

# CURRENT STATUS OF KOREA'S PROCESSED ORGANIC FOOD INDUSTRY AND ANALYSIS ON CONSUMERS' AWARENESS

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## Introduction

Thanks to the diversification of eating-habits and high interest in food safety, the markets for organic and environment-friendly products are rapidly expanding. The survey released by KREI (Korea Rural Research Institute) said the market of environment-friendly agriculture accounted for 80% of total food market with \$ 2 billion as of 2008 (Among that, processed organic food stood at about \$ 361million). Particularly, the growth of environment-friendly food market is driven by the processed organic food boasting drastically-growing markets.

However, organic products certified in Korea account for 0.7% of total agricultural products, implicating that processed foods by using the domestic raw-materials were not abundant. Usually, most processed organic food sold in Korean market is as follows; 1) the products reprocessed in Korea after importing their organic materials or primarily-processed organic food, and 2) imported food as the form of finished products. As of 2009, 21.293 million ton (about USD 39.74 million)-organic food was reportedly imported.

In this paper, I'd like to review the current status and management system of processed organic food industry in Korea and to grasp the awareness of consumers on the food in order to come up with measures to develop organic food industry.

## Management System of Korea's Processed Organic Food and its Certification Scheme

### 1. Management System of Processed Organic Food

Along with the enactment of 'Food Industry Promotion Act' in June 2008, the certification scheme of processed organic food started in Korea. Unlike the certification of Environment-friendly agricultural products, processed organic food is addressed by "Excellent Certification Authorities" designated by 'Enforcement Ordinance of Food Industry Promotion Act'. As of December 2010, the Korea Food Research Institute and other 5 organizations were designated as "excellent certification authorities" by 'the ministry of agriculture and food'.

**Tab. 1: Management Comparison between Environment-friendly Agricultural Products and Processed Organic Food (as of the end of December 2010)**

Division	Environment-friendly Products Certification	Processed Organic Food (certification)	Processed Organic Food (labeling)
Relevant Law	Environment-friendly Agriculture Promotion Act	Food Industry Promotion Act	Food Hygiene Act
Certification Scope	Organic Products / No-input Agricultural Fertilizers	Processed Food      Organic	Processed Organic Food (Imported)

Certification Body	National Agricultural Products Quality Management Service / Private Certification Bodies	Excellent Certification Authorities (Private)	Foreign Certification Bodies accredited by the Korea Food & Drug Administration (345 organizations from 30 countries)
Relevant Government Authorities	Environment-friendly Agriculture Team of the Ministry of Agriculture and Food / National Agricultural Products Quality Management Service	Dept. of Consumer Security Policy of the Ministry of Agriculture and Food	Dept. of Imported Products of the Korea Food & Drug Administration / Local Branches of KFDA

Beside of that, Article 10 of 'Food Hygiene Act' stipulates 'labeling principles of foods' which is applied to processed organic food, allowing the term of "100% organic", or "Organic" to be put on the product in line with the percentage of organic contents. The labeling system of processed organic food has some grace period until 'the Food Industry Promotion Act' is well underway. By December 31<sup>st</sup> 2012, certification system and labeling system can go hand in hand (Starting from January 1<sup>st</sup> 2013, the mark of processed organic food can be labeled only when it attains the certificate in advance from certification bodies designated by 'the ministry of agriculture and food' based on 'the Food Industry Promotion Act').

## 2. Certification and Import of Processed Organic Food

Statistics made by the Korea Food Research Institute in 2008 said that Korean organic market was assumed to reach USD 361 million. Among it, processed food stood at USD 194, accounting for 53.4% of total market. However, in the process that organic food is imported, they are imported as general food, so it's expected the organic market is bigger in reality.

As of the end of December 2010, 6 organizations including KFRI were designated as 'Excellent Certification Authorities' in accordance with 'Food Industry Promotion Act'; there are 4 Korean organizations and 2 foreign bodies. Taking a close look into the cases of certification issued by them, we could see they issued certificates to 464 items in total 285 cases- which means about 1,288 products got certificates. At the end of 2007 when organic certification scheme came into effect, 187 cases succeed in getting the quality certificates with 94 items such as Kimchi, and flavoring food, which shows certification items have been diversified after 2007.

Additionally, regarding the certificates issued by each country, Koreans receive certificates from 19 countries including Korea. Of course the share of certificates granted by Korean organizations is high, showing 225 cases (379 items and 1,094 products) are Korean certificates among 285 cases in total. Looking at the items, tea-based products have the lion's share with 246 products in 71 cases, followed by beverage with 141 products in 56 cases.

In the meanwhile, <Table 2> shows the status of imported organic food managed in line with 'Food Labeling Principles' of 'Food Hygiene Act'. It's not possible to distinguish organic agricultural products and processed organic foods, but the processed organic food reportedly accounts for 80~90% of total imported organic food. In 2009, Korea imported 21,293 ton of organic food (in total 3,686 cases of import) from 43 countries, showing the amount of imports were USD 39,735,000. In 2008, the previous year, the import quantity decreased remarkably as the import of fruits,

processed vegetables, pressed olive oil, bean-based processed food went down drastically.

**Tab.2: Annual Import of Organic Food (including Organic agricultural products)**

Division	2005Y	2006Y	2007Y	2008Y	2009Y
Producing Country	29	35	35	45	43
Case	2,078	2,451	3,009	3,844	3,686
Weight (ton)	8,410	14,635	23,868	25,350	21,293
Amount (1,000 dollars)	18,351	27,486	40,358	56,604	39,735

Note) The terms of 'imported organic agricultural products and processed food' mean the products with the mark of 'Organic' based on detail labeling principles of processed organic food which is stipulated by Article 3 of 'Food Labeling Principles' announced by the Korea Food & Drug Administration

Source: 「Annual Report on Imported Food Inspection in 2010 (12 issue)」, KFDA (2010Y)

## **Awareness of Consumers on Processed Organic Food**

### **1. Survey on Consumers' Awareness**

To grasp the consumption patterns and consumers' awareness on environment-friendly processed food (especially, processed organic food), we conducted a survey (by using questionnaires) on 500 consumers (women residing in Seoul) who experienced the purchase of environment-friendly products and their processed food under the cooperation with department stores, big shopping malls, stores exclusive organic products, and stores of consumer cooperatives. 404 respondents (80.8% of total participants) were 'housewives' and the remaining 19.2% is 'working mothers'. When it comes to the location, 37.0% of respondents (185 people) lived in western part of Gangnam (Gangnam means the area to the south of Han river, which is the place rich people prefer to live in), followed by east of Gangbuk (25.2% with 126 people), west of Gangbuk (20.4% with 102 people) and east of Gangnam (17.4% with 87 people). In terms of income bracket of respondents, respondents saying "KRW 3 million ~ 3.99 million per month) were the highest with 40.4%, followed by "KRW 2 million ~2.99 million" with 23.4%, and "KRW 4 million ~ 4.99" with 20.2%. This survey was conducted for a month (from October 17<sup>th</sup> to November 17<sup>th</sup> in 2005) by using questionnaires. After collecting the questionnaires, we performed 'Face to Face Interview'. Collected data was analyzed through the process of Editing-Cording-key-in-Programming by using the tool of SPSS for win.

### **2. Analysis on Consumers' Propensity about Processed Organic Food**

#### **1) Experience of Purchasing Processed Organic Products and Purchase Frequency**

The percentage of respondents saying they had bought processed organic products reached 74.8% (374 respondents), and the remaining 25.2% didn't buy them. Concerning the distribution channel, most consumers used department stores and organic food-exclusive stores which sold various products.

In addition, as to purchase frequency, usually consumers bought products once a month, but they bought bean-based processed food, products for side dishes, and some snacks twice a month. In case of bean-based food, 96.2% of respondents said they bought tobu (soybean curd).

#### **2) Consumers' Consideration in case of Purchasing Processed Organic Food and Their Reliability**

The survey also questioned the consideration that consumers took into when they bought processed organic food (multiple answers were allowed). The results showed that 78.3% of consumers put priority on 'safety', followed by 'original place to grow raw materials' with 39.8%, 'nutrition' with 34.2%, and 'taste' with 34.0%. It means the biggest reason consumers buy processed organic food is food safety. In terms of purchase channels, users of 'consumer cooperatives' have less concerns on 'price' or 'package design' than consumers using other distribution channels, and they also had higher intention of buying the same products in the future.

As to the questions on the reliability of processed organic food, 82.3% of people mentioned 'overall satisfied' or 'strongly satisfied', meaning consumers had high trust on processed organic food.

### 3) Satisfactory Level on Processed Organic Food and Further Consumption

In case of consumers' satisfaction on processed organic food, 78.9 % replied "satisfied", and only 1.9% replied "unsatisfied". Among unsatisfied consumers, 85.7% pointed "expensive price" and 14.3% answered "not delicious" (Effective replies are 7). Concerning the consumers' satisfaction by each distribution channel, consumers using organic food-exclusive stores reached the highest level of satisfaction (84.4%), and members of consumer cooperatives showed the lowest level (72.3%).

While the import of processed organic food was increasing drastically, 54.2% of respondents said "they would buy domestically-processed organic food", but 29.0% mentioned "they would buy the processed organic food imported from foreign countries even if they were safe and reliable". 15.8% replied "they would make choices depending on items and products". Consumers using department stores said they would buy the imported ones even if they were safe and reliable, showing the highest figure.

Besides, 65.2% replied they would intend to buy more processed organic food in the future. The question about what kinds of product they would purchase more showed that soybean curd ranked first (23.9%) followed by sesame oil (12.3%), soybean paste (12.0%), hot-pepper paste (12.0%), hot-pepper powder, bread, nutritious power, ham, snacks, and kimchi. Except for them, consumers also have intention of buying fruit juice or fruit jam further. In other words, consumers are willing to buy more basic foodstuff, seasonings, and spicy.

### 4) Consumers' Intention of Payment on Processed Organic Food

We raised an open question to know how much consumers would be willing to pay additionally based on the assumption that general processed food is 100. The results showed consumers would intend to pay soybean paste, hot-pepper paste, and soybean sources with the percentage of 28.0%, followed by edible oil (27.7%), bean-based processed food (27.6%) and baby food (27.6%). In terms of distribution channel, consumers using organic food-exclusive stores had the highest intention of making additional payment (26.8%).

## Conclusion

The year 2011 will see an integral law come into effect to unify the management of processed organic food which has been managed under the separate law and regulations. In addition, 'the 3<sup>rd</sup> phase of 5-year Plan for Environment-friendly Agriculture Promotion', which is scheduled to take effect in 2011, notices obviously that the government will mainly foster processed food industry based on environment-friendly products and organic products.

Processing of organic agricultural products allows us to keep up with the changing trends of various consumers and to resolve the issue of market imbalance through stable demand-supply

As shown by this survey, consumers' demand for processed organic food is very high. However, the basis for producing processed organic food is really weak, so most companies actually import i) foreign organic products or primarily-processed products in order to reprocess them or ii) finished products, instead of processing home-grown raw materials. Particularly, processed organic domestic foods are just tea, soybean or hot-pepper pastes, edible oil, and snacks, meaning they are usually simply-processed food. Therefore it's difficult to satisfy various ranges of consumers' demand.

More than 50% of consumers noticed that they would "buy processed organic food which was processed in Korea by using domestic ingredients", and they would be willing to pay 27% more additionally than general processed food. If domestically-processed organic food is fully developed to cover various ranges of products, possibility is high that the industry can grow even though its price competitiveness is a little bit weak.

To establish the production basis for organic food and to boost its consumption, there are some measures required as follows; first, academia-industrial cooperation is required to develop production technology of processed organic foods and new products. Second, production technology and basis for processed organic agricultural products need to be built in massive reclaimed fields in order to secure the raw materials. Third, the management system of processed organic food shall be effective. Beginning from January 2013, the management of processed organic food will be integrated to the certification scheme of processed organic food in accordance with 'the Food Industry Promotion Act', and it will be managed in a united way by the ministry of agriculture and food. However, some adjustment is required because it is a little bit against the management system of environment-friendly agricultural products including organic products. To foster environment-friendly agriculture in overall, it's desirable to prepare the certification scheme or labeling system about processed foods in detail, such as 'processed food of no-input chemicals'.

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