

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

**SPAIN**

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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## SPAIN

### 1. FRESH FISH IN SPAIN

#### 1.1 IMPORTANCE OF FRESH FISH

According to the consumers' panel of the Spanish Ministry of Agriculture, Fisheries and Food (MAPA), in 2000, fishery products represented **3.8%** of the total volume of food bought by Spaniards. In value, however, fishery products accounted for **13.4%** of Spanish food expenditure in that year.

Also according to MAPA, Spaniards bought a total of 1.3 mio tons of fishery products in 2000. Of the total, **594 000 tons (46%)** corresponded to fresh fish, i.e. 14.8kg per capita, 151 000 tons (11%) corresponded to frozen fish, and 173 000 tons (13%) was canned fish and seafood, and another 384 000 tons (30%) corresponded to other seafood.

Purchases of fresh fish in 2000 totalled EUR 3 280 mios (44% of the total) and frozen fish represented EUR 810 mios (11%).

For Spanish retail chains, the fish department accounts for **3% to 5%** of the turnover of the chain. The turnover of the fish section of one of the top Spanish retailers is around EUR 220 mios per year.

#### 1.2 THE ROLE OF MEDITERRANEAN FISH

The importance of Mediterranean fish in the whole offer of fish in Spain **depends very much on the region** where people are living. Besides, for wholesalers, the share of Mediterranean fish varies from one company to another since some are specialized in a small range of fish. The figure can also vary according to the season of the year.

In fact, only relatively small quantities of Mediterranean fish are sold in the region of Madrid, located in the centre of the peninsula. Mediterranean fish could represent just **5% to 15%** of the fish sold in that region.

Mediterranean fish are much more consumed on the coasts (north-west, east and south of the peninsula) and in the islands, that is to say in the following regions: Galicia, Asturias, Cantabria, Basque Country, Catalonia, Valencia, Murcia, Andalusia, the Balearic Islands and the Canary Islands. In those parts of Spain, Mediterranean fish can account for **20% to 40%** of the total amount of fish sold.

For retail chains which have buying centres dealing at the national level, Mediterranean fish account for 10% to 20% of the fish sold in their stores. However, once again, there are regional disparities since part of the supply can be from local sources i.e. stores located near the coasts buy local fish directly.

The volumes of Mediterranean fish are quite stable. Some speak of an increase because "Blue Fish" (an imprecise generic term for all common fish whose backs are bluish in colour and with silvery bellies e.g. sardines, sprats, swordfish, tuna...), which used to be caught on the northern coasts of the peninsula, are nowadays more to be found in the Mediterranean.

The 7 interviewees we met gave us various examples of species of Mediterranean fish. The following list shows the occurrence of mentions of the different fish (in order of frequency):

- Sardine (mentioned 6 out of 7 times)
- Gilt-head Sea bream and Sea bass (5 times)
- Almaco Jack (4 times)
- Chub Mackerel/Piraputanga (3 times)
- Tuna (3 times)
- Blue Fish (twice)
- Sole (twice)
- European Sea bass, Crevalle Jack, Swordfish, Bonito (once each).

#### 1.21 CONSUMER TRENDS

The image of Mediterranean fish is **positive** in Spain because of the geographical proximity of the Mediterranean Sea and the **freshness** it implies for this type of fish.

There is little demand for Mediterranean fish in the region of Madrid and the offer is generally higher than demand in that part of the country. At the national level, more fish from the northern coasts is consumed. Fish is also imported from Chile and North America. Chilean fish is usually cheaper than the Mediterranean fish.

Mediterranean fish is generally consumed locally and at the restaurant.

Mediterranean fish is consumed in sizes of 300-400g (weight of whole fish purchased).

In Spain, Mediterranean fish are eaten from **1 to 2 times a week** in average. Their consumption is more frequent during the week, whereas bigger fish are eaten at weekends. Mediterranean fish are also more consumed during the spring and summer seasons, especially on the coasts.

#### 1.22 CONSUMER PROFILE

Every Spaniard eats fish, whatever the age and the social status. However, people aged between 30 and 50 years old are more prone to eating fish. And the type and quality of fish depend on the social status of the consumer.

There is not really a specific profile for Mediterranean fish consumers. However, we can note that people living on the coasts or coming from the coasts eat more Mediterranean fish.

Moreover, Mediterranean fish consumers are usually smaller fish consumers. Finally, as Mediterranean fish is more expensive than other kinds of fish, consumers often belong to the middle and upper classes.

### 1.23 COOKING MODALITIES

In most cases, fish is **fried** (“*frito*”) or **grilled** (“*a la plancha*”). It can also be cooked in the oven (“*al horno*”) or with salt (“*a la sal*”).

Gilt-head Sea bream and Sea bass are usually cooked in the oven. Almaco Jack, Sardine, Sole and Chub Mackerel/Piraputanga are usually fried. Tuna can be cooked in various ways.

### 1.3 PERCEPTION OF FARMED FISH IN SPAIN

Farmed fish has a **good image** in Spain.

Farmed Gilt-head sea bream and sea bass were introduced in 1998-1999 in Spain and they have obtained a real success. Their consumption has been sharply increasing in the last three years and it should now start to stabilize.

Farmed fish is valorised by its lower and relatively stable **price** compared with wild fish.

Furthermore, as captures of fish are decreasing, farmed fish is seen as a good alternative for the supply of fish.

Farmed fish also has a good image in terms of **freshness, quality and traceability**.

Finally, farmed fish was **advertised** in recent years on a national scale and also by some retail chains, and this must have contributed to knowledge of it and its good image among Spanish consumers.

However, in recent years, Spaniards have increasingly been concerned about farmed fish's **feed and stress**.

## 1.4 CRITERIA OF SUCCESS FOR A NEW SPECIES

The criteria of success for the introduction of a new species the most cited by interviewees were **quality** (freshness in particular – less than 2 days “after slaughter” – and the stress status of the fish), **traceability and security** (information on feed asked).

The **regularity of supply** is also of high importance and makes the difference with wild fish. It also helps to retain regular consumers.

**Price** is also crucial for buyers - it mustn't be too high.

**Taste** is very important, especially in Spain where the market share of traditional fishmongers is still high (55-65% for fresh fish). In fact, if the fish is not good, the fishmonger loses a usually faithful client.

Finally, the introduction of a new species must be accompanied by a **strategic programme** set up by **suppliers**. New products must be **marketed and advertised**, it was the case for farmed gilt-head sea bream, sea bass and trout, which became real successes.

### 1.41 EXAMPLES OF SUCCESSES OR FAILURES

Most of the new species introduced in the last few years were **farmed species**.

#### Successes

**Gilt-head Sea bream, Sea bass, Salmon, Trout and Perch fillet** were introduced with success on the Spanish market. Gilt-head Sea bream and Sea bass only appeared 5 to 6 years ago in Spain.

The introduction of **Halibut** was only halfway successful.

For some, the introduction of the **Turbot** was a success although volumes sold are not important. In fact, it was finally accepted by consumers who didn't know how to cook it at the beginning but learned how to do it.

#### Failures

The introduction of **Tilapia** resulted in a failure because, among others, the criteria of success were not gathered:

- supply was irregular
- consumers didn't know the fish
- Tilapia fillet looks like Perch fillet which is well accepted by consumers but Tilapia fillet was more expensive than Perch fillet.

Some still continue to try to sell Tilapia because there are more and more foreigners in Spain – especially from South America – and the Tilapia looks like a fish used in a traditional dish from South America (“*ceviche*”).

The introduction of **Sole and Pin Fish** also failed because of the difference of colour and flavour of the farmed fish compared with captured fish. In fact, both farmed fish were darker than the captured fish which made the former less attractive for consumers.

#### 1.42 PRICE FORMATION

Buyers ask for indications on price from their suppliers when they introduce a new species.

Farmed fish prices depend on the market of wild fish. The former must be less expensive than the latter.

The new species' price must also be lower than the one of competing fish or of the fish for which it substitutes.

Finally, the price of a new species must be in accordance with the price consumers are ready to spend for this fish (perceived value).

Prices of new species are usually made by a process of trial and error at the beginning, and thereafter market forces come into play. But according to some fish buyers, farmed fish prices depend only on production costs...

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

The 7 photos of fish shown to the distributor interviewees were of species which looked very much alike, except for the Sea bass. The following tables show the results of the interviewees' attempts to give a name to each fish:

Photo n°	Fish names	Retailers' answer						
		Retailer A	Retailer B	Retailer C	Retailer D	Retailer E	Retailer F	Retailer G
1	Morocco dentex	pandora	doesn't know	white porgy	sharpnout seabream, red porgy	pandora	pandora	pandora
2	Blue-spotted seabream	blue-spotted seabream	blue-spotted seabream mutton snapper	blue-spotted seabream pandora	gilt-head seabream, blue-spotted seabream	dentex, sharpnout seabream	blue-spotted seabream	blue-spotted seabream
3	Pink dentex	pandora	dentex	doesn't know	red porgy	dentex, sharpnout seabream	pandora	pandora
4	Gilt-head seabream	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	N/A	N/A	N/A	N/A	N/A	red porgy	pandora
6	Farmed porgy	<i>faneca</i>	gilt-head seabream	black seabream	gilt-head seabream, red porgy	gilt-head seabream	doesn't know	<i>negrita</i>
7	European seabass	european seabass	european seabass	european seabass	european seabass	european seabass	european seabass	european seabass

Photo n°	Fish names	Retailers' marks							Average
		Retailer A	Retailer B	Retailer C	Retailer D	Retailer E	Retailer F	Retailer G	
1	Morocco dentex	0	0	0	0	0	0	0	0.0
2	Blue-spotted seabream	1	1	1	1	0	1	1	0.9
3	Pink dentex	0	1	0	0	1	0	0	0.3
4	Gilt-head seabream	1	1	1	1	1	1	1	1.0
5	Mediterranean red porgy	N/A	N/A	N/A	N/A	N/A	1	0	N/A
6	Farmed porgy	0	0	0	0	0	0	0	0.0
7	European seabass	1	1	1	1	1	1	1	1.0
<b>Average</b>		<b>0.5</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.6</b>	<b>0.4</b>	<b>0.5</b>

0 wrong answer or no answer at all  
1 right answer

All the Spanish interviewees recognised Gilt-head Sea bream and Sea bass (photos n°4 and 7).

One interviewee (out of two) recognised wild Red Porgy from the Mediterranean (photo n°5).

Six interviewees (out of seven) recognised Blue-spotted Sea bream (photo n°2).

Two interviewees (out of seven) recognised Pink dentex (photo n°3).

None of the Spanish interviewees recognised Morocco dentex (photo n°1), however, they proposed various names: Pandora (4 times), White Porgy, Red Porgy and Sharpnout Sea bream.

Moreover, none recognised farmed Porgy (photo n°6), evidently because they had never seen it before. Three interviewees (out of seven) said farmed Red Porgy *looked like* Gilt-head Sea bream, although they were convinced that it was not Gilt-head Sea bream.

## 2. RED PORGY SALES

### 2.1 SALES TRENDS

Most wholesalers based in Madrid do not sell Red Porgy at all, because this kind of fish is very little consumed in this region. MERCAMADRID, the wholesale market based in Madrid, is the biggest fish market in Spain. In 2002, only 20 tons of wild Red Porgy were sold there.

National purchasers from retail chains usually buy small quantities of Red Porgy, especially destined to the stores situated in the consuming regions (i.e. the coasts and the islands). Furthermore, a buyer in charge of consuming regions said he was selling between 30kg and 50kg of Red Porgy per day through 200 stores.

MERCABARNA, the wholesale market based in Barcelona (Catalonia) reportedly sold nearly 80 tons of wild Red Porgy in 2002. The higher quantity of Red Porgy sold in MERCABARNA compared with MERCAMADRID is explained by the fact that Catalonia is a region usually consuming more Red Porgy than Madrid.

On the whole, **Red Porgy's sales are stable** but they can vary very much from one day to another depending on the promotions proposed.

It should be noted that in the region of Madrid, Red Porgy is sometimes sold under the name Pandora.

### 2.2 ORIGIN

Red Porgy can come from the Spanish coasts and be purchased directly in the north or in the south of the peninsula (from the Cadiz market in Andalusia in particular).

Morocco is a supplier of Atlantic Red Porgy for Spain. In this case, it is bought via wholesalers.

Two of the interviewees buy Red Porgy from Argentina. Fresh fish from Argentina is brought by plane to Spain where it is sold 2 to 4 days after it was caught.

### 2.3 SIZE AND PRICE

#### Size

In the north of the peninsula, Red Porgies weigh between 700g and 1 000g, while they are consumed smaller in the east and the south: between 400g and 600g (i.e. portion size). Red Porgy from Morocco can weigh 600-800g and even up to 1.5kg (this size is expensive and seldom sold, the best selling season being Christmas).

### Selling Price

For Red Porgy coming from Morocco and Spain, sales prices range from EUR 10 to EUR 16 per kg.

Sales price of Red Porgy from Argentina is EUR 5-7 per kg.

#### 2.4 STRENGTHS AND WEAKNESSES OF WILD RED PORGY

We derive the following analysis from our series of interviews:

##### Strengths

Everyone agrees on the fact that Red Porgy has an excellent **flavour**.

Red Porgy is also usually very **fresh**, except for the one coming from Argentina.

**Argentinean** Red Porgy has a very competitive price.

Red Porgy is not a traditional Spanish fish and can be appreciated as **new type of fish**.

##### Weaknesses

Red Porgy is **not very well known** in Spain.

Supply of Red Porgy is **irregular**.

#### 2.5 COMPETING FISH

The fish competing with Red Porgy are: **Gilt-head Sea bream, Sea bass, Pandora** (i.e. *Pagellus erythrinus*, especially sold during the Christmas period and *Pagellus bogaraveo* which looks very much like Red Porgy but has a black spot above the eye), **Dentex and White Sea bream**.

### 3. FARMED RED PORGY

Only 2 out of 7 Spanish interviewees had heard about farmed Red Porgy and none knew its strengths and weaknesses, since none had ever tried to sell it.

#### 4. CONDITIONS FOR A FARMED RED PORGY OFFER

##### 4.1 NAME

Farmed Red Porgy would certainly be called Red Porgy in Spain as this fish is unknown by most Spaniards but a new name could as well be given to farmed Red Porgy.

##### 4.2 OPTIMAL SIZE AND COLOUR

###### Size

Apparently, two ranges of size would be needed:

- a **portion size** of 400-600g or 500-700g (corresponding to most of the demand)
- a bigger size of around 1kg used by the catering sector and occasionally by families, although some buyers say that they do not sell this size of fish at all.

###### Colour

**A red colour or at least a brighter colour would be preferred to a dark colour.** The large difference of colour between the wild fish and the farmed one would be a brake to the sale of the latter.

In fact, consumers don't like dark fish because it looks less fresh.

##### 4.3 OPTIMAL SUPPLIER

Potential suppliers of farmed Red Porgy will need to have a **regular offer** and a good **traceability** of their products.

##### 4.4 OPTIMAL COMMUNICATION

Fish buyers ask for information from their suppliers.

Farmed Red Porgy will also have to be **advertised** just like Gilt-head Sea bream and Sea bass were in Spain.

The communication campaign should be both **national** and at the **store level**. Flyers would be useful, as well as posters and loudspeaker advertisement in store. TV and magazine campaigns would be ideal...

Buyers would also ask for help from the **FROM** (Fund for the regulation and organization of the market of fishing products and marine cultures) which is an autonomous body of the Spanish Ministry of Agriculture, Fisheries and Food.

Finally, **low price** would be a good way of communicating on a new product for its introduction.

#### 4.5 POTENTIAL CONSUMERS

The potential consumer of farmed Red Porgy would surely be the same as the one of farmed Gilt-head Sea bream and Sea bass.

#### 4.6 OPTIMAL PRICE

**Most interviewees agree on the fact that farmed Red Porgy's consumer price should be similar or lower than that of farmed Gilt-head Sea bream, i.e. about EUR 6-7 per kg.** If farmed Red Porgy were red, the price could be a little higher.

However, some raised the paradoxical problem that if the product is very cheap, it is going to have a negative image among consumers because low price is often associated with low quality.

Finally, the key would be rapidly to reach a stable price; this was crucial for several interviewees.

#### 4.7 VOLUMES EXPECTED

This question was very difficult to answer for most of the interviewees since it would depend on many parameters (price, packing, freshness, consumer acceptance, etc.). However, some finally gave us reluctant indications on the volumes of farmed Red Porgy they could expect to sell...

A wholesaler based in Madrid selling currently 250 tons of farmed Gilt-head Sea bream and Sea bass per year would expect to sell 20 tons of farmed Red Porgy per year.

For one of the top Spanish retail chains' buyer in charge of fish purchase at the national level, 100 tons/year would be a minimum volume expected. For another one, the volume expected would be similar to that of Pandora, i.e. 80 tons/year.

A retail chain buyer in charge of a consuming region with 200 stores would expect sales similar to farmed Sea bass, i.e. 100 tons/year.

One interviewee raised the important question of packaging, which can be of 1, 2, 3, 5 or 10kg. In fact, since the fish doesn't stay more than 2 days in store, if it was in 3kg packs, stores could buy several boxes per week, but if it was of 10kg, maybe only one box would be bought, or even none, because it is too big.

## 5. CONCLUSION FOR SPAIN

Although Spaniards are huge fish consumers, not all the Spanish buyers/wholesalers interviewed by GIRA were used to selling wild Red Porgy.

In fact, Red Porgy's consumption shows a **strong regionalism** in Spain: it is mostly consumed on the coasts and in the islands and very little consumed in the rest of the peninsula. Moreover, in general, Red Porgy is **not very well known** by Spaniards. So, Red Porgy's market is very small in Spain.

Wild Red Porgy consumed in Spain currently comes from the Spanish coasts, Morocco and Argentina. Argentina offers very competitive prices, but not less fresh products.

**Farmed fish has a good image in Spain** where Sea bream and Sea bass were introduced very successfully.

But the dark colour of farmed Red Porgy is seen as a real brake as dark fish doesn't look fresh.

According to the interviewees, the conditions for a successful introduction of farmed Red Porgy in Spain would be:

- the development (by suppliers and maybe the Government) of a **strategic programme including advertisements and marketing** in order to make Red Porgy know to Spanish consumers
- a **brighter colour** for the fish which would then look fresher and more attractive
- a **regular supply** in order to get stable prices and faithful consumers
- guarantees of **quality** (freshness), **traceability** and **security** (feed)
- a portion size of **400-600g**, since big fish is hardly sold in retail
- a similar or lower price than farmed Sea bream, i.e. EUR 6-7 per kg.

**So we would not currently expect to sell large volumes of farmed Red Porgy in Spain, since its wild counterpart is not well known to Spanish consumers, and its dark colour is a real brake to marketing.**