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The French Market for Mussels: Dominant Features, Competitive Forces and Prospects

by

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The French Market for Mussels:

Dominant Features, Competitive Forces and Prospects

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Table of Contents

Executive Summary

Market, size and development	• The market absorbs mainly live mussels (80/85,000 tonnes) • Larger than ever range of products; and product development in the mussels processing industry is expected to continue to improve the sector performances and to boost sales • Mussels-based value added products (IQF shell on vacuum packed, ready meals, breaded products) comply with modern consumers' requirements and offer retailers incremental volumes and profit opportunities • Emerging competition between raw and VAP items
Supply environment	• Important domestic production, yet not sufficient to cover needs • No production development expected (full occupation of the French coast by existing

	farming units and other economic activities, fisheries fields fully exploited) • Atomised and non organised producing sector • No centralised market at ex-producers' level (by contrast with The Netherlands) • Large number of small scale producing units • Concentrations observed in recent years (1998,1999) • Production level and output quality are highly dependent upon natural environment • Important production and marketing capacities of foreign supplying countries (The Netherlands, Spain) • Severe competition between all players
Product differentiation	• Bouchot farmed mussels are well recognised and get a premium in price • Limited results of branding efforts to create product differentiation
Buying environment	• Growing market share of large scale and powerful buyers (supermarkets)

	• Large but decreasing number of clients • Increasing demand for “services”, including quality specifications, quality assurances, promotional capacities, logistics services, etc.
Consumption	• Dominance of live mussels on the market • Important potential market for this item, • Important potential for ready-to-cook (graded, clean, byssus-off, packed, portion-sized) mussels, on both retail and catering segments • Important potential for value added products

1. Introduction

1.1. Objective

This study's objective is to provide a clear and comprehensive picture of the French market for mussels, to identify the competitive forces prevailing on this market and to detect potential development. We start out by looking at the supply side, since France is both a large producer and a large importer of mussels. We continue by investigating consumption patterns for mussels in France. We focus on questions like where are mussels consumed, when are mussels consumed and by whom is mussels consumed. In chapter 4 different product forms in the French market are discussed, with focus on preparation methods and packaging for mussels that are not sold as fresh. In chapter 5 we look closer at the development of the price, and also the relationship between the prices at different levels in the value chain and between different product forms. In chapter 6 different marketing and branding strategies are discussed before we concludes by discussing some key success factors.

1.2. Sources of Information

The report is based on both primary and secondary data. Secondary data include public and private reports, articles in French specialised magazines/ fisheries newspapers. Statistical data originate in the French Ministry of Agriculture, Ministry of Trade (import/export), Ofimer (the French body in charge of seafood market regulation and promotion), and trade data are from the European Union's statistical agency, Eurostat. Products' descriptions are based on direct in-store observations.

2. Sources of Supplies

Three species of blue mussels are available on the French market:

- *Mytilus edulis*, the domestic species, of rather small size 4 to 6 cm
- *Mytilus galloprovincialis*, the Mediterranean species, of size 6 to 8 cm
- *Perna canaliculus*, the New Zealand species, of size 9 to 12 cm

2.1. European Production

Within the European Union different country groups may be distinguished according to species cultivated and farming method[1]:

- In the UK and Ireland, culture of *Mytilus edulis* mussel is almost exclusively horizontal fixed (rope grown mussels),
- In Southern European countries, *Mytilus galloprovincialis* species is farmed with hang nursing in places sheltered from the coast
- In France and the Netherlands both farming and fishing contribute to production of *Mytilus edulis*
- In Denmark, all mussels *Mytilus edulis* are dredged from the bottom by fishing vessels.

Spain, where farming activities are concentrated in Galicia (95% of total production), is Europe's largest and the world's second largest mussel producer,

[1] Source: Globefish Research Programme, Volume 55 (1998)

with output ranging from 180,000 to 250,000 tonnes per annum. Mussels of the *Mytilus galloprovincialis* species, are either marketed live, frozen and an important part is destined to the local canning industry.

Table 1: Spain Canned Mussel Production (output weight in tonnes)

1993	1994	1995	1996
12,242	11,875	10,925	11,580

Source: Globefish Vol. 55

Table 2: Main European Producing Countries, in tonnes

Country	Method	Species	1985	1990	1995	1996	1997
Spain	Aqua-culture	Mytilus edulis	245,655	173,300	182,250	188,462	188,793
Netherlands	Aqua-culture	Mytilus edulis	116,252	98,845	79,772	94,496	93,244
Denmark	Fisheries	Mytilus edulis	84,077	93,348	107,377	86,002	90,765
France	Aqua-culture	Mytilus edulis	49,073	46,642	49,194	49,962	52,350
Italy	Aqua-culture	Mytilus galloprovincialis	33,000	40,000	47,500	50,000	51,500
Greece	Fisheries	Mytilus galloprovincialis	437	0	10,806	12,625	24,139
Germany	Aqua-culture	Mytilus edulis	20,818	20,237	17,782	38,028	22,330
Italy	Fisheries	Mytilus galloprovincialis	10,984	30,314	21,425	22,174	21,430
United Kingdom	Fisheries	Mytilus edulis	4,625	6,740	9,534	12,337	18,994
Ireland	Aqua-culture	Mytilus edulis	10,358	18,380	11,000	14,500	16,094
United Kingdom	Aqua-culture	Mytilus edulis	1,204	2,044	5,801	8,347	13,127
France	Aqua-culture	Mytilus galloprovincialis	5,795	15,118	15,000	12,000	11,000
Diverse	Both	Diverse	2,417	18,899	31,433	16,027	13,828

Source: FAO Fishstat

The Netherlands is the number two producer of blue mussels (*Mytilus edulis*) in Europe, with an overall production over 90,000 tonnes in 1999.

Mussels are farmed in two main regions, Zeeland and Waddenzee. Zeeland mussels are cultivated by about 80 companies located around Yerseke, Bruinisse, Zierikzee. Processing and marketing operations are rather concentrated, with for example, four companies[2] being responsible for the sales of 80% of all live mussels traded by the country.

Table 3: The Netherlands Mussels Production, in Tonnes

	94/95	95/96	96/97	98/99
Zeeland	54,355	52,428	53,463	39,517
Waddenzee	50,209	31,474	38,500	57,137
Total	104,564	83,902	91,963	96,654

Source: Mussel Industry Bureau

In Denmark, mussel fishing operations are concentrated in the Limfjord and Wadden sea. Fishery activity is very strictly regulated through severe licence and quota per ship system.

Ireland is a modest, yet growing, supplier of blue mussels to the European market. Whilst fisheries production fluctuates greatly, from 5,000 tonnes to

[2] Aquamossel, Deltamossel, Prins & Dingemause, Roem van Yerseke. Source : PDM.

15,000 tonnes per annum, rope grown mussel landings record a regular and steady growth. It was estimated to 8,000 tonnes in 1998, and is expected to reach 10,000 tonnes by the end of the century.

Table 4: Irish Mussel Production, in Tonnes

	1994	1995	1996	98/99
Fishery	9,260	12,600	11,000	15,000
Farming	3,707	5,500	6,500	8,000
Total	12,967	18,100	17,600	23,000

Source: BIM

Today total European production is estimated to 700,000 tonnes[3] compared to 550,000 tonnes in the early eighties.

2.2. French Production

Overall production

Mussel landings in France originate in both fishing operations and farming activities. The first sector supplies the market with very erratic quantities, ranging from a few hundred tonnes (in case of fishery grounds closure) to several thousands of tonnes. The farming sector offers more stable volumes, estimated at 60,000 tonnes per annum.

[3] Live mussel weight equivalent

Table 5: French Production, in Tonnes

	1993	1994	1995	1996	1997	1998
Fisheries	27,366	32,698	10,796	6,214	12,671	10,000 (e)
Aquaculture	64,413	66,194	61,962	63,350	70,000	60,000
Total	>91,000	>98,000	>71,000	>70,000	>83,000	>70,000 (e)

e: estimate
Source: Ofimer

When farming activities are concerned these data are believed to reflect the reality. Fisheries data are less accurate and declared landings are expected to under-estimate real landings.

Regional production

Mussel production is concentrated in Normandy where an important proportion (43% in 1998) of all farmed products and almost all fisheries products are landed.

Table 6: Farmed Mussel Production, by Region, in 1998

	Tonnes	%
Total	62,500	100%
Normandie-Mer du Nord	27,000	43%
Bretagne Nord	12,500	20%
Bretagne Sud	2,500	4%
Ré-Centre-Ouest	9,000	14%
Marennes-Oléron	2,500	4%
Méditerranée	8,000	13%

Source: CNC (1999)

Farming activities are run all along the French coast and concern *Mytilus edulis* and *Mytilus galloprovincialis.* The geographical and species diversity contributes to supply the market during a large seasonal spectrum, from June to February.

2.3. Imports

The EU trade statistics report flows of :

Live, fresh or chilled mussels with or without shell	CN Code 0307 31
Live, fresh or chilled mussels with or without shell, of Mytilus spp	*CN Code 0307 31 10*
Live, fresh or chilled mussels with or without shell, Perna spp	*CN Code 0307 31 90*
Mussels, whether in shell or not, frozen, dried, salted or in brine	CN Code 0307 39
Mussels, whether in shell or not, frozen, dried, salted or in brine, Mytilus spp	*CN Code 0307 39 10*
Mussels, whether in shell or not, frozen, dried, salted or in brine, Perna spp	*CN Code 0307 39 90*
Preserved, prepared mussels, in airtight containers	CN Code 1605 9011
Preserved, prepared mussels in other containers	CN Code 1605 9019

Code 0307 31 includes all live and chilled mussels. Yet, it does not indicate the respective share of both product categories: live mussels on the one hand and chilled prepared items on the other hand. Code 0307 39 also includes different types of products. Aggregation of different value products does not allow us to use the trade data for price analysis.

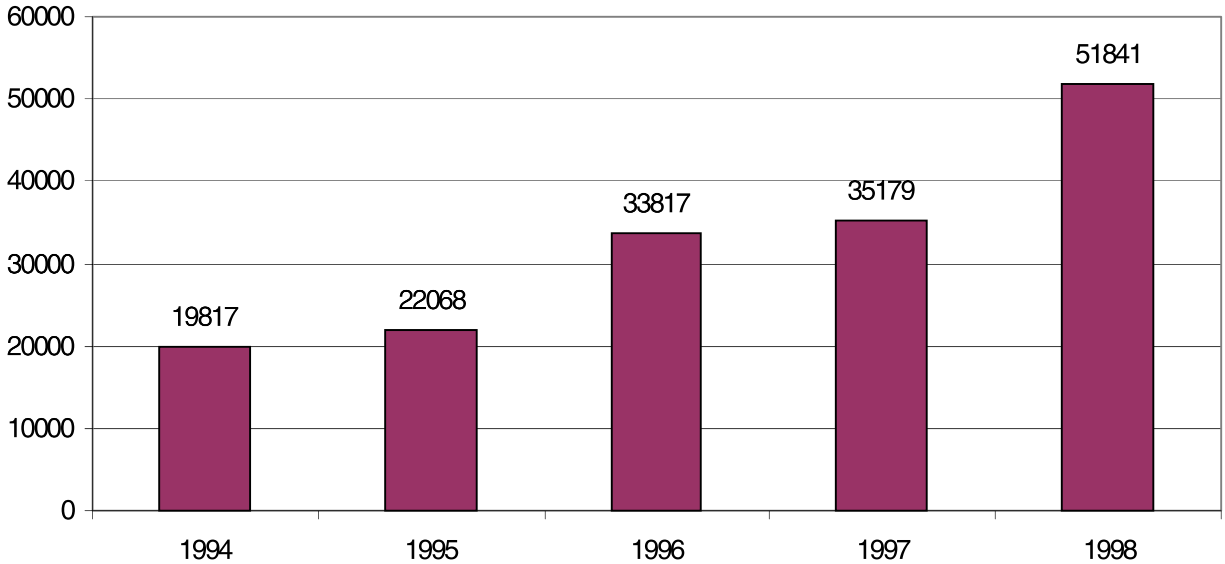
In 1998, France imported mussels in all forms for a total value of 62.2 million euros, of which:

- 51,841 tonnes of live and chilled products with a value of 32.3 million FF
- 4,025 tonnes of frozen products worth 8.4 million FF
- 9,098 tonnes of preserved items with a value of 21.5 million FF

Live and chilled mussels

1998 live mussel imports hit a ten year record with over 50,000 tonnes, after a regular growth since 1994. Import levels tend to be oppositely linked to domestic supply performances; the lower the production, the higher the imports.

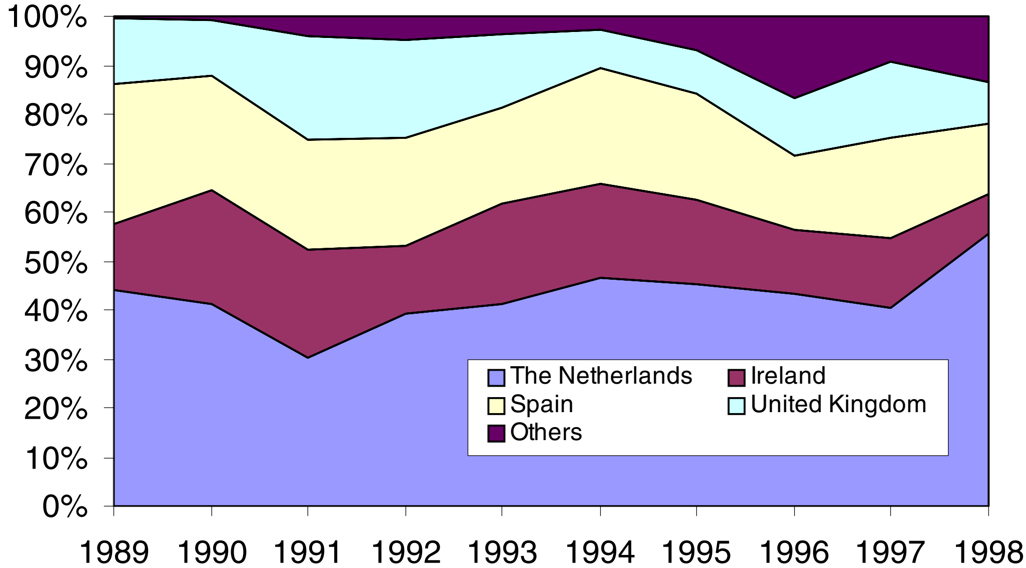
Graph 1: Imports of Live and Chilled Mussels, in tonnes



Source : Eurostat

During the first half of the decade, live mussels declined regularly from 37,000 tonnes in 1989 down to 20,000 tonnes in 1994; Declines in imports were the consequence of high domestic fisheries landings and to some extent of low availability in the main supplying countries (The Netherlands, Spain).

Graph 2: French Imports of Live Mussels, by Origin, Volume wise



Source: Eurostat

Table 7: French Imports of Live and Chilled Mussels, in Tonnes, by Origin

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Netherlands	16,532	14,258	10,531	11,853	8,875	9,004	9,520	14,309	14,173	29,302
Spain	10,851	8,172	7,747	6,788	4,157	4,532	4,528	5,029	7,156	7,542
Ireland	4,981	8,073	7,635	4,174	4,484	3,746	3,635	4,427	4,883	4,300
United Kingdom	4,953	3,869	7,400	6,072	3,260	1,545	1,943	3,947	5,417	4,518
Others	186	336	1,476	1,742	1,405	990	2,442	6,105	3,550	5,179
Total, quantity	37,503	34,708	34,789	30,629	22,181	19,817	22,068	33,817	35,179	50,841
Total Value	18.4	20.0	21.9	21.5	15.6	14.9	16.7	29.2	28.0	32.3

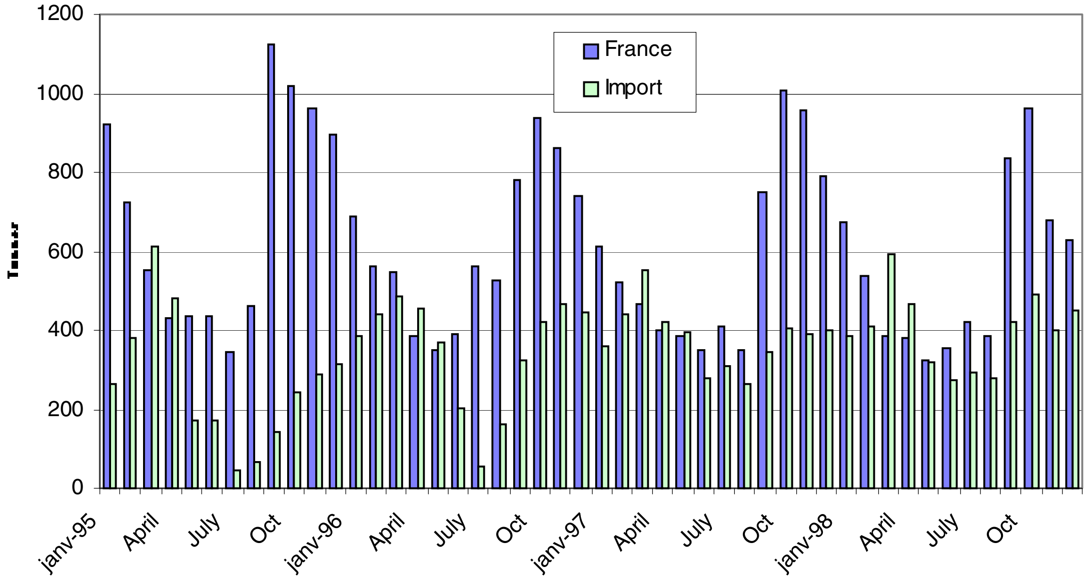
Source: Eurostat

The Netherlands is the largest supplier of live mussels to France, providing 40% to 55% of all imports. Spain occupies the second position, followed by Ireland and the UK.

Several factors contribute to explain the leading position of The Netherlands as a live mussel supplier:

- This is Europe's second largest producer of *Mytilus edulis*, the most appreciated mussel species in France.
- Dutch supplies comply with French importers' wishes in terms of product and services; Most Dutch mussels are sold clean (no sand, no grit), byssus-off. Delivery is efficient (products are delivered less than 48 hours after orders).
- Dutch products are price competitive.

Graph 3: Live Mussel at Rungis Wholesale Market: Sales of Imported Items



Source: Semmaris

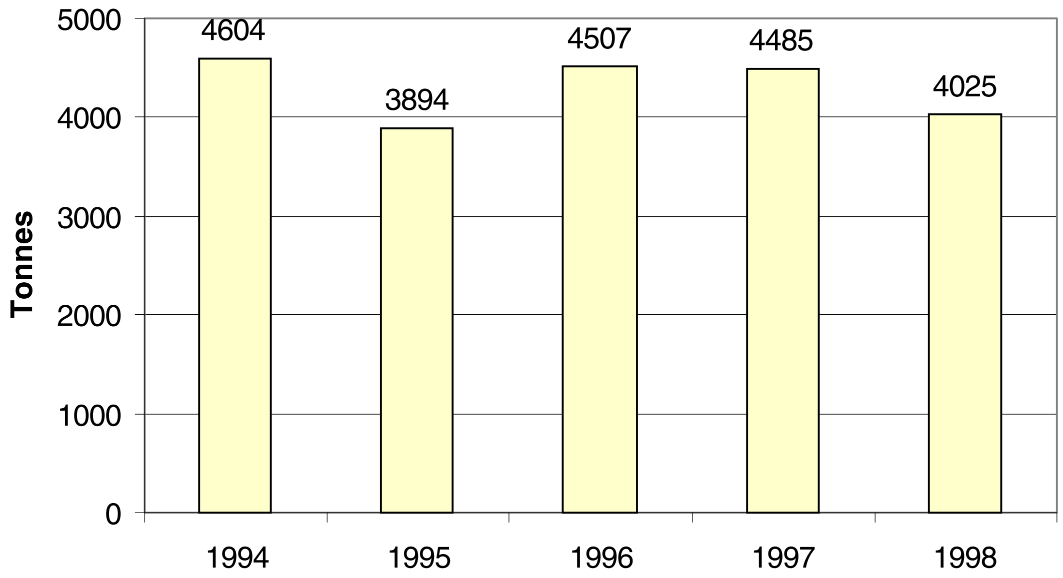
Imports of live, chilled mussels are characterised by strong seasonal variations, with two peak periods observed year after year, as reflected in Graph 3. The highest imports are recorded in March/April, when domestic landings are very low. A second peak is observed in November, when consumption is the highest. Imports increase from September to March the following year, to culminate that month (600 tonnes in March 1998), when French production is lowest. After the spring peak, imports tend to decline as French production arrives on the market (starting in May/ June, up to January/February).

Frozen mussels

French imports of frozen mussels have been quite stable since 1994 at about 4,000/4,500 tonnes. Yet, this follows a period during which imports were much lower (below 2,000 tonnes between 1989/1992). Two phenomena are to be considered to explain this development:

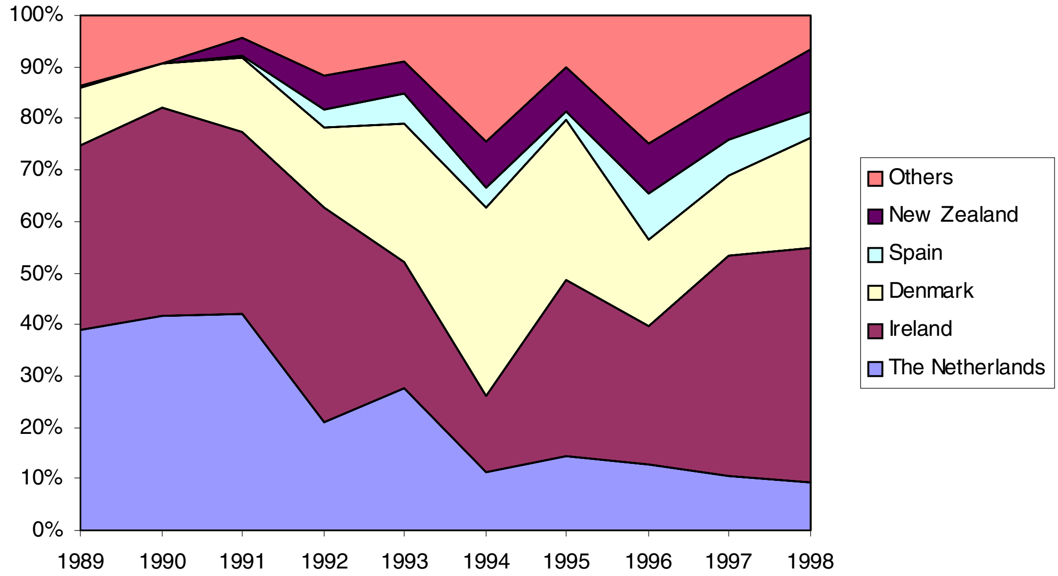
- Whilst in the first mentioned period, frozen mussels' imports mainly concerned shell-off products (peeled), since 1994 the market has been supplied with frozen mussels ready for consumption, shell-on (consumers packs).
- Increase in ready meals production has implied the growth in industrialists' demand for ingredients, of which mussels meat (peeled).

Graph 4: French Imports of Frozen Mussels



Source: Eurostat

Graph 5: Frozen Mussel Imports by Origin



	1990	1994	1995	1996	1997	1998
Ireland	681	685	1,337	1,217	1,930	1,837
Denmark	141	1,681	1,213	751	692	868
New Zealand	0	422	345	429	387	491
The Netherlands	699	521	559	578	464	370
Spain	0	175	52	401	309	195
Others	158	1,120	388	1,131	703	264
Total Tonnes	1,679	4,604	3,894	4,507	4,485	4,025
Total value	3.0	7.5	6.9	8.0	7.9	8.4

Source: Eurostat

Ireland is by far the main supplier of frozen mussels, exporting products ready for consumption. Denmark and the Netherlands are providers of frozen peeled products, mainly utilised by the processing industry. Note that some consumers' packs are also retailed.

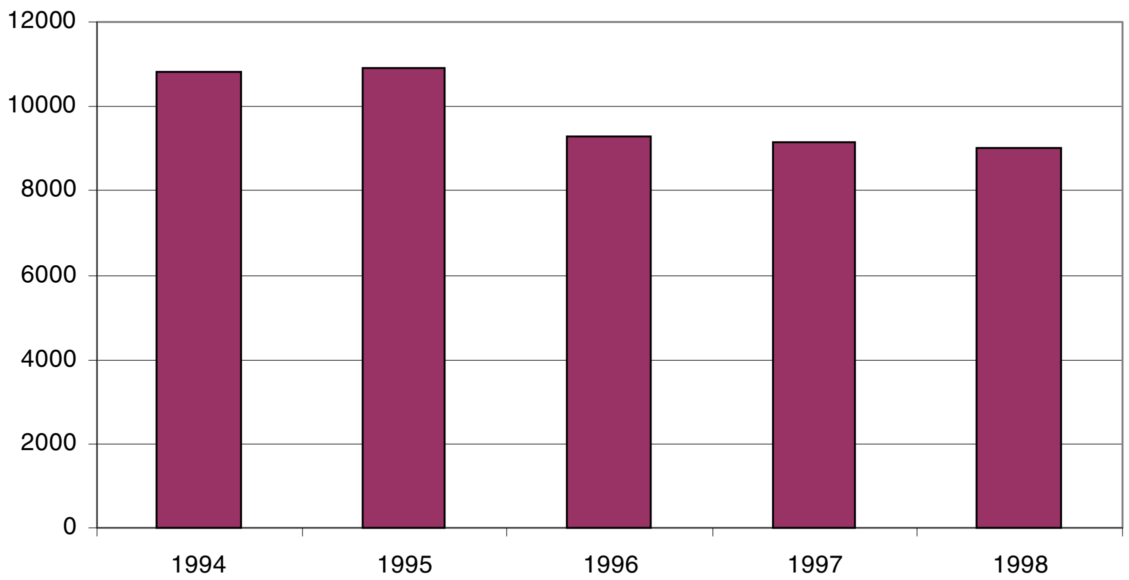
Imports from New Zealand really started in the mid nineties, as the industry initiated some promotional actions (New Zealand mussels were first presented at SIAL[4] in 1992).

Preserved mussels

Imports of preserved mussels concern:

- Canned mussels in metal tins (canned in sauce or in brine[5])
- Mussels in glass jars, pasteurised or not, presented in brine or in sauce.

Graph 6: French Imports of Preserved Mussels, in tonnes

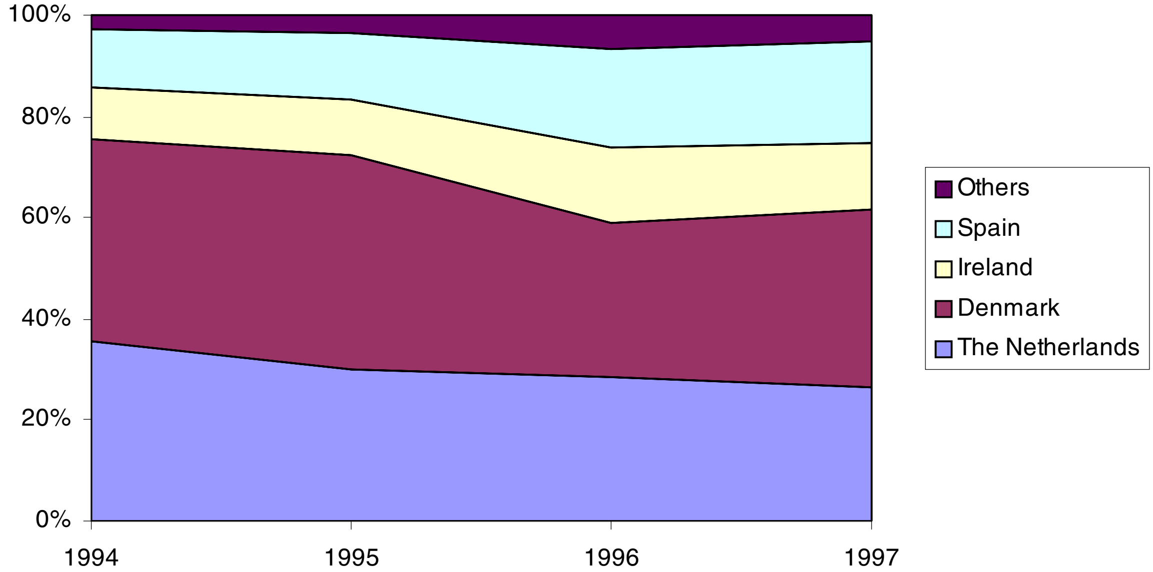


Source: Eurostat

The three main suppliers are Denmark, the Netherlands and Spain.

[4] SIAL : International Food Exhibition which takes place in Paris every second year.
[5] In brine or «au naturel» in French

Graph 7: French Imports of Preserved Mussels, by Origin, in Tonnes



	1994	1995	1996	1997,	1998
Denmark	4,333	4,616	2,796	3,226	4,336
The Netherlands	3,856	3,277	2,659	2,446	2,054
Spain	1,229	1,454	1,808	1,848	1,044
Ireland	1,095	1,188	1,403	1,189	1,186
Others	311	374	620	468	478
Total tonnes	10,824	10,909	9,286	9,177	9,098
Total Value	22.6	22.4	21.9	21.9	21.5

Source: Eurostat

2.4. Exports

French exports of mussels are limited. In 1998, they represented 3,430 tonnes of live products worth 3.6 million euros, 379 tonnes of frozen mussels worth 0.8 million euros and 356 tonnes of preserved products worth 1.1 million euros.

The bulk is exported to EU member countries (89% of the total 5.5 million euros exported).

Table 8: 1998 French Exports by Outlets, Ranked in Value

Rank	Live	Frozen	Preserved
#1	Spain	UK	Netherlands
#2	Italy	Spain	Germany
#3	Germany	Italy	Italy

Source: Eurostat

3. Consumption

In this section we utilise consumption data collected and analysed for Ofimer by Secodip market research company. This set of data is based on continuous seafood purchases' declarations of 4,500 householders.

3.1. Where are Mussels Consumed?

The penetration rate of live mussels, i.e., the proportion of consumers buying the product at least once a year varies greatly from region to region. When the average penetration rate, at national scale, was 39% in 1998, it reached 50% in Western France, 42% in Northern France, 32% in Eastern France and 30% in Paris and region.

Live mussel consumption is linked to the general attitude towards chilled seafood; the higher seafood consumption, the higher mussels consumption. Yet in this picture, Paris is an exception; in the capital, consumption of this item is much below the French average, whilst consumption of chilled fish are similar to the country average.

The low consumption in Paris is due to consumers' perception of the product status (low price, low profile), and to product presentation (it takes time to prepare and to eat mussels). Note that the consumption index of pre-packed chilled mussels in Paris (74), although being lower than the French average (100), is higher than the live mussel consumption index (69).

Mussels in restaurants

Approximately 45% of all live mussels are distributed through the catering sector and 55% through the retail sector[6].

Mussels are mainly consumed in middle class commercial restaurants. Note the development of mussels specialised restaurants, of which the most famous is "*Léon de Bruxelles*". The first "*Léon de Bruxelles*" restaurant opened in France in 1989, and the group today counts (December 1999) 37 franchised outlets located in the country's largest cities. Price per mussel based dish varies from 40 FF to 80 FF according to the recipe and the restaurant standard.

Table 9: Most Common Mussel Recipes in Restaurants

A la marinière	Onions, butter, white wine, celery, parsley
À la crème	Celery, onion, cream, white wine
À la provençale	Tomatoes, garlic, onions, white wine, butter
Au beurre d'escargot	With garlic, butter, parsley
Au curry	Cream, curry spices, parsley, white wine

3.2. When are Mussels Consumed?

Consumption is characterised by two distinct seasons.

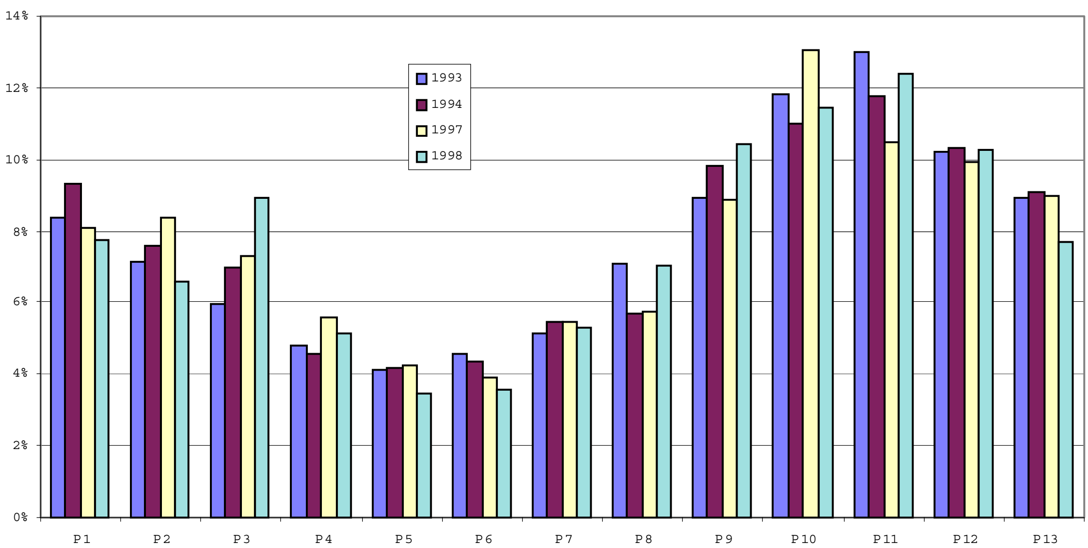
[6] Source : Personal communication Ofimer.

The high season goes from September to December with a peak in October/November, the low season from late April to August, with the bottom reached in May/June. Two reasons for this pattern:

- Spring time is the low production season in France. Highest production is recorded in autumn and during winter time.
- Consumption of molluscs (mussels, oyster, clam, etc.) in France has always been low during summer time, partly for sanitary reasons[7]. This tradition remains vivid in today's consumption behaviour.

This two seasons pattern has remained stable over the past years, as shown in Graph 8.

Graph 8: Live Mussels, Householders' Purchases, by Period



Source: Secodip

[7] In the past, it was recommended not to eat live molluscs during months with no "R" in the name such as May, June, July and August.

3.3. Who are the consumers of mussels ?

Live mussels are predominantly consumed by middle-aged people (50-64 years old), and consumption amongst younger people is low. The former group eats three times as much as the latter. Note that consumption in Paris is very low (two-thirds of the average), when the highest consumption is recorded in small sized cities (2,000 to 50,000 inhabitants).

It is interesting to note that the typical consumers' profile is different when pre-packed mussels are concerned. The highest consumption is recorded with 35-49 year-old people, living in urbanised areas (highest consumption rate in cities over 50,000 inhabitants).

Pre-packed mussels, being more convenient (time saving) and carrying a more modern status, attract non-traditional mussel consumers.

4. Products and Markets

4.1. Presentation Forms

Mussels are sold in a large number of preparations. It can be the unique ingredient, sold shell-on or peeled; it can be the main ingredient but not the only one in case of mussels with sauce. It is also extensively utilised by industrialists, caterers and even consumers, as a secondary ingredient in a large number of ready meals.

Yet, the market is still dominated by live forms. A total of 80,000/85,000 tonnes have been sold as such to final users (householders and caterers) in 1998.

Table 10: Products' Presentations

	Unique ingredient	Main ingredient	Secondary ingredient
Live	✔		
Shell-on, plain (no sauce)	✔		
Shell-on with sauce		✔	
Half shell, plain	✔		
Half shell, with sauce		✔	
Peeled, cooked, au naturel	✔		
Peeled, cooked, in sauce, in wine, in vinegar		✔	✔
Seafood cocktail			✔
Ready meals, seafood inspired			✔
Pizza, crêpes, quiche			✔

The market for live mussels is rather segmented, with a large range of products available on the market, characterised by the following criteria:

- species,
- size,
- production method,
- final presentation form.

All products described in the table below are available on the market.

Table 11: Live Mussels Market's : Main Segmentation Criteria

Species	Size	Production method	Final presentation		
Mytilus edulis	Small	Fisheries		YES	NO
Mytilus galloprovincialis	Large	Bouchot farmed	Separated	✔	✔
		Rope farmed	Sorted	✔	✔
		Others	Byssus	OFF	ON
			Rinse/clean	✔	✔

Live mussels may be sold after a basic separating process (some mussels will still be attached to each other), yet some more preparation tasks may be done by producers. Separation may be done more thoroughly, mussels may be sorted by size, byssus may be taken off, and mussels carefully cleaned (no sand, no grit). The full preparation process (separating, sorting, de-byssing, cleaning) cost is estimated to be 1 to 2 FF per kilo. This process could be performed manually, yet, these tasks are time consuming and there is a clear tendency in France for producers to invest in specific mussel cleaning machinery.

The production method is an important segmentation criteria. The so-called "*Bouchot*" grown products get a low price premium. On the retail market, Bouchot mussels represents a retail market share slightly higher in value (62.4% in 1998) than in volume (60%) reflecting the higher consumer's price.

Table 12: Live Mussels: Householders' Consumption by Products, in 1998

Mussels type	Vol	Val
Bouchot	60.0%	62.4%
From the Netherlands	11.5%	11.9%
Others French origin	9.5%	8.0%
From other foreign origins	7.9%	7.1%
French Mediterranean	7.4%	7.1%

Source: Ofimer – Secodip (1999)

4.2. Preservation Modes

Mussel products are available in chilled, frozen and preserved forms. Dried and smoked mussels are not common on the French market.

Table 13: Preservation Mode

	Chilled	Frozen	Preserved/canned
Live	✔		
Shell-on, plain (no sauce)	✔	✔	
Shell-on with sauce	✔	✔	
Half shell, plain	✔	✔	
Half shell, with sauce	✔	✔	
Peeled, cooked, au	✔	✔	✔

naturel			
Peeled, cooked, in sauce, in wine, in vinegar	✔		✔

Shell-on mussels, other than live, are presented either in chilled or in frozen vacuum packed forms. Ireland is the main supplier of this product to the market. Mussels may be cooked with no sauce "*au naturel*", or with one of the most common sauces used for preparing mussels: *Marinière*, *à la crème*.

Half shell cooked mussels covered with stuffing (the traditional and most common recipe is a mixture of butter (80%), garlic and parsley, named in French "*Moules farcies*"). These products are sold by the dozen. Processed in plants located in France, these items are made with French, Irish, Dutch and even New Zealand raw products.

Semi-preserved mussels are imported from Holland and from Denmark as final products. These products are mainly destined to the retail segment. They are packed in 200g, 350g, 500g glass jars. The main recipes are:

- Mussels *au naturel* , in brine (water, salt)
- Mussels *à l'escabèche* (pickles)
- Mussels *à la catalane* (tomato + onion sauce)

4.3. Packaging

Fresh mussels are sold live to fishmongers or restaurants in 15 to 30kg bags. They are retailed in bulk. In the past, and still today in some retail places, mussels were sold in litres[8] (each retailer has a special box containing the equivalent of one litre).

Table 14: Packaging

	Chilled	Frozen	Preserved/canned
Live	Bulk in polybag, sack, basket full of seawater		
Shell-on, plain (no sauce)	Polybag, Vacuum packed	Polybag, Vacuum packed, carton box	
Shell-on with sauce	Polybag, Vacuum packed	Polybag, Vacuum packed	
Half shell, plain	MAP* in tray,	Polybag	
Half shell, with sauce	MAP in tray, plastic tray	Polybag,	
Peeled, cooked, au naturel	Polybag, Vacuum packed	Polybag, Vacuum packed	Glass jar, tin, plastic tray
Peeled, cooked in sauce, in wine, in vinegar	MAP in tray, Vacuum packed		Glass jar, tin, plastic tray

*MAP: Modified Atmosphere Packing

[8] One litre is about 0.75 kg.

4.4. Main Outlets

The retail market

Based on two major panel studies (Secodip for the retail market, Gira for the catering market), Ofimer indicates that the retail market absorbs 55% (i.e., 46,000 tonnes in 1998) of all live mussels marketed in France.

Table 15: Main Outlets

	Chilled	Frozen	Preserved/canned
Live	Retail, catering		
Shell-on, plain (no sauce)	Retail, catering, processing industry	Retail, catering	
Half shell, plain	Catering, processing industry	Catering	
Shell-on with sauce	Retail, catering	Retail, catering	
Half shell, with sauce	Retail, catering	Retail, catering	
Cooked, peeled, au naturel	Retail, catering, processing industry	Retail, catering, processing industry	Retail
Cooked, peeled, in sauce, in wine, in vinegar	Retail		Retail

4.5. Trends

Although the demand still predominantly concerns live mussels in bulk, producers and processors attempt to adapt the product to modern consumers' requirements.

These requirements, when food in general and seafood in particular are concerned, are quite well known. For clearly identified economic and sociological reasons, consumers want time saving products, easy to prepare, pleasant to taste, offering total security.

The following table indicates that mussel producers have started to develop products which comply with consumers' expectations, but several fields can further be explored.

Table 16: Trends on the Market for Seafood and Mussels

Consumer's demand	Adaptation on the seafood market	Adaptation on the mussels market
Small portion-sized	Development of small portions (fillets, fixed weight portion sized)	One/two person(s) shell-on vacuum pack (450g/800g)
Time saving items	Ready to cook with little preparation (fillets) Ready to heat with no preparation Pre-cooked portions, with/without sauce	Thoroughly cleaned Prepared and packed with sauce Packed with sauce and fries (clear mention on pack: less than 5mn preparation)
Easy / pleasant to prepare	Pre-processed products	Thoroughly cleaned
Pleasant / easy to eat	Boneless, skinless portions Ready meals with nice recipes Continuous flow of new presentation	-
Fixed cost, known price	Fixed weight items, Pre-packed chilled fish	Consumers pack (preferred to bulk)
Regular quality	Brands	Collective brands
Quality assurance	Quality labels (Label	-

	Rouge)	
Healthful	Information disseminated through different media (news magazine, women magazine, etc.)	General seafood information well disseminated (no mussel specific)
Appealing/appetising	New packaging	Recent introduction of new packaging (doypack)
Social value	Environment friendly	-

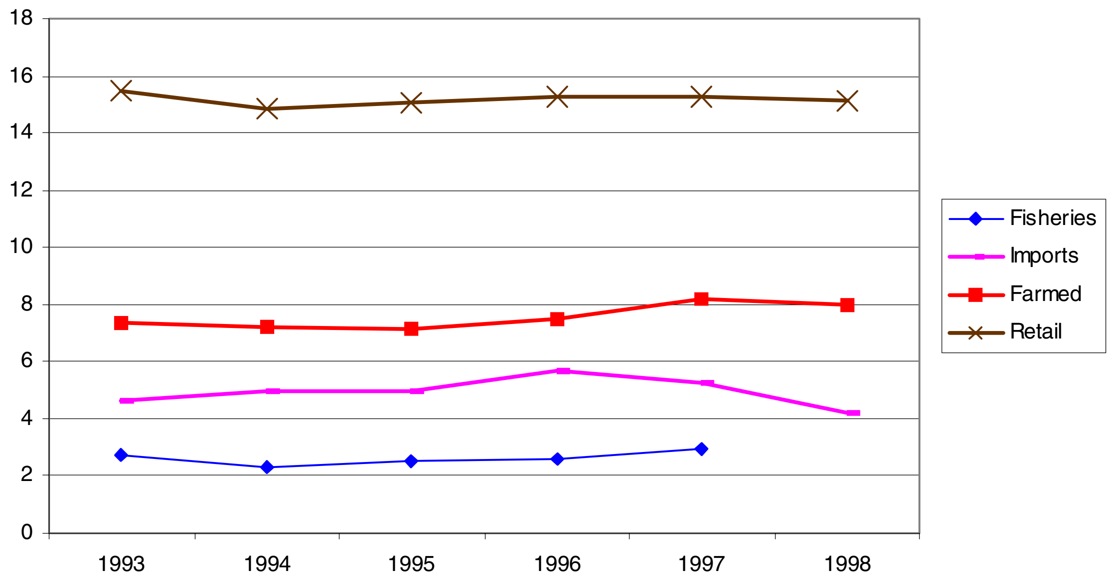
- none

5. Prices

In this section we focus on live mussels prices, the most common presentation form available on the French market. Some retail prices indications are given for the other products.

The graph below indicates that live mussels prices have been quite stable over the past 5 years.

Graph 9: Live Mussel Prices, in FF/kg



Source: Ofimer, Customs data, Secodip

5.1. Ex-farm/ Ex-vessel

Average prices paid to fishermen have been quite stable over the past 5 years, at about 2.50 FF/kilo. Yet, behind this average figure, prices have fluctuated between less than 1FF to 4 FF/kilo. Prices paid to fishermen on a given day, depend directly on

- Volume landed that day, especially volume of landings from the Barfleur stock. Barfleur landings constitute a large part of the country's wild live mussel supply. Landings are seasonal, and prices quite volatile.
- The presentation form. If mussels have been separated, washed, packed on-board, fishermen get a premium. Price difference between bulk and sorted/cleaned products is about 1 FF/kg. In 1998, bulk mussels were paid 2.50 FF/kg to fishermen when the second category was paid 3.50 FF/kg.

Table 17: Ex-Producer Prices, in FF/kg

	1993	1994	1995	1996	1997	1998
Fisheries	2.70	2.31	2.55	2.62	2.96	na
Farming	7.32	7.18	7.17	7.50	8.16	8.00(e)

Source: Ofimer

Farmed mussels fetch a higher price, commanded by higher production costs, a better quality (no sand, no mud, nor small parasitic crabs), and a better image as perceived by consumers. Yet, in the short term, prices of farmed products depend upon:

- production method (Bouchot, rope),
- overall supplies (including domestic fisheries and imports).

5.2. Import

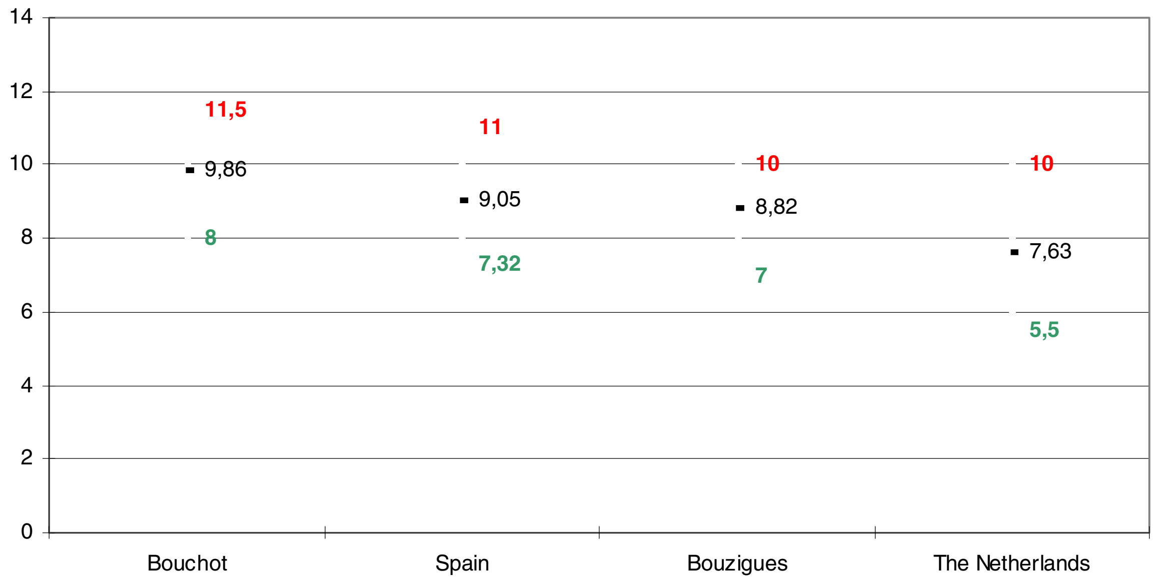
Several types of products, valued at very different prices, are aggregated under the same statistical code. Consequently, trade data are not relevant for carrying detailed trade price analysis. Live mussels' wholesale prices collected at Rungis give us some interesting information on prices by origin.

5.3. Wholesale Prices

Rungis wholesale market plays an important role in live mussel distribution in the Paris region, with 10,500 tonnes of live mussels coming from all regions traded every year[9]. Graph 19, based on monthly average data covering the period from January 1995 to September of 1999, indicates the price positioning of the different products characterised by origin.

Bouchot mussels are clearly positioned at the upper end of the market; they get the higher average price, and happened to be traded at 11.50 FF/kilo. Spanish mussels, of large scale come second when average and maximum prices are considered. This species occupies a different market niche, being often consumed raw. Dutch mussels traded at lower prices (7.63 FF/kilo on average) record the highest price variations, as a consequence of important supply fluctuations.

Graph 19: Mussel Prices at Rungis Market, FF/kg



Source: Semmaris

5.3. Retail

Retail prices range from 7 FF/kg to 20 FF/kg[10]. This depends upon a large number of variables including species, presentation form, production method, point of sale, marketing context and current supply situation.

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[9] Average per year over period 1995-1998
[10] In 1999, according to different sources, including Ofimer data, personal observations.

Species: The French market is rather small-sized mussels oriented. Large size items, of the *Mytilus galloprovincialis* species are less appreciated than the *Mytilus edulis*. Yet, there is a specific demand for these products (catering sector, processing industry). Period of *Mytilus galloprovincialis* shortage is favourable, in terms of demand and prices, to large size *Mytilus edulis*.

Presentation form: Retail prices depend upon the final presentation; whether mussels are graded by size, cleaned, with byssus on or off, presented ready to cook, or whether they are sold in bulk.

Production method: Farmed mussels get a premium compared to fisheries items. Moreover, the "Bouchot" production, perceived by consumers to be of better quality gets a better price compared to rope grown mussels.

Point of sale: At retail level, food prices depend upon where products are sold. What is true for food, is true for mussels. Prices in supermarkets[11] are lower than prices at independent fishmongers. The difference is estimated to 15% by Ofimer[12]. Moreover, large scale retailers have played an increasing role in

[11] We hereby name supermarkets, unless otherwise specified, all retail stores of size above 400m². The exact terminology refers to supermarkets retail stores of size ranging from 400m² to 2,500m² and hypermarkets stores with size above 2,500m². The two types of stores are referred as to "GMS" in French for "Grandes and Moyennes surfaces", large to medium sized stores.

[12] Difference between prices in large scale retailers network and traditional retailers as observed in 1998.

mussel distribution, with a market share jumping from 32% in 1988 to 64.5% ten years later.

Table 20: Sales of Live Mussels by Retail Outlets, in Volume Terms

	Supermarkets	Fishmongers	Direct sales
1988	32.0%	61.0%	7.0%
1998	64.5%	32.1%	3.4%

Source: Secodip

Marketing context: The lower average prices observed in supermarkets is partly explained by the fact that this item is regularly included in promotional programmes. These promotions are predominantly run during the fall season, when consumption is the highest.

Table 20: Mussel Promotion in Supermarkets

Mussels Origin	Selling Unit	Price per litre	Price per Kilo	Date
The Netherlands	3 litres	6.50 FF	*circa 8.71 FF*	Sept 1997
The Netherlands	3 litres	6.50 FF	*circa 8.71 FF*	Nov 1997
France, fisheries mussels, Barfleur	One litre	6.90 FF	*circa 9.25 FF*	Nov 1998
France, Bouchot	One kilo	*circa 10.37 FF*	13.90 FF	Nov 1999
France, Bouchot (Brand Fort Boyard)	One kilo	*circa 9.85 FF*	13.20 FF	Nov 1999
France, Bouchot	One kilo	*circa 11.04 FF*	14.80 FF	Dec 1999

Italic prices are derived with a 1.34 conversion rate (1 kilo = 1.34 litre)
Source: Supermarkets promotion catalogues

Supply/Demand context: Prices may vary as a consequence of overall supply and demand circumstances. Yet, it seems that on short term basis price fluctuations are rather limited. Behind these empirical observations, a specific analysis[13] of the supply and demand conditions, based on time series, would tell us more about the relationship between prices and market conditions.

Brands: Except for the Bouchot appellation, most attempts to build recognised brands have failed. Brands, today, do not constitute a determinant criteria for prices (cf. section 6.2.).

5.4. Frozen Mussels retail Prices

Retail prices for frozen mussels depend upon product presentation. Table 21 and 22 indicate some 1999 prices by product presentation.

Table 21: Frozen Mussels, Consumers' Prices, in 1999

Type	Mussels presentation	FF/kg
1	Cooked meat shell off	23/43
2	Cooked in sauce, shell-on vacuum packed	35/45
3	Stuffed, in half shell	100/140

Source: Monfort M.C. (1999)

[13] out of the scope of this study

Table 22: Frozen Mussels Description and Prices

Type	Presentation	Origin	Brand	Weight	FF/kilo	Packaging
1	Cooked meat	Denmark	Royal Greenland	400g	36.50	Carton box
1	Cooked meat	Holland	Picard	500g	44.40	Polybag
1	Cooked meat	Denmark		1kg	30.90	Polybag
1	Cooked in shell	France		1kg	27.90	Mussels and juice in polybag
1	Cooked meat	Denmark	Loceda	400g	34.75	Plastic tray
1	Cooked meat	Denmark	Alcyon	500g	33.70	Laminate bag
1	Cooked meat	Denmark	Royal Greenland	1kg	26.90	Full colour polybag
1	Cooked meat	Denmark	Royal Greenland	500g	26.90	Full colour polybag
1	Cooked meat	Germany	Scamark	1kg	22.95	Polybag
1	Cooked meat	Germany	NordFrie. Mussel Konserven	500g	25.00	IQF mussels in polybag. LOWEST PRICE
2	Cooked in shell	New Zealand	Turner	500g	69.00	shell-on and juice in vacuum pack
2	à la marinière	Ireland	Servifrais	450g	38.89	Vacuum packed in carton box. 400g mussels
2	à la marinière	France	Le Père des Pêcheurs	450g	42.00	Vacuum packed in carton box
2	in sauce	Ireland	Bantry Bay	450g	43.33	Marinière in carton box. 400g mussels.
2	in sauce	Ireland	Bantry Bay	450g	43.33	à la crème in carton box. 400g mussels
2	à la marinière	Ireland	Picard	450g	50.88	88% mussels vacuum packed in carton box
3	Stuffed	France		125g	108.80	
3	Stuffed	France	Escal	110g	134.55	Made on Irish mussels. In carton box
3	Stuffed	France	Billot	125g	127.60	Cooked meat in half shell

Source: Monfort MC (1999)

6. Marketing Policies

In a context of increasing European production, growing competition between different sources of mussels and competition with other food products, stabilised if not declining producer's profit margin, specific marketing strategies have been initiated by mussels producers. All designed for stimulating mussel consumption and sales, marketing actions have been developed at both national and regional levels. Three main types of approaches have been identified[14]: Advertising, Product Specificity, Top grade quality. Beside these collective actions, a few private operators have very recently attempted to develop private brands.

6.1. Collective Campaigns Initiated by Foreign Producing Countries

In France, two countries have run generic mussel campaigns: The Netherlands and New Zealand. These campaigns are all based on information dissemination and advertisement.

The Netherlands

The Dutch Fish Marketing Board is a collective promotional organization of the Dutch fishing branch. In recent years, this body has launched mussel campaigns in three targeted countries : The Netherlands, Belgium and France.

[14] Charles, E., Paquotte, P. (1998)

In France, the Dutch mussel's campaigns, which have reached full speed since the mid nineties, include the distribution of products presentation (leaflets) and recipes, as well as advertisement in professional magazines. The target is mainly professional buyers, including supermarkets buyers since 1997.

The main promotional arguments used by the Dutch Fish Marketing Board are:

- Product quality; mussels are fully cleaned, with no sand, no grit; packaging is leek-proof.
- Fast and secure deliveries. Orders passed by French importers before 5 PM on day A, are delivered the next day (day B) in optimal conditions (packaging and transport conditions).

New Zealand

New Zealand mussels, introduced in France in the early nineties, were first presented at SIAL in 1992. Since then, product information was disseminated among seafood professionals (mainly importers). More recently a specific campaign was designed for the commercial catering segment. In 1998, 5.000 booklets including recipes were distributed to high class restaurants' chefs.

The New Zealand campaign focuses on *Perna canaliculus* specificities: size and colour.

Ireland

The Irish mussel industry did not actively promote the product on the French market.

6.2. French Producers' Marketing Strategy

Whilst the Bouchot farming technique has existed for ages, and represents the bulk of the country production (65%), the Bouchot brand has been officially recognised since 1997. That year, the National Committee for Shellfish Farming introduced specific terms of references:

"Commercial name *Bouchot mussels* is restricted to mussels farmed in the following conditions: Grown exclusively on vertical poles, totally or partly free from seawater during the lowest tides, in concessions allocated to this purpose, during at least 6 consecutive months prior to placing on the market".

In 1998, Bouchot brand was enhanced through national wide TV campaign for a 1.5 million FF budget. The *Moule de Bouchot* brand carries a positive image among French consumers, and fetches a premium in price.

In addition to this national wide appellation, there exist several regional brands referring to the local origin of products. As an example, the brand *Moule de Bouchot La Charron* was launched during summer 1995. It is today applied on 10,000 tonnes produced by 100 farming companies.

In the same region (Charente), two other local brands have been created: *Moule de Fort Boyard* and *Moule de Fort de Charente*.

Using a geographical brand often requires for producers to comply with specific parameters, other than production area, of which the most common are:

- Production method
- Marketable size
- Meat/shell ratio
- Identity/location of marketing centres
- Packing specifications

These parameters and target levels vary from brand to brand. In the entire country, a large number of local brands do exist and compete with each other. These brands carry clear information concerning the region of production, sometimes complemented by information on production method (bouchot, pleine mer), but they say little about final product specifics as the link between geographical origin or the production processes and final characteristics of the products are difficult to establish[15]. Except for the bouchot brand, collective branding efforts implemented by mussels' producers did not yet manage to create strongly differentiated products. Competition remains severe for all producers.

6.3. Individual Efforts

For financial reasons, mussel producers being small scale operators, have so-far preferred to invest in collective branding policies rather than in private ones. Yet, as recent concentration attempts have been observed, private branding efforts have emerged. Since 1999, Normandy located companies, Monbrun and Kermarée do market under the brand "*Les Marinières*" mussels produced by a total of 45 local growers. Les "*Marinières*" mussels are guarantied to be at least 4cm in length, at most 90 pieces in a litre, with a meat/shell ratio superior or equivalent to 24%. External quality control is implemented by Veritas France. The brand "*Spéciale Marinière*", referring to larger products is expected to be launched soon.

[15] Charles, E., Paquotte, P. (1998)

7. Key factors For Success

Being a successful supplier of mussels to the French market implies to be endowed with several if not all of the capacities/ abilities discussed below. Yet, final recommendations would greatly vary depending upon the size, financial capacities and scope of operations of the supplier. The following intends to underline the major aspects to be considered in any export strategy definition.

Opportunities have been identify on the specific markets for ready-to-cook live products and value added products (chilled and frozen). It is important to adapt this traditionally time-consuming food item into a quick to cook one.

The market is open to supplies of live mussels during France's low production period (March/May) and during France's peak consumption season (October/November).

Competition on this market is hard, and consumers are very price sensitive. Sales of standard live mussels could be successful at prices comparable to Dutch product prices. To fetch prices paid to Bouchot farmed items will only be possible on "quality guaranties" and "clearly recognised" items. Information and promotion campaign would be necessary to launch a new origin; and the success of this campaign will depend upon the choice of the target.

The market for live mussels tend to requires quality guaranteed products (clean, sorted, meat content). Moreover, on the market for live and chilled products it is considered as a major competitive advantage to be able to supply the market quickly, regularly, in optimal transport conditions.

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