

THE PRESENT SITUATION AND PROSPECT OF AQUATIC PRODUCTS CONSUMPTION IN CHINA

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ABSTRACT

By analysis of the aquatic products market in China, the following characteristics are found. The total volume and proportion of the aquatic products consumption have been increasing gradually. The proportion of oceanic halieutics in total aquatic products and the proportion between oceanic products and freshwater products have decreased annually. The difference between town and countryside and the difference in the income levels and regions have distinct effect on the aquatic products consumption. Consumption ideas become more and more mature and preference to aquatic products reaches a higher intensity. Both internal and international aquatic markets are brisk. Meanwhile, the paper discusses the prospect of the future aquatic products market.

Keywords: aquatic products; consumption; aquaculture; halieutics; purchase & expenditure

China is one of the most important fishery country, also is a principal exporting country and processing country in the world, the output of its breed aquatics nearly account for approximately 70 percent of the world gross. Chinese export value of aquatic products have leaped to the first place in the world since 1990, and become the largest fishery country of the world for 16 years, the per capita of aquatic products annual increased. As an important part of national economy, Chinese fishery has a more and more prominent status in economy even in the whole social development. In recent years, the demand and supply of aquatic products keep growing stably. For the increased income of residents, the position of the aquatic products in food consumption has improved gradually.

THE CONSUMPTIVE ACTUALITY OF AQUATIC PRODUCTS MARKET IN CHINA

Presently, consumption of internal aquatic products is made up of the following parts.

The first part is the food consumption of urban and rural residents, mostly includes household consumption and social consumption of urban and rural residents. The household consumption of urban dwellers is the primary part of food consumption of Chinese people. The social consumption is the form of consuming in restaurant, feast and presenting aquatic products. In recent years, the aquatic products consumption of Chinese people takes on ascending trend stably. Especially to the urban households, from 1995 to 2006, the per capita annual purchases of aquatic products are upgrade from 9.2 kilogram to 12.95 kilogram, and have closed to the per capita annual purchases of pork, which can be found according to the fig.1.

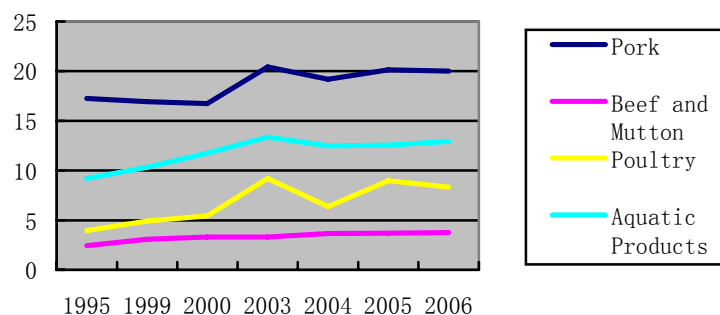


Fig.1 Per capita annual purchases of major commodities of urban households

Unit: kg

Source of information: Chinese Statistics Yearbook 2007

Meanwhile, the living consumption structure of rural residents has been improved gradually. The corn consumption of rural residents descended markedly, but per capita consumption of milk products, meat, fruit and aquatic products have an impressive promotion, per-person consumption of aquatic products reached 4.6kg in 2005, rose by 13.4 percent over the previous year. The tendency can be found from the fig.2.

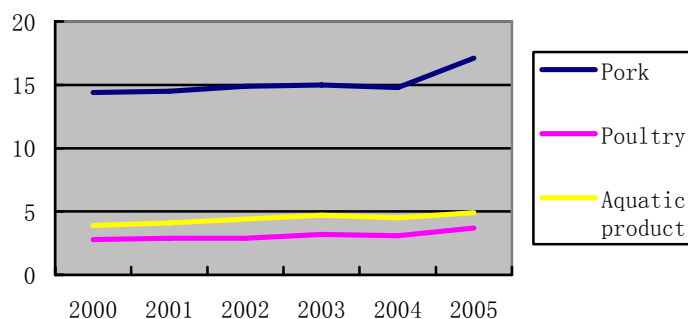


Fig.2 Per capita consumption of major food in rural households

Unit: kg

Source of information: "Chinese Rural Households Investigation Yearbook 2006"

The second part is materials consumption of processing industry. Aquatic products can be taken as materials in industrial process, and become feed, additives, health food and other food products. At the end of 2005, the aquatic products which were used to processing had reached 15,487,400 tons. For the improvement of aquatic products processing technology and the change of people's requirement on living condition, the type and quantity of processed aquatic products have a great promotion. At the end of 2005, there are 9128 aquatic products processing enterprises in our country which mainly in Zhejiang, Shandong, Fujian and Guangdong, the whole processing abilities had reached 16961589 tons per year, the total processing quantity of aquatic products were 11954842 tons. Considering from composition of existing processed aquatic goods, the products mainly include chilling of aquatic products, dry products, pickle, minced fish products and others. Hereinto, chilling of aquatic products is the most important part, more than half of the total processed products.

Another part is export trade of aquatic products. In "Tenth Five-Year Plan of China", in spite of facing the disadvantages of international trade barrier time after time, aquatic products export of our country constantly kept a rapid growth; growth rate is above 16 percent per-year. According to the statistics, export value of the whole year is more than 9 billion dollar in 2006. Export value of aquatic products in

the export value of agricultural products account for about 30 percent. Recently, Chinese export value of aquatic products account for about 10 percent of the export value of whole world aquatic products, leaped to the first place in the world since 2002.

Table 1: The trending of total export volume and value of Chinese aquatic products

Year	2000	2001	2002	2003	2004	2005
Amount (USD)	3,832,045,670	4,185,495,467	4,692,282,499	5,485,888,569	6,966,483,200	7,888,394,450
Export volume (ton)	153.44	195.31	208.52	210.31	242.06	256.83
Export value/Total	87.15%	85.55%	90.96%	83.60%	80.06%	76.06%
Export volume /Total	82.93%	82.94%	86.97%	79.79%	87.24%	72.52%
Price (USD/ton)	2497.503	2142.980	2250.246	2608.502	2878.040	3071.453

Source of information: According to the information of “Chinese Fishery Yearbook”

Recently, the export of Chinese aquatic products has mainly four varieties: small frozen shrimps, baked eels, preserved small shrimps or prawns, squid and cuttlefish. Hereinto, in the three previous seasons of 2006, the export value of small frozen shrimps and baked eels had a deep slump, but the other varieties kept a relatively rapid speed. Among the seawater products, the primarily-processed fish fillets, such as hairtail, Hairfin gizzard shad, frozen fish, peeled shrimp and frozen fish fillets, which are account for above 60 percent of the total export quantities.

In addition to the mainly consumption above, other consumption still exist, mainly include the part of which the fishermen eat by themselves and consume within the fishing village and farm. Because elastic quantity of the fishermen eating is large, and low value fishes mostly are feed which are sold to other culturist, the related data is difficult to be found.

CHARACTERISTICS OF THE AQUATIC PRODUCTS CONSUMPTION IN CHINA

With the growth of the national economy and the improvement of the overall living standards of the Chinese people, the supply and the demand of the aquatic products have been expanding rapidly and soundly. Aquatic products market is quite brisk, and the consumption has taken on the following distinctive features in recent years.

The Total Volume and Proportion of the Aquatic Products Consumption Have Been Increasing Each Year.

Predictions from the UN Food and Agriculture Organization (that is FAO) show that the total volume of the aquatic products consumption in the world will gradually increase in the next 30 years, and the increase of the aquatic products supply will mainly come from the China-led developing countries in Asia. The leaders of the Bureau of Fisheries Ministry of Agriculture of the People's Republic of China denote that the gap of the intending aquatic products consumption will be supplied by breed aquatics. Our fishery has obvious advantage, such as large scale of breed aquatics, advanced technology, abundant labor force, and strong production capacity. Ministry of Agriculture issues the “Eleventh Five-Year Plan for the fishery development”, and put forward some Objectives to the end of the Eleventh Five-Year Plan that the output of breed aquatics will achieve 45.50 million tons, and the output ratio of breed aquatic and halieutics should be 76 to 24 (now the proportion is 67 to 33). The above plan still gives other related

goals, including that the production of aquatic products is expected to reach 60 million tons increasing by an average of 3.3 percent a year, the per-capita production of aquatic products will be 44 kilogram, the per-capita consumption of aquatic products will be 12 kilogram, the gross value of fishery output reach 570 billion Yuan with an average annual growth rate of 6.4 percent.

From 2000 to 2005, the statistical data gives that the aquatic products consumption in China show an upward tendency. For urban households and rural household, grain consumption has declined, but the consumption of pork, beef and mutton, Poultry and aquatic products rise soundly. Especially for urban residents, the aquatic products consumption is getting closer and closer to the amount of pork consumption, and far exceeds the consumption of beef, mutton and milk products.

In addition, the proportion of aquatic products expenditure in food expenditure is increasing each year. Throughout the country, the above proportion in 1992 is 6.72 percent, and increases to 7.47 percent, among which Breed aquatics accounted for approximately 5 percent. Aquatic products are gradually becoming the consumption essential commodity of Chinese people.

The Proportion of Oceanic Halieutics in Total Aquatic Products and the Proportion Between Oceanic Products and Freshwater Products Have Decreased Annually.

From the supply of aquatic products perspective in 2005, the output of freshwater aquaculture amount to the most part and the proportion is 39.4 percent, the same figure about oceanic halieutics is 28.5 percent, the same figure about seawater aquaculture is 27.2 percent, and the same figure about freshwater halieutics is 5 percent. From 2000 to 2005, the ratios between halieutics output and aquaculture output were 39 to 61, 38 to 62, 36 to 64, 35 to 65, 35 to 65 and 34 to 66. The proportion of halieutics output in the total has decreased year by year, but the aquaculture has increased year after year. For nearly two years, the state has shown a sign of leveling off. Meanwhile, from 2000 to 2005, the output ratios between seawater and freshwater were 59 to 44, 58 to 42, 57 to 43, 56 to 44 and 56 to 44. The proportion of oceanic products in the total declined and the figure of freshwater products increased continuously. In order to the leading of policy and the restricting of fisheries resources, our residents have changed consumption Ideas and accepted aquaculture products gradually. At the same time, although aquaculture techniques in our country remain to be further enhanced, there are growing signs that aquiculture will develop steadily and transform from a numerically superior to a qualitatively superior type. Now aquaculture areas and output keep going up, famous brand high-quality products are taken more seriously. Therefore, in the long term aquaculture products will very likely have more market share.

The Difference Between Town and Countryside and the Difference in the Income Levels Have Distinct Effect on the Aquatic Products Consumption.

Affected by some factors like the consumption habits and the income levels, the aquatic products consumption show marked difference between town and countryside. The consumption level of urban residents is higher than the level of rural residents. Statistics indicate that the per capita consumption of the aquatic products in rural households in 2005 was 4.9 kilogram, rose by 25.6% compared to that in 2000. The per capita annual purchase of the aquatic products of urban households of the corresponding period was 12.55 kilogram and up 9.4% compared to that in 2000. In food consumption of the urban residents, per capita consumption of meat, poultry, eggs and aquatic products are lower than those of urban residents. Furthermore, the different income levels have different per capita consumption of aquatic products. According to the table 2, in the field of aquatic products, the per capita annual consumption expenditure of urban households in 2004 was 178.06 Yuan. At the same time, the lower income levels of the households are, the lower their expenditure of the aquatic products can be.

Table 2: Per Capita Annual Consumption Expenditure of Urban Households (2004)

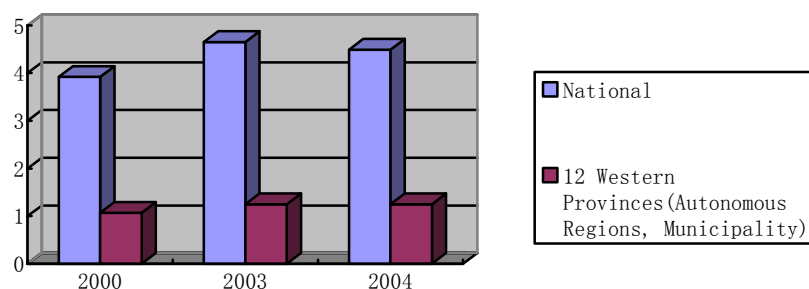
Unit: Yuan

Item	Average	Lowest Income Households	Poor Households	Low Income households	Lower Middle Income Households	Middle Income Households	Upper Middle Income Households	High Income Households	Highest Income Households
Consumption Expenditure	7182.10	2855.15	2441.12	3942.23	5096.15	6498.36	8345.70	10749.35	16841.82
Food	2709.60	1417.76	1248.87	1827.42	2201.88	2581.24	3130.75	3740.68	4914.64
Grain	238.76	219.10	213.83	229.99	232.81	234.29	248.35	255.10	260.68
Meat, Poultry and Their Products	526.80	325.49	284.70	408.15	477.70	534.02	605.95	658.06	713.85
Eggs	68.19	50.92	46.24	60.61	67.63	69.18	74.29	77.74	74.75
Aquatic Products	178.06	67.25	56.16	93.37	124.74	160.97	216.70	282.60	393.58
Milk and Its Products	132.37	46.32	35.11	78.05	106.77	131.64	162.90	194.65	237.34

Source of information: Chinese Statistics Yearbook 2005

There is Great Regional Disparity in Respect of the Aquatic Products Consumption.

According to statistics, there is distinct difference on consumption of national aquatic products. Take 2004 for instance, Per Capita Annual aquatic products Consumption Expenditure of Urban Households is 178.06 Yuan, in which, Tianjin, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Guangdong and Hainan are above the average level. In the same year, there are similar regional characteristic in aquatic products consumption of rural households. At the same time, the per capita annual purchases of aquatic products in 12 Western Provinces (Autonomous Regions, Municipality) is markedly lower than national average (Fig.3 and Fig.4).

**Fig.3 Per capita consumption of aquatic products in rural households of national and 12 western provinces (autonomous regions, municipality) at the year-end**

Unit: kilogram

Source of information: Chinese Statistics Yearbook 2005

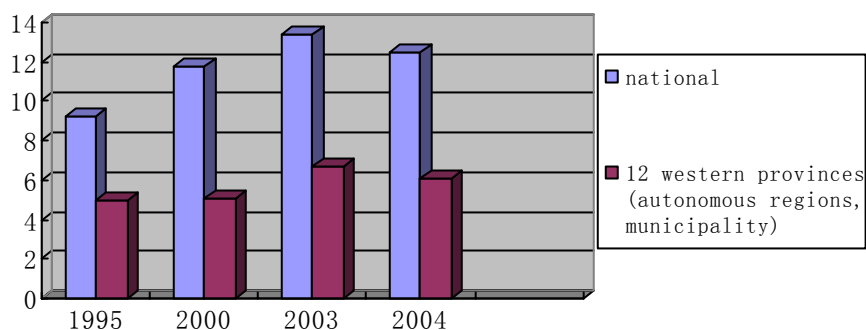


Fig. 4 Per capita consumption of aquatic products in urban households of national and 12 western provinces (autonomous regions, municipality) at the year-end

Unit: kilogram

Source of information: Chinese Statistics Yearbook 2005

The regional difference on aquatic products consumption mainly comes from natural inheritance of fishery and consumption habits of aquatic products. The highest regions on consumption are all the relatively developed regions of fishery. Guangdong's output of aquatic products are first in China, reach 3033100 tons, take up 22.54 percent of our country; Fujian running second, the output is 1608900 tons, take up 12.03 percent, Shandong ranks the third, the quantity is 1390600 tons, take up 10.40 percent; Zhejiang ranks the fourth, the quantity is 1116100 tons, take up 8.35 percent; Jiangsu ranks the fifth, the quantity is 1018600 tons, take up 7.62 percent. The above five provinces take up 60.96 percent of the whole country. For example, the supply of river crab market is at saturation, the time of sales is short (only three months every year), and the area of sale is limited, most concentrate in several provinces and municipalities like Jiangsu, Zhejiang and Shanghai. Thereby, regions differences are bounded by local supply condition of aquatic products. Furthermore, aquatic products consumption are also affected by some outer conditions like local resident's income, the backward economic regions are relatively few on consumption of aquatic products, this is similar to difference of urban and rural residents.

Consumption Ideas Become More and More Mature; Preference to Aquatic Products Reaches a Higher Intensity.

Firstly, traditional species are lasting favored. Chinese residents, influenced by long-time consumption habits, prefer to aquatic products of traditional species. Consumption of aquatic products are composed mainly of live products and less of processed freshwater and seawater products. Most of residents prefer to traditional and common species. In 2005, the stable and popular catch sea products are as follow: among the seawater aquaculture products, some products exist stably, like kelp, Porphyra, jelly fish, scallop, oyster, clam, razor clam, Hairfin gizzard shad, swimming crab, shrimp etc; among the freshwater aquaculture products, some products keep fairly stable supply, like grass carp, crucian, black silver carp, Java tilapia, spadefish, eel, lobster, giant freshwater prawn and so on. The questionnaire also indicates that even in comparatively developed area such as shanghai, common residents usually buy aquatic products most of which are cheap freshwater aquaculture products.

Secondly, high-quality aquacultures are more demanded. Along with the higher living standard, the idea of health has surpassed that of adequate food and clothing, and demand for safety has surpassed that of survival. The consciousness about safe consumption is obvious gradually in not only international but also domestic market. It is reported by International Center of National Bureau of Statistics (NBS) that Engel coefficient of households in city and town areas is 36.78% and that of urban families is 45.5% in 2005. Though it is still doubtful of the practical meaning of the figure, as to the aspect of food

consumption merely, those whose Engel coefficient is under 40% will pursue health and nutrition of food more than food itself. As the market has manifested, domestic consumers begin to pay more attention to qualities and brands of aquatic product. In general, supply of aquatic products can on the whole suffice current need. However, most of supply is taken up by average quality or cheap goods, while high-grade and fine-processed aquatic products are still deficient. For simple need and immature consumption ideas in the past, people, without more demand, used to consume common aquatic products. Nowadays with the improvement of living condition, people incline to purchase more sorts of high-quality aquatic products. As such, there comes a phenomenon that common aquatic products with good sale have low price while demand for top-grade aquatic products exceeds supply, some of which even needed to be provided by importation. At the same time, some researches revealed that processed products also are more accepted in the market, so that demand should not been ignored. Some aquatic processing enterprises have set up their brands gradually and introduced fish cans and seafood flavoring which are welcomed by more and more consumers.

Thirdly, the consumption of aquatic products is influenced by changes of people's living habit to some extent. In the past, Chinese people's food consumption in the cities and towns largely puts up the consumption at home. With the development of people's living standard and changes of consumption habit, chances of having a dinner in a restaurant are increasingly enhanced, especially for citizens, and the amount of spending in restaurants makes more portions of that of all food spending. In addition, for aquatic products are regarded as a kind of food with high nutrition and costliness, followed with the increasing income and more supplies of aquatic products, the consumptions of aquatic products, especially luxurious ones, begin to rise.

Fourthly, security of food quality impacts aquatic products consumption. Due to global epidemic disease, such as "bird flu", "crazy ox", etc, people's preference to aquatic products turns up. In all amount of food consumption by households in city and town, aquatic products consumption makes 9 percent, which has rose nearly 1 percent than that in 2000. Especially in the beginning of 2004, the impact of the epidemic of "bird flu" led to consumption of aquatic products taking the place of that of poultry products. However, the following several accidents of the quality security of aquatic products in 2006 have restrained the consumption of the aquatic products to some extent.

Marketing Are Brisk in Both Internal and International Aquatic Products Market.

Reviewing the change of resident's aquatic products consumption price index for nearly five years, before 2004 internal aquatic products consumption price are lower than the same period of last year, aquatic products consumption price fall into a decline from 1998 to 2004. Affected by the demand of consumption, the aquatic products market price rose significantly in 2004 and 2005. In the situation of which consumption demand increase relatively fast and supply grow steadily, affected by the rising of the feed price and the cost of fishery production, the aquatic products price made a large increase in 2004. Freshwater aquatic products price increase even more. According to the data from The Ministry of Agriculture, the wholesale price of national aquatic products raised 20 percent than last year, in which, seawater aquatic products raised 13 percent, freshwater aquatic products raised 29 percent. The growth rate has abated in 2005. But according to the three previous quarters of 2006, the consumer price kept in a downward trend, until May, price raised with a little range; in the international market, although affected by anti-dumping duty, import and export of our aquatic products have get \$3.77 billion favorable balance, and have some breakthrough on exploring international market, for example porphyra enter the Japanese market for the first time. At the same time, our export market is appearing diversified tendency. At the time of the large rising on volume and value of export, in 2005, the five biggest countries or regions of aquatic products exportation are Japan, USA, Korea, Hong Kong and German, the export quantities take on 72.52 percent of total export, the export amounts take up 76.06 percent of total amounts, and the figures decrease over the last year.

EXPECTATION OF AQUATIC PRODUCTS CONSUMPTION IN CHINA

In general, Chinese aquatic products development is flourishing presently in market both at domestic and abroad areas, achievement is quite good, and the internal demand and supply are appearing good development tendency. To analyze by context, the demand and supply structure of present aquatic products show some changes, which mainly come from the effect of internal macro-environment, international economic situation and micro-environment. The healthy development and consumption of future aquatic products market will showing the following tendency on the existing basis.

Internal Macro-environment Support and Guide the Fishery and the Consumption of the Aquatic Products.

According to the fishery's development plan of every provinces and municipalities in "Eleventh Five-Year Plan", the production of aquatic products, aquaculture, scientific research, processing and export, which have been paid enough attention and gradient policy, this will improve the supply quantity and quality of aquatic products. Recently, all concerned in our country progressively pay attention to the upgrade of agricultural industrial structure and optimum structure inside fishery economy, the development goals of fishery which in "Eleventh Five-Year Plan" specifically give guaranteeing the safe supply of aquatic products, as well as strengthening the technology of aquaculture and the technology of refrigerating & carrying, and strengthening the protection of fishery resources and fishery environment. These policies not only steadily develop the fishery to better quality and benefits, but also more and more good aquatic products will appear in market, Rural regions and the central and western areas which have consumption differences in aquatic products could get more choices for aquatic products. At the same time, a number of problem occurred in safety of food and aquatic products recently which have affected the internal consumption and export trade to a certain extent, warning the supply departments of aquatic products. Our Ministry of Agriculture has united with Industrial and Commercial Administration, fishery administration, fishery organization and quality inspection departments all over the country to make inspection. Relative regulations and laws have got a great deal of attention. In the future, our aquatic products will get better management and supervision.

In additional, our macro-environment is in good state. Population growth in future and improvement of resident's income level has brought the improvement of requirement for life quality. The income elasticity of aquatic products consumption is relatively large. Under this tendency, trading in aquatic products market will be more and more active. Growth of aquatic products consumption and increase in demand on high-grade aquatic products will be an important factor which protects the increase of aquatic products price. In the meantime, urbanization tendency bring the increase of population in urban, due to the differences of consumption habit between urban and rural areas and in different regions, urbanization may bring growth of demand of aquatic products at some areas. Certainly, urban growth may cause to higher requirement for aquatic products supply and destroy the waters environment of fishery. Chinese people must pay more attention to the questions of supply and quality of aquatic products.

International Economic Situation Have All-round Effect on International and Internal Market of Aquatic Products.

In the economic globalization situation, the trading of export and import are very active, as a large fishery country, after we joined WTO, aquatic products continue being the predominant products in the international market. Now, import and export scale are powerful, and products structure is relatively steady. After dealing with several trade barriers and requirements in international market, Chinese fishery will pay more attention to international competition of aquatic products, and offer more and better aquatic products to international markets. As far as domestic markets is concerned, in this multi-economic cooperation situation, especially the effect of multilateral and bilateral trading liberalization, there are a great deal of foreign aquatic products that will come into the markets of aquatic products in our country.

The products will have more diversity and some goods may be better and more affordable, which will greatly enrich the food choice of residents. Those products will give more challenge to Chinese fishery. In addition, culture of consumption abroad, habit of consumption should affect our residents' habit of consumption on aquatic products.

Micro-Environment Factors Make a Higher Claim for Aquatic Products.

Micro-Environment factors mainly come from corporations, buyers, the public and competitors. As change of consumption ideas, consumers not only make higher claim for traditional aquatic products, but also no longer are satisfied with existing variety. After the living standard is improved, new products have more and more attraction to consumer, not excepting the aquatic products. In the competitive market, life cycle of new aquatic products have shortened to less than 5 years, the products' advantages is relative and brief. Today, fishermen and fishing corporations have considered and decided the variety of breeding and processing according to market demand. Some of them can make a good marketing analysis and judgment. There are some changes on traditional production ideas, but there is some bigger uncertainty in production and supply in aquatic products. Existing varieties of manufactured products are still poor. So the marketers must be pay attention to marketing adaptability and technology content, find out the demand of the market, catch latent consumption demand, make good market forecast, and grasp characteristic and rule of changes in market, in order to supply popular aquatic products which are closer to the consumer's demand.

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