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WORLD OVERVIEW OF THE SHRIMP MARKET

by
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ABSTRACT

This paper briefly discusses an overview of world market demand and the supply of shrimp and its prospects. World demand for shrimp depends on income, population growth, falling prices, changes in taste with regard to seafood and the availability of substitute seafood products. The estimated demand increases by 3.5 percent per annum. About 50 percent of the demand comes from the U.S.A and Japan. About 80 percent of the world supply of shrimp comes from the Asian countries. It is estimated that supply would increase by 60 percent per annum. Since the estimated supply exceeds the estimated demand, prices are expected to fall in the future.

Keywords: Shrimp market, World Overview.

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1. INTRODUCTION

Shrimp culture is one of the fastest growing aquaculture industries in the world. An increasing number of countires are undertaking the venture to produce and market the shrimps. This paper discusses an overview of world demand, supply and price situations, and the market prospects in Japan, North America and Europe.

2. WORLD DEMAND

Demand for shrimp is the function of income. As shrimp is considered a luxury food item generally only those countries with high per capita income could afford to purchase and consume shrimps. Thus, Japan, the United States of America and Europe are the major consuming regions.

The data in Table 1 reveal that about 50 percent of total supply of shrimps is consumed by Japan and the U.S.A in 1988. Consumption in Europe is about 10–12 percent of the world total supply.

The Average annual growth rates in world demand between 1970–1988 is 3.73 percent, for Japan it is 6.53 percent and for the U.S.A 3.75 percent. The Japanese demand for shrimps has steadily increased from 6.53 percent in 1970 to 8.13 percent in 1988. For the USA, the annual growth rates of shrimp consumption fluctuated thoroughout the two decades in question. Between the 1970–1980 period, the growth rate was only 0.85 percent per annum. But during the 1980–1988, growth rate shot up to 7.48 percent per annum. In the case of other consuming countries, the best period was between 1970–1980 with the growth rates of 4.92 percent annually. Since 1981, the growth in demand declined drastically (0.32 percent p.a)

According the one study, "the high annual rates of increase in shrimp consumption in Japan, the USA and Europe, are the result of the relatively long period of economic growth in these countries, and declines in real prices of many shrimp products over the past 10 years. Part of this price decline is explained by upward revaluation of currencies of Japan and some European countries".

Future demand for shrimps is expected to grow at an annual rate of 3.5 percent over the next five years, taking into consideration, population growth, income, prices of shrimp and prices of its substitutes such as beef, pork, chicken and consumer tastes.

3. WORLD SUPPLY

More than forty countries in the world produced farm-raised shrimps of different varieties. The giant tiger shrimps, Penaeus Monodon, however, dominates production (33%), as indicated in Figure 1.

The other varieties of shrimp include the Chinese White Shrimp (28%), Western White Shrimp (10%) and others.

Table 1 Worldwide Shrimp Consumption (1970 - 1988)

(000 tons, whole animal equivalent)				
Year	Japan	USA	Other	Total
1970	148	294	644	1086
1975	261	306	744	1311
1980	304	320	1041	1665
1981	290	328	1091	1637
1982	308	340	1066	1714
1983	316	387	1088	1791
1984	338	435	1092	1865
1985	353	463	1164	1980
1986	396	519	1084	2001
1987	425	561	1052	2038 a/b
1988	425	561	1068	2100
Average Annual Growht Rates:				
1970-88	6.53	3.75	2.85	3.73
1970-80	7.46	0.85	4.92	4.37
1980-88	5.37	7.48	0.32	2.94
1984-88	8.13	7.00	-0.55	3.01
a/ Preliminary b/ Team Estimate	FAO Estimate			

Sources: U.S. National Marine Fisheries Services for consumption in Japan and the U.S.A (with conversion by the team of U.S.A data to head-on equivalent); total consumption from FAO estimates of world-wide shrimp production form 1970–1987. Consumption by other countries is taken as the difference between the FAO total production figures and the estimated consumption in Japan and U.S.A combined.

As quoted in Asia-wide Shrimp Agro-Industry Sector Study (p66)

The major countries that produce shrimps cultured in the man-made ponds are China, Indonesia, Thailand, Philippines, Equador, Vietnam, India, Taiwan, Central America and Caribbean and South America (Table 2).

China is the largest supplier of shrimps in the world. The Asian countries contribute about 80 percent of the world cultured shrimp.

Cultured shrimps output "has increased from about 30,000 MT in 1975 (2.3 percent of world supplies) to about 560,000 MT in 1988 (26.6 percent of world supplies)" (Table 2).

Table 2 World Summary 1989

Country by rank (guesstimate)	% of World Production	Heads-on Production (metric tons)	Hectares in Production	Kilograms per Hectare
China	29	165,000	145,000	1,138
Indonesia	16	90,000	250,000	360
Thailand	16	90,000	80,000	1,125
Philippines	9	50,000	200,000	250
Ecuador	8	45,000	70,000	643
Vietnam	5	30,000	160,000	187
India	4	25,000	60,000	416
Taiwan	4	20,000	4,000	5,000
Central Americal and Caribbean	2	12,000	12,000	1,000
South American (excluding Ecuador	1	7,000	8,000	875
Other	5	30,800	103,300	298
Totals	-	564,800	1,092,300	517
Eastern Hemisphere	89	500,100	1,002,300	499
Western Hemisphere	11	64,700	90,200	717

Source: *World Shrimp Farming 1989*

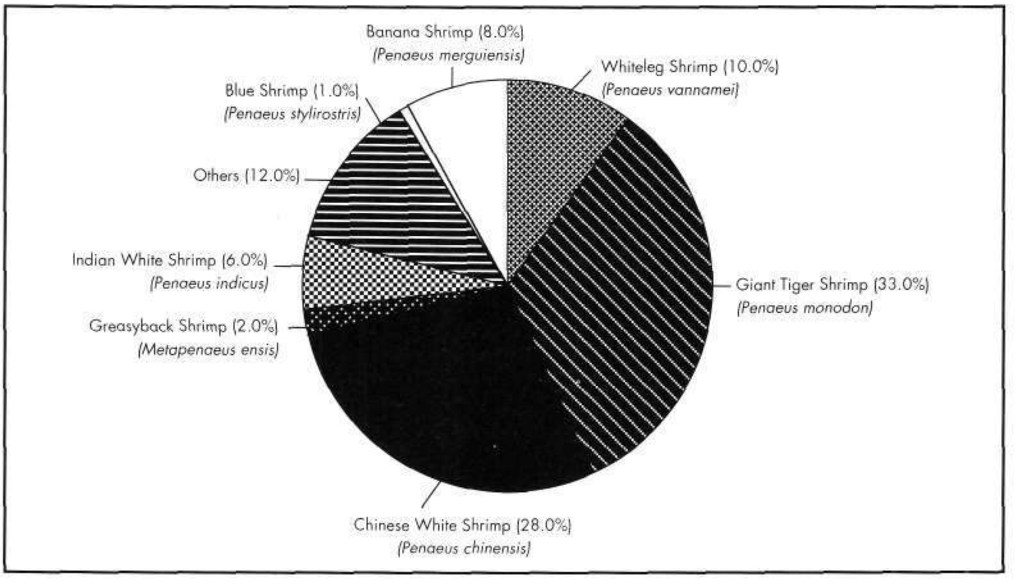

Fig. 1 World Production by species (1989)

Source: *Aquatech '90: Conference Programme*

Table 3 Estimated Shrimp Culture Production, 1975 - 1988

(000 tons, live weight)						
Country	1975	1980	1985	1986	1987	1988
Study Countries						
Bangladesh	4	7	13	13	15	18
China	0	2	41	83	153	180
India	4	12	17	19	22	24
Indonesia	10	28	37	41	52	70
Malaysia	0	0	0	2	3	3
Philippines	1	2	29	30	35	45
Thailand	3	10	16	18	30	45
Sub-Total	22	61	206	206	310	385
Other Major Procedures						
Ecuador	0	9	27	36	66	70
Taiwan	0	5	33	70	90	45
Vietnam	1	4	7	10	15	25
Sub-Total	1	18	67	116	171	140
Others	7	11	6	19	25	35
Total	30	90	226	341	506	560
Shares of world catch (%)	2	5	11	17	25	27

Sources: Infofish and team estimates:
As quoted in Asia-Wide Shrimp Agro-Industry Sector Study April 1989

In 1988, it is estimated that the total world shrimp supply (including captured shrimp) reached approximately 2.1 million MT. Table 3 shows that output of cultured shrimp has grown at an annual rate of 25% between 1975 and 1988. Since most countries are encouraging the growth of shrimp culture, the output in the future is expected to increase, perhaps exceeding demand (Figures 2 and 3).

"The average increase in total supplies of about 6 percent annually" is estimated by Asia-wide study.

4. SHRIMP PRICES

Analysis of the shrimps prices during the short term duration shows that shrimps prices have been fluctuating in the US, Japan and Europe. However, the general trend over a longer term, shows that the prices remained constant. It is a scenario that will not be maintained in the future.

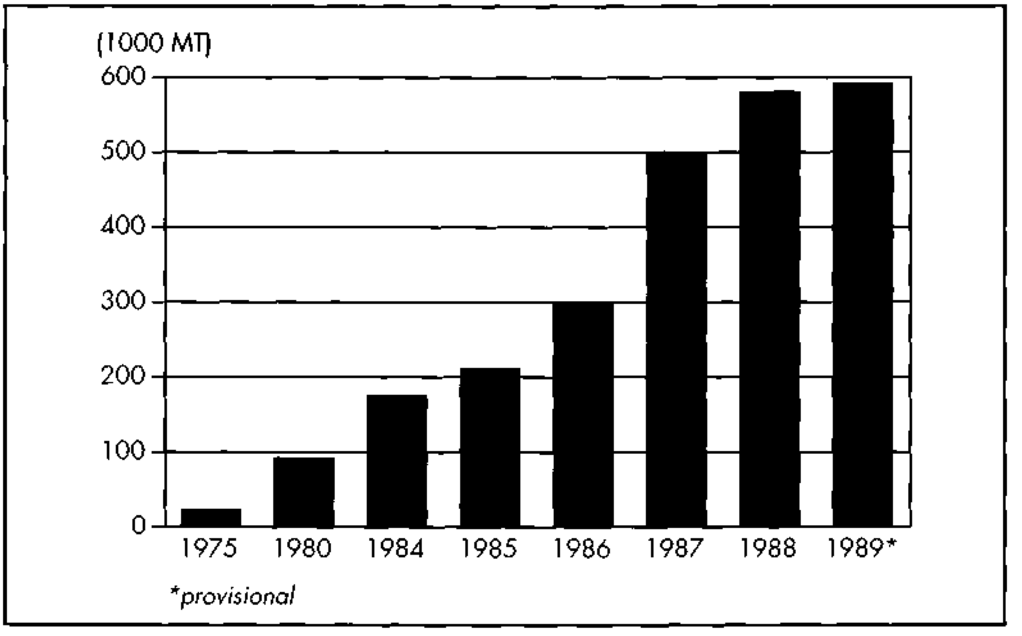

Fig. 2 World Production of aquacultured shrimp

Source: Aquatech '90 conference programme

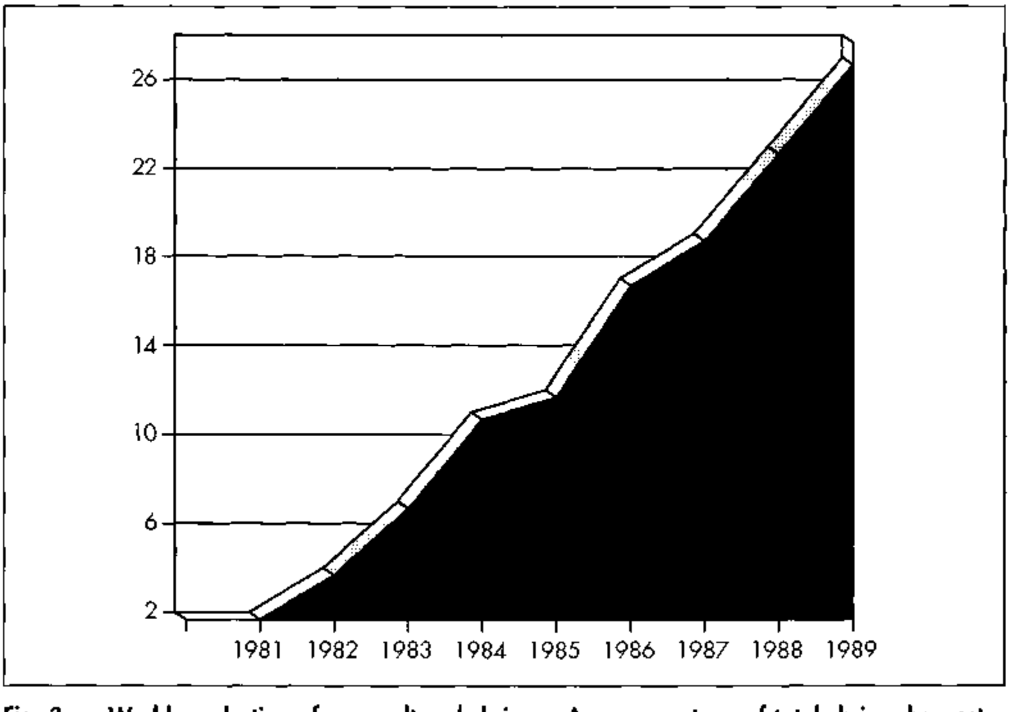

Fig. 3 World production of aquacultured shrimp - As a percentage of total shrimp harvest

Source: Aquatech '90 conference programme

Asia-Wide Study shows that "demand is expected to rise at about 3.5 percent annually, and supply is expected to increase at an annual rate of about 6 percent. Thus real prices of shrimps are likely to decline sharply". Furthermore, it is estimated that "by 1993, real shrimps prices, on average, could decline by about 35 percent from their level in 1988. For producers of cultured shrimps, this could mean that pondbank prices of black tiger shrimps would fall by 1993, to as low as (US) $4.00/kg of 30 gram animals.

The later quarter of 1989 saw a drastic decline in the prices of world shrimps due to the over supply of shrimps from Thailand, Indonesia and the Philippines. The fall in the shrimps prices resulted in the increase in the consumption of shrimps in Japan, the US and Europe. Extremely low prices in 1989, led to unexpectedly high consumption figures: 3 kg per caput in Japan, 1.2 kg per caput in the United States and 0.75 kg per caput in the European Community. The prices have reached their lowest levels and are now rising, but they are not expected to reach the high levels they have enjoyed. Relatively low prices are here to stay. With the persisting glut on the world market many Asian countries resorted to the promotion of domestic shrimp sales.

5. THE JAPANESE SHRIMP MARKET

Japan's shrimp consumption as well as imports have increased since the early sixties. The total shrimp supplies increased from 148,000 tons in 1970 to 462,000 tons in 1988, representing a growth rate of 6.53 percent annually. Domestic production is decreasing while imports are increasing to fill the gap in supplies to meet the increasing demand. The increase in demand for shrimp is due to the rising incomes, cheaper shrimp prices and appreciation of the yen. The present consumption per caput is 3.0 kg, the highest in the world. It is observed that the Japanese market has reached a "saturation point". Nonetheless, given further increase in incomes and population in the future, there should be room for further increase in demand for shrimps in general, and cultured shrimps in particular. Apart from these, a new trend seems to be emerging. This is the increase in imports of value-added and air-flown products. Thus these factors should contribute to future increase in imports of shrimps into Japan (Figure 4 and 5).

6. THE USA SHRIMP MARKET

The Americans seem to enjoy seafood. The consumption of shrimps grew slowly during the 1970–1980 due to (i) the slunggish economy and (ii) oil-price shocks. However, the consumption picked up rapidly since 1980 mainly because of:

i. The steady expansion in the economy;

ii. The shift in taste towards seafood and towards cultured black tiger shrimps and;

iii. The declining prices of shrimps (Figure 9).

Domestic landings of shrimp in the US are low. The highest production of shrimp was

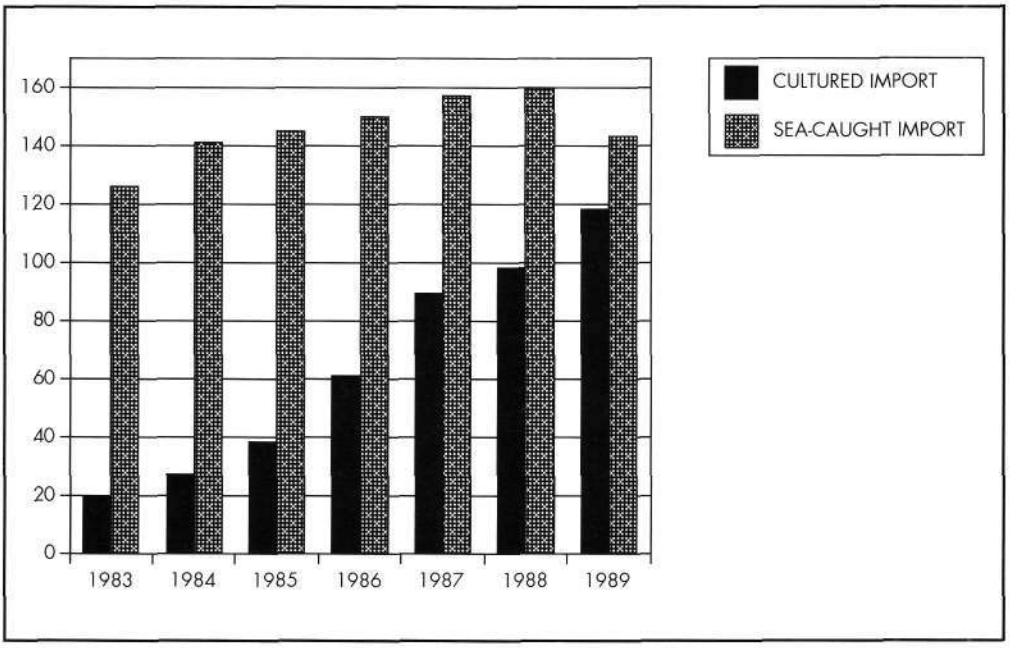

Fig. 4 Japan: Cultured Vs Sea-Caught shrimp imports

Source: Aquatech '90 conference programme

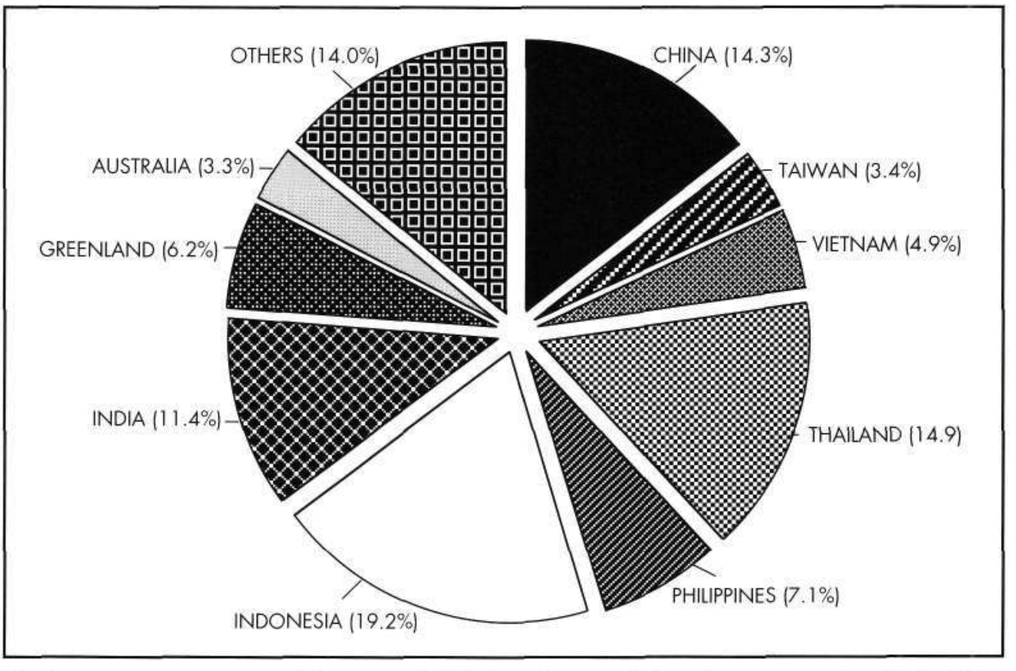

Fig. 5 Japan: Quantity of imports of chilled and frozen shrimp by country of origin (1989)

Source: Aquatech '90 conference programme

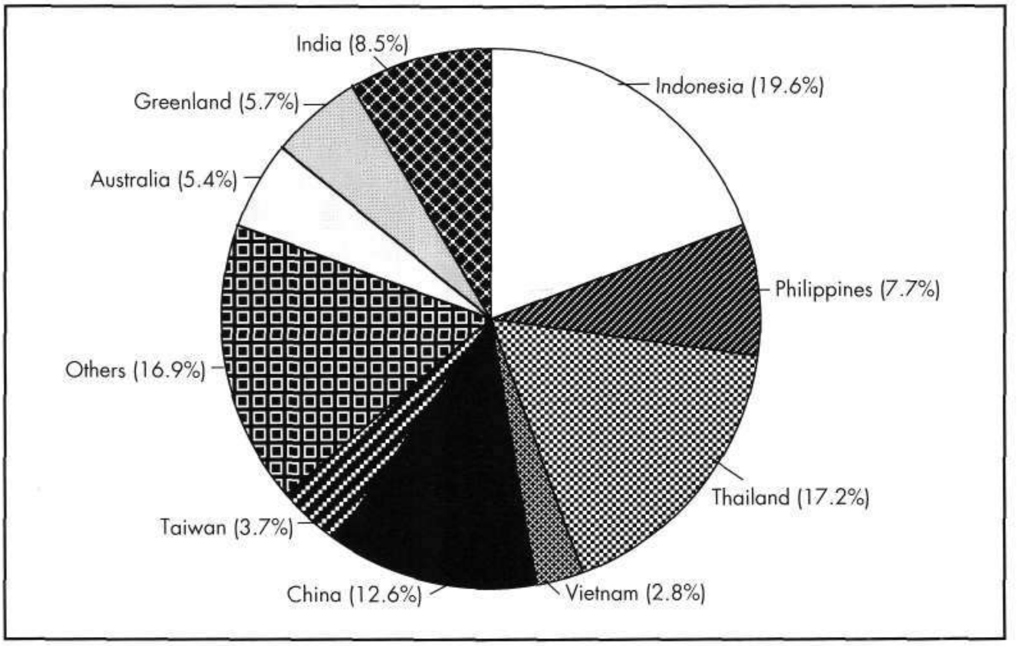

Fig. 6 Japan: Value of frozen shrimp imports by country (1989)

Source: Aquatech '90 conference programme

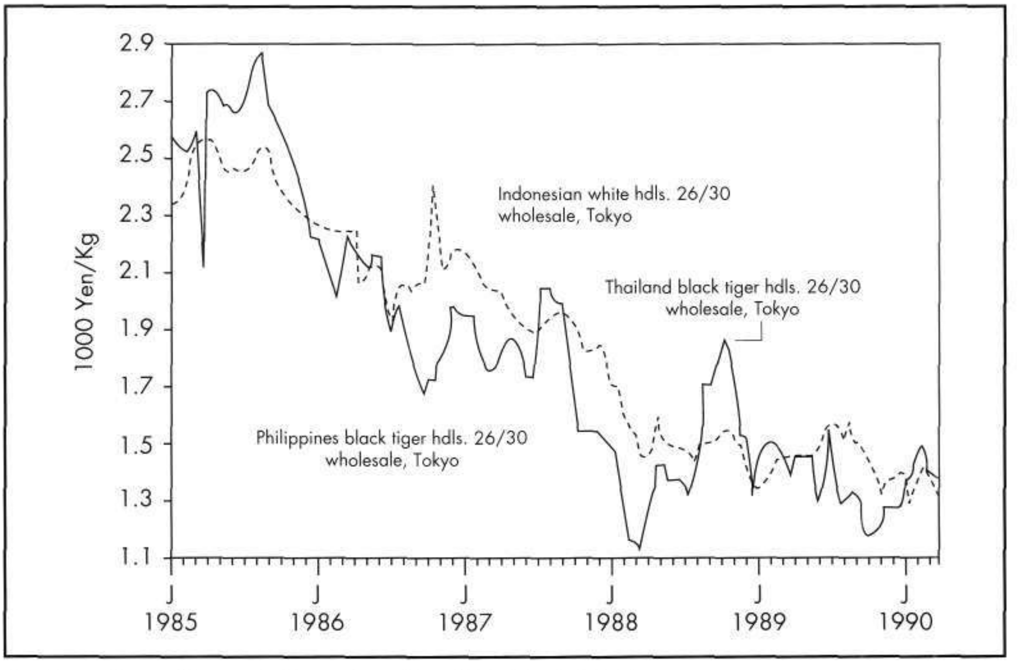

Fig. 7 Japan frozen shrimp prices (Jan 1985-April 1990)

Source: Aquatech '90 conference programme

179,000 tons in 1986 while the output totalled only 151,000 tons in 1988. A minimal amount of shrimps are cultured in the US. Thus, the USA imports about 70% of the total consumption of shrimps. During the last 5 years, shrimp imports have increased from 360 million lbs in 1985 to 503 million lbs in 1989 (Figure 8).

The increase in consumption was partly due to the increase in cheap imports. For a long time Latin American countries such as Ecuador and Mexico had supplied shrimps to the US market, but this trend was broken by the Peoples' Republic of China in 1988 when it became the number one supplier to the US market. Other Asian countries such as Thailand and Philippines have also doubled their exports to this market during the last two years.

Perhaps, Malaysia can also exploit this market in future. In view of the fact that per capita consumption of shrimp in the US is low (1.2 kg), there could be a bright market potential for those producing countries, especially in Asia.

7. THE EUROPEAN SHRIMP MARKET

Europe would be considered the third largest market for shrimp after Japan and the United States. The consumption of shrimp per capita for Europeans is about 0.75 kg. The huge population of over 320 million, favourable exchange rate movements, lower import prices from Asian producers and changing consumer attitudes in Europe are the important factors contributing to increased demand for shrimp consumption.

Shrimp imports into European states increased from 170,000 tons in 1984 to 265,000 tons in 1987 (Table 4).

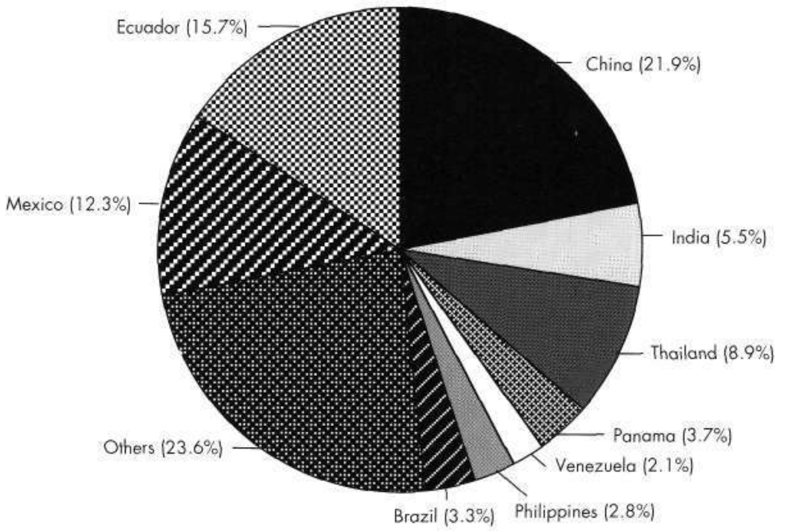

Fig. 8 USA: Quantity of shrimp imports (1989) by country of origin (% contribution)

Source: Aquatech '90 conference programme

Table 4 European Imports of Chilled and Frozen Shrimp by Importing Countries, 1984 - 1988

(000 tons, product weight)				
Importing Country	1984	1985	1986	1987
Belgium/Luxembourg	7.9	9.4	12.0	14.2
Denmark	38.2	48.2	53.2	48.2
France	26.7	32.6	35.7	38.2
West Germany	6.6	8.4	10.0	11.7
Italy	12.9	17.3	19.2	23.1
Netherlands	9.4	12.6	12.7	15.8
Norway	6.6	13.6	12.2	10.3
Spain	12.7	7.7	18.0	34.3
Sweden	13.3	13.5	13.8	14.4
U.K.	32.9	36.4	41.0	40.9
Others	2.5	4.9	3.5	13.9
Total (14 countries)	169.7	204.6	232.0	265.0

Source: Foodnews

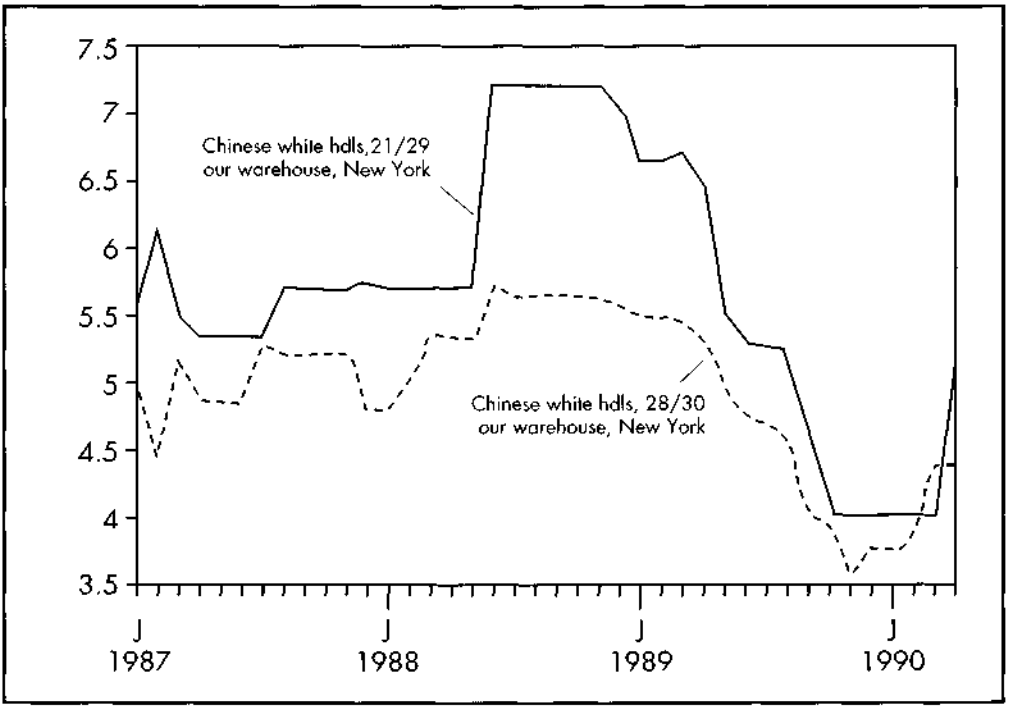

Fig. 9 USA frozen shrimp prices

Source: Aquatech '90 conference programme

If we assume that the consumption in Europe would increase in the pattern of the USA and Japan, then, we could estimate per caput consumption of 1.5 kg in the next five to ten years. This means doubling the present consumption. With the European common market opening its door wide open in 1992 and with effective promotion by shrimp farming countries, there is a great scope for expansion in the shrimp market in the various countries of Europe.

8. SUMMARY

In summary, we can say that the world demand for the cultured black tiger shrimp is determined by population growth, increase in income, a fall in shrimp prices and its substitutes and changes in taste towards seafood consumption. There is a decline in captured fisheries including shrimp products. Thus, farm-raised shrimp should close the gap. However, because of technical improvements, availability of commercial feeds and advances in culture techniques, a good supply of shrimp is being produced by many countries - especially Asian countries. This has led to the present situation where supply exceeds demand. In the event prices are bound to fall. If world demand increases to match the increased supplies, the shrimp industry should experience stability and growth.

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