

# Tilapia Marketing Tests in Kuwait\*

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## Abstract

In 1982, live tilapia were introduced into the Kuwait markets for the first time as part of a project to determine their aquaculture potential in Kuwait. Further market tests were held in 1983, 1984 and 1985. Various sizes (250-900 g) and two color patterns (natural coloration and red) of tilapia were sold and consumer response measured. Kuwaitis were initially cautious because the fish were unknown to them. Other consumers, particularly Egyptians who were familiar with tilapia, enthusiastically purchased the fish. In the later years, Kuwaitis' acceptance of the fish increased substantially. Large tilapia were preferred by Kuwaitis while the Egyptians preferred smaller fish. Natural-colored tilapia were much more preferred than the red. Various marketing strategies for new aquaculture products are discussed.

## Introduction

The Kuwait fish catch remained relatively constant from 1975 to 1983 while the Kuwaiti and expatriate populations increased approximately 25% (475,000 to 634,900) and 100% (531,000 to 1,036,800), respectively (Hopkins et al. 1984a; Central Statistical Office, Kuwait 1983). Thus, the per capita fish catch has declined from 5.1 kg in 1975 to only 2.1 kg in 1983. This decline concerns the Kuwaiti government because it increases the reliance of the local population on imported food supplies.

In an effort to increase local supplies of fresh fish, a substantial aquaculture research program was started by the Kuwait Institute for Scientific Research (KISR) in the mid-1970s. This research program used both native and exotic species. A major question facing the program was the acceptability of aquaculture products by the Kuwait

populace. As tilapia was an exotic species in Kuwait and was not sold there prior to the start of the program, this question was of particular concern.

Using tilapia grown during the course of experiments at a KISR fisheries station, market tests were started in late 1982 and completed in early 1985. The emphases of the tests were: (1) general observations on consumer acceptance (1982); (2) preferences for size of tilapia, natural-colored (ranging from silvery to almost black) versus reddish-colored tilapia, and sales rates of tilapia in relation to other fresh fish (1983); (3) sales rates of tilapia in different neighborhoods, size and color preferences (1984); (4) sales rates in different neighborhoods and sales rates in relation to other cultured fish (1985).

## Methods

All of the market tests were conducted in retail fish stores in Kuwait City. A store in Abdulla Al-Salem, an affluent district inhabited primarily by Kuwaitis, was used in all the tests. During 1984, a second store in a different district was included in the test while in 1985, three additional stores in other districts were used. Three tilapias were used in the tests, natural-colored *Oreochromis aureus* and *O. spilurus* and a red tilapia "hybrid" from Taiwan. They were sorted by size into large (400-700 g), medium (200-300 g) and small (150 g) categories prior to delivery to the stores. As only limited amounts of tilapia were available for the tests (486 kg in 1982, 962 kg in 1983, 824 kg in 1984 and 607 kg in 1985), advertising was restricted to small signs in the stores, a few telephone calls by the store managers to valued customers, and sales talk at the place of purchase.

Tilapia were positioned by price in the prime fish category. To support this positioning, the market strategy emphasized high quality and freshness. Quality was ensured by carefully checking the fish for off-flavors while the fish were still at the fish "farm". If any off-flavors were detected, the fish were held for several more days and were delivered to the store(s) only when off-flavors could no longer be detected. Freshness of the product was ensured by delivering the fish to the stores within 30 min. of removal from the holding tanks. Almost all of the tilapia were still alive upon arrival in the stores and some fish lived for several hours after being placed on ice in display cabinets.

Consumer response was observed by KISR staff stationed in the fish stores during the sales periods. Also, in 1982, 141 questionnaires written in both Arabic and English were distributed to all tilapia buyers. Information regarding the sale rates of other fresh and frozen fish was obtained from the store managers or operators. Additional details of the methods used during the market tests are contained in reports by Hopkins et al. 1984b; Hopkins et al. 1985a; 1985b.

### Results and Discussion

The sales of tilapia in 1982 were much more successful than had been expected, with each approximately 50-kg consignment being completely sold in one to two hours. Sales were often made from the delivery trays before the store personnel even had the opportunity to place the tilapia in the display cabinets. The enthusiasm of the Egyptian customers for "their fish" encouraged the Kuwaiti customers to overcome their reluctance to try an unknown fish. Egyptians comprised a majority of the respondents to the questionnaire followed by Kuwaitis and Iraqis (Table 1). A majority of the respondents preferred the medium-sized tilapia, although the Kuwaitis preferred the large tilapia. All buyers indicated that they liked the taste and were willing to buy again if the tilapia was sold live.

In 1983, the percentage of Gulf Arab, presumably Kuwaiti buyers, increased substantially. As in 1982, Kuwaitis preferred the large tilapia and the Egyptians preferred the medium size. The Kuwaitis tended to purchase 5-10 kg of tilapia at one time while the Egyptians usually purchased only 2-5 kg at one time. The sales rate of red tilapia averaged only 15% of the sales rate for natural-colored tilapia. Red tilapia was often mistaken for red snapper which is considered to be a medium- or low-class fish and is not very well liked in the Arabian Gulf area. However, when the customers were told that the fish was a tilapia, they were often willing to purchase at least one fish to try it. The ratio of the average fresh tilapia sales rate during the 1983 sales period to the average sales rate of other fresh fish sold in the store during the month when the test was conducted was 0.72. Imported frozen tilapia was also available in the store at KD0.500/kg versus KD2.250/kg for fresh tilapia. However, only few people purchased the frozen tilapia.

The 1984 sales performance of tilapia at the store in Abdulla Al-Salem (where the previous tests had been conducted) was outstanding while sales at a store located in the Salmiya district were not as successful. The percentage of Kuwaiti buyers remained high in Abdulla Al-Salem but was much lower in Salmiya. As a majority of the customers resided in the same district as the store

where they purchased their tilapia, this difference in customers' nationalities could be a reflection of the character of the districts (Abdulla Al-Salem is 70% Kuwaiti while Salmiya is only 10% Kuwaiti). The Kuwaitis again preferred large tilapia but the size preference for tilapia by the Egyptians differed between the two stores, large in Abdulla Al-Salem and medium in Salmiya. Natural-colored tilapia were preferred by all nationalities with only 7-11% of the customers purchasing only red tilapia. However, an increasing number of Kuwaiti customers (40%) purchased both colors of tilapia. The ratio of tilapia sales to other fish sales was 1:1 in Abdulla Al-Salem but only 0.17:1 in Salmiya. The major reason for the poorer response in Salmiya was resistance to high price. Many complaints about high price were heard in Salmiya but not in Abdulla Al-Salem, a much more affluent district. The preference for fresh versus frozen tilapia was again very pronounced with a 10.5:1 ratio of fresh to frozen tilapia sales.

An analysis of sales volumes of other fresh fish during the weeks immediately preceding, during and following the test showed that sales of all fresh fish increased when the live tilapia were present. This indicates that tilapia sales were not at the expense of other fresh fish sales. Instead, the presence of the tilapia attracted customers to the stores.

The 1985 market test clearly demonstrated the potential for competition between fresh cultured tilapia and other fresh cultured fish (porgy, *Acanthopagrus cuvieri* and grouper, *Epinephelus* spp.). Cultured porgy was preferred by Kuwaitis in three of the four stores used in the test (Table 2) while Egyptians preferred tilapia. When all three species were present, over 50% of the cultured fish sold was porgy, 35% was grouper and 15% was tilapia. This species preference was not constant between stores or through time. Tilapia sales were very slow in Mishref and Omariya where almost all of the customers were Kuwaitis unfamiliar with fresh tilapia.

At the Abdulla Al-Salem and Sharq stores, the tilapia sales percentage increased as the test progressed. Most of this increase in tilapia sales was at the expense of grouper sales. Small tilapia could not be sold at the same price as grouper (1,130 g mean weight), porgy (700 g) and large tilapia. However, when the price for small tilapia was halved, the market cleared in a few hours. In Abdulla Al-Salem and Omariya where frozen tilapia are regularly sold, the ratio of live tilapia sales to frozen tilapia sales was 7:1 and 0.7:1, respectively. The lower ratio in Omariya reflected a reluctance by the Kuwaiti customers to buy the fresh tilapia which was being sold for the first time in that district. The frozen tilapia were purchased primarily by working-class Egyptians who indicated they could not afford the fresh tilapia. The ratio of total test fish

sales to total sales of other fresh fish ranged from 0.5:1 in Sharq to 2.5:1 in Abdulla Al-Salem.

The market tests conclusively showed that tilapia can be sold as a prime fish if it is sold alive and that large, natural-colored tilapia are more preferred than small or red tilapia. The extent of the potential tilapia market is much more difficult to estimate. In 1983 and 1984, one year after fresh tilapia were introduced into the market, the ratio of fresh tilapia sales to other fresh fish sales ranged from 0.72:1 to 1:1 at the store in Abdulla Al-Salem. Given an annual fresh fish catch of 3,500 t, the potential tilapia market would be 2,500 to 3,500 t/year if: (a) the measured sales ratios can be maintained; (b) there is no competition from cultured grouper and porgy; and (c) the market can absorb the additional fish.

The last assumption can probably be met because doubling the fish supply would increase per capita supplies of fresh fish to about 4 kg/year which is still less than the 5 kg/year level in 1975. But, given the results in Salmiya, it is most doubtful that the high sales prices used in the tests can be maintained if tilapia supplies increased to 2,500-3,500 t/year. Although the current potential for competition from other fresh cultured fish is minimal, economically viable culture systems are currently being developed and may be operational in just a few years. Given these uncertainties, a safe starting point for a commercial tilapia farm would probably be 10% of the 3,500 t/year maximum estimated market. As data on sales are collected, revised estimates of the demand relationship can be made.

These marketing tests illustrate a number of points which should be considered when developing new markets for tilapia and aquaculture products, in general. First, as has been stated by Ray (1978), "Tilapia reputation will be dependent on the image the industry creates." As the Kuwaiti customers were not familiar with tilapia, they had no preconceived notions about the fish. Thus, when the tilapia were carefully presented as prime fish, the customers accepted them as such and were willing to pay prime fish prices.

Second, introducing a new product takes time. Consumers are reluctant to try a new fish. In Abdulla Al-Salem, Kuwaitis comprised only 17% of the tilapia buyers in 1982 but they composed 50% of the buyers in later years. The time required to introduce a new product will substantially increase if the customers have negative preconceived opinions about the product. These prejudices vary greatly throughout the world. For example, the response to red tilapia was initially very negative in Kuwait while red-colored tilapia are often preferred in the Far East. Buyer preferences should be carefully examined before introducing a new product.

Third, only a small number of Kuwaitis purchased tilapia during the 1985 tests in the stores where tilapia had

not been sold previously. This indicates that each new market area will have to receive considerable market development before the tilapia are accepted there.

Fourth, the product should be differentiated from potential competitors. We stressed a degree of freshness which only a local aquaculture operation could provide. While locally-cultured fish could still present competition, competition from low-priced frozen imports was minimized.

## References

- Hopkins, M.L., C.P. Mathews and M. Samuel. 1984a. An overview of Kuwait's fisheries including a preliminary economic analysis. *Kuwait Bull. Mar. Sci.* 5:37-59.
- Hopkins, M.L., K.D. Hopkins and A. Al-Ameeri. 1984b. Tilapia market introductions in Kuwait 1982 and 1983. Report KISR 1459. 16 p. Kuwait Institute for Scientific Research, Kuwait.
- Hopkins, M.L., A. Al-Ameeri, T. Al-Ahmad, K.D. Hopkins, M. Ridha and A. Al-Ahmad. 1985a. Marketing tilapia in Kuwait, 1984. Interim Report KISR 1667. 14 p. Kuwait Institute for Scientific Research, Kuwait.
- Hopkins, M.L., A. Al-Ahmad, M.G. Teng and C. El-Zahr. 1985b. Marketing three cultured fish in Kuwait: interim report. Kuwait Institute for Scientific Research, Kuwait. 13 p.
- Kuwait. Central Statistical Office. 1983. Annual statistical abstract. Ministry of Planning, Kuwait. 362 p.
- Ray, L. 1978. Production of tilapia in catfish raceways using geothermal water, p. 86-89. *In* R.O. Smitherman, W.L. Shelton and J.H. Grover (eds.) Culture of exotic fishes. Fish Culture Section, American Fisheries Society, Auburn, Alabama, USA.

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Table 1. Nationalities of customers, size preferences and sales rates during 1982, 1983 and 1984 tilapia market tests in Kuwait.

	1982	1983	1984
Nationality of tilapia buyers (%)			
Abdulla Al-Salem store			
Kuwaiti	17	50 <sup>a</sup>	44
Egyptian	56	50	38
Other nationalities	27	0	18
Salmiya store			
Kuwaiti	—	—	22
Egyptian	—	—	60
Other nationalities	—	—	18
Size preference based on plurality			
Abdulla Al-Salem store			
Kuwaiti	large	large	large
Egyptian	medium	medium	large
Other nationalities	medium	—	large
Salmiya store			
Kuwaiti	—	—	large
Egyptian	—	—	medium
Other nationalities	—	—	large
Sales ratios			
Natural-colored: red tilapia	—	7:1	—
All tilapia: all other fresh fish	—	0.72:1	1:1
Fresh tilapia: frozen tilapia	—	—	10.5:1

<sup>a</sup>Gulf Arab, presumably Kuwaiti.

Table 2. Composition of cultured fish sales in Kuwait during 1985 market test.

Store location and fish type	% cultured fish sold by date <sup>1</sup>					5-day duration
	3	4	March 5	6	7	
Abdulla Al-Salem <sup>2</sup>						
Tilapia	11	4	4	29	38	18
Grouper	45	44	36	7	24	32
Porgy	44	52	60	64	38	50
Mishref <sup>3</sup>						
Tilapia	—	7	—	4	—	7
Grouper	—	55	—	21	—	43
Porgy	—	38	—	75	—	50
Omariya <sup>4</sup>						
Tilapia	—	9	12	6	9	9
Grouper	—	18	39	36	24	30
Porgy	—	73	49	58	67	61
Sharq <sup>5</sup>						
Tilapia	—	18	—	15	27	20
Grouper	—	52	—	23	26	37
Porgy	—	30	—	62	47	43

<sup>1</sup>% when all 3 types of fish were present with days when this condition was not met, shown as "—"

<sup>2</sup>The only district in this test where fresh tilapia was previously sold, Kuwaitis comprising 70% of residents.

<sup>3</sup>Kuwaitis comprised 57% of residents.

<sup>4</sup>Kuwaitis comprised 69% of residents.

<sup>5</sup>Kuwaitis comprised 9% of residents.