Implications of a South Korea-U.S. Free Trade Agreement on U.S. Agriculture

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South Korea Trade Promotion Agreement Analysis
Executive Summary

On April 1, 2007, the United States and South Korea completed negotiations on a bilateral free trade agreement. Negotiations were launched in June 2006 and the agreement is considered the largest U.S. free trade agreement since the North American Free Trade Agreement (NAFTA). The South Korea-U.S. Free Trade Agreement (KORUS FTA) was signed on June 30, 2007 and the agreement must now be approved by the U.S. Congress.

The KORUS FTA, as proposed, is a significant opportunity for the U.S. agriculture sector. The benefits involve expanded exports of a wide range of farm products, some right away and some of which come later in the implementation period as South Korea's import demand for farm products expands. By 2027, when the agreement would be fully implemented, increased exports of the major grain, oilseed, fiber, fruit and vegetable and livestock products are likely to exceed $1.6 billion.

The KORUS FTA allows the United States to become a competitive supplier of agricultural products to South Korea by providing duty-free and reduced tariff access. This will allow the United States to better compete with South Korea's other Asian and Oceania trading partners that are currently supplying a large percent of the South Korean food and fiber market.

Separately, South Korea and the United States have agreed to resolve sanitary and phytosanitary (SPS) barriers and other non-tariff barriers to U.S. exports. Clear rules for addressing SPS concerns have been outlined in the agreement, however the U.S. government will have to be aggressive in enforcing these rules to ensure that South Korea abides by the agreement.

Despite tariff reductions on other products, rice and all rice products were excluded from the agreement and are not subject to tariff reductions. The United States does have guaranteed access to some of the South Korean rice market through the WTO and rice consumption has been declining in South Korea for two decades, so the impact of not including rice may not be as significant as it could have been. However, it does set a serious precedent for future U.S. free trade agreements

Even with these challenges, for agriculture as a whole, the economics suggest it will have a positive effect on the American agricultural sector.

Background Information on South Korea

On April 1, 2007, the United States and the Republic of Korea completed negotiations on a bilateral free trade agreement. Negotiations were launched in June 2006 and the agreement is considered the largest U.S. free trade agreement since the North American Free Trade Agreement (NAFTA). The South Korea-U.S. Free Trade Agreement (KORUS FTA) was signed on June 30, 2007 and the agreement must now be approved by the U.S. Congress.

General Information

South Korea is geographically a relatively small country, with a size only slightly larger than that of Indiana, and only about 17 percent of that arable land. South Korea has a population of about 48 million people. (For reference, the six DR-CAFTA countries had a population of 44 million people.)

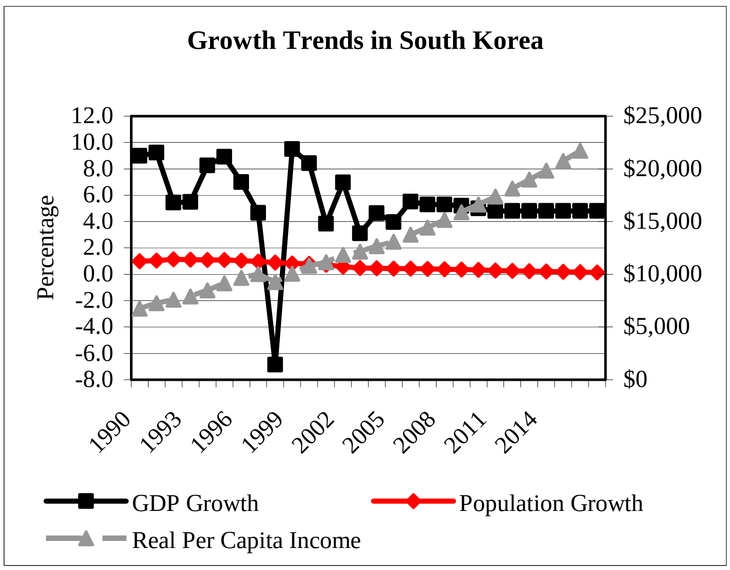
While still self-designated as a developing economy in the World Trade Organization (WTO), South Korea is actually the tenth largest economy in the world.[1] Four decades ago, gross domestic product (GDP) per capita was comparable with levels in the poorer countries of Africa and Asia. After high levels of economic growth during the 1980s and 1990s, economic growth plunged to a negative 6.9 percent in 1998 due to the Asian financial crisis of 1997-1999. However, the South Korean economy then strongly recovered to 9.5 percent growth in 1999 and 8.5 percent in 2000.[2]

South Korea has now fully recovered from the Asian financial crisis. In 2004, South Korea joined the "trillion dollar club" of world economies. Today, the South Korean GDP per capita is fourteen times that of North Korea and is equal to some economies of the European Union. "Moderate inflation, low unemployment, an export surplus, and fairly equal distribution of income characterize this solid economy," is how the CIA World Factbook describes South Korea.

[1] Office of the United States Trade Representative. *Trade Facts*, "FTA: United States and Republic of Korea Economic and Strategic Benefits." February 2, 2006.
[2] Central Intelligence Agency. *The World Factbook*. Washington, DC, February 2006.

Growth Trends in South Korea

There are several growth trends that can be examined in an attempt to estimate what the South Korean market could represent in the future. These trends include the GDP growth rate, the population growth rate and the increase in per capita income. Each of these trends is shown in the graph below, which includes actual data from 1990 to the present and forecasts from the present to 2017.[3]



While the GDP in South Korea experienced a significant drop from 1997 to 1998, the country is now experiencing strong economic growth. This growth is forecasted to continue at about 5 percent per year through 2017.

The population growth rate for South Korea has been relatively stable at roughly 1 percent per year. However, that growth rate is expected to decline to less than 0.5 percent per year by 2017. This stagnating population could create challenges in the South Korean economy as labor sources decrease and the population ages.

As mentioned previously, South Korea is very advanced for a "developing" country. This point is only further illustrated by examining the country's per capita income and per capita income

[3] United States Department of Agriculture. "International Macroeconomic Data Set." Economic Research Service, Washington, DC, February 2006.

growth trends. South Korea had a nominal per capita income of roughly $20,300 in 2005, compared to a per capita income of $41,800 in the United States in 2005. The per capita income in South Korea is expected to grow significantly in the future. From a real per capita income (in 2000 dollars) of roughly $12,000 today, it is forecasted to grow to nearly $23,000 by 2017.

General Trade with South Korea

South Korea is the seventh largest trading partner of the United States.[4] Total trade between the United States and South Korea was $78.3 billion in 2006. The export of American goods totaled $32.5 billion, an increase of roughly 17 percent since 2005. Top exports to South Korea included organic chemicals, industrial machines, semi-conductors and civilian and military aircraft. United States imports from South Korea totaled $45.8 billion, up just $2 billion from 2005. Top imports included petroleum products, household appliances, computers and semi-conductors and passenger cars and parts. The United States currently has a total trade deficit with South Korea of $13.3 billion.[5] The United States is one of the leading foreign investors in Korea. The stock of U.S. foreign direct investment in South Korea in 2005 was $18.8 billion and was largely focused in the manufacturing, banking and wholesale trade sectors.[6]

Agricultural Information

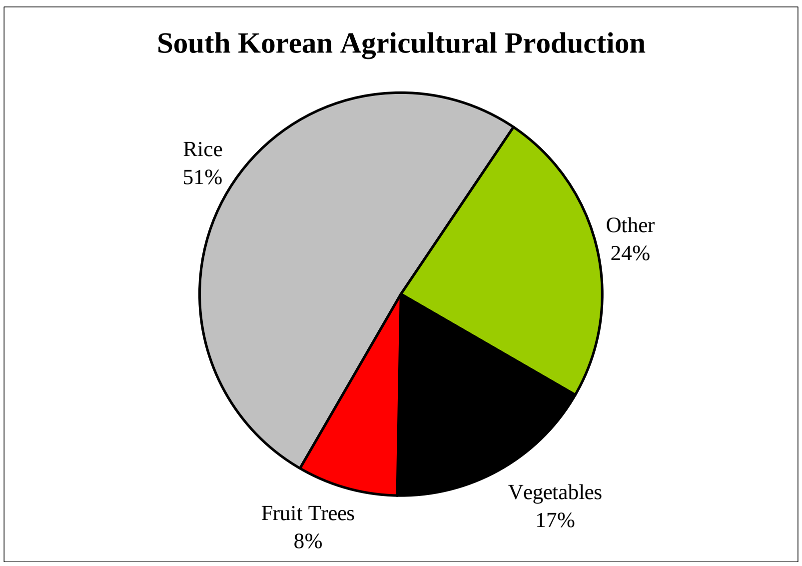
At the start of the economic boom in 1963, the majority of South Koreans were farmers. In fact, 63 percent of the population lived in rural areas. Over the next several decades, however, South Korea grew from a predominantly rural, agricultural nation into an urban, newly industrialized country and the agricultural workforce shrank to less than 8 percent of the total workforce in 2006. South Korea has 1.3 million farms with an average farm size of 3.5 acres.[7]

South Korea's agriculture has many inherent problems. South Korea is a mountainous country with only 17 percent arable land and less rainfall than most other neighboring rice-growing

[4] Office of the United States Trade Representative. *Trade Facts*, "FTA: United States and Republic of Korea Economic and Strategic Benefits." February 2, 2006.
[5] United States Census Bureau. "Trade in Goods (Imports, Exports and Trade Balance with Korea, South." Foreign Trade Statistics. Washington, DC, January 2006.
[6] Office of the United States Trade Representative. *2005 National Trade Estimate Report on Foreign Trade Barriers*. March 2005.
[7] Foreign Agricultural Service. "South Korea's Agricultural and Food Sectors." U.S. Embassy in Seoul, March 2007.

countries. In addition, the enormous growth of urban areas has led to a rapid decrease of available farmland, while at the same time population increases and bigger incomes mean that the demand for food has greatly outstripped supply. The result of these developments was that by the late 1980s, roughly half of South Korea's food and fiber needs, mainly wheat and animal feed, were imported.[8]

Rice dominates crop production in South Korea and has long been the staple food in the country. Other important cash crops include barley, millet, cotton, hemp, sesame, tobacco and ginseng. While production of fruits, vegetables and livestock has grown over the last three decades, South Korea has turned increasingly to food imports to satisfy consumers' demands.

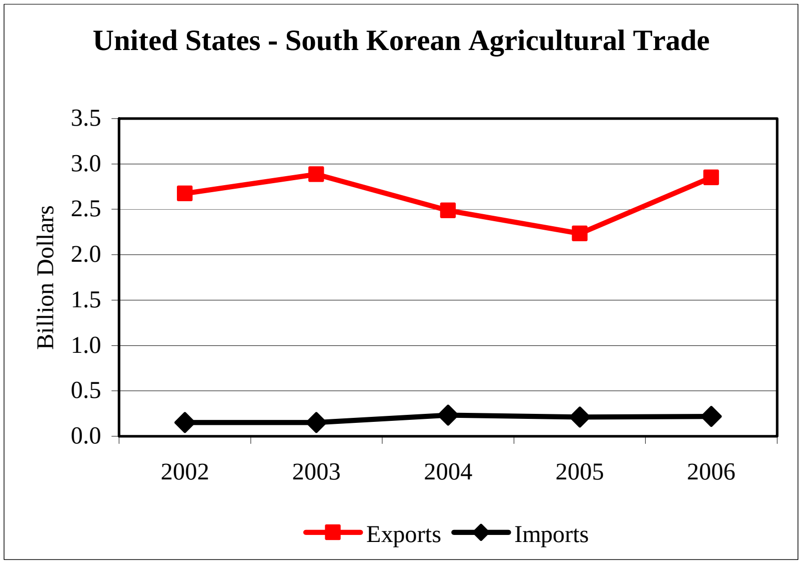


Current agricultural and food consumption in South Korea are focused on the consumption of fruit and vegetable products, rather than meat products. This is best illustrated in the food balance sheet attached to this report as Appendix A. Most of the food consumption in South Korea is rice. As South Korean consumers continue to experience increased income and undergo the generational transformation, they will diversify their consumption to include more meats. This could provide a great opportunity for American agricultural exports.

[8] United States Department of Agriculture. "Briefing Room – South Korea." Economic Research Service. Washington, DC, June 2005.

Agricultural Trade Information

South Korea was the 5th largest export market for agricultural products in 2004. Of the $10.5 billion in agricultural goods South Korea imported in 2004, $2.5 billion came from the United States. Unlike the general economy, the United States has a trade surplus with South Korea in agricultural products. As the figure below shows, in 2006 the United States had an agricultural trade surplus with South Korea of $2.6 billion.[9]



Agricultural Exports

The United States is the chief agricultural exporter to South Korea, supplying a range of products, with corn, beef, hides, soybeans, milling wheat and cotton being the major items. From 2002 through 2004, the United States exported an average of $2.6 billion per year of agricultural products to South Korea. The majority of products being sent to South Korea were bulk commodities, such as corn, wheat and soybeans. In addition to these bulk commodities, the United States also exports some high-valued products to South Korea, including cattle hides, fruits and vegetables. The table on the following page shows the top ten exports, by value, sent to South Korea from the United States during 2002-2006.

[9] All trade data – United States Department of Agriculture. *U.S. Trade Data*. Foreign Agricultural Service, Washington, DC, February 2006.

Top 10 U.S. Agricultural Exports to South Korea

(Values in $1,000)

	2002	2003	2004	2005	2006	5 Yr Avg
Whole Cattle Hides	381,441	365,440	328,397	285,163	258,615	323,811
Corn	79,251	42,128	541,539	233,800	718,310	323,006
Beef & Veal, Fresh, Chilled or Frozen	607,591	740,593	0	0	448	269,726
Soybeans	247,150	282,430	284,594	199,406	113,065	225,329
Wheat	187,244	205,363	230,919	184,675	188,199	199,280
Feed, Ingredients & Fodder	98,217	122,875	114,763	128,709	165,928	126,098
Cotton	99,165	135,369	146,268	141,404	98,982	124,238
Miscellaneous Horticulture Products	104,031	101,232	101,000	101,069	111,403	103,747
Fresh Fruits, Citrus	76,642	88,715	97,796	111,989	111,835	97,395
Pork, Fresh, Chilled or Frozen	26,187	69,998	43,591	131,408	203,613	94,959
All Agricultural Exports	2,673,364	2,885,665	2,488,788	2,233,851	2,850,736	2,626,481

While the United States is a significant supplier of the South Korean food and fiber market, that market share is decreasing. The United States market share of South Korea's agricultural imports has fallen from nearly 45 percent in 1996 to less than 30 percent in 2004. Other countries are moving into and increasing their share of the South Korean agricultural market. Examples of these other suppliers expanding in the South Korean market include Australia for wheat, beef, mutton, wool and sugar; Malaysia for rubber and palm oil; New Zealand for beef, kiwifruit and dairy products; Canada for feed grains and oilseeds; the European Union for pork, feed grains and processed meat; and China for a variety of agricultural products.

Diversified Korean Agricultural Suppliers

(Average Imports 2002-2006)

Item	Top Supplier	Second Supplier	Third Supplier
Feed Grains	China	U.S.	Argentina
Wheat	Canada	Australia	U.S.
Soybeans	U.S.	Brazil	Argentina
Soybean Meal	Brazil	Argentina	U.S.
Soybean Oil	Brazil	Argentina	U.S.
Beef	Australia	New Zealand	
Pork	Canada	EU	U.S.
Poultry	U.S.	EU	
Specialty Crops	China	U.S.	

In addition, South Koreans are among the most competitive importers in the world. South Korea traditionally buys from a broad range of suppliers on the basis of close comparison of prices, transportation costs and quality. There are few countries around the world who buy from as many different suppliers and who shift suppliers as often as South Korea. This is in stark contract to neighboring Japan, where U.S. shares are substantial *and* stable.

Agricultural Imports

From 2002 through 2006, the United States imported an average of $192 million per year of agricultural products from South Korea. The table below shows the top ten imports, by value, sent to the United States from South Korea during 2002 to 2006. Many of these agricultural imports do not compete directly with domestically produced commodities (for example, off-season deciduous fruits) or are processed products, such as miscellaneous grain products (mostly pasta) and prepared vegetables.

Top 10 U.S. Agricultural Imports from South Korea

(Values in $1,000)

	2002	2003	2004	2005	2006	5 Yr Avg
Miscellaneous Horticulture Products[1]	37,183	40,556	47,136	63,895	83,837	54,521
Miscellaneous Grain Products	36,741	42,541	50,253	54,282	40,772	44,918
Fresh Fruits, Deciduous	15,091	12,166	14,668	22,067	21,960	17,190
Wheat Products	13,512	10,688	13,451	12,216	13,534	12,680
Other Poultry Products	123	409	57,267	1,810	671	12,056
Miscellaneous Processed Dairy Products	3,770	5,027	5,855	6,387	7,804	5,769
Wine & Wine Products	2,235	3,975	4,980	4,583	5,198	4,194
Vegetables	3,712	4,122	3,643	3,993	4,534	4,001
Sugar & Related Products	4,526	3,416	4,531	3,819	2,901	3,839
Ginseng	1,927	2,832	3,225	5,974	4,169	3,625
All Agricultural Imports	151,223	151,415	232,930	211,643	217,488	192,940

[1] Includes other processed food products including soups and condiments and nonalcoholic beverages

Agricultural Tariff Rates

South Korea is known around the world for its high tariff rates. Several trade disputes in the WTO reflect the country's strong tendencies toward protectionism. Under the WTO's Uruguay Round Agreement on Agriculture (URAA), South Korea has lowered the tariffs on more than 30 agricultural products of primary interest to the United States. These products include bulk, intermediate- and high-value items, such as mixed feeds, feed corn, wheat, vegetable oils and meals, fruits, nuts, popcorn, processed potatoes, frozen French fries and breakfast cereals. However, duties are still inflated on many other high-value agricultural and fishery products. Korea imposes tariffs above 40 percent on many products of interest to U.S. exporters, including shelled walnuts, table grapes, beef, canned peaches and fruit cocktail, distilled spirits, apples, pears and a variety of citrus fruits.[10] The table below shows both the bound and applied tariff rates for some select agricultural commodities, both in the United States and in South Korea.

Tariff Rate Information

(Values in Percent)

	South Korea		United States	
Commodity	Bound	Applied	Bound	Applied
Barley	359.1	359.1	0.7	0.0
Beef	40.0	40.0	26.4	5.3
Butter	89.0	67.6	80.9	6.7
Cheese	36.0	36.0	36.4	9.8
Corn	403.5	403.5	0.6	0.0
Cotton	2.8	2.2	25.9	25.9
Milk	176.0	176.0	40.0	0.0
Pork	22.5	22.5	0.2	0.0
Poultry	19.5	19.5	17.4	6.9
Rice*	5.0	5.0	6.8	6.8
Sorghum	394.2	394.2	1.4	0.0
Soybeans	487.0	15.0	0.0	0.0
Soybean Meal	1.8	1.8	2.5	2.5
Soybean Oil	12.6	8.0	19.1	19.1
Sugar	18.0	13.5	195.0	195.0
Wheat	4.2	3.0	2.6	0.0
Aggregate Fruits	45.0	45.0	3.7	3.7
Aggregate Vegetables	45.0	45.0	6.8	6.8
Processed Products	51.5	51.5	11.4	11.4

** Represents in-quota tariff, only; see Rice section below*

As the table illustrates, agricultural tariff rates in South Korea range from just over 1 percent to nearly 500 percent, depending on the commodity. Eliminating these tariff rates through the KORUS FTA could be extremely beneficial to the United States agricultural sector. The lower tariff rate on U.S. products will make the United States more competitive with Australia, China, Japan and other agricultural suppliers to South Korea.

<u>Rice in South Korea</u>

Rice is unlike other agricultural commodities in South Korea. The South Korean government has long had a stated policy of self-sufficiency in rice. This is accomplished through heavy

[10] Office of the United States Trade Representative. *2005 National Trade Estimate Report on Foreign Trade Barriers*. March 2005.

government involvement and intervention. Due in large part to this policy, more than half of South Korean farmers produce rice.

Because of the sector's dependency on rice, the South Korean government exercises full control over the purchase, distribution and end-use of all imported rice. In fact, all imported rice is used for processing purposes only. The tariff rate table indicates that rice entering the South Korean market faces a 5 percent duty. This is true only for in-quota rice. In 2005, South Korea imported 225,575 metric tons of rice. The United States has a guaranteed share of that quota of 50,076 metric tons, which faces the 5 percent duty. South Korea does not have an over-quota tariff on rice because it has never imported more than it's required quota since the signing of the URAA.

South Korea's WTO
Minimum Access Commitments on Milled Rice
(Values in Metric Tons)

Year	Tons	Year	Tons
1995	51,307	2005	225,757
1996	64,134	2006	245,992
1997	76,961	2007	266,269
1998	89,787	2008	286,617
1999	102,614	2009	306,964
2000	102,615	2010	327,311
2001	128,268	2011	347,658
2002	153,921	2012	368006
2003	179,575	2013	388,353
2004	205,228	2014	408,700

However, rice consumption in South Korea has been declining every year since 1987, so increased exports of rice into the country absent the quota would probably not be substantial.[11]

[11] United States Department of Agriculture. "Briefing Room – South Korea: Policy." Economic Research Service. Washington, DC, June 2007.

AFBF Economic Analysis

Before discussing the economic impact analysis of the KORUS FTA, an understanding of the agreement's content is important. Some important aspects of the agricultural sections of the KORUS FTA are summarized below.

Major KORUS FTA Provisions

Under the KORUS FTA, almost two-thirds of current U.S. agricultural exports to South Korea will become duty-free immediately. Items that receive immediate duty-free treatment include wheat, corn, soybeans for crushing, hides and skins, cotton and a broad range of high-value and processed products including almonds, pistachios, bourbon whisky, wine, raisins, grape juice, fresh cherries, frozen French fries and frozen orange juice concentrate. In addition, the United States and South Korea are working to resolve sanitary and phytosanitary barriers to agricultural trade, including food safety inspection procedures for beef, pork and poultry. Some of the other specific provisions of the agreement are discussed further below.

<u>Rice in the Agreement</u>

Rice and rice products were not included in the KORUS FTA. Products including rice in the husk, husked rice, semi-milled or wholly milled rice, broken rice, rice flour, rice meal and rice pellets were excluded from any tariff reductions. The agreement states that for these products, "No obligations regarding tariffs in this Agreement shall apply…" While the United States does not get any additional access to the South Korean rice market, the agreement does require that South Korea continue to abide by its WTO commitments to increase rice imports, as previously discussed.

<u>Tariff Rate Quotas in the Agreement</u>

In the KORUS FTA, both parties utilized tariff rate quotas (TRQ) as a transition vehicle to open markets for a variety of agricultural products. A TRQ is a two-leveled tariff, where the tariff rate charged on imports depends on the volume or quantity of imports. A lower tariff, also called an in-quota tariff, is charged on imports that fall within the quota volume. These tariffs are generally low and minimally trade distorting. A higher tariff, also called an over-quota tariff, is imposed on imports in excess of the quota volume.

The United States will utilize TRQs to open its markets for certain sensitive processed dairy products. The U.S. TRQ will be eliminated and the market will be fully opened within 10 years. South Korea will also utilize TRQs as a means of transition to completely open markets. Most South Korean TRQs will be eliminated and markets will be fully opened within 18 years. However, for some TRQs (processed dairy products, honey, potatoes, oranges and soybeans for human consumption), the TRQ will grow by 3 percent per year, into perpetuity with the over-quota tariff never eliminated. The table below shows the commodities for which South Korea will utilize a TRQ, the average U.S. export of these selected commodities (from 2002 to 2006) and the TRQ values for year one and year ten of the agreement's implementation.

South Korea's TRQ Commitments

(Values in Metric Tons)

Commodity	Avg Exports[1]	Year 1 TRQ	Year 10 TRQ	Unlimited In
Flatfish	4,485	1,530	3,058	12 years
Alaska Pollock	3,792	4,000	8,688	15 years
Croaker	7	1,000	1,551	12 years
Milk or Cream Powder	152	5,000	6,524	Grows 3% / year
Food Whey	1,215	3,000	Unlimited	10 years
Butters	11	200	Unlimited	10 years
Cheeses	5,248	7,000	9,133	15 years
Honey	142	200	261	Grows 3% / year
Potatoes	1,984	3,000	3,914	Grows 3% / year
Oranges (Seasonal TRQ)	34,000	2,500	3,262	Grows 3% / year
Barley, except Malting	28	2,500	2,988	15 years
Barley, for Malting	13	9,000	10,756	15 years
Corn Starch	5	10,000	13,048	15 years
Soybeans, Human Cons	0	10,000	13,048	Grows 3% / year
Ginseng, Raw	0	5.7	7.4	18 years
Hay & Other Fodders	396,605	200,000	200,000	15 years
Dry Milk	598	700	Unlimited	10 years
Supplementary Feeds	6,006	5,500	7,176	12 years
Dextrins/Starches	767	14,000	18,267	12 years

[1] *2002-2006 averages from FAS, based on Korean Customs Service data*

It is important to note that the TRQs are for duty-free access into the South Korean market. In many cases, the United States has been exporting product into the South Korean market and paying the tariffs. The United States will still be able to do this with the KORUS FTA in place, but will also have access to a growing quantity of the duty-free quota via these TRQs.

To ensure that these TRQs are administered in a manner that facilitates opening these protected markets, the agreement provides specific guidelines on how the TRQs will be administered. The agreement states, “Each Party shall make every effort to administer its TRQs in a manner that allows importers to fully utilize import quotas.” Specifically, the agreement requires that TRQ administration be transparent, that administration will be done by government authorities and that TRQ quantities are made in commercially viable amounts.

Safeguard Mechanisms in the Agreement

Safeguard mechanisms are generally established in free trade agreements for selected agricultural commodities in the event that the domestic market for the commodity would be disrupted and producers would be harmed by a surge in imports due to the agreement. In the KORUS FTA, only South Korea is utilizing safeguards. (South Korean agricultural production and exports are so small that the United States should not see any commodity market disruptions.) South Korea has safeguard measures for 30 agricultural and food products. A trigger level was set for each commodity in the text of the agreement and an additional duty (that varies by commodity and may never exceed WTO-allowed tariff levels) may be charged *temporarily* if this trigger is reached. The agreement also requires that safeguards be implemented in a “transparent” manner and are subject to review.

South Korea's Safeguard Commitments

(Values in Metric Tons)

Commodity	Avg Exports[1]	Year 1 Trigger	Year 10 Trigger	Eliminated In
Beef	90,264	270,000	324,000	16 years
Pork	2,737	8,250	13,938	11 years
Onions	4,879	2,904	4,771	19 years
Garlic	4	1,148	1,887	19 years
Peppers	8	827	1,359	19 years
Other Beans	0	238	595	16 years
Sweet Potatoes	0	212	530	11 years
Roots and Tubers	0	30	30	11 years
Apples	0	9,000	13,911	24 years
Green Tea	0	8	14	19 years
Ginger	0	573	942	19 years
Malt & Malting Barley	13	9,000	10,756	16 years
Barley	28	2,500	2,988	16 years
Popcorn	4,426	5,112	None	8 years
Other Corn	238,468	187,547	None	8 years
Buckwheat	0	250	625	16 years
Cereal & Groats	2	128	221	16 years
Potato Flour & Meal	12	5,000	6,524	11 years
Corn Starch	5	10,000	13,048	16 years
Potato Starch	77	239	598	16 years
Manioc Starch	0	433	1,083	16 years
Sweet Potato Starch	0	202	505	16 years
Other Starch	6	53	133	16 years
Ground Nuts	0	140	231	19 years
Sesame Seeds	2	3,561	5,850	19 years
Ginseng	0	62	84	21 years
Sesame Seed Oil	2	30	50	19 years
Sugar	719	833	1,086	21 years
Alcohol	0	236	590	16 years
Dextrins	767	14,000	18,267	13 years

[1] *2002-2006 averages from FAS, based on Korean Customs Service data*

Analysis Methodology

This analysis of KORUS FTA's impact on American agriculture is based on two different trade scenarios—the first assumes no agreement is implemented and the second assumes that the current agreement is put in place. Since South Korean producers are already producing near their peak, the analysis focuses on assessing U.S. opportunities to increase exports to South Korea. In the first scenario, South Korean demand, supply, exports and imports for the major grain, oilseed, livestock, fruit and vegetable and fiber products in 2027 (by which time all TRQs will be eliminated and the KORUS FTA would be fully implemented) are estimated assuming continuation of the current market situation. The supply baseline assumes continuation of South Korea's historical production trends for the last 3 decades; demand projections looked at economic growth and population gains; exports were projected based on trends as well. Imports were then calculated as a residual. Prices in this scenario were assumed to stay constant at 2002-2006 levels.

With an agreement in place, it was assumed that the main difference between the two scenarios would be due to the commodity price changes resulting from tariff elimination, and the higher general economic growth and per capita incomes likely with an agreement. Supply, demand, price and income elasticities developed by the Food and Agriculture Organization of the United Nations were used to adjust production and consumption of the various commodities to reflect tariff-related changes in price and a KORUS FTA's higher economic growth rates. Imports were then recalculated.

Once South Korea's import needs were re-estimated, the market share likely to accrue to the United States under the two scenarios was calculated using historical data. For the non-agreement scenario, the 2002-2006 base market share was used. For the KORUS FTA scenario, the U.S. share was increased by 10 percentage points to reflect the improved U.S. competitive position. As a specific example, the U.S. share of the feed grains market was assumed to increase from 30 percent to 40 percent, based on improved access to the South Korean feed grain market. These share estimates were then applied to the estimates of the country's overall import demand to generate U.S. export estimates. This assumption of added market share accruing to the United States is important. Given that the United States will have duty-free access for most agricultural products, goods from the United States will be as competitive as products from South Korea's other partners with preferential trade agreements of their own. Consequently, it is likely that the United States will *gain* market share. Rather than assume that the United States would capture the entire market, assuming a 10 percent gain recognizes the potential to grow, without overstating possible results.

Specific data for the remaining commodities moving between South Korea and the United States, for consumption, production, and trade are much more limited. Consequently, the same kind of detailed analysis consisting of production and consumption adjustments due to lower tariff rates is not possible. Growth in United States exports of these items with an agreement is assumed to be at the same pace estimated for the major grain, oilseed, livestock and fiber commodities.

As with any economic report, it is necessary to list some caveats. First, due to data limitations, the study looked at fairly broad commodity aggregates. For example, beef is treated as a single commodity, despite differences between low and high quality beef products. The data used for the analysis is from the Food and Agriculture Organization (FAO) of the United Nations. While FAO works hard to ensure the quality and internal consistency of the data, the data is only as good as the information countries provide.

Agriculture Shares in General Gains

The farm-sector impact indicates that U.S. agriculture would be a net gainer with the KORUS FTA in place. South Korea is already a major food-importing country. KORUS FTA-related expansion in United States farm exports to South Korea is likely to significantly outpace expansion in United States imports of farm products from South Korea.

The KORUS FTA will provide an opportunity for the U.S. to expand exports of grains, oilseeds, fiber, fruits and vegetables and livestock products. Unlike previous free trade agreements where trade gains have been focused in bulk agricultural commodities, the largest gains from the KORUS FTA are focused in the processed and semi-processed products. In addition to the usual livestock products, fish, fruits, vegetables and nuts all benefit substantially from the agreement. However, due to the proximity of alternative suppliers (namely Australia and New Zealand), this FTA does not offer the same potential for dairy products. Still, the increased U.S. agricultural exports likely with a KORUS FTA in place could exceed $1.6 billion. The table below shows the value of these increased exports.

Summary of KORUS FTA Benefits to U.S. Agriculture

(Values in Million Dollars)

Commodity	2002-2006 Avg Imports from U.S.	2027 Imports from U.S. **Without** KORUS	2027 Imports from U.S. **With** KORUS	2027 Difference
Animal Hides	398.8	299.3	337.8	38.5
Beef	271.6	515.5	780.9	265.4
Corn & Feeds	324.9	483.7	596.6	112.9
Cotton	132.8	86.8	107.4	20.6
Dairy & Products	65.8	135.0	202.5	67.5
Fish	369.1	462.6	578.8	116.2
Fruits, Veggies & Nuts	251.2	314.3	413.4	99.1
Pork	101.6	232.7	421.7	189.0
Poultry	51.4	380.7	570.1	189.4
Rice[1]	16.8	29.9	38.1	8.2
Soybeans	225.2	394.1	514.9	120.8
Soybean Meal	13.7	19.9	156.7	136.8
Soybean Oil	21.4	25.5	111.1	85.6
Wheat	199.3	274.0	365.1	91.1
Estimated Impact of Selected Commodoties	2,443.6	3,654.0	5,195.1	1,541.1
All Other Commodities	182.9	268.6	378.0	109.4
Total	2,626.5	3,922.6	5,573.1	1,650.5

[1] *Trade gains for rice come from increased commitments through a WTO, rice-specific agreement and not from the FTA*

As shown in the table, the analysis suggests a total surplus of KORUS FTA-related gains in exports over imports of $1.6 billion.

It is important to note that this analysis assumes no sanitary and phyto-sanitary (SPS) barriers to trade in South Korea. If tariffs are lowered such that trade should be occurring, the analysis assumes that the trade does occur. South Korea has previously used non-tariff barriers aggressively. While clear rules for SPS concerns have been clearly outlined in the agreement, the U.S. government will have to be aggressive in enforcing these rules to make sure that the United States gets everything that these tariff cuts imply.

Looking at some of the specific commodities of export interest to the United States, the agreement would put the United States in a strong position to capitalize on the following commodity opportunities in what will be a fast growing market.

- South Korea's growth in imports of **grains and oilseed products** related both to growing food demand for wheat and vegetable oils and to growing domestic livestock demand for feed grains and protein meals is likely to be substantial. With no wheat and oilseed production capacity, South Korea's dependence on imports is likely to grow steadily. South Korea has already made a transition to fed-livestock (producing some livestock and importing the feedstuffs). The trade agreement puts the United States in a strong supplier position to compete on a level playing field with other trade partners.
- Expanding import demand for **livestock products** related to growth in population and per capita incomes, combined with rather limited domestic production potential, will also be important. Growth in domestic demand for livestock products is likely to outpace production, despite larger imports of feed grains and protein meals. The KORUS FTA would allow the United States to use its cost advantages and its wide variety of beef, pork and poultry products to fill a growing share of this market.

  While the analysis does include increases in U.S. beef exports to South Korea, our estimates indicate that the United States will be able to *recapture* its historic share of the South Korean beef market, but not *increase* that market share as assumed for other commodities. Market analysis indicates that the South Koreans are developing a preference for grass-fed, Australian beef, and may be unlikely to switch back to grain-fed, U.S. beef. Even with the cost advantage of no tariffs, the Australians could still compete with U.S. beef on a price-basis. This is due to lower expenses for feeding (grass versus corn) and transportation.
- Gains in **cotton** import demand are smaller than one might expect. South Korea has been losing its advantage in the production of clothing and shoes, so will need less cotton to produce these products. The KORUS FTA would put the United States in a position to capture the remaining market share.
- Gains in **other agricultural products** could also be substantial. The United States exports a broad range of farm products to South Korea. The commodities noted specifically above account for two-thirds of the United States total exports. Other commodities or commodity groupings of importance include fruits, vegetables, tallow, and other processed products. Data on production and trade in these products is generally too limited to support detailed analysis. Assuming that the same pattern of growth likely

for grains, fiber, oilseeds and livestock products holds for these other commodities, KORUS FTA would allow the United States to capture a larger share of these expanding markets as well.

Conclusion: Positive Impact on the Farm Sector

The KORUS FTA, as proposed, is an opportunity for the U.S. farm sector. The benefits involve expanded exports of a wide range of farm products. By 2027, when the agreement would be fully implemented, increased exports of the major grain, oilseed, fiber, fruit and vegetable and livestock products are likely to exceed $1.6 billion.

The KORUS FTA allows the United States to become a competitive supplier of agricultural products to South Korea. The United States will have preferential access to *most* of the third largest import market in the world; a market where the United States currently has less than one-third of the share and faces considerable pressure from other suppliers. While the KORUS FTA does not guarantee the United States expanded exports, the agreement will provide the United States with duty-free access on a majority of agricultural products. South Korea and the United States have agreed to resolve sanitary and phyto-sanitary (SPS) and other non-tariff barriers to U.S. exports. For agriculture as a whole, the economics suggest it will have a positive effect on the American agricultural sector.

United States Trade Representative
Fact Sheet

Free Trade with South Korea: Brief Summary of the Agreement
http://www.ustr.gov/assets/Document_Library/Fact_Sheets/2007/asset_upload_file563_11035.pdf

Free Trade with South Korea: Summary of the KORUS FTA
http://www.ustr.gov/assets/Document_Library/Fact_Sheets/2007/asset_upload_file939_11034.pdf

KORUS FTA: Opportunities for Agriculture
http://www.ustr.gov/assets/Document_Library/Fact_Sheets/2007/asset_upload_file525_12707.pdf

Food Balance Sheet

Republic of Korea

2005

All Values in Thousand Metric Tons

	Domestic Supply				Domestic Utilization			
Product	Production	Imports	Exports	Total	Feed and Seed	Other Uses	Food	Total
Grand Total Food	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vegetable products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Animal products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cereals	6776.0	13275.5	390.5	20442.0	8334.8	1625.8	9700.5	19661.0
Wheat	7.0	4015.6	69.3	4091.9	1493.6	403.9	2055.8	3953.4
Rice	6435.0	270.2	177.5	6882.7	49.0	448.1	6030.6	6527.7
Barley	260.0	241.0	8.6	509.6	12.6	103.7	376.1	492.4
Maize	63.0	8667.1	114.7	8844.9	6719.4	689.3	1206.7	8615.4
Rye	0	13.6	0.1	13.7	13.2	0.2	0.1	13.6
Oats	0	6.3	0.1	6.3	6.2	0	0	6.2
Millet	2.0	18.0	0	20.0	8.5	-4.8	16.2	19.9
Sorghum	2.0	4.6	0	6.6	28.6	-22.0	0	6.6
Cereals, Other	7.0	39.0	20.2	66.2	3.7	7.3	14.9	25.9
Starchy roots	960.0	1221.2	6.6	2187.7	1098.5	150.2	926.0	2174.6
Cassava	0	877.5	0.5	878.0	884.6	-7.6	0	877.0
Potatoes	670.0	304.8	6.0	980.8	156.5	137.9	674.5	968.8
Sweet Potatoes	290.0	23.8	0	313.8	57.4	5.8	250.5	313.7
Yams	0	0	0	0	0	0	0	0
Roots, Other	0	15.1	0	15.2	0	14.0	1.1	15.1
Sugarcrops	0	14426.0	4220.9	18646.9	280.5	2421.7	7502.8	10205.0
Sugar Beet	0	5859.0	1868.5	7727.5	0	2001.1	1989.4	3990.5
Sugar Cane	0	8567.0	2352.4	10919.4	280.5	420.6	5513.4	6214.6
Honey	29.0	1.2	0.1	30.3	0	10.9	19.1	30.0
Edible offals	122.5	29.8	2.5	154.8	0	-11.7	161.6	149.9

	Domestic Supply				Domestic Utilization			
Product	Production	Imports	Exports	Total	Feed and Seed	Other Uses	Food	Total
Pulses	18.0	59.0	0.2	77.2	0.6	-2.3	78.5	76.8
Dry Beans	9.0	55.8	0	64.8	0.3	-0.1	64.5	64.8
Broad Beans	0	0	0.1	0.1	0	-0.1	0	-0.1
Dry Peas	0	2.8	0.1	2.9	0	-1.2	3.9	2.7
Chick Peas	0	0.0	0	0	0	-0.1	0.2	0
Lentils	0	0.1	0	0.1	0	-0.2	0.2	0.1
Pulses, Other	9.0	0.3	0	9.3	0.4	-0.8	9.7	9.3
Nuts	63.9	31.7	17.9	113.5	0	3.9	73.8	77.7
Almonds	0	10.3	0.1	10.3	0	-5.4	15.6	10.2
Pistachios	0	0.9	0.1	0.9	0	-0.4	1.2	0.8
Cashew Nuts	0	1.7	0.1	1.8	0	-0.5	2.1	1.6
Hazelnuts	0	0.7	0.1	0.8	0	-0.5	1.2	0.7
Walnuts	0.9	7.7	0.1	8.7	0	-1.1	9.6	8.5
Chestnuts	50.0	1.2	16.5	67.7	0	1.6	33.2	34.7
Nuts, Other	13.0	9.2	1.1	23.3	0	10.2	10.9	21.2
Oilcrops	229.4	5308.7	32.6	5570.7	38.1	977.5	4489.9	5505.5
Soybeans	183.0	2854.6	30.1	3067.7	36.5	343.2	2627.9	3007.6
Groundnuts	7.0	63.5	0.5	70.9	0	-2.5	72.5	70.0
Sunflower Seed	0	4.7	0	4.7	0	-0.8	5.4	4.7
Rapeseed and Mustard Seed	1.4	93.6	0.1	95.1	0	12.8	82.0	94.9
Cottonseed	0	198.5	0.2	198.7	0	-31.7	230.0	198.3
Coconuts	0	410.7	0.2	410.9	0	0.2	410.4	410.6
Sesame seed	18.0	54.5	0.2	72.6	0.2	-10.0	82.2	72.3
Palm Nuts-Kernels	0	1424.5	0.5	1425.0	0	642.0	782.0	1424.1
Olives	0	155.5	0.2	155.6	0	-14.3	169.6	155.3
Linseed	0	16.0	0	16.0	0	16.0	0	16.0
Oilseeds, Other	20.0	32.7	0.8	53.5	1.5	22.5	27.9	51.9
Stimulants	1.5	145.6	38.5	185.6	0	18.0	90.7	108.7
Green Coffee	0	111.6	26.8	138.3	0	1.0	83.8	84.8
Cocoa Beans	0	31.3	9.9	41.2	0	15.3	6.1	21.5
Tea and Maté	1.5	2.7	1.9	6.1	0	1.7	0.7	2.4

	Domestic Supply				Domestic Utilization			
Product	Production	Imports	Exports	Total	Feed and Seed	Other Uses	Food	Total
Vegetables	12160.1	1191.1	94.9	13446.1	0	872.7	12383.6	13256.3
Tomatoes	400.0	110.7	3.6	514.2	0	-4.8	511.9	507.1
Onions	1750.0	41.1	0.1	1791.2	0	126.9	1664.1	1791.0
Garlic	350.0	16.3	0.1	366.4	0	53.9	312.3	366.2
Carrots and Turnips	70.0	71.2	0.2	141.3	0	21.3	119.7	141.0
Cauliflowers and Broccoli	0.1	3.1	0	3.2	0	0.3	2.9	3.2
Leeks	0	0.2	0.1	0.3	0	-1.2	1.3	0.1
Cabbage	3300.0	1.8	11.5	3313.3	0	496.2	2794.1	3290.2
Lettuce and Chicory	210.0	1.4	0.1	211.5	0	7.3	204.0	211.2
Cucumbers and Gherkins	400.0	0	0.9	400.9	0	66.1	333.0	399.1
Pumpkins, Squash and Gourds	310.0	0	0.1	310.1	0	40.4	269.5	309.9
Green Peas	0	0	0	0	0	0	0	0
Green Beans	0	0	0	0	0	0	0	0
Legumes	0	0	0	0	0	0	0	0
Artichokes	0	0	0	0	0	0	0	0
Asparagus	0	0.2	0	0.2	0	0	0.2	0.2
Mushrooms and Truffles	25.0	16.9	2.2	44.1	0	-17.2	56.8	39.6
Chillies and Green Peppers	420.0	0.1	18.9	438.9	0	64.6	336.6	401.2
Watermelons	850.0	0	0.1	850.2	0	62.9	787.0	849.9
Other Melons	250.0	0.1	1.7	251.8	0	20.2	228.2	248.4
Eggplants	5.0	0	0.7	5.7	0	0.8	3.5	4.4
Spinach	120.0	0	0	120.0	0	15.1	104.9	120.0
Other Vegetables	3700.0	928.2	54.6	4682.8	0	-79.9	4653.5	4573.6
Spices	6.0	30.2	1.9	38.1	0	-0.7	35.0	34.3
Pepper	0	4.2	0	4.2	0	0.2	3.9	4.1
Dry Chillies and Peppers	0	10.4	1.7	12.1	0	-3.7	12.3	8.6
Cloves	0	0.1	0	0.1	0	0	0	0.1
Vanilla	0	0.0	0	0	0	0	0	0.0
Cinnamon	0	2.6	0	2.6	0	0	2.6	2.6
Nutmeg, Mace and Cardamoms	0	0.2	0	0.2	0	0	0.2	0.2
Anise, Adian, and Fennel	0	0.5	0	0.5	0	-0.2	0.7	0.5
Ginger	6.0	11.9	0.1	17.9	0	3.0	14.7	17.8
Spices, Other	0	0.5	0.1	0.6	0	-0.2	0.6	0.5

	Domestic Supply				Domestic Utilization			
Product	Production	Imports	Exports	Totals	Feed and Seed	Other Uses	Food	Total
Fruits	2487.0	1135.5	117.0	3739.5	0	529.3	2976.2	3505.5
Oranges	0	561.9	16.2	578.1	0	360.4	185.4	545.7
Lemons and Limes	0	5.0	0.5	5.5	0	-1.0	5.4	4.5
Grapefruit and Pomelo	0	6.6	1.5	8.1	0	-1.2	6.3	5.0
Other Citrus Fruit	1.0	0.4	1.7	3.1	0	-1.8	1.4	-0.4
Bananas	0	260.3	2.2	262.5	0	31.8	226.3	258.1
Plantains	0	0	0	0	0	0	0	0
Apples	380.0	26.9	12.7	419.7	0	62.6	331.7	394.2
Pineapples	1.0	56.8	0.2	57.9	0	-48.3	105.9	57.6
Dates	0	0.3	0	0.3	0	0.3	0	0.3
Grapes	360.0	64.0	8.8	432.8	0	12.2	403.1	415.3
Figs	0	0.5	0	0.5	0	-0.6	1.0	0.4
Avocados	0	0.2	0	0.2	0	-0.2	0.4	0.2
Guavas, Mangoes, and Mangosteens	0	2.1	0	2.1	0	-16.3	18.4	2.1
Tangerines and Mandarins	580.0	2.7	4.2	586.9	0	8.4	570.1	578.5
Papayas	0	0.2	0	0.2	0	0.1	0.1	0.2
Pears and Quinces	380.0	3.3	34.9	418.2	0	27.0	321.4	348.4
Apricots	0	1.1	0	1.1	0	-0.8	1.8	1.0
Cherries	0	0.4	0	0.4	0	-0.8	1.2	0.3
Peaches and Nectarines	180.0	3.6	2.3	185.9	0	3.0	178.3	181.3
Plums and Sloes	75.0	12.0	5.1	92.1	0	9.8	72.1	81.9
Strawberries	200.0	0.4	0.7	201.1	0	17.2	182.5	199.7
Raspberries and Other Berries	0	0.1	0	0.1	0	-0.2	0.2	0.1
Currants and Gooseberries	0	0.2	0	0.2	0	-0.1	0.3	0.2
Cranberries and Blueberries	0	0	0	0	0	0	0	0
Kiwi Fruit	10.0	26.7	0	36.7	0	2.9	33.8	36.7
Fruit, Other	320.0	100.0	25.7	445.7	0	65.0	329.3	394.3
Animal fats	62.2	88.0	5.6	155.8	0.8	66.9	77.0	144.7
Milk	2237.7	641.9	14.8	2894.3	798.8	184.9	1881.0	2864.7
Eggs	598.0	1.9	0	600.0	42.3	33.5	524.2	599.9

Product	Domestic Supply Production	Imports	Exports	Totals	Domestic Utilization Feed and Seed	Other Uses	Food	Total
Meat	1692.4	465.2	48.0	2205.7	5.8	544.1	1559.8	2109.7
Bovine Meat	195.0	208.6	13.6	417.2	4.8	36.9	348.4	390.0
Pig Meat	1036.0	187.8	31.3	1255.2	1.1	472.4	719.1	1192.5
Sheep and Goat Meat	3.3	3.1	0	6.4	0	-2.7	9.1	6.4
Equine Meat	0.7	0	0	0.7	0	0	0.7	0.7
Meat, Other	4.7	4.1	0.1	8.9	0	-5.1	13.8	8.7
Chicken Meat	402.0	58.3	2.9	463.2	0	35.4	421.9	457.4
Turkey Meat	0	3.3	0	3.3	0	2.5	0.8	3.3
Duck, Goose and Guinea Fowl Meat	48.0	0	0	48.1	0	4.6	43.4	48.0
Rabbit meat	2.7	0	0	2.7	0	0	2.7	2.7
Fish	2020.5	1378.7	481.4	3880.6	173.0	283.6	2461.1	2917.7
Freshwater Fish	23.4	61.3	11.4	96.2	0	18.6	54.8	73.3
Demersal Fish	346.6	613.3	93.2	1053.1	0	0	866.8	866.8
Large Pelagic Fish	710.3	359.7	167.7	1237.6	0	85.0	817.3	902.3
Marine Fish, Other	63.3	12.2	2.2	77.6	52.0	0	21.3	73.3
Crustaceans	94.9	109.1	14.1	218.0	121.0	0	68.9	189.9
Molluscs	403.8	94.1	79.0	576.9	0	100.0	318.9	418.9
Cephalopods	378.3	128.9	114.0	621.2	0	80.0	313.2	393.2
Other Aquatic Products	472.1	52.1	26.5	550.6	0	5.0	492.7	497.7
Aquatic mammals	0	0	0	0	0	0	0	0
Aquatic plants	457.2	15.7	23.0	495.9	0	5.0	445.0	450.0
Aquatic Animals, Other	14.9	36.3	3.5	54.7	0	0	47.7	47.7