Consumption pattern of fish among households in Batticaloa District

S.Komahan and P.Sivarajah
Department of Agricultural Economics, Eastern University of Sri Lanka

Introduction

Fisheries sector in Sri Lanka provides livelihood for more than 2.5 million coastal communities as well as providing more than 50% of animal protein requirement of people in the country (NARA, 2012). The fact that fish is relatively cheap compared with meat, beef, mutton, poultry, and pork, which also contains protein of high biological value tends to make it preferred to other sources o f animal protein (Adeniyi *et al*., 2010). In Batticaloa District presence of a long seacoast and the mile long lagoon provides a good fishing environment. It leads to high availability and production of both inland and marine fish (Dist. Planning Secretariat, 2013). About 85% of people in Batticaloa District consume fish as their major protein food (Devadawson and Jayasinghe, 2014). Therefore, this study was designed to determine the quantity of fish consumed, expenditure on fish and preferences for various fish varieties by households in Batticaloa District.

Methodology

Data related to frequency of fish purchases, price of different fish varieties, preference of fish varieties and other fish purchasing details were collected from 120 respondents at 3 rural and 3 urban markets in 6 DS Divisions in the Batticaloa District. Purposive sampling technique was used to select the respondents and a pre tested and well-structured questionnaire was used to collect data. The data was analyzed using SPSS Ver.22.0 software.

Result and Discussion

The data revealed that the majority of the respondents (66%) were consuming both marine and inland fish varieties, while 24% of the respondents consume marine fish only and 10% consume inland fish only. It was also evident from the data that about 34% of the respondents had some specific reasons for the avoidance of certain fish types in their meal. Avoidance of marine fish varieties in fish purchase occurs only due to the high market price compared to inland fish. In case of inland fish avoiders, 82% of them avoid due to the unfavorable odor emanating during the cooking process, 62% of them avoid due to polluted and unsatisfactory sanitary conditions prevalent in fishing areas and rest (13%) avoids inland fish due to unpalatable taste.

In purchasing fish about 26% of the consumers considered only the desirable characters of fish, around 68% considered both price of fish and fish characters equally and only 6% considered the price of fish in purchasing decisions. Freshness of fish is the important fish character considered in fish purchasing. Around 97% of consumers were very specific about the freshness of fish they purchase. About 60% consumers were concerned about taste of the fish they purchase and 43% of consumers concerned about the allergic condition of fish to their family members and a quarter of the respondents (28%) pay attention to the appearance of the fish which include firmness of flesh, bone content and thickness of skin.

Table 1: Consumption pattern of Marine Fish Varieties (N=108)

Fish varieties	Percentage of Consumers purchasing	Frequency of purchases per month / family	Quantity purchased (Kgs/visit)	Mean Price (Rs./kg)	Preference (% of consumers)
1. Arukula (Scomberomorus cavalla)	36.11	1.23	0.56	1026.15	26.9
2. Kelawalla (Tuna sp.)	38.89	2.10	0.58	775.00	32.4
3. Paarai (Carangoides malabaricus)	66.67	2.47	0.60	673.75	37.0
4. Balaya (Thunnus albacores)	39.81	2.23	0.58	349.77	13.0
5. Soodai (Sardinella sp.)	45.37	2.06	0.62	245.51	2.8
6. Thalapath (Istiuphorus platypterus)	20.37	1.10	0.51	718.64	13.0
7. Keeri (Amplicaster sp.)	58.33	2.66	0.57	372.38	13.9
8. Neththali (Anchoviella sp.)	61.11	2.50	0.56	350.30	28.7
9. Sura (Chaenogalus sp.)	7.41	1.38	0.69	593.75	6.5
10. Seela (Sphyraenabarracuda.)	56.48	2.40	0.58	320.98	18.5
11. Kumbula (Rastrelliger sp.)	54.63	2.94	0.56	419.83	25.9
12. Thirukkai (Dasyatis sp.)	15.74	2.41	0.66	457.65	6.5

According to Table 1, in Batticaloa District, popular marine fish variety was *Carangoides malabaricus*. About 67% of the consumers purchased *Carangoides malabaricus* fish for their meal at an average of about 2-3 days per month. Fish purchased at high frequency in a month by respondents was *Rastrelliger sp.* (55% at 3 days/ month interval). The data clearly showed that no appreciable changes were observed on mean consumption of fish varieties and it was very independent with the quantity purchased and variety selected. The mean consumption of marine fish varieties at a single visit in study area was 0.59 kg. Data revealed that the high priced marine fish variety *Scomberomorus cavalla*, and mean market price was Rs.1,025 per kg. Cheapest marine fish variety in the study area was *Sardinella sp.* (Rs. 245 per kg). In the study area the respondents mostly preferred varieties of fish were 37% *Paarai (Carangoides malabaricus*), 32% Kelawalla *(Tuna sp.)* and 29% Neththali *(Anchoviella sp.)*.The mean expenditure on marine fish purchases per family per month was Rs.3,042.

As shown Table 2, in the consumption pattern of inland fish varieties, about 72% of the consumers consumed *Oreochromis mossambicus*, 65% of them consumed *Etropluss uratensis* at an average of 3 times per month. The average quantity of inland fish variety purchased was more or less similar to all varieties. The mean quantity of inland fish variety purchased was 0.57 kgs per single visit.

According to the data, the high priced inland fish variety in the study area was *Ophicephlaus sp.* (Rs.511 per kg) followed by *Cyprinus carpio* (Rs.504 per kg). In the study area, consumers most preferred varieties of fish were 44% *Oreochromis mossambicu (Tilapia),* 25.3% *Seththal (Etropluss uratensis)* and 24% *Otti (Siganus sp.)* due to their reasonable prices and frequent availability. It was found that the mean expenditure on inland fish purchases per family per month was Rs.1,077.

Table 2: Consumption pattern of Inland Fish Varieties (N=91)

Fish varieties	Percentage of Consumers purchasing	Frequency of purchase / mth. Per family	Quantity purchased (Kgs/visit)	Mean Price (Rs./kg)	Preference (% of consumers)
1. Tilapia (Oreochromis mossambicus)	72.53	3.27	0.59	284.09	43.96
2. Keluthi (Arius sp.)	29.67	2.33	0.69	236.48	8.79
3. Viral (Ophicephlaus sp.)	14.29	1.08	0.63	511.54	6.59
4. Seththal (Etropluss uratensis)	64.84	3.00	0.61	283.39	25.27
5. Kayal (Liza sp.)	26.37	1.71	0.53	346.67	12.09
6. Koduwa (Ephinephalus sp.)	19.78	1.56	0.57	383.89	6.59
7. Otti (Siganus sp.)	40.66	2.05	0.58	398.65	24.18
8. Sallal (Etroplus aculates)	20.88	3.00	0.51	242.11	3.30
9. Kanayan (Cyprinus carpio)	13.19	2.33	0.52	504.17	10.99
10. Manalai (Mugil cephalus)	13.19	2.17	0.44	281.67	3.30

Conclusions

Majority of the households were consuming both marine and inland fish varieties in the study area and they mostly consider the price of fish and desirable fish characters together during purchases. Price, freshness, allergic content and taste of fish were considered in purchasing decisions while freshness of fish was the important fish character considered in fish purchasing. Average quantity of fish purchased at a single market visit did not differ significantly between marine and inland fish varieties and was about 0.57 kg per household /visit. While the expenditure by households on marine fish purchases was almost three times higher than that on inland fish purchases. Hence promotion of sales of both marine and inland fish varieties could help households meet their consumption demands. Especially the promotion of inland fish culture or aquaculture could enhance production of inland fish and the level of fish protein intake among households at a cheaper cost.

References

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