

## Le Marché Européen des moules



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### European production of mussels

The overall production of mussels in Europe peaked at nearly 750 000 tonnes in the late 1990s and has since declined to about 550 000 tonnes in the past few years. On a global scale, Europe is a major contributor of mussels, supplying over a third of the total production. Aquaculture is by far the main source of mussels and is responsible for over 90 percent of total landings. *Mytilus edulis* and *M. galloprovincialis* are the two main species harvested and cultivated in Europe.

### Major EU suppliers

Three countries are responsible for two thirds of all European mussel production. Spain is very clearly the largest producer with over 200 000 tonnes per year, followed by France with a stable production of around 80 000 tonnes. Italy is the third main producing country with 65 000 tonnes. Most of the supplies from all three countries come from aquaculture.

### Spain

In Spain, farming is based on mussel spawn, collected from wild populations, and then grown on horizontal systems of ropes suspended in the water by buoys, pipes or floats. Galicia, located in the northwest of Spain, is by far the largest production area in the country, where more than 90 percent of all mussels are produced. Two other autonomous communities producing mussels are Catalonia and Andalusia, each producing less than 10

percent of the production volumes in 2012. Mussel farming is a family-owned business; in Galicia in 2012, it was estimated that around 3 350 rafts were held by around 2 300 families.

Prices for Spanish mussels have followed a long term declining trend and price differences by category have tended to shrink.

### **France**

In France, mussel farming is undertaken along both the Atlantic and the Mediterranean coast. All mussel juveniles are collected in the wild. Ropes are immersed in the seas waiting for spats to attach themselves. The ropes are then fixed to wooden poles called “bouchots”, which are arranged in horizontal lines. Ex-farm prices have not been published since 2008, when they averaged EUR 1.55 per kg. In comparison, in the same year, fisheries mussel prices to fishermen did not climb above EUR 0.91 per kg. Many mussel-growing areas all along the coast have entered into specific quality schemes, following more or less stringent specifications.

### **Italy**

In Italy, the culture of mussels is well developed and this species represents 48 percent of the volume of all farmed marine products. The mussel production comes from 220 production sites or farms, 60 percent (132) of which are located in southern Italy and Sardinia. National production of mussels does not satisfy domestic demand. Therefore, mussels are also imported, mainly from Spain (75 percent) and Greece (22 percent). Overall, mussel imports have increased in the past ten years. Over the last five years there has been a slight slowdown in production (-1 percent per annum), mainly due to the decline in domestic demand as a result of the economic downturn. Mussel prices in Italy seem to have suffered considerably from the decline in domestic demand. In the first quarter of 2013, the average production price of farmed mussels (depurated) was EUR 0.78 per kg, with a decrease in price of 9.2% compared with the same period in 2012, mainly because of the drop in demand.

### **Chile**

Chile is the fourth largest producer of mussels in the world. The cultivated mussel (*M. chilensis*) sector in Chile has experienced a very rapid expansion in output over the last ten years, with production jumping from 20 000 tonnes in 2000 to 290 000 tonnes in 2011. The main processed product forms include IQF meat and half shell. Since 2007, this export oriented industry has been boosted by the drop in customs duties when entering the EU market. Much of the production of Chilean mussels is exported to the European market, including The Russian Federation, and to a growing extent also to South American countries. By contrast the cholga and giant mussels are consumed locally.

### **New Zealand**

New Zealand produces a large volume of farmed mussels, which in the past rivaled Spain’s production. The species used is *Perna canaliculus*, also called the green-lipped mussel, which is one of the largest mussels in the world. The industry is very export oriented and products are sold in a large number of countries (78 in 2011), including Spain, the UK, Germany and France; four major markets in Europe. The farmed product is sold under the trade-marked name Greenshell™ mussels, which has developed into New Zealand’s biggest aquaculture

business and the largest (by value), single species of seafood exported today. In 2012, New Zealand mussel farmers exported 34 000 tonnes of green-lipped mussels, worth a total of NZD 190 million.

### **Turkey**

Despite a well-established aquaculture sector and steady growth in Turkey's aquaculture output of finfish in recent years, mussel farming has not been able to flourish. Production levels of around 1 500 tonnes in the early 2000s declined to 5 tonnes in 2011. No production of farmed mussel was reported for 2012. For wild mussel production, volumes reached 2 093 tonnes in 2012.

### **Norway**

Blue mussel farming has a long history in Norway, although it is still a relatively small industry. In 2011, Norwegian farmers produced 1 742 tonnes of blue mussels (*M. edulis*), which can be found along the entire coast of Norway. Although it has been recognized for many years that the Norwegian coast could offer good potential for blue mussel farming, this industry has been declining for some time. This is possibly due to considerable financial losses followed by the closing down of several mussel farms.

### **Trade**

In 2012, the EU and its 27 members imported 155 000 tonnes net of products, worth EUR 250 million. The trade between EU members is largely dominant, with over 90 percent of total trade in value. Europe as a whole is a large market for mussels, but consumption is particularly high in three of the countries. The rest of the zone offers undoubtedly a huge potential for further sales.

### **Consumption**

Spain, France and Italy make up 78 percent of the total consumption, representing only 35 percent of the population. The eight countries listed in the table below absorb 96 percent of the total mussel market, with 65 percent of the population. This means that the remaining 19 countries and 35 percent of all EU consumers eat just 4 percent of mussels available on the market.

The level of consumption is highly variable according to country. The four countries of Spain, Denmark, Belgium and France, totalling 128 million inhabitants, have a per capita consumption that is well above average at 3.08 kg per year, whereas consumption by the remaining population of nearly 300 million is 200 g per annum at most.

### **Adding values to mussels**

In a context of declining natural resources and increasing production costs, adding value to seafood products, and to lesser extent to aquaculture products, is a major concern for producers and public authorities. Fishing less and selling better is something most industry participants would like to achieve, but do not always have the knowledge to accomplish. Superior quality, a unique origin, or a particular method of production, may be the means to add value. Seafood and aquaculture products offer many possibilities both because of the diversity of their characteristics, and also the diversity of buyers' expectations.

Some of the types of processing and labelling that mussel processors have undertaken for adding value to their products are described below.

### **Labelling**

In today's world of claims and counter claims about food products, consumers are faced with so much information that unsurprisingly, there is confusion and uncertainty about what to believe. The situation becomes increasingly more complex every day. Thus, the problem is not only to inform consumers, but also to present relevant and reliable facts in a way that catches the attention of consumers. Mussel producers have the choice of a range of labelling options, possibilities for accreditation and values to promote.

### **Organic labeling**

Organic production of seafood in Europe was launched in 2009 and is now governed by EU Commission Regulation 710/2009. Organic mussels fall into this regulation. Production requires quality products coming from a sustainable production system, which respects natural equilibrium and biodiversity, human health and animal welfare. Fundamental principles in organic production prohibit the use of:

**Synthetic chemicals;**

**GMO and GMO derived products; and**

**Ionising treatment**

The organic requirements for mussels look at stocking density, seed collection sustainability and a sustainable management plan following the principles of organic production. Products that meet these requirements can carry the EU organic logo. The demand for organic food in general and organic seafood in particular, is growing fast in Europe.

The EU organic label can be applied to production complying with several different standards that were developed by either public or private bodies. Producers choose the standards they feel most comfortable with, or the standards that are best recognized by buyers and consumers of the market they target. The French Ministry of Agriculture, the United Kingdom Soil Association, and the German Naturland Company are some of those that offer organic mussel standards complying with the EU rules.

Ireland is Europe's main producing country for organic mussels. The first export test shipments date back to 2010, and in 2011 sales began on a commercial scale. In France, two producers have entered this production method so far, and their products are AB (agriculture biologique or organic agriculture) certified. Compared with non-certified products, the premium obtained on organic mussels on the French market was estimated to be EUR 0.20–0.30 per kg at the pre-process stage and EUR 0.40–0.50 per kg at the post-process stage. Several large-scale buyers have indicated that they would buy, or would be interested in buying, limited volumes of organic mussels in response to the demands of a small proportion of the population. However, the product quality appears to be the same, with the organic stamp more applicable to the production process (waste management, fibre for the rope, etc.).

In Spain, the first organic commercial shipments started in 2012. After the EU Commission Regulation was issued, some of the Galician producers decided to apply for recognition of

their mussel production as organic. Since it began, Galician production of organic mussels grew quite quickly. In 2012, 160 tonnes of mussels were collected and sold in 4 bateas for a value of EUR 95 700, i.e. at an average price of EUR 0.60 per kg. This is considered to be a higher price compared with conventional products and is sufficient to cover the extra cost of undertaking the certification procedure. The first successes have inspired further production according to these rules. In 2013, 70 to 80 bateas are expected to go for organic production and small processing industries are interested in buying it.

### **Eco-labels**

Eco-labelling standards set criteria for the environmental responsibility of the fisherman or the sustainability of the stock that is being fished. One of the most well known eco-labels for seafood is the Marine Stewardship Council (MSC), which sets standards for wild fisheries. Friend of the Sea is an NGO that certifies sustainable fisheries and aquaculture.

In January 2010, Denmark's Limfjord mussel industry was the world's first mussel fishery to receive MSC certification. This fishery comprises 27 fishing vessels that produce about 30 000 tonnes of mussels annually. Since then, an additional ten mussel fisheries have received this well recognized resource certification.

### **Collective labels and brands**

Collective branding by a group of producers is currently the favoured marketing tool for businesses selling to consumers in the case of fresh or little processed fisheries and aquaculture products in Europe, with several hundred labels existing. All collective brands dedicated to aquatic products, promote a higher quality based on a combination of attributes; such as rigorous production practices, particular fishing technique, particular area of production, or even country of production.

### **The mussel market in the future**

The mussel market offers considerable potential for further development with good reasons for anticipating a sustained future. However, at all levels within the industry, including production and processing, profitability levels are low, and have declined in recent years (PricewaterhouseCoopers, 2006).

The economic performance of mussels on the European market may be challenged by some threats detected at the production level as well as on the marketing side. Though access to recent information on the profitability of the mussel production industry has not been available, it has been observed that some countries seem to have withdrawn somewhat from previous ambitions (Norway, Croatia, Ukraine), with declining production over the past five years.

## **Constraints and threats**

At the production level, a number of external risks may alter the overall output on sale, in particular unreliable seed resources and poor water quality, pollution, biotoxins, and finding spaces for future sites. At the market level, challenges exist relating to the low price of imports, which could pose a threat to local production, expensive transport and logistics and consumer reluctance to eat mollusks. Please review the full GLOBEFISH Research Programme Publication (Volume 115), to learn further about these constraints.

## **Opportunities**

Mussels are a low fat low calorie food and an excellent source of sodium (243mg), selenium (76 mcg), vitamin B12 (20 mcg), zinc (2.3 mg), and foliate (64 mcg), and as such, its consumption may be recommended. Furthermore, mussels are a moderately priced source of marine protein.

Based on the assumption that consumption could be increased by 200 g per inhabitant in high consumption countries and by 500 g in low consumption countries, this would demand an additional production of 190 000 tonnes. If the employment ratio found in Spanish mussel culture is applied to this extra volume, this would open jobs for around 9 500 people (Caballero G. et al., 2008).

In some existing markets, where the penetration rate is not particularly high, the market needs to be developed to attract more young people and to achieve better overall penetration. This is particularly applicable to sales of fresh, live product. There is a heavy reliance on the value added/ready cooked market, which could be seen as vulnerable to imports of frozen products from Chile, for example. Some markets, such as the UK, have very low per capita consumption but a growing population, so there is good potential for increasing the domestic market.

Despite the overall high consumption in European countries, mussels are not well known, not only in areas distant from the coast, but in high consuming countries as well. Getting people to show an interest in the product, and subsequently buying it, would require a combination of several factors: information dissemination to explain the product to consumers, facilitating the presence of the product in restaurants or retail shops, and last but not least, offering products in an easy-to-access format. Trying to sell live mussels in Hungary would certainly be very challenging, while the chances of success would probably be higher for pre-packed mussels in paprika sauce.

Promoting mussels as an environmentally friendly food could be another promotional strategy. According to a recent report by the Scottish Aquaculture Research Forum, “Carbon Footprint of Scottish Suspended Mussels and Intertidal Oysters” (Meyhoff Fry J., 2011), rope-grown mussels have a carbon footprint of just 0.25 kg of carbon dioxide equivalents per kilogram of mussels harvested, or 0.6 kg of carbon dioxide equivalents per kilogram of mussel meat. This good result may make mussels even more attractive to retailers, who are actively seeking to reduce the carbon impacts of products on their shelves.

The study also compared the cradle-to-gate carbon footprints of mussels with other seafood and meat products, and concluded that mussels can justifiably be promoted as a low-carbon food.

Processed mussels could help overcome logistic constraints as well as consumer reluctance. As a result of limited shelf-life, shipping live mussels a few hundred kilometres from the coast requires a fast and efficient logistic network. In comparison, vacuum packed items sold fresh, with or without sauce, enjoy a longer shelf-life and facilitate the distribution of the product. Looking at the situation in France, this sort of convenience product has proved to be effective in attracting new categories of clients. This example is only one among many, and product innovation yet to come will make mussels a much better distributed food item.

### **Conclusions**

The European market for mussels is estimated to be slightly below 600 000 tonnes in equivalent live animal weight, of which 500 000 tonnes is of domestic origin and about 100 000 tonnes of international origin (net balance import-export). The popularity of mussels differs from country to country, where per capita consumption varies from less than 200 g to nearly 4 kg. Mussel meat is a high quality marine protein, highly competitive in food markets, yet more could be done to promote this species. Provided proper value added production takes place and promotional initiatives are undertaken, based on the realistic assumption that consumption per capita will increase, the market should open up for additional volumes, offering numerous qualified jobs at production and processing levels.

Source : <http://www.globefish.org/the-european-market-for-mussels.html>