

# Thalassorama

## Certification and Quality Signals in the Aquaculture Sector in France

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**Abstract** *Regarding food-labeling programs, France created a set of official labels according to origin, superior quality, organic agriculture, or specific standards. While these labels have been widely used in the agri-food sector for many years, they have been applied only recently in the seafood sector, especially to farmed products. The economic importance of labeled aquaculture products is still limited, but developing. This paper will reflect on the use of labels for aquaculture products in the French seafood market and attempt to identify their effectiveness.*

**Key words** Aquaculture, certification, labeling, quality signals, seafood.

### Introduction

Increased globalization of food trade has created considerable concern among consumers regarding the quality of the products they purchase. There is sometimes a natural tendency to assume domestic food products are of better quality than goods produced by other nations, especially when this perception is associated with a traditional know-how that is valued in that country or region (Sylvander, Barjolle, and Arfini 2000). Food industries have often addressed this concern by providing consumers with country-of-origin labels, or at a minimum, informing consumers that the food is domestically produced. Practices such as these, by default, also segment the market by differentiating the food products. The segmented markets may be divided along demographic lines based on income or education, or may be divided by consumer perceptions, as mentioned above. While consumer concern for quality may drive labeling programs, producers also see these programs as a means to address increased competition. In some cases, the competition need not come from other nations, but from other regions of the same country. Furthermore, food labeling can be used to differentiate similar products by production process. An example of product differentiation that is based on production process among food products is organic vegetables, compared to traditionally produced vegetables. One might

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reasonably wonder whether labeling programs are effective, either as a signal of quality to the consumer, or as a means to segment the market. This paper will reflect on the use of labels for aquaculture products in the French seafood market and attempt to identify the effectiveness of the labels.

## Food Labels in France

Among the many nations that use food-labeling programs, France has been a world leader by creating a set of official labels. In 1919, France created the *appellation d'origine contrôlée* (AOC) and fully implemented it in 1966. This is a designation for origin and corresponds to the name of a country, a region, or a locality that reflect quality characteristics due to the environment or human factors. This program is administered by a public body, the *Institut National des Appellations d'Origine* (INAO). In addition, *Label Rouge* is a trademark belonging to the Ministry of Agriculture and is a signal of superior quality following a specification list proposed by a group of producers or processors. This label is also managed by a public body, the *Commission Nationale des Labels et Certifications* (CNLC), a national commission for labels and certifications. Finally, established in 1988, there is the *certification de conformité produit* (CCP) that identifies certified products conforming to an industry standard, managed by the CNLC, and the *agriculture biologique* (AB) for products of organic agriculture. The CCP allows for special product characteristics concerning production, processing, or packaging. In 1992, French food labeling regulations were complemented by European Union regulations (2081/92 and 2082/92), which define the Protection of Designation of Origin (PDO), the Protection of Geographical Indication (PGI), and the Certificate of Specific Character (CSC). The EU's PDO corresponds to the French AOC, and can be used in France by a group of producers or processors for products already covered by an AOC. A PGI or CSC can be applied only to products having obtained a *Label Rouge* or CCP.

All of the products that carry these official labels are approved for certification by a third-party organization. This organization is a private certification body officially accredited by a public organization that implements the control following the European standard EN 45011. Another important characteristic is that this system of official food labeling is open, as these signals can be awarded to non-French products; for example, the Scottish salmon *Label Rouge*.

For the most part, agricultural products have been the focus of these labels. AOC products represent 80% of the wine sector and 20% of the cheese sector. *Label Rouge* products represent 20% by volume and 30% of the value of the broiler sector as of 1997 (Lagrange, Briand, and Trognon 2000). More recently, aquacultured products are also receiving certification through some of these labels (Mariojous 2000).

## Seafood Supply in France

In 2000, total production of seafood in France amounted to 867,000 metric tons (mt), valued at 1,487 million euros, and French aquaculture produced 267,000 mt, valued at 457 million euros (OFIMER 2001a). The aquaculture industry covers a wide range of species, but the primary products are shellfish, oysters and mussels; and freshwater fish, such as trout. Species farmed in France are mainly consumed domestically.

Imports play an important role in the supply of the French market. In 2000, the seafood trade deficit was 450,000 mt (net weight) and 2 billion euros. Aquaculture

is responsible for a large share, as among the most significant imported species are salmon (127,000 mt), mussels (55,000 mt), shrimps (73,000 mt), and scallops (17,000 mt) (OFIMER 2001b).<sup>1</sup> The share of total farmed products in domestic consumption has been estimated at 31% in volume and 33% in value (Paquotte 2001).

## Labeling of Seafood Products

In the last decade, labeling of fisheries and aquaculture products has become more prevalent as an answer to both increasing market competition and the need for consumer reassurance (Mariojouis and Paquotte 2000). In France, the market for seafood products has long been generic, with no distinctions, except for the occasional brand naming of some products. The use of quality labeling was developed in the 1990s as a tool for improving the price mechanisms for products from capture fisheries (Charles and Boude 2001). Concurrently, labeling has developed for the aquaculture sector, and it appears to have some specific characteristics and advantages in managing the quality of products and a better ability to use the official quality signals defined for the agro-food sector (Mariojouis 2000).

Between 1989 and 2001, 16 certification programs have been defined for aquatic food products through official signals (Label Rouge, CCP, and organic farming). Among these, 11 concern aquaculture products, fresh or processed. Certified seafood products still represent a very small share of the French market, but are regarded as a promising segment, with 5,752 mt worth 37 million euros in 2000 (CERQUA 2000), jumping 15% in volume and 47% in value over 1999.<sup>2</sup>

### Salmon

Fresh Scottish salmon carries the *Label Rouge*, awarded in 1990, and is the primary labeled product sold in terms of both quantity and value. Data provided by the Paris office of Scottish Quality Salmon indicate that there was a price premium at export of 9% in 1999 and 20% in 2000, compared to standard Scottish salmon. With 4,500 mt sold in 2000, the *Label Rouge* salmon represents approximately 6% to 7% of the fresh salmon market in France. The Irish Clare Island Farm was awarded an organic label by the French government in July 2001, and should soon be available in the market. The multiple Carrefour organised a distinctive salmon supply chain with specifications from production to market, which was first privately certified and then awarded the public certification label CCP in 1999.

### Sea Bass

*Label Rouge* was approved in 2000 for one company owning two sea bass farms along the Mediterranean Coast. Production in 2000 was 81 mt, and production of 300 mt is expected in 2001 (while total expected 2001 French production is about 3,500 mt). The selling price (including delivery cost) was 10.45 euros per kg in 2000, representing a premium of 38% compared to the price of the standard product.

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<sup>1</sup> The import data (OFIMER 2001b) are specified in net weight and include wild products, notably for shrimps and scallops.

<sup>2</sup> The average apparent consumption of all seafood products in France during the period 1998–2000 was estimated at 1,751,500 mt (equivalent landed weight) with a value of 3,514 million euros (Girard 2001).

Expansion of certification to other farms is not considered to be easy, as the technical specifications are rather restrictive. Two sea bass farms have, however, recently applied for an official certification as organic farms.

The need to differentiate products also concerns the wild sea bass fisheries faced with the development of aquaculture. As a reaction to the new competition from farmed sea bass, the fishing industry in 1993 created two trademarks to identify their products: one for trawled sea bass and one for longline sea bass. Charles and Boude (2001) showed that anglers of western Brittany have succeeded in restoring a direct relationship between producer and consumer through labeling of each fish. Their products are identified as a separate category in the Rungis wholesale market.

### *Oysters*

Until the 1980s, the market of oysters, supplied primarily by domestic production, had a traditional segmentation based on the names of the production regions, among which Marennes-Oléron is the most famous, and the individual trademarks of a few important companies marketing the oysters. In Marennes-Oléron, premium oysters may receive one of two *Label Rouge*: *Green Fines de claires* (established in 1989) and *Pousses en claires* (established in 1998). *Pousses en claires* is a local specialty with limited production for a niche market, receiving a high price premium of 44% for the ex-farm price and 40% for the retail price, compared to the average national prices. *Green Fines de claires* has almost no price premium and has not been successful in competing with the *Fines de claires*. There is, however, very limited production of the labelled oysters, compared to national production.

### *Mussels*

For the mussel sector, action has been undertaken at the national level to protect the *bouchots* mussels from competition by other mussel products, including wild, farmed with other techniques, or imported. In 1995, the national trademark *moules de bouchot* was launched. At present, there is an application before the CNLC to obtain a CCP by the national mussel farmers association. This can be regarded as a further step forward to reinforce the protection of the product and the guarantees given to consumers.

## **Discussion**

This assessment of the use of quality signals in the French seafood sector shows the multiplicity of actions recently undertaken to create segmentation of the market and reassure consumers. While these initiatives may create a premium for the labeled products, they may also cause difficulties similar to those found in the agriculture sector. A recent report of the National Economic and Social Council presents a critical analysis of the pros and cons of the official certification system (Louis 2001). It demonstrates the difficulty operators face applying for and obtaining an agreement for a certification. The risk is the potential level of confusion consumers are faced with regarding the profusion of signs about quality and origin, governmentally certified or not. This is amplified in the market for seafood, about which French consumers know relatively little, compared to agriculture products for which “advertising

... frequently recalls the activity of production, whereas it almost never does for other products,” and the consumers “act as individuals who have knowledge and competence, even limited, about the product” (Valcheschini 1998). It has been shown in several European countries that the consumers interviewed about the creation of organic salmon react by asking questions about fish farming in general, with a risk of negative image (Aarset *et al.* in press).

The risk of failure is especially significant because the marketing strategies that we report here have rarely been preceded or accompanied by studies about consumer preferences and consumer acceptance of labeled products. The incorporation of ‘industrial-style’ market development techniques (*e.g.*, product differentiation and market segmentation) into research programs on aquaculture marketing could be recommended, possibly following methods reviewed by Kinnucan and Wessells (1997). There are a few other studies that are the first forays into the analysis of French seafood markets, including Paquette (1995), Charles and Paquette (1998), and Charles and Boude (2001). The main problem hampering these studies is that little actual market data exists, as this is a fledgling market. Thus, these studies should be viewed as preliminary.

The French aquaculture sector shows significant activity in the creation of market segmentation through labeling, more so than other nations. This action creates many questions. First, what are the characteristics that can be certified as contributing to a specific quality for an aquatic food product, such as production process, the production area, or characteristics of the producers? Are any of these characteristics important enough to consumers that they will pay a premium? What slim evidence presented herein seems to indicate that the premiums obtained could be significant? What we do not know is how significant the costs of providing these labeled seafood products are, but we may assume that the products labeled to date have been certified with limited costs to producers, or with a cost easily balanced by the expected profit for the first actors playing that game. The seafood products labeled so far may be the “low-hanging fruit,” or the easiest to make profitable. Quantity sold may also influence the cost of providing certified and labeled seafood. Second, what is the efficiency of quality signals? There are at least two ways to look at this: 1) what are the economic costs and benefits (discussed above); and 2) what is the value of quality signals that may, for example, reflect societal benefits, such as enhanced rural vitality? In French agriculture, labels have proved their efficiency in maintaining primary activities in difficult production areas; for instance, in the dairy sector of the Alps with AOC-labeled cheeses. Thus, the societal good may come from maintaining traditional shellfish production activities in places where shellfish production as an industry competes with the other economic activities of the coastal zone. Finally, what does labeling imply about the restructuring of the market and the supply chain? The market needs to be able to maintain differentiation of the product through the supply chain, such that products not qualified for a label are not mixed with labeled product. As a result, there may be at least two chains of processors and wholesalers, one dedicated to labeled (premium) seafood and one for regular seafood products. Niche markets for labeled seafood might create a more direct link between producers and consumers, avoiding any middleman. Thus, there would be a redistribution of consumer and producer surplus, and conceivably an increase in consumer surplus. Whether or not producer surplus increases depends somewhat on the size of marketing margins between market levels and the amount of the premium passed along the supply chain, from the retailers to the initial producers. All of these questions will hopefully be answered by future analyses of the important French market. For the time being, this is a market worth monitoring, as it may provide the best prediction of how successful seafood labeling may be in other countries.

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