

# Impact of the expansion fishery product export on domestic production areas

## —A case study of the Japanese scallop and cultivated yellowtail—

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Owing to the recent rising popularity of Japanese food and consumption of fishery products overseas, Japan's fishery product exports reached JPY 287.3 billion in 2019, which represents 31.5% of the total value of the exported agricultural, forestry, fishery products, and food. Japanese scallop is the highest-value fishery product exported by Japan and the cultivated yellowtail is increasingly exported as a sushi or sashimi product to foreign Japanese food markets in recent years. This study shows the effect of the trends in and expansion of exports of Japanese scallop and cultivated yellowtail on domestic production areas.

### 1. Japanese scallop

In 2019, exports of Japanese scallops included 84,000 tons of fresh or chilled and frozen products worth JPY 44.7 billion, 12,000 tons of prepared foodstuffs such as boiled products worth JPY 7.6 billion, and 800 tons of dried scallop adductor muscle or dried adductor muscles of shellfish worth JPY 8 billion. Of these, approximately 5,000–12,000 tons worth JPY 9–11.3 billion of fresh or chilled and frozen products were exported by the 2010s. From 2012, there was a sudden increase in shipments to China, with exports reaching 70,000 tons worth JPY 26.8 billion in 2019 due to continuous drop in the production of scallop in China (the same species as in Japan) during this period. A worsening marine environment in the area around the island of Zhangzidao, located near Dalian City in Liaoning Province, was believed to have affected China's scallop production.

Most of the scallops exported to China are in the form of “frozen scallops with both shells” (i.e., frozen scallops that do not peeled but only sorted and washed after being landed), where these are consumed as an ingredient in Chinese cooking. However, they are also processed using high concentrations of polyphosphate in water, a food additive that helps retain water when it thaws, to add volume and weight. The shellfish adductors are then refrozen and re-exported to the United States and other places that prefer larger foodstuffs.

In 2016, due to the increased exports to China and decreased domestic production in 2016, the landing prices have increased by 1.5–2 times their value in 2012. With this as a trigger, some fishery cooperatives have moved from pricing through periodic discussions between producers and processors to bidding systems at which high prices can be expected.

However, increasing export of “frozen scallops with both shells” has some problems. First, export volume and landing prices are strongly influenced by supply and demand in China, and supply volumes and retail prices for scallops aimed at domestic markets may be unstable. Moreover, there are concerns that increasing the handling of frozen scallops with both shells, which are cheaper than goods such as boiled and shellfish adductor products, will decrease processors' profits, resulting in worsening processor management. Furthermore, as the internal organs of the shellfish were not be remove, fear of the product being contaminated with undetected shellfish poison was high. If food poisoning were to occur as a result, it would greatly damage the image of food safety of Japanese scallops.

In contrast, most exports to the EU countries, such as the Netherlands, France, Italy, and Belgium, are in the form of frozen shellfish adductors, with volumes in the range of 600–1,200 tons and JPY 0.8–3.5 billion from 2008 to 2019. The value of exports to the Netherlands, which serves as a trade hub for Europe, has increased from approximately JPY 200 million in 2008 to JPY 1.4 billion in 2019, which implies an increase in demand for scallops. As tariffs on the Japanese scallop will gradually be removed until 2027 because of the Japan–EU Economic Partnership Agreement (Japan–EU EPA), which was enforced in February 2019, an increase in exports can be expected. However, this leads to a new problem as the EU maintains strict sanitary control based on the EU–HACCP. Consequently, high costs and labor requirements may present an obstacle to the production of exports aimed at the EU.

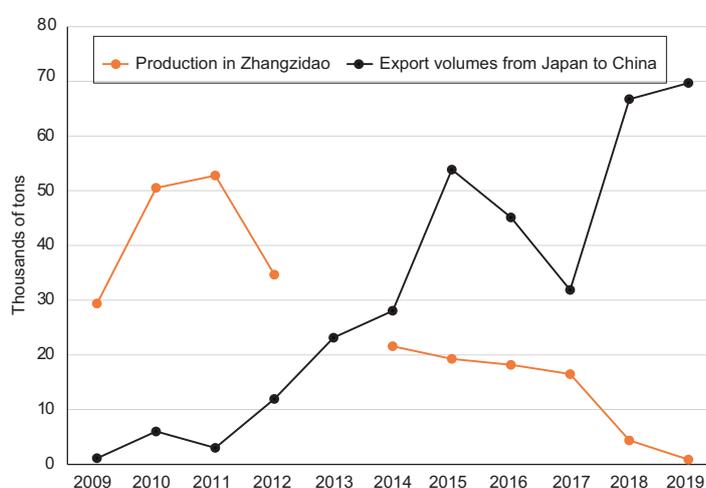


Figure. Relationship between production volumes in Zhangzidao, China, and export volumes from Japan to China (fresh or chilled and frozen)

Sources: Production volumes in Zhangzidao, China, from 2009 to 2018 are sourced from the Surveillance Report published on the homepage of the Marine Stewardship Council (MSC). Volumes for 2019 are estimated from 2018 volumes based on Chinese newspaper reports. Export volumes from Japan to China are from the Ministry of Finance's Trade Statistics of Japan.

## 2. Cultivated yellowtail

Exports of cultivated yellowtail increased from 2,500 tons of fillets worth JPY 3.9 billion in 2008 to 10,000 tons worth JPY 18.4 billion in 2019. To meet the needs of Japanese restaurants and other customers in countries receiving exports, fish that are raised to raw weights of 5kg or more are filleted and exported mainly to the United States, which prefers large, fattier cuts (approximately 80% of export volumes), as well as to Hong Kong and China, Southeast Asia, the EU, the Middle East, and other locations.

Cultivated yellowtail processing and trading companies (hereafter called “companies”) are primarily located in western Japan and they collect, process, and sell these fishery products. Oversupply of cultivated yellowtail to the domestic market became a problem in the 1980s, and some of these companies grasped the need to maintain a balance between domestic supply and demand as an opportunity to export to the United States. Initial exports included whole fish but fillet processing plants that received US–HACCP and EU–HACCP certifications were then constructed. As a system was gradually built for shipping to both domestic and foreign locations, the export of fillets became the core of the business in the 1990s. In the 2000s, the government fully introduced policies to encourage exports, and many companies began to proactively participate in export goods expositions and build facilities that could receive US–HACCP and EU–HACCP certifications.

Companies follow three routes for exporting cultivated yellowtail. The first route is direct trade through direct transactions with foreign importers, the second is indirect trade through transactions with domestic exporters, and the third is export after products shipped to wholesale markets in consumer areas are bought by exporters. The third route includes wholesale or brokerage companies as intermediaries. If a credible customer is found, many companies choose the second route because various risks such as losses due to currency exchanges can be avoided.

Companies have been classified according to export method, shipping form, and period of entry into the US market and are organized as shown in table : companies (I) and (II) are the leading types that entered the US market early (since exports began in the 1980s to the early 2000s); of which, (I) comprises those companies with EU–HACCP certification and proactively expanding their exports. Companies (III) and (V) began exports in the second half of the 2000s. Companies (III) and (IV) obtained US–HACCP certification and expanded their exports mainly by focusing on non-EU countries, although trends show ambitious companies within this group additionally obtaining EU–HACCP certification. Companies (V) are cautious about engaging in export despite having obtained US–HACCP certification and mainly emphasizing domestic market sales. Exports comprise an increasing proportion of sales for (I) and (III), while they are constant for all others. Furthermore, companies (I)–(IV) have got environmental certifications issued by such as from The Aquaculture Stewardship Council the abbreviated as ASC, or The Marine Eco-label Japan Council, which goes by the acronym MEL, and are striving to increase their exports. In addition, tariffs on yellowtail were repealed when the Japan–EU EPA was enacted and exports to various European countries are expected to grow in the future.

Table. Categorization of companies exporting cultivated yellowtail

Company category	I	II	III	IV	V
Company type	Leading-type		Following-type		
Company characteristics	Prior investment	Proactive entry	Proactive entry		Cautious entry
Certification of fishery product processing plants	EU-HACCP/ US-HACCP	US-HACCP	US-HACCP (EU-HACCP, etc)		US-HACCP
Primary product form	Frozen>Fresh or chilled	Frozen>Fresh or chilled	Frozen>Fresh or chilled	Frozen<Fresh or chilled	Fresh or chilled
Export method	Indirect export / Partial direct export	Indirect export / Partial direct export	Direct export / Indirect export	Indirect export	Indirect export
Corresponding companies	2 Companies	1 Company	1 Company	3 Companies	6 Companies
Exports as a proportion of sales	20 ~ 30 %	40 %	40 %	Approx. 5 %	Less than 5 %

## 3. Future issues

Exports of two products considered in this study expanded in response to foreign demand in recent years. However, the COVID-19 pandemic has brought considerable changes to the foreign and domestic distribution of goods and demand for foodstuffs; these changes will inevitably affect trade as well. Under such circumstances, for growth of the domestic fishery business, not only export strategy, for aiming on improving international competitiveness and food security, under appropriate fishing resource management, understanding domestic and foreign supply, demand trends, production, advancement of production systems through implementation of technologies at reducing production and processing costs and other measures, increase in PR efforts targeting foreign markets that seek to produce added value for domestic fishery products are effective.

In a bid to further boost exports, the Ministry of Finance would be required to optimize its data categorization process for Trade Statistics of Japan. Particularly, products that undergo various degrees of processing should be treated as separate items within the statistical code for export. The following is a specific example of how the Ministry of Finance had changed the data categorization process in a more desirable way. As the yellowtail statistical code for export, Trade Statistics of Japan treated only fillets (approximately

60% of the whole yellowtail weight, the majority of export forms of cultivated yellowtail) until 2018. However, in 2019, whole type yellowtail (the majority of export forms of wild-caught yellowtail) was newly added as a statistical code for export. By this process, in the future the supply of domestic and the demand of international for both wild-caught and cultivated yellowtail would be understood from the export statistical data. Conversely, for Japanese scallops, frozen shellfish adductors (about 10% of the original weight of the landed scallops) and frozen scallops with both shells, although which are in fact two products with different unit prices, are treated as the same statistical code for export. Therefore, it is difficult to understand what proportion of export deliveries is composed of “frozen scallops with both shells” and the export trends of each product forms. Thus, it is necessary to establish new codes within the export statistics or to reset the existing items such that it reflects the current product forms while also considering the retroactivity of trade statistical data and the conformance of such data to international methods.