant farmers suggested that Hispanic consumers purchase live animals for home consumption. This inspired a project that investigated their willingness to buy whole (i.e., unprocessed) catfish on ice.

Hispanic grocery stores in Lexington and Shelbyville, Kentucky, were recruited to feature the sale of unprocessed catfish on ice. These two cities were selected due to their large Hispanic population proportion. At each store, Hispanic customers were engaged in a simple bidding process to elicit their willingness to pay for the fish. If they bid “high enough”, they were allowed to buy catfish. These bids were recorded and the customers were surveyed to investigate their perception of catfish.

The survey of Hispanic consumers resulted in an useful sample size of 73. Of these respondents 42percent were female, 77 percent were less than 40 years old, 52 percent had agricultural or factory work as livelihood, 25 percent were from Mexico and 39 percent were from Peru.

Perception of fresh, whole catfish among Hispanic consumers

The survey data revealed that Hispanic consumers cooked fish frequently at home. The survey revealed that 75 percent of respondents either cooked fish weekly or twice monthly.

The survey indicated that 81 percent of respondents preferred whole catfish, 53 percent preferred fresh gutted catfish, and an additional 25 percent wanted live catfish. Only 22% of the respondents preferred fillets.

The catfish price bidding data provided measures of the value that Hispanic consumer placed on the whole fish. Most Hispanic consumers were willing to pay between $2 and $7 per pound. Their average WTP was $4.63 per pound. The most frequent price that they were willing to pay was $5 per pound.

Catfish sales to Hispanic grocers in Kentucky

The results of the Hispanic consumer survey encouraged several Hispanic grocers to feature fresh, unprocessed locally-grown catfish at their seafood counter. Kentucky State University supplied catfish to the grocers every Friday, in order to record their sales over time.

Two Hispanic grocers in Lexington, two in Shelbyville, and one in Louisville sold whole catfish. The Shelbyville grocers were unable to sell catfish for more than two weeks. The remaining grocers continued to purchase fish at prices ranging from $1.25 to $1.75 per pound. They wanted fish between 1.5 and 2.0 pounds. Average weekly demand per store varied from 30 pounds to 60 pounds. Grocers equipped with meat processing facilities (i.e., carneceria) were able to process the whole catfish and sell gutted fish.

Characteristics of farmers’ market patrons

- Total number of respondents = 71
- 68% of respondents were female
- 92% of respondents were Caucasian
- 78% of respondents had either a 4-year college degree, graduate degree, or professional degree
- 69% of respondents shopped at farmers’ markets every week and an additional 27% shopped at farmers’ markets “a few times per month”
- 58% of respondents were between 30 and 50 years old
- The average household size was 2.62, the most commonly-reported household size was 2

Characteristics of CSA patrons

- Total number of respondents = 80
- 59% of respondents were female
- 96% of respondents were Caucasian
- 89% of respondents had either a 4-year college degree, graduate degree, or professional degree
- 54% of respondents lived in a suburban area
- 67% of respondents were between 30 and 50 years old
- The average household size was 2.78; the most commonly-reported household size was 2

Distribution of willingness to pay for whole catfish by Hispanic consumers in Kentucky.

Clean up the given paragraph and data:...