





# **SUBMISSION**

2<sup>nd</sup> International GRAB-IT workshop

# Italian consumers' purchasing behaviour towards organic seafood: openness or scepticism?

Type of submission:

Paper for oral presentation

I wish to be included in the best paper award competition (only for full lenght papers)

NO

# **Abstract**

Organic aquaculture represents a possible way to take towards sustainability, although in Europe it actually covers just 4% of the total aquaculture production. A better understanding of consumer purchasing behaviors towards organic aquaculture foodstuffs is paramount to developing more effective marketing and policy strategies. The results of an online questionnaire (7,232 answers) evidence the scarce information for consumers, who are often not able to distinguish between conventional and organic seafood. However, consumers seem to be ready to receive this kind of products, even if more expensive, as they confer them an added value of sustainability and transparency.

#### Introduction

Consumer purchasing behavior towards seafood stuffs is capturing the interest of the main stakeholders of the supply chain of fishery and aquaculture, for political and economic reasons. Citing the FAO report on fishery and aquaculture (FAO, 2016), per capita fish consumption has increased from an average of 9.9 kg to 19.2 kg from 1960s to 2014, and will further increase in the next decades. Meeting the growing demand for fish as food following the guidelines of 2030 Agenda is both imperative and challenging. The ever-growing world population and fish per-capita consumption are causing an alarming pressure on natural fish stocks. Therefore, the required additional fish production should be offered by aquaculture, despite its widely known negative impacts on environment and, by some chance, on natural resources as well.

Organic aquaculture (EC 710/2009) could be a possible way to take towards sustainability, even if it actually represents, in Europe, just 4% of the total aquaculture production (EUMOFA, 2017). Even if it has wide margins of growth, its economic performances are still not satisfactory. The results of the BioBreed-H2O project, coordinated by CREA (Center of Zootechny and aquatic production) and funded by the Italian Ministry of Agriculture and Forestry, depicted Italian organic aquaculture going through a period of stagnation, after a growing season in the past years. Organic aquaculture was 3.6% of total production in 2016, with more than 6,000 t produced (primarily mussels).

But opportunities are emerging for organic seafood, as established by a market survey carried out in the BioBreed-H2O project. Thus, a better understanding of consumer purchasing behavior towards organic aquaculture foodstuffs is paramount to developing more effective marketing and policy strategies.

#### **Methods**

The survey method was an online questionnaire, easy to set up, faster (i.e., responses are processed automatically and the results are accessible at any time), and inexpensive to administer. The margin of error is greatly reduced with online surveys because participants enter their responses directly into the system.

The questionnaire was developed in Italian. Data collection was performed from October 2017 to February 2018. Diverse approaches (e-mails, phone calls, posts on social media, promotion during workshops) were used to invite and motivate consumers to participate in the study.

The questionnaire was made of three main sections: 1) consumption habits; 2) purchase habits; 3) attitude towards organic foodstuff, in particular aquaculture products. The degree of awareness of consumers towards farmed seafood and organic principles was evaluated.

In this preliminary study, no statistical analyses were performed and the available data were used to depict the general framework.

# **Results**

Questionnaire replies were received from 7232 customers. The socio-demographic profile of a subsample (n = 432) was reported in table 1. The sample was mainly represented by women (over 75%) and guaranteed an adequate coverage through the Italian territory.

The 87.5% of consumer surveyed (5596 of 6395) claimed they know the difference between aquaculture and fishery products. A brief and easy explanation was provided to the 12.5% of unaware consumers.

**Table 1.** Socio-demographic profile of the sub-sample (n = 432)

		%
Gender	Male	24.3
	Female	75.7
Age	<30	11.3
	31-49	56.7
	50-59	16.7
	60-69	12.3
	>70	3.0
Number of people in the household	1	15.7
	2	34.7
	3	22.2
	4	22.5
	>4	4.9
	None	-
Education level	Elementary school	-
	Secondary school	1.9
	Graduation	29.9
	Degree/Master	58.3
	PhD	9.7
Employment	Independent contractor	31.9
	Entrepreneur	3.5
	Executive	3.7
	Employee	38.4
	Student	4.6
	Unemployed	9.3
	Retiree	8.6
Marital status	Single	22
	Married/Unmarried partner	68.8
	Separated	3.7
	Divorced	4.4
	Widower	1.2

# Consumption habits

Italians mostly consume seafood in the household (64.3%), secondarily in restaurants (24%), mainly Italian seafood restaurants (64.4%) and taverns/diners (40.8%), less than once a month (42.5%), preferring marine fish (64.3%) and bivalve and other molluscs (50%).

# Purchase habits

More than 80% of Italian consumers purchase farmed seafood, even if quite rarely (less than once a month – 38.7%), in small amounts (1-5 kg each month – 83.4%), spending on average 20-50 euro a month (45.3%), and primarily in fish markets (28.8%) and supermarkets (22.8%). Considering the sex-ratio of the sample, the fact that over 50% of the consumers answered "myself" to the question "Who takes care of the shopping?", implies that women are mostly in charge of making shopping. Italians principally purchase fresh farmed seafood (82.3%): marine fish (75.8%), bivalve molluscs (47.9%), shellfish (36.8%), and freshwater fish (31.8%). They prefer fresh products for their "smell, flavour and taste" (62.9%), because they're "reach in vitamins, minerals and fatty acids beneficial for human health" (42.3%), and for their seasonality (26.6%).

# Attitude towards organic foodstuffs

Only 7% of the sample never purchased organic foodstuffs, for following reasons: 1) I don't see any difference between conventional and organic food (48.6%); 2) they're too expensive (40.3%); 3) I'm not able to distinguish between conventional and organic food (13.8%). Italian consumers are quite aware of organic principles: 30% of them interpret the word "organic" as "sustainable". However, over 30% of consumers still use the terms "natural" and "healthy" to define organic products. Products more purchase are fruit and vegetables (75%), eggs (55%),

cereals, pasta and bread (44%). The 25.3% of consumers usually buy organic meat and fish, the majority of those who never buy organic fish stated that they don't know enough about organic aquaculture products (27.4%). Thy, however, would expect from organic seafood reduced veterinary treatments (55%), monitoring and transparency (42%), sustainability (31%) and natural taste (23%). Most of consumers (54%) claimed to be willing to pay more for organic seafood.

# **Discussion and Conclusion**

Italian organic food market is well-developed for fruit and vegetables products, and generally, consumers are aware of organic principles. Organic aquaculture is still in its infancy, products are often not available in the marketplace, most consumers are not able to distinguish between conventional and organic seafood, and they're not confident with organic labels. Previous investigations showed that in Italy 60-80% of consumers use to purchase fisheries and aquaculture products (EUMOFA, 2017), but wild fish seems to be widely preferred. Thus, a lot of work must be done in the next future to inform consumers about the benefits of aquaculture products, and of organic aquaculture in particular. Information campaigns would be organized, in order to promote responsible consumption and increase awareness towards farmed seafood and especially organic one. Generally, consumers seem to be ready to receive this kind of products, even if more expensive, as they confer them an added value of sustainability and transparency.

# **Reference Section**

FAO (2016). The State of World Fisheries and Aquaculture 2016.

EUMOFA (2017). EU organic aquaculture.

EUMOFA (2017). EU consumer habits regarding fishery and aquaculture products.