Research Project on Food Safety Management System and Procedure on the Importation of Commodity and Food to the Republic of Korea

Executive Summary

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and

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ASEAN BUSINESS
CONSULTING CENTER

Outline of the Research Project

This report aims to provide and update information on food safety control and management in the Republic of Korea (ROK). The report includes updated laws and regulations on food, as well as procedures, structures, and institutions on importation in the ROK, and with reference to counterpart institutions, processes and regulations in Thailand. The objective of the report is to facilitate farmers, food manufacturers, exporters, and Thailand's public organizations in charge of control, inspection, and certification of commodity and food, and to provide relevant information to assist in planning and market expansion of Thailand's commodity and food into ROK - one of the largest markets that will be providing opportunities to Thailand.

Through a field survey, the report was able to collect sufficient data and information with limited analysis of the following key aspects:

1. Pattern and structure of ROK's organizations responsible for food safety
2. ROK's trading policy, laws and regulations on food safety, as well as ROK's standard procedures (SPs) on commodity and food importation
3. Import procedures for commodity and food into ROK for four (4) categories: (a) plant and plant products, (b) fisheries and fishery products, (c) livestock and livestock product, and (d) instant food
4. Markets and potential of the commodity and food categories in item 3. above, and an analysis of their competitiveness with respect to competitors in the ROK market.

The report has two major parts:

Part I Food Safety Management System and Procedure for the Importation of Commodity and Food into the Republic of Korea (ROK)

Part II Case studies: Mango, Frozen Chicken, Frozen Shrimp and Canned Tuna

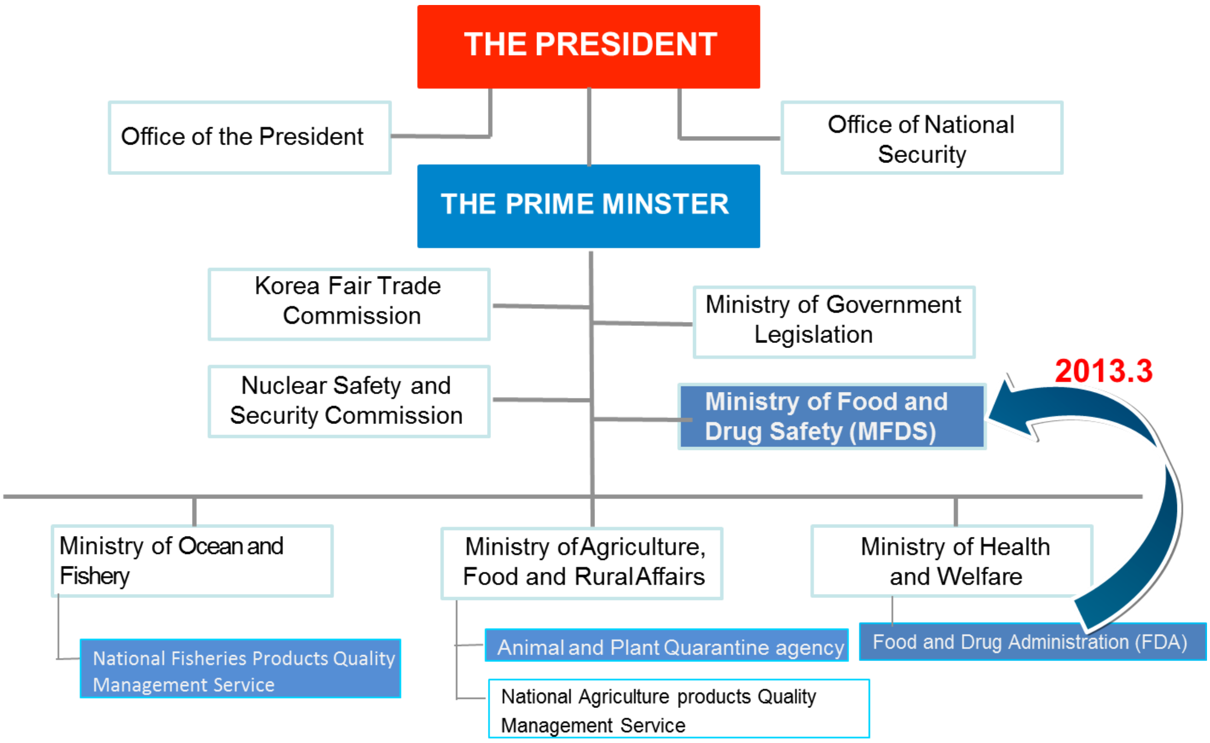
Part I Food Safety Management System and Procedure on the Importation of Commodity and Food into the Republic of ROK

Structure of ROK's Organizations Responsible for Food Safety

The administration of ROK's 18th President adopted as a top policy priority the safety of the nation. To support this policy, the President elevated the Korea Food and Drug Administration into the Ministry of Food and Drug Safety (MFDS) in order to strengthen the implementation of the food safety policy. In addition, the administration positioned the MFDS as the control tower for food safety and reinforced its functions.

With MFDS as the control tower of ROK's food safety, Animal and Plant Quarantine Agency under the Ministry of Agriculture, Food and Rural Affairs (MAFRA) and the National Fishery Product Quality Management Service under the Ministry of Oceans and Fisheries (MOF) shared responsibility on national food safety.

Chart 1.1 Korean Government Structure related to Food Safety



The following agencies became the vanguard for ROK's imported food safety:

- Ministry of Food and Drug Safety (MFDS)
- Animal and Plant Quarantine Agency
- National Fishery Product Quality Management Service

Table 1.1 Inspection and Quarantine Authority for Imported Food

	Plant	Livestock Products	Fishery Products
Quarantine	Animal and Plant Quarantine Agency(APQA)		National Fishery Product Quality Management Service
Inspection	Ministry of Food and Drug Safety(MFDS)		

In addition, MFDS is responsible for regulating pesticide residues in foodstuffs, in accordance with the maximum residue levels (MRLs) set in the Food Code. And MFDS is shifting its MRL policy to a positive list system. MFDS plans to first complete the transition to the positive system for tropical fruit and tree nuts & oilseeds by the end of 2016 and then plans to complete all other crops by the end of 2018 and veterinary drugs by January 2018. If no domestic MRL has been established, then an import tolerance will be required in order to import foods containing substance not approved for use in Korea. If no import tolerance is set, 0.01ppm will be applied as the default tolerance. Food Standard Planning office consists of Food Standard Division, Livestock Products Standard Division, and Food Addictive Standard Division. Livestock Products Standard Division undertakes import tolerance procedures together with Food Standard Division.

Chart 1.2 Responsibility of 3 different government offices related to MRLs

ROK's Trading Laws and Regulations on Food Safety

There are several laws which mandated the protection and food safety of Koreans. The four most important laws are the following:

- *Food Sanitation Act*
- *Plant Protection Act*
- *Act on the Prevention of Contagious Animal Diseases*
- *Special Act on Imported Food Safety Control*

Thai exporters should especially focus on the *Special Act on Imported Food Safety Control* enacted in February 2016. This regulation provides the policy framework for imported food, and consolidated all relevant polices and measures; previously, the relevant provisions were scattered in multiple legislation. The consolidation of the food policy framework laws and policies achieved more efficient management of imported food.

Two significant changes introduced under the *Special Act* are as follows

1) Mandatory pre-registration of foreign food facilities and livestock establishments by MFDS

2) Legal basis for MFDS to suspend import from foreign facilities or establishments that refuse on-site inspection.

Table 1.2 Applicable Acts based on Food Category

Category	Food Sanitation Act	**Special Act on Imported Food Safety Control**	Plant Protection Act	Act on the Prevention of Contagious Animal Diseases
Vegetables, fruits (fresh, frozen, or dried)	★	★	★	
Meat and processed meat products	★	★		★
Fish and clams (fresh, refrigerated, frozen, salted or dried)	★	★		

ROK's Labeling Standards

In order to export Thai food products to ROK, one must understand the regulations on labeling. Labels provide consumers with more accurate information on food products. MFDS implements related regulations and standards that require the labeling of product name, ingredients, manufactured and expiration dates (such as the quality retention date), net contents, identity and principle place of business, and nutrition information, as well as sanitary instructions for safe storage and warnings on packaging and containers.

Labeling may be categorized into (1) Labeling based on the *Health Functional Food Act*, (2) Labeling Standards for Livestock Products (Administered by MFDS) and (3) Labeling Methods for Imported Goods, depending on the characteristics of the products.

Product information provided by a Thai food exporter will be translated into Korean by the Korean importer and then printed and attached on the product, or printed on the exterior of the product packaging. Therefore, the exporters should provide accurate information to the Korean buyers. The key to labeling is communication and cooperation with the Korean importers.

Sanitary and Phytosanitary Measure on Food Importation

The *Sanitary and Phytosanitory (SPS) Measures* aim to achieve the objectives of public policy in protecting the life and health of the nation. This is consistent with the General Agreement on Tariffs and Trade (GATT) system which provide for the same terms and conditions. However, in order to operate these measures based on reasonable standards, the Korean government is systematically implementing these procedures based on scientific standards. Agricultural and livestock products with no entry permission may be imported after the 8-step *Import Risk Analysis (IRA).* Based on this analysis, fresh mangoes from Thailand, the importation of mango varieties such as Nang Klarngwan, Nam Dorkmai and Rad species into ROK greatly increased once they have been permitted for import after compliance with a 20-minute vapor heat treatment at 47°C. The importation of Thai frozen chicken that were once prohibited from entering since 2004 also appear to have increased in November 2016, after compliance with IRA procedures along with other import regulations, and thus were provided permission for entry.

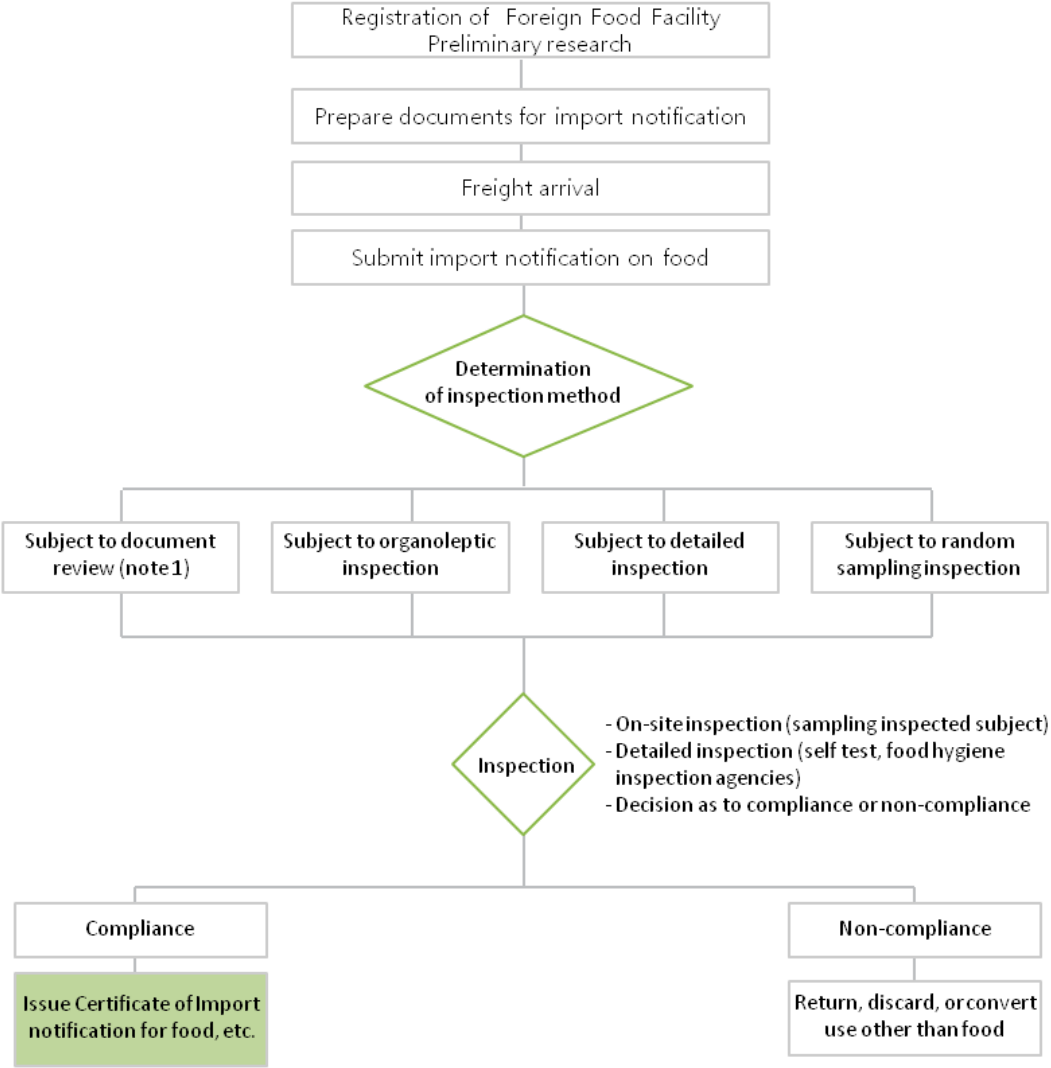
The relevant Korean government authorities exercise diligent and thorough management to ensure food safety for commodity items imported from overseas. Prior to the import, overseas producers and importers must register in accordance with the *Special Act on Imported Food Safety Control*. Furthermore, depending on the specific product, on-site inspection of overseas manufacturing facility may also be required. Inspection and quarantine are done with respect to products that entered the ROK through a seaport or airport, followed by customs clearance processing by the customs agency. After customs clearance, the products are monitored to check whether the restaurants or the distributors are distributing the imported food products in accordance with the *Food Sanitation Act.*

Import Procedures

The Korean government administers a strict inspection and quarantine process during the customs clearance process. Depending on the type of product, designated experts in an agency administer a thorough inspection of the product item based on importation standards.

Imported products affect the food safety for the nation's consumers. Fruits and vegetables undergo a thorough inspection and quarantine because they may serve as carriers of foreign diseases and insect pests. Furthermore, to prevent the spread of foreign contagious diseases in the ROK, the government responds with high sensitivity to information on contagious disease for meat products that has occurred overseas. For marine products, inspections are mainly done to harmful fodder and drugs that may remain inside the body of the marine products during marine product farming. Further, there were cases where foreign substances are injected into the body of marine products to increase their weight. These are also scrutinized strictly.

Chart 1.3 Import Procedures



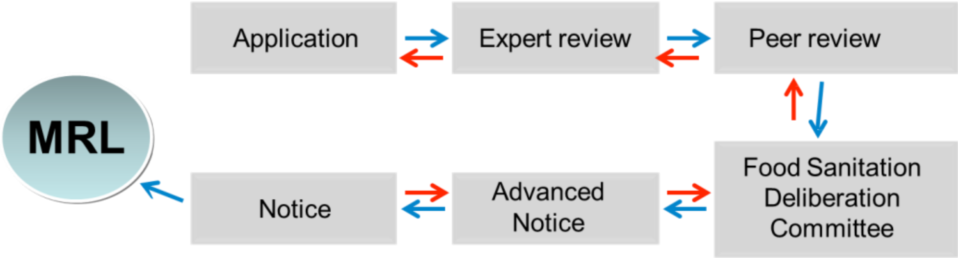
A 100 percent detailed inspection is done especially on products which are imported for the first time into the ROK. Should the products receive a 'non-compliance' report in the detailed inspection, the products are returned to the exporting country or disposed in the ROK, causing great loss to both the exporter and the importer. Therefore, to prevent losses, exporters should thoroughly comply with food safety regulations.

Thai exporters exporting to ROK for the first time should first send 100 kilograms of their product for detailed inspection and proceed with the exportation depending on the results of the detailed inspection.

C. Import Tolerance and Positive List System of Pesticide in ROK

MFDS is shifting its Maximum Residue Limit (MRL) policy to a positive list system. When the positive system is in place, an ***import tolerance*** will be required in order to import foods containing substance not approved for use in Korea, if no domestic MRL has been established. Furthermore if no import tolerance is set, 0.01ppm will be applied as the default tolerance.

Chart 1.4 ***MRL setting procedures***

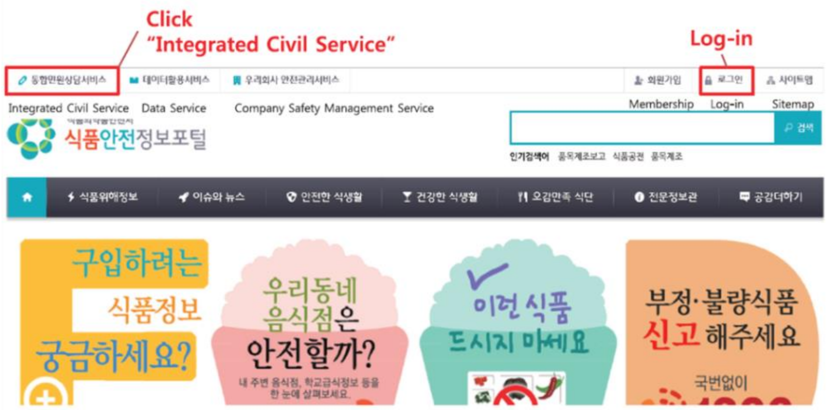


Source: Ministry of food and drug safety

Application for MRLs

1. MFDS has an on-line system for civil affairs (www.foodsafetykorea.go.kr)

Photo 1.1 Application for MRLs



2. Processing Time
   - Establishment of MRL : 12 months (365 days)
   - Change or Exemption of MRL : 7 months (210 days)
3. Processing Cost
   1) Toxicity data
      - Establishment of MRL : 30,000,000 KRW per commodity
      - Change or Exemption of MRL : 10,000,000 KRW per commodity
   2) Residual data
      - Establishment, Change or Exemption of MRL: 5, 000,000 KRW per commodity

4. Import tolerance application status

Application status can be traced through website;

http://www.foodnara.go.kr/residue/prd/progress/list.do?menuKey=1&subMenuKey=581

Table 1.3 Status of Import Tolerance Applied by Thai government

	Pesticide	Commodity	Application date	Result	Application company
1	Prochloraz	Mango	2016-09-29	5.0 mg/kg (Tropical Fruit), Number2016-153 Announcement date 29 Dec 2016	Thai goverment
2	Amitraz	Longan	2016-09-29	0.01 mg/kg, Number: 2016-153 Announcement 29 Dec 2016	Thai goverment
3	Chlorpyrifos	Durian	2016-09-29	0.4 mg/kg, Number: 2016-153 Announcement date: 29 Dec 2016	Thai goverment
4	Imidacloprid	Mango	2016-04-05	0.4 mg/kg, Number: 2016-153 Announcement Date:29 Dec 2016	Thai goverment
5	Difenoconazole	Mango	2016-04-05	0.07 mg/kg, Number: 2016-154 Announcement Date: 29 Dec 2016	Thai goverment
6	Carbaryl	Mango	2016-04-05	1.0 mg/kg, Number: 2016-154 Announcement Date: 29 Dec 2016	Thai goverment
7	Azoxystrobin	Mango	2016-04-05	0.7 mg/kg, Number: 2016-154 Announcement Date: 29 Dec 2016	Syngenta/Thai goverment
8	Cyhalothrin	Longan	2016-04-05	0.2 mg/kg, Number: 2016-154 Announcement date: 29 Dec 2016	Thai goverment
9	Imidacloprid	Longan	2016-04-05	0.7 mg/kg, Number: 2016-153 Announcement date: 29 Dec 2016	Thai goverment
10	Cypermethrin	Longan	2016-04-05	1.0 mg/kg, Number: 2016-154 Announcement date: 29 Dec 2016	Thai goverment
11	Chlorpyrifos	Longan	2016-04-05	0.9 mg/kg, Number: 2016-154 Announcement date: 29 Dec 2016	Thai goverment
12	Carbaryl	Longan	2016-04-05	20 mg/kg, Number: 2016-154 Announcement date: 29 Dec 2016	Thai goverment
13	Thiamethoxam	Mango	2016-04-01	0.2 mg/kg, Number: 2016-153 Announcement date: 29 Dec 2016	Syngenta, Thai goverment

Source: Homepage of ministry of food and drug safety

Part II Case studies: Mango, Frozen Chicken, Frozen Shrimp and Canned Tuna

In 2015, the Republic of Korea (ROK) imported US$ 4.85 billion worth of commodity from Thailand. Among the imported commodity, food and food related items covered USD 770 million, a 15.8% of the total amount. The total amount for imported food products in ROK is US$ 26.5 billion, and US$ 770 million from Thailand covers 2.9% of the total.

The report has a case study on the four products that may have wide potential to be exported to the ROK:

- Fresh Mangoes
- Frozen Chicken
- Frozen Shrimps
- Canned Tunas

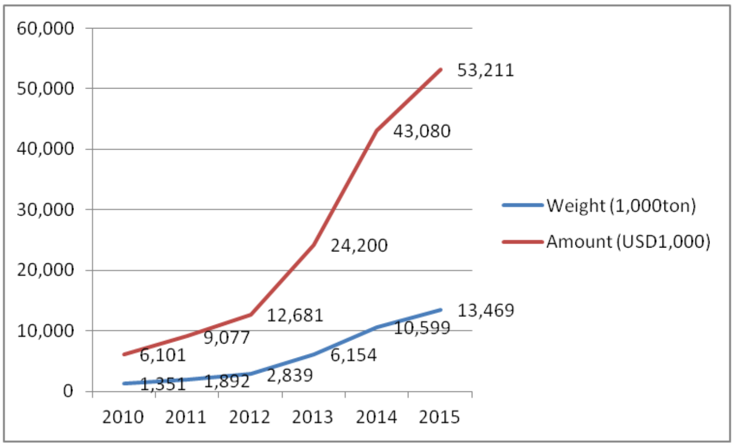
As the import of the frozen chicken from Thailand that were prohibited from importation since 2004 is now permitted, the export volume for Thai food products to ROK is observed to increase rapidly. Furthermore, the market for Thai mangoes is anticipated to expand continuously as the preference of tropical fruits by Korean consumers is increasing. Although Thailand is globally competitive with canned tuna, exporters are unable to expand their market in the ROK. Through new product development and OEM with famous food companies, Thailand exporters still has a lot of room to expand its market in the ROK. Intense price competition is ongoing with Vietnam and Ecuador for frozen shrimps. However, because the level of distrust in the food safety of Vietnamese frozen shrimps has recently increased, exporters may promote the image that Thailand exports safe food products. Furthermore, if instant food products using relatively advanced processing machines are developed, frozen shrimp products are significant items for possible market expansion into the ROK.

Case Study I: Mango (HS Code 08 04 50 2000)

Market Size

The mango importation market size for ROK in 2010 was USD 6.1 Million and grew around nine times with USD 53 Million in 2015.

Graph 2.1.1 Trend of ROK's Mango Imports



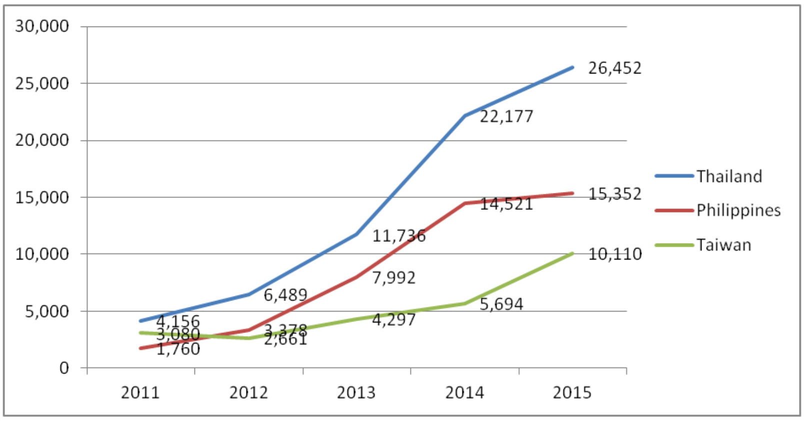
Source: Korea customs service

Major Exporting Countries

Major exporters are Thailand, Philippines and Taiwan. The imported amount from the three countries as of 2015 was USD 51,914,000 out of the total imported amount of USD 53,221,000, taking up 97.5% of the total imported amount. Especially in 2015, the imported amount from Thailand was USD 26,452,000, taking up 49.5% of the total imported amount.

Graph 2.1.2 Trends of Mango Imports from 3 Major Exporting Countries

Unit: USD 1,000

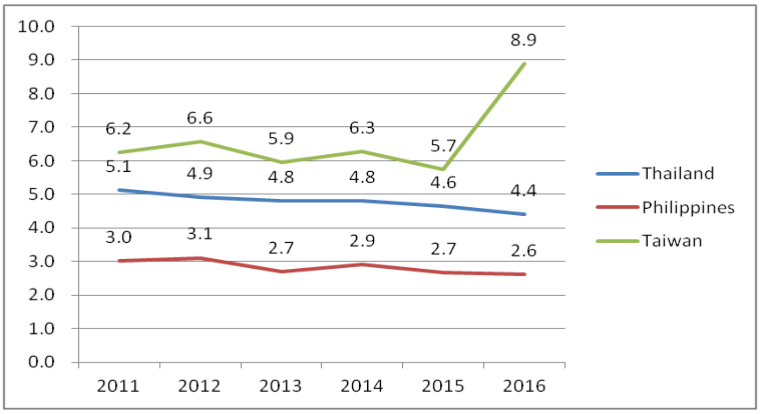


Source: Korea Custom Service

Trend of Import Price

Since 2011, the import price of mangoes from Thailand and the Philippines continuously decreased while the import volume is rapidly increasing. Mangoes from Taiwan are high in price and imports to ROK are stagnant.

Graph 2.1.3 Trends of Mango Import price (Unit: USD)



Source: Korea Custom Service

Import Tariff Rate of Mango under ROK's FTAs

The FTA with Peru, Australia, Vietnam and India is expected to affect the mango market. The global mango producer, India, is expected to set a 15% import tariff rate from 2017 and as a result of ROK-Vietnam FTA, tariff rate for products from Vietnam will be set at 21% in 2017 and 0% in 2024. Furthermore, tariff rate for Peruvian mangoes is already at 12% and at its first year, 423 tons of mangoes were exported. A rapid expansion in the market is expected once the import tariff rate hits 0% in 2020. The import tariff rate for mangoes regulated in the ASEAN-ROK FTA that entered into force in 2007 was 24%.

Table 2.1.1 Import tariff of Mango

	2016	2017	2018	2019	2020	2021	2022	2023	**2024**
Taiwan	30%	30%	30%	30%	30%	30%	30%	30%	**30%**
ASEAN (Thailand,Philippines)	24%	24%	24%	24%	24%	24%	24%	24%	**24%**
India	16.9%	15%	15%	15%	15%	15%	15%	15%	**15%**
Vietnam	24%	21%	18%	15%	12%	9%	6%	3%	**0%**
Austrailia	21%	18%	15%	12%	9%	6%	3%	0%	**0%**
Peru	12%	9%	6%	3%	0%	0%	0%	0%	**0%**

Source: Korea Customs Service

Distribution Structure of Imported Fruit

The distribution channel for imported fruits is a 70:30 structure with Importers and Big Discount Stores (Hypermarkets) forming the two major axes. The fruit importers distribute imported fruits through wholesale dealer (50%), wholesale corporation (20%) and discount stores (hypermarket; 30%). Big Discount Stores (Hypermarkets) make direct imports or are provided with supplies from importers and wholesale dealers and sell them to the consumers. They take up around 55% of the whole imported fruits distribution.

Furthermore, hypermarkets are expanding their distribution control over imported fruits as they operate a separate wholesale store with enhanced wholesale functions. Major wholesale hypermarkets include the America's Costco, E-mart's Traders and Lottemart's Big Market.

Mango Market Trend in ROK

In 2015, the total fruit imports in ROK exceeded 700,000 tons. In the early 2000, sales ratio of imported fruits was at 20% but in between 2015 - 2016, the ratio increased to 40-50%. Although there is deviation depending on the harvest season, the market segment for imported fruits in Korean distribution market, including mangoes, is gradually expanding.

Major imported fruits are bananas and oranges where the import of bananas in was 363,466 tons in 2015 taking up 35.3% of the total import volume. The import of oranges was 111,743 tons in the same year. The imported fruits with the sharpest increase were mangoes. In 2010, mango import volume was only 1,351 tons. However, in 2015, it increased to 13,459 tons. The import volume increased 10 times in 5 years. Aside from these fruits, the import of grapes increased by 1.9 times, lemons by 3 times, grapefruits by 3.2 times, while the import of pineapples and fruits have somewhat decreased.

The annual local fruit market size is 3,600,000 tons. Of this, local produce is 2,600,000 tons. Taking into consideration that more than 1,000,000 tons of fruits are being imported every year, the market share of imported fruits in the Korean fruit market has increased up to 28%.

The sudden increase in the popularity of mangoes is mainly due to the major decrease in the price of mangoes in the past few years. In the peak season starting April, the wholesale price of mangoes for a box of 5kg is gradually decreasing every year with KRW 53,000 in 2011 → KRW 46,000 in 2012 → KRW 41,622 in 2013. Along with cherries which have rapid increase in the consumption base, mangoes are one of the major products that have transformed from a luxury fruit to a common fruit. Furthermore, with the appearances of fresh fruit juice stores and shaved ice dessert stores, menus using mangoes are being developed and launched one after the other. This is contributing to the acceleration of the popularity of mangoes together with the increase in the supply of mangoes being done actively by the distributors through methods such as direct air shipments.

Consumers' Fruit Purchasing Behavior

Table 2.1.2 Important considerations when purchasing fruits

Price	Taste	Safety	Quality	nutrition	Convenience (Purchasing)	Convenience (Cooking)	Other
18.4%	**45.2%**	8.9%	**23.5%**	2.9%	0.6%	0.2%	0.3%

Note: Other: services, attitude, and etc

Source: 2015 Statistics Report on Food Consumption Behavior Survey (Korea Rural Economy Institute)

Table 2.1.3 Information checked first when purchasing fruits

Price	Resign of Origin	Country of origin	Freshness	Brixs	Other
23.6%	4.5%	**10.5%**	**48.1%**	6%	7.3

Note: Other: Promotion, Variety and etc

Source: 2015 Statistics Report on Food Consumption Behavior Survey (Korea Rural Economy Institute)

Competitive Environment of Thai Mango

The current ROK's mango market is being shared by Thailand and the Philippines. The market share of Thailand and the Philippines in the total import amount in 2015 was 79%. Especially for Thailand, its market share in the Korean mango import market is 49.7%. With Philippines being 2nd in the market share with 28.9%, Thailand still shows a gap of 20%.

Thailand's status as a market leader is also being challenged by Taiwan and Peru. Especially with the ROK-Peru FTA, the mango import tariff rate has decreased to 12% in 2015, offsetting the relatively high logistics cost. In 2017, the tariff rate will be at 9%, having an additional decrease of 3%, and enhancing the price competitiveness. 424 tons (USD 1.9 million) of Peruvian mangoes made its first debut in the Korean market in 2016. Furthermore, the challenge from Taiwanese mangoes becomes important consideration. Taiwan has exported 1,761 tons of mangoes in 2015 just with the simplification of quarantine procedures. Thailand should be ready to compete with India and Australia who are preparing full-scale exportation. India is a global mango producer and the Korean government will be permitting the restart of the import business starting 2016. With the ROK-India FTA, the import tariff rate will decrease to 15% in 2017. Furthermore, Australia has announced its entry to the Korean market last 2014 with Australia's image as a 'clean country', and with the tariff rate benefit from the ROK-Australia FTA (18% in 2017 and will decrease by 3% every year). A fierce challenge is expected from Vietnam as well. In 2015, Vietnam has exported 210 tons to ROK for the first time. But in 2016, it has already exported 260 tons from January to September alone. Vietnam has already exported USD 24 Million in fresh fruits to ROK and is expected to grow very fast. Especially with the ROK-Vietnam FTA taking effect, the tariff rate for Vietnamese mangoes is 21%, lower than the 24% being imposed with the ROK-ASEAN FTA and an additional 3% decrease is planning to be given every year, where by 2024, there will be no more tariff rates being imposed. Vietnam's price competitiveness will serve as their weapon to make a rapid market expansion.

SWOT Analysis for Thai Mangoes in Korean Market

Strength	**Weakness**
• Currently Market leader • Processing Capacity • Relatively Short Logistic Period	• Relatively high price • No strong brand image
Opportunity	**Threat**
• Increasing size of mango market continuously • Enhancing awareness of Mango taste	• Hot competition with the Philippines • Strong challenges from Vietnam, India and Peru with their price competitive advantage and FTA

Strategic Direction

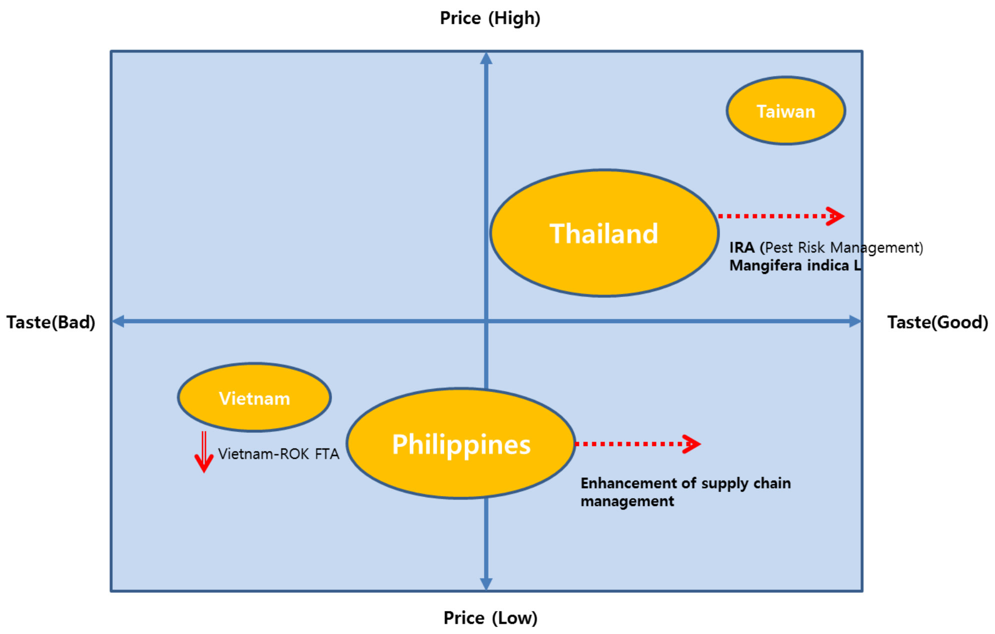
A. During the negotiation for further liberalization of ROK-ASEAN FTA, negotiations are being done to make tariff rates for mangoes imported to ROK at a tariff rate level similar to that of ROK-Vietnam FTA.

B. Develop brand image for Thai mango for promotion

C. Development and promotion of health functions of Thai mangoes

D. Develop as processed products with high added value

Chart 2.1.1 SWOT Positioning Map of Thai Mango



Food Safety Management

For fresh fruits to be exported to ROK, the import procedures of ROK must be followed. The Ministry of Food and Drug Safety inspects the imported food products in accordance with the Food Sanitation Act. The Animal and Plant Quarantine Agency (APQA) quarantines the imported fruits in accordance with Plant Protection Act. The Korean Customs Service proceeds with the import procedures for products that underwent import inspection and import quarantine.

Food products being imported for the first time are determined to be subject to detailed inspection. The processing takes 10 days from the day the import declaration has been made (does not include Sundays and holidays). After the detailed inspection, if the products have the same exporter, manufacturing country, manufacturing business, product name, manufacturing method and raw materials it shall be determined to be subject to document review. The processing takes 2 days.

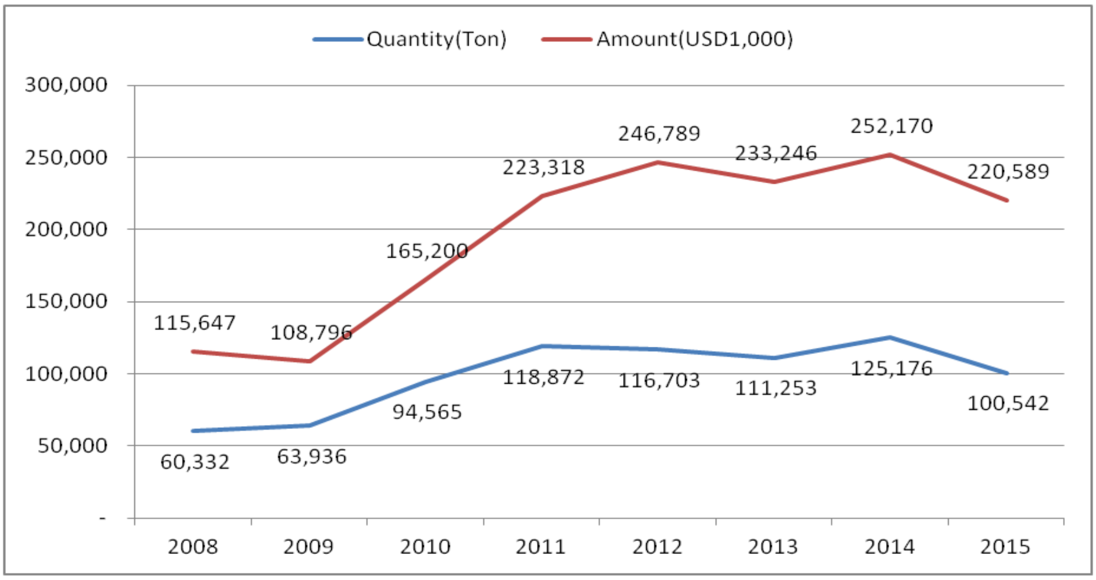
Thai mangoes are conditionally allowed to be exported to ROK based on the Plant Protection Act. Only those that have underwent vapor heat treatment at the production site (at 47°C for 20 minutes) and pre-clearance inspection by a Korean Plant Quarantine Inspector may be permitted for importation. Thus the Thai mango exporters need to contact the Korean Plant Quarantine Inspector beforehand to discuss the procedures and inspection schedule when establishing an export contract.

Case Study II: Frozen Chicken

Market Size

ROK's Poultry importation market size was USD 116 Million in 2008 which grew 1.9 times in the span of 7 years being USD 221 Million in 2015.

Graph 2.2.1: Poultry Import Trends of ROK



Source: Korea Customs Office

Chickens that are frozen and cut in pieces (HS Code 020714) take up more than 98% of the poultry imported in ROK.

Table2.2.1: 2015 Poultry importation status by type

HS Code	Definition	Import Quantity (Ton)	Import Amount (USD 1,000)	Share
0207	Meat and edible offal, of the poultry of heading 01.05, fresh, chilled or frozen.	100,541.70	220,589	
020712	Weighing not more than 550g of chicken	0	0	0%
020713	Cut in pieces, fresh or chilled of chicken	0	1	0%
020714	Cut in pieces, frozen of chicken	99,885.60	217,478	98.60%
020725	Not Cut in piece, Frozen of Turkey	28.8	151	0.10%
020727	Cut in piece, Frozen of Turkey	610.5	2,325	0.10%
020742	Not Cut in piece, Frozen of Duck	0	0	0%
020745	Other Frozen of Duck	16.7	634	0.30%

Source: Korea Customs Office

Major Countries Exporting Chicken to ROK

Major countries exporting chicken to ROK are Brazil and the U.S. After the occurrence of AI in U.S. in 2015, more than 85% of ROK's imported chicken market was taken over by Brazil. In 2003, Thailand has once taken over up to 63% of ROK's imported chicken market.

Table 2.2.2 Import status of chicken by country (HS Code 020714)

Amount unit: USD 1,000

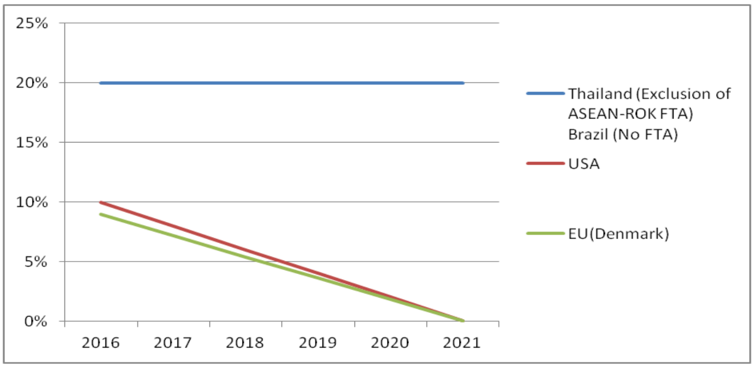
Year	Total	USA		Brazil		Thailand		Denmark		Others	
		Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
2000	59,563	40,542	68%	0	0%	15,597	26%	85	0%	3,339	6%
2001	86,740	43,173	50%	0	0%	37,350	43%	373	0%	5,844	7%
2002	93,635	51,420	55%	0	0%	40,303	43%	504	1%	1,408	2%
2003	88,307	31,358	36%	0	0%	55,834	63%	208	0%	907	1%
2004	48,442	3,742	8%	0	0%	10,488	22%	29,178	60%	5,034	10%
2005	81,296	30,509	38%	2,431	3%	0	0%	40,703	50%	7,653	9%
2006	75,023	37,013	49%	30,987	41%	0	0%	6,458	9%	565	1%
2007	70,653	23,143	33%	44,303	63%	0	0%	3,188	5%	19	0%
2008	110,519	52,944	48%	51,818	47%	0	0%	5,754	5%	3	0%
2009	103,314	37,084	36%	61,567	60%	0	0%	4,457	4%	206	0%
2010	158,933	68,029	43%	83,180	52%	0	0%	6,756	4%	968	1%
2011	213,244	126,311	59%	76,433	36%	0	0%	8,023	4%	2,477	1%
2012	243,286	89,575	37%	145,146	60%	0	0%	6,888	3%	1,677	1%
2013	230,426	70,443	31%	147,190	64%	0	0%	12,141	5%	652	0%
2014	249,215	95,574	38%	138,177	55%	0	0%	13,910	6%	1,554	1%
2015	217,478	14,623	7%	185,286	85%	0	0%	14,400	7%	3,169	1%

Source: Korea Customs Office

Custom Tariff for Chicken meats under the FTA

Korea's custom tariff for chicken meats from U.S. and EU is continuously decreasing with the FTA entered into force and will be eliminated in 2021(U.S. made chicken leg). No FTA is entered into between Brazil and ROK, and although there is FTA between ROK and ASEAN members, chicken is excluded.

Graph 2.2.2: Trends of Chicken Import Tariff from Major Exporting Countries



Source: Korea Customs Service

ROK's Chicken Distribution Structure

The chicken distribution in ROK is divided into B2C and B2B market. The main supply of chicken in the B2C market are fresh chicken, and the domestic chickens dominate more than 95% of the market. Currently, the frozen chicken imported to ROK are mainly distributed to restaurants, catering services, franchise restaurants and secondary processing companies. Restaurants, catering services, and franchise companies mainly use imported frozen chicken because the prices are more affordable than the chicken produced in ROK. However, they also use imported chicken for the reason that only imported chicken can bring about the true taste of the food, such as nuggets. Korean consumers have high preferences for domestic chicken and because they prefer fresh meat, B2C market rarely distributes imported frozen chicken.

Trends of ROK's Chicken Industry

Around 91% of the chicken are manufactured and distributed through *affiliated companies after being produced/slaughtered and packed.

**Affiliated companies provide the poultry raising farms with the materials (chicks, feed, medicine, quarantine, fuel, etc.) and technical consultations.*

There are currently 58 affiliated companies and 4 out of the total affiliated companies take up 64% of the domestic production. The major affiliated companies are Harim (31%), Dongwoo (15%), Easy Bio Group (11%) and Cherrybro (8%)

But the business profits of the four major chicken producers have decreased as an aftereffect of excessive supply of chicken in 2016. Further, the chicken farm industry is experiencing internal difficulties as the import and distribution of American chickens which are currently prohibited from importation is soon to resume.

There is a chicken breed where Korean traditional food culture has been incorporated. The breed is called White Semi Broiler and is used only for *Samgyetang* (a chicken soup made with chicken, ginseng and sticky rice). This breed was created in ROK to have similar texture with native chickens. This breed is a cross breed of ordinary broiler and egg-laying chickens. Their growth and development is fast and they are widely used for *Samgyetang*. They are supplied mainly in July and August, the months when Koreans enjoy eating *Samgyetang*. In 2014, the total supply of chickens for *Samgye* occupies 16% of the total supply.

Consumers' Chicken Purchasing Behavior in ROK

A. Preference by Parts (Frozen Chicken)

The demand for chicken legs increased further, where the import portion of chicken legs now cover 94% of the total import scale.

Table 2.2.3 Import amount of chicken by part

Unit: USD 1,000

Year	Total	Leg	%	Breast	%	Wing	%
2015	211,085	198,688	94%	3,583	2%	8,814	4%

Source: Korea Customs Service

B. Preference by Place of Origin

Since Korean consumers have strong faith in the taste and safety of Korean, chicken consumers fully prefer Korean produced chickens. Consumers tend to prefer chickens from Europe compared to U.S. due to the issue of Mad Cow Disease that occurred in U.S. However, the consumers are relatively lenient with the issue on the place of origin when it comes to processed chicken.

Table 2.2.4 Preference by place of origine

Place of Origin	Korea	EU	USA	OTHER
Preference	99.6%	0.3%	0.1%	0

Source: 2015 Statistics Report on Food Consumption Behavior Survey (Korea Rural Economy Institute)

C. Consumers Reaction on Imported Chicken

Korean consumers have adverse rejection when it comes to imported meat. It clearly shows that when the consumers do their own cooking, they avoid imported meat.

Table 2.2.5 Consumers Reaction on imported chicken

	Will never consume	Will not consume	Not sure	Will maybe try	Will definitely consume
Preference	29.4%	37.2%	26.6%	6.6%	0.2%

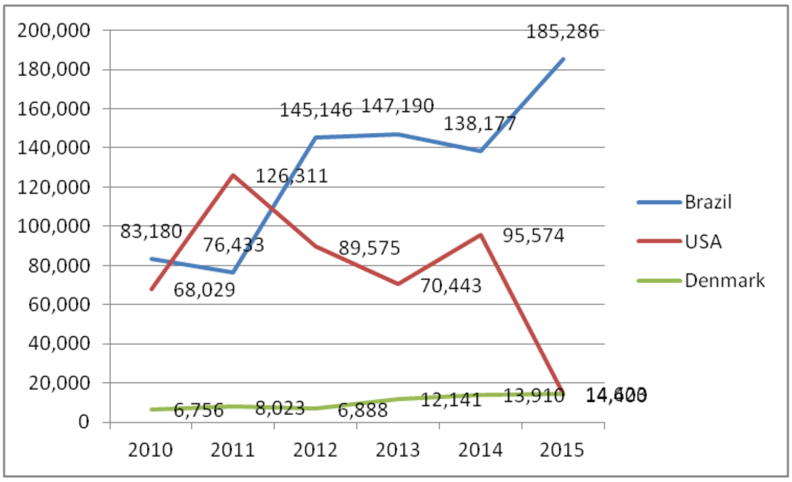
Source: 2015 Statistics Report on Food Consumption Behavior Survey (Korea Rural Economy Institute)

Competitive Environment of Thai Chicken

ROK's frozen chicken import market is being competed among Brazil, U.S. and Denmark. Brazil's quality (taste), U.S.'s price, and Denmark's safety are what they are putting forward to target the Korean market.

Graph 2.2.3 Trend of Chicken Import from Brazil, U.S. and Denmark

Unit: USD 1,000



Source: Korea Customs Service

Brazil is continuously expanding its market since their import of chickens began in 2005. Especially with the prohibition of import of chickens from U.S. due to AI, Brazil has taken more than 85% share of imported chickens in the Korean market. Even some chicken processing factories was prohibited due to the discovery of norfloxacin in the chickens from Brazil in 2015, the market share of Brazilian chicken has expanded rapidly with the lack of supply due to the import prohibition of American chickens.

Before the import of American chicken was suspended due to the occurrence of AI in 2015, American chicken continuously expanded the Korean market with affordable price as their strength.

Table 2.2.6 Comparison of frozen chicken leg price of U.S., Brazil and Denmark.

Country	U.S.	Brazil	Denmark
Price	USD1.47/kg	USD2.62/kg	USD 2.39/kg

Source: Korea Customs Service

Denmark has continuously increased its export amount putting forward safety as their weapon. It has more than 80% share in the market with wings as it produces wings weighing between 80-100 grams which are especially favored by the Koreans. The import amount of frozen chicken wings in 2015 was USD 8.8 Million of which USD 7.1 Million was from Denmark.

FTA Customs Tariff Rate

With the continuous decrease of tariff rate for American and Danish chickens due to the ROK-US FTA and ROK-EU FTA, a fierce competition is expected among Brazilian, US and Danish chickens as U.S. and Denmark is putting forward their price competitiveness for the fight. Although Thailand is tied with the ROK-ASEAN FTA, chicken is excluded from the concession, thus Thailand has to put up a tough price competition. As of 2017, the tariff rate imposed on Thai and Brazilian chickens are 20% while for U.S. and Denmark, they are 8% and 7.2%, respectively (as of 1 July 2017).

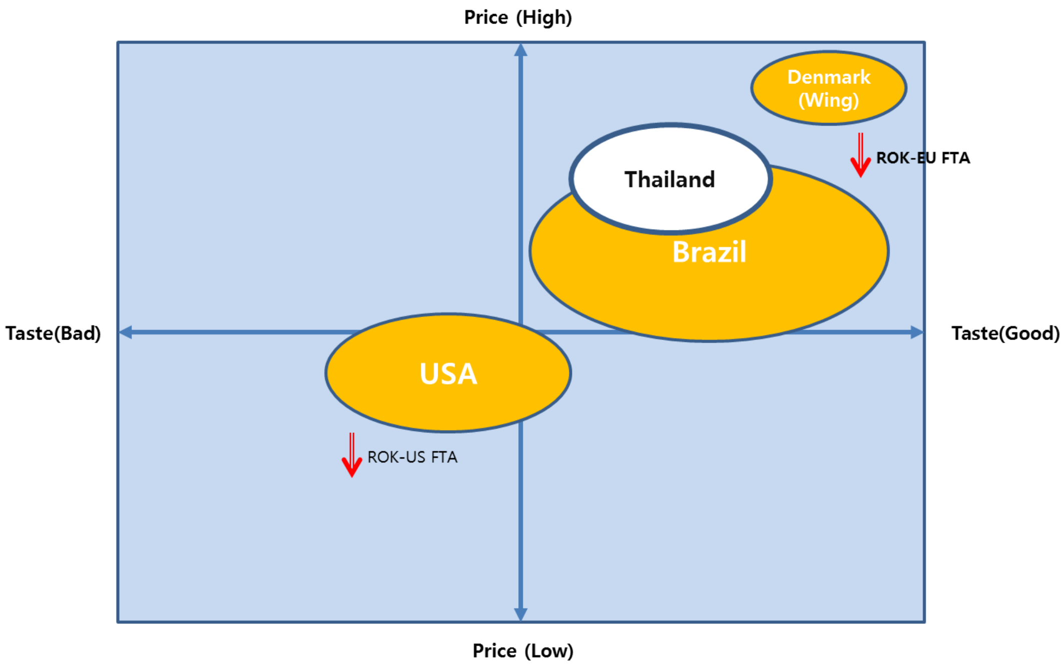
SWOT Analysis for Thai Chickens in the Korean Market

Strengthen • Short logistics period • Provide processing service customized to the demands of Korean buyers.	**Weakness** • High customs tariff rate compared to U.S. and Denmark. • Relatively insufficient business network within Korea
Opportunity • Chicken market is continuously growing. • More rooms for additional growth due to small chicken consumption compared to OECD average.	**Threat** • A public opinion against imported chicken has formed due to declining of Korean Chicken Industry. • A prospected intensification of quarantine for imported chicken • Decrease in import tariff on American and Danish chicken.

Strategic Direction for the Market Expansion of Thai Chicken

A. Target mainly on chicken franchise market which is 40% of the Korean chicken market.
B. Provide processing method preferred by the Korean market to the Thai producers. Example) Danish chicken wings are processed between 80-100 gram sizes
C. Negotiate in the current additional negotiations for ROK-ASEAN FTA for tariff rate for frozen chicken imported to ROK be at a level of the tariff rate of EU-ROK FTA.
D. Promotion focusing on the target buyer

Chart 2.2.1 SWOT Positioning Map of Thai Chicken



Food Safety Management

Since the Animal and Plant Quarantine Agency (APQA) discards or returns all imported chicken that are disqualified in the judgment, exporters should produce products that conform to the quarantine standards demanded by ROK.

Further, as the Korean government policies on food safety are being reinforced, exporters should work on their best in the management of the quality of the chickens. Apart from the quarantine procedures, the Ministry of Food and Drug Safety (MFDS) ran an inspection on the market places that brought in the chicken processed in the livestock workplace located at Paraná, Brazil which were prohibited from importation due to the discovery of Norfloxacin antibiotics. The MFDS took measures to have all Norfloxacin detected chickens to be recalled. Moreover, Brazil exporters who have exported Norfloxacin detected chicken are prohibited to export to ROK in the future. To improve food safety and increase the rationality of the food quarantine procedures of ROK, MFDS announced the sanitary conditions for poultry import in October 2016.

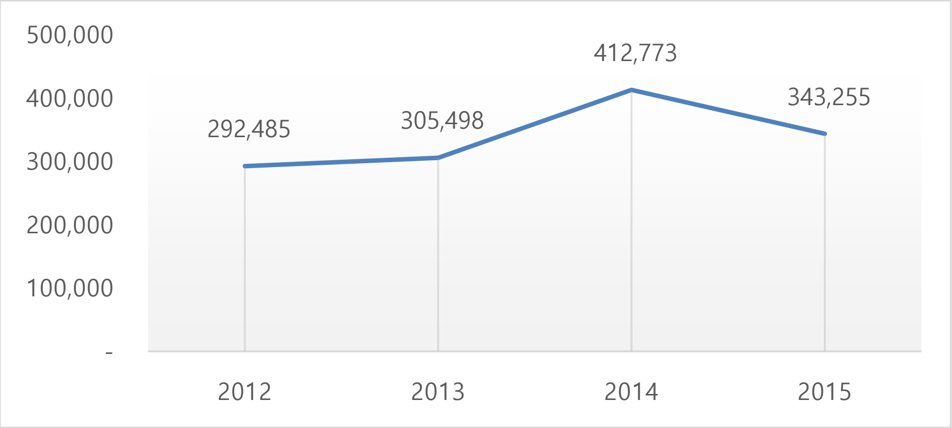
Case Study III: Frozen Shrimp (HS Code 03 06 17)

Market size

In 2015, the value of imported frozen shrimp *(HS Code 03 06 17)* in the Republic of Korea (ROK) was recorded at US$ 343,255,000. This value represents an increase of 17 percent compared to US$ 292,485,000 in 2012. It is estimated that imported frozen shrimp supplies 80 to 85 percent of the nation's annual consumption.

Graph 2.3.1 Import Value of Frozen Shrimp

Unit: USD Thousand



Source: Korea Customs Service

Major origins of imported frozen shrimp

In 2015, Korea imported US$ 309 million worth of frozen shrimp from Vietnam, Ecuador, China, Thailand, Malaysia, and India. This value accounted for 90 percent of the total value of US$ 343,255,000 imported frozen shrimp. Vietnam supplied 47 percent of the total, with a value of US$ 162,832,000. Other sources of frozen shrimp in ROK include Argentina, Indonesia, Saudi Arabia, the Philippines, Peru, and Bangladesh.

Imports from Vietnam, Ecuador, and India increased. In contrast, imports from China, Thailand, and Malaysia decreased. The data indicate that market dominance by Vietnam became stronger; imports from India increase. On the other hand, frozen shrimp imports from China and Thailand declined.

Graph 2.3.2 Changes in import volume by country

Unit: USD Thousand

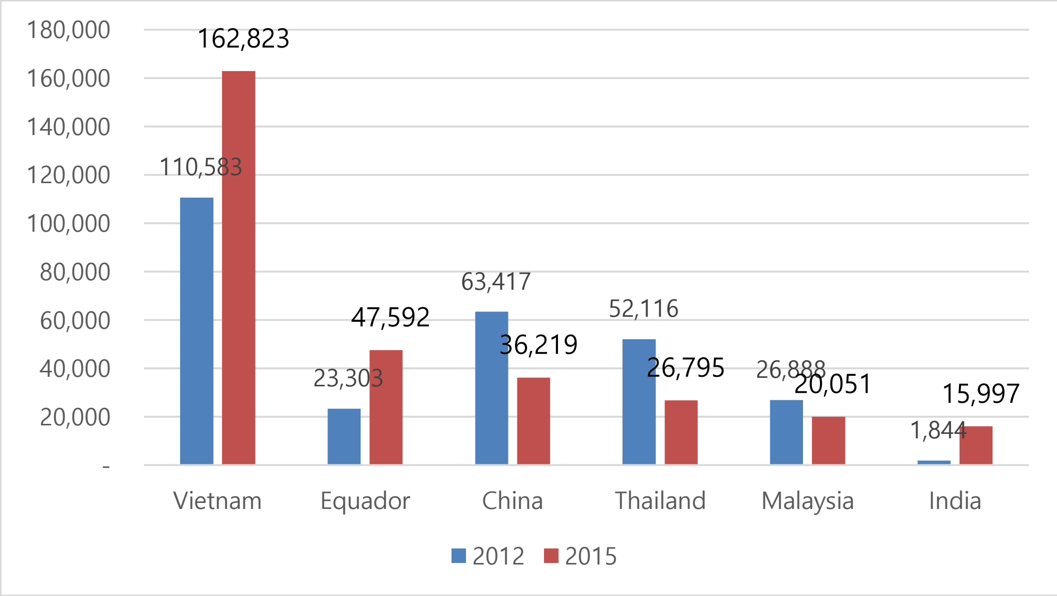
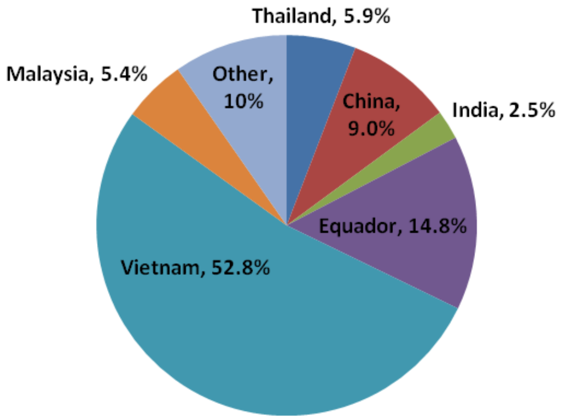


Table 2.3.1 **Market share of frozen shrimp by source, 2012 to 2015**

Unit: USD Thousan

Year	Vietnam		Thailand		Malaysia		China		Equador		India		Total
	Amout	Share	Amout	Share	Amout	Share	Amout	Share	Amout	Share	Amout	Share	
2012	110,583	38%	52,116	18%	26,888	9%	63,417	22%	23,303	8%	1,844	1%	292,485
2013	122,662	40%	29,492	10%	28,252	9%	52,730	17%	32,920	11%	20,655	7%	305,498
2014	205,049	50%	30,754	7%	33,090	8%	38,791	9%	41,563	10%	20,651	5%	412,773
2015	162,823	47%	26,795	8%	20,051	6%	36,219	11%	47,592	14%	15,997	5%	343,255

Graph 2.3.3 **Country of origin for frozen shrimp imports (Jan to Oct 2016)**



Source: Korea Customs Service

Tariff rates of frozen shrimp in the Free Trade Agreements (FTAs)

The basic tariff rate of 20 percent applies to frozen shrimp imported in ROK, with the exception of frozen shrimp imported from countries that entered into forced the Free Trade Agreement (FTA) with the ROK. The Association of Southeast Asian Nations (ASEAN) including Thailand benefits from the tariff rate prescribed by the ASEAN-ROK FTA fully entered into forced in 2009. Frozen shrimp has a preferential tariff rate according to the Tariff Rate Quotas (TRQ) under the agreement. This means that importers that acquire through open competitive bidding a volume of frozen shrimp within the TRQ could take advantage. However, these importers still need to make payments which depend on market supply and demand changes, to participate in the bidding and acquire an import allocation volume.

※ TRQs in the ROK-ASEAN FTA and ROK-Vietnam FTA

ROK-ASEAN FTA

- Agreement on Trade in Goods between ROK and the ASEAN (took effect in June 2007, for Thailand in 2009)
- TRQ of 9,300 tons : 7,300 tons of shrimp and 2,000 ton of cuttlefish
- TRQ administration method: allocation by open competitive bidding (electronic bidding)

ROK-Vietnam FTA

- Free Trade Agreement between ROK and Vietnam (effective as of Dec 2015)
- The ROK committed to provide tariff quotas for 10,000 tons of Vietnam shrimp in the first year and for 15,000 tons in the sixth year
- TRQ administration method: open competitive bidding (electronic bidding) to auction the right to import at the in-quota tariff.

Distribution structure of imported frozen shrimp

There are various distribution channels with the increase in the volume of frozen shrimp from numerous supplier countries around the world. Frozen shrimp entering the Port of ROK reaches consumers through the wholesale market, wholesalers, and retailers. Recently however, some imports of frozen shrimp skip the wholesalers and are distributed by the importer straight to the wholesale market and retailers. On the other hand, the hypermarket E-Mart started to supply the market with private brand (PB) label products with frozen shrimp from Thailand. LotteMart, another hypermarket had frozen shrimp from Vietnam and Argentina imported through Lotte International, trade arm of Lotte group.

Current status of the frozen shrimp market in the ROK

The annual shrimp consumption in the ROK is estimated at sixty to seventy thousand tons of which six to seven thousand tons are produced domestically. ROK's self-sufficiency in shrimp is equivalent to ten percent, with imports fueling 90 percent of the nation's shrimp consumption.

While the supply of shrimp from foreign sources is available throughout all seasons of the year, domestic shrimp is harvested generally in late August through late October, and stored frozen for distribution until the next season comes around.

Frozen shrimp product items include black tiger shrimp, white leg shrimp and cocktail shrimp. While black tiger shrimp is preferred in haute cuisine, white leg shrimp is similar to domestic shrimp and is very popular in general cuisine.

Consumer purchasing behavior

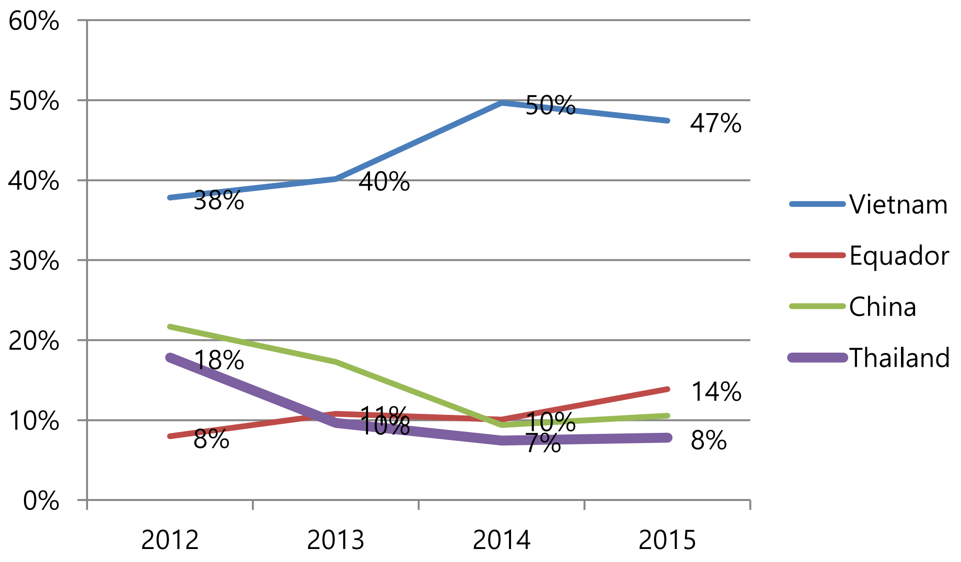
Consumers in ROK prioritize quality and safety over prices when purchasing seafood. The country of origin is another important factor, so the safety of "Made in Thailand" should be steadily advertised and carefully nurtured and maintained. Thailand can enhance the brand image of "Made in Thailand" by educating producers not to use substances and conducting thorough inspection on exports.

Competitive environment for frozen shrimp from Thailand

In 2015, Thailand exported US$ 26,795,000 worth of frozen shrimp to ROK, which accounted for 7.8 percent of the total frozen shrimp market. Thailand is the fourth biggest exporter after Vietnam, Ecuador, and China. Thailand's market share as the second biggest exporter dropped by half, compared with 17.8 percent in 2012.

In contrast, Ecuador increased exports from US$ 23 million in 2012 to US$ 48 million in 2015, which was 14 percent of the total imported frozen shrimp market in ROK. Vietnam benefits from the TRQ of 11,000 tons in 2016 under the ROK-Vietnam FTA which took effect in 2015. As a result, Thailand's price competitiveness was weakened. While frozen shrimp from Vietnam which has a 50 percent share of the Korean market is having safety issues, frozen shrimp from Thailand enjoys a reputation of good quality among Korean consumers. If Thailand promotes quality over price competitiveness offering premium products, it will compete better with Vietnam and Ecuador.

Graph 2.3.4 **ROK market share of frozen shrimp from Thailand**



Source: Korea Customs Service

SWOT analysis

Strength	Weakness
• Relatively strong in food safety • Relatively sufficient food processing capacity	• Relatively weak in price competitiveness
Opportunity	**Threat**
• More demand for ready-to-eat food	• ROK-Equador FTA discussions • Concern over imported food safety

Strategic directions

a. Expanding private brand (PB) label products

It is recommended that Thailand should avoid price competition with Vietnam, Ecuador, and India, and collaborates with hypermarkets in ROK promoting PB products based on its relatively advanced processing and packaging techniques. In this way, it will be able to reduce import and distribution costs and secure good sales channels.

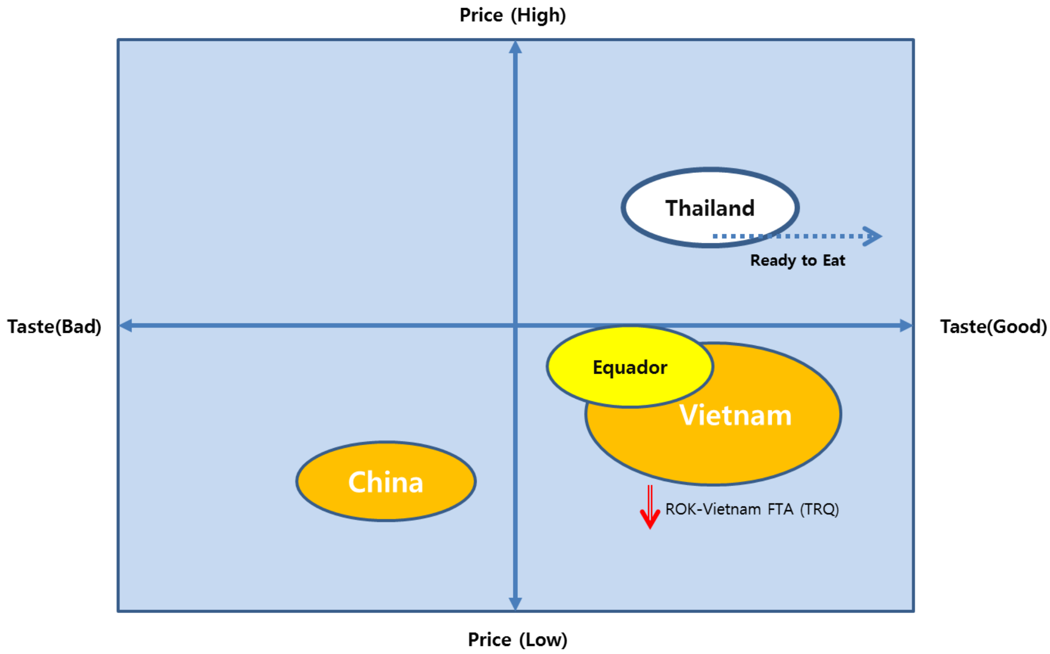
b. "Made in Thailand" marketing

Thailand should consider a marketing strategy for frozen shrimp that utilizes its worldwide reputation. Furthermore Thailand's food safety system functions better than that of Vietnam, India, or Ecuador, giving significant competitive advantage with respect to marketing efforts to promote good product-country image. Food safety is highly appreciated by consumers in the ROK.

c. "Ready to Eat" (RTE) food development

As single-person households sharply increase, RTE products have become more popular in the ROK. Many convenience stores frequented by single-person households are launching a variety of RTE products. Thai exporters could utilize this opportunity and claim high value-added processed food market by developing RTE products containing shrimp such as sweet chili shrimp and shrimp stir-fried rice and noodles, as food supply items for convenience store chains like GS25, CU, and Family Mart.

Chart 2.3.1 SWOT Positioning Map of Thai Shrimp



Food Safety Management

Importers for frozen shrimp products intended for food consumption must comply with procedures prescribed in the Food Sanitation Act. Frozen shrimp importers must submit a sanitary certificate issued by the Thai government. The certificate must declare the types of shrimp for import, areas of catch, area of farming and the hygiene process.

As frozen shrimp from Vietnam increases its market share in ROK, food safety issues are likewise on the rise. Recently, the Ministry of Food and Drug Safety ordered a complete recall of frozen white leg shrimp imported from Vietnam. *Furazolidone*, a nitrofuran antibacterial agent was detected. Similarly, a video showing a worker at a shrimp processing plant in Vietnam repeatedly injecting jelly-like substances in the shrimp head, body and tail was disclosed in YouTube and Facebook. These incidents raised safety concerns.

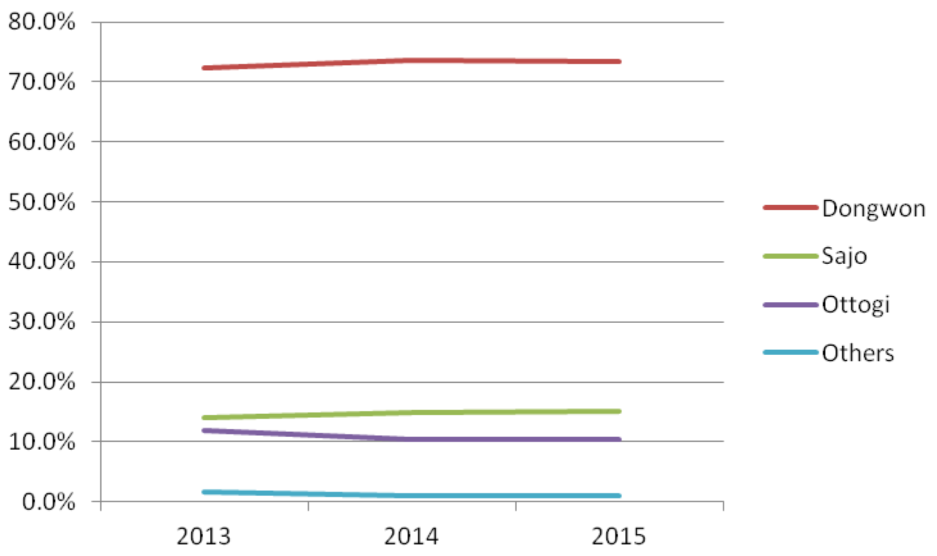
Case Study IV: Canned Tuna

Market Size

At the end of 2015 the total market value of canned tuna *(HS Code 16 0414 1021)* in the Republic of Korea (ROK) reached $450 million. Since Dongwon, the leading Korean food company launched canned tuna products in 1982, the canned tuna market had a steady market growth, with a recorded $400 million value in 2011, however remained stagnant in the last five years. There are three major players that produce canned tuna in ROK - Dongwon, Sajo, and Ottugi – with Dongwon leading the canned tuna market with a 70 percent market share.

The import market of canned tuna expanded six times, from $0.42 million in 2010 to $2.6 million in 2015. This expansion however is insignificant in the total market of canned tuna in the ROK. Strong domestic competitors like Dongwon manage the entire process of marketing canned tuna from catching the fish to its processing and distribution, boosting price competitiveness and widening distribution channels. In 2015, the ROK had $2.4 million worth of canned tuna imported from Thailand, which is 93 percent of the import market of canned tuna.

Graph 2.4.1 Market Share Status of Major Canned Tuna Players in ROK



Source: Nielsen Korea

Tariff rates of canned tuna under the Free Trade Agreements (FTAs)

Since the ASEAN-Korea Free Trade Agreement (FTA) signed in June 2007 did not include canned tuna, a 20 percent tariff is imposed on the canned tuna imported from Thailand. In contrast, the EU-Korea FTA allows a 9 percent tariff on the very small quantity of canned tuna from Italy. If the current negotiations for further liberalization of the ASEAN-Korea FTA shall include canned tuna, imported canned tuna will be more price-competitive. Expansion of its share in ROK is expected, with the catering and franchise businesses as target markets.

Distribution structure of imported canned tuna in the ROK

Hypermarkets occupy 43.1 percent of the distribution channels for canned tuna, followed by convenience stores and supermarkets taking up 42 percent and more. Convenience stores, in particular, are expanding sales due to an increase of single-person households and the preference among young consumers to go grocery shopping at stores close to home.

Current status of the canned tuna market in ROK

At present the canned tuna market of ROK is heavily dominated by three domestic food companies, which are Dongwon, Sajo, and Ottugi. Dongwon is the forerunner in the canned tuna market with its 70 percent market share. This sharply contrasts with less than 1 percent market share of imported canned tuna.

The canned tuna market has not grown since 2011. Dongwon with a 70 percent of the market is encountering challenges with decreasing profitability due to stagnant sales.

The canned tuna market has already reached a saturation point, which is closely related to a transition of generations in the consumer population. The canned fish market in ROK indicates that consumers are moving from the third generation of canned tuna to the fourth generation of canned salmon. In the canned fish market, the first generation was the canned pacific saury, the second generation was the canned whelk, the third generation was canned tuna, and the fourth generation is now canned salmon. As the fourth generation of canned salmon enters the canned fish market this year, CJ Cheil Jedang, Dongwon, and Sajo are the key players in the fierce three-cornered competitive fight in the canned salmon market.

Consumer purchasing behavior for canned tuna

As competition in the canned tuna market heated up, many food companies presented plain tuna with added flavors like spicy-flavored, light-flavored, or Kimchi-flavored tuna. This strategy highly influenced consumers in the ROK to consider the flavor first and foremost when purchasing canned tuna. They strongly prefer products of Dongwon, which has generated a positive image through its powerful advertising and marketing. Due to a strong consumer perception that all tuna is imported from overseas, the country of origin is less important compared to the flavor, in the purchasing behavior of consumers in the ROK.

Additionally Most of consumers in the ROK are influenced in their purchasing behavior by information on canned tuna from television commercials and retail promotions.

Competitive environment for canned tuna from Thailand

In 2015, canned tuna from Thailand had a dominant share of about 94 percent of the imported canned tuna market of ROK. Thailand is the world's biggest tuna exporting country, yet it accounts for less than one percent of the total canned tuna market in ROK. The number goes further down if the market for canned tuna for pets is included in the analysis. Canned tuna from Thailand will compete with potential imports of canned tuna from Senegal, which started to enter the Korean market in 2016. Canned tuna from Vietnam continues to target Korean consumers. It is important for Thai exporters to find a way to challenge the domestic players that control 99 percent of the total canned tuna market of ROK.

SWOT analysis: market share expansion of canned tuna from Thailand

Strength	**Weakness**
• Production Capacity • Price competitive advantage	• Weak Brand Identity • Unfamiliarity with Korean Taste
Opportunity	**Threat**
• Diversification of consumer taste • Trend toward new taste	• Saturated Canned Tuna Market • Dominance by domestic platers

Strategic directions: market share expansion of canned tuna from Thailand

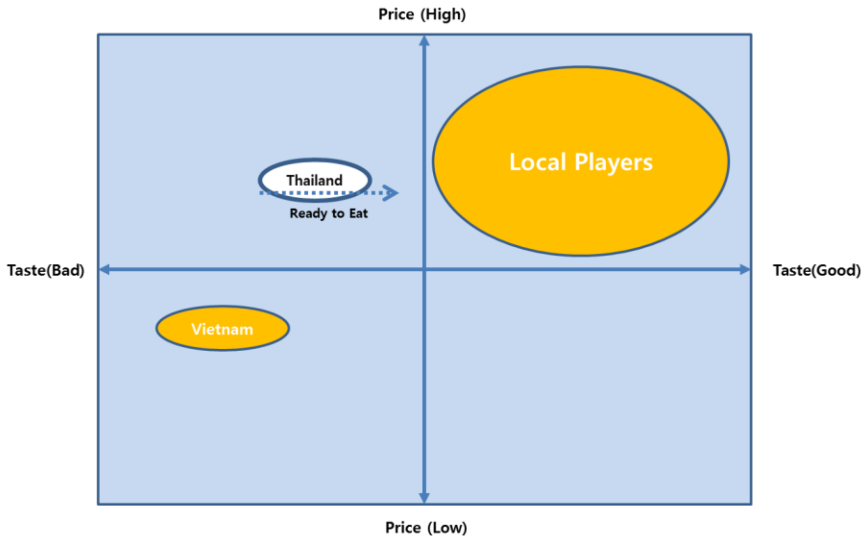
Reinforcing "original equipment manufacturer" (OEM) business

In the Korean market, domestic business players dominate canned tuna sales. Even Thai companies with experience in the global market should approach Korean distribution companies like hypermarkets with new ideas for PB products. Furthermore the OEM business should strengthen due to the advantages of marketing through existing distribution channels.

Canned tuna for pets as an emerging market target

The pet food and snack market is growing rapidly in the ROK. Producers and exporters of canned tuna of Thailand should reinforce their marketing strategies to target the pet food and snack market in the ROK.

Chart 2.4.1 SWOT Positioning Map of Thai Canned Tuna



Food Safety Management

Imported Canned tuna should go through the import and customs procedures defined by the *Food Sanitation Act* before making entry in ROK. This law specifies that all food imported for the first time must undergo an in-depth inspection conducted within ten days (excluding Sundays and holidays) after an import declaration is made. For tuna products, documents required by the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Inter-American Tropical Tuna Commission (IATTC) must be ready. Upon the completion of import inspection, the Korea Customs Service proceeds with its customs procedures.

Since import and customs procedures are managed by Korean importers, exporters need to focus on food safety. Canned tuna reaches consumers through domestic distribution channels right after they are imported in ROK. Any issues concerning food sanitation and safety when reported by consumers will negatively affect the domestic import agents as well as their partners, the exporters in abroad.

In June 2015, Dongwon was ordered the complete recall of Dongwon Pineapple and Dongwon Salmon made of finished products imported from Vietnam. Reports indicated that these imported products contained substances that tested positive for bacteria growth. Dongwon also had a food sanitation issue in another incident when a bug was found in its canned tuna.