Research under the Success project identifies challenges, potential solutions in the Italian mussel sector

Consumers interested in certified products

Success or "Strategic Use of Competitiveness towards Consolidating the Economic Sustainability of the European Seafood Sector" is a European research project financed over three years (2015-2018) and is part of the H2020 Strategy. The overall aim of the project is to reinforce the competitiveness of the European fisheries and aquaculture industries.

Some of the research carried out under the SUCCESS project has been based on the Italian mussel sector. The scientists carried out a number of task including:

- The collection of data on quantities, average ex farm prices and production value
- Reconstructing the mussel value chain using data from national statistical sources and through direct interviews with the main stakeholders involved in the formation of the final price at consumption level
- Collection of data on costs and revenues of companies in the mussel segment
- Comparison of balance sheet indices and performance indicators of the Italian mussel sector with the main European competitors
- Analysis, through interviews, of the main bottlenecks that can jeopardize the growth of the mussel sector
- Analysis of bottlenecks in the value chain that reduce profit for producers

Rare display of unity at workshop

The strength of the project stems from the strong involvement of stakeholders in the research activities. As part of the project, a meeting was held in Cattolica last May. The meeting was attended by all representatives of mussel producers, the main wholesalers, who provide for the purification and wholesale of mussels both in Italy and abroad, and the European president of mussel producers. The event achieved two important goals:

– for the first time around 40 producers representing over 70 companies attended the same meeting
– for the first time the meeting was held with the first national association of mussel producers.

These two goals represented a turning point for the Italian mussel production sector, the biggest in terms of cultivated volumes, since before this it was not represented by a unified trade association. Aware of the importance of the event, the meeting organisers sought to use it to:

- validate the economic indicators of the Italian sector and obtain feedback related to anomalies found in the analysis of certain production and operative costs
- discuss the mussel value chain in Italy to understand the gray areas, where it might be appropriate to invest to strengthen the bargaining power of producers
- present the list of bottlenecks detected in the sector through the analysis carried out through interviews, and ask participants about the order and degree of importance of the bottlenecks.

Economic overview and performance

There were 159 farms in 2014, of which around half are small enterprises with less than five employees. These are usually family-owned and managed, and the same people are involved also in other fishing activities, such as the catch of the seeds. Italian mussel production in the last seven years has shown a significant contraction in value (-19%) compared with the volume (-6%), which correspond to a decrease of more than EUR9.5m and over 3,500 tonnes.

In volume terms the mussel segment is more important than any other aquaculture sector with a production of 74.5 thousand tonnes, but it is an unprofitable segment for future investments, due to low ex farm prices.

The two main factors affecting operating costs in the breeding of mussels are wages and salaries at 44%, and seed at 34%.

In 2015 energy costs showed an abnormal increase compared with the previous year. This aspect was discussed with the stakeholders and the reason is primarily linked with new rules that oblige the producers to move the new installations beyond three nautical miles from the coastline. The greater distance meant an increase in fuel consumption by boats to reach the facilities and also meant higher fees for private surveillances services to monitor the facilities. The segment, while producing significant volumes of product, is the one with the worst economic performance. On average gross value added (GVA) during 2013-2014 was about EUR30m, while net margin and

Some 40 representatives of Italian mussel producers attended a meeting in Cattolica to discuss among other topics the mussel value chain in Italy and the bottlenecks that hindered producers from expanding production.

EBIT were respectively -EUR14.5m and -EUR13.5m. The mussel segment is unable to generate cash (operating cash flow is -EUR8.7m). Average revenues, in the last two years, was over EUR50m, which is approximately EUR323 thousand for each mussel farm.

The limited capacity to generate revenue is due to the poorly capitalised structure. The human resources employed are below the number that would be appropriate to make work more efficient. The interviewed producers/farmers involved in the SUCCESS meeting, have repeatedly stated that they have difficulty in hiring more employees, as work is very seasonal (from February to June in some regions, or at most to August in other regions). Most of the employees are occupied in full-time jobs. In 2014 there were around 1,000, while the number of FTEs was about 830, which is due to the seasonality of the mussel harvesting phases.

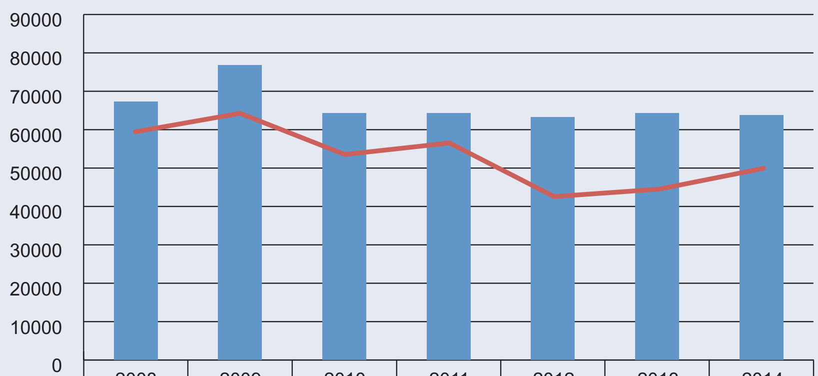
Two main areas of mussel production in Italy

Mussel production is located in two main geographical areas: the Adriatic area, where higher output is found in the Emilia Romagna region, and the Tyrrhenian area. In addition, significant production comes from Puglia, and some from the Campania region. Italy, like Spain, and France, concentrates its production mainly on molluscs. It provides two-thirds of EU aquaculture production with regard to mussels (*Mytilus galloprovincialis*) and is the main EU producer of clams (*Ruditapes philippinarum*), with 94.2% in volume and 91.6% in value of total EU production.

The percentage of mussels for the processing industry is very low (less than 2% of the national production), although in the statistics on food consumption mussels are among the first products to be bought by Italian families. The sector is fragmented, therefore the reconstruction of the value chain considers the main factors that drive the formation of prices of production increased supply which is expressed in the production of the Adriatic.

The analysis of ex-farm prices of mussels has shown a price almost unchanged in the last five years, though both consumption and consumer prices have gradually increased. In 2016-2017 prices of over EUR2.50/kg were recorded for mussels with organic certification and for mussels carrying protected designation of origin (PDO) labels. From a market point of view, it shows a tendency among consumers to appreciate the consumption of Italian mussels and to recognize their value if they have certificates of quality, organic or international recognition, such as PDO, which ensure the certainty of origin and the exclusivity of traditional production methods. Unlike farmed fish, mussels more closely follow the commercial dynamics of fisheries products especially as regards enhancements such as the quality certification of production processes. Consortia producing bivalves (including mussels) where there is vertical integration, also have purification centres and provide direct marketing. In this case, the product certification is the added value that allows the sale of mussels to the retail chains. According to a survey conducted in Italy in which more than 200 fish consumers were interviewed, it emerged that for molluscs the consumer expresses a great deal of interest in knowing the origin of the product and receiving certain information on health and hygiene standards. More than 90% of the sample stated that despite slightly higher prices (10-15% more) they are willing to buy molluscs (mainly referred to mussel). The tendency is to be sure of origin and quality, because molluscs often cause contamination dangerous to human health. The producers present at the Cattolica meeting confirmed the data emerging and described their activities to qualify and, in

Italian Mussel Production



	2008	2009	2010	2011	2012	2013	2014
Volume (Tons)	67239	76800	64256	64300	63257	64235	63700
Value (Euro)	59275	64073	53365	56364.54	42433	44355	49766

Source: Eurostat 2016

some cases, enhance the offer of mussels.

The major producers, who are members of the same consortium and who sell the mussels through a producers' organisation, have described the dynamics underlying the choice to certify organic mussels, or sell them as such, only with information required by law about the hygiene and food safety. Related to the ex-farm price, the mussel producers have confirmed the stagnation and their inability to push the integration of phases following the collection of mussels. Downstream of production, the integration is not widespread, since the entire distribution process is entrusted to wholesalers, which supply both the wholesale fish markets and Horeca sector From fish markets around 9% of mussels are exported.

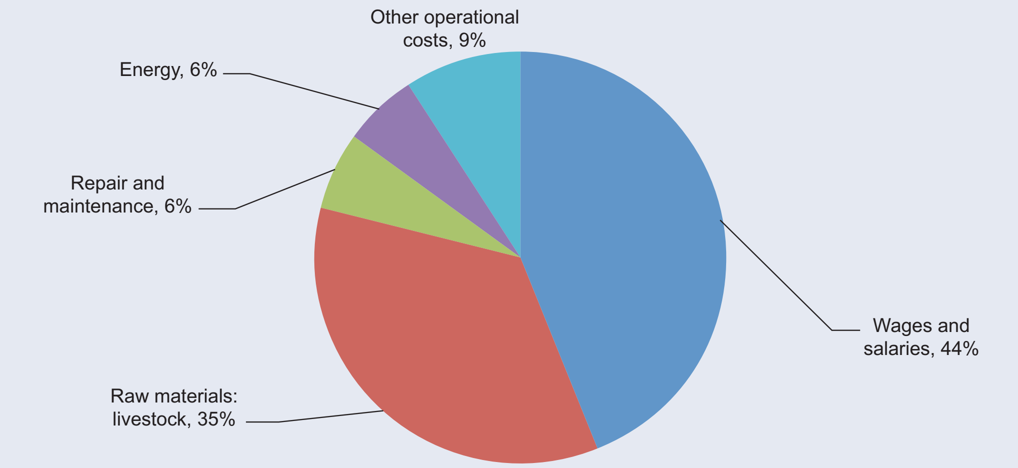
Over 90% of the entire production is directly sold to wholesalers who are responsible for purification and sales. One growth strategy for the mussel sector in Italy envisages making investments for the purification of mussels through EMFF funds. The opportunity for small producers would be to join up with producer organisations and be able to make investments to increase the quantity offered, enhance it through certifications and arrange to place the mussels on the main distribution channels. Certainly aggregation activities would be supported by better collaboration between producers, and by greater participation in associations. Moreover, it will be an opportunity to diversify activities. Currently the degree of diversification in the mussels sector is very low. There were no cases of economic activities related to tourism or direct processing. In northern Italy there are some fishing cooperatives that aggregate internally and breed mussels, clams and other bivalves.

Bottlenecks in the mussel sector and opportunities in the future

During the SUCCESS project information about the most important bottlenecks in the mussel sector was collected. These were discussed with the farmers, who explained that the main need of producers is to improve the ex-farm price and promote the expansion in national and foreign markets. The bottlenecks confirmed during the discussion were:

- Lack of areas that are available for new installations

Distribution of operational costs



Source: STECF EWG 14-10

- Poor ability to introduce new species of shells
- Improving professional training and support women's employment
- Inability to vertically integrate
- Fragmentation of producers (lack of national association)
- Fragmented supply
- Long supply chain from producer to final consumer
- Lack of certification / labelling that can enhance the fresh products

The main constraints are considered to be slow speed and difficulty in the regional sphere to obtain permits and concessions to expand or build new facilities. In addition, in many areas, there has been an increase in human activities damaging the quality of water where long-line breeding facilities were already installed. The pace at which authorizations are granted both for new installations and for the renewal of state property concessions of existing farms, moreover, is different from region to region, creating barriers within the same Italian territory.

Many regions continue to equate mussel aquaculture with fish farming so that requirements are placed on the producers regarding the release of sediments and about environmental analyses on the quality of aquaculture water process. Furthermore, the different Italian approach to calculating the cost of using the marine breeding areas continues to be a bottleneck: the fees are considerably lower if they are to be paid by joint-stock companies or by cooperating companies.

The advisability of using EMFF funds for future investments was not discussed comprehensively. This is because bureaucratic and administrative fragmentation often damages the producers economically and often puts them in a position of default which, obviously, does not allow them to access either public funding or bank credit lines.

Mutually beneficial discussions between producers from different regions

The goal of involving the stakeholders and reporting the real needs of the sector to find a way to constructive growth has been widely achieved. Furthermore, the meeting managed to summarise the main gray areas of the mussel sector, but above all to identify a joint national action line. Many present, whether members of a trade associations or not, found it very interesting to compare notes with producers of different regions and to exchange ideas on any best practices already adopted or, alternatively, find common solutions. There was much interest in the participation of many “young” breeders who said, they had never wanted public aid or support, such as from past structural funds etc., but expected the commitment of the state and the regions to support them with the creation and provision of infrastructures to be shared. Participants shared the conviction that the sector has significant margins of growth, but that breeding activity must necessarily be supported by vertical integration activities, better communication, and by joining or reinforcing producer organizations.

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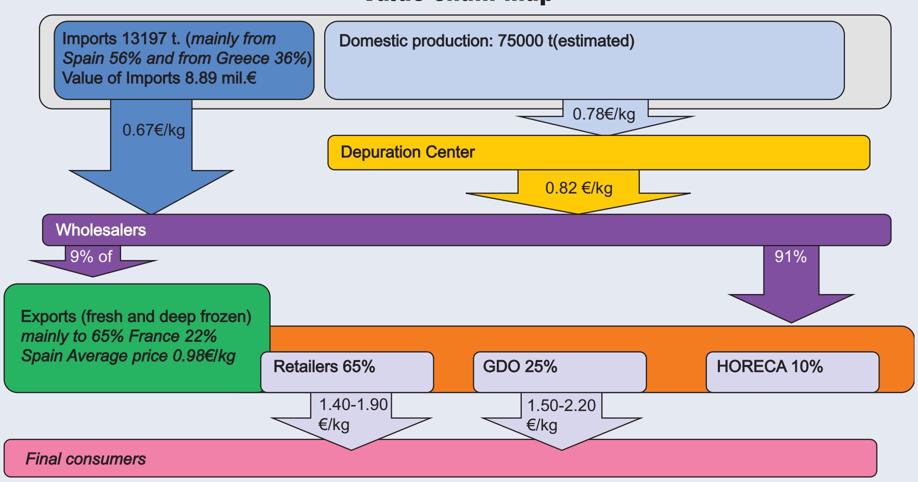
Value chain map



Source: Analysis based on SUCCESS Case Study- direct interviews/personnel contacts