

KOREA NATIONAL FOOD CLUSTER

FOODPOLIS

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DEAR FRIENDS,

The Ministry of Agriculture, Food and Rural Affairs (MAFRA) and Korea Agro-Fisheries & Food Trade Corporation recently published a report on the Processed Food Submarket. It evaluates the Korean market for milk, modified milk powder, fermented milk and soybean milk, as part of a project for providing statistics and information about the food industry.

According to this report, domestic milk production is stagnant, while the production and consumption of modified milk powder, fermented milk and soybean milk have recently increased with the entry into the Chinese market and the spread of health-centered consumer trends. You may find the contents of this report very interesting, and can read more details in the Policy Talk section.

The Cover Story focuses on Aging Population and Food Industry. With the global population of 'senior' consumers set to grow by almost 150 million in the next two years, there are massive opportunities for the food industry to target the older consumer.

Finally, I am pleased to inform you that Europe's leading food research institute, the TNO Food Research, decided to choose Korea National Food Cluster as its R&D base in Asia, following the NIZO Food Research from the Netherlands. TNO Food Research signed a memorandum of understanding for investments with MAFRA on Nov. 26th. I am very glad that more foreign companies are showing interest in our food cluster.

TNO Food Research was established in 1930 and owns a history of more than 80 years. Projects covering a wide range of areas including healthcare, food and energy are currently underway for TNO. More recently, TNO is pursuing a joint R&D project with the Seoul National University and Nong-Shim (Tae-Kyung) to source diabetes preventive food base materials using genome technology.

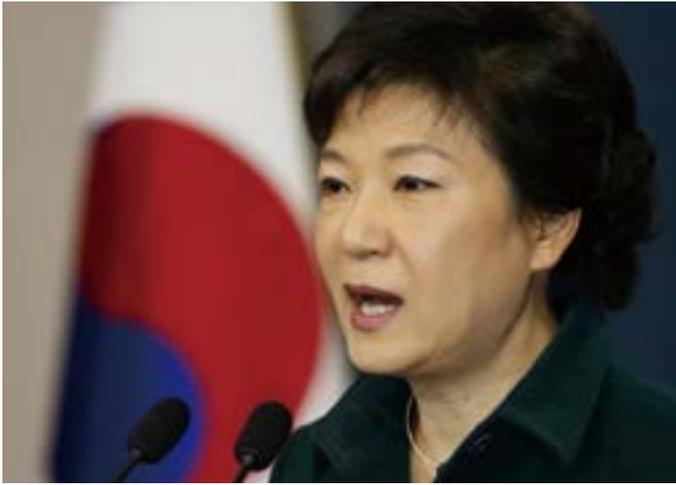
I am sure that 2014 will be landmark year for FOODPOLIS, and hopefully many more companies will sign investment MOUs with us.

Wishing you and your family a very happy and prosperous new year!

LEE Dong Phil

Minister of Agriculture, Food & Rural Affairs

President Park Pledges to Make Korea Fifth-largest Trading Power



President Park Geun-hye said that the government will foster new export industries, help smaller firms' export capabilities and strengthen free trade networks with other nations in order to make Korea the world's fifth-largest trading power by 2020.

"We cannot sit contently with these achievements. Our export industries are now facing new challenges," she said. "Developing nations are chasing us in technology at a faster pace, and manufacturing industries in advanced nations are reviving, making the global competition fiercer than ever."

Global trade environments are also changing rapidly as large economies, such as the United States, the European Union and Japan, are seeking free trade deals, and non-tariff barriers are also rising, she said.

She said she would launch a second "Nation Building by Exports" drive.

"Under the goal of becoming the world's fifth-largest trading power and reaching \$2 trillion in annual trade by 2020, I will actively carry out three major tasks of fostering new export industries, enhancing export capabilities of small and middle-class firms and strengthening sales diplomacy and our free trade foundation," she said.

Per Capita GNI to exceed \$24,000

Korea's per capita income is expected to surpass the \$24,000 mark for the first time due mainly to the appreciation of the Korean won, according to a research institute. The LG Economic Research Institute forecast that the gross national income (GNI) per capita will reach \$24,044 this year.

The figure comes by presuming this year's gross domestic product (GDP) will be 2.8 percent, the estimate by the Bank of Korea (BOK), and this year's average exchange rate, 1,095 won per dollar, which was calculated based on the average rate between January and October. Researcher Lee Geun-tae of the institute said both GDP growth and the won's appreciation influenced the increase of GNI per capita.

"This year's GDP is expected to grow faster than last year. Also the average exchange rate is expected to be 1,095 won per dollar this year compared to last year's 1,127 won, so the dollar-converted GNI will become larger," he said.

Korea Designates 5 New Foreign Investment Zones

The government said that it has designated five new locations as foreign investment zones that are expected to create over 1,100 new jobs. A foreign investment zone (FIZ) is designated upon request from foreign investors or joint ventures with an investment plan. Having the FIZ designation entitles the investors to a wide range of benefits, including reduced rent and tax incentives.

"If the foreign investment in the five newly designated foreign investment zones (FIZs) is carried out as currently planned, a total of 1.17 trillion won (\$1.11 billion) will be invested with 1,159 new jobs in direct employment," the Ministry of Trade, Industry and Energy said in a press release.

One of the five new FIZs is a joint investment area where four foreign companies, including German medical equipment manufacturer Artificial Life Inc., plan to invest a total of \$68 million over the next five years, employing 580 people in Munmak, Gangwon Province, according to the ministry.

A joint venture between South Korea's Lotte Chemical and Italy's Versalis S.p.A. plans to invest over \$515 million, including \$100 million in foreign direct investment, to begin producing petrochemical products, such as rubber, from 2017 in Yeosu, 455 kilometers south of Seoul. The other three new FIZs are each set to house Japan's Toray Industries, Inc., Nitto Denko Corp. and U.S.-based Air Products & Chemicals, Inc.



Fiscal Deficit Shrunk in Third Quarter

Korea's cumulative fiscal deficit in the first nine months of this year shrank from that of the January-June period's as government spending decreased, the Ministry of Strategy and Finance said.

Despite the decline, however, this year's fiscal deficit is still expected to be more than 20 trillion won (\$18.9 billion), remaining in the red for the sixth consecutive year. According to the Finance Ministry, the country's cumulative fiscal deficit at the end of September was 29 trillion won, a drop from 46.2 trillion won in the first six months of the year. The shrinkage of the deficit from the first six months to the first nine months is the largest since 2010 when the deficit over the same period was reduced by 12.9 trillion won. This year, the deficit shrank by 17.2 trillion won.



Korea's Rice Production Grows 5.6%

Rice production grew 5.6 percent on-year in 2013 as favorable weather conditions and little damage from typhoons led to a bumper harvest, government data showed. According to the data by Statistics Korea, the country produced a total of 4.23 million tons of rice this year, up from 4.01 million tons tallied a year earlier. This represented the first on-year output growth since 2009.

The hike is attributable to favorable weather conditions and little damage from typhoons. Last year, the country's southwestern areas where large rice paddies are located were severely affected by typhoons and torrential rains. The statistics agency said that the area where rice is grown de-

clined over the past year but enhanced production efficiency also played a role in increasing rice output.



Overseas Spending Hits Record High

Koreans' overseas spending hit an all-time high in the third quarter on the back of a fast growth in direct offshore purchases via the Internet. The amount of their overseas expenditure reached 6.49 trillion won (\$6.16 billion) in the July-September period, up 11.2 percent from three months earlier, according to the data by the Bank of Korea (BOK). That marks a 4.7 percent on-quarter increase from the previous record high of 5.83 trillion won in the third quarter of 2012, BOK data showed.

Overseas spending includes cash and credit card expenditure and money transfer to another country, as well as transactions made to purchase goods from foreign online shopping malls.



Inflation Hits Low of 14 Years

Korea's consumer prices grew less than 1 percent for three consecutive months for the first time in 14 years since 1999. According to Statistics Korea, consumer prices rose 0.9 percent last month year-on-year due to a 0.2 percent increase in prices of daily goods. However, the index fell 0.1 percent month-on-month, largely due to a 2.6 percent drop month-on-month and 8.5 percent plunge year-on-year in agricultural prices, the report said. A 1.1 percent fall in petroleum prices also slowed inflation, it added. Prices of agricultural products and fresh food slid as supply expanded during the peak autumn season, the report said. Prices of cabbages plummeted by a whopping 34.5 percent in November compared to the previous month, along with a 5.3 percent drop in pork prices and 6.7 percent fall in apple prices, the data showed. Owing to the stabilized agricultural and oil prices, the nation's core inflation index remained in the 1 percent range, signaling a stable growth trend.



Korea's Automobile Output, Exports Expected to Grow

Korea's automobile industry is expected to grow both in terms of its output and sales next year, the government said.

"Despite continuing global economic uncertainties, the automobile industry is expected to show slight gains in overseas sales, as well as its output and exports in 2014," the Ministry of Trade, Industry and Energy said in a press release. The ministry said the combined domestic output by the country's five automakers is expected to shrink 1.4 percent this year from 2012, largely due to a 13.9 percent spike in their combined overseas production.

In 2014, however, their domestic output is expected to gain 2.2 percent on-year with their overseas output also growing 6.3 percent, the ministry said.



Korea to Ease Rules for FEZ Hospitals, Schools

The Park Geun-hye administration is considering easing a set of business regulations on medical institutions and schools in free economic zones nationwide. During a policy briefing to the president, the National Economic Advisory Council unveiled a vision to develop the service industry by lifting outdated barriers in terms of attracting foreign capital to the FEZs in Incheon and other regions. For the medical sector, the NEAC recommended eliminating the requirements that foreign hospitals in the FEZs should employ a doctor staff of at least 10 percent expat doctors and that the hospital chief should be a foreigner. In addition, it is necessary for policy-makers to allow Korean hospitals in the zones to hire foreign doctors, said the council.

To draw renowned foreign educational institutions, the NEAC said the government should allow foreign colleges and other schools in the zones to transfer operational surplus to their countries. The government plans to inject a total of 202 trillion won (\$190 billion) into the construction of the zone while trying to attract foreign investment worth \$27.6 billion by 2020, the committee said.



Gov't gives a Formal Nod to U.S.-led Trade Pact

Korea finally made it official that it is highly interested in joining the Trans-Pacific Partnership, a U.S.-led multilateral trade pact.

The Korean government held a meeting of economy-related ministers where it expressed "interest" in participating in the TPP. An expression of interest is the diplomatic step before initiating a preliminary meeting with existing members to discuss specific terms. Korea had been on the fence for a long time about the 12-member pact because of both potential political ramifications and economic considerations. China is wary of the TPP, which is dominated by the United States and its allies including Japan. China is instead pushing a so-called Regional Comprehensive Economic Partnership (RCEP) in East Asia. With 12 members now (not including Korea), the TPP covers around 792 million people and 38 percent of global gross domestic product, or \$27.5 trillion, according to U.S. Congressional Research Service. The members are the United States, Japan, Canada, Australia, New Zealand, Singapore, Malaysia, Vietnam, Brunei, Chile, Mexico and Peru.



Korea, Australia Reach FTA Deal

Korea and Australia reached a deal on a bilateral free trade agreement that asks Australia to immediately and completely remove its 5 percent tariff on Korean passenger cars, the country's no. 1 export to Australia, Korea's trade ministry said. The agreement was announced at a trade ministers' meeting in Bali, Indonesia, between Korean Trade Minister Yoon Sang-jick and his counterpart from Australia, Andrew Robb. Based on the deal, Korea will eliminate tariffs of up to 300 percent on Australia's major exports, notably agricultural products such as wheat, dairy and beef.



Korea's trade ministry said that it tried to minimize the FTA's impact on local farmers by agreeing to cut tariffs on Australian beef over 15 years. Korea is the third-largest buyer of Australian beef. The deal was reached after Korea and Australia had their seventh round of free trade talks in Bali.

Korea, Canada Make Progress at FTA Talks

Trade ministers of South Korea and Canada have agreed to work toward early conclusion of a bilateral free trade agreement, citing what they called "significant progress" made at the latest round of talks, the Korean government said.

"Minister Yoon Sang-jick and Canadian Minister of International Trade Ed Fast noted that there had been significant progress in negotiations for the Korea-Canada FTA," the Ministry of Trade, Industry and Energy said.

The Yoon-Fast meeting was held in Bali, Indonesia, where the ministerial conference of the World Trade Organization was being underway. Korea and Canada resumed their FTA negotiations last week after over five years of pause since the latest round held in March 2008 hit a deadlock, largely over the level of market liberalization and access for the countries' products.



Dongwon F&B Launches Premium Salmon Products

Dongwon F&B said that its recently unveiled four products are gaining popularity in the domestic market. They are Dongwon Salmon Original, Dongwon Salmon Chilly, Dongwon Salmon S and Dongwon Salmon Salad. With the sole exception of the Salad, which uses chum salmon, the other three are made of premium coho fillet, which has not been available here in cans.

Unlike pink salmon, or humpback salmon that is most abundant of all the Pacific salmon, coho salmon is touted as the best along with sockeye salmon. Both the Original and Chilly sell at 4,980 won a can. While the S and the Salad is priced at 4,480 won and 2,500 won, respectively.



Paris Baguette Grows into Global Brand

The nation's bakery giant, Paris Baguette, has been faring well in the global market, especially in China, the U.S., Vietnam and Singapore, thanks to its localization strategy. After cementing its status as a premium brand by capturing upper-class customers in each country, Paris Baguette, an affiliate of the SPC Group, pursues localization, along with customer-friendly, experience-based marketing promotions, such as holding cake-making classes. To localize its brand, it plans to ensure products are up to 20 percent local, that is, tailored to local consumers' taste.

Paris Baguette opened its 100th store in China last year, indicating the significant growth of its franchise business as a major player in the country's bakery industry. Now Paris Baguette, plans to advance into Indonesia and other countries in the region to ultimately form an "SPC global belt." It has set the goal of 2 trillion won in overseas sales and 3,000 stores in 60 countries by 2020.



Dongsuh Upgrades Instant Coffee Products

Dongsuh Food, Korea's largest instant coffee product manufacturer, recently upgraded its products by using better coffee beans and adopting advanced manufacturing methods to meet increasingly sophisticated consumer tastes.

Under the slogan of the "Better Beans, Better Taste," the company has been updating a wide range of its products every four to five years since 1996. In October, Dongsuh introduced "restaged Maxim" and other items for the fifth time, drawing a great deal of attention from coffee drinkers.

The company's renewed lineup will continue to dominate the domestic market. The company has been updating its best-selling product since it was launched in 1989."



Convenience Stores See Sales Surge



As single-person households emerge as the main consumer group for convenience stores, sales at the ubiquitous outlets have taken off this year. CU, the nation's largest convenience store chain, which retails about 500 private brand (PB) products, said sales of PB items increased 32.5 percent this year, as of the end of November, compared to the same period last year.

PB products are typically less expensive than their brand-name counterparts, according to industry observers. Sales of fast and easy food products like lunchboxes jumped 55.7 percent, kimbap, seaweed covered rice snacks 24.2 percent and hamburgers 18.8 percent.

Ministop, a local convenience store chain, also saw sales of hot foods such as chicken pieces, skewered foods and fish cakes increase 40.5 percent through November, compared to the same period last year. According to 7-Eleven, accumulated sales of bottled water, which accounted for 43.3 percent of all sales in 2011, grew to 48 percent this year as of November. At GS25, its PB bottled water ranked second in terms of the sales volume of all products this year.

FTC Gives Dairies Conduct Code

The Fair Trade Commission (FTC) said it would establish trading standards for dairy companies and their distributors to prevent large dairy companies from abusing distributors. According to the FTC, the domestic dairy products market was 5.014 trillion won as of 2011, and the four major dairy companies, Seoul Milk, Namyang Dairy, Maeil Dairy and Korea Yakult Corporation, account for 77 percent of the market. So-called exemplary trading standards are an advisory that encourages voluntary compliance by operators.

The FTC said the standards will not be legally binding, but it expects a high compliance rate. In the past, there have been such non-binding voluntary trading standards in the pharmaceutical industry, patent sector, entertainment management industry and in convenience stores and coffee shops, all of which were established in 2012.

The standards will likely forbid forcibly assigning products that have passed more than 50 percent of the expiration period to small distributors. Being forced to buy products with impending expiration dates is a common complaint among retailers. The standards will also forbid dairy companies from delivering products that distributors did not order or forcing retailers to order unpopular products with sluggish sales.

More Firms Open Online Malls

Major retail companies, including hotels and shopping malls, are expanding their sales outlets by opening online stores amid the prolonged economic slump. Lotte Hotel, a chain that is part of the Lotte Group, launched an online shopping mall, Lotte Hotel Shop, on Nov. 18. The mall sells mainly food products made by the hotel, such as kimchi, bread and cake. The company expects its online mall to be a breakthrough because it will reach customers nationwide, something that its offline stores have not been able to achieve. In the last few years, department stores have established an online presence through open markets such as G-market and 11 Street. For example, Hyundai Department Store launched an online store on 11 Street in April 2012. Lotte Department Store also introduced an online store on G-market in July 2011. CJ O Shopping, an affiliate of CJ Group, which operates various shopping outlets, also launched a new online bookstore, O's Books, on Nov. 19. This is the company's first foray into the e-book business.



Korea Beats Japan in China-Trade

Korea beat Japan in trade with China when it exported \$150 billion worth products in the first 10 months of the year, up 9.4 percent from a year earlier. Japan, which used to be the biggest exporter to China, sold \$133.2 billion worth products in the Chinese market, losing its ground to Korea for the first time.

The government said its strategy to diversify export markets, shifting the focus from advanced markets to emerging ones, has paid off. In the 1990s, about 32 percent of Korea's exports went to North America. This year, the percentage was down to 12 percent. Instead, the proportion of exports going to Asian markets expanded to 60.5 percent. By the end of the year, the government forecasts that aggregate trade volume will reach \$1.07 trillion, up slightly from \$1.06 trillion last year. The country is also expected to achieve its largest exports and trade surplus by the end of the year.



Koreans' Life Expectancy Higher than OECD Average

The average life expectancy of babies born in 2012 rose slightly from a year earlier, a government report showed, apparently on improving medical services. Babies born last year were expected to live an average of 81.4 years, up from 81.2 years tallied in 2011, according to a report by Statistics Korea.

The figure represents a marked increase from just 61.9 years in 1970 and also from 77 years in 2002. The life expectancy of Korean males was 77.9 years, 0.6 years higher than the average of the 34 OECD member nations. It added the figure was 84.6 years for Korean women, while the OECD average stood at 82.8 years.

The difference in life expectancy by gender in Korea was 6.7 years during the same period, also higher than the OECD aver-



age of 5.5 years. "This difference by gender in the country has remained between 6.7 years and 6.9 years since 2007," Statistics Korea said.

World Bank Opens Office in Songdo

The World Bank Group opened its brand new Korean office in a special ceremony attended by its chief and many other officials from here and abroad. The new Korea office in Songdo represents Korea's growing stature in the international community, the World Bank Group and Korea's finance ministry said in a joint press release. It, however, will also work with developing countries in the region.

"Korea is a great development success story which many developing countries look to as an inspiration. We will bring together the public and private sector sides of our operation to enhance our collaboration to end extreme poverty and build shared prosperity," World Bank Group President Kim Jim-yong was quoted as saying in the opening ceremony held in Songdo, an artificial island located just west of Seoul in Incheon.



Introducing Kimchi Index

Korean households consume some 2 million tons of kimchi per year, making the fermented side dish's ingredients key factors in the nation's price index especially during the kimchi-making season in late fall and early winter.

In consideration of the kimchi crises that have jolted the domestic economy over the past few years, the Ministry of Agriculture, Food and Rural Affairs has recently introduced the "kimchi index." The kimchi index, indicating the costs of 13 key ingredients such as cabbage, salt, dried red pepper powder, and peeled garlic, was 91.3 this month, which was the lowest level since 2009, according to officials.

In comparison, the index in October 2010, when the nation's cabbage skyrocketed in price, was 152.6. The average cost of making kimchi for a family of four was 195,000 won (\$182) this month, with that budget rising by 28 won for every 100 won increase in cabbage prices, data showed.



Language, Copyright, Culture Data made Public

The Korean government has released an additional one million public data records on November 25. With this new release, people will now have access to over 240,000 new data points related to the use of the Korean language, as well as to information about copyright and culture.

Useful language information, such as dictionaries of both the North Korean and South Korean versions of the Korean language, regional dialects and literary dialects, all of which are not currently easily accessible by the public, will now be accessible online.

In addition to the language-related data, there will be unveiled some 800,000 records concerning copyright and pat-

ents, particularly covering industry and industrial copyrights. Users will also be able to obtain information about a broad range of Korean culture and art from plays, music and dance all the way through to paintings, architecture and literary and cultural heritage.



Ski Resorts Open for Business

The winter leisure season has begun with snow already falling on parts of the country. Ski resorts around the country started to open from the middle of the month. Most of those located in Gangwon Province are now already admitting skiers and snowboarders, with those in Gyeonggi and North Jeolla provinces opening for business this week. Phoenix Park in Pyeongchang was the first to welcome skiers this season, and Yongpyong Resort is already in operation. Jisan Forest Resort also opened its ski slopes. It is just a 40-minute ride from Gangnam, Seoul and runs free shuttle buses to the capital and satellite cities.



DAIRY PRODUCT MARKET REPORT



농림축산식품부
Ministry of Agriculture, Food and Rural Affairs



The market for fermented milk and soybean milk has grown and become a premium market through diversification of products. Fermented milk production rose 15% from 2007 and soybean milk production rose 49% from 2008. These are some of the findings of a new report published by MAFRA.



The Ministry of Agriculture, Food and Rural Affairs (MAFRA) and Korea Agro-Fisheries & Food Trade Corporation recently published a report on the Processed Food Submarket. It evaluates the Korean market for milk, modified milk powder, fermented milk and soybean milk, as part of a project for providing statistics and information about the food industry.

According to this report, domestic milk production is stagnant, while the production and consumption of modified milk powder, fermented milk and soybean milk have recently increased with the entry into the Chinese market and the spread of health-centered consumer trends.

Modified milk powder production decreased 12% from 10 years ago, but rose 25% from 2007. As demand decreases due to reduced birth rates and spread of the breastfeeding movement, production also shows a downward trend. However, domestic niche markets are growing with the recent release of functional products and customized products such as milk powder for infants born with metabolism disorders.

In particular, increasing exports to China are bringing back vigor to the related industries.

The report points out that the 4 trillion won per annum Chinese market for modified milk powder, which is 10 times larger than the domestic market, has recorded a growth rate of more than 10% every year and anticipates that exports to China will further increase as domestic products are being recognized by Chinese consumers for their superior quality.

For reference, exports of modified milk powder rose dramatically from 3.5 million dollars in 2000 to 57 million dollars in 2012. The recent export to China where consumers do not trust their domestic powdered milk products, for example, due to the Chinese milk scandal in 2008, is rising fast.

As for fermented milk, production had shown a downward trend until 2009. With the recent trends of health-oriented consumption, however, consumption of fermented milk, which is rich in lactic acid bacteria, has been rising to a large extent

Milk production

(Unit: tons)

Year	White market milk	Processed market milk	Market milk total
2000	1,447,376	224,132	1,671,508
2001	1,465,793	263,538	1,729,331
2002	1,362,107	302,222	1,664,329
2003	1,380,182	448,359	1,828,541
2004	1,328,278	452,943	1,781,221
2005	1,310,882	380,317	1,691,199
2006	1,343,727	339,855	1,683,582
2007	1,361,915	334,631	1,696,546
2008	1,351,540	350,755	1,702,295
2009	1,389,585	312,270	1,701,855
2010	1,361,958	279,160	1,641,118
2011	1,338,081	286,309	1,624,390
2012	1,405,132	280,161	1,685,293
00-12 Annual avg. change	-0.2%	1.9%	-0.2%

* Dairy Statistical Yearbook, Korea Dairy Committee

Milk consumption by year

(Unit: kg)

Year	Raw milk consumption per capita ¹⁾	Market milk consumption per capita ²⁾	
		White	Processed
2000	59.63	30.79	4.77
2001	63.90	30.95	5.56
2002	64.26	28.60	6.35
2003	62.48	28.84	9.37
2004	63.99	27.65	9.43
2005	62.91	27.23	7.90
2006	63.47	27.78	7.03
2007	62.85	28.02	6.89
2008	60.88	27.61	7.17
2009	61.74	28.25	6.35
2010	64.18	27.56	5.65
2011	70.67	26.88	5.75
2012	67.17	28.10	5.60

* Korea Dairy Committee (www.dairy.or.kr)

1 Raw milk consumption per capita: Total domestic raw milk consumption/ population

2 Market milk consumption per capita: Total market milk consumption/population

Modified milk powder production

(Unit: tons)

Year	Production	Consumption
2000	26,612	27,282
2001	26,204	29,855
2002	20,595	21,013
2003	18,251	17,566
2004	15,139	17,800
2005	15,204	15,742
2006	12,766	13,600
2007	14,642	14,629
2008	15,632	15,034
2009	14,453	13,913
2010	14,513	14,860
2011	15,191	13,786
2012	18,236	14,475

* Status of Production and Consumption of Milk and Dairy Products, MAFRA

Fermented milk consumption by year

(Unit: kg)

Year	Raw milk consumption per capita ¹⁾	Fermented milk consumption per capita ²⁾	
		Liquid	Stirred
2000	59.63	8.55	2.64
2001	63.90	7.98	3.29
2002	64.26	7.84	3.40
2003	62.48	8.07	3.38
2004	63.99	7.42	3.37
2005	62.91	6.66	3.24
2006	63.47	6.70	3.59
2007	62.85	6.25	3.62
2008	60.88	5.81	3.38
2009	61.74	5.34	3.60
2010	64.18	7.44	2.62
2011	70.67	7.83	2.55
2012	67.17	8.77	2.26

* Dairy Statistics Yearbook, Korea Dairy Committee

1 Raw milk consumption per capita: Total domestic raw milk consumption/ population

2 Fermented milk consumption per capita/population

Soybean milk production (soybean milk and other grain milk)

(Unit: kg)

Year	Soybean milk		Other grain milk		Total	
	Production	Amount	Production	Amount	Production	Amount
2008	178,015	205,170,934	335	488,484	178,350	205,659,418
2009	174,444	213,061,305	1,319	2,158,448	175,763	215,219,753
2010	209,134	240,671,864	1,581	1,990,712	210,715	242,662,576
2011	263,937	287,445,264	1,247	1,366,933	265,184	288,812,197

* Food and Food Additives Production Report, MFDS



since 2009. Production of fermented milk in 2012 rose by 25% from 2009 when the production had recorded the lowest level in recent years.

In addition to existing liquid, drink and stirred-type products, new types of products such as ice cream and sherbet-type products are also being released. The premium market is also growing, which includes organic and additive-free fermented milk products.

As for soybean milk, with the increasing interest in diet and utilization of soybean milk as an alternative on traditional breakfast menus, the market has continuously expanded since 2009. More recently, the demand for products mixed with sesame, grain or green tea is gradually increasing.

The soybean milk market size is estimated to be around 460 billion won based on retail sales in 2012, and black bean milk products account for 51.6% of the total sales, followed by white bean milk products (35.7%) and other products (12.6%).

The report noted that recently, consumers of soybean milk products are being diversified; coffee shops and bakeries also use more soybean milk. With targets expanding from the middle-aged to women in their 20s, it is expected that the market will continue to grow in the future.

As for the stated reasons to buy soybean milk, “for health” (43.4%) topped the list, followed by “for beverage” (28.2%) and “as an alternative to a meal” (21.6%).

The things that consumers consider when buying soybean milk include flavor (45.3%), brand (13.1%) and price (11.1%). In addition, 28% of the respondents said they purchase soybean milk at least once a week. This shows the frequency of purchasing soybean milk is much lower than that of milk.

Meanwhile, domestic raw milk production dropped 17% from 10 years ago but has maintained a similar level since 2007. Market milk production has no significant difference from 10 years ago, maintaining the stability of the market.

Raw milk production began to decrease in 2003 because production was cut in 2002 to balance the supply and demand and

there appeared various other products that can replace milk, such as soybean milk and functional beverages.

In addition, as the milk market has matured, the preference for premium products such as low fat/fat-free milk and organic milk is increasing in the market. It is also predicted that it will be more necessary to develop various products such as chewable milk to expand milk demand.

The industry is also expecting that the recent amendment of a relevant regulation that enables low-fat milk products to be produced, as health functional food will contribute to expanding milk product ranges.

MAFRA's Food Industry Policy Division Manager said that the ministry had published market reports for more than 20 items, including kimchi, gochujang, curry, and ramen, since 2010, and would publish more reports on over 10 items including instant dish, ginseng beverage, sugar and seasoning. He added that the ministry would continuously monitor the market for each of these items every two years.

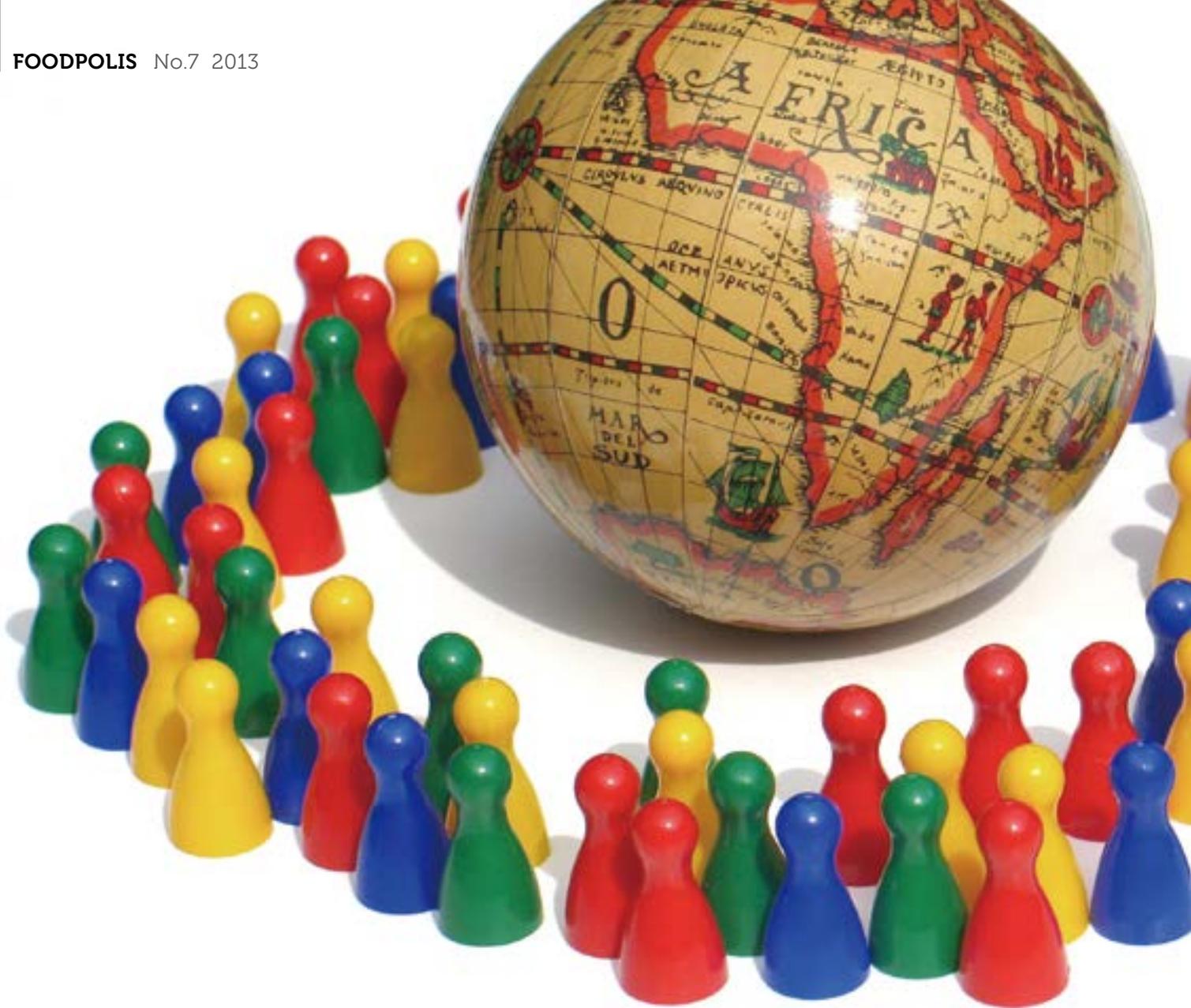
i You can download a full version of the report at the Food Industry Statistics System website (<http://www.affis.or.kr>)

Source: Ministry of Agriculture, Food & Rural Affairs (www.mafra.go.kr).



AGEING POPULATION & FOOD INDUSTRY

With the global population of 'senior' consumers set to grow by almost 150 million in the next two years, there are massive opportunities for the food industry to target older consumers.



In 1950, there were 205 million persons aged 60 or over in the world. By 2012, the number of older persons had increased to almost 810 million. It is projected to more than double by 2050, reaching 2 billion.

According to a recent report published by the United Nations Population Fund (UNFPA) and HelpAge International, the ageing of the world population is progressive and rapid. It is an unprecedented phenomenon that is affecting nearly all countries of the world. As long as fertility continues to fall or remains low and old age mortality keeps on declining, the proportion of older people will continue to increase.

“The numbers are staggering. In the

past ten years alone, the number of people aged 60 or over has risen by 178 million – equivalent to nearly the entire population of Pakistan, the sixth most populous country in the world. And in China alone, the estimated number of older people in 2012 is 180 million,” the report notes.

The number of people who turn 60 each year worldwide is nearly 58 million, equivalent to almost two persons every second. In 2012, people aged 60 or over represent almost 11.5 per cent of our total global population of 7 billion. By 2050, the proportion is projected to nearly double to 22 per cent. By 2050, for the first time there will be more older people than children under 15, the report titled ‘Ageing in the

Twenty-First Century: A Celebration and A Challenge’ states.

What is ageing?

When talking about ageing, it is essential to distinguish between population or demographic ageing as “the process whereby older individuals become a proportionately larger share of the total population” growing older. This individual process of ageing is multidimensional and involves physical, psychological and social changes.

The United Nations uses 60 years to refer to older people. This line, which



divides younger and older cohorts of a population, is also used by demographers. However, in many developed countries, the age of 65 is used as a reference point for older persons as this is often the age at which persons become eligible for old-age social security benefits. So, there is no exact definition of “old” as this concept has different meanings in different societies.

Defining “old” is further challenged by the changing average lifespan of human beings. Around 1900, average life expectancy was between 45 and 50 years in the developed countries of that time. Now, life expectancy in developed countries reaches 80 years.

There are other definitions of “old” that go beyond chronological age. Old age as a social construct is often associated with a change of social roles and activities, for example, becoming a grandparent or a pensioner.

Older persons often define old age as a stage at which functional, mental and physical capacity is declining and people are more prone to disease or disabilities.

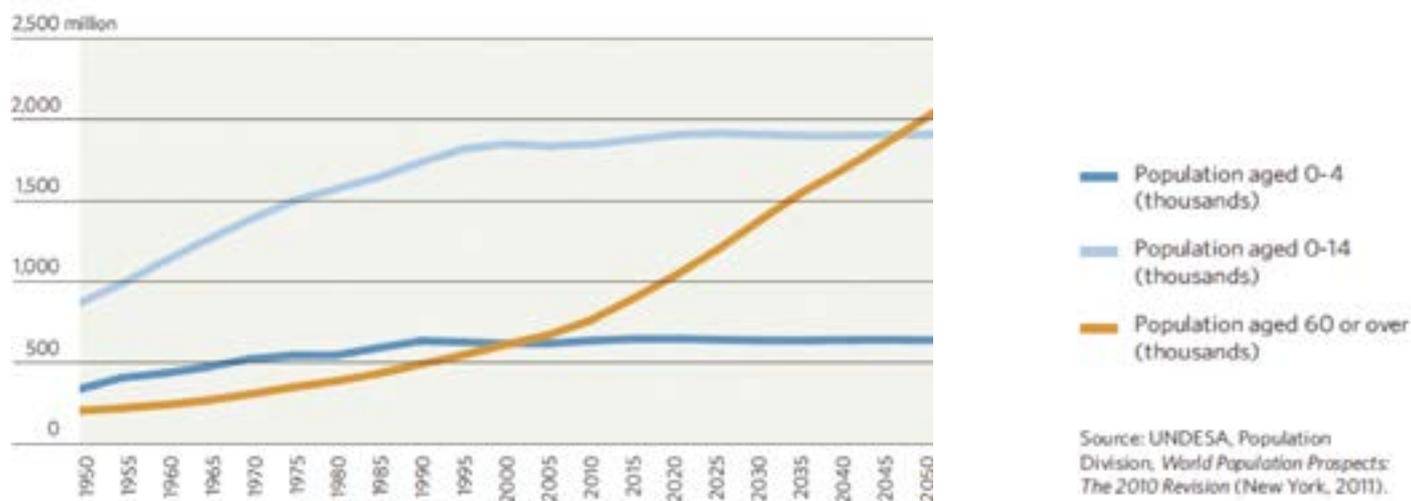
As the report notes, population ageing is occurring because of declining fertility rates, lower infant mortality and increasing survival at older ages. Total fertility dropped by half from five children per woman in 1950-1955 to 2.5 children in 2010-2015, and it is expected to continue to decline.

Life expectancy at birth has risen substantially across the world; it is not just a developed world phenomenon. In 2010-2015, life expectancy is 78 years in developed countries and 68 years in developing regions. By 2045-2050, newborns can expect to live to 83 years in developed regions and 74 years in developing regions. While overall the world is ageing, there are differences in the speed of population ageing. It is happening fastest in the developing world.

The report points out that today, almost two in three people aged 60 or over live in developing countries, and by 2050, nearly four in five will live in the developing world.

Challenges of population ageing

Population ageing has significant social and economic implications at the individual, family, and societal levels. It also has important consequences and opportunities for a country's development. Although the percentage of older persons is currently much higher in developed countries, the pace of population ageing is much more rapid in developing countries and their transition from a young to an old age structure will occur over a shorter period. Not only do developing countries have





less time to adjust to a growing population of older persons, they are at much lower levels of economic development and will experience greater challenges in meeting the needs of the increasing numbers of older people.

Financial security is one of the major concerns as people age. It is an issue for both older persons and a growing challenge for families and societies. Population ageing is raising concerns about the ability of countries to provide adequate social protection and social security for the growing numbers of older persons. In many countries, the expectation is that the family will take care of its economically dependent older members. While some families support their older relatives, others are not in a financial position to do so in a way that does not affect their own economic situation. Older persons who do not have family to support them are especially vulnerable.

Informal support systems for older persons are increasingly coming under

stress, as a consequence, among others, of lower fertility, out-migration of the young, and women working outside the home. There is an increasing consensus that countries must develop social protection systems that cover at least the basic needs of all older persons. Ensuring a secure income in old age is seen as a major challenge for governments facing fiscal problems and competing priorities.

Health is another major concern for older persons. The demographic transition to an ageing population, accompanied by an epidemiological transition from the predominance of infectious diseases to non-communicable diseases, is associated with an increasing demand for health care and long-term care. Their management has become an increasing concern for both developing and developed countries.

Maintaining good health and access to health care is a core concern of older people everywhere. In many developed countries quality of care and rising healthcare costs are major issues related





to population ageing.

As is evident, population ageing will present both challenges and opportunities.

An aging world population has placed increased demands on food and beverage manufacturers to take a closer look at their nutritional needs to help seniors manage chronic conditions affiliated with aging, such as heart disease, diabetes and cardiovascular disease.

As the average age of the global population rises, companies are looking for ways to more accurately satisfy the specific needs and wants of 'older consumers'. One of the key opportunity areas is to develop products that help to ameliorate escalating health concerns. But health is not the only focus, so too is packaging adaptation and segmented communications that appeal but don't patronize.

There will be more focus on health -- stirring manufacturers to pare down fat and sodium levels even more. Smaller package sizes (or portion sizes within larger packages) will also be in more demand,

as appetites get smaller and there are fewer mouths to feed in the house. Finally, individual, single-serve meals (with their accompanying more reasonable portion size) that are convenient and appear healthful will be more in demand among older consumers. Remember also that with smaller appetites the aging consumer will need to pack the same amount of nutrients into a small portion size so the need for nutrient dense food will play a role in product choice.

Another thing to note about an aging population is a decrease in taste buds. At age thirty you have 245 taste buds and by age eighty you have only 64 taste buds. Foods that will appeal to this age group will need to be flavor enhanced. The use of more exotic spices or the addition of herbs may enhance flavor without adding high fat or sodium levels.

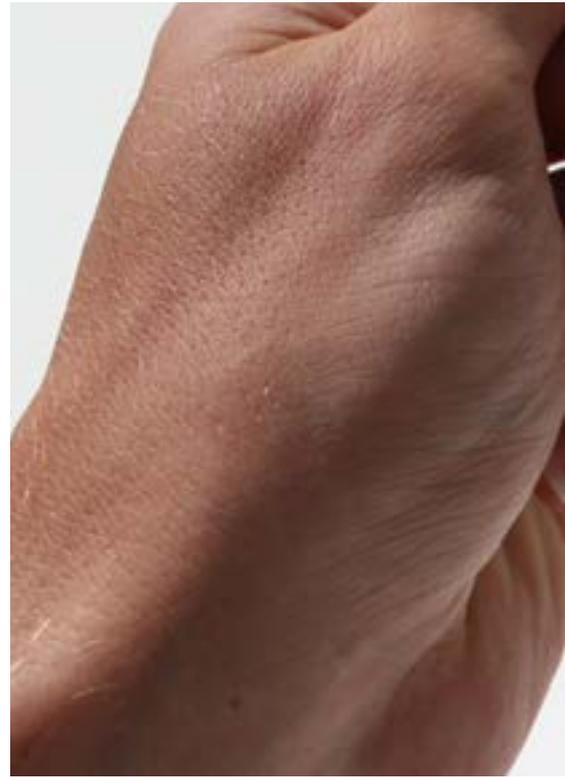
Even with healthy eating habits, physical activity and other healthy ways of living there are some things that are just factors that come with an aging population.

Increases in the incidences of arthritis, high blood pressure, high cholesterol levels and other medical conditions rise as you age. Since there is a movement towards being more responsible personally for health there will be increased interest in functional foods or herbal remedies that will address these problems.

Another factor to take into consideration is the increasing attention given to the number of the population that is considered obese. This may lead to further requirements by Health Canada or the Food and Drug Administration for nutritional information such as the need to label trans fatty acids in food that will be coming into effect in the United States.

Opportunities

The size of the senior market presents many opportunities for the agri-food sector in the development of food products with health benefits. To better understand and



prioritize these opportunities, additional market intelligence is needed on the attitudes and consumption patterns, shopping habits, and needs for products and services for the various segments of the senior population. Industry could look to senior's organizations as partners and sources of information.

For seniors with medical conditions and decreased mobility, specialized foods are required at the retail level as well as for institutions or agencies. Reduced appetites, a reduction in taste and smell acuity and problems with chewing and swallowing would indicate a need for appetizing products that appeal to the eye and have good mouth feel. Opportunities exist for innovation to enhance flavor, taste and texture to improve sensory properties of food along with the nutritional profile. These enhancements can be accomplished through new technologies, new processing methods, food additives and novel ingredients.

Few food products have been specifically marketed to seniors. While industry has been addressing the



nutritional needs of seniors through a variety of means that increase access to healthy food choices, there is a significant opportunity to expand on strategies such as altering nutrient levels in pre-packaged foods, developing nutrient-dense foods and ready-made meals, and applying innovative ingredients and technologies to enhance product format and packaging. Some opportunities are explored below.

Sodium Reduction

Reducing the sodium content of food is an important way that industry can help seniors address high blood pressure (a major risk factor for stroke, heart disease and kidney disease).

Trans Fat Reduction

Reformulating products and using new fat sources and ingredients that contain little or no trans fat is helping industry to successfully lower the trans fat content of the diet. Continuing these changes will meet the needs of the senior population who are managing, or are interested in preventing, cardiovascular disease.

Dietary Fiber

Increasing the fiber content of foods can help seniors improve their overall dietary fiber intake to manage blood cholesterol levels and laxation. In addition, fiber can be used to modify product texture to assist with swallowing. The industry can increase the fiber content of many categories of foods by using recognized sources of fiber and new novel fibers.

Nutrient-Dense Foods

Foods that provide higher levels of protein, vitamins, mineral nutrients and sometimes calories in smaller volumes can help seniors meet increased nutrient requirements. The challenge for industry is to develop appetizing, nutrient-dense foods through value-added ingredients, novel ingredients, new technologies, reformulation, fortification and supplementation to meet the unique needs of the various segments of the senior population.

Ready-Made Meals

Most seniors live independently, and in general prefer homemade meals. For older consumers, ready meals are more likely to be perceived as lacking and a compromise in comparison with more traditional meal preparation. However, pre-packaged meals and meal services represent conveniences that could help many meet their nutritional needs.

Pre-packaged meals provide convenience by offering a complete meal that requires easy one-step cooking in the oven or microwave. The food industry may be able to expand this market to help meet seniors' nutritional needs through development of products that appeal in quality, taste and freshness and that meet specific nutritional requirements.

Meal services represent another convenience that could be important to seniors. To reach a broad customer base, marketing would need to counter the perception that this type of service is for the "old and sick". Ingredients that are fresh, portion controlled and partially prepared represent an opportunity that may appeal to the healthy, active senior.





are based on scientific substantiation is vital to increasing consumers' trust in the credibility of health claims, thus widening the market to those who have not previously considered purchasing foods for added health benefits. As an additional consideration, simple messages may be better for seniors with declining eyesight.

Nutrient content claims and quantitative declaration of bioactive substances can be used to highlight specific product features. Factual statements identifying the quantity of nutrient in a product are straightforward to use as long as conditions for their use are met.

Nutrient function claims can also be used to highlight product features sought by seniors. CFIA maintains a list of accepted claims that describe the well-established roles of energy or known nutrients that are essential for the maintenance of good health or for normal growth and development.

Manufacturers can make use of health claims approved by regulators for use on food labels of products that meet the conditions of use.

Conclusion

The ageing population has been identified as one of the most important challenges facing the world as the twenty-first century progresses. This carries numerous implications for the global food industry, as this increasingly affluent demographic group is more inclined to seek out products that promote health and longevity, and/or address emerging health concerns.

These trends carry numerous implications for the global food industry as this increasingly affluent demographic group becomes more inclined to seek out products that promote health and longevity, as well as helping them to maintain a healthy and active lifestyle past middle age. This trend has already been observed in sectors such as milk, yoghurt drinks, bottled water and ready meals, and seems set to shape other activities to an ever-increasing extent over the coming years.

The opportunity also exists to market meal replacements and foods with modified textures not only to institutions but also for distribution at retail and home delivery markets. These types of products can be promoted to professional and family caregivers.

Food Packaging and Labeling

Developing appropriate product format and packaging addresses the special needs of the mature consumer by making food accessible and therefore potentially improving seniors' nutrient intake and ultimately their health status.

Industry can expand current efforts in adapting product packaging to accommodate reduced strength and dexterity. Some trends in packaging that may appeal to the senior population include easy open and reclose, single and double portions, microwave reheating including steam-assisted, stand-up flexible pouches and cook-in barrier bags, flip-top

caps in which the product and cap stay together (as opposed to twist tops), and square packages (instead of round) that do not roll.

Use of increased font size and colors with good contrast are especially important for label information. Including instructions on how to open packaging, adjusting package size to contents and including a toll-free number for consumer information are some of the many ways for industry to continue improving upon food and beverage packaging.

Communicating the Health Benefits of Foods

Marketing the health benefits of foods to seniors in clear and meaningful ways will improve consumer knowledge and acceptance of new foods with health benefits. Product labels are the most used source of nutrition information but are in the middle in terms of credibility. Communicating health benefits that

LABOR COST SURVEY RESULTS

The Ministry of Employment & Labor collected data on overall labor costs incurred by enterprises as a result of employing workers to use them as basic data to establish labor policies.

The survey covered 3,329 incorporated enterprises with 10 regular employees or more excluding those in agriculture, forestry and fishing, state or local administrative agencies, armed forces and police, national and public educational institutions and health care and social work.

– Reference year: 2012 – Survey period: May 13 ~ Jun. 12, 2013

Total Labor Cost

The average monthly labor cost per employee in enterprises with 10 regular employees or more was 4.487 million won in 2012, an increase of 159,000 won or 3.7% from 4.329 million won in 2011. Direct labor costs rose 4.3%, a slight fall compared to 2011, and indirect labor costs rose only 1.5% due to the base effect caused by the large increase in indirect labor costs in 2011.

As a percentage of total labor costs, direct and indirect labor costs were 77.5% and 22.5%, respectively, compared with 77.0% and 23.0% in 2011. This shows that the share of direct labor costs increased somewhat.

	(Unit: 1,000 won, %)									
	2008		2009		2010		2011		2012	
Total labor costs	3,846	-	3,866	[0.5]	4,022	[4.0]	4,329	[7.6]	4,487	[3.7]
	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)	
Direct labor costs	3,003	-	3,014	[0.4]	3,166	[5.0]	3,332	[5.2]	3,476	[4.3]
	(78.1)		(78.0)		(78.7)		(77.0)		(77.5)	
Indirect labor costs	843	-	852	[1.1]	856	[0.5]	997	[16.4]	1,011	[1.5]
	(21.9)		(22.0)		(21.3)		(23.0)		(22.5)	
Retirement payments	360	-	371	[2.9]	383	[3.4]	480	[25.3]	471	[-2.0]
	(9.4)		(9.6)		(9.5)		(11.1)		(10.5)	
Legally required benefits	256	-	259	[1.4]	267	[2.9]	280	[5.0]	297	[6.0]
	(6.6)		(6.7)		(6.6)		(6.5)		(6.6)	
Non-legally required benefits	185	-	185	[0.2]	169	[-8.5]	196	[15.5]	202	[3.2]
	(4.8)		(4.8)		(4.2)		(4.5)		(4.5)	
Education & training cost	29	-	25	[-14.1]	25	[-1.6]	27	[11.0]	28	[1.8]
	(0.8)		(0.6)		(0.6)		(0.6)		(0.6)	

By Industry

Labor costs remained high in electricity, gas, steam and water supply (7.606 million won) and financial and insurance activities (7.565 million won). In contrast, labor costs were relatively low in business facilities management and business support services (2.115 million won) and accommodation and food service activities (2.797 million won).

Membership organizations, repair and other personal services saw the biggest year-on-year increase in labor costs with a rise of 10.3% while electricity, gas, steam and water supply saw the biggest year-on-year decrease with a fall of 3.4%.

Manufacturing which employs a large percentage of Korea's workforce had the third highest labor costs with 5.121 million won. The growth rate of labor costs in this sector continued to stay above the average.

(Unit: 1,000 won, %)

	2009		2010		2011		2012	
All industries	3,866	(0.5)	4,022	(4.0)	4,329	(7.6)	4,487	(3.7)
B. Mining	3,442	(-1.6)	3,646	(5.9)	4,299	(17.9)	4,579	(6.5)
C. Manufacturing	4,289	(1.8)	4,464	(4.1)	4,891	(9.5)	5,121	(4.7)
D. Electricity, gas	6,739	(-0.5)	7,107	(5.5)	7,870	(10.7)	7,606	(-3.4)
E. Sewage-waste management	2,887	(-0.5)	3,018	(4.5)	3,212	(6.4)	3,396	(5.8)
F. Construction	3,710	(-2.6)	3,963	(6.8)	4,251	(7.3)	4,401	(3.5)
G. Wholesale & retail trade	3,624	(-0.3)	3,803	(4.9)	3,963	(4.2)	4,235	(6.9)
H. Transportation	2,723	(0.8)	2,952	(8.4)	3,220	(9.1)	3,399	(5.6)
I. Accommodation & food service activities	2,623	(1.0)	2,738	(4.4)	2,848	(4.0)	2,797	(-1.8)
J. Publishing, motion picture	3,905	(1.2)	4,267	(9.3)	4,521	(6.0)	4,828	(6.8)
K. Financial activities	6,797	(-0.1)	7,139	(5.0)	7,280	(2.0)	7,565	(3.9)
L. Real estate	2,918	(1.0)	3,015	(3.3)	2,971	(-1.5)	2,967	(-0.2)
M. Professional, scientific activities	4,027	(-1.8)	4,081	(1.3)	4,160	(1.9)	4,375	(5.2)
N. Business facilities management	1,900	(2.2)	2,018	(6.2)	1,958	(-3.0)	2,115	(8.0)
R. Arts, sports	3,671	(-0.5)	3,701	(0.8)	3,845	(3.9)	4,231	(10.1)
S. Membership organizations	2,530	(-0.6)	2,712	(7.2)	3,196	(17.9)	3,525	(10.3)

By Enterprise Size

By enterprise size, labor costs were up as much as 5.6% in enterprises with fewer than 300 employees, but a mere 1.4% in enterprises with 300 employees or more. This suggests that labor costs in SMEs grew more steeply. Labor costs in enterprises with 1,000 employees or more (6.262 million won) were nearly twice as high as those in enterprises with 10~29 employees (3.2 million won).

(Unit: 1,000 won, %)

	2008	2009		2010		2011		2012	
Enterprises of all sizes	3,846	3,866	(0.5)	4,022	(4.0)	4,329	(7.6)	4,487	(3.7)
Fewer than 300 employees	2,960	2,960	(0.0)	3,122	(5.4)	3,381	(8.3)	3,570	(5.6)
10~29 employees	2,771	2,779	(0.3)	2,860	(2.9)	3,090	(8.0)	3,200	(3.5)
30~99 employees	2,920	2,915	(-0.2)	3,133	(7.5)	3,402	(8.6)	3,610	(6.1)
100~299 employees	3,187	3,174	(-0.4)	3,343	(5.3)	3,636	(8.8)	3,880	(6.7)
300 employees or more	4,935	4,940	(0.1)	5,169	(4.6)	5,563	(7.6)	5,640	(1.4)
300~499 employees	3,568	3,624	(1.6)	3,880	(7.1)	4,264	(9.9)	4,305	(0.9)
500~999 employees	4,069	4,112	(1.1)	4,265	(3.7)	4,318	(1.3)	4,269	(-1.2)
1,000 employees or more	5,390	5,365	(-0.5)	5,713	(6.5)	6,177	(8.1)	6,262	(1.4)

By ItemDirect labor cost

In 2012, direct labor costs averaged 3.476 million won per employee per month, up 144,000 won or 4.3% from 3.332 million won in 2011. Among direct labor costs, regular and overtime payments were 2.737 million won, up 4.8% from 2.611 million won in 2011, and bonuses and incentives were 739,000 won, up 2.6% from 720,000 won in 2011.

employee relaxation, recreation, etc., with 13,000 won (6.6%).

(Unit: 1,000 won, %)

	2008	2009	2010	2011	2012
Direct labor costs	3,003	3,014 (0.4)	3,166 (5.0)	3,332 (5.2)	3,476 (4.3)
Regular and overtime payments	2,332	2,341 (0.4)	2,461 (5.1)	2,611 (6.1)	2,737 (4.8)
Bonuses and other special payments	671	673 (0.3)	704 (4.7)	720 (2.3)	739 (2.6)

Indirect labor cost

In 2012, indirect labor costs averaged 1.011 million won per employee per month, up 15,000 or 1.5% from 997,000 in 2011. In 2011, the growth rate of indirect labor costs was high at 16.4% as a growing number of companies switched to a retirement pension plan after the benefits of the retirement pay system ceased to exist. However, the figure sharply fell in 2012 due to the consequent base effect.

support for school expenses with 24,000 won (12.1%), housing costs with 15,000 won (7.2%), and costs for employee relaxation, recreation, etc., with 13,000 won (6.6%).

(Unit: 1,000 won, %)

	2008	2009	2010	2011	2012
Indirect labor costs	843	852 (1.1)	856 (0.5)	997 (16.4)	1,011 (1.5)
Retirement payments	360	371 (2.9)	383 (3.4)	480 (25.3)	471 (-2.0)
Legally required benefits	256	259 (1.4)	267 (2.9)	280 (5.0)	297 (6.0)
Non-legally required benefits	185	185 (0.2)	169 (-8.5)	196 (15.5)	202 (3.2)
Education & training cost	29	25 (-14.1)	25 (-1.6)	27 (11.0)	28 (1.8)
Others	13	12 (-5.4)	12 (0.0)	14 (11.5)	15 (6.6)

Note: Others are payments in kind, recruitment cost and other labor costs

Retirement payments

Retirement payments were 471,000 won in 2012, a 2% decrease compared with 480,000 won in 2011. In 2011, the growth rate of retirement payments was high at 25.3%. However, it slightly dropped in 2012 due to the consequent base effect.

Employers contributed 20.8 trillion won to retirement pension plans in 2011, but the amount of contributions shrank by 3.4 trillion won to 17.4 trillion won in 2012.

Legally required benefits were 297,000 won per employee, up 6.0% from 280,000 won in 2011. The lion's share of such costs was taken by national pension contributions with 106,000 won (35.8%), followed by health insurance contributions with 105,000 won (35.3%), industrial accident compensation insurance contributions with 44,000 won (14.9%) and employment insurance contributions with 38,000 won (12.8%).

(Unit: 1,000 won, %)

	2009		2010		2011		2012	
Legally required benefits	259.1	(1.4)	266.7	(2.9)	280.1	(5.0)	296.8	(6.0)
Health insurance contributions	79.7	(3.0)	82.6	(3.6)	95.9	(16.1)	104.8	(9.3)
Industrial accident compensation insurance contributions	45.0	(0.0)	46.5	(3.3)	43.9	(-5.6)	44.3	(0.9)
National pension contributions	99.2	(0.8)	101.3	(2.1)	102.6	(1.3)	106.4	(3.7)
Employment insurance contributions	32.7	(2.8)	33.4	(2.1)	34.6	(3.6)	38.0	(9.8)
Others	2.5	(-10.7)	2.9	(16.0)	3.2	(10.3)	3.3	(3.1)

Note: Others are contributory charges relating to employment of disabled persons

Non-legally required benefits (non-obligatory spending)

Non-legally required benefits were 202,000 won in 2012, a 3.2% increase compared with 196,000 won in 2011. In 2010, costs for non-legally required benefits plummeted by 8.5% in the aftermath of the financial crisis of 2009. However, they began to recover their pre-crisis level in 2011. The largest share of such costs was taken by canteens & other food services with 82,000 won (40.5%), followed by

(Unit: 1,000 won, %)

	2011		2012		% change on year ago
Non-legally required benefits	195.5	(100.0)	201.8	(100.0)	3.2
housing costs	15.9	(8.1)	14.6	(7.2)	-8.2
health & medical care costs	12.4	(6.3)	12.0	(5.9)	-3.2
canteens & other food services	77.5	(39.6)	81.7	(40.5)	5.4
support for private insurance	10.0	(5.1)	10.7	(5.3)	7.0
support for school expenses	23.7	(12.1)	24.4	(12.1)	3.0
employee relaxation, recreation, etc.	12.5	(6.4)	13.4	(6.6)	7.2
others	43.6	(22.3)	32.0	(15.9)	-26.6

Note:

1. The figures in () are expressed as a percentage of non-legally required benefits.
2. Others include contributions to the employee welfare fund, support for the employee stock ownership plan, culture, sports and recreation expenses, congratulation and condolence allowances, and support for child-care expenses.

Analysis and implications

Labor costs in enterprises rose 3.7% in 2012, a much lower growth compared with 7.6% in 2011. The low growth is due to the base effect caused by the high increase in labor costs in the previous year.

By item, direct and indirect labor costs increased by 4.3% and 1.5%, respectively. Of the two, indirect labor costs grew more slowly (16.4% in 2011 → 1.5% in 2012). In particular, among indirect labor costs, retirement payments grew very sharply (25.3%) in 2011, but they fell 2.0% in 2012, playing a leading role in slowing down the overall growth.

Large companies with 1,000 employees or more had 1.79 times higher direct costs and 2.67 times higher indirect costs than SMEs with 10~29 employees. This implies that the gap in welfare costs between small and big firms was larger than that in wages. The gap in both direct and indirect costs between large companies and SMEs shrank slightly in 2012 compared to 2011, showing that polarization eased off somewhat.

 Source: Ministry of Employment & Labor (www.moel.go.kr)

INSTANTLABS

InstantLabs, a molecular diagnostic device company, developed and markets the Hunter Real-Time-PCR system, a fully integrated, portable and affordable real-time polymerase chain reaction (RT-PCR) platform for rapid, accurate pathogen detection.

Mr. Steven Guterman,
Chief Executive Officer of InstantLabs



InstantLabs, founded in 2008 and located in Baltimore, Maryland currently offers the Hunter Real-Time PCR system to food processors and manufacturer that want to quickly validate that the products they sell are free from dangerous food pathogens. The Hunter system is especially well suited for use at points-of-care and points-of-need to detect and analyze a wide variety of common and problematic pathogen.

By designing the Hunter for the point-of-need, food companies can test for themselves instead of wasting time by sending samples to external laboratories. This approach saves significant time and money, and enables products to get to market sooner and safer.

InstantLabs has a broad portfolio of pathogen detection test kits, including Salmonella, Listeria, and E coli. In addition, InstantLabs has food identification assays for porcine and equine DNA (pork and horse meat). These assays are used in the confirmation of halal food (porcine DNA) and in food fraud or adulteration cases (horse). The system is available worldwide.

It also works with industrial customers to develop specialized test kits for their specific needs. The Hunter combines ease-of-use, high mobility, and affordable pricing to bring the benefits of PCR to many setting.

InstantLabs' growing worldwide customer base includes some of the leading food industry firms. The company is also

developing products for additional markets, including medical diagnostics and veterinary health where gold-standard accuracy, combined with ease-of-use and rapid results, are critical.

In an interview to FOODPOLIS magazine, Mr. Steven Guterman, Chief Executive Officer of InstantLabs talks about company and its competitive advantages.

Mr. Guterman was named Chief Executive Officer of InstantLabs in February 2012. Prior to that time he served as the company's Chief Financial Officer. From 2001 to 2009, Mr. Guterman was the Senior Managing Director responsible for AIG Investments' Global Business Development team.

At AIG he quickly grew client assets to over \$100 billion and transformed the organization into a global provider of investment management services. He arrived at AIG through the acquisition of American General Investment Management (AGIM), where he was Executive Vice President in charge of Institutional Asset Management. From 1990-1998, he was Managing Director and Head of U.S. Fixed Income Portfolio Management at Salomon Brothers Asset Management.

Mr. Guterman joined Salomon in 1983 as a research analyst where he pioneered the development of many of the firm's proprietary quantitative models.



He began his financial career in 1980 with Chase Manhattan Bank, where he built sophisticated analytic systems to analyze the bank's income sensitivity and balance sheet.

He started his professional career as a Principal Investigator at Brookhaven National Laboratory, analyzing the potential for energy conservation through the use of innovative technologies.

Mr. Guterman earned a BS in Applied Mathematics from the State University of New York at Stony Brook and an MBA in Quantitative Analysis from Long Island University.

What are the key objectives of your company this year, in terms of expanding operations? Are there any products that you would like to talk about?

Now that we have AOAC certification for our Salmonella, Listeria Species and L. mono Food Safety Test Kits, our primary goal is to expand our sales in the U.S. and overseas markets. The need for increasing food testing is clear; every week a new food-related outbreak is occurring someplace in the world.

Government regulations usually mandate a minimum level of testing but many companies go beyond that in order to protect their brand. Nothing will hurt a food

company faster than having a customer getting ill from tainted food. Our food safety pathogen-detection test kits are our core business, however, the food identification / purity market is also growing. The recent cases of food fraud and adulteration (horse meat included in beef products) are the forces behind this demand. In addition we sell a porcine DNA test to confirm the presence/absence of porcine DNA for halal certification.

What are the competitive advantages that InstantLab offers? What are your views on food safety issues?

InstantLabs Hunter real-time PCR instrument was designed from the beginning for the point-of-need. It is small, portable, affordable and most importantly easy-to-use. This brings the accuracy of gold-standard PCR testing directly to the food producer, saving time and money. Thankfully, most of the food we eat is very safe. Food testing is needed to catch those few incidents where a dangerous bacterium has crept into the supply chain. Many companies view food safety testing as "insurance" going well beyond government regulated testing in order to protect their brand.

Globally there is an increasing awareness about the need for food safety. Platitudes three years ago are now realities, as governments around the world are

starting to require food testing for imports. In addition, fines are increasing in many locations. However, it is still a patchwork with many different regulations and common practices. The clear trend is towards more testing, as people everywhere want to know their food is safe from pathogen and what ingredients are included in the final product.

What are your plans for operation in Korea?

Korea has very strict food safety rules and encourages a culture of high standards of food safety. Since InstantLabs bring a new paradigm to the market, DNA testing at the point-of-need, we are exploring how we can fit in with the local established Korean practices.

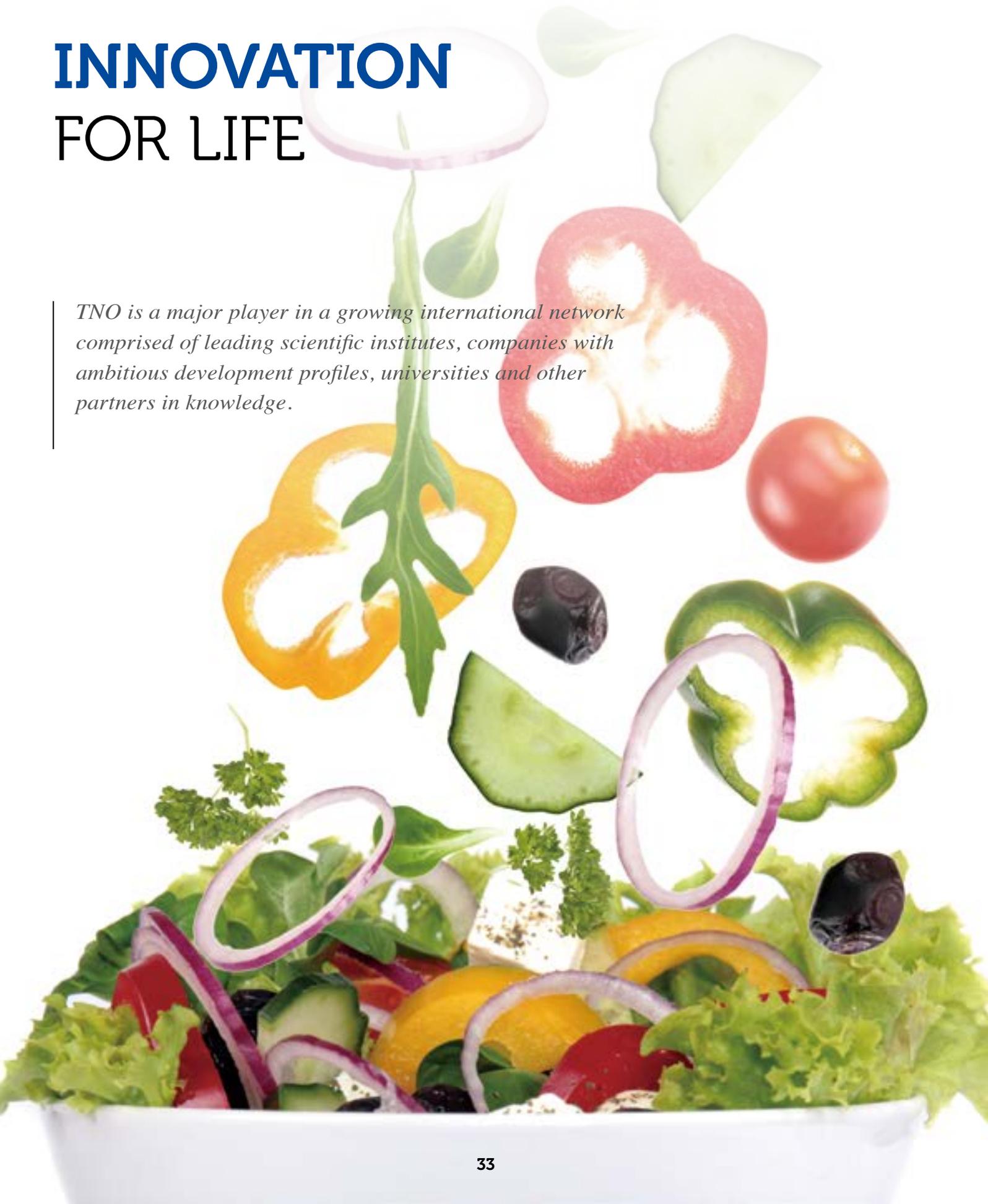
Do you have any thoughts on FOODPOLIS, the Korean government initiative to develop the food industry in Northeast Asia?

We applaud the Korean Government's initiative in creating FOODPOLIS. We believe the technology; knowledge sharing and awareness that is coming out of FOODPOLIS will help grow Korea as a food center for Asia.

i Website: <http://www.instantlabs.com>

INNOVATION FOR LIFE

TNO is a major player in a growing international network comprised of leading scientific institutes, companies with ambitious development profiles, universities and other partners in knowledge.





Globalization, climate, energy, security and ageing demand new policies to provide the solutions to these societal problems and create opportunities for companies to innovate.

What can the Netherlands and Europe do to create the conditions for this to happen? And what can the market do to ensure that the economic basis for this is sufficient and that the quality of life is good?

With a hundred or so knowledge experts in strategic studies TNO is working on orchestrating innovations to be effective.

TNO experts in strategy and policy studies advise on and support strategic decision-making in a range of societal innovation issues both at home and abroad. The studies normally cater to governments, international institutions and industry. Our partners are political decision-makers in the Netherlands and Europe and it cooperate with the universities of Amsterdam, Utrecht and Rotterdam on economic, innovation and policy issues.

TNO focuses its research on seven societal themes: healthy living; industrial innovation; built environment; energy; transport and mobility; defense, safety and security; and the information society. TNO's strategic research is geared to evaluating new developments around these seven themes and how they interact.

In other words, TNO connects people and knowledge to create innovations that boost the sustainable competitive strength of industry and well being of society.

Food and Nutrition

The food industry is facing enormous challenges. Today's large-scale food production has a considerable impact on the environment, and the demand for food continues to rise with the growth in prosperity and the world population. The world population is increasing, and so is the number of overweight people and people suffering from diabetes and food allergies. As globalization progresses, the risk of manageable food incidents is increasing.

TNO is responding to these developments with a multidisciplinary research program, which involves working on methods and insights to help the agri-food sector innovate safely and to support the public sector in policymaking. Thanks to our extensive knowledge and expertise, we are strong in the area of translating fundamental scientific insights into customized applications.

Translation into customized applications takes the form of research projects, many of which are commissioned by international companies. In addition, we often work with a group of companies in a consortium. In this context, we formulate

agreements as to how the parties involved will use the results.

TNO regularly brings together relevant parties in consortia. This extensive network means that we are a highly sought-after research partner in various public-private partnerships (PPPs) and open innovation networks in the Netherlands and the European Union.

Healthy food

TNO is working on methods that facilitate the fast and accurate measurement of the health effects of food. Its researchers are developing models for analyzing various aspects of the human digestive system and for giving companies information on the health effects of ingredients.

Manufacturers make large investments in the development of food products that could help prevent important metabolic diseases. Product health claims are a marketing tool intended to inform the consumer about the beneficial effects of particular products. These claims should be scientifically substantiated but often, in practice, this is not the case. The majority of health claims, currently made, do not meet the strict criteria defined by the European Food Safety Authority (EFSA). This has resulted in manufacturers playing a waiting game in the development of products with health claims and thus a deceleration in innovation.



Health-claim substantiation is a challenging task. Studies on the health effects of food products are often carried out among healthy volunteers over a relatively short time frame. Often the effects are too small to establish a causal relationship in the longer term. However, many diseases develop gradually over time. For example, it may take years before obesity leads to complications.

TNO uses its broad knowledge and expertise to enable rapid, expert assessment of the health effects of food products. From its extensive knowledge of systems biology, genomics and metabolomics the institute develops new definitions of the concept of health by focusing on the relationship between nutrition, obesity (and its complications), and intestinal health. TNO collaborates with respected partners including Wageningen University & Research Centre, TI Food and Nutrition, and Food and Nutrition Delta (FND).

The ambition is to establish groundbreaking methodologies that will be adopted nationally and internationally in the substantiation and assessment of health claims. New scientific insights will enable TNO to increase support for individual manufacturers, food safety organizations and governments in either product development and/or in assembling the scientific reference data required for health-claim substantiation.

The Biomarkers program consists of two lines of research: Health assessment is developing innovative methods to measure the potential of people, who currently feel healthy, to become ill. These measurements are based on the body's responses, such as stress or an infection. This research line also focuses on the development of biomarkers that accurately predict when obesity will lead to complications, such as diabetes or cardiovascular disease. The investigation into the role in satiation (the process of becoming feeling full) of receptors and signal molecules in the gastrointestinal tract will increase the understanding of weight management.

Intestinal health focuses on the effect of metabolites from intestinal

bacteria on weight management and appetite. This research line also examines the relationship between nutrition, the immune system and intestinal barrier function. TNO's in vitro gastrointestinal model TIM provides significant advantages to this research.

Food Safety

TNO develops methods that enable manufacturers and the public sector to quickly assess the toxicological safety of complex products. Points of focus are: efficient testing for allergenicity in foods and timely intervention for potential food incidents..

Industry and governments are finding it increasingly difficult to efficiently assess the risks and safety of foods and food production. Product constituents are growing in number and variety and often are present in very low concentrations. For many substances the toxicological hazards and the allergy-causing potential are unknown: these include certain natural extracts, novel proteins and GMOs. Often there is a significant delay before the negative effects of particular components manifest, and it is almost impossible to link specific health problems to the presence of individual substances. In the case of emerging food risks, proper risk evaluation is difficult due to lack of data. This limits the ability to make swift, well-considered yet crucial decisions, such as recalling a product.

TNO is a world leader in (food) safety assessment and risk management. The organization's methods allow manufacturers and governments to obtain rapid insights into the toxicological safety of complex products. In addition, TNO develops efficient assessment methods of allergenicity of proteins and peptides, as well as tools for early detection of public health hazards and emerging food and food production risks. TNO closely collaborates with recognized organizations, including Utrecht University, the University Medical Centre Utrecht, ILSI Europe, the US Food Allergy Research & Resources Program (FARRP) and the Allergen Bureau in Australia. TNO aims to create a set of internationally

acknowledged assessment methods that support product and policy development, and increase accuracy while reducing emergency response time in emerging food incidents.

TNO invests in three research approaches. One is focused on the toxicological safety assessment of complex food matrices. Methods are developed that measure concentrations of unknown compounds and that enable exclusion of toxicity. These methods are integrated into a safety assessment strategy. In its food allergy research TNO develops biological and physical/chemical tools to predict, understand and prevent allergenicity of proteins and peptides. These are translated into a risk assessment strategy. Emerging Risk Identification Support (ERIS) is a unique service that helps stakeholders in the food and feed chain to identify and evaluate present and emerging food safety risks. It helps to anticipate food and feed safety crises and issues, and enables stakeholders to develop appropriate risk management strategies at an early stage. TNO also works on technologies for detection and characterization of microbial and chemical hazards during food production.

Innovative food concepts

TNO has a comprehensive approach that allows manufacturers to bring healthy and sustainable innovations to the market more quickly. This program focuses on issues such as recipe improvement (reducing sugar and salt content, clean labeling), production processes (new separation and drying processes and 3D printing technology) and product quality (flavor, texture, storage life). Product development and reformulation can be very challenging. Changes in a product formula or recipe - for example to reduce salt, sugar or fat, and the use of alternative protein sources such as algae - should not lead to deterioration in flavor, texture, shelf-life or the safety of the product. Moreover, product quality should go hand in hand with efficient and clean production processes.

TNO's comprehensive approach

empowers ingredient suppliers and food manufacturers to efficiently solve issues of product development and reformulation. Enabling clients to significantly shorten time-to-market for new and improved products, TNO's method dynamically acquires and seamlessly integrates knowledge of ingredients, production processes and product quality. New insights into ingredient interactions provide leads for the optimization of production processes and improvements in product quality. Understanding product quality and production processes gives insight into ingredient functionality and how to it can be improved.

TNO makes an important contribution to targets set by the government and industry for reformulating existing food products into healthier equivalents. The organization is partner in several open innovation networks in the Netherlands. The ambition is to make sure that improved products are launched quickly and successfully on the market.

The research program follows three interdependent paths. Quality focuses on solving quality issues that arise from (re) formulation and the use of novel ingredients, by developing methods that couple product quality with consumer choice. TNO also investigates new ways of adding structure to ingredients, for example by using vegetable proteins to imitate the texture of meat. Ingredients is about understanding and improving ingredient characteristics by developing production and modification technologies that make ingredients 'greener', 'cleaner' and healthier. Processing focuses on creating separation, drying and production processes that are energy efficient, reduce waste streams and improve product and ingredient quality. In addition, TNO develops methods - such as print technology - for the production of tailor-made foods.

 Website: <http://www.tno.nl>

TNO FOOD RESEARCH MOU



Europe's leading food research institute, TNO Food Research, chose Korea National Food Cluster as its R&D base in Asia, following the NIZO Food Research from the Netherlands.



TNO Food Research signed a memorandum of understanding for investments individually with the Ministry of Agriculture, Food and Rural Affairs on Nov. 26th.

TNO Food Research was established in 1930 and owns a history of more than 80 years. Projects covering a wide range of areas including healthcare, food and energy are currently underway for TNO. More recently, TNO is pursuing a joint R&D project with the Seoul National University and Nong-Shim (Tae-Kyung) to source diabetes preventive food base materials using genome technology.

In the past, the TNO Food Research has conducted joint research projects with international food companies including Coca Cola, Unilever and Danone, which involved commercialization of the products developed. Moreover, the TNO is currently running various projects involving food quality, components and processing, targeting Food Valley's tenant companies. TNO Food Research's food-related research areas include; development of new food



product and its processing technology, safety evaluation on food ingredients, support on registration of the functional food, and the development of food packaging technology.

TNO research institute is planning to secure bridgehead into Asia by establishing its headquarter or research centers within the Korea National Food Cluster located in North Jeolla Province, City of Iksan by 2015. Securing such a global food research institute among its tenants has great meaning since it showed the possibility that food cluster can be the main set for Asia food industries' R&D, and showed great significance for FOODPOLIS as it showed its potential as a R&D hub in the Asian

Food Market. In addition, it is expected to encourage further investment from global food companies.

Mr. Im Jung-bin, Director General, Food Industry Policy Bureau, MAFRA remarked: "The TNO Research Institute possesses outstanding expertise in the field of food processing, safety and functionality assessment. Joining hands with the FOODPOLIS which owns various support facilities to accommodate product safety, functionality and packaging support, will create much synergy for both parties. He continued, "We will continue to do our best in attracting more global food companies and research institutes as our tenants

and we believe this will be out first step ahead towards becoming a core hub for the Northeast Asian food market."

A total of \$ 521 million has been invested into the national Food Cluster project which aims to prepare a R&D and export-oriented Korea National Food cluster (2.32million $\text{\textcircled{K}}$) that comprises of food-related companies, research institutes and others. Support facilities: Food quality safety center, food functionality evaluation center, food packaging center, incubation centers, lease plants, and the Korea National Food Cluster support center.



HARIM CORPORATION

As one of the most renowned food companies to represent Korea, Harim has expanded agriculture and made food a high value-added industry. It has led Korea's Vertical Broiler Integrator business and laid the foundation to compete in global markets.





Harim is a Korea-based company engaged in the processing of chicken products. With its humble beginning as 'Hwangdeung Farm in 1978, Harim opened the door to new possibilities in the food industry by not taking the same road taken by others. With foremost priority in quality and productivity, the company paves a new way in agri-business that crates added value by expanding the concept of competitiveness in production to processing and distribution.

The Company mainly provides fresh chicken and processing products. Its fresh chicken products include whole chicken, chicken parts and range chicken. Its processing products include fried products, barbecue products, hams, sausage products, smoked products, samgyetang (chicken broth with ginseng), canned products and others.

The Company provides its products under the brand names of Natural Record,

Harim IFF, YONGGARY CHICKEN and Slim & Light, among others. In addition, it is involved in the production of animal feeds and breeding of chicken.

Always looking further and reaching higher, Harim's quest for challenge is unyielding. Its fully vertical integrated system is benchmarked by other international companies and strength widely recognized in the global market. It follows the Samjantoghap integrated production at farms, processing at plant and distribution in the market.

The main operations of the company range from breeding to distribution as well as processing. Below are more details about these business segments.

Breeding business

As Harim applies bio-security to all farms, hatcheries and chicken feed mill plants to exercise the most genetic potential of choosing superior varieties of the worlds best quality; it improves environmental

specifications to reach standard capacities of health management and provides a verified high specifications management program to ensure the highest productivity.

The Grand Parent Stock farm is located in a clean natural environment, where stock (hens and roosters) are raised under careful and through management. The fostering farm and two egg-laying farms are located in in Jeollabuk-do.

The company raises approximately 1.5 million parent stocks at its Parent Stock farm. Hatchery eggs are produced under protective systems completely segregated from the outside world and stringent specifications management are utilized, including advanced automatic control management systems such as weight management, vaccination, lightning management, cutting edge equipment and so on.

The breeding capacity is 1.5 million chickens while the production capacity of





hatchery eggs is 150 million per year.

Eggs laid by parent stocks are transported to the five hatchery facilities where 1.2 trillion chicks are produced; all equipped with the latest sanitation systems. After these produced chicks are thoroughly screened by automatic systems, they are supplied to the contracted broiler farms.

The company also has a chicken feed mill plant that has been producing 25,000 tons of pallet mixture feed mill per month. It applies the results of constant R&D efforts at the research farm.

Fresh Meat Sector

The size of the processing plant is singlehandedly the largest in Korea. The production line is operated thoroughly adhering to the strict HACCP standards. The fresh meat line involves daily handling of 350,000 chickens at the sanitary processing plant to produce fresh whole meat, deboning meat and cut parts. Using

an automated air spray chilling system in the process, the company completely eliminates any possible contamination in the slaughtering process.

Processing Sector

The processing line that processes the chicken can be divided into frozen processing line, refrigerated processing line and room temperature processing line.

The frozen processing line produces fried products, molded and chicken cutlet products etc. The refrigerated processing line produces sausages, slices, and grilled marinated chicken. The room temperature processing line produces canned chicken breast, samgyetang (chicken broth with ginseng) etc.

Productivity is maximized through sterilized packing rooms that adopt the same standards as NASA.

Distribution

Consumers can get access to the diverse

range of products through the companies advanced distribution system. They can be purchased through television home shopping channels, specialized shops, department stores, discount chains, restaurants as well as online, captivating the taste buds of many consumers. Reliability, taste and freshness are guaranteed through an impeccable 24-hour cold chain system.

From healthy tasty products that can be consumed right out of their package designed for those on the go, to various national franchise chains and in-flight meals, Harim chicken can be found everywhere in Korea. Harim's standard of high quality and taste is becoming more and more recognized beyond Korea and is on its way to truly becoming a global brand.

i Company website:
<http://www.harim.com>

EXPERIENCED LEADER



Mr. Kim Won-il, who leads the National Food Cluster Center at MARFA, believes that FOODPOLIS has been recognized as the best investment destination for foreign food companies, and is confident that the cluster will play a very important role in the Northeast Asia food market.

In an exclusive interview to FOODPOLIS magazine, Mr. Kim Won-il, who was recently appointed Director of the Korea National Food Cluster gave us his vision and plans for the future.



Could you please tell us about vision of FOODPOLIS as a team manager of the Department of Activation?

As the world's population and income grows, the food industry is also expected to gradually increase its market scale, with more emphasis on well-being and health food trend. To counteract this kind of global scale increase of the food industry and market trends, FOODPOLIS is launching its action plan to become an advanced base of the global food industry and to boost Korea's agricultural growth.

The construction of FOODPOLIS will begin in earnest in 2014. Including the Food Safety Center, 6 of government supporting facilities will also be under construction. To become one of the global top 5 food clusters, FOODPOLIS has prepared various plans to attract more local enterprises and foreign investment.

What is your most memorable performance or reference while working for MAFRA?

The disaster insurance of agriculture in 2001 can be the most memorable reference. Several trials have failed before 2001, because of a lack of response from agriculture business holders. My colleagues also gave me skeptical opinions about the project. However, directly after the typhoon, 'Prapiroon', the ministry announced the introduction of this policy and began its starting action with apple and pear. Now, as the numbers of items have sharply

increased, this insurance policy is the actual protection policy of agriculture business holders.

You were also previously associated with the Food and Agriculture Organization (FAO). What was your main role?

Starting in September 2010, I worked at the Department of Crop Protection, at the headquarters of FAO.

My major tasks were to handle projects on horticulture field and energy reduction of vinyl greenhouses. Also, I was a new project reviewer, responsible for estimating FAO planned projects and to evaluate human resources of in-field project manager in underdeveloped nations.

Could you briefly tell us about your lifestyle and family?

My family includes my wife and two sons. My first son is in 1st grade of middle school and the second is in 4th grade. I try to spend weekends with my family. I enjoy my spare time by taking my sons to national museums, science experience, or watching kid's musical plays. Also, I like having conversation with my wife and sons during hiking seasonal courses.

What are your future goals?

I would like to play an important role in giving a helping hand to Korean agriculture and food industries. After my retirement, I hope to participate as a volunteer for underdeveloped countries.

WHOLESOME CONSULTANT



The Legal Clinic of Law School, Wonkwang University provides various free legal services for local firms and steps forward to protect human rights. Besides, it also provides real case training, where professors mentor their trainees to provide proper legal consultation.



Wonkwang University, as the region's best private institution located at Iksan, Jeollabuk-do, was founded to cultivate future leaders of the advanced civilized society by providing an integrated total human education with both science and morality on the basis of the founding principle of Won Buddhism, "With this Great Opening of Matter, let there be a Great Opening of Spirit."

The University, which originated from the former Yuil Hakrim in 1946, occupies 1.6 million㎡ of beautifully landscaped ground and has 15 colleges, 29 divisions (including 3 independent divisions) and 20 departments, as well as Graduate Schools, Specialized Graduate Schools and Professional Graduate School of Oriental medicine, etc. Currently, a total of 25,000 students are enrolled at the university.

Affiliated facilities cover a Central Library equipped with 5,000 seats, 1.2 million books and electronic information center, and a university museum that carries the largest collection of Korean folk art in the nation. University Newspaper and Broadcasting station, Science center, Center for Continuing Education, Student Service center with its one-stop service system, Center for moral Education. Wonkwang also has 43 research centers including Research Center for Mahan-Baekje culture.

In addition, for higher education competitiveness, Wonkwang University has signed various exchange agreements with 64 universities in 20 countries for various sectors, including introduction of new management method, re-arrangement of the university organization, activation of

international exchanges and support for educational activities.

Among regional universities, Wonkwang University is the only one that produced current Justice of the Supreme Court. In addition, for the past 5 years, the number of Wonkwang law graduates who passed bar examinations was the highest among the private regional universities.

The University begun law school preparation for a decade and has started recruiting in 2008. The Law School specializes in Medical and Bioscience Law - based on its competitiveness in medical science and pharmacy. It strives to produce well-trained law students to become legal practitioners equipped with a balanced sense of respect for human life and expertise.

Equipped with superior teaching staff with excellent practices, Wonkwang University has 32 superior teaching staff including three lawyers with the US Bar Admissions, ten judicial practices experienced professors and three other practical professors from non-judicial areas, and their average research performances reach 1400%.

Legal Clinic

The law school is equipped with all the necessary facilities needed for a law school including a mock court, library and latest information technology facilities, and tries various approaches to train professional jurists. One of its most satisfying practices is the Legal Clinic, which provides free legal consulting service to faculties, students, firms, local citizens of Iksan City and any client who needs legal consultation to prevent legal conflict and to protect human rights.

Based on its purpose of giving real case study or in-field training to future lawyers, Legal Clinic also hopes to contribute on deployment of 'wholesome legal culture'.

A group of trainees provides professional legal aid by case or project under their mentor's professional care. From simple conflict to M&A, experienced professors lead groups to provide professional legal advice.

Professor Choi Dan-bie, Head Professor of the Legal Clinic said: "The Legal Clinic has





been established to discipline in-field training to students, but we also lead several social projects to protect second-class citizens as well. Cultivating moral jurist is precedence over case winning jurist.”

Without commercial legal activities, the Legal Clinic prepares a number of social projects for local citizens as well; such as firm-individual conflicts, human right protection, environmental issues and especially for second-class citizens, Professor Choi mentioned. Base on academic motto of Wonkwang University, Legal Clinic also steps forward to act morality over its knowledge.

The Legal Clinic advises various cases for local firms as well. Especially, for local SMEs who need legal support, it gives them appropriate and general legal advice. Of course, because of its academic identity, it can only provide non-commercial legal advice; this free service can actually help SME who have no legal department or small business holders. Its legal activities are quite limited to be as an advisor or social group. Therefore, to supplement it, the Legal Clinic makes agreements for reference building and to share various cases by academic approach.

Due to the high level of its real case training, FOODPOLIS expects the Legal Clinic to become a legal advisory to local small and mid-sized firms' legal conflicts, M&A, and to provide various legal consultations as a legal enabler. For this purpose an MOU was recently signed between both parties.

To fulfill its principal purpose of MOU with FOODPOLIS, Legal Clinic has studied the demands of investor firms. Through its definite research of grasping demands, the Legal Clinic plans to deploy solid legal supporting system and fine policy to help investors based on its professionalism.

The Legal Clinic plans to research and develop solid legal care system until 2015. According to its plan, it is more important to deploy steady system and demand – industry specialty analyses enable to boost their potential.

As a legal service provider, and an academic experience tool, the Legal Clinic functionally fulfills its duty on ethical legal provision to random clients without benefit.



TRADITIONAL WINTER FOOD

A variety of seasonal snacks and foods are available in Korea during the biting cold winter season. They include the savory and sweet winter street snacks like bungeoppang, hotteok, baked sweet potatoes, and hoppang, along with the traditional winter dishes such as gimjang kimchi, tteokguk, and manduguk.

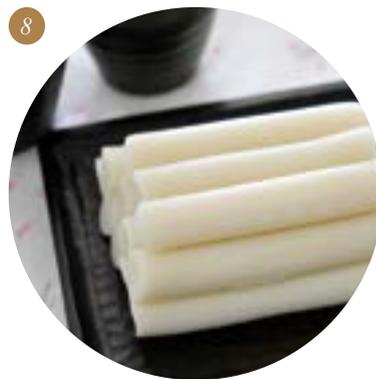
Kimchi is the quintessential Korean food and comes in numerous varieties. Wintertime kimchi-making is known as “Gimjang,” a time when households in Korea prepare and store kimchi in massive quantities for the winter months. Traditionally, gimjang kimchi making had been one of the most important winter preparation tasks for housewives.

An important part of gimjang is the storing of the final product. To allow for proper fermentation, gimjang kimchi is best kept near 0°C with minimal temperature fluctuation. In the past, special holes were dug in which kimchi jars were buried and covered with straw mats to ferment during

the winter. Today, most Korean households have two refrigerators. One is just your average refrigerator while the other is a uniquely Korean appliance used exclusively for kimchi storage.

Meanwhile, the winter solstice is the shortest day of the year and has the most hours of darkness. It usually falls around December 22 on the solar calendar. A traditional Korean winter solstice event is making and eating red bean paste porridge called “patjuk”.

Red beans are boiled and small balls of glutinous rice are added, making a thick and sweet porridge. Red beans symbolize the chasing away of evil spirits, and the rice



-
- 1 *Gimjangdok*
 - 2 *Patjuk*
 - 3 *Ogot Bab & Namool*
 - 4 *Teok-mandoo gook*
 - 5 *Dongchimi*
 - 6 *Moolgimchi*
 - 7 *Teok guk*
 - 8 *Garae Teok*



balls symbolize new life. Therefore, eating a delicious bowl of patjuk on winter solstice was believed to chase away all illnesses. Also, eating the same number of rice balls as one's age symbolizes the successful passing of the year.

In the past, Koreans would sprinkle red bean paste porridge around the yard and share the dish with neighbors to chase away evil spirits. At the time, many also believed that a warm winter solstice meant the coming of disease and death, while a cold, snowy winter solstice meant a prosperous New Year.

Although the winter solstice is not a major Korean holiday like Chuseok or Lunar New Year's Day, Korean families do get together to enjoy a sweet bowl of red bean paste porridge and wish each other a healthy and prosperous New Year.

Manduguk (dumpling soup) is a dish that is regularly eaten by Koreans in the winter. Dumplings are filled with minced beef and vegetables, put in a broth along with sliced rice cakes, and boiled to perfection. You may even find restaurants

that serve pink and yellow dumplings colored with natural dyes. Although eaten throughout the year, manduguk is especially favored in the winter and is traditionally served on New Year's Day. It is best enjoyed with gimjang kimchi (kimchi prepared during the winter) or mul-kimchi (watery kimchi served cold).

It doesn't feel like a real Lunar New Year's Day without a bowl of tteokguk. On the morning of the Lunar New Year, the whole family gathers around to have tteokguk, make New Year's resolutions and wish each other a healthy and prosperous New Year. In recent years, tteokguk has also become a popular food for Solar New Year's Day as well.

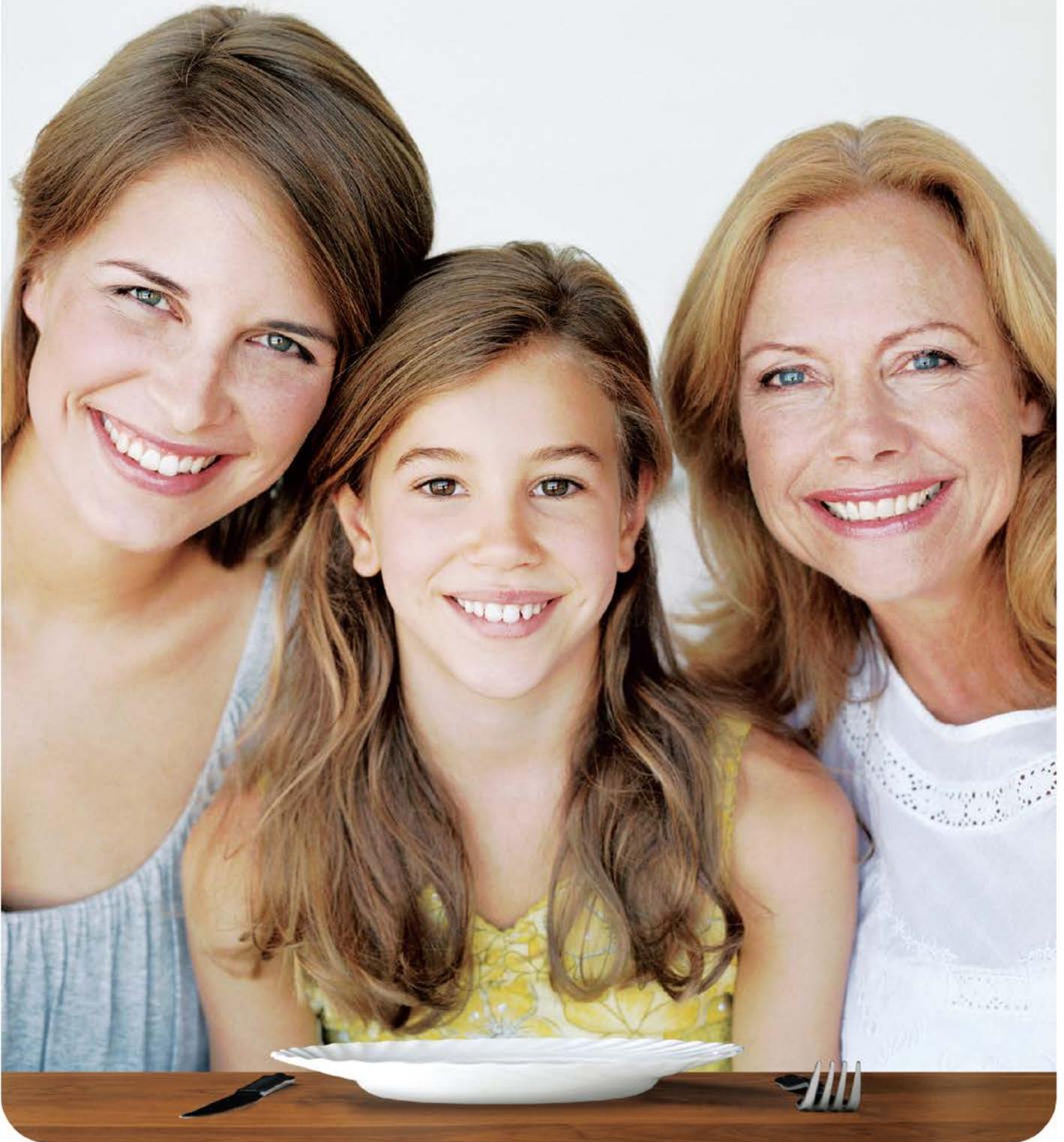
To make tteokguk, garaetteok (long, cylinder-shaped tteok) is sliced into thin pieces and placed into a soup stock seasoned with a pinch of salt or a drop of soy sauce. One interesting thing about this dish is that different regions of Korea slice Garaetteok into different shapes, meaning that you can guess the hometown of your cook if you have a keen eye. These days,

sliced Garaetteok is enjoyed in a range of soups including manduguk (dumpling soup) and ramen.

Ogokbap Rice, a special food originating from the Jeongwol Daeboreum (first full moon) festival, is a type of cooked white rice mixed with five grains: glutinous rice, glutinous millet, red beans, glutinous kaoliang, and black beans. Depending on the region, some grains are replaced with local substitutes. This healthy tradition may have even led to more households adding grains to their white rice. Another tradition of Jeongwol Daeboreum is to enjoy dried wild vegetables from the previous year. Bureom, a selection of nuts including pine nuts, chestnuts, walnuts, and peanuts, is also enjoyed to wish for good luck in the coming year.

i Reference: Official website of Korea Tourism (www.visitkorea.or.kr)

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