On the supply and consumption of fish in Cyprus

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Marketing of aquaculture products

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SUMMARY - In Cyprus there is a shortage of fish and local production from fisheries and aquaculture meets only about 40% of the total fish consumption, while the gap is filled by imports. Marine aquaculture is promoted by the government in order to increase the local supply of fresh fish. The per capita consumption of fish in 1994 was around 13kg out of which 1.2kg was consumed by tourists. An analysis of the consumption is being further attempted. Special attention is given to good quality fresh fish and its sources of supply, since marine aquaculture in 1994 represented about 30% of it. The factors which affect the market for aquaculture products are being examined. Consumer preferences are also discussed. The perspectives for the expansion of the market for aquaculture products are given. It is anticipated that the new market environment created by GATT and the harmonization of Cyprus to the Aquis Communautaire could affect the supply and, subsequently, the consumption of fish in Cyprus.

Key words: Aquaculture, Fisheries, fish consumption, fish imports

RESUME - *"Offre et consommation de poisson à Chypre". A Chypre il y a un déficit de poisson, la production locale des pêcheries et de l'aquaculture ne fournissant que 40% de la consommation totale de poisson, et la différence étant assurée par les importations. L'aquaculture marine est encouragée par le gouvernement afin d'augmenter l'offre locale de poisson frais. La consommation de poisson par habitant en 1994 a été d'environ 13 kg, parmi lesquels 1,2 kg ont été consommés par des touristes. Une analyse de la consommation est en cours. Une attention particulière est accordée au poisson frais de bonne qualité et à ses sources d'approvisionnement, étant donné que l'aquaculture marine en 1994 a représenté 30% de ce volume. Les facteurs qui influencent le marché des produits aquacoles sont examinés. Les préférences du consommateur sont également discutées. Les perspectives d'expansion du marché des produits aquacoles sont présentées. Il est avancé que le nouveau cadre de marché créé par le GATT ainsi que l'harmonisation de Chypre vis-à-vis de la Communauté Aquis pourraient affecter l'offre et, par conséquent, la consommation de poisson à Chypre.*

Mots-clés : *Aquaculture, pêcheries, consommation de poisson, importations de poisson.*

INTRODUCTION

The supply of fish from fisheries is limited since the fishing grounds are almost fully exploited and the Eastern Mediterranean is generally poor in fish resources. Aquaculture is being promoted by the government acknowledging its potentials in increasing local fish supply. Freshwater aquaculture (trout culture) is limited by the scarcity of suitable water, while marine aquaculture has excellent potentials for development.

In 1995 there were into operation 8 offshore cage farms, 3 landbased marine fish hatcheries and one shrimp farm. The fish farms started operation in 1991-1992 and are at the stage of expansion in order to reach, in the first place their initially planned capacity of 150t/year per farm on the average. The species which are cultured on commercial basis are mainly seabream, seabass and, on a smaller scale, new species like the sharpsnout bream Puntazzo puntazzo and the Japanese red seabream Pagrus major as well as the shrimp Penaeus indicus.

In addition to the fish produced by fisheries and aquaculture, fish and fish products are being imported to fill the gap between supply and demand in the local market. Presently Cyprus applies a fish import licensing system based on fish species and size to protect local production. This system is being re-examined in view of the GATT policy and the harmonization of the island towards the Aquis Communautaire.

The existing situation as regards the supply and consumption of fish in Cyprus is being examined in detail in this paper.

FISH SUPPLY

Local sources

Fisheries production comes from the inshore fishery, the trawl fishery with fishing undertaken along the narrow continental shelf of the island, swordfish fishing in territorial and international waters offshore Cyprus and the trawl fishery in international waters. The production of fish from fisheries is rather stable being around 2700t per year.

Aquaculture production comes mainly from marine fish farms and increases every year (Fig. 1), while the production of the trout farms is rather stable, ranging around 80-90t per year. In 1994 aquaculture products represented in quantity about 10% of the total fish production of the Cyprus fisheries and in value about 20%.

The supply of fish from the Cyprus fisheries during 1992-1994 is given in Fig. 2.

Imports

During the last 5 years no dramatic changes in the total quantity of fish and fish products imports was noted. Imports increased from 4300t in 1990 valued at C£6.5 million to 5050t in 1994 valued at C£9 million.

The imports refer to fresh, frozen or processed fish as well as to crustaceans and molluscs (mostly octopus, squid and cuttlefish) that represent a large percentage of the imports. The imported fresh fish refers mainly to marine fish from fisheries and to small quantities of salmon for smoking. Main sources of fresh fish supply are some other Mediterranean and Gulf countries as well as Norway and Scotland (for salmon).

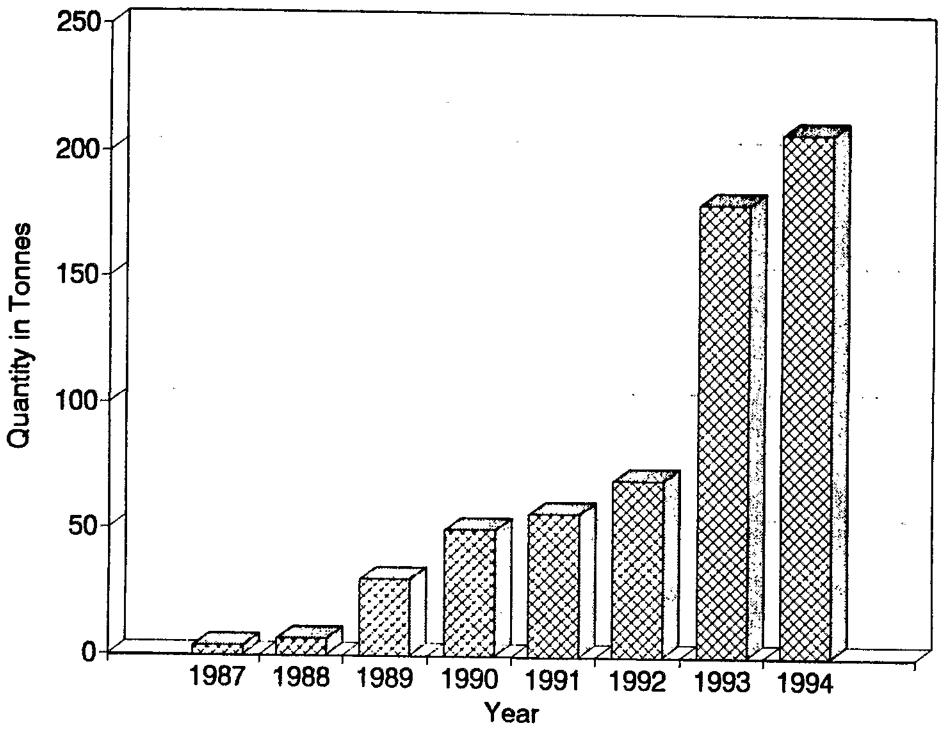

Fig. 1. Marine Aquaculture Production.

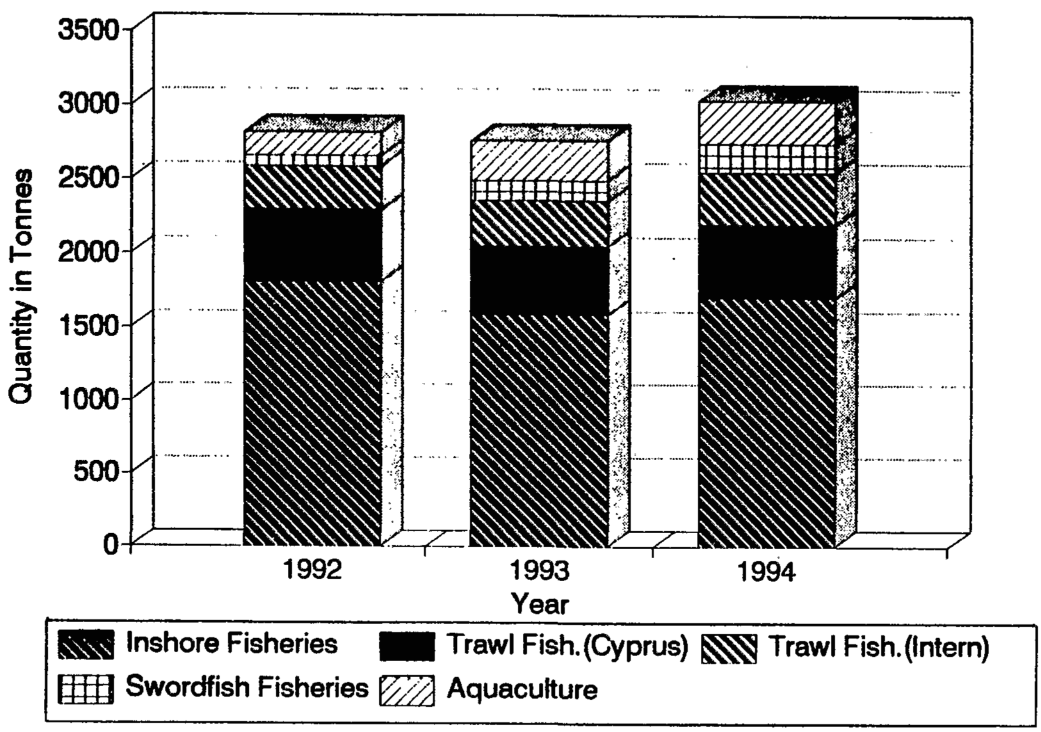

Fig. 2. Cyprus Fish Production by Source.

Presently the largest quantities of fresh fish imported from Mediterranean countries belong to the common seabream Pagrus pagrus and the common dentex Dentex dentex. As regards the species imported from the Gulf, the majority of them are species which have some similarities with the above mentioned species. These are sold under the common Cypriot names of Pagrus pagrus and Dentex dentex (mislabelling). The bulk of the fresh fish from the Gulf belongs to the species Argyrops spinifer, Mylio berda, M.cuvieri, M. bifasciatus (sold as common seabream) and Lethrinus harak, Pinjalo pinjalo, Lutzanus malabaricus (sold as common dentex).

FISH CONSUMPTION

Fish Quantity

The fish consumption in Cyprus during 1994 is given in Fig. 3. Imported fish and fish products represented in quantity about 60% of the total fish consumed and in value about 45%.

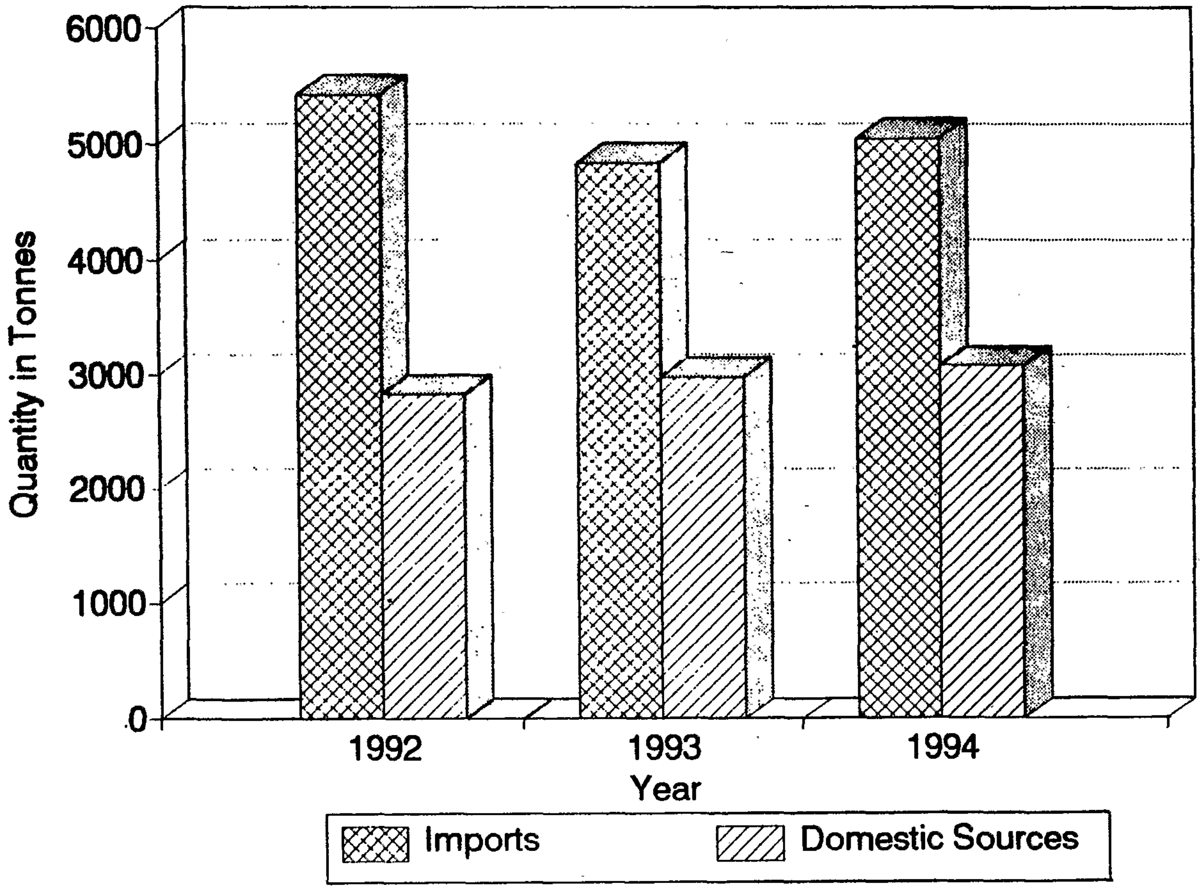

Fig. 3. Consumption of Fish in Cyprus (Fresh, Frozen & Processed).

The average per capita consumption of fish and fish products in also rather stable ranging from 12.2kg in 1990 to 12.7kg in 1994 (Fig. 4). This is low compared with that of the north Mediterranean countries and higher than that of the south Mediterranean countries.

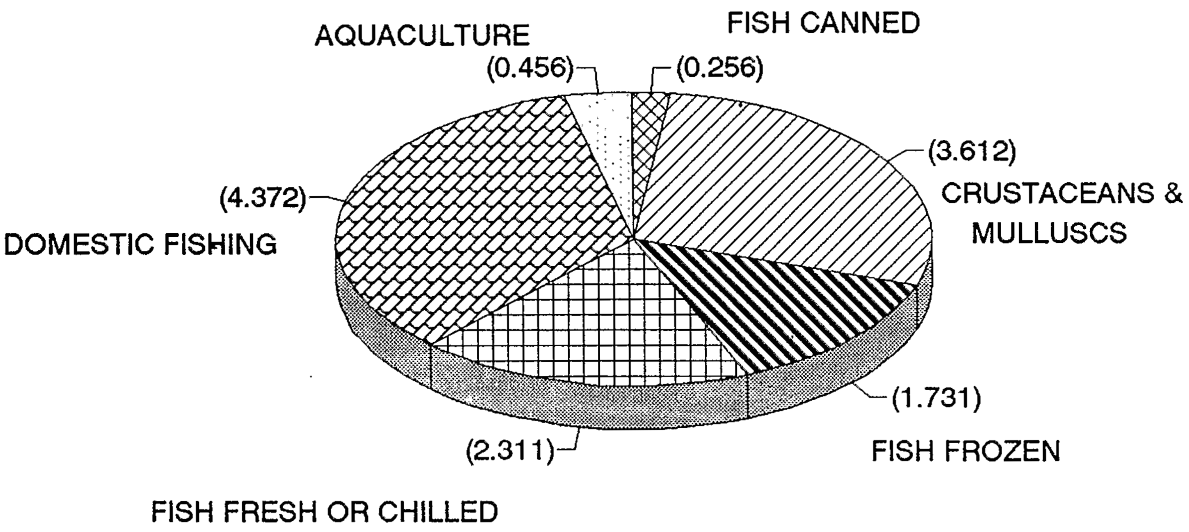

Fig. 4. Average Annual Fish Consumption per Capita in Kilos (1994).

The estimation of the per capita consumption is somehow misleading: the local Cypriot consumes less fish than 12.7kg per year because considerable quantities of fish are absorbed by the flourishing tourist industry. During 1994 Cyprus hosted about 2 million tourists, about 3 times the local population, that stayed on the average for 12 days. Assuming that the tourists consume about the same quantity of fish as the locals do during their stay, it is estimated that about 1.2kg was consumed by each tourist. If this is taken into account, then the per capita consumption of fish by Cypriots in 1994 was only 11.5kg. Such an inaccuracy in the estimation of the per capita consumption of fish may occur in most Mediterranean countries, especially in those where the number of tourists, compared with the local population, is high. The estimated quantity of the cultured fish which was consumed during 1994 was only about 0.45kg capita.

Consumers preferences

Fresh marine fish is highly esteemed by Cypriots, although they are heavy meat eaters, as proved by Fig.5. The low fish consumption could be partly attributed to the high price of fresh marine fish: The price of one kilo of B quality marine fish is equal to the cost of about 2 kilos of mutton meat and 4 kilos of poultry or pork meat.

As regards aquaculture products, Cypriots prefer the taste of marine fish than trout which is sold to a great extent smoked and is absorbed by the tourist industry. Also there exists a distinct preference for seabream than seabass, which is the prevailing preference in the Eastern Mediterranean.

As regards imported fresh marine fish, the Mediterranean species are preferred by the consumers, although exotic species from the Gulf countries are sold extensively in the fish shops, mainly due to their low price. During 1994 55% of the imported fresh Mediterranean fish were common seabream and common dentex. Also 71% of the fish quantities imported from the Gulf were species which were disposed in Cyprus as common dentex and common seabream.

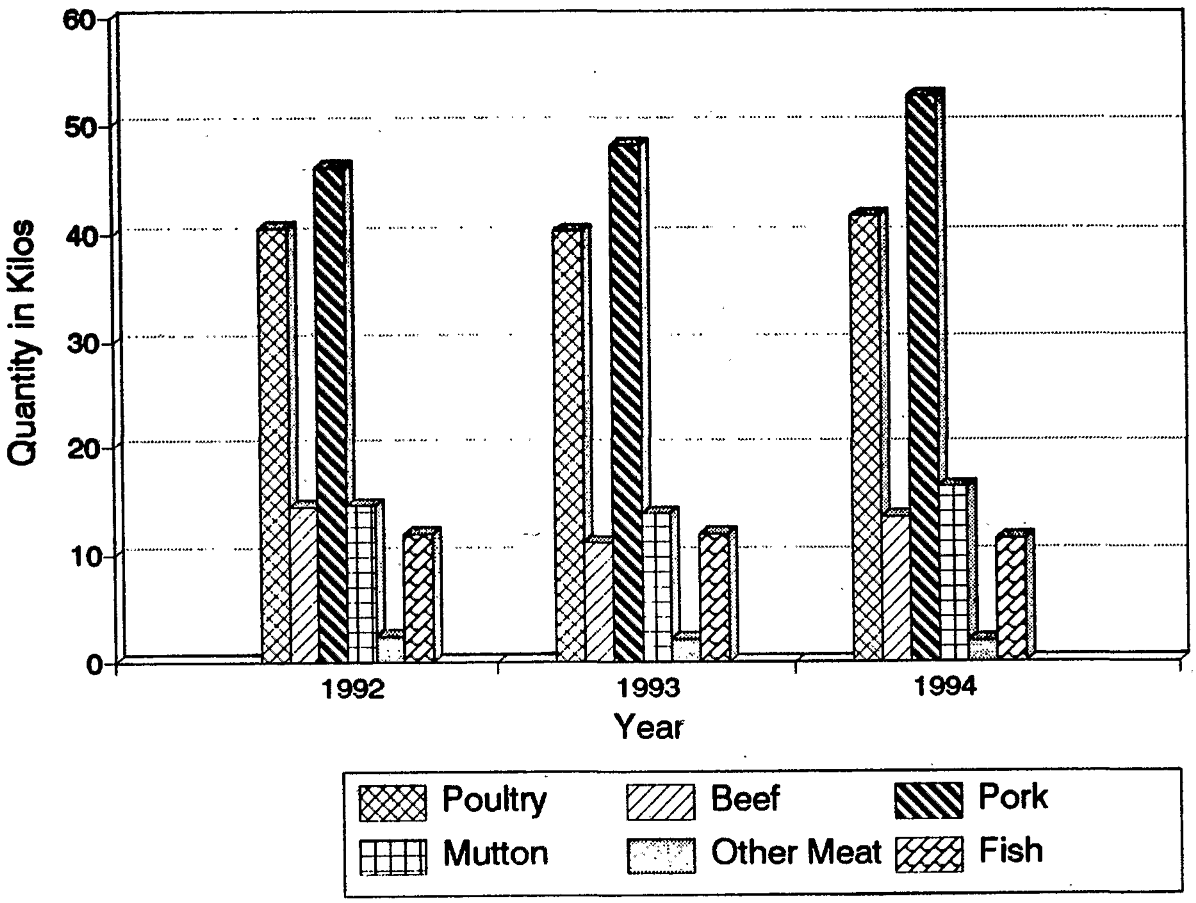

Fig. 5. Per Capita Consumption of Meat and Fish in Cyprus.

High quality fish supply

Fresh fish represents about 50% of the total quality consumed and its sources of supply are given in Fig. 6. During 1994 the situation was as follows:

<u>Sources of supply based on quantity</u>		<u>Sources of supply based on quality*</u>
Imports	8.5%	36%
Aquaculture	11.5%	27%
Fisheries	80%	37%

* Only A and B quality fish were taken into consideration.

It is pointed out that the contribution of aquaculture (mainly marine) to the supply of fresh fish of good quality (A+B) is much higher than their total quantity of production implies (Fig. 7).

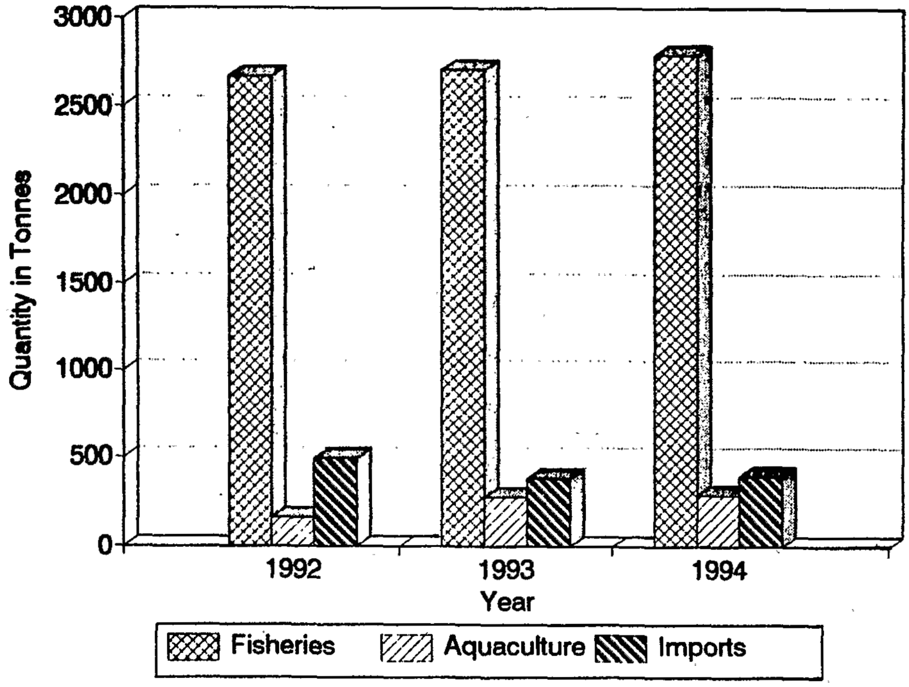

Fig. 6. Fresh Fish in Cyprus by Source.

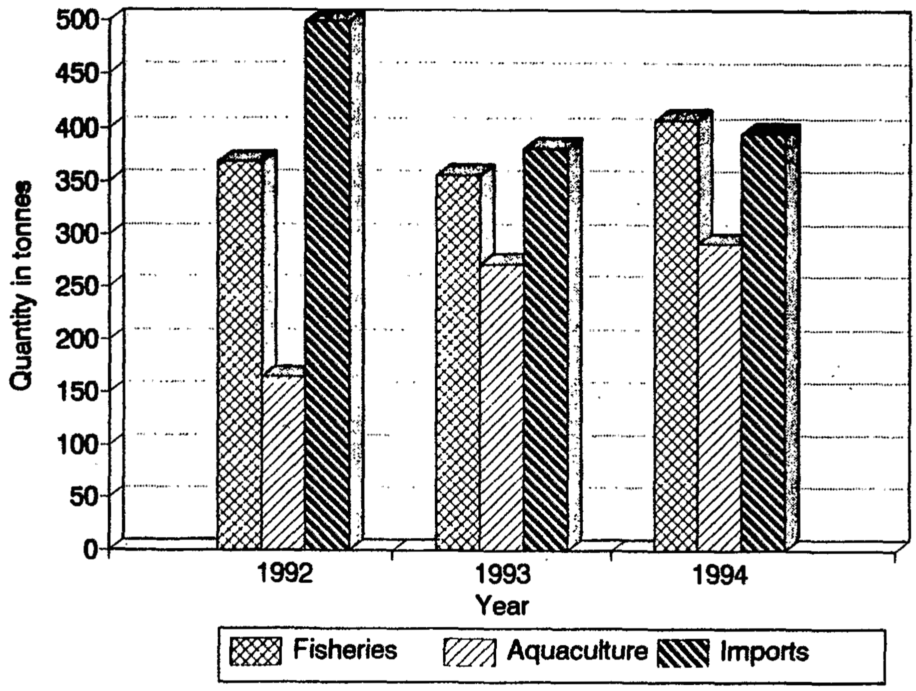

Fig. 7. A&B Quality Fresh Fish Production by Source.

Marketing channels/prices

Presently the bulk of the production is disposed locally through the traditional fish marketing channels i.e. through fish mongers. Because of this any reduction of the wholesale price of seabream and seabass does not reach the consumer at the same magnitude. The prices structure during the last 4 years is given herebelow:

Local wholesale and retail prices of table size (330g) fish produced in the Cyprus marine fish farms

Year	Prices* £C/kg	Seabream		Seabass	
		Wholesale	Retail	Wholesale	Retail
1992	min. max.	6.00 7.00	8.00 8.50	6.00 7.00	8.00 8.50
1993	min. max.	5.00 6.00	7.00 7.50	5.00 6.00	7.00 7.50
1994	min. max.	5.00 5.50	7.00 7.50	4.50 5.50	7.00 7.50
1995	min. max.	4.50 5.50	5.50 7.00	4.50 4.50	5.50 7.00

* 1C£ = U.S.$2.2

Small quantities are sold directly from the producers to consumers while the role of the supermarket as a new outlet of fresh fish has to be further exploited. One of the marketing solutions which are presently being sought with government encouragement refer to the establishment of Producers Associations.

Local market/exports

Seabream and seabass, especially the latter, were rather unknown to the Cypriot consumers, since they are caught by Fisheries in negligible quantities. Their market expanded considerably since 1992 that the fish farms started selling their production.

	1992	1993	1994	1995(Estimation)
Local market	53t (76%)	72t (42.4%)	188t (89%)	90t (97%)
Export	17t (24%)	98t (57.6%)	22t (11%)	10t (3%)
Total	70t	170t	210t	300t

	1992-1993	1993-1994	1994-1995
Local Market Increase	36%	161%	54%

Presently the low export price that the fish fetch in the Italian market discourages exports. In addition to the low price, an import duty of 15% is imposed on table marine fish which is exported to EU countries from Cyprus, since the latter is not yet a member of EU and the sector of Fisheries is excluded from the Customs Union Agreement between EU and Cyprus. For the time being fish exports are considered as a mean for securing the recycling of the working capital of the farms and a "pressure valve" that eliminates the pressures on the local market. Nevertheless the exports of marine aquaculture products in 1994 represented 32% of the value of exports of all animal and animal products (excluding dairy products). Aquaculture exports included also the value of 4 million marine fish fry exported mainly to Greece.

PROSPECTS

Efforts to expand further the local market for aquaculture products include publicity campaigns undertaken by the government through the Department of Fisheries (TV programmes, distribution of recipes to consumers, mass media etc) as well as relevant efforts undertaken by the producers themselves. The latter are expected to intensify their publicity campaigns with the increase of their production.

Also Cyprus is trying to diversify the species produced by marine aquaculture with the production of fish like the sharpsnout bream Puntazzo puntazzo, while experiments continue for the mass production of species like the common seabream Pagrus pagrus, the common dentex Dentex dentex, the axillary seabream Pagellus acarne, the marbled spinefoot Siganus rivulatus etc. The diversification aims at improving the market potentials of aquaculture fish by increasing their variety and replacing some quantities of seabream and seabass with other good quality fish.

Further expansion of the local market for aquaculture products is expected with the improvement-expansion of the marketing channels and the distribution systems used. It is anticipated that the prevailing new dietary habits and the increase of the standard of living of Cypriots will result to the increase of fish consumption in the future. The production of fresh marine fish from aquaculture could contribute to such a development provided that it reaches the consumer at reasonable prices. The introduction of the GATT philosophy on fish imports and the harmonization with the EU imports regulations could affect the marine aquaculture development in Cyprus, although it is impossible at this stage to foresee the repercussions, since the target of the marine aquaculture sector is to become selfsustained and competitive in the local and international fish markets. Nevertheless aquaculture products are not expected to be sold at the price of low quality marine fish.

In addition to the anticipated increased consumption by Cypriots, a study is required of the role of the tourists as consumers of seabream, seabass and as a force for the development/expansion of the market of these species in their countries of origin i.e. U.K., North Europe and Scandinavia.

The decrease of the retail price of seabream and seabass is expected to lead to the replacement of the imported relative species and of species which look similar with them and/or are prepared in the same prevailing way (grilled). Such candidates for replacement are the common seabream and common dentex and the exotic species which are sold under the same names.

The potentials for further expansion of the local market as well as the replacement of exports will dictate the rate of expansion of the marine aquaculture production and, to a certain extent, the level of production. It is anticipated that in the years to come increasing attention will be paid to safeguarding the hygiene of the fish and its high quality.

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