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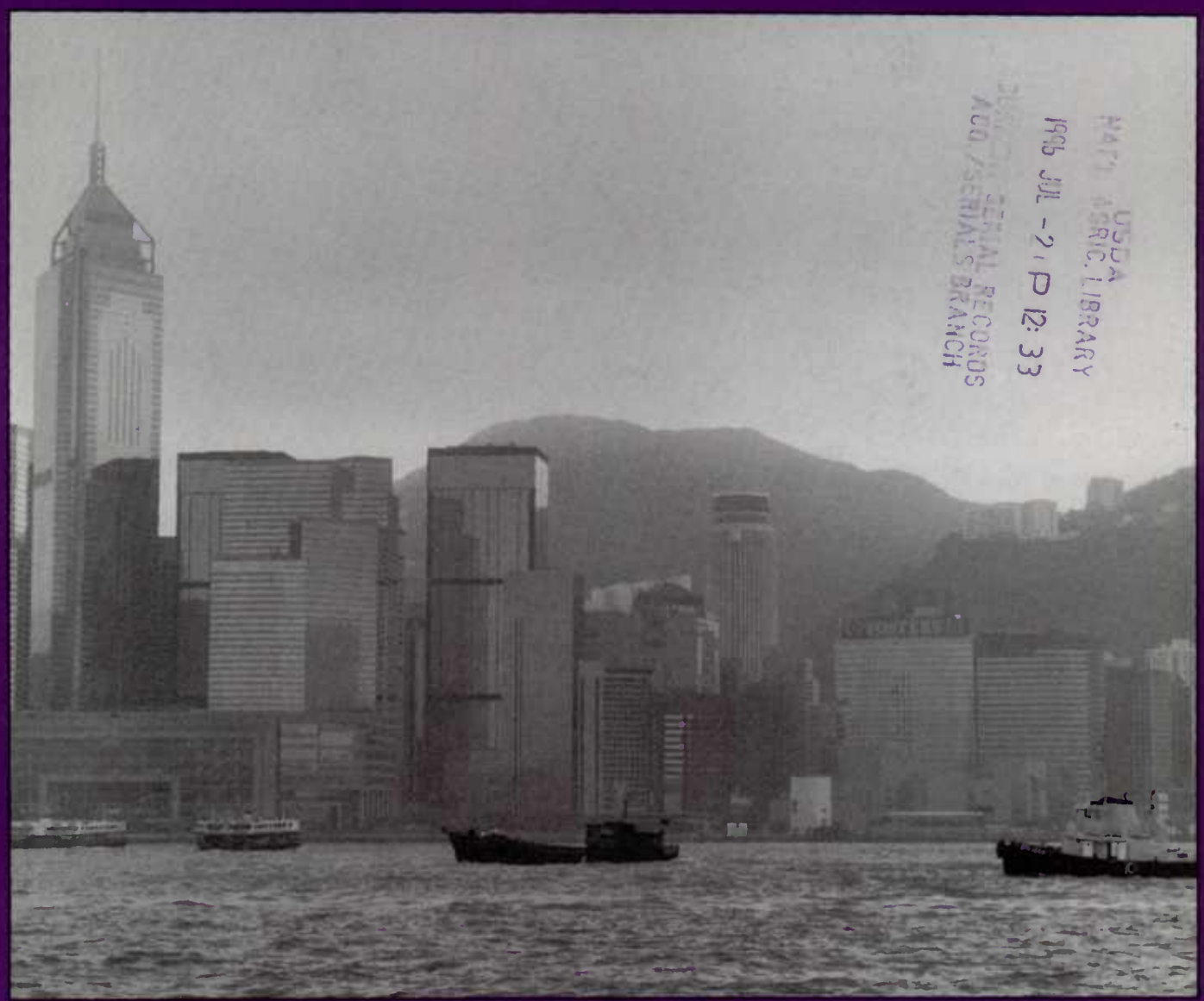
Agricultural
Economic
Report
Number 734

Asia
INITIATIVE

An Economic Research Service Report

APEC Agriculture and Trade

Asia-Pacific Economic Cooperation Region Buying More U.S. Consumer- Ready Food Products



Members of the Asia-Pacific Economic Cooperation Forum (APEC)



Asia and Pacific Ocean Members

China

East Asia Region

Japan

South Korea

Taiwan

Hong Kong

Association of South-East Asian Nations (ASEAN)

Brunei

Indonesia

Malaysia

Philippines

Singapore

Thailand

(Vietnam belongs to ASEAN but not to APEC)

Oceania

Australia

Papua New Guinea

New Zealand

Western Hemisphere Members

North American Free Trade Agreement (NAFTA)

United States

Mexico

Canada

South America

Chile (negotiating to join an enlarged NAFTA)

APEC Agriculture and Trade: Asia-Pacific Economic Cooperation Region Buying More U.S. Consumer-Ready Food Products. Sophia Wu Huang (editor). Commercial Agriculture Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 734.

Abstract

In fiscal 1995, more than 60 percent of U.S. farm exports, worth a record \$33 billion, went to Asia-Pacific Economic Cooperation (APEC) forum members. Bulk exports showed the most dramatic growth, benefiting greatly from China's conversion from a net grain exporter into a major net importer. Chinese imports are projected to increase further over the long term. Continued trade liberalization throughout APEC, rapid economic growth in its developing economies, and limited arable land in China and East Asia will ensure continued growth in U.S. farm exports to APEC markets—especially meat for East Asia and grains for China and Southeast Asia.

Keywords: APEC, ASEAN, NAFTA, China, Japan, Canada, Mexico, Chile, agricultural exports.

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Summary

More than 60 percent of U.S. agricultural exports in fiscal 1995 went to the 18 members of the Asia-Pacific Economic Cooperation forum (see map on inside front cover). Those exports surged 23 percent over the previous year, reaching a record \$33 billion. APEC's top 7 markets (Japan, Canada, Mexico, South Korea, China, Taiwan, and Hong Kong) received 90 percent of the U.S. agricultural exports going to the region. Large middle-class populations, lowered trade barriers, a weak U.S. dollar, and supply/demand developments in world markets were major factors underlying the trade increase. U.S. agricultural exports rose to all APEC members in 1995, except for Mexico and Brunei.

The most dramatic growth of U.S. sales in fiscal 1995 was in bulk exports, which grew by 34 percent over the previous year to reach \$13.5 billion, largely because of Chinese grain shortages. China shifted from being a net grain exporter to become a major net importer, allowing the United States not only to gain a large share of the new Chinese market, but also to reclaim markets it had lost to China in East and Southeast Asia.

Even North Korea purchased U.S. corn in 1995, the first-ever sale of U.S. corn to that country. In another first, North Korea acknowledged a chronic deficit in its grain supply and subsequently received considerable amounts of concessional food shipments from nearby APEC members.

Because of its size, China exerts a large influence on world markets for agricultural products. The Economic Research Service projects that even though China's grain production will expand by about 1 percent per year over the next decade, China's grain imports will also increase, as a growing population, rising incomes, changing diets, and limited agricultural land resources cause total consumption to increase faster than production.

Indonesia, Thailand, Malaysia, and, to a lesser degree, the Philippines have become rapidly expanding markets (up 117 percent in last 5 years) for U.S. farm exports because of their large populations, buoyant economic performance, and per capita incomes at levels where food is still an important component in consumption.

The United States also holds a large and stable share of the import markets in land-scarce Japan, South Korea, Taiwan, and Hong Kong, which together have accounted for a third of total U.S. farm exports over the last 10 years. Liberalization of formerly severe restrictions on agricultural imports, increasing price competition, rising incomes, and the Westernization of diets will promote the future growth of East Asian markets, particularly for high-value and processed food products. If their applications to join the World Trade Organization are accepted,

both China and Taiwan would be required to substantially reduce their trade barriers to agricultural imports, which would boost U.S. sales higher.

Since the mid-1980's, Canada has provided an important growth market for U.S. farm exports. Trade expanded especially rapidly since 1989, when the U.S.-Canada Free Trade Agreement (CFTA) started eliminating barriers to trade over a ten-year period. (CFTA evolved into the North American Free Trade Agreement, or NAFTA, when Mexico joined the group in January 1994.) The United States has long been Canada's largest farm export market. In fiscal 1995, the United States imported \$5.4 billion worth of agricultural products from Canada, while Canada imported a record \$5.8 billion from the United States—making it the world's second-largest importer of U.S. farm products (following Japan). Because Canada and the United States share common interests in agriculture and agricultural trade, trade between them continues to grow in spite of several unresolved disputes. Recent agricultural policy changes in Canada, especially the elimination of the Western Grain Transportation Act freight subsidies, will significantly affect future Canadian production and trade patterns. These subsidies encouraged the production of grains and oilseeds, and underwrote exporting unprocessed farm products overseas, where they competed with U.S. exports.

Reciprocal trade liberalization under NAFTA fostered rapid growth in agricultural trade between Mexico and the United States. In 1994, the first year of NAFTA, the U.S. agricultural trade surplus with Mexico nearly doubled, reaching a record \$1.6 billion, the largest surplus ever. The devaluation of the Mexican peso in December 1994 and that country's subsequent sharp economic slowdown, however, caused U.S. agricultural exports to Mexico to decline by 10 percent to \$3.7 billion in fiscal 1995. At the same time, largely due to more favorable terms of trade following the peso's devaluation, U.S. agricultural imports from Mexico surged by 33 percent to \$3.7 billion. Despite the recent setbacks in U.S. exports to Mexico, the long-term potential of U.S. farm exports to Mexico remains good.

Chile is the next country in line to become a member of NAFTA. Although Chile is not a major market for U.S. exports, its prosperity has caused many Latin American countries to emulate its policies, for example by reducing import tariffs. The terms of Chile's accession to NAFTA could set precedents for further Western Hemisphere integration. Although some subsectors of U.S. agriculture would benefit from increased exports while others would face greater competition from imports, the overall impact of Chile's accession to NAFTA would be minor, both because Chile is such a small market and because its tariffs are already low.

Introduction

by William T. Coyle (202-501-8136)

The Asia-Pacific Economic Cooperation (APEC) forum has 18 members on both sides of the Pacific, including the United States. This report provides information and analyses about developments in agriculture, food, policy, and trade in the APEC region, with particular reference to their implications for the United States.

The rationale for focusing on APEC is two-fold:

- APEC is the most rapidly growing market for U.S. agricultural exports. It includes two of the three major trading hubs in the world—East Asia and North America (the other is Western Europe). More than 60 percent of U.S. agricultural exports went to the APEC region in 1995. Strong agricultural trade ties between many of its members knit the APEC region together.
- The increased participation of U.S. government agencies, including the USDA and the U.S. Trade Representative's office, in APEC forums will likely give rise to questions about agriculture and trade in the APEC region. This report provides the background to answer some of those questions.

History of the APEC Forum

APEC began in 1989 as an informal group of 12 market-oriented Asia-Pacific economies, with the goals of better managing the growing interdependence in the Pacific region and sustaining economic growth. The original members were Australia, New Zealand, the United States, Canada, Japan, South Korea, Thailand, Malaysia, Indonesia, the Philippines, Singapore, and Brunei. In 1991, APEC admitted China, Taiwan, and Hong Kong. Mexico and Papua New Guinea joined in 1993, and Chile was admitted in 1994. In recent years, APEC has gained

recognition from heads of state and from other international organizations.

Over the years, APEC has evolved into a formal institution with a permanent secretariat located in Singapore. APEC holds annual meetings of its members' foreign, economic, and finance ministers. These provide a forum for ministerial level discussions and cooperation on a range of economic issues, including trade promotion and liberalization, investment, technology transfers, human resource development, energy, telecommunications, and transportation. Member countries often use APEC meetings as a forum for bilateral discussions on trade and political issues.

The APEC countries' relatively wealthy citizenry of 2.2 billion comprise 38 percent of the world's population, yet earn 57 percent of world GDP. With economies less trade intensive than those of the European Community, APEC members conduct more than 40 percent of world trade.

The APEC forum's members are a very diverse group, with per capita GDP's ranging from less than \$1,000 (China and Indonesia) to over \$20,000 (the United States, Canada, and Japan). Trade regimes for agricultural products are also wide-ranging, from the relatively open systems of Singapore and Hong Kong, to the transitional system of China, to the relatively protective regimes of South Korea, Taiwan, and Japan. Trade within the APEC region is concentrated on the sides of a geographical triangle, with North America, East Asia, and Oceania at the triangle's points. Trade links between ASEAN and East Asia, ASEAN and North America, and Oceania and ASEAN are also strong, while links between Latin America and the Western Pacific are relatively weak.

Asian Growth Outpaces World Economy's

by William Kost (202-219-0684)

Slow global economic recovery continues, with Asian APEC countries remaining the leading performers. Rapid economic growth in Asia is raising import demand. Investment in Southeast Asia by Japan, South Korea, Taiwan, Singapore, and Hong Kong will continue to stimulate economic growth and intra-regional trade. In North America, the economic slowdowns experienced by the NAFTA countries in 1995 will likely carry over into 1996, although the economic situations within the United States, Canada, and Mexico will likely improve over the remainder of the decade.

World Recovery Continues ... But at a Slower Pace

The global economy continued its recovery from the slowdown of the early 1990's, though the world growth rate slowed somewhat in 1995 (table 1). Income growth in the industrial world still has not substantially reduced unemployment. Both persistent high unemployment and cuts in government expenditures as countries strive to reduce budget deficits have slowed growth and dampened economic recovery rates.

Asia Still Has Fastest Growth Rates

Although 1995 growth rates were below those achieved in 1994, Asia continues to be the major bright spot in the global economy, with economic growth remaining above that experienced in other regions. The Asian economies have managed the moderate slowdown well, contributing to relative stability and avoiding another downturn.

Japan is the major exception to this record of continuing rapid growth in Asia. The Japanese economy continues to stagnate, with GDP growth below 0.5 percent in both 1994 and 1995. The yen weakened against the dollar in mid-1995 from under 80 yen/dollar to a level of about 100 yen/dollar in late 1995, thereby helping both export earnings (in dollars) and prospects for economic growth. Yet consumer and business confidence worsened in 1995, as Japan's banking crisis unfolded. Japanese economic growth is expected to recover somewhat by late 1996, as banks work out their bad debt problems and as low interest rates spur investment. Recently implemented fiscal and monetary stimulus packages also will encourage growth. Nevertheless, most analysts doubt Japan will be able to repeat past levels of high growth and anticipate that the Japanese economy will grow by about 2.5-3.0 percent annually for the rest of the decade.

Asian growth continues to be buoyed by the performance of the Chinese economy, which has grown quickly since it became more open to trade in the 1980's. China's rapid growth, combined with Japan's stagnation in the 1990's, has made China a driving economic force in Asia.

Chinese economic growth in 1995 slowed to around 10 percent as China reduced inflation to below 20 percent. Growth for the rest of the decade is expected to hover around a more sustainable 7 percent. Controlling inflation will continue to be a key problem. Current forecasts are that inflation will continue to fall, though remaining in double digits. If China continues economic reforms and maintains a relatively open market, its growth, coupled with the sheer size of its market, will make it a formidable economic force in Asia.

The newly industrialized Asian economies of Korea, Taiwan, Singapore, and Hong Kong are also experiencing a moderate slowdown, but their growth remains strong relative to other countries in Asia and the rest of the world. That performance is likely to continue through the remainder of the decade.

NAFTA Performance Weakens

The NAFTA countries have recovered from the global slowdown, but growth rates remain below those of many of their Asian counterparts. U.S. economic growth decelerated in 1995, but the country avoided slipping into recession as businesses brought inventories back into line with sales. Continuing low interest rates and low inflation should induce the business investment needed to maintain further growth over the rest of the decade.

Canadian growth decelerated in 1995 as net exports fell, government spending decreased, and both residential and non-residential construction remained weak. While a recession is unlikely, high real interest rates, sharply lower public spending, and tepid U.S. growth will generate an even lower real GDP growth for Canada in 1996.

Of the three NAFTA economies, Mexico fared the worst. Its peso crisis in December 1994 precipitated a severe recession, in which the Mexican economy contracted by more than 5 percent. Inflation, interest rates, and unemployment reached very high levels; and domestic consumption fell sharply in an environment of lower real incomes, lack of liquidity, and a much-depreciated peso.

Table 1: Economic growth slows in 1995, but is expected to continue at generally moderate rates

Region Country or Subregion	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 through 2010
<i>Real GDP growth, percent change from previous year</i>												
World	2.7	1.7	2.1	1.7	3.4	2.8	2.7	3.3	3.3	3.2	3.2	2.9
North America	1.1	-0.7	2.2	3.0	4.1	2.9	2.4	2.7	2.7	2.6	2.6	2.1
Europe	3.1	1.6	1.0	-0.4	2.6	2.8	2.6	2.7	2.6	2.5	2.7	2.4
Latin America	-0.1	3.1	2.4	3.5	5.1	1.6	3.1	5.0	5.4	5.5	5.5	4.8
Africa-Middle East	3.2	4.3	3.8	2.3	1.5	1.8	3.1	3.8	2.0	3.6	3.6	3.7
Asia	5.0	4.5	3.2	2.8	3.5	3.2	3.3	4.4	4.5	4.2	4.0	3.8
Developing Asia	6.1	6.3	7.5	7.8	8.1	7.6	6.3	6.2	6.0	6.0	5.8	5.6
NIC's	7.1	7.9	5.8	6.2	7.6	7.5	6.5	5.9	5.8	5.8	5.7	5.3
Commodity-base	8.1	6.3	5.9	6.7	7.3	7.3	6.6	5.8	5.7	5.7	5.2	5.1
Low income	4.6	5.1	9.5	9.4	8.9	7.9	6.0	6.6	6.2	6.2	6.1	5.9
APEC Countries												
Australia	1.4	-1.5	2.0	3.9	5.4	3.4	2.8	2.9	2.2	2.7	2.9	2.8
Brunei	--	--	--	--	--	--	--	--	--	--	--	--
Canada	-0.2	-1.8	0.8	2.2	4.6	2.1	1.9	3.8	4.0	3.4	2.7	2.6
Chile	3.3	7.3	11.0	6.3	4.2	5.3	5.1	5.7	5.5	5.6	5.8	5.2
China	3.9	8.0	13.6	13.5	11.8	9.9	6.8	7.7	7.0	6.9	6.9	6.6
Hong Kong	3.4	5.1	6.3	6.4	5.4	4.9	5.0	4.8	4.6	4.6	4.5	4.5
Indonesia	7.1	6.6	6.1	6.7	6.8	6.6	6.2	5.0	4.7	4.8	4.5	4.7
Japan	4.9	4.3	1.1	-0.2	0.5	0.3	1.2	3.2	3.6	3.1	2.6	2.3
Korea	9.2	9.1	5.1	5.6	8.5	8.5	6.8	6.2	6.1	6.1	5.9	5.3
Malaysia	9.7	8.7	7.8	8.5	8.8	8.5	7.2	6.9	7.0	6.3	5.5	5.4
Mexico	4.4	3.6	2.8	0.6	3.5	-5.6	2.4	4.4	4.5	5.4	6.2	5.3
New Zealand	-2.6	-3.6	0.8	5.1	3.8	3.5	2.8	3.6	3.6	3.3	3.7	3.4
Papua New Guinea	--	--	--	--	--	--	--	--	--	--	--	--
Philippines	2.4	-0.4	0.0	2.0	4.3	5.0	5.3	5.6	5.9	6.0	5.9	5.0
Singapore	8.8	6.7	6.0	10.1	10.1	7.7	6.7	5.0	4.5	4.7	4.8	4.5
Taiwan	5.4	7.6	6.8	6.3	6.5	7.0	6.6	6.0	6.1	6.2	6.1	5.8
Thailand	11.6	8.1	7.6	7.8	8.5	8.5	7.2	6.1	6.2	6.3	5.4	5.4
United States	1.2	-0.6	2.3	3.1	4.1	3.0	2.4	2.6	2.5	2.5	2.6	2.1

-- = not available.

Source: USDA, Economic Research Service, based on DRI/McGraw-Hill, World Markets Executive Overview, Fourth Quarter, 1995.

Mexico's stringent economic recovery program slowly bore fruit over the course of 1995. The peso has largely stabilized as Mexico's exports have grown faster than its imports, as the austerity program gradually reined in inflation, and as currency traders became convinced that the Mexican government would continue its austerity program as long as needed. The easing of Mexico's bank liquidity problems and of high consumer debt should help the recovery of private consumption and investment in 1996 and 1997, and aid Mexico's return to its growth potential. Economic growth is forecast to average near 5 percent per year for the last half of the decade.

Consumption Growth Follows Incomes

Relatively rapid income growth in Asia, coupled with reduced inflation in most countries, is stimulating consumption. In Asia's developing economies, income growth has brought more people above poverty levels and has led to improved diets, with consumption of more meat and processed foods. In contrast, the current economic recession in Mexico has lowered demand for all but basic foodstuffs, reversing a trend over the previous 4 years of rising consumption of high-value foods, especially those imported from the United States.

Inflation, Still Moderate in Developed Areas, Is Higher but Abating Elsewhere

The rate of inflation in the APEC developed countries remained moderate as monetary authorities increased interest rates and excess industrial capacity limited price rises for finished goods—even as profit margins increased with larger sales. Progress in trade liberalization through the GATT Uruguay Round Agreement and regional agreements such as NAFTA helped to ease price pressures on both sides of the Pacific. Increased competition in international markets from the newly industrialized and developing countries likewise helped to restrain prices.

Many developed APEC countries had slightly accelerated inflation in 1995. As measured by the Consumer Price Index (CPI), inflation rates rose to 2.8 percent in the United States, 2.0 percent in Canada, 4.5 percent in Australia, 4.2 percent in New Zealand, and 9.1 percent in Hong Kong. However, CPI inflation rates fell in other industrial APEC countries: to 5.9 percent in Korea, 2.4 percent in Singapore, and 3.8 percent in Taiwan. In Japan, consumer prices actually fell—by 0.4 percent—in 1995.

Within the APEC region, inflation in Mexico and in developing Asian countries remained much higher than in the developed countries. Mexico and China experienced the highest levels, at 38.0 and 19.4 percent,

respectively. As mentioned above, Mexican authorities already have taken steps to slow inflation. While Chinese authorities also remain committed to reducing inflation, their fear of increasing unemployment if the unprofitable state industries and enterprises are closed or cut back will likely keep inflation in double digits.

Strength of Yen Affects Developing Asian Economies

Although the yen weakened to about 100 yen/dollar in late 1995 as the Japanese government further eased the money supply and implemented policies to promote capital outflows, medium-term prospects are for a modest appreciation of the yen as the Japanese trade surplus and U.S. trade deficit continue, and as Japanese inflation remains lower than in the United States.

The other Asian economies will continue to experience the effects of the stronger yen, including further direct investments from Japan, partly in place of Japanese exports. Most Asian currencies are directly or indirectly pegged to the dollar, and most Asian economies depend heavily on the United States as a market for their exports. Because many Asian countries rely on Japan for imports of goods and capital, the yen's appreciation translates into higher costs for imported goods from Japan and may contribute to rising levels of inflation. In addition, since a significant portion of developing Asia's debt is yen-denominated, the rising yen also increases debt burdens. On the other hand, Asia's relatively weaker currencies will stimulate exports and encourage Japanese foreign direct investments, as Japan's export competitiveness declines.

Asian Economic Prosperity Is Largely Self-Generated

Developing nations' growth has usually depended on the economic well-being of developed economies as markets for their exports. The current Asian economic expansion is different. Increased income *within* the Asian countries has generated demand for Asian products and has led to rising intra-regional trade. Asia's rapid expansion has also led to larger levels of intra-regional investment, with foreign direct investments from Japan, Singapore, Taiwan, Hong Kong, and Korea constituting a major force behind the region's faster pace of development. Manufacturing, particularly in labor-intensive industries, has shifted out of the developed countries of Asia into Malaysia, Indonesia, Thailand, and, more recently, into China. The combination of increased trade and higher levels of industrialization has formed a cycle of self-sustaining growth. As a result, Asia has emerged more self-sufficient and less dependent on North America and Europe to purchase exports or provide investment funds.

U.S. Agricultural Exports to APEC Region at Record High

by Sophia Wu Huang (202-219-0679)

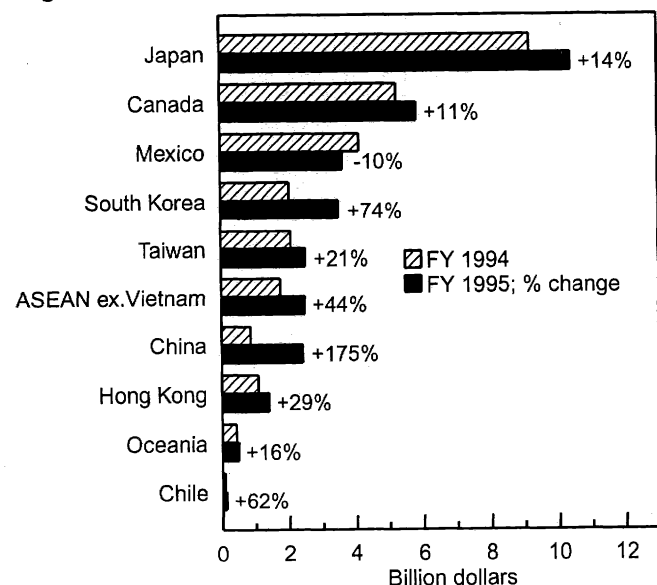
The United States sold 61 percent of its total agricultural exports to the APEC region in fiscal 1995. Sales jumped up 23 percent from the previous year, to a record value of \$33 billion. Exports of high-value products to the region continued to grow strongly. In 1995, sales of bulk agricultural products also grew sharply, in part because of new demand from China and its retreat from export markets—particularly for corn. Prospects for future growth in U.S. farm exports to APEC members are good.

East Asia, China, and NAFTA Partners Dominate U.S.–APEC Farm Trade

U.S. exports of agricultural products increased in fiscal 1995 to all APEC members except Mexico and the minor market of Brunei (fig. 1). Large middle-class populations, improved market access, a weak U.S. dollar, and supply/demand developments in world markets were the major factors contributing to the growth in trade. Exports to China, South Korea, and some ASEAN countries grew particularly fast, though total U.S. exports were still concentrated in East Asia and in North America. The top 7 markets—Japan, Canada, Mexico, South Korea, China, Taiwan, and Hong Kong—accounted for 90 percent of U.S. farm exports to the APEC region in fiscal 1995.

Japan remained the world's largest market for U.S. agricultural exports, purchasing \$10.5 billion in fiscal 1995, while Canada remained a distant second, purchasing \$5.8 billion (fig. 2). U.S. exports to Japan grew by 14 percent, with consumer-oriented goods leading the increase.

Figure 1
U.S. Farm Exports at Record
Highs in Most APEC Markets

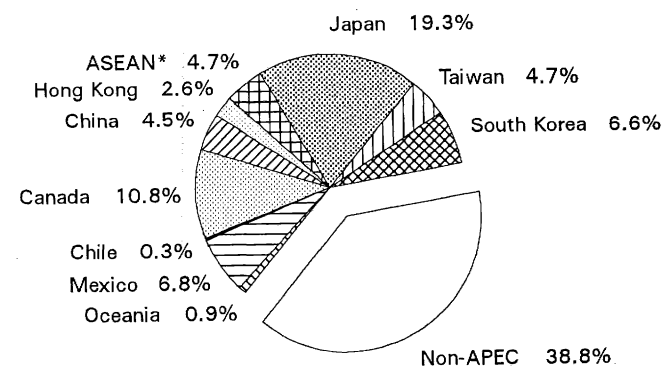


Japanese consumers were eager to obtain lower-priced goods after a prolonged economic recession. The 1992 and 1994 deregulations of Japan's Large Store Retail Law spurred stores to simplify their product distribution channels to counter increased competition. As the yen rose sharply and market access in Japan improved, direct imports of competitively priced foreign foods surged.

U.S. agricultural exports to Canada grew by 11 percent in fiscal 1995. Here too the sharpest value gains were in consumer-oriented products. The preferential access to the Canadian market given to U.S. agricultural products by NAFTA (and by its predecessor CFTA) should ensure continued strong sales for U.S. foods there.

While the value of U.S. agricultural exports to Canada and to Japan reached record levels, other APEC members had more rapidly growing imports of U.S. agricultural products. The most dramatic growth of U.S. sales in fiscal 1995 occurred in China, where exports ballooned from \$0.88 billion to \$2.4 billion—with grains, cotton, and soybean oil leading the growth. To fill grain shortages and hold down prices, China became the world's largest wheat importer, buying more than 10

Figure 2
61.2 Percent of U.S. Farm Exports
Went to APEC Region in FY 1995



Total U.S. agricultural exports = \$54.2 billion = 100%
* ASEAN excluding Vietnam

million tons of wheat in fiscal 1995 (including 3.8 million tons from the United States). For the first time in years, China was a net rice importer (with most of its imports coming from Thailand and Vietnam). In addition, China moved from being the world's second-largest seller of corn to being the world's third-largest buyer, importing 4 million tons of U.S. corn. U.S. cotton sales to China soared, rising 62 percent in value above the level attained in fiscal 1994—because of strong demand, tight supplies in the world market, and poor Chinese harvests over the past 2 years. Expanding sales of such items as frozen poultry and soybean oil supported the continued growth of U.S. sales of high-value farm products.

China's import figures do not include products routed via Hong Kong. There is evidence that substantial quantities of U.S. exports, particularly high-value products, have made their way into China through Hong Kong. U.S. exports to Hong Kong broke the \$1 billion mark for the first time in fiscal 1994, and grew by another 29 percent in fiscal 1995 to reach \$1.4 billion.

China's withdrawal from the corn export market also made it possible for U.S. corn to reclaim former markets in Asia, notably in South Korea and ASEAN countries. Corn sales were helped further by tight world supplies of competing grains, such as feed wheat. As a result, South Korea dramatically increased its coarse grain imports from the United States in fiscal 1995, from \$69 million to \$1 billion. South Korea also substantially increased its imports of U.S. red meats and hides and skins. Total U.S. agricultural exports to South Korea jumped by 74 percent to reach a record \$3.6 billion in fiscal 1995. In the ASEAN countries, fast economic growth raised the demand for U.S. farm products. U.S. sales to ASEAN countries excluding Vietnam (which has not yet joined APEC) grew by 44 percent in fiscal 1995 to reach \$2.6 billion. That is the size of Taiwan's market, after it grew by 21 percent in fiscal 1995. If Taiwan's application to join the WTO is accepted, the island would be required to substantially reduce its trade barriers to agricultural imports, which would further accelerate U.S. sales there.

In contrast to the booming Asian market and to the explosive growth of Mexican imports in the early 1990's, U.S. exports to Mexico dropped by \$432 million to \$3.7 billion in fiscal 1995, because of the devaluation of the Mexican peso and the country's subsequent sharp economic slowdown. The deepest export declines were for consumer-oriented products, which fell by 25 percent. However, U.S. exports of basic food items, including corn, rice, and vegetable oils, increased.

APEC Played Major Role in Increasing U.S. Exports in Most Commodity Groups

Registering double-digit percentage gains in its imports of bulk, intermediate, and consumer-oriented goods, the

APEC region was largely responsible for making fiscal 1995 a banner year for U.S. farm exports. Bulk commodities still accounted for 41 percent of U.S. farm exports to the region in fiscal 1995, despite rapid growth of high-value-product imports over the years (table 2). Led by burgeoning trade in coarse grains, cotton, soybeans, and wheat, bulk commodity exports to APEC members grew by 34 percent in fiscal 1995, reaching \$13.5 billion, or 55 percent of U.S. bulk exports worldwide. APEC countries purchased 72 percent of the global U.S. coarse grain export value, and 76 percent of the global U.S. cotton export value. Strong import demand, a lack of exportable supplies from other countries, and, above all, a drastic shift in China's net trade position underlay the surge of U.S. bulk exports to the region.

While less prominent in value terms, U.S. exports of intermediate farm products to the region rose 21 percent in fiscal 1995, attaining a record \$6 billion. APEC countries accounted for 54 percent of worldwide exports of U.S. intermediate agricultural products. The region drastically increased imports of U.S. soybean oil, from \$69 million to a record \$473 million, mainly due to strong demand from China and below-normal growth of palm oil production. U.S. exports of hides and skins to APEC members grew by 21 percent to \$1.6 billion. The region has long been the dominant market for U.S. hides and skins, which are used principally for processing into re-exported leather goods. In recent years, APEC countries have accounted for more than 90 percent of global U.S. exports of hides and skins.

Further evidence of the generally booming state of these economies is their strong demand for consumer-oriented goods. U.S. exports of consumer foods to the region in fiscal 1995 rose by 14 percent above fiscal 1994 levels, attaining a value of \$13.6 billion. About 73 percent of U.S. consumer-ready food exports were shipped to APEC countries. The top-selling product group was red meats (fresh, chilled, and frozen) at \$3.7 billion, up by 25 percent from the previous year (despite a \$108-million decline in exports to Mexico). More than 90 percent of U.S. red meat exports went to the region, with Japan the dominant destination. Japan imported \$2.5 billion of U.S. meat in fiscal 1995—a 33-percent increase over 1994—with beef the largest component, but pork rising at a faster rate. The major factors increasing Japan's demand for beef were low U.S. prices and a weak U.S. dollar. Exports of U.S. red meats to South Korea jumped up by 54 percent to a record \$333 million because of Korea's quota increase and attractive U.S. beef prices.

Other major exports of U.S. agricultural consumer goods to the region included record sales of fresh fruits (\$1.7 billion), processed fruits and vegetables (\$1.3 billion), fresh vegetables (\$1.1 billion), and poultry meat (\$1.0 billion), with the sales of the latter three products up sharply from the previous year. New records also were set for fruit and vegetable juices, and for wine and beer.

Table 2: U.S. agricultural exports to APEC by commodity, fiscal years 1994 and 1995

Category Commodities	Sales to APEC members		Sales to APEC members as share of global U.S. exports		Share of commodity in U.S. agricultural exports to APEC	
	1994	1995	1994	1995	1994	1995
	----- Million dollars -----		----- Percent -----			
Bulk goods total	10,098	13,542	56	55	37.4	40.9
Coarse grains	2,925	5,352	64	72	10.8	16.1
Soybeans	2,251	2,481	54	47	8.3	7.5
Cotton	1,890	2,669	82	76	7.0	8.1
Wheat	1,705	1,978	42	40	6.3	6.0
Tobacco, unmanufactured	614	557	49	42	2.3	1.7
Rice	381	164	43	16	1.4	0.5
Intermediate goods total	4,943	5,998	53	54	18.3	18.1
Soybean meal	370	459	37	43	1.4	1.4
Soybean oil	69	473	16	58	0.3	1.4
Other vegetable oil	293	395	48	43	1.1	1.2
Feeds and fodders	802	824	47	44	3.0	2.5
Live animals	363	339	62	65	1.3	1.0
Hides and skins	1,299	1,569	91	91	4.8	4.7
Consumer-oriented products total	11,959	13,605	74	73	44.3	41.0
Red meats: fresh, chilled, frozen	2,934	3,660	92	91	10.9	11.0
Poultry meat	850	1,028	60	54	3.1	3.1
Dairy products	450	461	57	57	1.7	1.4
Fresh fruits	1,679	1,712	88	87	6.2	5.2
Fresh vegetables	891	1,063	92	94	3.3	3.2
Processed fruits and vegetables	1,167	1,293	70	68	4.3	3.9
Fruit and vegetable juices	365	433	71	69	1.4	1.3
Tree nuts	412	360	37	32	1.5	1.1
Wine and beer	312	387	65	62	1.2	1.2
Agricultural products total	27,000	33,145	62	61	100.0	100.0

Source: U.S. Census Bureau trade data compiled by Trade and Marketing Analysis Branch, Foreign Agricultural Service, USDA.

Outlook for Fiscal 1996: Continued but Less Spectacular Growth Than in 1995

The APEC region will remain the largest market for U.S. agricultural exports—and also among the fastest growing. However, U.S. agricultural exports to this region are expected to grow much less rapidly in fiscal 1996 than the 23-percent increase experienced in fiscal 1995. Two major factors spurring growth in 1995 will be missing in 1996: the drastic reversal in China's net trade status and the near-record export volumes for U.S. cotton despite unusually high prices.

Although the North American market will continue to be limited by Mexico's economic recession, China and other APEC members in East Asia and ASEAN are still growing rapidly. Already a main hub for U.S. trade, the East Asian market will increasingly depend on agricultural

imports because of its combination of rising incomes and scarce land resources. For high-value products, another important factor in the East Asian market is the improved market access now guaranteed under the Uruguay Round Agreement.

U.S. exporters also have great opportunities beyond the wealthy East Asian societies. China and ASEAN are two obvious examples. With large populations, buoyant economic performance, and relatively low per capita income bases, these areas are expected to provide rapidly growing markets for U.S. agricultural exports.

One-Third of Global U.S. Agricultural Imports Come from Canada and Mexico

Canada and Mexico, major destinations for U.S. agricultural exports, are also the two leading suppliers of U.S.

agricultural imports. The two NAFTA partners supplied nearly one-third of all U.S. agricultural imports in fiscal 1995, with Canada furnishing 18 percent and Mexico 13 percent. Canadian shipments to the United States rose by nearly 3 percent over fiscal 1994 to reach \$5.4 billion. Larger sales of cattle, vegetables, and rapeseed oil were partly offset by declines in grains, oilseeds, malt beverages, and meats. In recent years, Canada has increasingly replaced shipments of live cattle (most for immediate slaughter) by shipments of beef. Reduced grain shipments were due to low Canadian production and stocks. U.S. imports from Mexico surged by 33 percent to \$3.7 billion in fiscal 1995, largely due to favorable terms of trade following the peso's devaluation against the dollar. Vegetables, fruits, cattle, coffee, and beer were among the products with large value gains for Mexican exporters.

ASEAN is another important source for U.S. agricultural

imports, particularly rubber and allied products, as well as tropical vegetable oils. Strong demand for rubber and allied products helped boost ASEAN's agricultural product sales to the United States by 37 percent in fiscal 1995 to \$3.4 billion, or an 11-percent share of the U.S. agricultural import market. Oceania—mainly Australia and New Zealand—accounted for another 6 percent of U.S. imports. Oceania's shipments, dominated by livestock products, were worth \$1.6 billion in fiscal 1995. The 6-percent decline from the previous year occurred mainly because of reduced beef shipments from Australia, the consequence of a drought. The role of the rest of the APEC region—East Asia and China—in U.S. agricultural imports is limited to specialty products, such as garlic and mushrooms. This area captured a 4-percent share of the U.S. agricultural import market, with sales totaling \$1.1 billion in fiscal 1995, about 7 percent higher than in fiscal 1994.

Prospects for Agricultural Trade in the APEC Region

by Jeff Clark (202-219-0389)

APEC members will rapidly expand both their imports and exports of agricultural commodities over the next decade. Imports are forecast to rise by 41 percent for grains, 46 percent for soybeans and derivative products, and 64 percent for meats. Over the same ten-year period, APEC members are projected to increase their exports by 25 percent for grains, 8 percent for soybeans and products, and 57 percent for meats. Rapidly rising incomes in many East and Southeast Asian countries are intensifying the demand for more varied diets, which will lead to more imports of food and feed. Our projections of trade growth presume continued strong economic performance in China and Southeast Asia, and accelerated economic liberalization throughout the region via the WTO, APEC, and other international agreements.

USDA World Model Projects Net Trade

All trade figures discussed in this article and summarized in table 3 are based on historical data and other information available in mid-January 1996, and on the USDA projections subsequently published in *Long-Term Agricultural Projections to 2005* (Staff Report WAOB-96-1), February 1996. The projections are a consensus scenario derived from a combination of formal model results and analysts' judgments, based on a shared set of assumptions. Because action on new U.S. farm legislation was incomplete at the time that the projections were being prepared, U.S. policies authorized under the 1990 farm bill, as amended, were assumed to continue throughout the projections period. All countries were presumed to adhere to existing international agreements which affect agricultural trade. Conversely, the projections assume that no new international agreement affecting agricultural

trade will go into effect, beyond those already signed. Thus the projections make no attempt to estimate the possible effects of China or Taiwan joining the World Trade Organization, nor the potential repercussions of any other proposed trade agreement. The projected trade levels for each country are predicated on normal weather.

Regional Overviews

Asian APEC Members' Rising Incomes Spur Demand for Agricultural Imports

APEC's Asian members will become larger net importers of agricultural products over the next 10 years, as their demand for better diets expands more rapidly than their farm sectors can increase production.

The developed and newly industrialized economies of

East Asia (Japan, South Korea, Taiwan, and Hong Kong) will continue as major markets for U.S. farm products. However, China and several Southeast Asian countries (Thailand, Malaysia, Indonesia, and the Philippines) will grow in relative importance.

Among commodities, meats will have the greatest growth in imports. Meat consumption is particularly responsive to rising incomes. Asian APEC countries lead the world in economic growth, with China and Southeast Asia sustaining high rates. Moreover, Asian markets are expected to become more open to meat imports as they implement the Uruguay Round and bilateral trade agreements. East Asia will remain a major market for U.S. meat exports.

China's leaders are backing away from a strict policy of food self-sufficiency, opening the door for growing food imports. China is projected to become a net importer of oilseeds, meals, vegetable oils, and poultry meat. Since 1994, it has been a net importer of coarse grains (fig. 3) and rice, a condition expected to continue.

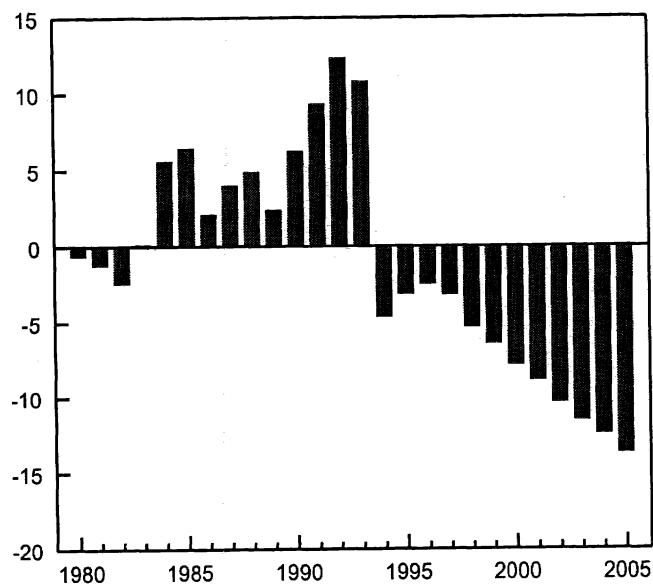
Agricultural Exports from North America Will Grow While Imports Rise in Chile and Mexico

Unlike their Asian counterparts, APEC members in the Western Hemisphere will have growing exports of agricultural commodities, in the aggregate, over the next decade. Exports will rise for both the United States and Canada. However, the smaller markets of Mexico and Chile will become larger net importers.

The elimination of rail transport subsidies for grains, oilseeds, and some specialty crops harvested in Canada's prairie provinces will affect trade in these and other products. Without the subsidies (which were available for shipment to export ports on Canada's coasts, but not for transport to U.S. border towns), farmers will be less inclined to ship their harvests for export overseas and more likely to sell them within Canada or to nearby U.S. markets. Some land now in wheat probably will be diverted to canola production. Additionally, the anticipated lower domestic prices for grains and seeds following the cutoff of transport subsidies should encourage Canadian beef producers to increase their output and exports, and the local milling and crushing industries to expand their capacities.

The Mexican peso devaluation which began in December 1994 had a substantial impact on that country's agricultural trade, sharply reducing imports and increasing exports throughout 1995. However, the principal effects of the devaluation are expected to be reflected in lower base-period values, without significantly affecting Mexico's long-term growth rates. For example, Mexican meat consumption in 1995 was depressed by rapid price escalation as imported feed and livestock products suddenly became expensive, while production for export became more appealing as a means to earn increasingly valuable

Figure 3
China's Net Exports of Coarse Grains
Million tons



hard currency. The poultry industry, in particular, will start from much lower production and consumption levels in 1996 than previously anticipated. The medium-term outlook for the Mexican economy is moderate GDP growth that will support rising wages and demand. In the agricultural sector, the government has maintained its "PROCAMPO" strategy of direct, area-based subsidies to farmers.

Commodity Overviews

Meat Imports Respond Strongly to Rising Incomes and Trade Liberalization

APEC members are expected to increase substantially their trade in meat products over the next 10 years. East Asian countries will be the markets increasing their imports the most, while the U.S. will be the primary beneficiary on the supply side, with an annual export increase of 5.7 percent by volume over the projection period.

In Asia, trade patterns of the feed-livestock complex are changing. As their incomes increase, Asians are consuming a more varied diet, including more meat. Countries have a choice of importing more meat or increasing their own livestock production—which entails increased imports of coarse feed grains, oilseeds, and protein meals.

Japanese livestock production has peaked, both because land is scarce, and because the government has been reducing import barriers that kept local meat prices high. As Japanese livestock production falls, imports of coarse grains, soybeans, and soymeal are declining. However, those declines are being offset by increased imports of high-value-added meat products from the United States

and other countries.

The other East Asian APEC members will be able to continue increasing their livestock production for the time being. However, their demand and imports are expected eventually to follow a path similar to Japan's, as their incomes continue to rise, local production peaks, and imported meat prices fall in concert with trade barriers.

Citizens of China and Southeast Asia are enjoying rising incomes, too. However, unlike their neighbors in East Asia, they are still far from maximizing their livestock production capacities. Hence, imports of feedstuffs by China and Southeast Asian countries are expected to rise significantly over the next decade, in support of their rapidly expanding livestock sectors.

Meat imports by Asian APEC members are projected to grow by 6.4 percent annually through the next decade, maintaining a stable 70 percent share of global meat imports (fig. 4). Rising income levels in China combined with an increasing appetite for meats in Japan and the other industrialized economies of East Asia will drive this import growth. In the Western Hemisphere, Mexican and Chilean meat imports are projected to increase annually by 5.1 percent and 6.3 percent, respectively.

Beef imports in the APEC region are anticipated to grow by 3.3 percent annually, mainly due to strong import growth in Japan, South Korea, and Taiwan. Pork imports are likely to grow by 2.6 percent per year as Japanese production declines and South Korean import barriers fall. China and East Asia will account for most of the 9.0 percent annual import growth in poultry meat expected in the region over the next decade.

In the Western Hemisphere, Mexican imports of both beef and pork are expected to more than double over the projection period as income levels rise, allowing consumers to satisfy demand recently suppressed by the effects of the peso crisis. Assuming that the government enforces the tariff rate quota authorized under NAFTA, Mexico's poultry imports will fall off abruptly in 1996, and then grow by an estimated 2.6 percent per year thereafter. Chile is anticipated nearly to double its imports of beef over the projection period.

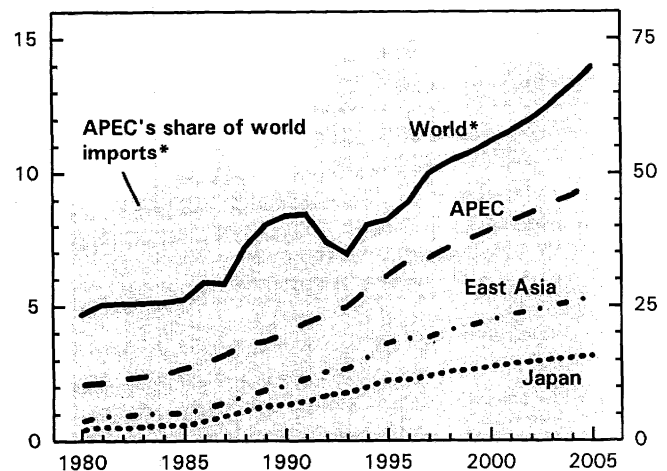
On the supply side, Australian and U.S. beef exports are expected to enjoy sustained robust growth as Japan continues to demand more grain-fed chilled beef, and as South Korea relaxes its beef import regulations in accordance with Uruguay Round and U.S.-Korean bilateral agreements. Japan is now Australia's largest beef export market, but strong price competition from the United States has led to some recent erosion in Australia's market share. Beef exports from New Zealand and Canada are projected to rise as well. The United States and China are expected to increase net exports of pork, whereas exports from Taiwan and Canada are expected to fall. In

Figure 4

Meat Imports

Million tons (for lines)

Percent (for shaded area)



* "World imports" exclude intra-European Union meat trade.

spite of its rapidly increasing production of poultry meat, China is projected to switch from being a net exporter to being a significant net importer early in the next century. Although Thailand's broiler production will expand, increasing domestic demand and labor costs are expected to prevent the country from enlarging its share of APEC's poultry exports. U.S. poultry exports are anticipated to rise by 5.8 percent per year throughout the projection period.

New Rice Markets Emerge

Total production and total consumption of rice in the APEC region are forecast to remain relatively stable over the coming decade. Southeast Asians will consume more rice, but consumption will fall in the higher income East Asian countries as diets diversify. Thailand and Australia are the only APEC members expected to increase their net exports over the projection period. The United States, the only other net exporter of rice in APEC, is projected to decrease its exports slightly.

Even though Japanese production is anticipated to fall steadily over the ten-year period, access to the previously closed Japanese rice market is likely to be limited to the minimum levels mandated by the Uruguay Round agreement, which calls for imports of 758,000 tons in 2000. With domestic rice supplies in South Korea expected to remain tight, that country's rice imports are projected to furnish 4-8 percent of its consumption over most of the decade. This would keep South Korea's imports above the minimum levels mandated under the Uruguay Round.

Despite anticipated moderate growth in production, the Philippines' rice imports are expected to increase by 2.3 percent per year. Although China and Indonesia have been volatile rice traders in recent years, both countries are expected to be perennial net importers over the next

decade. With China's huge purchases in 1994 viewed as an exceptional case, Chinese imports are projected to increase by 2.2 percent annually from an estimated value of 878,000 tons in 1996. Indonesia's modest rise in production should outpace its increase in consumption, enabling the country to move closer to its goal of rice self-sufficiency. Imports in 2005 are projected to be less than one-fourth of their 1993-95 average level. In contrast, Thailand's projected growth in rice production is expected to allow it to boost rice exports by 2.1 percent yearly, causing them to surpass 6.7 million tons in 2005.

Since the late 1980's, Vietnam (a member of ASEAN but not of APEC) has been the world's third- or fourth-ranking rice exporter, after Thailand, the United States, and sometimes India. But in spite of continuing strong growth rates for production, rising incomes are expected to increase domestic consumption enough to reduce the amounts left over for export. Over the next decade, Vietnam's rice exports are projected to contract by 0.9 percent per year, from a 2-million-ton average in 1993-95 to 1.9 million tons in 2000 and 1.8 million tons in 2005.

Rapidly Growing Wheat Imports by China and Southeast Asia

Wheat imports in the APEC region are expected to grow by 3.2 percent per year over the projection period. China is projected to account for the largest growth in imports, purchasing 18.2 million tons in 2005 after a decade of 6.8 percent annual increases. Southeast Asia is projected to increase its wheat imports by 5.0 percent per year, reaching 13.0 million tons in 2005. Demand growth in Southeast Asia reflects urbanization and a growing appetite for noodles, bread, and other wheat-based foods.

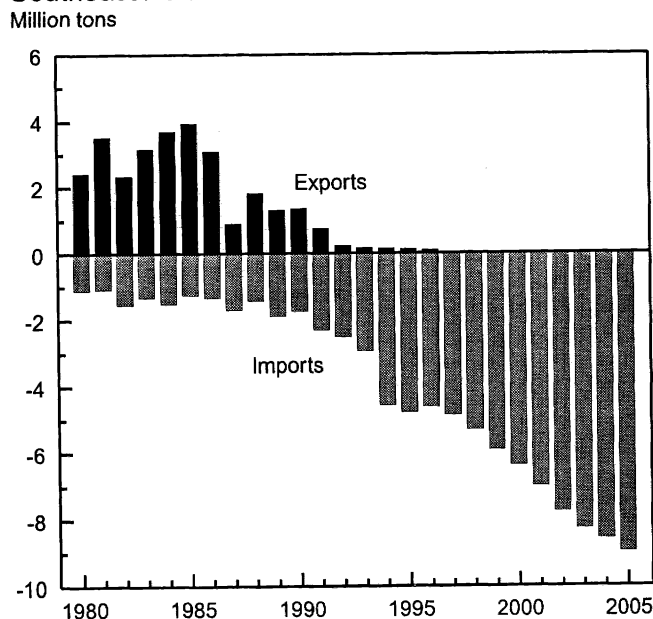
The United States, Canada, and Australia are expected to increase their exports over the projection period by 2.3, 0.3, and 2.3 percent per year, respectively. Canadian exports in 1994 were unexpectedly high, depleting stocks, as suppliers took advantage of higher world prices and of the transport subsidy before it expired in August 1995.

Coarse Grain Imports Surge To Feed Livestock

Coarse grain imports by APEC members are projected to increase to 46 percent above their 1993-95 average by 2005. Developing economies throughout the region will increase meat consumption, expand livestock production in response, and thus need more coarse grain imports to nourish their growing herds and flocks.

The APEC region's production of coarse grains will continue to be concentrated in the United States and China. The United States is anticipated to export much of its increased production, with a 48-percent rise in exports. China, conversely, will need to more than triple its coarse grain imports to satisfy escalating demand.

Figure 5
Southeast Asian Coarse Grain Trade



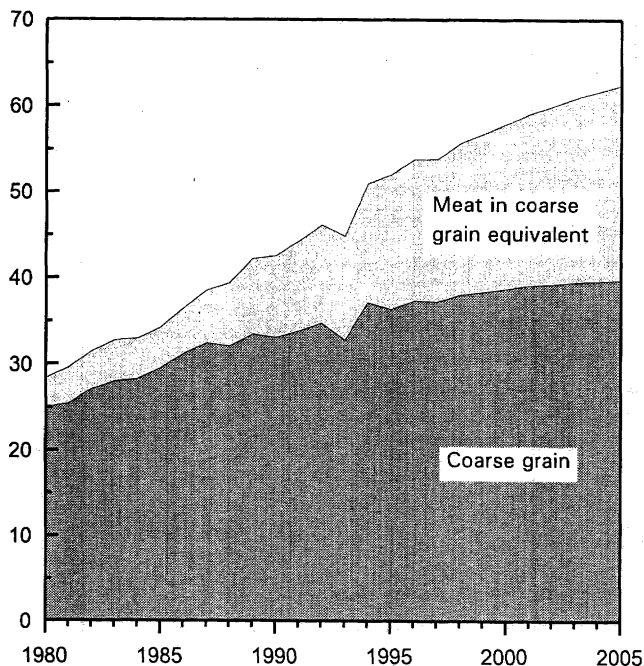
Growth in Australian production will support increased feeding of local beef for export, thus limiting its barley surplus for export. Outside of Japan, consumption and imports of coarse grains in East and Southeast Asia are expected to grow in support of expanding domestic livestock sectors. APEC members are anticipated to become a driving force in world markets, augmenting their coarse grain imports by 25 million tons over the next decade. USDA projects that Chinese imports will rise by 12 percent per year, reaching 14.3 million tons in 2005; that Southeast Asia will increase its imports by 7.4 percent per year to 9.0 million tons (fig. 5); and that Mexico's imports will rise by 5.7 percent per year, surpassing 10 million tons in 2005.

Producers of feed grains are optimistic about the short-term outlook of increased livestock production in East Asia, but some are concerned about the long-term prospect that most countries will follow Japan's pattern of switching from feedgrain imports to meat imports as farm labor becomes more expensive and ecological concerns mount. At first glance a movement toward meat imports may seem disadvantageous for coarse grain producers. However, taking into account the coarse grain eaten by the livestock which produced the meat shipped to APEC members, the opportunities for long-term growth in total grain demand become obvious (fig. 6, next page).

Exports of Soybeans, Meal, and Oil Spurred by Rising Demand in China and Southeast Asia

Trade in oilseeds and oilseed products is being driven by rapidly growing demand in China and Southeast Asia. Oilseed production in these areas will expand, but not rapidly enough to meet demand, thus leaving room for

Figure 6
 East Asian Imports of Coarse Grain and
 Imports of Meat in Coarse Grain Equivalent
 Million tons



greater imports. APEC members' total imports of soybeans and soymeal are anticipated to increase by 3.5 percent annually to 2005. The United States, and Canada to a lesser extent, will be able to take advantage of the burgeoning demand. U.S. exports of soybeans and soy products are anticipated to grow by 1.0 percent per year through 2005. Canada is expected to have modest and growing net exports of soybeans and soy products over most of the projection period, with an increasing portion of its soybean harvest processed into oil and meal before it is exported.

As with coarse grains, China is expected to switch from being a net exporter of oilseeds and oilmeals to being a net importer by the turn of the century. Growing at an annual rate of 25 percent, China's imports of soybeans and soymeal are driven both by expanding meat production and by rising consumer demand for edible oils. In Southeast Asia, increasing poultry production will be the

main cause of the projected 5.1 percent annual growth in soybean and soymeal imports.

Falling vegetable oil tariffs in Japan and in South Korea are hurting their oilseed crushing industries. In South Korea, the adjustment is expected to cause imports of finished oil and meal products to replace imports of oilseeds for processing. Japan and Taiwan are the only countries in East and Southeast Asia projected to reduce their imports of soymeal. Japan's reduction will be due to its declining livestock sector, while Taiwan is anticipated to import more soybeans and less soymeal as recently adjusted tariff schedules favor imports of unprocessed oilseeds for local processing.

Southeast Asia Will Increase Its Vegetable Oil Exports

Production of vegetable oils in Southeast Asia is expected to increase dramatically over the next 10 years, resulting in large exportable surpluses. Indonesia and Malaysia are projected to increase their production and exports of palm oil over the next decade. Vegetable oil consumption in China and Southeast Asia will increase substantially, with China's soy oil imports in 2005 estimated to be 23 percent above their present level. Aggregate imports of soy oil by APEC members are expected to grow by 1.7 percent per year, compounding to a 21-percent increase over the decade. The United States is expected to augment its exports of soy oil by 0.2 percent per year, reaching nearly 1 million tons in 2005.

Cotton Spinning Concentrates in Poorer Asian Countries

Cotton spinning will continue its transition from the more developed countries in the Asian APEC region to less developed ones. Declining competitiveness in Japan, South Korea, and Taiwan is driving down cotton yarn fabrication and therefore the need for cotton imports. Cotton production in China, the United States, and Australia will increase substantially, but not enough to keep pace with growing demand from factories in the region's poorer countries. That will create opportunities for expanded exports by cotton producers outside the APEC region.

Table 3: APEC members' agricultural commodity trade, by item and place, average past and forecast future levels, for selected crop years

PRODUCT Region Country	Exports				Imports			
	3-year average		Forecast		3-year average		Forecast	
	1984-86	1994-96	2000	2005	1984-86	1994-96	2000	2005
TOTAL MEAT	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	2,280	6,572	8,859	10,302	2,679	5,810	7,796	9,527
APEC, less USA	1,810	3,609	4,597	5,145	1,273	4,500	6,410	8,048
Western Hemisphere	832	3,535	4,902	5,811	1,593	2,075	2,320	2,604
United States	470	2,964	4,262	5,157	1,406	1,310	1,386	1,479
Canada	361	545	605	614	171	328	354	395
Mexico	1	10	9	10	16	371	499	608
Chile	0	16	26	30	0	66	81	122
China and East Asia	375	1,205	1,940	2,250	1,084	3,637	5,404	6,834
China	271	542	1,008	1,175	0	311	937	1,509
Japan	0	5	6	9	640	2,115	2,737	3,154
South Korea	0	13	18	23	11	298	450	641
Taiwan	98	326	279	240	34	67	89	122
Hong Kong	5	319	629	803	400	845	1,191	1,408
Southeast Asia	46	211	239	279	2	87	69	84
Thailand	46	172	185	187	0	0	24	25
Malaysia	0	39	54	92	0	8	8	7
Indonesia	-	-	0	0	-	-	0	0
Philippines	0	0	0	0	2	79	37	52
Oceania	1,028	1,622	1,778	1,962	0	11	3	5
Australia	708	1,135	1,260	1,440	0	9	3	5
New Zealand	320	486	518	522	0	3	0	0
BEEF	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	1,333	2,778	3,333	3,775	1,389	2,677	3,188	3,693
APEC, less USA	1,153	1,929	2,158	2,391	468	1,677	2,076	2,468
Western Hemisphere	290	1,075	1,467	1,716	1,038	1,375	1,594	1,787
United States	181	849	1,175	1,384	921	1,000	1,112	1,225
Canada	109	222	286	325	114	230	204	214
Mexico	0	4	6	7	3	78	197	226
Chile	0	0	0	0	0	66	81	122
China and East Asia	19	100	105	114	349	1,231	1,539	1,834
China	19	98	105	114	0	4	6	6
Japan	0	0	0	0	227	889	1,062	1,181
South Korea	0	0	0	0	11	203	304	439
Taiwan	0	0	0	0	34	63	83	115
Hong Kong	1	2	0	0	78	71	84	93
Southeast Asia	0	0	0	0	2	63	55	72
Thailand	-	-	0	0	-	-	18	25
Malaysia	0	0	0	0	0	0	0	0
Indonesia	-	-	0	0	-	-	0	0
Philippines	0	0	0	0	2	63	37	47
Oceania	1,024	1,603	1,761	1,945	0	8	0	0
Australia	704	1,117	1,243	1,423	0	5	0	0
New Zealand	320	486	518	522	0	3	0	0

- = not available.

Sources: USDA historical data as of January 1996, and USDA, ERS, Long-Term Agricultural Projections to 2005, February 1996.

Table 3: APEC members' agricultural commodity trade, by item and place, average past and forecast future levels, for selected crop years

PRODUCT Region Country	Exports				Imports			
	3-year average		Forecast		3-year average		Forecast	
	1984-86	1994-96	2000	2005	1984-86	1994-96	2000	2005
PORK	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	650	1,230	1,381	1,468	1,002	1,494	1,717	1,936
APEC, less USA	593	895	873	835	517	1,184	1,443	1,682
Western Hemisphere	307	659	828	926	505	412	430	483
United States	57	335	508	633	485	310	274	254
Canada	249	314	309	279	19	34	59	80
Mexico	1	5	3	3	1	68	97	149
Chile	0	4	8	11	0	0	0	0
China and East Asia	341	542	526	507	497	1,063	1,277	1,443
China	243	202	234	249	0	0	0	0
Japan	0	0	0	0	283	768	962	1,103
South Korea	0	13	18	23	0	67	99	109
Taiwan	97	320	274	235	0	3	5	6
Hong Kong	0	7	0	0	215	225	211	225
Southeast Asia	0	20	20	28	0	15	6	5
Thailand	-	-	0	8	-	-	6	0
Malaysia	-	20	20	20	-	-	0	0
Indonesia	-	-	0	0	-	-	0	0
Philippines	0	0	0	0	0	15	0	5
Oceania	2	9	7	7	0	3	3	5
Australia	2	9	7	7	0	3	3	5
New Zealand	-	-	-	-	-	-	-	-
POULTRY *	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	297	2,565	4,145	5,059	288	1,640	2,891	3,898
APEC, less USA	65	785	1,566	1,919	288	1,640	2,891	3,898
Western Hemisphere	235	1,801	2,607	3,169	50	288	296	334
United States	232	1,780	2,579	3,140	0	0	0	0
Canada	3	9	10	10	38	64	91	101
Mexico	-	-	0	0	13	224	205	233
Chile	-	12	18	19	-	-	0	0
China and East Asia	15	563	1,309	1,629	238	1,343	2,587	3,557
China	9	243	669	812	-	307	931	1,503
Japan	0	5	6	9	130	458	713	870
South Korea	0	0	0	0	0	28	47	93
Taiwan	1	6	5	5	0	1	1	1
Hong Kong	5	310	629	803	107	549	895	1,090
Southeast Asia	46	191	219	251	0	8	8	7
Thailand	46	172	185	179	0	0	0	0
Malaysia	-	19	34	72	-	8	8	7
Indonesia	-	-	0	0	-	-	0	0
Philippines	0	0	0	0	0	0	0	0
Oceania	1	10	10	10	0	0	0	0
Australia	1	10	10	10	0	0	0	0
New Zealand	-	-	-	-	-	-	-	-

- = not available. * Poultry projections revised from cited source.

Sources: USDA historical data as of January 1996, and USDA, ERS, Long-Term Agricultural Projections to 2005, February 1996.

Table 3: APEC members' agricultural commodity trade, by item and place, average past and forecast future levels, for selected crop years

PRODUCT Region Country	Exports				Imports			
	3-year average		Forecast		3-year average		Forecast	
	1984-86	1994-96	2000	2005	1984-86	1994-96	2000	2005
COARSE GRAIN	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	65,130	66,578	77,978	87,374	37,412	53,957	67,329	78,689
APEC, less USA	19,080	13,083	7,987	8,358	36,612	50,473	64,098	75,458
Western Hemisphere	51,144	58,329	74,445	83,970	5,071	10,123	13,247	15,623
United States	46,050	53,495	69,991	79,016	799	3,484	3,231	3,231
Canada	5,085	4,789	4,452	4,937	586	660	993	1,301
Mexico	0	45	0	0	3,575	5,445	8,210	10,057
Chile	9	0	2	17	110	534	813	1,035
China and East Asia	5,677	4,913	1,391	1,231	30,957	39,567	47,698	54,079
China	5,677	4,913	1,391	1,231	969	4,070	8,930	14,307
Japan	0	0	0	0	21,230	20,777	19,711	19,517
South Korea	0	0	0	0	4,016	8,488	12,146	12,796
Taiwan	0	0	0	0	4,425	6,165	6,911	7,459
Hong Kong	-	-	-	-	316	67	0	0
Southeast Asia	3,569	148	0	0	1,374	4,111	6,385	8,987
Thailand	3,512	113	0	0	0	147	383	693
Malaysia	0	0	0	0	1,193	2,226	2,830	3,455
Indonesia	56	35	0	0	57	1,587	2,478	3,477
Philippines	0	0	0	0	125	150	694	1,362
Oceania	4,740	3,188	2,142	2,173	10	157	0	0
Australia	4,740	3,188	2,142	2,173	10	157	0	0
New Zealand	-	-	-	-	-	-	-	-
SOY BEANS	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	20,525	21,545	22,625	24,271	9,478	12,528	15,242	17,782
APEC, less USA	1,512	1,237	1,125	1,138	9,478	12,528	15,242	17,782
Western Hemisphere	19,160	20,829	22,275	23,957	1,354	2,164	2,933	3,725
United States	19,012	20,308	21,500	23,133	0	0	0	0
Canada	148	521	775	824	207	47	44	47
Mexico	0	0	0	0	1,147	2,117	2,889	3,678
Chile	-	-	0	0	-	-	0	0
China and East Asia	1,363	700	330	294	7,548	8,780	10,144	11,304
China	1,363	700	330	294	157	183	1,164	2,307
Japan	0	0	0	0	4,758	4,802	4,734	4,818
South Korea	0	0	0	0	943	1,245	1,471	1,183
Taiwan	0	0	0	0	1,691	2,550	2,775	2,996
Hong Kong	-	-	-	-	-	-	-	-
Southeast Asia	1	16	20	20	576	1,529	2,098	2,672
Thailand	1	0	0	0	0	148	226	340
Malaysia	0	16	20	20	224	597	860	1,037
Indonesia	0	0	0	0	338	636	772	997
Philippines	0	0	0	0	14	147	240	299
Oceania	0	0	0	0	0	56	67	81
Australia	0	0	0	0	0	56	67	81
New Zealand	-	-	-	-	-	-	-	-

- = not available.

Sources: USDA historical data as of January 1996, and USDA, ERS, Long-Term Agricultural Projections to 2005, February 1996.

Table 3: APEC members' agricultural commodity trade, by item and place, average past and forecast future levels, for selected crop years

PRODUCT Region Country	Exports				Imports			
	3-year average		Forecast		3-year average		Forecast	
	1984-86	1994-96	2000	2005	1984-86	1994-96	2000	2005
SOY MEAL	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	6,668	6,450	5,733	6,072	2,076	5,631	7,055	8,657
APEC, less USA	1,162	926	426	266	2,076	5,631	7,055	8,657
Western Hemisphere	5,510	5,543	5,332	5,833	744	1,247	1,481	1,688
United States	5,506	5,524	5,307	5,806	0	0	0	0
Canada	3	19	25	26	611	721	725	745
Mexico	0	0	0	0	96	352	467	561
Chile	0	0	0	0	36	173	288	382
China and East Asia	1,158	902	396	234	394	1,856	2,050	2,628
China	1,103	900	394	232	1	66	426	681
Japan	1	2	2	2	177	848	564	450
South Korea	0	0	0	0	150	787	939	1,400
Taiwan	10	0	0	0	0	143	121	96
Hong Kong	45	0	-	-	66	11	-	-
Southeast Asia	0	5	5	5	938	2,529	3,524	4,342
Thailand	0	0	0	0	212	811	1,043	1,269
Malaysia	0	5	5	5	155	447	558	740
Indonesia	0	0	0	0	241	550	876	1,059
Philippines	0	0	0	0	330	722	1,048	1,274
Oceania	0	0	0	0	0	0	0	0
Australia	-	-	-	-	24	237	0	0
New Zealand	-	-	-	-	4	49	-	-
SOY OIL	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	681	1,142	1,057	1,165	399	1,418	1,491	1,690
APEC, less USA	61	210	195	212	392	1,418	1,491	1,690
Western Hemisphere	624	967	873	969	106	183	161	203
United States	620	932	862	953	7	0	0	0
Canada	4	18	11	16	10	82	29	31
Mexico	0	18	0	0	40	8	9	19
Chile	0	0	0	0	49	93	123	154
China and East Asia	7	57	25	25	238	1,174	1,283	1,469
China	2	49	20	20	227	1,099	1,246	1,351
Japan	2	0	0	0	1	21	8	7
South Korea	0	0	0	0	1	32	28	104
Taiwan	1	6	5	5	7	3	1	6
Hong Kong	3	2	-	-	3	20	-	-
Southeast Asia	50	118	159	171	54	60	47	18
Thailand	0	0	0	2	15	7	7	2
Malaysia	50	101	124	144	28	33	15	6
Indonesia	0	17	35	25	2	6	18	1
Philippines	0	0	0	0	9	14	7	8
Oceania	0	0	0	0	0	0	0	0
Australia	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-

- = not available.

Sources: USDA historical data as of January 1996, and USDA, ERS, Long-Term Agricultural Projections to 2005, February 1996.

Table 3: APEC members' agricultural commodity trade, by item and place, average past and forecast future levels, for selected crop years

PRODUCT Region Country	Exports				Imports			
	3-year average		Forecast		3-year average		Forecast	
	1984-86	1994-96	2000	2005	1984-86	1994-96	2000	2005
RICE	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	8,323	11,830	8,677	9,176	1,620	2,537	1,700	1,509
APEC, less USA	6,135	9,023	5,895	6,519	1,551	2,291	1,313	941
Western Hemisphere	2,188	2,808	2,781	2,658	250	806	1,079	1,349
United States	2,188	2,808	2,781	2,658	69	246	387	568
Canada	0	0	0	0	93	200	218	235
Mexico	0	0	0	0	75	325	424	482
Chile	0	0	0	0	13	34	50	64
China and East Asia	1,214	993	393	391	695	2,615	2,340	2,414
China	1,092	590	393	390	327	1,083	962	1,066
Japan	0	203	0	0	18	1,066	758	758
South Korea	0	50	0	0	0	39	228	205
Taiwan	122	150	0	1	3	20	6	6
Hong Kong	-	-	-	-	346	407	386	379
Southeast Asia	4,512	5,454	6,151	6,743	665	2,503	1,662	1,471
Thailand	4,224	5,379	6,151	6,743	1	0	0	0
Malaysia	0	0	0	0	352	348	442	545
Indonesia	251	75	0	0	69	1,750	884	404
Philippines	37	0	0	0	243	405	336	522
Oceania	409	575	603	620	10	34	38	38
Australia	409	575	603	620	10	34	38	38
New Zealand	-	-	-	-	-	-	-	-
WHEAT	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	64,442	64,058	71,381	77,103	21,728	33,188	41,384	46,912
APEC, less USA	34,217	31,181	31,915	34,924	21,303	30,471	37,982	43,918
Western Hemisphere	48,904	52,410	58,320	62,333	1,070	4,943	5,983	5,620
United States	30,225	32,877	39,467	42,179	426	2,717	3,402	2,994
Canada	18,674	19,499	18,800	20,100	18	127	103	108
Mexico	5	33	54	54	386	1,451	1,651	1,400
Chile	0	0	0	0	241	647	827	1,118
China and East Asia	314	475	400	400	17,544	20,604	25,134	28,309
China	0	67	0	0	7,606	8,800	15,100	18,154
Japan	314	408	400	400	5,639	6,248	6,350	6,406
South Korea	0	0	0	0	3,346	4,234	2,340	2,351
Taiwan	0	0	0	0	771	905	945	984
Hong Kong	-	-	-	-	183	417	399	414
Southeast Asia	19	140	161	170	3,112	7,596	10,234	12,947
Thailand	0	0	0	0	184	673	1,021	1,361
Malaysia	16	140	161	170	606	1,209	1,493	1,723
Indonesia	0	0	0	0	1,451	3,508	4,924	6,400
Philippines	3	0	0	0	871	2,206	2,796	3,463
Oceania	15,205	11,034	12,500	14,200	2	45	34	36
Australia	15,205	11,034	12,500	14,200	2	45	34	36
New Zealand	-	-	-	-	-	-	-	-

- = not available.

Sources: USDA historical data as of January 1996, and USDA, ERS, Long-Term Agricultural Projections to 2005, February 1996.

Table 3: APEC members' agricultural commodity trade, by item and place, average past and forecast future levels, for selected crop years

PRODUCT Region Country	Exports				Imports			
	3-year average		Forecast		3-year average		Forecast	
	1984-86	1994-96	2000	2005	1984-86	1994-96	2000	2005
COTTON	<i>Thousand metric tons</i>				<i>Thousand metric tons</i>			
All APEC members	1,955	2,167	2,336	2,594	2,222	2,857	3,081	3,469
APEC, less USA	877	478	681	721	2,217	2,852	3,080	3,468
Western Hemisphere	1,163	1,722	1,736	1,957	80	202	190	226
United States	1,078	1,688	1,655	1,874	4	6	1	1
Canada	0	0	0	0	47	48	51	53
Mexico	85	34	82	83	14	127	114	143
Chile	0	0	0	0	14	21	23	29
China and East Asia	565	138	121	113	1,726	1,718	1,701	1,740
China	502	89	100	92	7	513	665	832
Japan	0	0	0	0	716	395	294	225
South Korea	0	3	0	0	376	355	354	332
Taiwan	0	1	0	0	376	253	210	176
Hong Kong	63	45	21	21	251	202	179	174
Southeast Asia	9	6	0	0	415	938	1,190	1,503
Thailand	9	6	0	0	189	330	442	584
Malaysia	0	0	0	0	28	64	54	59
Indonesia	0	0	0	0	164	476	606	745
Philippines	0	0	0	0	33	68	88	116
Oceania	218	300	479	524	1	0	0	0
Australia	218	300	479	524	1	0	0	0
New Zealand	-	-	-	-	-	-	-	-

- = not available.

Sources: USDA historical data as of January 1996, and USDA, ERS, Long-Term Agricultural Projections to 2005, February 1996.

China's Rising Imports Will Not Cause Global Grain Shortage

by Frederick Crook (202-219-0002) and William T. Coyle (202-501-8136)

China's grain import needs are forecast to increase in the future, as rising incomes, a changing diet, and limited agricultural land resources will cause consumption to rise more rapidly than production. Production is expected to expand by about 1 percent per year in the next decade despite declining land availability due to urbanization. At present, yields are lower than reported in official statistics because those statistics significantly underestimate planted area. Thus China's yields have ample leeway to rise in the future, with better management, higher yielding seeds, greater use of inputs like fertilizer, reduced post-harvest losses, and significant scope for expansion of double and triple cropping in southern China.

China Crucial to APEC Grain Trade

The future of China's grain sector will be the single most important variable affecting the future of agricultural trade in the APEC region. China's production accounts for about 40 percent of the APEC total and for about 20 percent of global grain production (fig. 7).

In the early 1990's, China's rising corn exports made it the world's second-largest corn exporter after the United States. China's exports to South Korea, for example, greatly reduced the U.S. share of the Korean market.

But things have changed dramatically in the last 2 years. Stocks-to-use ratios for grains are lower than they were in the early 1970's, with global consumption projected to exceed output for the third year in a row. These developments occurred while China's grain prices were rising, leading its government to curb exports and expand imports. In 2 years, China has shifted from net exports of 7.5 million tons to net imports of 15.5 million tons—a swing of 23 million tons, or about 10 percent of global grain trade (fig. 8).

Higher Incomes Will Boost Demand

The recent large swing in China's net trade warrants attention, though such rapid change is not unprecedented in global grain markets. Similarly large fluctuations occurred with the Soviet Union in the 1970's. However, there is a significant difference: whereas the fluctuations in Soviet grain trade were largely random events—the sequel of a crop failure or a bumper harvest—the growth in China's imports may be sustained for years, supported by higher and rapidly growing per-capita income levels. The DRI/McGraw-Hill *World Markets Countries Summaries* forecast that China's economy would expand by 10.2 percent in 1995, and by another 9.3 percent in 1996, making it the fastest-growing APEC country over the next 2 years. The major challenge for China is controlling inflation while sustaining growth. Rapid inflation tends to reduce exports and augment imports. Such trends

Figure 7
Nearly Half of the World's Grain Is Produced in the APEC Region, with More than a Fifth Coming from China Alone

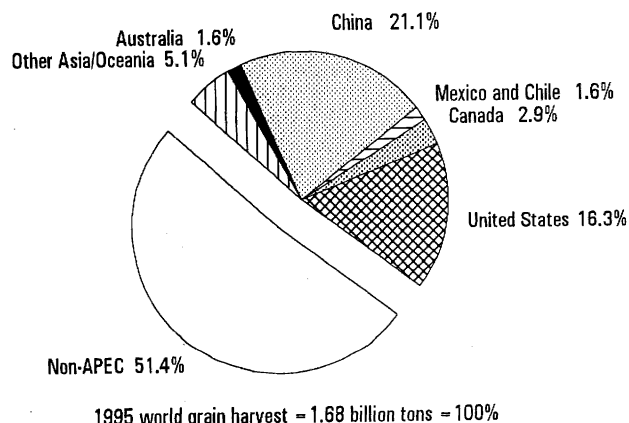
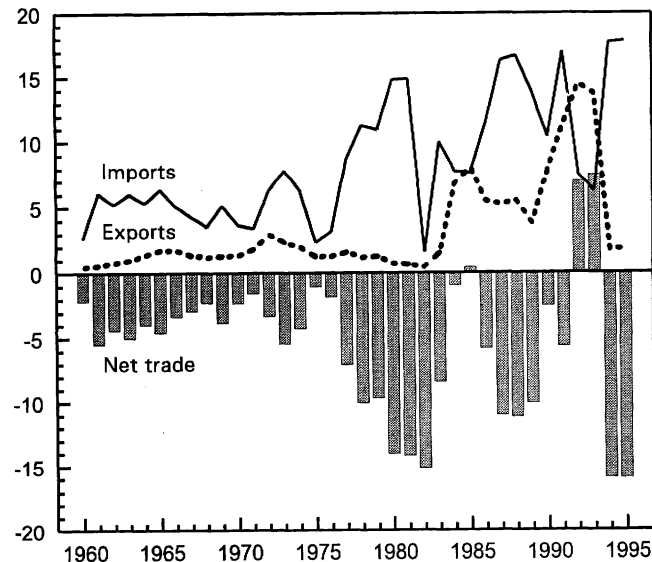


Figure 8
China's Total Grain Trade
Million tons



have already been manifested in Chinese trade of grain, cotton, and basic producer goods like petroleum, steel, and fertilizer.

China's rapid growth comes on top of an already fairly high average income. In 1992, per capita income was equivalent to about \$1,600, up from \$600 in 1980 on a purchasing-power-parity basis (which compares what China's currency can buy at home with the purchasing power of other countries' currencies). Some economists estimate that in certain coastal regions real per capita income was as high as \$4,000 [1,8].¹ In 1992, there were an average of 70 color televisions and 80 washing machines per 100 households in urban areas. As recently as 1981, the rates were just 1 color television and 6 washing machines per 100 urban households [1,5].

Continuing rapid economic growth in China will have several consequences for food and agriculture. One will be major changes in dietary patterns, away from food grains like rice and wheat and toward livestock products, fruits, vegetables, and processed foods. This pattern is widespread in Asia. Income changes have a big impact on a nation's livestock sector and on the derived demand for feed grains. In countries with limited agricultural resources, including China and other East Asian nations, the costs of increasing livestock production rise rapidly, making meat imports more competitive.

A second consequence of rapid economic growth is a decline in agriculture's share of the country's output and employment. As income rises, the demand for food rises more slowly than the demand for many other goods and services. This causes resources to be bid away from agriculture and into other, more remunerative activities. The decline can be especially fast in densely populated and rapidly growing markets, like coastal China and East Asia.

Future developments in China's grain markets depend on demand, supply, and policy factors, many of which are difficult to predict. Perhaps the easiest to forecast are demand factors such as population and income growth. China's natural rate of population growth, which has already begun to decline, is forecast to fall to about 0.9 percent in 1995-2000, and to 0.8 percent in 2000-2005.

The rapid economic growth of the last several years conditions our view of China's future. Although China is unlikely to sustain double-digit economic growth rates over the next 10 years, many observers forecast relatively high rates of growth, with somewhat faster growth in urban than in rural areas [1]. Other important factors that will influence imports are future world prices for grains, meats, and fertilizer, and the rising opportunity costs of labor and land in agriculture.

¹ Numbers in brackets refer to sources listed at end of article.

China's Grain Imports Will Grow Steadily, but Not Catastrophically

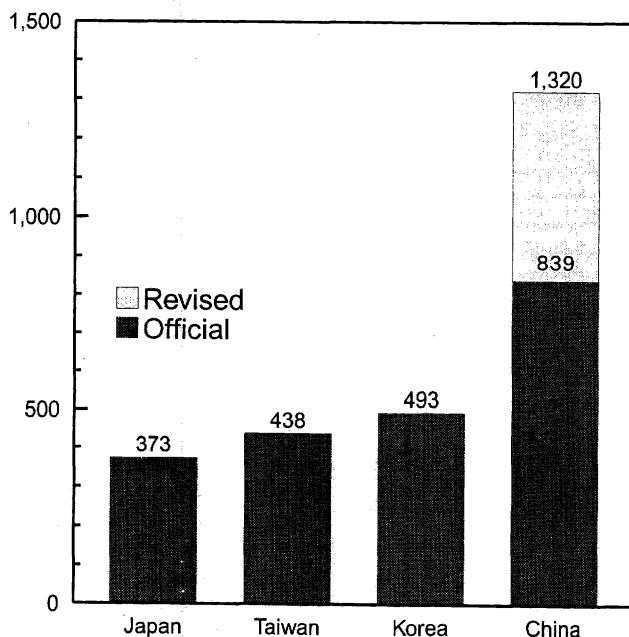
Many observers foresee a continuing modest gap between the growth rates of grain production and consumption in China, leading to gradually rising net imports. Estimates of China's grain imports in 2000 range up to 40 million tons (compared with 16 million tons in 1995).

Total grain consumption is likely to rise by no more than 1.5 percent per year, due almost entirely to the increase in demand for feed grain (increases in wheat will largely offset declines in rice). We forecast that grain production will most likely grow by only 1 percent per year. Key factors that will affect supply are the availability of arable land, intensified use of fertilizer, and expanded double- and triple-cropping.

Arable Land Area Underestimated

A report published in 1992 noted that the actual amount of arable land in 1985 was 44 percent greater than the 96.85 million hectares of arable land officially reported by China's State Statistical Bureau (SSB) [5,7]. According to the SSB, by 1990 China's arable land area had declined to 95.7 million hectares. Taking the estimated 44 percent underreporting into account, China's arable land per capita is 3.26 times as large as Japan's, 2.46 times as large as South Korea's, and 2.77 times as large as Taiwan's (fig. 9) [2,3,4,6]. Surely, China is losing arable land to urban development, road and rail construction, factory sites, dams, docks, bridges, and airfields every year. But at the same time, new farmland is being reclaimed. China remains in a much stronger position than its neighbors to maintain per-capita grain output.

Figure 9
Cultivated Land Per Capita
Square meters



Higher Yields are Possible

Many researchers use SSB yield data to predict future trends. However, SSB statisticians admit that they over-report grain yields to compensate for underreporting land areas. SSB statisticians are more interested in getting accurate figures for total production than for production per hectare, so they rely on sample survey cuttings to determine actual yields, and then inflate those yields by 20 to 30 percent to compensate for underreported grain areas. Because China's actual crop yields are lower than reported, there is more potential to boost grain yields than previously thought.

In addition, differences in the way that the United States and China define "grains" obscure reliable measurement of China's grain output. The USDA defines "grains" to include wheat, rice (on a milled basis), corn, sorghum, millet, barley, and oats. But China's SSB defines "grain crops" to include not only the USDA grains (with rice on a paddy basis), but also potatoes converted to their grain weight equivalent,² soybeans, pulses, and other grains such as buckwheat and proso-millet. In 1990, China produced 446 million tons of grain crops according to the SSB definition, but it produced only 342 million tons of grain according to USDA's definition.

Given these circumstances, predicting that China's grain production will fall in the intermediate term is implausible. Grain yields have ample room to increase above their current levels. For all crops, higher yielding seeds, better management, and additional inputs (such as plastic sheeting and fertilizer) can help yields continue to rise. Other efficiency gains within the economy will likely increase the effective level of production by reducing spoilage after harvest, for example.

More Fertilizer Would Help

Whether farmers take advantage of inputs such as fertilizers depends on market availability, prices, and access to a mix of fertilizers that boosts yields. Some analysts believe that diminishing chemical fertilizer returns have begun in China, as they have in the United States. In certain areas (such as the Pearl River delta), farmers probably are approaching diminishing returns to the use of nitrogen. But fertilizer usage remains low in many interior provinces. China plans to expand the production and use of phosphorus and potassium in compound fertilizers. Greater application rates, improved mixes, and better timing in the application of fertilizers could readily improve yields, especially in China's interior provinces.

Higher farm profits also would motivate farmers to make better use of fertilizer. The 1993/94 decline in fertilizer usage rates may have been due to price considerations.

² 4 tons of fresh potatoes = 1 ton of dry-weight-equivalent grain.

Because the government not only held grain purchase prices down, but also did not pay farmers promptly—at a time when the prices of manufactured goods, including agricultural inputs, were soaring—farmers' profit margins were squeezed severely. With grain prices now rising, fertilizer application rates could well recover.

Multiple Cropping Could Expand

Much of China's arable land is farther south than the cropland in Japan, Korea, and Taiwan. Parts of southern China have climates that permit double and even triple cropping of grain crops.

Long-Term Prospects

By most calculations, China will neither create world shortages, nor return to being a large net exporter of grains as it was in 1992-93. Instead, it will become a more significant importer of grains out to the year 2000 and beyond. This forecast arises from the likelihood that demand for feed grains will accelerate faster than production increases, and that China's government policies will accommodate these changes.

There are mitigating factors that rule out an increase bigger than 23 million tons between 1995 and 2000. And in light of the foregoing analysis, China is unlikely to import more than 100 million tons of grain in 2030.

- Long-term projections need to take into account the self-correcting mechanisms in a market economy, such as the increasingly open consumer and producer goods markets that China will likely develop in the future. Grain shortages would lead to rising prices, stimulating production and reducing consumption, in China as in the rest of the world.
- China still can expand grain production. Because local authorities underreported cropland areas by an estimated 40 percent in the past, China's yield statistics have been overstated. The actual yields leave much room for future improvement through better management, higher yielding seeds, and greater use of inputs.
- Although China's meat demand will rise in the future, it will rise less than some predict, since it is already at a high level for a country at China's level of development. Per capita red meat consumption is roughly on a par with Korea and Japan.
- Even supposing that China meets the requirements to become a member of the World Trade Organization, China's policymakers probably could still restrain meat consumption, on the grounds of promoting domestic self-sufficiency (as in Korea and Japan). Such a policy would permit imports of feed grains but restrict imports of meats. This would keep meat prices inside China high and constrain red meat consumption.

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North Korea an Emerging Market for Food Trade

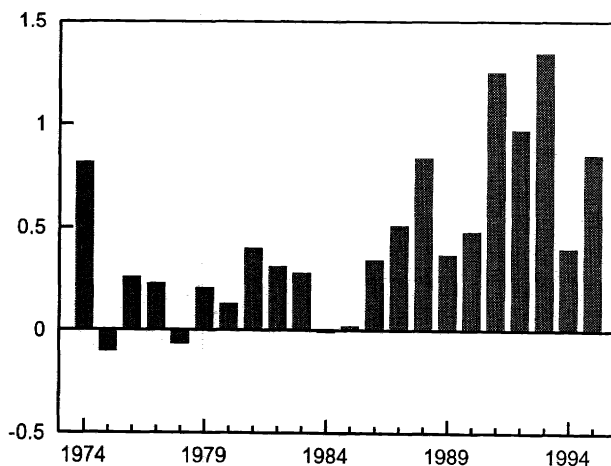
by John Dyck (202-219-0698)

North Korea, for most of its history, has emphasized that self-sufficiency is a high priority, especially for foods. However, the country ceased to be self-sufficient in the mid-1980's and has had to import increasing amounts of foodstuffs. The first sale of U.S. grain occurred in the spring of 1995. By the summer, North Korea had turned openly to the world community with appeals for food aid, and admitted that it had a chronic grain deficit. As a result, North Korea's position with respect to world trade in agricultural products changed greatly in 1995. More changes are possible.

North Korea's position with respect to world trade in agricultural products changed greatly in 1995, and more changes are possible. North Korea for most of its history has emphasized that self-sufficiency is a high priority, especially for foods. Although North Korea actually ceased to be self-sufficient in the mid-1980's, and has had to import increasing amounts of food including grain (fig. 10), its rhetoric continued to exhort greater efforts to raise production and lower consumption so as to achieve self-sufficiency. In 1995, North Korea turned openly to the world community with appeals for food aid. After severe flooding in the summer of 1995, North Korea told its citizens of alarming conditions and of food aid from abroad.

North Korea also dropped some of the secrecy with which it had protected its agricultural situation from foreign analysis, allowing U.N. officials and others to assess its crop conditions after the flooding. However, North Korea did not release crucial statistics about its food supply and demand that would allow a true assessment of its needs to be made.

Figure 10
Net Grain Imports of North Korea,
Calendar Years
Million tons



Estimated from partner trade data and other sources. Values shown for 1993-1994 subject to further revision. Value for 1995 is actual imports through November.

Another notable change occurred in the spring of 1995, when North Korea purchased two commercial shipments of corn from the United States, totaling 85,000 tons. North Korea had opened its ports to U.S. imports and ships for the first time in January 1995, and the corn shipments apparently mark the first commercial trade of any sort between the United States and North Korea.

Some of the factors that may have influenced the changes include a probable tightening of available food supplies in the aftermath of low grain imports in 1994; the shift of China from a major grain exporter (including to North Korea) to an importer, and its subsequent ban on exports; the extraordinary world grain markets of 1995, with quite high prices for all grains; and the presence of large but unwanted stocks of rice in Japan. In late spring, North Korea sounded out Japan about whether it might lend or give rice from these stocks to North Korea. South Korea then offered to supply rice to the North. After the North and South negotiated terms for South Korean food aid, Japan agreed to transfer some of its rice stocks too. By July, North Korea had secured over 450,000 tons of rice (milled basis), in a mixture of donations and long-term loans that required no payment in 1995. After the flooding, Japan agreed to turn over an additional 180,000 tons (milled), again with no payment due in 1995.

The enormous food aid granted North Korea in 1995 was probably not enough to get it out of its food supply difficulties. The low level of grain imports in 1994, compared with imports in 1991-93, is likely to have been accompanied by a drawdown in stocks. Flooding in northwestern North Korea probably meant 1995 grain production was less than in 1994 on a national basis. North Korea has always been short of foreign exchange, and tries to buy grain as cheaply as it can. Since the country will need to import more grain before the next harvest in October 1996, foreign observers worry that there is a threat of famine.

In the longer term North Korea appears to have given up its insistence on self-sufficiency, and is becoming more open to foreign traders, investors, and tourists. North Korea has become the site of numerous export-processing operations, set up by South Korean and Japanese firms. These firms supply unprocessed and semi-processed inputs, which are made into finished products by North Korean workers, and then reexported. This is particularly common in the textile industry: fabric from South Korea and Japan is shipped to the North, sewn into clothing, and then shipped back. In addition to this labor-intensive manufacturing, North Korea is trying to barter cement, steel, and unprocessed minerals for various goods. It also is trying to develop the northeastern corner of the country into a large transit and processing center for northeast Asia. The government actively courts foreign investors from all countries.

Despite North Korea's efforts to invigorate its economy through foreign investment and trade, its progress has been slow. The infrastructure is relatively undeveloped. Habits of secrecy and suspicion of foreigners remain entrenched. North Koreans have not had much exposure to capitalist economies. However, if the North eventually succeeds in getting its economy to grow, it would have the resources to buy more imports, especially foods. An interesting issue is what kind of food imports it would accept if it had more cash. Its neighbors—Japan, South Korea, and China—all tried to protect their livestock industries and import only inputs such as feedgrains. These policies were costly to their consumers and economies, since domestic livestock prices were high. North Korea could supply itself with meat more cheaply if it were to allow meat imports. North Korea has demonstrated that even totalitarian efforts could not make it self-sufficient in food. Perhaps this experience, together with its need to secure food at the lowest cost, will lead North Korea to import meat and dairy products, which would allow consumption to increase from current very low levels.

The Effects of Mexico's Peso Devaluation on Agricultural Trade

by Constanza Valdes (202-219-0919)

The devaluation of the Mexican peso in December 1994 stifled the strong economic recovery that had been underway in the country. The austerity program formulated in response to the devaluation, designed to restore strength to the peso and rebuild investor confidence, resulted in a recession and a higher inflation rate than previously anticipated for 1995. The primary impact of the peso devaluation on U.S. agricultural trade has been a short-term erosion of trade gains realized from the North American Free Trade Agreement (NAFTA). The adjustment policies lowered Mexico's imports and boosted exports, turning the U.S. agricultural trade balance with Mexico from the record \$1.6 billion surplus attained in 1994, the first year of NAFTA's implementation, to a deficit of \$260 million in 1995.

Until the 1994 peso devaluation, Mexico was enjoying the results of the remarkable economic transformation which followed the economic crisis of the early 1980's. During 1983-94, Mexico carried out a program of economic stabilization and structural reforms. The key policies were unilateral liberalization of international trade and the deregulation of government controls on investments. The reform strategy also included implementing conservative fiscal and monetary policies and deregulating economic activities. Mexico began dismantling its tariff and non-tariff trade barriers in 1985. It joined the General Agreement on Tariffs and Trade (GATT) in 1986. To consolidate the gains from trade liberalization, Mexico entered into several free trade arrangements, culminating with the implementation of NAFTA in January 1994.

Reforming Agriculture

Mexico's economic reforms of the past decade extended to the agricultural sector. Prior to 1989, Mexican agriculture was subject to extensive government intervention at every level of the marketing system. Mexico's government aided farmers through guaranteed price supports combined with farm input subsidies. Public enterprises provided low-cost financial, marketing, and processing services to the farm sector. In addition, the government maintained high tariffs, import licensing requirements, and variable levies on imports of agricultural goods to support official prices and protect domestic farming.

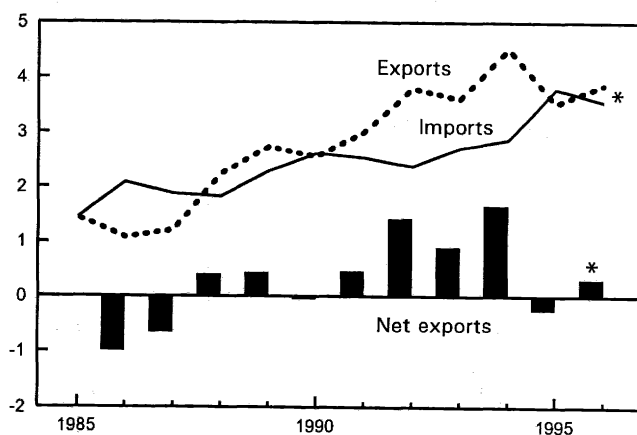
As part of the economic reform process initiated in 1989, Mexico relaxed foreign investment regulations in the agricultural sector, privatized public agricultural enterprises, substantially reduced agricultural subsidies, and deregulated the land tenure system. However, the most significant policy action affecting the farm sector was the partial replacement of agricultural price supports with the PROCAMPO (*Programa de Apoyos Directos al Campo*) strategy. In place since 1994, this farm support program implemented Mexico's plan to accelerate agricultural trade liberalization while providing direct income support

to subsistence producers. PROCAMPO lowered support prices for most crops in 1994. The changed price relationships led to reductions in the areas planted to basic grains, both on irrigated and rain-fed lands. That diminished domestic production and boosted imports of U.S. farm commodities. In 1994, the Mexican government also began making direct payments to farmers based on the number of planted hectares of selected crops, namely corn, beans, wheat, rice, cotton, soybeans, safflower, barley, and sorghum.

Impact of the Peso Crisis on the Value of U.S. Agricultural Trade with Mexico

The reciprocal trade liberalization under NAFTA led to rapid growth in agricultural trade between Mexico and the United States (fig. 11). In 1994, the first year of NAFTA, two-way agricultural trade between the United States and Mexico increased by 17 percent to \$7.4 billion. U.S. agricultural exports to Mexico grew by 25 percent, to a record \$4.5 billion, led by U.S. exports of corn, beef, pork, poultry, fresh and processed fruits, vegetables and preparations, oilseed products, and nuts.

Figure 11
U.S. Agricultural Trade with Mexico
Billion dollars



* 1996 forecast

With exports rising much faster than imports in 1994, the size of the U.S. agricultural trade surplus with Mexico almost doubled to \$1.6 billion, its largest value ever.

But since December 1994, the sharp devaluation of the Mexican peso has dimmed short-term prospects for further growth in U.S. farm exports to Mexico, both by raising the price of peso-denominated imports and by slowing, or reversing, income gains in Mexico. Nevertheless, medium- and long-term prospects for increased U.S. farm sales to Mexico remain favorable, as Mexico's private consumption is expected to rise once employment recovers from the present crisis and wages resume their growth.

Since the devaluation, higher domestic prices in Mexico encouraged expansion of feed grains production at the expense of imports. However, weather conditions in 1995 reduced harvests of basic commodities, increasing import demand.

The devaluation also increased reliance on corn as a food staple and temporarily reduced the consumption of beef, pork, and poultry. As the increase in export prices for Mexican goods more than offset increases in credit and input costs, farmers expanded the areas planted to export-oriented crops such as horticultural products and cotton.

U.S. agricultural exports to Mexico declined to \$3.5 billion in 1995, from \$4.5 billion in 1994. Reduced U.S. exports of fresh and processed fruits and vegetables, nuts, meats, processed cereals, and snacks contributed to the decline. U.S. exports of these commodities had expanded significantly in recent years as incomes in Mexico grew and consumers diversified their diets.

Conversely, U.S. imports of agricultural goods from Mexico in 1995 rose to \$3.8 billion from \$2.9 billion the year before. The devaluation lowered prices for Mexican products in the United States, expanding U.S. imports of feeder cattle, fruits, nuts, and vegetables. A drought in northern Mexico also boosted exports of live cattle to the United States. The combination of lower U.S. exports and increased U.S. imports led to a \$260 million agricultural trade deficit with Mexico in 1995.

1995 Outcomes Varied by Commodity

The impact of the peso devaluation on the volumes of U.S. agricultural goods exported to Mexico varied widely among commodities, depending on the income and price responsiveness of individual products.

U.S. corn exports to Mexico were just under 2.9 million tons, 6 percent below their level in 1994 but still above the 1995 NAFTA minimum-import quota of 2.6 million tons. U.S. sorghum exports declined much more, falling by 36 percent to 2.1 million tons. Higher prices in Mex-

ico had led to a recovery in the areas planted to sorghum there, just as Mexico's demand for sorghum was falling because of increased corn use in feed rations and reduced hog inventories.

U.S. sales of wheat to Mexico increased by 26 percent over their level in 1994, reaching 791,000 tons. This occurred despite the elimination of direct subsidies to the domestic milling industry, which previously had reduced consumer prices for wheat products such as flour and bread.

The quantity of U.S. soybeans exported to Mexico declined to 2.0 million tons. The decline was limited to 2 percent, in part because U.S. soybean exports were supported by General Sales Manager (GSM) credits, which provided liquidity to importers. Mexico's imports of U.S. soy oil nearly tripled in 1995, reaching 61,000 tons. On the other hand, imports of soymeal fell from 365,000 to 339,000 tons, following slowdowns in the growth of Mexico's pork and poultry sectors.

Beef consumption, which had been growing very rapidly on both a total and a per capita basis over the past 3 years, plummeted in the second half of 1995. The annual volume of U.S. exports fell to 29,000 tons, just 41 percent of the 1994 level. The combined effects of higher prices and smaller incomes reduced U.S. pork exports by a similar proportion, to 21,000 tons or 42 percent of the previous year's amount. U.S. poultry exports to Mexico fell to 157,000 tons or 83 percent of their 1994 level—a sharp drop, though not nearly as steep as the percentage declines in beef and pork trade.

Reduced incomes in Mexico also strongly affected U.S. sales of fruits and vegetables. Mexican imports of U.S. fresh fruit fell by 52 percent in 1995, to 133,000 tons. Imports of U.S. fresh vegetables nosedived, falling 63 percent from 105,000 tons in 1994 to 38,000 in 1995. Imports of canned and frozen vegetables dropped 41 percent, from 46,000 to 27,000 tons. In Mexico, processed vegetables are purchased primarily for use in restaurants, typically serving a clientele with higher than average incomes.

Conclusion

While the economic crisis has reduced the short-term gains from NAFTA, the size of the cumulative effects of the devaluation will depend on how soon Mexico stabilizes the peso and interest rates, and on how rapidly the economy responds to the stabilization program. For example, income growth plays a large role in determining consumption. If income falls more than estimated in current projections, Mexico's imports could contract further. Also, the level at which the peso exchange rate eventually stabilizes will affect both imports and exports. A rapid recovery of the peso would brighten U.S. agricultural export prospects.

U.S.–Canada Trade and Competition Remain Crucial

by Jim Stout (202-219-0678) and Suchada Langley (202-219-0006)

The United States and Canada share a common interest in agriculture and in agricultural trade. Trade between the United States and Canada continues to grow despite several unresolved trade disputes. Recent agricultural policy changes in Canada, especially the elimination of Western Grain Transportation Act (WGTA) subsidies, will significantly affect future Canadian production and trade patterns.

Growth in Trade

On January 1, 1989, the United States and Canada implemented the U.S.–Canada Free Trade Agreement (CFTA), eliminating tariff and non-tariff barriers to trade over a 10-year period. The CFTA was suspended on January 1, 1994, and incorporated into the North American Free Trade Agreement (NAFTA).

Trade between the United States and Canada has expanded rapidly since 1989, keeping Canada as the largest trading partner of the United States. In 1995, the United States exported \$126 billion in merchandise products to Canada and imported \$145 billion of goods from it.

U.S. agricultural exports to Canada in 1995 rose to \$5.7 billion, an increase of more than \$2.2 billion since 1988. Fruits and vegetables and their products are the largest and fastest-growing category, accounting for more than 35 percent of Canadian imports from the United States.

The United States is Canada's largest export market. It imported a wide variety of agricultural products, worth a total of \$5.6 billion, from Canada in 1995—about half of Canada's agricultural exports.

Trade Issues

Three of the most salient issues in U.S.–Canadian agricultural trade relations have been the 1994 trade dispute over Canada's then very rapidly expanding wheat exports to the United States, Canada's tariffs on poultry and dairy products, and the new restrictions on sugar trade that were introduced by both governments in 1995.

Wheat

Between 1990 and 1994, U.S. wheat and wheat product imports from Canada increased by nearly 42 percent. This surge in imports led to the negotiation of a temporary agreement to limit U.S. imports of Canadian wheat for a year-long period beginning on September 12, 1994, by a system of steeply escalating tariff rates (table 4). The agreement also established a Joint Commission on Grains to examine the two countries' grain marketing and support systems, their impacts on the U.S. and Canadian domestic markets, and their effects on the competition

Table 4: Tariff rate quotas on U.S. imports of Canadian wheat from Sept. 12, 1994 to Sept. 11, 1995

Durum wheat		Other wheat **	
Quantity	Tariff	Quantity	Tariff
1,000 m.t.	U.S. \$/Ton	1,000 m.t.	U.S. \$/Ton
0 to 300	\$3.08 - 2.31 *	0 to 1,050	\$3.08 - 2.31 *
300 to 450	23.00	1,050 and up	50.00
450 and up	50.00		

* The base tariff rate fell from \$3.08 to \$2.31 on Jan. 1, 1995.

** Excluding white winter wheat produced outside the jurisdiction of the Canadian Wheat Board, which was never subsidized under the WGTA.

between the two nations for sales to other countries.

The Joint Commission released its findings in January 1996. Its major recommendations were that the United States and Canada eliminate export subsidies on grains and grain products, and reduce or remove all domestic support programs which distort trade. The Joint Commission also recommended that Canada and the United States continue to undertake "regular and structured" consultations concerning grain policy issues, including further analysis of the Canadian Wheat Board's operations and of the U.S. Export Enhancement Program.

Poultry and Dairy Products

In poultry and dairy product trade, the United States and Canada have a fundamental disagreement about the status of their commitments under NAFTA, and the relationship of those commitments to the Uruguay Round agreement. Under terms negotiated in the Uruguay Round, Canada converted its import quotas on dairy, poultry, and eggs into tariff-rate quotas that went into effect on January 1, 1995. The United States believes that the high second-tier tariffs—over 200 percent—introduced as a result of this conversion are in violation of the CFTA accord, which states that no new tariffs or tariff increases may be placed on either country's products. Canada maintains that the

Uruguay Round agreement takes precedence. This issue is currently under consideration by a five-member trade panel under the dispute settlement provisions of NAFTA.

Sugar and Sugar-Containing Products

Since January 1, 1995, the new tariff-rate quotas that the United States imposed under the GATT agreement have sharply reduced Canada's access to U.S. markets for both sugar and sugar-containing products. Meanwhile, the Canadian International Trade Tribunal has found in favor of Canadian sugar companies, which had filed anti-dumping and countervailing-duty charges against the United States and five other countries for selling sugar into Canada at low prices. Duties on U.S. sugar sold in Canada have been set at 69 to 85 percent.

Recent Policy Changes in Canada

Canada's budget for the current fiscal year (1996-97) reduces Federal expenditures in general, and those for agriculture in particular.

The most significant recent change in Canadian farm policy was the termination of the C\$561-million Western Grain Transportation Act (WGTA) freight rate subsidy program for Canadian prairie grains, oilseeds, and other specialty crops, effective August 1, 1995. From 1897 to 1995, the Canadian Government had subsidized the rail transportation of crops produced in the western prairie provinces. It regulated freight rates, which remained fixed from 1900 to 1983, and since 1984 were allowed to increase only slowly. In recent years, the railway had been permitted to charge shippers approximately C\$11 per metric ton to move grain from a mid-point of prairie provinces to an export position, while the government paid the railroads an additional C\$12 to C\$19 per ton. The complete elimination of the freight subsidies goes beyond Canada's Uruguay Round commitments.

The freight subsidies under the WGTA encouraged planting crops eligible for the low rates, and they encouraged the shipment of unprocessed harvests from the prairies to port cities. Elimination of the freight subsidies is expected to induce a reallocation of resources to other farming activities, such as livestock and high-value-added products. More crops will be sold, processed, and consumed in the prairies, especially if related industries develop there and livestock production increases. Removal of the WGTA freight subsidies also makes the nearby U.S. market more attractive for Canadian grain and oilseed producers.

To compensate farmers for the forgone subsidies, the government is providing a C\$1.6-billion lump-sum payout to landowners, a C\$300-million fund for adjustment assistance programs, and C\$1 billion in new export credit guarantees.

In its redesigned agricultural support programs, Canada's principal goals are to reduce budgetary costs while enhancing farmers' insurance against catastrophic losses. The policies adopted to achieve these goals are an expansion of Canada's recently developed whole-farm savings plan—the Net Income Stabilization Account (NISA) program—coupled with reductions in crop-specific and production distorting subsidies. NISA was designed as a risk management tool for producers. It is a voluntary program that helps producers save money in good times, allowing them to augment their income when farm revenues drop. When the program began in 1991, producers were permitted to contribute up to 2 percent of their eligible net sales. The Federal and provincial governments each contributed 1 percent. In 1995, the Federal Government and the producers raised their contributions by a percentage point. As a result, total contributions now can reach 6 percent of eligible net sales: 2 percent from the Federal Government, 1 percent from the provincial government, and up to 3 percent from the producer.

Chile: Small Country and Policy Pioneer

by Lon Cesal (202-219-0692) and Teresita Ramos (202-219-0664)

Although it is not a major market for U.S. exports, Chile is an important policy concern for the United States. Chile's prosperity has caused many countries in the region to emulate its policies. Chile's accession to the North American Free Trade Agreement (NAFTA) would set precedents for Western Hemisphere integration.

Since Chile implemented profound economic reforms in 1974, its economy has become one of the most market-directed in the Western Hemisphere. Chile's reliance on open markets to guide investment and resource allocations has led to significant structural changes, especially in its agricultural sector. Chilean economic policies are consistent with and supported by U.S. objectives of more open global trade.

Because Chile is a very small country, it is not a major market for the United States. Its population of 14 million people is about the same as the population of Florida. Chile's Gross Domestic Product (GDP) is only about 0.6 percent as large as the United States' GDP. U.S. agricultural exports to Chile account for less than 0.5 percent of total U.S. agricultural exports, while agricultural imports from Chile are about 2 percent of total U.S. agricultural imports.

Chile's Policy Reforms Bear Fruit

Over the past decade, Chile reduced its uniform tariff to 11 percent on all imports. Though it still maintains price bands designed to limit price variability for sugar, vegetable oils, wheat, and wheat flour, Chile has pursued policies promoting an increasingly efficient private sector in a more diversified, export-oriented economy. To support this strategy, the Central Bank attempts to hold the exchange rate steady in real terms. The government seeks to keep inflation at a normal level for industrialized countries, with a target of 8 percent in 1995. The government also acts to alleviate poverty. Since 1990, it has increased the ratio of expenditures on social services and social infrastructure to GDP. These programs have focused on basic education, job training, and health services.

Chile's economy has thrived with its policy reforms. Real GDP growth averaged 6.5 percent per year for the decade ending in 1994. Inflation declined continuously, from about 20 percent in 1990 to 9 percent in 1994. Output growth was led by investment and exports, each of which increased by an average of about 13 percent per year over the past decade. Net international reserves of the Central Bank have increased continuously since 1988, reaching \$1.7 billion in September 1995—over twice the level of public sector external debt. Chile's unemployment rate declined from over 20 percent in the early

1980's to about 6 percent in 1994, while the savings rate increased steadily from 12 percent of GDP in 1985 to over 25 percent in 1994. The portion of people in poverty declined from 45 percent in 1987 to 29 percent in 1994.

On this strong economic base, Chile's economic performance in 1995 was good. Chile's GDP is estimated to have grown by 7 percent in 1995, while the trade balance is estimated to have improved significantly for the second year in a row. Domestic demand is expected to grow strongly as wages rise and inflation declines to its lowest level since 1965. A potential downside is an overvaluation of the real exchange rate, which could lead to higher imports.

Chile's Policies Set Precedents

The success of Chile's policies attracted attention. In the last 5 years most Latin American countries have liberalized their economies. In December 1994, the elected leaders of 34 countries in the hemisphere (excluding only Cuba) met and signed a Declaration of Principles in which they resolved to begin to construct the Free Trade Area of the Americas (FTAA). They agreed to conclude the negotiations for the FTAA no later than 2005. At the same meeting, Canada, Chile, Mexico, and the United States issued a joint declaration stating their intention to begin negotiations for Chile to join the North American Free Trade Agreement.

Chile's joining NAFTA is to be the first step toward the creation of the FTAA. The first informal technical discussions among the NAFTA countries and Chile were held in April 1995, and the trade ministers and other technical working groups from these countries have met several times since then. But as of December 1995, progress had been limited due to the lack of fast-track negotiating authority in the United States. While fast-track authority is not required, it facilitates negotiations by allowing the negotiators to concur on the specifics of an agreement with the assurance that they will not be altered by the U.S. Congress when it passes the final accord.

Presently, there is no consensus on whether labor and environmental issues should be a part of the agreement.

Members of Congress have also raised concerns over other issues already negotiated in the NAFTA agreement, such as agricultural export subsidies, intellectual property rights, and basic telecommunications. However, the U.S. administration does not intend to reopen the NAFTA accords.

Chile's accession to NAFTA is important, not because of its economic impact on the United States, but because of the precedents it will set for the expansion of NAFTA and the establishment of the FTAA. Most important, Chile's accession to NAFTA would symbolize a commitment by the United States to support more open economic cooperation with Latin American countries. Also, Chile's acceptance would likely establish a model for deciding the scope of FTAA negotiations based on how controversial topics, such as labor and environmental concerns, phytosanitary regulations, and dispute settlement, are managed. Finally, Chile's accession to NAFTA, or the lack thereof, may shape the future path of FTAA negotiations. By the end of 1995, two general approaches to establishing the FTAA had been discussed. One would expand and strengthen existing subregional or bloc trade agreements (NAFTA, MERCOSUR, etc.) with eventual bloc-to-bloc negotiations to establish the FTAA. A second approach would follow the GATT/WTO model with all countries simultaneously negotiating membership requirements.

Chile's Accession to NAFTA Would Mostly Affect Small Chilean Farms

Because Chile is such a small market, its accession to NAFTA would have a minimal effect on U.S. agriculture. With only 14 million people, Chile is a small market. Consequently, U.S. agricultural exports to Chile

would be limited, even if Chile eliminates all of its trade barriers. Removal of Chile's phytosanitary barriers would provide opportunities for U.S. firms to export small amounts of fresh fruits and vegetables during Chile's winter season. Increases in U.S. exports of bulk commodities are less certain, as Chile can import bulk commodities from Argentina and Brazil for less than it can import them from the United States.

Because U.S. restrictions on most of Chile's imports are already low, Chile's accession to NAFTA would have little effect on that country's exports to the United States. For a few processed agricultural products where the United States has high levels of protection, such as canned peaches, U.S. interests would be faced with more competition from Chilean imports.

The effect of Chile's accession would have far more impact on Chilean farmers than on U.S. farmers. Chile's small producers of traditional crops, especially wheat, would have difficulty competing with large efficient producers in the United States and Canada. Many of these farmers in the southern part of Chile have few alternatives, and without a long phase-in period, would be forced into poverty. Their only alternatives in this part of the country are forestry or livestock, both of which require long periods before they generate a continuous income stream. Moreover, neither of these activities requires as much labor as wheat.

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The Market Potential for U.S. Agricultural Exports in East Asia

by Larry Deaton (202-219-0815)

U.S. exports of agricultural goods to East Asia (Japan, South Korea, Taiwan, and Hong Kong) have grown rapidly, reaching a record level of slightly more than \$18 billion in fiscal 1995. The region now purchases one-third of total U.S. agricultural exports. Liberalization of formerly severe restrictions on agricultural imports, increasing price competition within East Asia's food marketing systems, rising incomes, Westernization of diets, and a falling U.S. dollar all have promoted the growth of total U.S. agricultural exports, and the rising share of high-value and processed products.

Despite Domestic Economic Problems, Japan Remains the Giant of East Asia

Japan is the world's largest importer of agricultural and forestry products. In particular, it is the largest importer of wheat, coarse grains, oilseeds, beef, and forest products. The United States is the leading exporter to this market, supplying about one-third of the total value in recent years. U.S. agricultural exports reached \$10.5 billion in FY 1995 (fig. 12). The \$1.25 billion increase over the previous year by itself was greater than total U.S. agricultural exports to most other countries.

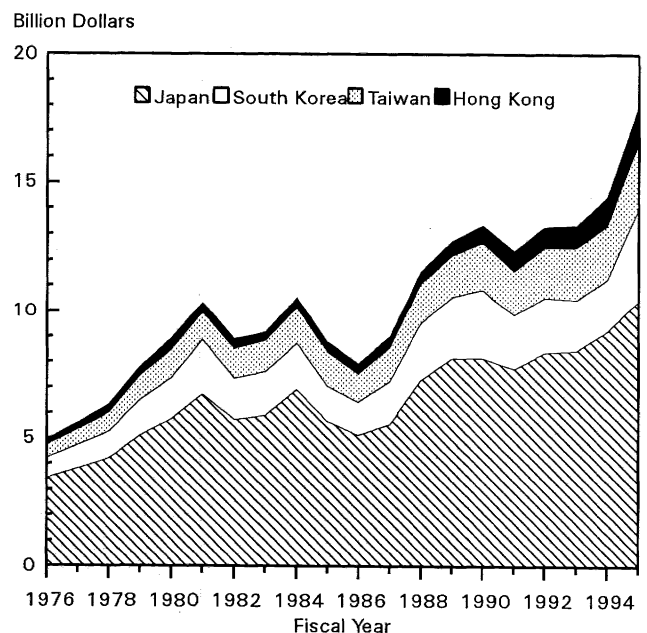
Exports of bulk products to Japan have generally reached a plateau, while exports of other products such as beef, processed products, and forest products continue to increase. Beef is expected to surpass corn as the most important U.S. export to this market in 1996. Exports of consumer-oriented products now account for 43 percent of the total, and may top 50 percent by the end of 1996. Examples of this category showing significant growth include various horticultural products, beer and wine, and processed foods such as breakfast cereals, pancake mix, and snack foods.

Competition for the Japanese market continues to be intense. Among developed countries, Australia and New Zealand have a geographic advantage. China and South-east Asian countries are also increasing their shares of Japan's imports.

Japan has continued to increase its imports of agricultural goods even though its economic growth has been moribund for almost 4 years. Unfortunately, underlying economic problems probably will limit import growth for the next few years. Japan's demographic structure, with a very slowly growing and rapidly aging population, portends slower growth for most agricultural imports. While these factors will limit increases in imports of bulk commodities, rapid growth of U.S. exports of selected consumer-oriented commodities may still occur.

After many years of difficult bilateral and multilateral trade negotiations, Japanese trade restrictions no longer

Figure 12
U.S. Agricultural Exports to East Asia



are the major factor affecting future increases in imports for most agricultural commodities. The key element now is the upheaval taking place in the Japanese distribution system, most notably the rapidly spreading price competition in Japan's food retail sector. Due to price and quality characteristics, U.S. food items are likely to benefit more than those of many other countries. However, price competition is also leading to the relocation of some Japanese food production facilities to other Asian nations, especially Thailand and China.

South Korea's Phenomenal Growth Drives Imports

U.S. agricultural exports to Korea are expected to reach a record \$3.8 billion in 1995, an astonishing 65-percent increase over the 1994 level of \$2.3 billion. Despite the major recent increases in U.S. exports, South Korea's import restrictions remain the subject of significant disputes between the two nations.

Processed products and consumer-ready items are becoming ever more important in the South Korean import market. South Korea imported over \$2 billion worth of consumer-oriented food products in 1994 (including seafood), with U.S. exports totaling \$630 million. Beef is by far the largest single export in the consumer-oriented category, with U.S. exports in 1995 expected to exceed the record of \$240 million set in 1994. Beef imports are expected to grow rapidly and could reach an annual total of \$1 billion by the year 2000.

Japan, China, Canada, Australia, New Zealand, and the European Union actively compete in this market to sell a broad range of agricultural products, and many other countries sell individual products. New competitors are likely to enter, such as Chile for fresh fruits and vegetables, and Russia for seafoods and forestry products.

Economic growth has been the main factor driving agricultural imports. Since 1960, South Korea has grown from one of the world's poorest nations (with a per capita income of less than \$150) to the world's 11th largest economy (with a per capita income above \$10,000 in 1995). Per capita income may rise to over \$15,000 by 2000. Other factors include the spread of Western-style restaurants, which have increased the consumption—and hence imports—of meat and poultry. Poultry consumption also has been augmented by people who see chicken as a healthier alternative to red meats.

Policy factors will continue to have a major influence on Korean trade. Under the GATT agreement, South Korea agreed to liberalize many regulations which affect agricultural imports. But market access is still a matter of concern. Two issues—one on the shelf-life of food products, the other on import inspection—have received the most attention. These and other excessively conservative restrictions may have cost the United States \$500 million worth of agricultural exports to Korea in 1995 alone. The successful resolution of the shelf life dispute in July 1995 should permit increased imports of red meats, poultry, and processed foods. USDA estimates that the total value of the affected products may reach \$1 billion by 1999. The issue of import inspection standards and procedures has not yet been resolved.

As in Japan, Korea's complex distribution system has been a major factor limiting imports. While changes in the system have been less dramatic than in Japan, traditional marketing methods are on the decline, with department stores and convenience stores increasingly making direct purchases from foreign suppliers. These changes are also likely to increase imports.

Taiwan's Bid To Join the WTO Will Open Its Markets More

U.S. agricultural exports to Taiwan have grown more than \$0.5 billion over the past 2 years, reaching \$2.55

billion in FY 1995. Taiwan is an important market for U.S. wheat, coarse grains, and soybeans. However, imports of consumer-oriented products have been growing especially rapidly. Taiwan's already sophisticated diet continues to become even more diversified, with rising shares of fruits, vegetables, and processed products.

Unlike Japan and South Korea, Taiwan has imported relatively small amounts of red meats and poultry from the United States. In fact, Taiwan has been a major competitor of the United States in world pork markets. The eventual entrance of Taiwan into the WTO will reduce trade barriers and should result in some expansion of Taiwanese meat and poultry imports.

The United States remains the largest agricultural supplier to Taiwan, although the U.S. market share dipped down from 33.6 percent in 1993 to 31.5 percent in 1994. Other important competitors include Malaysia, Australia, Indonesia, Thailand, Japan, and Canada. Many of these countries are dominant in a particular area. Japan, for example, has excelled at consumer-ready food products, while New Zealand dominates in dairy products. Australia occupies the leading position in wool and beef. Competition for the Taiwanese market would be likely to intensify after WTO accession.

Increasing consumer incomes and demographic factors will continue to boost food imports. Per capita income, which exceeded \$11,500 in 1994, should continue to grow at roughly 5 percent annually. With Taiwan already the second most densely populated country in the world, environmental problems will tend to make domestic production more costly and imports increasingly attractive. The distribution system is undergoing changes similar to those in South Korea, but Taiwan's rate of transformation definitely has been faster in recent years. The first supermarket opened only in 1981, and expansion was relatively slow until quite recently. While most purchases of agricultural products—about 60 percent of the total value—are still made in traditional markets, this portion has fallen significantly in recent years. Changes in other parts of the distribution system are also accelerating. Taiwan's first convenience store opened in 1980; by 1995, there were 2,900 convenience stores; and 8,000 are projected to be in operation in 1998.

Hong Kong's Political Future Will Have Little Effect on Agricultural Imports

U.S. agricultural exports to Hong Kong totaled \$1.2 billion last year, having increased by almost 150 percent since 1989. An increasing share of imported agricultural goods is being reexported to China. This is especially true for poultry meat, produce, and processed products. With few trade barriers, Hong Kong has always had one of the world's most competitive markets. As a low-priced source of farm goods, the United States has generally prospered under such conditions.

Political uncertainty connected with Hong Kong's reversion to Chinese political control in 1997 does give rise to concern about the future economic health of the territory's market. Job openings are declining, and some jobs are being shifted to the mainland. The result is increasing unemployment and flat consumer spending. But at the same time, foreign capital has continued to flow into Hong Kong, buoyed by optimistic observers looking at economic growth in southern China—and the role that Hong Kong could play in future growth on the Chinese mainland. Trade, including imports of food, is still expanding.

Outlook

The East Asian region will continue to generate rapid growth for U.S. agricultural exports, especially processed items and consumer-oriented goods. Rising incomes have been the major factor augmenting imports, though Japan has recently demonstrated that food imports may rise rapidly even after income growth slows. Most factors likely to affect future growth are very positive. However, North Korea and China both pose different kinds of real, growing risks for the economic stability and growth of the region.

Appendix table 1: Summary of agricultural indicators

APEC member	1994			1993			Latest available data		1994		
	GDP per capita*	Population	Share of agricultural population	Agricultural share of GDP	Total land	Arable and permanent cropland	Number of farms	Average farm size	Agricultural trade as share of total trade	Exports	Imports
	1990 US\$	Millions	----- Percent -----		---- 1,000 hectares ----		1,000	Hectares	----- Percent -----		
United States	23,213	261	2	2	957,311	187,776	2,065	191	10	5	
Australia	18,132	18	4	3	764,444	46,486	121	3,812	27	5	
Brunei	--	0.3	49	--	527	7	--	--	0.3	15	
Canada	20,698	29	3	2	922,097	45,500	280	243	7	6	
Chile	2,411	14	12	9	74,880	4,257	360	--	16	8	
China	476	1,209	64	19	932,641	94,907	229,840	0.41	7	6	
Hong Kong	16,004	5.8	1	0	99	7	--	--	4	6	
Indonesia	719	195	41	19	181,157	30,987	--	--	12	10	
Japan	25,149	125	5	2	37,652	4,463	3,690	1.40	0.4	14	
Malaysia	3,000	20	27	15	32,855	4,880	965	1.45	11	5	
Mexico	2,951	92	28	8	190,869	24,730	--	--	12	12	
New Zealand	13,413	3.5	8	6	26,799	3,800	81	214	8	1	
Papua New Guinea	1,146	4.2	63	26	45,286	415	--	--	14	16	
Philippines	704	66	44	22	29,817	9,190	6,848	1.44	11	8	
Singapore	17,602	2.8	1	0	61	1	--	--	4	5	
South Korea	7,491	45	19	7	9,873	2,055	1,641	1.26	1	8	
Taiwan	10,023	21	19	4	3,601	872	808	1.08	5	10	
Thailand	1,981	58	58	10	51,089	20,800	5,130	26	16	4	

-- = not available.

* Calculated as real GDP (or GNP for Japan and Taiwan) in local currency at 1990 prices, converted to U.S. dollars at the 1990 exchange rate, divided by midyear population. For Papua New Guinea, data are from 1993, not 1994.

Sources

China: For total land, arable and permanent cropland--1995 China Statistical Yearbook. For all other series--same sources as "Other places" below.

Taiwan: For GDP per capita--the Central Bank of China, Financial Statistics, November 1995.

For all other series--Council of Agriculture, 1994 Basic Agricultural Statistics, July 1995.

Other places:

GDP per capita: International Monetary Fund, Financial Statistics, February 1996.

Population, share of agricultural population, total land, arable and permanent cropland, and agricultural trade as share of total trade: Food and Agriculture Organization, FAOSTAT database.

Agricultural share of GDP: World Bank, World Development Report 1995, and country sources.

Number of farms and average farm size: Country sources.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
AUSTRALIA							
Population, midyear estimates	Million	16.81	17.06	17.28	17.48	17.66	17.84
Exchange rate	\$/US\$	1.26	1.28	1.28	1.36	1.47	1.37
Foreign exchange reserves	Mil. US\$	13,150	15,605	15,894	10,536	10,470	10,706
GDP	Bil. \$A	357.40	377.32	379.51	394.20	414.05	440.96
Real GDP	Bil. \$A (1990)	373.13	377.32	370.98	380.41	394.71	414.39
Real per capita GDP*	1990 US\$/person	17,327	17,265	16,759	16,988	17,447	18,132
Real GDP growth (local currency)	Percent	4.2	1.3	-1.6	2.5	4.0	4.9
Change in CPI	"	7.6	7.3	3.2	1.0	1.8	1.9
Current account balance	Mil. US\$	-19,227	-16,585	-11,658	-11,776	-10,978	-16,350
Merchandise exports, f.o.b.	"	36,893	39,332	42,005	42,375	42,214	46,985
Merchandise imports, f.o.b.	"	40,311	38,964	38,491	40,820	42,363	50,275
Balance	"	-3,418	368	3,514	1,555	-149	-3,290
Agricultural exports, f.o.b.	"	12,153	11,750	10,449	11,064	11,108	11,955
Agricultural imports, f.o.b.	"	1,784	1,717	1,752	1,837	1,870	2,029
Balance	"	10,369	10,033	8,697	9,227	9,238	9,926
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	8,331	8,538	8,404	8,876	8,277	9,781
Total U.S. imports from	"	3,873	4,447	3,988	3,688	3,297	3,202
U.S. agricultural exports to	"	155	223	283	268	326	404
U.S. agricultural imports from	"	1,076	1,174	1,180	1,107	1,075	987
CANADA							
Population, midyear estimates	Million	26.24	26.58	28.12	28.43	28.94	29.25
Exchange rate	\$/CAN/US\$	1.18	1.17	1.15	1.21	1.29	1.37
Foreign exchange reserves	Mil. US\$	14,150	15,802	14,079	9,382	10,471	10,219
GDP	Bil. \$CAN	650.75	669.51	676.48	690.12	712.86	750.05
Real GDP	Bil. \$CAN (1990)	671.09	669.51	657.55	662.58	677.29	708.35
Real per capita GDP*	1990 US\$/person	21,859	21,529	19,986	19,919	20,003	20,698
Real GDP growth (local currency)	Percent	2.4	-0.2	-1.8	0.8	2.2	4.6
Change in CPI	"	5.0	4.8	5.6	1.5	1.8	0.2
Current account balance	Mil. US\$	-23,790	-22,577	-24,571	-22,592	-23,391	-17,388
Merchandise exports, f.o.b.	"	122,969	128,440	126,153	132,115	143,953	163,492
Merchandise imports, f.o.b.	"	116,984	120,106	122,282	126,415	136,026	151,290
Balance	"	5,985	8,334	3,871	5,700	7,927	12,202
Agricultural exports, f.o.b.	"	7,861	9,181	9,619	10,926	10,351	11,239
Agricultural imports, f.o.b.	"	6,490	7,101	7,346	7,585	7,984	8,607
Balance	"	1,371	2,080	2,273	3,341	2,367	2,632
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	78,809	83,674	85,150	90,594	100,444	114,439
Total U.S. imports from	"	87,953	91,380	91,064	98,630	111,216	128,406
U.S. agricultural exports to	"	2,221	4,197	4,554	4,902	5,271	5,504
U.S. agricultural imports from	"	2,915	3,152	3,306	4,102	4,621	5,231

* Calculated as real GDP in local currency at 1990 prices, converted to U.S. dollars at the 1990 exchange rate, divided by population.

Sources

Agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others: IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
CHILE							
Population, midyear estimates	Million	12.96	13.17	13.39	13.60	13.81	13.99
Exchange rate	Peso/US\$	267.16	305.06	349.37	362.59	404.35	420.08
Foreign exchange reserves	Mil. US\$	3,604	6,068	7,041	9,167	9,639	13,087
GDP	Bil. Peso	7,529	9,270	12,017	15,500	18,454	21,918
Real GDP	Bil. Peso (1990)	8,977	9,270	9,942	11,002	11,733	12,231
Real per capita GDP*	1990 US\$/person	1,910	1,941	2,048	2,231	2,343	2,411
Real GDP growth (local currency)	Percent	9.9	3.3	7.3	11.0	6.3	4.2
Change in CPI	"	17.0	26.0	21.8	15.4	12.7	11.4
Current account balance	Mil. US\$	-705	-536	112	-708	-2,096	-757
Merchandise exports, f.o.b.	"	8,080	8,372	8,942	10,008	9,199	11,538
Merchandise imports, f.o.b.	"	6,502	7,037	7,354	9,236	10,181	10,879
Balance	"	1,578	1,335	1,588	772	-982	659
Agricultural exports, f.o.b.	"	1,006	1,201	1,356	1,613	1,540	1,803
Agricultural imports, c.i.f.	"	310	379	516	663	698	842
Balance	"	696	822	840	950	842	961
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	1,414	1,664	1,839	2,466	2,599	2,774
Total U.S. imports from	"	1,292	1,313	1,302	1,388	1,462	1,821
U.S. agricultural exports to	"	392	480	443	494	456	543
U.S. agricultural imports from	"	35	54	70	90	108	98
CHINA							
Population, midyear estimates	Million	1,139	1,153	1,170	1,184	1,196	1,209
Exchange rate	Yuan/US\$	3.77	4.78	5.32	5.51	5.76	8.62
Foreign exchange reserves	Mil. US\$	17,022	28,594	42,664	19,443	21,199	51,620
GDP	Bil. Yuan	1,600	1,768	2,019	2,402	3,138	4,380
Real GDP	Bil. Yuan (1990)	1,702	1,768	1,910	2,161	2,460	2,752
Real per capita GDP*	1990 US\$/person	312	320	341	382	430	476
Real GDP growth (local currency)	Percent	4.3	3.9	8.0	13.2	13.8	11.9
Change in CPI	"	16.3	1.4	5.1	6.3	14.6	24.3
Current account balance	Mil. US\$	-4,390	11,878	13,083	6,188	-11,702	6,532
Merchandise exports, f.o.b.	"	43,220	51,519	58,919	69,568	75,659	102,561
Merchandise imports, f.o.b.	"	48,840	42,354	50,176	64,385	86,313	95,271
Balance	"	-5,620	9,165	8,743	5,183	-10,654	7,290
Agricultural exports, f.o.b.	"	10,479	10,204	11,620	12,045	12,197	14,532
Agricultural imports, c.i.f.	"	11,067	9,794	9,429	9,800	8,569	12,376
Balance	"	-588	410	2,191	2,245	3,628	2,156
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	5,755	4,806	6,278	7,418	8,763	9,282
Total U.S. imports from	"	11,990	15,237	18,969	25,728	31,540	38,787
U.S. agricultural exports to	"	1,435	814	722	545	376	1,080
U.S. agricultural imports from	"	319	271	328	379	451	440

* Calculated as real GDP in local currency at 1990 prices, converted to U.S. dollars at the 1990 exchange rate, divided by population.

Sources

Agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others: IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
HONG KONG							
Population	Million	5.69	5.71	5.76	5.78	5.81	5.84
Exchange rate	HK\$/US\$	7.81	7.80	7.77	7.74	7.74	7.73
Foreign exchange reserves	Mil. US\$	--	--	--	--	--	--
GDP	Bil. HK\$	491	556	643	779	900	1,024
Real GDP	Bil. HK\$ (1990)	537	556	580	650	692	729
Real per capita GDP*	1990 US\$/person	12,099	12,484	12,910	14,418	15,270	16,004
Real GDP growth (local currency)	Percent	2.3	3.5	4.3	6.3	6.4	5.4
Change in CPI	"	9.7	9.7	6.9	9.6	8.7	8.6
Current account balance	Mil. US\$	5,120	3,640	2,850	5,780	8,340	3,780
Merchandise exports, f.o.b.	"	73,025	81,904	98,799	119,319	134,966	150,932
Merchandise imports, f.o.b.	"	72,036	82,244	100,489	123,233	138,365	161,341
Balance	"	989	-340	-1,690	-3,914	-3,399	-10,409
Agricultural exports, f.o.b.	"	3,272	3,611	4,316	4,806	4,622	5,405
Agricultural imports, c.i.f.	"	6,293	6,822	7,699	8,436	8,069	9,460
Balance	"	-3,021	-3,211	-3,383	-3,630	-3,447	-4,055
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	6,291	6,817	8,137	9,077	9,874	11,441
Total U.S. imports from	"	9,722	9,622	9,279	9,793	9,554	9,696
U.S. agricultural exports to	"	611	701	771	862	875	1,233
U.S. agricultural imports from	"	97	107	108	121	107	111
INDONESIA							
Population, midyear estimates	Million	179.1	179.8	182.9	186.0	189.1	192.2
Exchange rate	Rupiah/US\$	1,770	1,843	1,950	2,030	2,087	2,161
Foreign exchange reserves	Mil. US\$	5,357	7,353	9,151	10,181	10,988	11,820
GDP	Bil. Rupiah	167,185	195,597	227,450	259,884	329,776	377,354
Real GDP	Bil. Rupiah (1990)	182,389	195,597	209,192	222,705	237,172	254,574
Real per capita GDP*	1990 US\$/person	552	590	620	650	680	719
Real GDP growth (local currency)	Percent	7.5	7.2	7.0	6.5	6.5	7.3
Change in CPI	"	6.4	7.8	9.4	7.5	9.7	8.5
Current account balance	Mil. US\$	-1,108	-2,988	-4,260	-2,780	-2,106	-2,790
Merchandise exports, f.o.b.	"	22,974	26,807	29,635	33,796	36,607	40,223
Merchandise imports, f.o.b.	"	16,310	21,455	24,834	26,774	28,376	32,322
Balance	"	6,664	5,352	4,801	7,022	8,231	7,901
Agricultural exports, f.o.b.	"	2,963	2,802	3,122	3,401	3,618	4,844
Agricultural imports, c.i.f.	"	1,622	1,591	2,051	2,412	2,353	3,129
Balance	"	1,341	1,211	1,071	989	1,265	1,715
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	1,247	1,897	1,891	2,779	2,770	2,809
Total U.S. imports from	"	3,529	3,341	3,241	4,529	5,435	6,547
U.S. agricultural exports to	"	231	272	298	342	342	481
U.S. agricultural imports from	"	808	684	685	824	819	1,019

-- = not available.

* Calculated as real GDP in local currency at 1990 prices, converted to U.S. dollars at the 1990 exchange rate, divided by population.

Sources

Agricultural exports and imports, and Hong Kong population: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

Change in CPI: International Monetary Fund (IMF), International Financial Statistics Yearbook 1995.

All others (Hong Kong): DRI/McGraw-Hill, World Markets Report, Hong Kong, various issues.

All others (Indonesia): IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
JAPAN							
Population, midyear estimates	Million	123.1	123.5	123.9	124.3	124.7	124.9
Exchange rate	Yen/US\$	137.96	144.79	134.71	126.65	111.20	102.20
Foreign exchange reserves	Mil. US\$	77,992	69,487	61,758	61,888	88,720	115,146
GDP	Billion Yen	396,197	424,537	451,297	463,145	465,972	469,240
Real GNP	Bil. Yen (1990)	407,932	427,469	445,742	451,797	452,311	455,027
Real per capita GNP*	1990 US\$/person	22,883	23,898	24,843	25,099	25,051	25,149
Real GDP growth (local currency)	Percent	4.8	4.8	4.3	1.4	0.1	0.6
Change in CPI	"	2.3	3.1	3.3	1.7	1.3	0.7
Current account balance	Bil. US\$	56.99	35.87	72.91	117.65	131.54	129.24
Merchandise exports, f.o.b.	"	269.55	280.35	306.58	330.87	351.31	384.18
Merchandise imports, f.o.b.	"	192.66	216.77	203.49	198.47	209.74	238.25
Balance	"	76.89	63.58	103.09	132.40	141.57	145.93
Agricultural exports, f.o.b.	Mil. US\$	1,074	1,165	1,284	1,448	1,526	1,636
Agricultural imports, c.i.f.	"	29,060	28,659	29,625	31,311	31,720	37,704
Balance	"	-27,986	-27,494	-28,341	-29,863	-30,194	-36,068
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	44,494	48,580	48,125	47,813	47,892	53,488
Total U.S. imports from	"	93,553	89,684	91,511	97,414	107,246	119,156
U.S. agricultural exports to	"	8,162	8,104	7,729	8,437	8,739	9,268
U.S. agricultural imports from	"	216	246	263	254	261	284
MALAYSIA							
Population, midyear estimates	Million	17.35	17.76	18.18	18.61	19.25	19.70
Exchange rate	Ringgit/US\$	2.71	2.70	2.75	2.55	2.57	2.62
Foreign exchange reserves	Mil. US\$	7,393	9,327	10,421	16,784	26,814	24,888
GDP	Mil. Ringgit	102,587	115,828	129,559	147,784	163,039	185,344
Real GDP	Mil. Ringgit (1990)	105,547	115,828	125,861	135,667	146,987	159,848
Real per capita GDP*	1990 US\$/person	2,249	2,411	2,559	2,695	2,823	3,000
Real GDP growth (local currency)	Percent	9.2	9.7	8.7	7.8	8.3	8.7
Change in CPI	"	2.8	2.6	4.4	4.8	3.5	3.7
Current account balance	Mil. US\$	315	-870	-4,183	-2,167	-2,809	-4,147
Merchandise exports, f.o.b.	"	24,776	28,806	33,712	39,823	46,226	56,906
Merchandise imports, f.o.b.	"	20,498	26,280	33,321	36,673	43,201	55,325
Balance	"	4,278	2,526	391	3,150	3,025	1,581
Agricultural exports, f.o.b.	"	4,775	4,360	4,422	4,958	5,014	6,562
Agricultural imports, c.i.f.	"	2,099	2,137	2,397	2,597	2,734	3,191
Balance	"	2,676	2,223	2,025	2,361	2,280	3,371
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	2,870	3,425	3,900	4,363	6,064	6,969
Total U.S. imports from	"	4,744	5,272	6,101	8,294	10,563	13,982
U.S. agricultural exports to	"	111	124	154	167	198	231
U.S. agricultural imports from	"	386	308	299	346	311	372

* Calculated as real GDP or GNP in local currency at 1990 prices, converted to U.S. dollars at 1990 exchange rate, divided by population.

Sources

Agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others: IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
MEXICO							
Population, midyear estimates	Million	84.49	86.15	87.84	89.54	91.21	93.01
Exchange rate	New Peso/US\$	2.46	2.81	3.02	3.09	3.12	3.38
Foreign exchange reserves	Mil. US\$	5,946	9,446	17,140	18,394	24,886	6,101
GDP	Mil. New Peso	512,603	694,872	876,933	1,034,733	1,145,382	1,272,799
Real GDP	Mil. New Peso(1990)	664,849	694,872	720,154	740,038	745,174	771,246
Real per capita GDP*	1990 US\$/person	2,800	2,870	2,918	2,941	2,907	2,951
Real GDP growth (local currency)	Percent	3.3	4.4	3.6	2.8	0.6	3.5
Change in CPI	"	20.0	26.7	22.7	15.5	9.8	7.0
Current account balance	Mil. US\$	-5,825	-7,451	-14,888	-24,442	-23,400	-28,784
Merchandise exports, f.o.b.	"	35,171	40,711	42,687	46,196	51,885	60,882
Merchandise imports, f.o.b.	"	34,766	41,592	49,966	62,130	65,366	79,347
Balance	"	405	-881	-7,279	-15,934	-13,481	-18,465
Agricultural exports, f.o.b.	"	2,514	2,937	3,171	2,972	3,585	4,032
Agricultural imports, f.o.b.**	"	4,159	4,990	4,587	5,999	5,862	7,135
Balance	"	-1,645	-2,053	-1,416	-3,027	-2,277	-3,103
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	24,982	28,279	33,277	40,592	41,581	50,844
Total U.S. imports from	"	27,162	30,157	31,130	35,211	39,917	49,494
U.S. agricultural exports to	"	2,724	2,553	2,999	3,791	3,603	4,513
U.S. agricultural imports from	"	2,280	2,611	2,527	2,372	2,709	2,855
NEW ZEALAND							
Population, midyear estimates	Million	3.31	3.35	3.38	3.41	3.46	3.49
Exchange rate	\$NZ/US\$	1.67	1.68	1.73	1.86	1.85	1.82
Foreign exchange reserves	Mil. US\$	2,974	4,071	2,872	2,929	3,195	3,561
GDP	Mil. \$NZ	71,406	72,962	73,030	75,221	79,999	86,304
Real GDP	Mil. \$NZ (1990)	73,525	72,962	71,303	71,924	76,270	78,642
Real per capita GDP*	1990 US\$/person	13,222	12,964	12,557	12,555	13,121	13,413
Real GDP growth (local currency)	Percent	-1.3	-0.9	-2.5	1.9	5.2	3.1
Change in CPI	"	5.7	6.1	2.6	1.0	1.3	1.7
Current account balance	Mil. US\$	-2,916	-3,137	-1,511	-1,581	-1,323	-2,006
Merchandise exports, f.o.b.	"	8,846	9,190	9,563	9,749	10,468	11,984
Merchandise imports, f.o.b.	"	7,873	8,375	7,485	8,262	8,741	10,648
Balance	"	973	815	2,078	1,487	1,727	1,336
Agricultural exports, f.o.b.	"	5,256	4,780	4,787	5,093	4,945	5,374
Agricultural imports, c.i.f.	"	621	668	655	653	715	831
Balance	"	4,635	4,112	4,132	4,440	4,230	4,543
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	1,117	1,135	1,007	1,307	1,249	1,508
Total U.S. imports from	"	1,209	1,197	1,209	1,218	1,208	1,421
U.S. agricultural exports to	"	56	58	52	62	79	76
U.S. agricultural imports from	"	867	852	863	809	767	775

* Calculated as real GDP in local currency at 1990 prices, converted to U.S. dollars at the 1990 exchange rate, divided by population.

** Mexican import values are c.i.f. through 1991.

Sources

Agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others: IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
PAPUA NEW GUINEA							
Population, midyear estimates	Million	3.63	3.70	3.77	3.85	3.92	4.00
Exchange rate	Kina/US\$	0.86	0.96	0.95	0.96	0.98	1.01
Foreign exchange reserves	Mil. US\$	372	403	323	238	141	96
GDP	Mil. Kina	3,046	3,076	3,606	4,140	4,979	--
Real GDP	Mil. Kina (1990)	3,171	3,076	3,369	3,767	4,311	--
Real per capita GDP*	1990 US\$/person	910	866	931	1,019	1,146	--
Real GDP growth (local currency)	Percent	-1.4	-3.0	9.5	11.8	14.4	--
Change in CPI	"	4.5	7.0	7.0	4.3	5.0	2.9
Current account balance	Mil. US\$	-313	-76	-157	95	646	569
Merchandise exports, f.o.b.	"	1,319	1,175	1,482	1,948	2,604	2,651
Merchandise imports, f.o.b.	"	1,341	1,106	1,404	1,323	1,135	1,325
Balance	"	-22	69	78	625	1,469	1,326
Agricultural exports, f.o.b.	"	327	220	202	230	259	360
Agricultural imports, f.o.b.	"	206	189	209	206	201	217
Balance	"	121	31	-7	24	58	143
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	106	54	96	72	50	66
Total U.S. imports from	"	29	22	34	64	98	115
U.S. agricultural exports to	"	1.1	0.6	0.9	1.0	1.7	1.5
U.S. agricultural imports from	"	22	21	23	26	25	30
PHILIPPINES							
Population, midyear estimates	Million	60.10	61.48	62.87	64.26	65.65	67.04
Exchange rate	Peso/US\$	21.74	24.31	27.48	25.51	27.12	26.42
Foreign exchange reserves	Mil. US\$	1,365	868	3,186	4,283	4,546	5,866
GDP	Bil. peso	925	1,077	1,248	1,352	1,475	1,694
Real GDP	Bil. peso (1990)	1,046	1,077	1,072	1,075	1,098	1,147
Real per capita GDP*	1990 US\$/person	716	721	701	688	688	704
Real GDP growth (local currency)	Percent	6.2	3.0	-0.6	0.3	2.1	4.3
Change in CPI	"	12.2	14.1	18.7	8.9	7.6	9.1
Current account balance	Mil. US\$	-1,456	-2,695	-1,034	-1,000	-3,289	--
Merchandise exports, f.o.b.	"	7,821	8,186	8,840	9,824	11,375	--
Merchandise imports, f.o.b.	"	10,419	12,206	12,051	14,519	17,597	--
Balance	"	-2,598	-4,020	-3,211	-4,695	-6,222	--
Agricultural exports, f.o.b.	"	1,230	1,230	1,261	1,379	1,359	1,441
Agricultural imports, c.i.f.	"	1,155	1,363	1,054	1,299	1,473	1,872
Balance	"	75	-133	207	80	-114	-431
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	2,202	2,471	2,265	2,759	3,529	3,886
Total U.S. imports from	"	3,068	3,384	3,471	4,355	4,894	5,719
U.S. agricultural exports to	"	350	379	372	517	478	567
U.S. agricultural imports from	"	463	417	416	550	436	434

-- = not available.

* Calculated as real GDP in local currency at 1990 prices, converted to U.S. dollars at the 1990 exchange rate, divided by population.

Sources

Agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others: IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
SINGAPORE							
Population, midyear estimates	Million	2.65	2.71	2.76	2.82	2.87	2.93
Exchange rate	\$\$/US\$	1.95	1.81	1.73	1.63	1.62	1.53
Foreign exchange reserves	Mil. US\$	20,136	27,535	33,931	39,661	48,066	57,890
GDP	Mil. \$\$	58,943	67,705	75,280	80,637	92,348	105,313
Real GDP	Mil. \$\$ (1990)	62,621	67,705	72,444	77,087	84,905	93,477
Real per capita GDP*	1990 US\$/person	13,037	13,784	14,481	15,082	16,322	17,602
Real GDP growth (local currency)	Percent	9.4	8.1	7.0	6.4	10.1	10.1
Change in CPI	"	2.4	3.4	3.4	2.3	2.2	3.1
Current account balance	Mil. US\$	2,942	3,181	4,688	6,155	5,173	11,950
Merchandise exports, f.o.b.	"	45,720	54,763	61,236	67,129	77,801	98,689
Merchandise imports, f.o.b.	"	46,012	56,311	61,443	68,388	80,587	96,583
Balance	"	-292	-1,548	-207	-1,259	-2,786	2,106
Agricultural exports, f.o.b.	"	2,435	2,555	3,014	3,260	3,410	4,015
Agricultural imports, c.i.f.	"	3,196	3,521	3,923	4,265	4,623	4,931
Balance	"	-761	-966	-909	-1,005	-1,213	-916
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	7,344	8,023	8,804	9,626	11,678	13,020
Total U.S. imports from	"	9,003	9,800	9,957	11,313	12,798	15,358
U.S. agricultural exports to	"	155	168	190	205	226	262
U.S. agricultural imports from	"	59	72	56	56	46	59
SOUTH KOREA							
Population, midyear estimates	Million	42.45	42.87	43.27	43.66	44.06	44.50
Exchange rate	Won/US\$	671.46	707.76	733.35	780.65	802.67	803.45
Foreign exchange reserves	Mil. US\$	14,978	14,459	13,306	16,640	19,704	25,032
GDP	Bil. Won	149,165	179,539	215,734	240,392	267,146	305,008
Real GDP	Bil. Won (1990)	163,950	179,539	195,936	205,860	217,699	235,931
Real per capita GDP*	1990 US\$/person	5,457	5,917	6,398	6,662	6,981	7,491
Real GDP growth (local currency)	Percent	6.4	9.5	9.1	5.1	5.8	8.4
Change in CPI	"	5.7	8.6	9.3	6.2	4.8	6.3
Current account balance	Mil. US\$	5,387	-1,745	-8,291	-3,939	1,016	-3,855
Merchandise exports, f.o.b.	"	61,408	63,123	69,581	75,169	80,950	93,676
Merchandise imports, f.o.b.	"	56,811	65,127	76,561	77,315	79,090	96,822
Balance	"	4,597	-2,004	-6,980	-2,146	1,860	-3,146
Agricultural exports, f.o.b.	"	1,129	1,145	1,102	1,177	1,105	1,331
Agricultural imports, c.i.f.	"	6,303	6,459	6,952	7,019	6,685	7,844
Balance	"	-5,174	-5,314	-5,850	-5,842	-5,580	-6,513
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	13,459	14,404	15,505	14,639	14,782	18,025
Total U.S. imports from	"	19,737	18,485	17,018	16,682	17,118	19,629
U.S. agricultural exports to	"	2,593	2,644	2,104	2,222	1,932	2,330
U.S. agricultural imports from	"	56	62	56	60	66	70

* Calculated as real GDP or GNP in local currency at 1990 prices, converted to U.S. dollars at 1990 exchange rate, divided by population.

Sources

Agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others: IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
TAIWAN							
Population, midyear estimates	Million	19.99	20.22	20.45	20.64	20.82	21.03
Exchange rate	\$NT/US\$	26.41	26.89	26.82	25.16	26.39	26.46
Foreign exchange reserves	Mil. US\$	73,224	72,441	82,405	82,306	83,573	92,454
GDP	Bil. \$NT	3,939	4,307	4,811	5,338	5,875	6,377
Real GNP	Bil. \$NT (1990)	4,180	4,412	4,745	5,041	5,344	5,668
Real per capita GNP*	1990 US\$/person	7,776	8,115	8,629	9,082	9,545	10,023
Real GDP growth (local currency)	Percent	8.2	5.4	7.6	6.8	6.3	6.5
Change in CPI	"	4.4	4.1	3.6	4.5	2.9	4.1
Current account balance	Mil. US\$	11,384	10,769	12,015	8,154	6,714	6,154
Merchandise exports, f.o.b.	"	65,874	66,823	75,535	80,723	84,329	92,242
Merchandise imports, f.o.b.	"	49,672	51,895	59,781	67,956	72,742	80,258
Balance	"	16,202	14,928	15,754	12,767	11,587	11,984
Agricultural exports, f.o.b.	"	3,815	3,661	4,153	4,101	4,194	4,843
Agricultural imports, c.i.f.	"	6,261	6,088	6,899	7,473	7,768	8,847
Balance	"	-2,446	-2,427	-2,746	-3,372	-3,574	-4,004
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	11,335	11,491	13,182	15,250	16,168	17,109
Total U.S. imports from	"	24,313	22,666	23,023	24,595	25,102	26,706
U.S. agricultural exports to	"	1,754	1,661	1,899	1,900	2,043	2,145
U.S. agricultural imports from	"	153	179	175	128	112	117
THAILAND							
Population, midyear estimates	Million	55.21	56.08	56.92	57.76	58.58	59.40
Exchange rate	Baht/US\$	25.70	25.59	25.52	25.40	25.32	25.15
Foreign exchange reserves	Mil. US\$	9,461	13,247	17,287	20,012	24,078	28,884
GDP	Bil. baht	1,857	2,191	2,520	2,833	3,171	3,602
Real GDP	Bil. baht (1990)	1,963	2,191	2,375	2,563	2,774	3,011
Real per capita GDP*	1990 US\$/person	1,390	1,527	1,631	1,735	1,851	1,981
Real GDP growth (local currency)	Percent	12.2	11.6	8.4	7.9	8.2	8.5
Change in CPI	"	5.4	5.9	5.7	4.1	3.4	5.1
Current account balance	Mil. US\$	-2,498	-7,281	-7,571	-6,355	-7,047	-8,419
Merchandise exports, f.o.b.	"	19,834	22,811	28,232	32,100	36,398	44,478
Merchandise imports, f.o.b.	"	22,750	29,561	34,222	36,261	40,648	48,187
Balance	"	-2,916	-6,750	-5,990	-4,161	-4,250	-3,709
Agricultural exports, f.o.b.	"	6,010	5,388	5,881	6,671	5,991	7,121
Agricultural imports, c.i.f.	"	1,249	1,601	1,879	2,140	2,093	2,387
Balance	"	4,761	3,787	4,002	4,531	3,898	4,734
Trade with U.S.:							
Total U.S. exports to	Mil. US\$	2,288	2,995	3,753	3,989	3,766	4,865
Total U.S. imports from	"	4,379	5,289	6,122	7,529	8,542	10,306
U.S. agricultural exports to	"	190	271	286	311	302	384
U.S. agricultural imports from	"	432	469	518	658	727	714

* Calculated as real GDP or GNP in local currency at 1990 prices, converted to U.S. dollars at 1990 exchange rate, divided by population.

Sources

Taiwan agricultural exports and imports: Council of Agriculture, Agricultural Trade Statistics of Republic of China 1994, April 1995.

Thailand agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others (Taiwan): The Central Bank of China, Financial Statistics, Taiwan District, November 1995.

All others (Thailand): IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 2: Macroeconomic data

Country and item	Units	1989	1990	1991	1992	1993	1994
UNITED STATES							
Population, midyear estimates	Million	247.34	249.91	252.64	255.41	258.12	260.65
Foreign exchange reserves	Bil. US\$	44.55	52.19	45.93	40.01	41.53	41.22
GDP	Bil. US\$	5,251.00	5,522.20	5,722.90	6,020.20	6,343.30	6,738.40
Real GDP	Bil. US\$ (1990)	5,477.60	5,522.20	5,458.30	5,637.50	5,813.20	6,050.40
Real per capita GDP*	1990 US\$/person	22,146	22,097	21,605	22,072	22,521	23,213
Real GDP growth	Percent	2.5	0.8	-1.2	3.3	3.1	4.1
Change in CPI	"	4.8	5.4	4.2	3.0	3.0	2.6
Current account balance	Bil. US\$	-103.97	-92.91	-7.72	-62.00	-99.73	-150.93
Merchandise exports, f.o.b.	"	362.00	389.31	416.91	440.35	458.72	504.54
Merchandise imports, f.o.b.	"	477.30	498.34	490.98	536.45	590.11	668.86
Balance	"	-115.30	-109.03	-74.07	-96.10	-131.39	-164.32
Agricultural exports, f.o.b.	Mil. US\$	44,161	45,211	44,633	48,247	47,795	52,332
Agricultural imports, c.i.f.	"	25,392	27,088	26,672	28,467	28,799	30,901
Balance	"	18,769	18,123	17,961	19,780	18,996	21,431

* Calculated as real GDP at 1990 prices divided by population.

Sources

Agricultural exports and imports: Food and Agriculture Organization, FAOSTAT database.

Total U.S. exports and imports: U.S. Department of Commerce, Bureau of the Census.

U.S. agricultural exports and imports: USDA, Foreign Agricultural Trade of the United States database.

All others: IMF, International Financial Statistics Yearbook 1995 and International Financial Statistics, February 1996.

Appendix table 3: Imports of principal agricultural commodities and U.S. shares

Country and commodity	Total volume			U.S. volume			U.S. share		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
	----- 1,000 tons -----						----- Percent -----		
CANADA									
Beef & veal	155	189	201	79	76	89	51	40	44
Poultry	44	47	45	44	47	45	100	100	100
Corn	777	836	737	775	836	736	100	100	100
Soybeans	81	236	27	81	235	27	99	100	98
Tomatoes	146	152	149	139	136	129	96	89	87
Apples	90	97	103	75	80	84	83	83	82
Grapes	151	154	144	105	110	102	70	71	71
Oranges, tangerines, etc.	280	301	279	196	217	203	70	72	73
Cotton lint	45	46	45	40	45	44	90	97	97
CHILE									
Corn	454	381	585	258	220	335	57	58	57
Wheat	485	691	650	31	21	33	6	3	5
Coarse grains	464	396	595	258	243	335	56	61	56
Sugar	229	40	29	22	2	14	10	5	48
Vegetable oils	87	102	122	2	1	2	2	1	2
Soybean oil	70	85	105	0	0	0	0	0	0
Beef & veal	28	35	40	0	0	0	0	0	0
Rice	25	33	30	5	17	9	20	52	30
Dry milk	23	27	20	5	17	9	22	63	45
Cotton	20	22	21	0	2	2	0	9	10
Barley	10	15	10	0	0	0	0	0	0
CHINA									
Corn	0	0	--	0	0	36	--	--	--
Raw cotton	280	10	500	133	0.2	401	48	2	80
Wheat	10,580	6,420	7,180	2,982	2,717	1,913	28	42	27
Poultry meat	78	100	139	9	28	34	12	28	24
Whole cattle hides*	72	60	132	127	207	709	--	--	--
HONG KONG									
Soybeans	35	36	35	2	3	2	6	8	6
Raw cotton	218	164	209	76	17	82	35	10	39
Wheat	145	85	95	133	79	90	92	93	95
Beef	32	31	34	5	5	2	16	16	6
Poultry meat	295	355	468	174	230	330	59	65	71
Whole cattle hides	75	74	13	7	13	1	9	18	8
Tobacco	27	21	20	11	8	9	41	38	45
Citrus fruit	224	225	241	123	135	148	55	60	61
Apples	69	80	86	51	57	66	74	71	77

* U.S. volume of cattle hides in thousand pieces. -- = not available.

Sources

Canada: U.N. Trade database.

Chile: Chilean Ministry of Agriculture; USDA, Foreign Agricultural Trade of the United States (FATUS) database.

China: PRC Custom Statistics, annual issues; USDA, FATUS database.

Hong Kong: Hong Kong Census and Statistics Department, Hong Kong Trade Statistics, December issues.

Appendix table 3: Imports of principal agricultural commodities and U.S. shares

Country and commodity	Total volume			U.S. volume			U.S. share		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
	----- 1,000 tons -----						----- Percent -----		
JAPAN									
Corn	16,382	16,862	15,930	13,508	14,551	11,887	82	86	75
Sorghum	3,084	3,079	2,777	1,728	1,900	1,701	56	62	61
Barley	1,584	1,618	1,665	25	101	0	2	6	0
Soybeans	4,725	5,031	4,731	3,900	4,036	3,540	83	80	75
Raw cotton	549	478	404	227	182	208	41	38	51
Wheat	5,979	5,813	6,352	3,429	3,228	3,706	57	56	58
Beef & veal (boneless)	412	509	587	185	217	250	45	43	43
Pork (boneless)	480	458	493	67	63	73	14	14	15
Chicken meat	394	400	454	112	116	123	28	29	27
Whole cattle hides	188	189	138	130	126	95	69	67	69
Tobacco	117	119	135	60	61	68	51	51	50
Citrus fruit	511	493	573	496	468	537	97	95	94
MEXICO									
Corn	1,137	289	3,054	1,137	289	3,054	100	100	100
Sorghum	4,956	3,613	3,402	4,956	3,613	3,402	100	100	100
Wheat	1,352	1,754	1,400	409	967	625	30	55	45
Soybeans	2,151	2,376	2,591	1,914	1,758	2,073	89	74	80
Soymeal	464	211	377	455	192	365	98	91	97
Beef & veal	130	96	90	69	39	72	53	41	80
Pork	55	50	80	38	29	51	69	58	64
Poultry	150	180	190	136	171	189	91	95	99
Nonfat dry milk	187	200	200	26	49	21	14	25	11
SOUTH KOREA									
Corn	6,612	6,207	5,748	1,669	741	1,489	25	12	26
Soybeans	1,289	1,088	1,228	1,214	972	1,017	94	89	83
Raw cotton	383	366	371	246	222	221	64	61	60
Wheat	3,543	4,938	6,057	1,516	1,402	1,535	43	28	25
Beef (product weight)	134	97	119	51	40	57	38	41	48
Turkey meat	15	17	21	10	12	15	67	71	71
Whole cattle hides	405	389	356	266	253	265	66	65	74
Tobacco	16	9	10	5	2	3	31	22	30
TAIWAN									
Corn	5,355	5,466	5,601	5,101	5,245	5,211	95	96	93
Soybeans	2,234	2,436	2,392	2,097	2,435	1,860	94	100	78
Fish meal for feed	388	481	453	70	50	54	18	10	12
Raw cotton	299	273	285	86	65	80	29	24	28
Hides and leather	220	227	253	84	86	112	38	38	44
Wheat	893	908	982	769	848	872	86	93	89
Beef	48	48	52	4	5	7	8	10	13
Dairy products	135	145	145	12	17	12	9	12	8
Apples	116	107	122	116	95	113	100	89	93

Sources

Japan: Meats: USDA, Foreign Agricultural Service (FAS), attaché reports.

Other series: Ministry of Finance, Japan Exports and Imports, December issues.

Mexico: USDA, Foreign Agricultural Trade of the United States database; USDA, FAS, attaché reports.

South Korea: Beef: USDA, FAS, attaché reports.

Other series: Korean Customs Service, Statistical Yearbook of Foreign Trade, various issues.

Taiwan: Council of Agriculture, Agricultural Trade Statistics of the Republic of China 1994, April 1995.

Appendix table 4: U.S. agricultural exports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
AUSTRALIA								
Animals & animal products	22.4	25.7	30.2	26.7	NA	NA	NA	NA
Grains & feeds	12.8	14.2	21.8	67.0	19.7	19.4	37.4	428.7
Fruits & preparations, ex. juice	16.4	16.7	16.5	15.2	13.0	14.1	14.9	15.4
Nuts & preparations	19.6	18.3	20.3	17.5	5.8	5.1	5.7	5.5
Vegetables & preparations	39.2	52.8	49.8	43.8	NA	NA	NA	NA
Oilseeds & products	50.4	50.9	58.6	81.9	180.4	179.0	211.1	352.5
Soybeans	11.2	16.4	10.4	17.4	49.9	72.4	44.6	78.7
Vegetable oil & waxes	2.7	3.2	2.9	3.7	1.6	2.2	1.9	2.6
Oilcake and meal	26.6	18.4	35.4	51.3	119.9	83.4	160.5	266.4
Tobacco, unmanufactured	21.4	18.0	16.8	15.3	3.4	2.7	2.6	2.3
Total U.S. agricultural exports	302.5	315.4	356.4	405.2	NA	NA	NA	NA
BRUNEI								
Total U.S. agricultural exports	0.7	2.1	3.8	1.6	NA	NA	NA	NA
CANADA								
Animals & animal products	890.3	922.8	986.9	1,043.6	NA	NA	NA	NA
Grains & feeds	714.2	843.6	874.3	977.9	1,384.5	2,265.4	1,745.4	2,260.3
Fruits & preparations, ex. juice	717.4	721.9	700.4	695.0	915.5	946.7	943.6	909.3
Nuts & preparations	135.8	131.5	129.4	137.8	81.5	76.6	66.9	88.6
Vegetables & preparations	1,091.1	1,226.7	1,163.6	1,473.6	NA	NA	NA	NA
Oilseeds & products	282.2	358.2	327.7	346.1	832.1	1,069.2	904.6	1,121.1
Soybeans	17.8	62.4	6.7	16.7	76.2	249.0	25.7	72.6
Vegetable oil & waxes	78.7	98.5	111.7	121.6	91.6	117.6	119.6	136.5
Oilcake and meal	144.6	148.6	160.5	159.7	603.4	619.9	676.7	829.0
Tobacco, unmanufactured	4.2	4.5	1.8	2.3	1.6	3.7	0.4	0.5
Cotton, excluding linters	63.7	53.5	61.5	86.3	39.7	33.2	38.7	55.4
Total U.S. agricultural exports	4,812.2	5,219.6	5,261.3	5,838.4	NA	NA	NA	NA
CHILE								
Animals & animal products	12.8	11.2	10.4	14.2	NA	NA	NA	NA
Grains & feeds	27.3	62.4	41.1	89.1	254.5	529.4	320.9	645.3
Fruits & preparations, ex. juice	0.2	0.2	0.1	0.7	0.1	0.1	0.1	0.6
Nuts & preparations	1.0	0.8	0.7	0.7	0.3	0.3	0.3	0.4
Vegetables & preparations	2.5	4.6	5.4	7.1	NA	NA	NA	NA
Oilseeds & products	7.5	9.4	4.6	7.1	15.2	23.6	3.9	5.3
Soybeans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vegetable oil & waxes	1.5	1.1	1.1	2.9	1.6	1.3	1.3	3.6
Oilcake and meal	2.8	4.5	0.2	0.0	12.1	20.7	1.0	0.0
Tobacco, unmanufactured	0.1	1.5	2.8	0.1	0.0	0.0	0.1	0.0
Cotton, excluding linters	0.2	0.9	4.6	0.6	0.1	0.7	3.2	0.3
Total U.S. agricultural exports	85.0	115.1	86.4	140.1	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 4: U.S. agricultural exports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
CHINA								
Animals & animal products	28.3	43.8	79.0	189.8	NA	NA	NA	NA
Live baby chicks (1,000)	8.5	8.0	8.0	7.4	2,421.0	3,822.8	2,337.1	2,675.0
Cattle hides, whole (1,000)	7.3	8.2	31.4	77.7	161.8	163.1	581.8	1,332.1
Grains & feeds	370.6	239.4	205.7	983.8	4,228.7	2,189.4	2,361.8	7,937.6
Wheat & products	369.7	238.3	203.5	510.8	4,226.0	2,187.4	2,356.8	3,823.2
Feeds & fodder, ex. oilcake	0.4	1.0	1.7	8.0	1.8	1.8	4.1	44.3
Fruits, nuts, & vegetables	4.2	10.4	7.8	7.2	NA	NA	NA	NA
Oilseeds & products	39.0	17.0	74.8	393.1	156.9	63.7	168.5	603.7
Soybeans	29.7	13.9	17.7	0.0	135.6	61.4	69.8	0.0
Cotton, excluding linters	240.6	0.2	496.6	805.8	172.2	0.2	303.5	471.4
Total U.S. agricultural exports	690.5	322.0	877.3	2,413.1	NA	NA	NA	NA
HONG KONG								
Animals & animal products	227.5	277.9	367.4	584.2	NA	NA	NA	NA
Beef & veal	19.7	22.6	18.7	20.2	4.6	5.4	4.4	4.2
Poultry meat	131.4	160.9	231.0	389.6	144.5	207.5	301.7	463.4
Cattle hides, whole (1,000)	11.1	13.9	22.5	28.2	202.2	274.8	435.4	541.3
Grains & feeds	52.1	41.9	49.6	48.1	233.5	150.4	152.6	162.5
Wheat & products	25.2	17.1	20.4	13.5	176.7	105.3	111.6	78.3
Feeds & fodder, ex. oilcake	17.7	13.9	12.3	18.0	34.5	33.2	23.0	61.7
Fruits & preparations, ex. juice	144.1	158.3	175.6	186.3	209.1	246.5	262.1	271.3
Nuts & preparations	29.2	41.5	35.4	43.9	9.0	11.8	9.9	15.8
Vegetables & preparations	77.4	110.5	132.2	139.2	NA	NA	NA	NA
Oilseeds & products	23.8	19.5	32.6	76.4	31.0	25.4	30.2	76.0
Vegetable oil & waxes	19.4	15.5	24.0	58.9	24.7	19.7	25.2	66.8
Tobacco, unmanufactured	39.5	35.2	28.8	28.6	6.4	6.2	4.6	4.1
Cotton, excluding linters	88.1	16.2	101.0	112.1	78.3	14.9	74.4	70.7
Total U.S. agricultural exports	817.0	880.0	1,102.5	1,425.9	NA	NA	NA	NA
INDONESIA								
Animals & animal products	14.1	16.5	33.3	48.2	NA	NA	NA	NA
Grains & feeds	22.0	32.9	42.3	167.3	75.5	134.4	162.0	1,131.9
Wheat & products	0.9	7.1	4.3	43.6	5.5	49.4	30.2	265.9
Feeds & fodder, ex. oilcake	16.7	20.9	30.4	20.7	57.1	65.2	86.6	71.8
Rice	2.3	2.1	1.1	14.5	7.9	9.1	3.0	48.5
Fruits & preparations, ex. juice	13.3	16.0	23.9	37.7	13.9	18.4	34.8	55.0
Vegetables & preparations	5.1	5.1	8.6	17.7	NA	NA	NA	NA
Oilseeds & products	39.1	114.2	73.9	68.7	167.9	482.9	282.6	267.2
Soybeans	32.8	112.1	68.0	63.4	145.8	481.6	263.8	264.1
Tobacco, unmanufactured	7.9	7.8	5.2	11.2	1.1	1.1	0.7	1.5
Cotton, excluding linters	240.7	123.9	207.6	345.2	161.9	93.3	148.0	200.1
Total U.S. agricultural exports	353.1	327.4	407.6	706.8	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 4: U.S. agricultural exports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
JAPAN								
Animals & animal products	2,371.4	2,558.4	2,521.8	3,300.3	NA	NA	NA	NA
Beef & veal	1,047.2	1,240.4	1,278.6	1,617.2	200.3	230.3	265.9	312.3
Pork	275.0	331.0	347.7	552.4	65.3	77.4	82.9	123.6
Poultry meat	165.4	142.2	156.4	176.6	139.0	123.5	122.0	132.4
Tallow, inedible	13.6	13.7	10.8	19.2	39.7	38.1	31.9	41.1
Cattle hides, whole (1,000)	260.3	242.8	220.6	260.5	4,794.5	4,340.5	3,702.1	3,975.5
Other animal products	609.8	588.2	507.7	674.3	NA	NA	NA	NA
Grains & feeds	2,764.6	2,721.3	3,101.8	3,210.4	21,049.3	22,090.8	20,375.1	24,196.2
Wheat & products	542.7	517.7	629.7	518.4	3,348.6	3,269.4	3,416.2	3,033.5
Feeds & fodder, ex. oilcake	447.1	501.8	541.1	557.6	2,365.4	2,448.4	2,595.8	2,583.1
Fruits & preparations, ex. juice	556.5	509.5	612.1	691.7	648.9	602.7	661.5	680.2
Nuts & preparations	127.9	132.9	170.4	145.7	44.8	42.4	39.4	47.2
Vegetables & preparations	394.3	446.0	598.6	758.7	NA	NA	NA	NA
Oilseeds & products	997.1	1,082.9	1,079.5	1,142.0	4,108.1	4,377.3	3,818.0	4,477.7
Soybeans	882.5	919.8	910.6	940.9	3,890.7	3,983.7	3,527.3	4,061.5
Vegetable oil & waxes	48.6	62.8	90.6	94.5	55.7	73.1	99.5	89.1
Oilcake and meal	20.7	54.8	23.9	45.2	92.0	249.2	102.0	226.0
Tobacco, unmanufactured	351.3	319.5	360.9	277.4	59.1	52.7	60.3	43.9
Cotton, excluding linters	381.8	250.0	253.9	394.1	242.0	177.1	175.2	225.6
Total U.S. agricultural exports	8,382.8	8,461.5	9,207.8	10,454.1	NA	NA	NA	NA
MALAYSIA								
Animals & animal products	11.6	9.5	12.7	13.3	NA	NA	NA	NA
Grains & feeds	22.2	34.4	36.5	120.9	93.5	141.8	131.7	766.8
Wheat & products	8.4	17.8	13.9	24.2	52.3	101.7	75.0	131.2
Feeds & fodder, ex. oilcake	10.9	12.9	18.1	18.6	35.9	35.0	50.9	55.0
Fruits & preparations, ex. juice	21.6	23.7	27.6	32.3	28.9	31.3	40.3	44.9
Vegetables & preparations	15.9	19.4	25.2	30.6	NA	NA	NA	NA
Oilseeds & products	25.0	70.1	38.1	116.0	91.5	297.5	131.3	464.9
Soybeans	20.8	65.5	33.2	93.0	86.3	291.6	126.8	412.6
Tobacco, unmanufactured	25.3	25.1	21.5	32.0	4.5	5.6	3.7	4.6
Cotton, excluding linters	12.3	5.4	6.5	9.6	8.6	3.9	4.3	5.9
Total U.S. agricultural exports	153.8	213.2	200.5	376.7	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 4: U.S. agricultural exports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
MEXICO								
Animals & animal products	1,307.3	1,205.8	1,240.9	975.0	NA	NA	NA	NA
Grains & feeds	1,002.0	905.5	1,037.9	1,079.6	7,462.9	6,404.1	6,691.9	7,453.9
Wheat & products	65.9	120.3	102.9	124.2	389.2	789.6	742.5	716.1
Feeds & fodder, ex. oilcake	110.6	129.6	145.4	122.6	601.8	536.9	505.3	407.8
Fruits & preparations, ex. juice	77.6	100.0	176.6	103.5	142.8	178.8	290.5	171.0
Nuts & preparations	36.0	34.3	43.2	36.0	23.7	23.8	29.9	28.9
Vegetables & preparations	154.3	184.3	237.3	185.1	NA	NA	NA	NA
Oilseeds & products	674.3	687.2	821.8	766.4	2,731.5	2,651.8	2,918.8	2,745.1
Soybeans	451.0	411.0	529.1	414.0	1,956.6	1,747.2	2,047.8	1,782.6
Tobacco, unmanufactured	0.1	0.1	0.5	0.1	0.0	0.0	0.0	0.0
Cotton, excluding linters	73.2	166.0	206.7	180.1	54.5	132.1	142.4	103.6
Total U.S. agricultural exports	3,676.0	3,660.0	4,133.0	3,700.7	NA	NA	NA	NA
NEW ZEALAND								
Animals & animal products	7.4	10.5	7.6	7.3	NA	NA	NA	NA
Grains & feeds	7.0	8.9	7.7	14.8	32.2	43.7	23.5	70.4
Wheat & products	4.0	2.5	0.9	0.0	24.3	14.8	4.7	0.0
Feed grains	0.4	2.7	0.9	7.5	3.8	23.5	7.0	61.8
Fruits & preparations, ex. juice	9.4	10.7	12.7	15.9	9.6	12.3	11.8	15.6
Nuts & preparations	2.6	3.1	2.5	3.1	1.8	2.0	0.7	1.6
Vegetables & preparations	3.7	5.3	6.9	5.5	NA	NA	NA	NA
Oilseeds & products	13.2	11.2	15.7	19.6	39.5	32.9	47.9	54.7
Vegetable oil & waxes	2.9	2.1	2.8	6.9	2.0	1.7	3.3	9.3
Oilcake and meal	8.1	6.8	9.6	9.0	35.5	29.5	43.0	43.3
Tobacco, unmanufactured	2.8	2.5	2.4	3.1	0.4	0.4	0.4	0.5
Total U.S. agricultural exports	57.6	76.1	76.2	93.1	NA	NA	NA	NA
PAPUA NEW GUINEA								
Total U.S. agricultural exports	1.2	1.3	1.3	6.2	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 4: U.S. agricultural exports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
PHILIPPINES								
Animals & animal products	25.1	21.4	21.8	31.8	NA	NA	NA	NA
Grains & feeds	175.9	252.5	300.0	300.7	1,305.0	1,648.1	2,177.0	1,949.3
Wheat & products	157.5	231.5	280.0	266.5	1,259.8	1,595.2	2,131.4	1,792.1
Feeds & fodder, ex. oilcake	5.8	7.0	7.4	10.8	16.7	20.4	20.1	32.5
Fruits & preparations, ex. juice	22.2	21.7	22.6	29.8	22.5	23.6	30.6	36.5
Nuts & preparations	1.7	1.2	2.6	2.5	0.4	0.3	0.7	0.7
Vegetables & preparations	33.4	42.8	38.9	45.9	NA	NA	NA	NA
Oilseeds & products	74.0	99.1	77.1	149.8	315.3	422.2	319.5	691.6
Soybeans	4.6	13.1	12.0	29.2	19.2	55.1	46.1	124.6
Vegetable oil & waxes	3.5	2.8	1.6	3.8	3.9	2.2	1.3	2.5
Oilcake and meal	63.8	80.5	59.2	105.2	291.0	363.3	269.3	533.8
Tobacco, unmanufactured	22.7	13.7	15.1	19.5	3.2	1.9	2.0	2.6
Cotton, excluding linters	51.6	26.2	48.5	62.1	40.7	23.5	38.4	36.0
Total U.S. agricultural exports	442.6	512.2	553.8	675.0	NA	NA	NA	NA
SINGAPORE								
Animals & animal products	46.7	52.9	56.1	58.0	NA	NA	NA	NA
Beef & veal	7.3	9.2	6.8	9.1	1.1	1.3	1.1	1.2
Poultry meat	28.3	28.6	36.8	36.3	26.9	28.2	30.8	26.4
Grains & feeds	20.5	24.2	29.1	25.9	52.0	59.0	90.4	76.1
Wheat & products	3.2	4.2	5.9	4.4	18.9	24.8	34.8	25.7
Rice, paddy	1.3	1.3	2.3	1.6	2.7	2.8	4.1	3.0
Feeds & fodder, ex. oilcake	11.7	9.6	9.7	9.0	27.7	26.6	33.2	39.7
Fruits & preparations, ex. juice	38.9	39.1	44.0	48.6	47.3	45.9	52.4	56.4
Nuts & preparations	9.0	12.7	13.8	10.5	2.6	3.1	3.1	3.5
Vegetables & preparations	31.5	31.6	37.0	54.0	NA	NA	NA	NA
Oilseeds & products	7.7	15.6	12.8	27.4	6.2	22.9	12.1	33.2
Vegetable oil & waxes	7.3	14.5	12.1	26.2	5.8	20.4	10.9	32.0
Tobacco, unmanufactured	21.9	16.2	25.1	24.7	3.8	2.8	4.7	3.7
Cotton, excluding linters	3.2	1.2	1.4	1.9	2.2	0.8	0.9	1.1
Total U.S. agricultural exports	202.6	219.7	249.5	281.5	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 4: U.S. agricultural exports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
SOUTH KOREA								
Animals & animal products	869.2	818.0	895.7	1,197.4	NA	NA	NA	NA
Beef & veal	215.7	167.3	199.3	291.2	57.0	43.4	51.8	81.5
Pork	3.0	1.5	5.0	27.6	0.9	0.6	1.9	12.2
Poultry meat	17.2	19.9	23.8	33.1	9.0	12.5	15.4	25.4
Tallow, inedible	14.8	13.7	10.9	20.6	47.2	39.9	32.5	45.4
Cattle hides, whole (1,000)	525.1	507.5	509.4	640.5	9,597.5	9,170.3	8,860.6	10,628.9
Other animal products	93.4	108.1	147.3	184.4	NA	NA	NA	NA
Grains & feeds	444.6	353.5	333.0	1,331.0	3,145.3	2,538.0	2,219.7	10,521.7
Wheat & products	245.5	220.9	230.9	244.0	1,587.8	1,447.7	1,542.6	1,446.7
Feed grains	177.5	105.7	68.8	1,039.2	1,507.9	1,021.2	631.3	8,935.6
Feeds & fodder, ex. oilcake	14.3	15.4	15.3	28.2	43.1	58.3	33.0	112.0
Fruits & preparations, ex. juice	19.7	18.6	24.7	41.4	17.8	17.8	23.4	49.7
Nuts & preparations	21.7	24.6	30.0	21.6	6.4	6.7	7.2	6.5
Vegetables & preparations	61.9	72.9	75.6	106.0	NA	NA	NA	NA
Oilseeds & products	308.1	328.6	275.0	378.6	1,274.8	1,323.4	959.6	1,465.0
Soybeans	262.7	263.0	228.2	306.4	1,169.8	1,132.3	888.2	1,352.3
Vegetable oil & waxes	19.0	18.8	31.2	52.6	32.0	31.6	45.2	80.0
Oilcake and meal	15.5	34.6	1.5	2.0	66.7	153.0	9.1	11.5
Tobacco, unmanufactured	36.9	15.7	19.1	34.3	4.9	2.3	2.7	4.8
Cotton, excluding linters	356.3	304.8	296.3	350.8	239.8	221.9	209.8	196.8
Total U.S. agricultural exports	2,200.1	2,040.9	2,054.6	3,576.1	NA	NA	NA	NA
TAIWAN								
Animals & animal products	181.2	185.7	241.0	344.3	NA	NA	NA	NA
Beef & veal	16.7	20.3	27.2	36.5	3.2	3.6	5.4	7.0
Tallow, inedible	1.1	3.6	2.3	12.3	3.1	8.7	5.7	27.1
Cattle hides, whole (1,000)	112.2	111.5	147.3	201.4	1,997.6	1,955.5	2,445.9	2,992.3
Other animal products	51.2	50.4	64.2	94.1	NA	NA	NA	NA
Grains & feeds	749.9	767.4	835.6	974.9	5,890.1	6,414.0	6,023.2	7,352.9
Wheat & products	119.7	134.4	169.3	150.3	773.0	835.6	888.9	821.6
Feed grains and products	589.0	581.6	597.6	742.5	5,002.9	5,453.2	4,955.6	6,295.6
Feeds & fodder, ex. oilcake	36.4	45.8	61.2	73.3	109.5	120.1	168.2	226.6
Fruits & preparations, ex. juice	143.3	149.5	187.6	173.8	191.9	194.1	224.4	209.0
Nuts & preparations	22.0	27.3	21.8	25.7	5.4	6.7	5.0	6.9
Vegetables & preparations	109.9	123.0	135.9	149.6	NA	NA	NA	NA
Oilseeds & products	483.3	563.1	454.8	600.8	2,049.9	2,383.5	1,716.0	2,609.6
Soybeans	461.4	543.5	434.5	574.4	2,033.7	2,369.1	1,700.4	2,586.1
Vegetable oil & waxes	12.4	9.9	9.1	13.3	9.2	7.4	7.1	13.6
Oilcake and meal	0.1	0.0	0.0	0.1	0.1	0.0	0.0	1.0
Tobacco, unmanufactured	77.6	56.2	47.9	40.6	13.0	10.6	8.2	7.0
Cotton, excluding linters	93.7	64.1	101.6	135.0	84.5	58.5	75.1	78.2
Total U.S. agricultural exports	1,915.9	1,999.1	2,103.2	2,552.9	NA	NA	NA	NA

NA = Not Applicable. Source: Electronic database of USDA, Foreign Agricultural Trade of the United States.

Appendix table 4: U.S. agricultural exports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
THAILAND								
Animals & animal products	27.9	29.5	32.4	55.1	NA	NA	NA	NA
Cattle hides, whole (1,000)	8.4	11.9	19.7	29.8	165.4	253.6	414.3	571.1
Grains & feeds	48.9	72.9	85.3	126.8	241.4	315.0	379.4	628.0
Wheat & products	27.6	45.7	54.1	62.1	173.7	248.1	302.9	350.2
Feeds & fodder, ex. oilcake	19.5	25.3	29.4	38.7	64.0	63.9	74.4	119.0
Fruits & preparations, ex. juice	17.2	17.6	27.0	26.8	20.3	21.5	36.3	35.9
Nuts & preparations	0.7	0.9	1.0	1.4	0.2	0.2	0.2	0.4
Vegetables & preparations	14.4	24.8	26.3	12.0	NA	NA	NA	NA
Oilseeds & products	30.1	24.0	16.4	49.9	110.6	89.7	43.0	197.5
Soybeans	24.3	10.5	0.0	25.9	105.8	45.8	0.0	115.5
Tobacco, unmanufactured	53.2	54.1	66.0	67.0	7.6	7.6	8.9	8.6
Total U.S. agricultural exports	316.6	275.7	361.2	515.7	NA	NA	NA	NA

NA = Not Applicable. Source: Electronic database of USDA, Foreign Agricultural Trade of the United States.

Appendix table 5: U.S. agricultural imports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
AUSTRALIA								
Animals & products	955.5	876.9	800.5	666.5	NA	NA	NA	NA
Beef & veal	767.9	679.8	607.2	433.9	345.9	305.7	280.9	240.6
Mutton, goat, & lamb	28.1	32.2	36.0	39.6	18.3	15.4	15.7	16.9
Grains & feeds	26.1	28.1	36.9	32.4	22.7	26.8	28.2	32.6
Fruits & preparations, ex. juice	7.0	10.1	15.9	10.2	6.0	6.3	13.1	6.6
Vegetables & preparations	7.5	5.6	7.7	3.1	NA	NA	NA	NA
Nuts & preparations	8.3	16.2	8.6	16.1	1.1	2.3	1.2	2.0
Total U.S. agricultural imports	1,120.8	1,067.7	985.8	869.9	NA	NA	NA	NA
CANADA								
Animals & products	1,757.8	2,044.2	1,925.9	2,047.5	NA	NA	NA	NA
Beef & veal	266.9	349.5	385.5	353.9	117.3	146.0	178.6	171.7
Pork	343.2	369.2	393.5	406.1	174.9	173.5	187.6	187.7
Grains & feeds	739.8	809.3	1,312.5	1,225.8	3,682.6	3,803.7	8,155.2	5,943.9
Feeds & fodders, ex. oilcake	152.7	167.6	216.2	239.0	761.2	749.7	1,001.8	978.0
Fruits & preparations, ex. juice	72.0	72.8	88.8	101.4	105.5	95.4	84.4	119.3
Nuts & preparations	10.9	21.1	20.9	23.3	6.8	15.4	14.9	16.4
Vegetables & preparations	240.3	286.2	328.6	391.7	NA	NA	NA	NA
Sugar & related products	164.4	182.6	195.2	185.5	NA	NA	NA	NA
Beverages, excl. fruit juices (HL)	206.5	177.5	218.7	197.4	3,298.5	3,166.6	4,140.2	3,772.1
Oilseeds & products	312.8	354.6	616.8	608.5	1,283.8	1,274.3	2,034.7	1,912.8
Total U.S. agricultural imports	3,930.2	4,422.3	5,210.4	5,358.9	NA	NA	NA	NA
CHILE								
Animals & products	1.2	1.2	1.7	2.4	NA	NA	NA	NA
Grains & feeds	0.4	1.2	3.4	4.5	0.4	1.0	5.3	6.0
Fruits & preparations, ex. juice	301.5	306.3	312.9	332.7	453.8	460.7	447.8	462.1
Vegetables & preparations	29.7	29.7	42.4	40.4	NA	NA	NA	NA
Nuts & preparations	0.5	1.1	0.3	0.7	0.2	0.6	0.1	0.3
Total U.S. agricultural imports	490.8	465.8	514.2	536.7	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 5: U.S. agricultural imports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
CHINA								
Tea	27.7	29.2	30.3	31.9	23.5	25.0	25.3	26.1
Spices	5.1	6.4	5.3	5.6	1.9	3.7	4.8	3.4
Wool, unmanufactured	0.8	3.5	2.7	2.6	0.1	0.4	0.4	0.2
Feathers & down	41.3	37.4	43.8	57.6	10.0	10.7	11.4	12.6
Grains & feeds	10.0	12.6	19.3	22.6	9.9	11.5	23.4	21.3
Fruits & preparations, ex. juice	26.2	20.8	20.4	20.5	25.1	21.9	23.8	21.5
Nuts & preparations	11.5	20.1	14.8	16.1	2.7	5.6	5.3	5.2
Vegetables & preparations	79.0	97.5	115.6	132.1	NA	NA	NA	NA
Sugar & related products	25.3	28.1	27.6	16.6	NA	NA	NA	NA
Beverages, excl. fruit juices (HL)	6.9	7.4	5.6	6.7	83.3	92.2	68.8	81.2
Seeds, field & garden	15.9	11.6	12.9	16.2	2.4	4.7	6.6	5.9
Total U.S. agricultural imports	369.0	424.5	452.6	482.1	NA	NA	NA	NA
HONG KONG								
Poultry meat	0.6	0.6	0.2	0.5	0.1	0.1	0.0	0.1
Grains & feeds	14.2	13.4	10.9	10.8	8.4	8.2	5.4	5.7
Fruits, nuts, & vegtbls, ex. juice	66.2	63.8	76.9	60.7	NA	NA	NA	NA
Oilseeds & products	2.2	2.2	1.5	2.3	1.2	1.2	0.8	1.2
(Fish)	13.5	14.8	13.5	14.4	3.6	4.2	4.6	5.0
Total (excluding fish)	114.7	113.0	112.2	96.1	NA	NA	NA	NA
INDONESIA								
Animals & products	2.9	5.0	5.1	4.0	NA	NA	NA	NA
Grains & feeds	3.9	2.3	2.3	1.2	4.2	2.4	2.0	0.7
Vegetables & preparations	43.3	36.1	27.7	47.6	NA	NA	NA	NA
Fruits & preparations, ex. juice	9.4	10.7	10.5	12.8	14.8	20.4	23.2	23.8
Nuts & preparations	4.0	2.9	5.8	2.8	0.9	0.7	1.3	0.9
Tobacco, unmanufactured	11.6	15.3	10.6	10.3	5.9	11.1	7.1	5.5
Oilseeds & products	24.0	35.5	56.1	45.9	50.8	75.9	119.1	72.2
Coffee, cocoa, tea, & spices	158.3	134.5	182.2	186.4	150.8	141.3	142.0	86.8
Rubber & allied gums	451.9	512.7	528.3	950.0	559.4	612.2	607.5	624.1
Total U.S. agricultural imports	789.3	839.6	924.9	1,377.6	NA	NA	NA	NA
JAPAN								
Animals & products	19.7	19.5	24.5	32.2	NA	NA	NA	NA
Grains & feeds	39.7	39.3	49.4	54.8	10.3	9.5	9.6	9.6
Fruits & preparations (ex. juice)	16.4	15.2	14.2	14.8	8.1	16.6	10.5	20.6
Vegetables & preparations	65.8	67.4	72.2	78.2	NA	NA	NA	NA
Beverages, excl. fruit juices (HL)	29.3	29.4	25.9	23.4	240.5	219.1	179.0	132.5
Oilseeds & products	15.1	16.1	17.7	20.5	3.9	4.9	4.6	5.4
(Fish)	143.4	138.9	167.0	138.2	35.0	29.3	33.8	26.9
Total (excluding fish)	255.7	257.8	272.0	305.2	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 5: U.S. agricultural imports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
MALAYSIA								
Oilseed & products	113.4	120.8	152.9	190.0	253.2	255.9	323.1	269.2
Coffee, cocoa, tea & spices	82.1	60.3	32.8	50.5	47.2	43.6	17.1	20.0
Rubber & allied gums	127.9	128.3	126.6	206.2	147.3	138.5	133.2	132.6
(Fish)	34.5	23.3	22.3	22.4	7.7	5.6	4.8	4.6
Total (excluding fish)	339.1	323.2	328.6	468.8	NA	NA	NA	NA
MEXICO								
Animals & products	328.1	451.9	438.6	595.8	NA	NA	NA	NA
Grains & feeds	49.5	59.3	78.8	99.7	42.2	53.0	64.7	84.1
Fruits & preparations (ex. juice)	320.8	316.2	357.1	463.4	543.2	573.4	590.0	777.4
Nuts & preparations	46.9	83.5	32.3	70.2	17.5	21.8	15.5	27.4
Vegetables & preparations	774.5	1,058.1	1,073.2	1,295.1	NA	NA	NA	NA
Beverages, excl. fruit juices (HL)	164.7	183.7	191.9	230.8	2,008.8	2,234.2	2,350.8	2,835.8
Oilseeds & products	44.1	30.8	28.8	30.2	34.9	25.6	24.4	28.4
(Fish)	247.4	252.1	306.6	421.8	30.7	29.4	35.1	61.3
Total (excluding fish)	2,285.6	2,707.6	2,800.8	3,715.6	NA	NA	NA	NA
NEW ZEALAND								
Animal & products	750.9	677.9	656.6	646.2	NA	NA	NA	NA
Beef & veal	539.8	476.1	395.3	371.8	224.4	196.1	163.1	193.2
Mutton, goat, & lamb	18.7	25.0	23.6	37.1	5.9	7.7	7.3	10.0
Fruits & preparations, ex. juice	51.3	42.6	42.6	62.3	43.0	37.6	37.3	52.3
Vegetables & preparations	2.2	2.5	4.8	2.8	NA	NA	NA	NA
Nuts & preparations	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Grains & feeds	4.4	4.1	4.6	7.2	2.6	2.5	3.9	7.9
Total U.S. agricultural imports	847.7	771.8	746.0	764.0	NA	NA	NA	NA
PAPUA NEW GUINEA								
Total	22.3	25.3	24.7	26.9	NA	NA	NA	NA
PHILIPPINES								
Fruits & preparations, ex. juice	91.1	98.9	89.9	71.0	133.4	139.8	142.6	121.9
Oilseeds & products	193.4	210.8	172.9	295.2	358.0	487.9	370.0	484.0
(Fish)	95.0	84.7	97.0	106.0	29.8	31.3	31.8	37.0
Total (excluding fish)	481.6	483.1	448.3	541.0	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 5: U.S. agricultural imports (fiscal years)

Country and commodity	1992	1993	1994	1995	1992	1993	1994	1995
	----- Million dollars -----				----- 1,000 tons -----			
SINGAPORE								
Grains & feeds	4.9	5.0	5.7	5.6	2.3	2.1	2.3	2.3
Fruits, nuts & vegetables	7.6	6.6	7.9	6.3	NA	NA	NA	NA
Coffee, cocoa, tea, & spices	24.6	24.2	21.2	26.0	15.8	18.5	13.6	15.1
Rubber & allied gums	5.2	4.5	7.8	12.9	5.7	4.7	8.6	8.7
(Fish)	57.4	52.7	61.2	65.6	9.1	9.0	11.5	11.7
Total (excluding fish)	52.5	51.6	53.6	64.9	NA	NA	NA	NA
SOUTH KOREA								
Grains & feeds	20.5	20.9	23.8	25.0	10.4	10.7	11.9	12.3
Fruits & preparations	5.5	4.9	5.8	5.5	2.6	2.0	2.0	1.6
Nuts & preparations	0.8	0.9	0.6	1.2	0.3	0.3	0.2	0.3
Vegetables & preparations	14.8	16.5	17.4	17.1	NA	NA	NA	NA
Beverages, excl. fruit juices (HL)	3.1	3.9	5.2	5.2	25.9	32.2	44.0	42.0
Malt beverages	1.4	1.3	1.4	1.6	15.3	14.5	15.2	18.8
Total U.S. agricultural imports	59.1	64.1	67.7	72.4	NA	NA	NA	NA
TAIWAN								
Animals & products	10.0	12.3	17.5	35.4	NA	NA	NA	NA
Poultry and products	6.7	8.9	14.6	33.4	NA	NA	NA	NA
Grains & feeds	23.6	21.0	19.8	21.0	11.7	9.6	9.1	8.8
Fruits & preparations (ex. juice)	4.3	4.7	4.4	5.6	1.9	2.1	1.9	2.7
Vegetables & preparations	53.5	41.9	39.0	37.6	NA	NA	NA	NA
Mushrooms, canned	16.4	6.4	3.8	5.7	6.3	2.5	1.7	2.7
Sugar and related products	17.4	11.7	11.5	12.6	NA	NA	NA	NA
Oilseeds & products	2.8	2.2	3.2	3.7	1.3	1.0	1.2	1.6
Tea	3.8	3.8	4.4	4.5	0.7	0.5	0.6	0.6
Spices	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0
Field and garden seeds	7.6	3.2	2.0	2.4	0.1	0.1	0.1	0.1
Total U.S. agricultural imports	136.5	113.3	114.0	136.6	NA	NA	NA	NA
THAILAND								
Animals & products	23.2	21.1	21.2	24.5	NA	NA	NA	NA
Grains & feeds	126.4	120.5	135.5	137.7	371.0	232.8	221.1	229.7
Fruits & preparations	157.9	148.7	125.8	113.2	210.2	210.2	196.5	174.7
Vegetables & preparations	76.3	71.9	66.4	70.9	NA	NA	NA	NA
Tobacco, unmanufactured	20.8	51.1	53.1	22.1	10.3	24.6	18.3	8.9
Oilseeds & products	2.5	1.2	2.3	1.2	2.2	0.7	2.6	0.7
Coffee, cocoa, tea, & spices	42.0	64.0	51.3	117.5	51.2	75.5	42.1	45.4
Rubber & allied gums	124.2	150.0	180.3	351.4	146.4	175.2	202.0	231.3
(Fish)	862.9	887.6	1,257.1	1,237.3	223.4	184.9	206.2	180.0
Total (excluding fish)	649.6	694.5	703.4	915.3	NA	NA	NA	NA

NA = Not Applicable. Source: USDA, Foreign Agricultural Trade of the United States database.

Appendix table 6: Agricultural production (1,000 tons)

Country and commodity	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
AUSTRALIA										
Wheat	16,167	16,778	12,369	13,935	14,214	15,066	10,557	16,184	16,479	8,903
Wool	830	890	916	959	1,102	1,066	874	869	828	726
Beef & veal	1,388	1,508	1,588	1,491	1,677	1,760	1,791	1,826	1,825	1,783
Milk	6,038	6,176	6,127	6,291	6,262	6,403	6,732	7,327	8,077	8,205
Coarse grains	8,114	6,990	7,164	6,736	7,009	6,906	8,258	8,475	10,049	5,080
Fruits	2,273	2,278	2,340	2,369	2,413	2,362	2,639	2,617	2,715	2,557
Vegetables	2,188	2,340	2,448	2,535	2,633	2,951	2,675	2,644	2,650	2,683
Poultry meat	365	369	403	406	419	425	455	467	495	498
Sugar (94nt)	3,404	3,371	3,440	3,679	3,797	3,545	3,100	4,256	4,300	5,081
Pork	267	275	288	308	317	312	336	328	344	349
Mutton & lamb	553	553	581	599	544	628	668	667	642	591
Cotton	267	222	284	286	305	433	502	373	329	335
BRUNEI										
Poultry meat	5	5	5	5	5	5	5	5	5	5
Chicken eggs	2	3	3	3	3	3	3	3	3	3
Rice, paddy	1	1	1	1	1	1	1	1	1	1
Cassava	1	1	1	1	1	1	1	1	1	1
Fruit	5	4	5	5	5	5	5	5	5	5
Vegetables	9	8	8	8	8	8	8	8	8	8
CANADA										
Wheat	24,252	31,359	25,945	15,913	24,796	32,098	31,946	29,871	27,232	23,122
Canola	3,498	3,714	3,720	4,218	3,209	3,266	4,224	3,875	5,480	7,233
Barley	12,387	14,568	13,916	10,326	11,784	13,441	11,617	10,919	12,972	11,690
Soybeans	1,012	960	1,270	1,153	1,219	1,262	1,460	1,387	1,851	2,251
Corn	6,970	5,912	7,065	5,450	6,571	7,067	7,413	4,883	6,501	7,043
Beef & veal	1,029	1,035	977	973	980	924	867	898	860	903
Pork	1,088	1,097	1,131	1,188	1,184	1,133	1,129	1,209	1,192	1,234
Poultry	608	628	646	656	659	701	708	706	741	829
CHILE										
Sugar beets	2,124	2,638	2,650	2,487	2,810	2,326	2,150	3,588	3,411	3,547
Wheat	1,600	1,874	1,734	1,760	1,717	1,590	1,560	1,322	1,270	1,360
Grapes	1,000	900	963	999	1,037	1,171	1,186	1,141	1,300	1,200
Potatoes	909	791	727	928	882	829	844	1,023	926	900
Corn	650	610	661	938	762	840	910	900	937	932
Apples	425	515	580	630	660	700	780	830	840	810
Wine	438	335	390	423	390	398	290	317	381	320
Total oil	280	217	256	318	214	268	182	178	215	310
Oats	124	127	157	167	205	207	183	200	200	200
Rice, milled	75	95	104	105	90	98	86	78	85	86
Beef & veal	175	177	175	197	221	242	230	200	224	240
Dry beans	101	89	81	100	73	87	117	91	55	54

Sources

Australia: ABARE, Commodity Statistical Bulletin, 1994; ABARE, Australian Commodities, Forecasts and Issues, December 1995.

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Canada: USDA, PS&D database.

Chile: For wheat, corn, oats, rice, and total oil--USDA, PS&D database.

For all other series--Food and Agriculture Organization, AGROSTAT database.

Appendix table 6: Agricultural production (1,000 tons)

Country and commodity	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
CHINA										
Wheat	85,810	90,040	85,902	85,430	90,810	98,230	95,950	101,587	106,390	99,297
Rice, paddy	168,569	172,224	174,262	169,107	180,130	189,331	183,810	186,220	177,700	175,933
Corn	63,826	70,856	79,241	77,351	78,928	96,819	98,770	95,383	102,704	99,275
Wool	177	185	209	222	237	239	240	238	240	255
Beef & veal	467	589	793	958	1,072	1,256	1,535	1,803	2,336	3,270
Milk, cow	2,499	2,899	3,301	3,660	3,813	4,157	4,644	5,031	4,987	5,288
Coarse grains	79,910	84,832	93,569	92,141	91,309	111,685	112,280	108,360	116,740	118,663
Fruits	11,639	13,477	16,679	16,661	18,319	18,744	21,761	24,400	30,112	34,998
Poultry meat	1,602	1,879	2,194	2,744	2,820	3,229	3,950	4,542	5,736	7,552
Sugar (raw value)	4,627	5,250	5,060	4,610	5,010	5,820	6,401	8,290	7,710	5,920
Pork	16,547	17,960	18,349	20,176	21,228	22,811	24,523	26,353	28,544	32,048
Mutton & lamb	593	622	719	802	962	1,068	1,180	1,250	1,375	1,609
Cotton	4,137	3,549	4,225	4,149	3,788	4,508	5,675	4,508	3,739	4,341
Eggs	5,347	5,550	5,902	6,955	7,198	7,946	9,220	10,199	11,798	14,790
INDONESIA										
Coarse grains	4,330	5,000	4,800	5,200	5,000	5,000	5,400	5,650	5,400	5,200
Copra	1,250	1,270	1,250	1,245	1,320	1,310	1,325	1,190	1,465	1,235
Rice, milled	26,542	27,014	26,051	27,089	29,072	29,366	29,042	31,350	31,318	30,315
Sugar (raw value)	1,827	1,846	2,024	2,127	1,920	2,080	2,120	2,250	2,300	2,480
Tropical oil	2,143	2,170	2,285	2,586	3,325	3,750	3,850	4,365	4,977	5,245
Oilseed- and fish meal	615	616	754	858	967	1,017	975	1,067	1,161	1,120
JAPAN										
Wheat	874	876	864	1,021	985	952	759	759	638	565
Rice, paddy	14,577	14,559	13,284	12,419	12,934	13,124	12,005	13,216	9,793	14,976
Beef & veal	555	559	565	570	548	549	574	592	593	601
Pork	1,532	1,551	1,581	1,578	1,594	1,555	1,483	1,432	1,433	1,390
Poultry meat	1,395	1,421	1,465	1,471	1,482	1,451	1,420	1,367	1,368	1,302
Citrus fruits	3,202	2,883	3,296	2,672	2,632	2,215	2,067	2,219	1,913	1,683
Vegetables	13,500	13,750	13,671	13,671	13,716	13,293	12,932	13,125	12,375	--
Milk	7,380	7,457	7,335	7,607	8,059	8,189	8,259	8,576	8,626	8,389
Eggs	2,152	2,231	2,376	2,400	2,423	2,419	2,498	2,571	2,598	2,583
Potatoes, white	3,649	3,980	3,880	3,689	3,512	3,478	3,550	3,427	3,325	3,089
Tobacco	116	117	104	84	74	81	70	79	67	80

-- = not available.

Sources

China: China Agricultural Yearbook, various issues; China Statistical Yearbook, various issues.

Indonesia: USDA, PS&D database.

Japan: For vegetables--Pocket Book of the Ministry of Agriculture, Forestry, and Fishery (MAFF).

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Appendix table 6: Agricultural production (1,000 tons)

Country and commodity	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MALAYSIA										
Rice, milled	1,258	1,150	1,092	1,148	1,147	1,302	1,150	1,190	1,300	1,325
Fruit	985	1,015	1,047	1,075	1,114	1,105	1,120	1,129	1,184	1,206
Vegetables	277	280	315	306	313	344	351	366	383	396
Cocoa beans	99	130	167	230	243	247	230	220	226	230
Sugar (raw value)	81	94	98	88	100	105	95	104	106	114
Tropical oils	5,470	5,206	5,533	6,385	7,310	6,847	7,040	8,074	8,103	8,827
Oilseed- and fish meal	1,010	989	1,077	1,129	1,392	1,370	1,361	1,526	1,577	1,743
Rubber, natural	1,469	1,539	1,579	1,662	1,416	1,291	1,256	1,173	1,074	1,074
MEXICO										
Corn	10,500	10,000	9,900	10,100	9,750	14,100	14,689	18,631	19,141	18,200
Sorghum	3,700	4,300	4,000	3,110	3,750	3,700	4,403	3,088	3,018	3,000
Wheat	4,400	4,500	3,700	3,200	4,000	3,900	3,227	3,127	3,596	4,000
Soybeans	710	660	750	300	984	567	718	572	497	525
Cotton	209	138	221	305	166	175	181	30	24	100
Sugar	3,436	3,928	3,970	3,806	3,678	3,100	3,900	3,500	4,330	3,780
Beef & veal	1,339	1,200	1,205	1,754	2,140	1,790	1,580	1,660	1,710	1,810
Pork	865	910	950	964	910	792	820	830	870	900
Poultry	627	590	515	592	635	700	840	990	1,090	1,240
Eggs (million)	18,092	18,563	18,039	17,859	17,950	18,040	19,840	19,650	20,140	22,150
Milk	6,920	8,000	8,971	8,830	8,970	9,330	10,200	10,700	10,720	11,010
Tomatoes	1,616	1,454	1,672	1,980	1,919	1,855	1,860	1,413	1,693	1,560
NEW ZEALAND										
Wheat	298	379	336	228	135	188	181	191	219	227
Wool	373	350	348	346	341	309	305	296	256	284
Beef & veal	487	468	563	562	550	478	539	545	572	538
Milk	7,647	7,987	7,073	7,551	7,240	7,500	7,870	8,186	8,365	9,368
Coarse grains	870	804	656	557	532	675	623	540	579	594
Apples	286	310	344	383	359	404	425	443	439	415
Poultry meat	48	48	48	53	59	58	61	64	72	78
Pork	43	48	48	45	45	43	44	48	49	49
Mutton & lamb	728	617	606	615	615	530	555	585	510	515
Eggs	50	51	44	45	49	48	48	50	51	51

Sources

Malaysia: For rice, tropical oils, and oilseed- and fish meal--USDA, PS&D database.

For all other series--Food and Agriculture Organization, AGROSTAT database.

Mexico: For tomatoes--Food and Agriculture Organization, AGROSTAT database. For all other series--USDA, PS&D database.

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Appendix table 6: Agricultural production (1,000 tons)

Country and commodity	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
PAPUA NEW GUINEA										
Pork and poultry	28	29	30	30	31	31	31	33	33	33
Fruits	1,395	1,362	1,468	1,574	1,631	1,684	1,688	1,743	1,779	1,833
Vegetables	325	333	340	344	350	357	363	370	376	383
Sugar (raw value)	--	10	15	30	15	35	45	15	37	32
PHILIPPINES										
Coarse grains	3,922	4,016	4,380	4,525	4,412	5,102	4,490	4,810	5,030	4,533
Copra	2,500	2,100	1,826	1,650	2,313	2,006	1,934	2,221	1,923	2,100
Poultry	210	220	215	235	263	279	287	310	329	349
Pork	430	478	490	540	615	665	690	710	690	715
Rice, milled	5,913	5,831	5,642	5,996	5,785	6,425	5,936	6,190	6,450	6,809
Sugar (raw value)	1,767	1,500	1,350	1,400	1,600	1,750	1,718	2,010	2,060	1,809
Tropical oil	1,610	1,333	1,159	1,041	1,420	1,303	1,233	1,455	1,286	1,369
Oilseed- and fish meal	894	780	657	591	799	709	613	721	668	736
SINGAPORE										
Eggs	407	295	285	185	235	365	304	310	340	--
Pork & poultry	129	139	135	139	133	132	139	140	147	144
SOUTH KOREA										
Wheat	11	5	4	2	1	1	1	1	1	2
Rice, milled	5,626	5,607	5,493	6,053	5,898	5,606	5,385	5,331	4,750	5,060
Barley	792	627	719	780	715	575	485	428	320	234
Corn	132	113	127	106	121	120	75	92	82	89
Beef & veal	161	208	206	175	124	131	136	137	176	200
Milk	1,006	1,154	1,413	1,634	1,762	1,752	1,741	1,816	1,858	1,917
Apples	533	538	556	640	676	629	542	695	615	617
Vegetables	7,083	7,829	6,562	7,715	8,300	8,307	7,976	8,393	9,255	8,037
Poultry meat	197	203	222	235	243	269	280	354	366	378
Pork	434	402	470	541	680	634	623	752	773	786
Eggs	296	332	362	397	381	393	422	424	447	442

-- = not available.

Sources

Papua New Guinea: For sugar--USDA, PS&D database.

For all other series--Food and Agriculture Organization, AGROSTAT database.

Philippines and Singapore: USDA, PS&D database.

South Korea: For wheat, rice, barley, beef and veal, milk, apples, vegetables, and eggs--USDA, Foreign Agricultural Service, Agricultural Situation Report, October 1995. For all other series--USDA, PS&D database.

Appendix table 6: Agricultural production (1,000 tons)

Country and commodity	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
TAIWAN										
Pork	831	868	938	911	917	1,009	1,126	1,126	1,135	1,204
Rice, paddy	2,750	2,497	2,402	2,331	2,355	2,284	2,312	2,070	2,233	2,061
Fruits	1,912	1,838	2,101	2,364	2,440	2,327	2,455	2,276	2,551	2,434
Vegetables	3,243	3,128	3,284	3,094	2,955	2,713	2,864	2,825	2,840	2,594
Poultry meat	345	351	400	421	462	476	480	531	585	604
Sugarcane	6,823	6,002	5,163	6,767	6,628	5,581	4,536	5,668	4,577	5,275
Eggs*	224	222	236	226	250	263	253	304	317	335
Corn	226	272	307	321	329	339	321	339	346	345
Milk	88	110	144	173	182	204	226	246	278	290
Peanuts, in shell	89	77	112	83	65	65	84	76	76	81
Forest mushrooms	NA	NA	5	4	4	3	4	3	4	3
Tobacco	25	24	24	20	19	19	21	16	17	19
THAILAND										
Poultry	393	431	464	511	553	595	655	710	685	730
Coarse grains	5,670	4,589	2,946	4,430	4,330	4,070	3,750	3,550	3,080	3,800
Rice, milled	13,374	12,453	12,162	14,034	13,317	11,347	13,464	13,145	12,672	14,098
Fruits	5,058	5,637	5,579	5,844	6,254	5,413	5,495	5,769	6,212	6,338
Vegetables	2,464	2,411	2,458	2,521	2,473	2,495	2,539	2,575	2,587	2,603
Peanuts	172	169	162	164	161	162	160	162	165	165
Soybean	309	356	338	517	672	530	435	480	480	480
Sugar (raw value)	2,533	2,586	2,639	2,704	4,055	3,502	3,954	5,062	3,975	5,448
Soybean oil	27	36	39	53	64	58	64	69	68	69
Tropical oil	128	159	188	230	236	259	280	300	328	368
Oilseed- and fish meal	490	550	703	803	762	721	767	759	758	757
Rubber, natural	773	811	891	862	1,048	1,097	1,152	1,520	1,570	1,667

* Conversion factor of 1,000 eggs = 0.059 metric tons applied to data reported for Taiwan.

Sources

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