

**THE MARKET FOR FARMED RED PORGY IN  
FRANCE, GREECE, ITALY AND SPAIN**

**GREECE**

A study made within the COLORED project (Contract Q5RS-31629)  
"Environmental, nutritional, and neuroendocrine regulation of skin  
colouration in the Red porgy (*Pagrus pagrus*) towards the  
development of natural hue in culture populations"

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*Project Summary*

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## GREECE

### 1. FRESH FISH IN GREECE

#### 1.1 IMPORTANCE OF FRESH FISH

The Greek consumer generally prefers meat to fish, and fish has always been relatively expensive.

There is, however, an **increase in fish consumption**, due to:

- the rising standard of living and education
- the introduction of larger fish counters in modern food stores
- the fact that meat is not the same status symbol it used to be, and
- the Greek consumer has realised that fish is a healthy product.

There is also an **increase in fresh fish** consumption at the expense of frozen fish. However, retail chains do not have fish counters in all their stores yet: ALFA BETA has fish counters only in 50% of its stores – the biggest ones. SKLAVENITIS has frozen fish in its 36 stores, but fresh fish in only 12 stores. **Fish is not thus not very important for retailers. Fruit and vegetables play a more important role.**

Fish is not an image-builder for the store as the consumer is not yet used to the presence of a fish counter in the store.

#### 1.2 THE ROLE OF MEDITERRANEAN FISH

Of the overall quantities of fish consumed, it has been estimated that 70 to 75% is of Mediterranean origin (including imported). A chain like METRO has 95% of Mediterranean fish in its range.

In **catering** the importance of offering Mediterranean fish depends on the origin of the customer as well as the quality level of the restaurant:

- tourists tend to have little information about fish, as opposed to Greeks, and especially inhabitants of the islands, who know a lot about fish and for whom "Greek is better"
- up-market restaurants are looking for high quality, hence the choice of Greek, Tunisian and Moroccan fish.

Greek consumers want to eat Greek, as local production is considered to be of better quality. However, Greek production is not sufficient, and there are some imports.

**There is a degree of dishonesty about the origins and species of the fish,** especially in traditional shops/ markets where controls are not as strict as in modern retailing.

Local fish are mostly made up of sardines, anchovies etc. - because of their cheap price. In restaurants, people tend to eat more up-market fish (pandora, sea-bream etc.).

#### 1.21 CONSUMER TRENDS

Mediterranean fish consumption has been slowly increasing, following overall Greek fish consumption trends.

There are no clear statistics about the frequency of fish consumption in Greece. According to some operators, people tend to eat fish two to three times a week. Others consider that fish is still expensive and thus consumers eat little fish: only once a month on average!

There are obvious differences:

- depending on the season: in summer, fish consumption increases because people tend to go to out-door restaurants (tavernas) and eat smaller, fried fish
- and by geographical location: consumption is higher on the Greek islands.

The Greek consumer has been happy over the past few years to eat more fish, but also now has been educated to recognize the species and appreciates whether it is fresh or not.

#### 1.22 CONSUMER PROFILE

As it is not easy to cook (and because of its smell), fish tends to be eaten in restaurants (especially by young people).

Only older people tend to eat (and to be able to cook) fish at home.

#### 1.23 COOKING MODALITY

In Greece, **the tradition is to eat a whole fish.** Greek consumers traditionally do not buy fillets. However, there is a difference between Athens and the rest of the country. In Athens, women tend to have jobs, so consumers eat fish at the restaurant or take it home ready to eat from the supermarket.

Cooking habits change depending on the season. Fish are grilled or fried during summer (big fish are grilled while small ones are fried), while in winter fish is mostly turned into soup.

Red porgy is eaten mostly grilled. The head and tail are used to make soups. As a fillet it can be fried.

### 1.3 FARMED FISH IN GREECE

Farmed fish were introduced into Greece 20 years ago, and prices have kept decreasing ever since. **Consumers generally prefer wild fish**, as they are looking for quality, but take farmed fish because of its cheaper price (farmed sea bream costs EUR 5 to 5.5/kg compared to EUR 22/kg for wild sea bream). Farmed fish also makes it possible to have fish all year long with an acceptable taste (even though farmed fish is considered as fatter than wild fish). The Greek consumer eats an estimated 50% wild fish, 50% farmed fish.

In general, **consumers accept fish farming well** and there are no particular worries about farmed fish. Modern retailers do not communicate with consumers about farmed fish. They simply indicate whether the fish is wild or farmed. The only communication about farmed fish is made by supermarkets such as METRO or CARREFOUR, which communicate about their traceability programmes.

Unlike supermarkets, which tend to be cheaper and have a wider product range, most **restaurants prefer to serve wild fish**. Restaurant clients are ready to pay extra for quality (other than in cheap, tourist restaurants). Taverna owners buy farmed fish because they know they are going to make higher margins.

### 1.4 INTRODUCING NEW SPECIES

#### 1.41 EXAMPLES OF SUCCESS & FAILURE

What counts for the success or failure of a new species is:

- its price
- its similarity to a species that exists already.

The **Greek consumer does not always appreciate new species**. Some retail chains (e.g. METRO and ALFA BETA) try to innovate more than others. ALFA BETA customers are generally wealthier people, with a higher educational background, and they are thus curious to try new products. It is considered that only 10% of new introductions have failed.

New fish encounter difficulty at the start, since the Greek consumer prefers to buy what looks familiar. Sometimes it takes one or two years before a new product works, depending on the species.

Filletts are not developing very fast, even though there are frequent promotions in the stores. The consumer prefers the whole fish, otherwise she tends to believe that the fish is not fresh.

#### 1.42 PRICE FORMATION

Selling prices based on:

- buying price
- a mark-up depending on the competing fish's price.

#### 1.43 DEGREE OF BUYER RECOGNITION & FISH KNOWLEDGE

The following table indicates the answers given by the various interviewees when having to guess which fish were presented on the 7 pictures. Names in italics indicate the wrong names given by the interviewees.

Photo n°	Fish names	Retailers' answers			Wholesalers' answers		
		Retailer A	Retailer B	Retailer C	Wholesaler A	Wholesaler B	Wholesaler C
1	Morocco dentex	Does not know	<i>Blue-spotted seabream</i>	Morocco dentex	<i>Pandora</i>	<i>Pandora</i>	<i>Red porgy</i>
2	Blue-spotted seabream	<i>Pink dentex</i>	<i>Sea-bream</i>	<i>Pink dentex</i>	Blue-spotted seabream	Blue-spotted seabream	<i>Common red porgy</i>
3	Pink dentex	Morocco dentex	<i>Blue-spotted seabream</i>	<i>Blue-spotted seabream</i>	<i>Blue-spotted seabream</i>	<i>Pandora</i>	<i>Red porgy</i>
4	Gilt-head seabream	Gilt-head seabream	Gilt-head seabream	Gilt-head seabream	Gilt-head seabream	Gilt-head seabream	Gilt-head seabream
5	Mediterranean red porgy	Common red porgy	Common red porgy	n.a.	n.a.	n.a.	Common red porgy
6	Farmed porgy	<i>sea-bream</i>	Farmed porgy	<i>Common red porgy</i>	<i>sea-bream</i>	<i>sea-bream</i>	Farmed porgy
7	European seabass	Sea bass	Sea bass	Sea bass	Sea bass	Sea bass	Sea bass

The following table translates the above answers into figures, allowing us to draw some conclusions.

Photo n°	Fish names	Retailers' marks			Wholesalers' marks			Average
		Retailer A	Retailer B	Retailer C	Wholesaler A	Wholesaler B	Wholesaler C	
1	Morocco dentex	0	0	1	0	0	0	0.17
2	Blue-spotted seabream	0	0	0	1	1	0	0.33
3	Pink dentex	1	0	0	0	0	0	0.17
4	Gilt-head seabream	1	1	1	1	1	1	1
5	Mediterranean red porgy	1	1	n.a.	n.a.	n.a.	1	1
6	Farmed porgy	0	1	0	0	0	1	0.33
7	European seabass	1	1	1	1	1	1	1
<b>Average</b>		<b>0.57</b>	<b>0.57</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.57</b>	<b>0.54</b>

0: wrong answer or no answer at all

1: right answer

From these two tables we can conclude that:

- **common red porgy was recognized by all the interviewees** (as were gilt-head sea-bream and sea-bass)
- farmed porgy and Atlantic blue-spotted sea-bream are less well recognised:
  - Atlantic blue-spotted sea-bream was mistaken for several different species
  - farmed porgy was assimilated to a (admittedly deformed) sea-bream
- dentex are difficult to recognize.

The farmed red porgy presented on GIRA's picture was generally considered as **very different from a wild one in terms of colour and its shape**. It does not have an attractive colour.

## 2. RED PORGY SALES

### 2.1 SALES TRENDS

There are no figures for red porgy sales. It is the favourite "luxury" fish for Greeks and has been estimated at half luxury fish volumes. Luxury fish itself account for about 10% of the overall fish market. It means that fresh porgy could represent approximately 7 000 tonnes (both fresh and frozen).

Red porgy is mostly consumed frozen because of its relative low prices. Frozen is said to account for 80% of volumes. **Fresh red porgy volumes should thus be about 1 400 tonnes**. There are differences depending on the distribution channels:

- fresh porgy is sold to fishmongers (60%), restaurants (20 to 30%) and supermarkets (10%)

- frozen porgy is sold to fishmongers (60 to 70%), followed by supermarkets (30 to 40%). There is probably some frozen porgy which is bought by lower priced restaurants.

Modern retailers deal with small volumes of red porgy:

- ALFA BETA sells 15 tonnes of porgy a year, which it considers as being "a lot"
- SKLAVENTIS sold 116 tonnes of red porgy in 2002, of which only 10 tonnes was sold fresh
- CARREFOUR'S red porgy accounts for an estimated 1% of the fish turnover
- METRO sold 44 tonnes in 2002.

**Red porgy sales are stable in modern retailing, while it seems to follow an increasing trend in the restaurant sector.**

## 2.2 ORIGIN

There are 11 wholesale markets in Greece for a total of approximately 55 000 tonnes of fish (markets deal with only 40% of the total). In 2002, the Athens wholesale market dealt with a total of 25 000 tonnes, of which 545 tonnes of fresh red porgy:

- 94 tonnes of Greek origin
- 68 tonnes of other EU origins
- 383 tonnes of non-EU origin.

**Moroccan red porgy is similar to the Greek porgy in terms of taste, colour and shape. However, Senegalese porgy is preferred by Greek retailers because it is cheaper.**

Senegalese porgy has been estimated at 40% of the total, followed by Oman porgy. "Luxury" porgy – meaning similar to the Greek one (Morocco, Tunisia) – accounts for an estimated 30% of the total. There are also small volumes coming from other countries.

Greek porgy is said to represent very small volumes of the total.

Some modern retail chains buy directly from the producing countries (e.g. ALFA BETA), while others prefer dealing with importers because it gives more flexibility (e.g. SKLAVENTIS, METRO and CARREFOUR).

## 2.3 SIZE AND PRICE

### Size

Red porgy tends to be sold **mostly in larger sizes**: from 500g to 1.2kg and up to 3kg. Sizes are even bigger in the food-service area (up to 5kg).

### Prices

**Prices vary depending on the origin** and the buyer, however the following prices are indicative of current price levels. Fresh fish is always more expensive than frozen.

	Wholesale prices	Retail prices	Comments
Greece (fresh)	21.60	27.00	Up to EUR 40/kg
Morocco (fresh)	19.00		Up to EUR 25/kg
Senegal (fresh)	8.64	10.80	Up to EUR 16/kg
Oman (fresh)	8.21	10.28	Up to Eur 12/kg
Mauritania (frozen)	3.12	4.50	

Source: GIRA from interviews

Prices are higher in summer when there is need for higher quantities. Moroccan prices are EUR 1.5 higher during summer.

## 2.4 STRENGTHS AND WEAKNESSES OF WILD RED PORGY

Strengths	Weaknesses
Consumer demand Very good taste No particular technical/logistical problems Possibility of importing it at cheaper prices	Very expensive

Source: GIRA from interviews

Red porgy is considered as a **top quality fish** with an excellent taste and a very white, light meat. After sea bream, red porgy is the second favourite fish for grilling. It has a very good consumer image, that of a noble fish which comes from the Mediterranean. It is seen as very "natural".

Red porgy does not present any technical or logistical problems for retailers. Its supplies are also regular.

Its **only weakness is its price** (although there is the possibility of obtaining cheaper fish through imports). Some operators consider that if prices were lower, consumption would certainly increase.

## 2.5 COMPETING FISH

According to some operators, red porgy is easily substitutable by Morocco Dentex and gilt-head sea-bream, in terms of price and taste. According to others, red porgy does not have any real competitor as it is wild and sea-bream is mostly farmed. GIRA was told that **red porgy is a priority for the Greek consumer**.

Sea bream sells better than red porgy because it is farmed and thus much cheaper (EUR 8/kg).

## 3. FARMED RED PORGY

### 3.1 DEGREE OF KNOWLEDGE OF THE FISH

The presence of farmed red porgy on the Greek market is marginal. Many interviewees mentioned **an experiment which had been made a few years ago, but which stopped because of its bad results**.

The colour of farmed porgy did not correspond to the consumer requirements and the taste was not good.

Many operators are convinced that there is no farmed red porgy anymore in Greece. Some say that they are exported, others that they are sold to restaurants in the islands, as these are mostly frequented by tourists.

SKLAVENITIS and METRO sell farmed red porgy (on a very small basis). ALFA BETA sells 95% wild porgy against 5% of farmed porgy (750kg a year).

### 3.2 STRENGTHS AND WEAKNESSES

Farmed fish in general present several advantages:

- regular supplies
- cheaper prices
- consistent fish size.

However **farmed red porgy is still too expensive** at EUR 10 to 15/kg, which is more than the price of wild Senegal red porgy.

Because of the unsuccessful experiment made a few years ago, many operators are not so keen on trying to sell it again. Farmed red porgy does not have a good reputation. They consider that it would take time to make the farmed fish accepted.

**They sell so many other species without difficulty that there is no reason why they should make a special effort for farmed red porgy.**

### 3.3 DIFFERENCES IN COLOUR

Not everybody knows red porgy well, as it is really an "up-market" fish. The only information the consumer has about it is that **it is good, it is expensive, and it is red (this is very important)**. Consumers who cannot afford to buy it fresh from the Mediterranean (the majority of people), buy the Atlantic variety, which is also red.

One retailer's supplier is said to supply a reddish, farmed porgy. Clients are told which one is wild, and which one is farmed. The consumer knows the taste difference and pays less for the farmed one. There is thus no problem with the colour difference.

## 4. CONDITIONS FOR A FARMED RED PORGY OFFER

### 4.1 NAME

Red porgy sells thanks to its name as it has an excellent image. **However it is impossible to sell it under this name if it is not red.**

Introducing it under another name would make it a totally unknown product. It would thus take time before it could become accepted.

### 4.2 OPTIMAL SIZE AND COLOUR

#### Optimal Size

There is no agreement as far as the optimal size is concerned among modern retailers. It goes from 300g up to 1.2kg.

It seems that the size should be bigger in the food-service area, up to 2kg.

### Optimal Colour

The consumer knows that red porgy is red. It is important for farmed porgy to be red as the **fish's appearance is an important choice criterion** for the client.

The colour has to be similar to that of the wild porgy. It does not have to have exactly the same colour as common red-porgy, since Senegalese and Moroccan porgy is different and this does not create a problem. However it cannot be brown. Moreover its appearance will influence its price positioning.

There are two possibilities:

- **if farmed porgy is very similar to Mediterranean red porgy in shape and taste** (and if the farm is Greek), farmed red porgy can be more expensive than farmed sea-bream and can be sold at the same price as wild Atlantic porgy
- **if it is visibly different from Mediterranean red porgy**, it has to be cheaper than farmed sea-bream, otherwise, the consumer will choose wild Atlantic porgy (which is sold at the much lower price than the common porgy already) or farmed sea bream.

Considering the production costs (low volumes) and the necessary investments (technical, communication), the price positioning of farmed porgy will probably have to fall into the first category.

#### 4.3 OPTIMAL SUPPLIERS

Retailers believe that it would be better to get the fish directly from the producer, in order to avoid intermediaries. Although it seems that there would be no problem with the nationality of the farm, a **Greek supplier would be preferable** as it would imply lower costs and higher quality (less transport, thus fresher product). As an example, Turkish sea bream is said to sell badly.

#### 4.4 OPTIMAL COMMUNICATION

ALFA BETA – which already sells ITHACA'S farmed red porgy - stresses the fact that it is a Greek farm. Ithaca being an island, they insist it comes from that island. They accompany their consumer communication with regular price promotions.

When introducing farmed red porgy, it would be necessary to reassure consumers by a **communication campaign led by an international, credible institution**. The institution cannot be Greek, as some operators fear consumers would accuse it of being corrupt.

An educational campaign to persuade people of its good taste might be enough. It took a long time for farmed sea bream to break through, but at the end it did.

#### 4.5 OPTIMAL PRICE

The optimal price at which farmed red-porgy can be sold is not easy to define:

- according to some operators, farmed red porgy has to be cheaper than farmed sea bream (EUR 3.5/kg, retail price). Cheap products are always the easiest to sell
- for others, the price has to be the same as sea-bream, or slightly more because it is of superior quality
- others mentioned the fact that the wholesale price for a wild Atlantic porgy is approximately EUR 8/kg, while the Mediterranean red porgy is about EUR 18/kg. The optimal price would probably be in between: 10/kg, with the price getting gradually decreasing.

The price of the other farmed species (sea bream and sea bass) have to be taken into account to determine the optimal price. There are two fish markets in Greece: one for wild fish and one for farmed fish. **Farmed porgy will thus compete with the other farmed species.**

The price also strongly depends on the fish's taste. It seems that most operators would be ready to pay EUR 5/kg at the beginning, then it will always be possible to increase the price if the consumer likes it. **The price will be fixed by demand once the fish is accepted by the market.**

#### 4.6 POTENTIAL CONSUMERS

The potential consumer for farmed porgy will be mostly supermarkets and fish mongers, as restaurants privilege wild fish.

There could be some opportunities with restaurants on the islands, whose clients are mostly tourists.

#### 4.7 VOLUMES EXPECTED

The life cycle of farmed red porgy is difficult to determine:

- some operators think that - considering that the Greek consumer privileges a Greek origin - if red porgy is farmed in Greece and sold at the same price as sea bream, it will sell the same quantities as sea-bream (after a while). Farmed porgy could even succeed better than sea bream since it is more popular
- others think that farmed red porgy will probably sell well at the beginning through the effect of curiosity,

but all really depends on the fish's quality.

There will be a difference with the farmed sea-bream market since **farmed red porgy will encounter price competition from Atlantic porgy**. At the time when farmed sea bream was first introduced, there were no sea-bream imports.

Some operators suggested that it is possible to sell farmed red porgy as fillets, for the consumer to taste it; there would then be no problem of external colour. Fillets in general still represent small volumes in Greece, but are expected to increase in future years.

## 5. CONCLUSION

While the continental Greek consumer did not traditionally consume much fish, there has been a recent increase in consumption, especially of fresh fish at the expense of frozen. There is a strong preference for fish of Mediterranean origin - and Greek in particular.

Red porgy is very well known in Greece, it enjoys an excellent image with the consumer and is very expensive. All the buyers GIRA interviewed already sell wild red porgy (an estimated 1 400 tonnes of the fresh fish in total) from various origins (mostly Senegal - for its cheaper prices, up to 60% lower than Greek).

There are two markets in Greece: one for wild fish and one for farmed. Farmed fish are generally acquired by people who cannot afford to buy the wild fish, which remains the consumer's reference point. Even though the Greek consumer accepts farmed fish well, it seems premature to introduce farmed red-porgy since GIRA is told that it was tried a few years ago and failed because the fish produced did not correspond to the consumer expectations. Operators have not forgotten this, and are thus not particularly keen on repeating the experience.

If launching farmed red porgy, it will be absolutely necessary to:

- ensure that farmed porgy is **red, as it is essential** for a good price positioning
- develop a **major communication campaign** to reassure the general public and the buyers about the taste of the farmed fish.

There does not seem to be any real gap for farmed porgy in Greece, since there are already two types of wild red porgy on the market: the expensive Moroccan/Greek one and the cheaper Atlantic one, as well as the frozen alternatives. **Operators are not convinced of the necessity of launching a farmed alternative to wild red porgy.**