

PACIFIC FOOD OUTLOOK

1998–1999



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Abbreviations used in the Pacific Food Outlook

ADB	Asian Development Bank	GATT	General Agreement on Tariffs and Trade	IMF	International Monetary Fund
APEC	Asia Pacific Economic Cooperation Forum	GDP	Gross Domestic Product	NAFTA	North American Free Trade Agreement
ASEAN	Association of Southeast Asian Nations	GNP	Gross National Product	OECD	Organization for Economic Cooperation and Development
CPI	Consumer Price Index	IBRD	International Bank for Reconstruction and Development/The World Bank	VAT	Value-added tax
EU	European Union			WTO	World Trade Organization
FY	Fiscal Year				

Note: Every effort was made to include profiles for each PECC member economy. Unfortunately, the contributions of some members arrived too close to our printing deadline to be included in this year's report.

Pacific Economic Cooperation Council

The Pacific Economic Cooperation Council's Food and Agriculture Forum (FAF) is pleased to present its second Pacific Food Outlook (1998-99)

The Pacific Economic Cooperation Council (PECC) is an independent, policy-oriented organization devoted to promoting economic cooperation in the Pacific Rim. PECC brings together senior government, academic and business representatives from 23 economies to share perspectives and expertise in search of broad-based answers to economic problems in the Asia Pacific region.

Founded in 1980, PECC now comprises member committees from Australia; Brunei; Canada; Chile; China; Colombia; Hong Kong, China; Indonesia; Japan; Korea; Malaysia; Mexico; New Zealand; Peru; The Philippines; Russia; Singapore; Chinese Taipei; Thailand; the United States; and Vietnam as well as the Pacific Island Nations. France (Pacific Territories) was admitted as an associate member in April 1997. The Pacific Basin Economic Council (PBEC) and Pacific Trade and Development Conference (PAFTAD) are institutional members of PECC.

PECC's governing body is the Standing Committee, which meets several times a year and consists of the chairs of PECC committees in each member economy. The day-to-day administrative and coordinating functions are carried out by an International Secretariat based in Singapore. Each member committee sends a high-level tripartite delegation from government, business, and academia to the PECC General Meeting held approximately every two years.

In addition, PECC establishes task forces, forums, and working groups to concentrate on particular policy areas. These groups meet periodically, organize seminars and workshops, conduct studies, and publish their conclusions and recommendations for the benefit of the Pacific Community. Task forces operate in such areas as capital and financial markets; fisheries development and cooperation; human resource development; Pacific island nations; and science and technology. PECC supports regional forums on trade policy, food and agriculture, minerals, energy, telecommunications, and transportation and publishes annual editions of *Pacific Economic Outlook* and *Pacific Food Outlook*.

At the regional level, PECC's most important link with government is through APEC. PECC is the only nongovernmental organization among the three official APEC observers. PECC representatives attend APEC Ministerial Meetings, Senior Officials Meetings, and working group meetings. PECC also works with other international organizations such as the WTO, the OECD, the Asian Development Bank, the World Bank, and United Nations' agencies.

For more information, contact the PECC International Secretariat, 4 Nassim Road, Singapore 258372, Tel: 65-737 9822/23, Fax: 65-737 9824.

■ Foreword

Since the November 1997 release of the first *Pacific Food Outlook (PFO)*, the Asian economic and financial crisis has spread and is now the most significant factor affecting the outlook for the Pacific food system. Given the growing importance of the crisis, we decided to focus this year's PFO on the impact of the financial crisis on the region's food system.

The crisis has resulted in an economic recession in several PECC economies—in East Asia, Southeast Asia, and Russia. Although this is still “history in the making” and the duration of the crisis remains unknown, a continued slowdown in global economic activity in the region is a virtual certainty through 1999.

The current global market volatility makes assessing this year's outlook especially difficult. Economic growth forecasts have been progressively revised downward to reflect changing conditions. In affected economies where the share of disposable income spent on food is large, food price inflation and lower incomes are reducing food consumption, especially of more demand-elastic processed foods and of food eaten in restaurants and other food outlets away from home. Urban areas in the affected economies have been particularly hard hit.

It is our hope that the economic turmoil and depressed market conditions in the region do not curtail commitments from government and businesses to further develop the region's food system. At a time of reduced financial resources and poor market returns, it is not always easy to commit investments that may not yield an immediate, short-term return. However, the development of the food system in member economies cannot be neglected in structuring policies for economic recovery that affect agricultural producers, rural communities, and the consuming public.

With this objective before us, *PFO 1999–2000* will be focused on the role of infrastructure in the outlook for the Pacific food system. Infrastructure is the most critical priority for giving rural residents a stake in the global economy and giving farm producers a position in the global food system.

■ Acknowledgments

We thank Rabobank, our principal sponsor, and the APEC Economic Committee for their very substantial commitments. Rabobank also contributed substantively to the meeting through the excellent presentation and discussion by Dr. Anning Wei, senior manager, Food and Agriculture Business Research, Rabobank International, Hong Kong, China.

We are grateful to Dr. Walter Armbruster, managing director of the Farm Foundation, for his participation at our meeting in Taipei and for the Farm Foundation's continuing support. We also thank the following sponsors: Cargill Asia Pacific, Colombian Coffee Federation, Danone Group, Economic Analysis Systems, I-Mei Foods, the International Food and Agribusiness Management Association (IAMA), the National Pork Producers Council, the Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA), Winrock International, and World Perspectives, Inc.

This year's PFO would not have been possible without the contributions of several people. Dr. Robert Thompson of the World Bank, the PFO coordinator, brought leadership to this second issue and was instrumental in enhancing the quality of our forecasters' panel. William Coyle, senior economist, ERS, USDA, contributed to the report's overview and directed the editing and production of the report. Constanza Valdes, economist, ERS, USDA, who coordinated the first PFO while on assignment at the PECC Secretariat in Singapore, also served as a reviewer and economic editor for this year's outlook and wrote the special report on infrastructure, laying the groundwork for the 1999–2000 outlook. Dr. Mark Borthwick of the U. S. National Committee for Pacific Economic Cooperation has provided unwavering support for the PFO project since its inception. Thanks to Anita Chomsky of World Perspectives, Inc., for coordinating the meeting of PFO forecasters in Taipei and for her continuing support of the PFO project. Thanks also to Wilma Davis of ERS, USDA, for statistical support; Anne Kelleher for editorial services; and Joseph Yacinski for design and production.

As chair of PECC's Food and Agriculture Forum, I want to express my special gratitude on behalf of the PECC to the PFO coordinators and the PFO expert forecasters. Despite the burden on their personal time and economic turmoil in many of their countries, the PFO expert forecasters made extraordinary efforts to contribute their analyses and data to the 1998–99 PFO. Lastly, I also want to express the PFO's thanks to the PECC member committees, the PECC International Secretariat, and to all private and public officials committed to advancing the Pacific food system's growth, integration, and development.

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Pacific Food Outlook *Coordinators and Forecasting Panel*

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Impact of the Regionwide Financial Crisis: An Overview

The role of the Asia Pacific in the prosperity of the global food system cannot be understated. For much of the past decade, the Asia Pacific was the largest growth market in the world for agricultural and food products. Dynamic economic growth increased effective demand for food, enabling PECC member economies' populations to achieve both unprecedented national wealth creation and gains in living standards. A considerable share of this rising food demand was met by imports from net food exporters in the region. This decade of prosperity ended in summer 1997, when Thailand's baht collapsed and triggered the "Asian Meltdown."

What began as a financial crisis initially affecting three vulnerable ASEAN economies (Indonesia, Malaysia, and Thailand) and South Korea has spread to other Asia Pacific economies and beyond. Russia's economic and financial market turmoil reached an acute stage in August 1998. This contributed further to the financial community's flight to "safety" and diminished confidence in emerging market economies across the globe, with the most recent threat spilling over into Brazil and its Latin American neighbors.

Obviously, the global financial crisis is the greatest uncertainty clouding the 1999 outlook for the Asia Pacific food system. Economic turmoil was just beginning to surface in the region as the November 1997 *Pacific Food Outlook (PFO)* was being written. We based our forecasts for that issue on the generally accepted assumption that the economic contraction would be confined primarily to Southeast Asia. Clearly, the macroeconomic outlook for the PECC region has worsened substantially since then, despite the macroeconomic stabilization programs in Indonesia, Thailand, and Korea.

The Asia Pacific crisis now has assumed global dimensions. Four PECC economies are now receiving a total of more than \$120 billion in IMF loans to restore financial confidence: Thailand, Indonesia, South Korea, and Russia. These four economies and three others—Hong Kong, China; Malaysia; and Japan—are now in recession.

Given the important linkages between global and regional macroeconomic forces and the region's food system, this 1998–99 *PFO* focuses on the macroeconomic impacts on the regional food system—specifically, the duration of the financial crisis now besetting parts of the region and the potential for continued spillover effects and spreading of the contagion to other economies within the region and beyond. Some economists believe that the worst is over, that the global financial system is acting effectively to restore confidence and that the result will be a relatively rapid turnaround beginning with the stabilization of South Korea and Thailand in 1999. Others express greater pessimism about the capacity of the international financial community to provide the necessary capital and of national governments to undertake the necessary structural reforms to restore confidence.

We believe that the prolongation of the current downturn may have several serious medium- to long-term negative impacts on the development of the Pacific food system.

First, no issue is more crucial to the stability of the PECC region or to any individual economy than the delivery of an affordable, adequate supply of food to the population. Political instability already has been triggered in Indonesia due to food price inflation and lack of purchasing power. Deep currency devaluations have constrained the capacity of crisis economies to import necessary basic foodstuffs and, in some cases, production inputs. The current financial crisis may encourage a reversion to national food self-sufficiency policies that would result in serious longer-term market dis-

■ *The Chronology of the Asian/Russian Financial Crisis*

The acute state of the Asian crisis started with the floating and devaluation of the Thai baht in July 1997. Shortly afterwards, the currencies of Thailand's neighbors—Indonesia, Malaysia, and the Philippines—also declined. By mid-October, the contagion had spread to East Asia, most seriously affecting South Korea and, to a lesser extent, affecting Japan and Chinese Taipei. The Korean won declined the quickest, a nearly 60 percent devaluation in less than two months. Indonesia faced the deepest and most protracted decline. Equity markets were also affected across the region, declining the most in Malaysia, Indonesia, Korea and the least in Chinese Taipei and China. Russia joined these countries in acute crisis in August 1998.

There are now three categories of Asian countries in crisis: those modestly affected (Japan; Hong Kong, China; Singapore; Chinese Taipei; and China); those severely affected (Korea, Thailand, Malaysia, and the Philippines); and the most severely affected country, Indonesia, which has financial problems compounded by a political crisis (Figure 1). Conditions in currency markets have stabilized in the most affected economies in Southeast Asia and Korea, compared with the second half of 1997. Equity markets remain volatile, with some increases in early 1998, but generally moving downward.

In August 1998, Russia began a downward economic spiral precipitated by default on short-term debt, capital flight, and the sharp depreciation of the ruble.

tortions. Official trade finance support and direct food aid where necessary, combined with government safety net commitments, are important components for maintaining current stability both through providing affordable basic foods to consumers and maintaining profitability in the food production and processing sectors.

Second, continued financial market instability and reverse capital flows are curtailing the vital investment required to build food system capacities. Infrastructure funds already are being cut back, with the less-attractive nonurban projects suffering the heaviest losses. As the financial crisis is spurring reverse urbanization and a return to rural regions in several crisis economies, the lack of basic infrastructure will restrain wealth building by inhibiting economic activity in the food system. Cutbacks in public and private capital spending on transportation, telecommunications, and power generation will restrain the expansion of viable agricultural processing and marketing industries. If the current reduced access to domestic finance and foreign investment capital continues, the food system will suffer a serious decline in long-term economic potential.

Third, the financial crisis is creating a serious challenge to the past decade's commitment to market liberalization as crisis economies and the trading system as a whole generally face the costs—not the benefits—of globalization. This reaction against greater liberalization of trade and investment flows comes at a time when the agricultural sector has only just begun to reduce trade barriers and open markets to international competition. In some cases, economies already are seeking to manage their internal crises through currency and capital controls and commodity-specific measures to restrain imports and/or exports in order to stabilize internal prices. These challenges to the momentum of trade liberalization may well increase in 1999, with a negative impact on regional trade flows, agricultural trade negotiations in APEC and the WTO, and food system efficiencies.

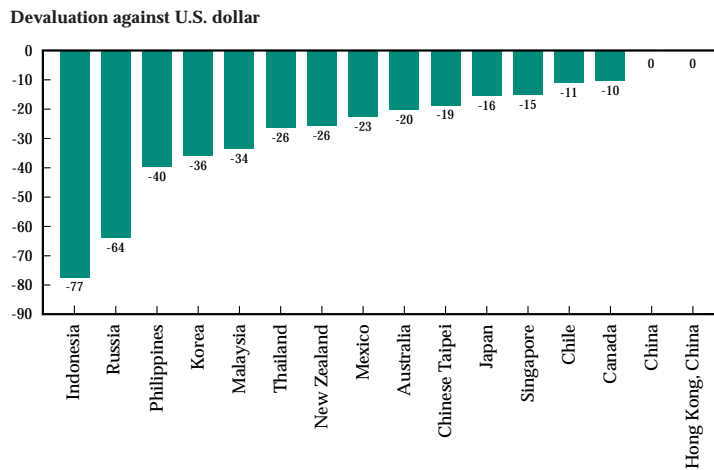
■ *Japan and China Are Key*

The ultimate path of the financial crisis is difficult to judge at this point. Its duration and spread depend primarily on the policy response in the affected economies, which are undertaking various measures to bring about recovery, such as capital controls in Malaysia and targeted food assistance in Indonesia.

The most affected economies (Russia, ASEAN, and South Korea) represent a fairly modest share of global GNP, but the sum total of the resulting global crisis of confidence has been far greater than individual statistics would imply. If the Asian region can better manage the reform process, the medium-term impacts beyond these markets will remain modest. However, if the dominant regional and global economies—Japan and China—are unable to overcome their own economic challenges and

*Figure 1—Currency Devaluations in PECC,
July 1997 to October 1998*

Source: Pacific Exchange Rate Service



remain the growth engines in the region, the effect would be further escalation of what is already a global financial crisis.

Japan and China are key to the outlook of the region's food system because Japan is the world's largest net food importer and China the largest producer of food and agricultural products. Japan, also the number two economy in the world, has struggled to recover from the bursting of its "bubble" economy in 1991 and a number of macroeconomic policy mistakes like raising taxes in April 1997. While its current account and foreign exchange positions remain relatively strong, economic growth has slowed dramatically in the 1990s compared with previous decades, and Japan's economy is now in recession for the first time since 1974. Slow domestic growth and the bursting of the property bubble were manageable in the banking sector until the impact of the Southeast Asian economic crisis dealt another serious blow to already weak balance sheets and exposed structural problems, including flaws in Japan's corporate and banking sectors. A central issue in the outlook for Japan is the government's role in stimulating domestic demand, made more difficult in light of declining industrial production, corporate profits, and consumer optimism about the future. So far, the impact on Japan's food sector has been relatively modest, but could worsen if the economy further deteriorates.

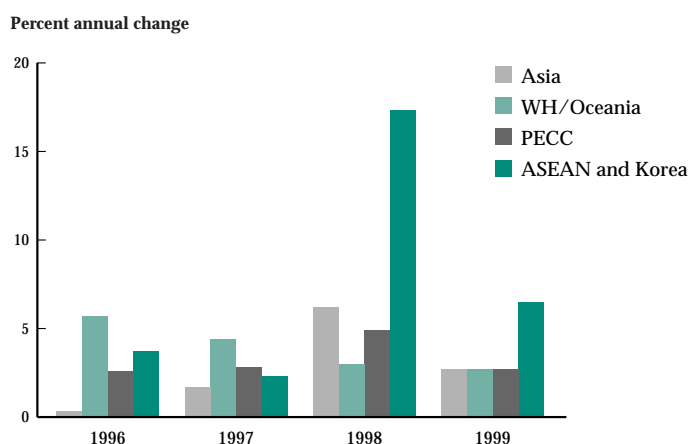
China's currency is under increasing pressure, although the country has steadfastly steered clear of devaluation. It has reduced export taxes on some key goods to remain competitive. China's growth is officially forecast to continue at about 8 percent through 1999, but the outlook could change due to flooding in the north and south, slowing exports (including exports of agricultural products, which account for about 10 percent of China's total exports), and the possibility of a declining trade surplus. China's political leaders are implementing policies to stimulate domestic demand, which could reduce the economy's future reliance on exports for growth and ease the short-term pressure to devalue its currency. If China were to devalue its currency, it could ignite another round of devaluations among its neighbors in East and Southeast Asia, with still more unemployment, lower incomes, and higher food prices.

■ *Southeast Asia, Korea, and Russia Most Affected*

The financial crisis has most severely affected the food systems of Indonesia, Malaysia, the Philippines, Thailand (ASEAN), South Korea, and Russia. The rise in risk and fall in productivity in these economies has induced capital flight, depreciating exchange rates. In Indonesia, for example, the exchange rate fell by more than 70 percent between July 1997 and October 1998 (Figure 1). The outflow of capital has raised real interest rates and induced a general deflation of asset prices. Rising unem-

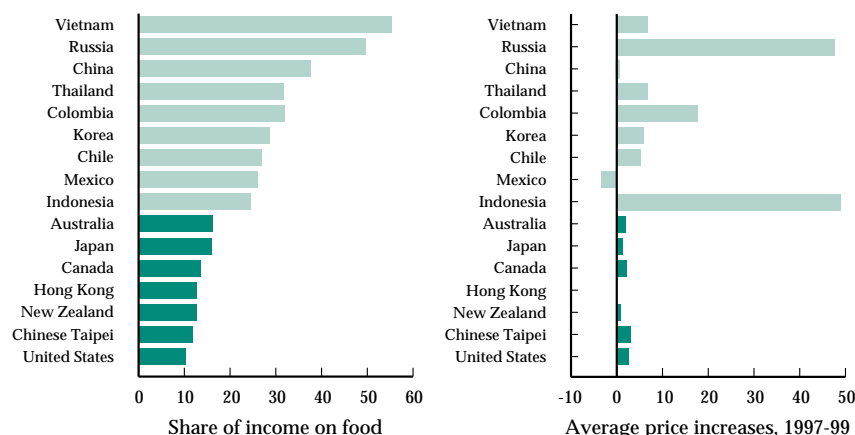
**Figure 2—Food Prices in the PECC Region
Rising Rapidly in the Crisis Economies**

Source: PFO profiles and indicators; average weighted by trade



**Figure 3—Largest Food Price Increases Forecast in
Economies with Largest Share of Income Spent on Food**

Source: PFO profiles and indicators



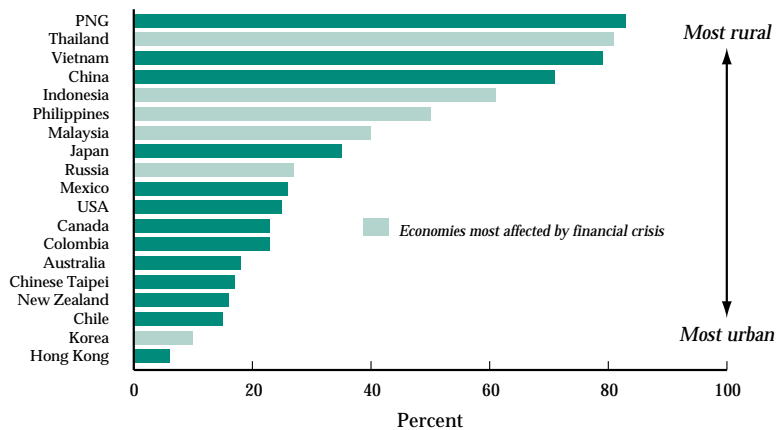
ployment is reducing domestic demand, including demand for food and food products, especially high-value and processed products, in these six economies.

The high cost of food could create further social instability. Consumers in the most severely affected economies, where family budget shares spent on food are very high (30 to 50 percent), are facing significant increases in food prices (Figures 2 and 3). The combination of high budget shares and rapidly rising food prices is forcing consumers in urban areas to spend more on staple foods (e.g., grain-based foods and vegetable oil), crowding out purchases of luxury food products, including food eaten away from home and nonfood items. Economic recession—or depression in the case of Indonesia—has brought to a standstill in many cases the critical engines of urban economic growth—manufacturing, services, and the construction industries. In response, some of the jobless are migrating back to the countryside.

Looking forward, food prices are expected to rise the most in ASEAN, Korea, and Russia. In In-

Figure 4—Nonurban Share of Population

Source: PFO profiles and indicators



**Food price increases
(percent change)**

ECONOMY	1997	1998E	1999F
Australia	2.6	1.5	2.0
Canada	2.1	1.9	2.5
China	2.2	-2.7	1.5
Colombia	16.4	21.0	16.0
Indonesia	8.1	119	20
Japan	2.2	.1	0
Korea	3.8	7.8	6.1
Malaysia	1.2	9.3	5.9
New Zealand	2.1	2.0	1.0
Peru	7.1	8.2	8.2
Philippines	3.4	13.7	10.0
Russia	8.1	135a	na
Chinese Taipei	-.9	3.5	2.0
United States	2.6	1.8	1.7
Vietnam	2.1	18.3	na
PECC	2.8	4.9	2.7
Asian PECC	1.7	6.2	2.7
ASEAN and South Korea	2.3	17.3	6.5
Western Hemisphere and Oceania	4.4	3	2.7

E=estimate F=Forecast

a. Reflects increase in general CPI in a two-week period in September 1998.

Source: Key Food System Indicators (pp. 87–106); aggregations weighted by trade.

Indonesia, prices have nearly doubled in the last year for many staple foods (e.g., rice, palm oil, and sugar). Increases have been more modest in Malaysia (up 10 to 40 percent). Imported food products are very expensive in local currencies, forcing economies to seek food from domestic or regional sources or food imports on concessional terms from exporters outside the region.

Food price inflation also is likely to be significant in Colombia and Peru where it has been a long-standing problem. In other PECC economies, both in North America and East Asia, food price increases will be modest in 1998–99 (Figure 2).

Large Export Sectors May Mitigate Impact of Crisis

ASEAN will be focused on trying to improve its economies' current account balances through expanded agricultural exports. On the positive side, large devaluations have greatly buoyed agricultural prices in local currencies. Since these economies generally are highly export dependent (exports account for 45 percent of GDP), their economic recovery depends on their capacity to increase exports of both agricultural and nonagricultural products to partially offset the decline in domestic consumption and mitigate the overall impact of the financial crisis on GDP growth.

However, agricultural trade could play a role in returning the affected economies to positive GDP growth since the import content of ASEAN's agricultural exports is smaller than that of its manufactured exports. The large devaluations and inability to obtain critical trade financing for imported industrial inputs has severely curtailed manufactured goods exports, despite highly competitive exchange rates.

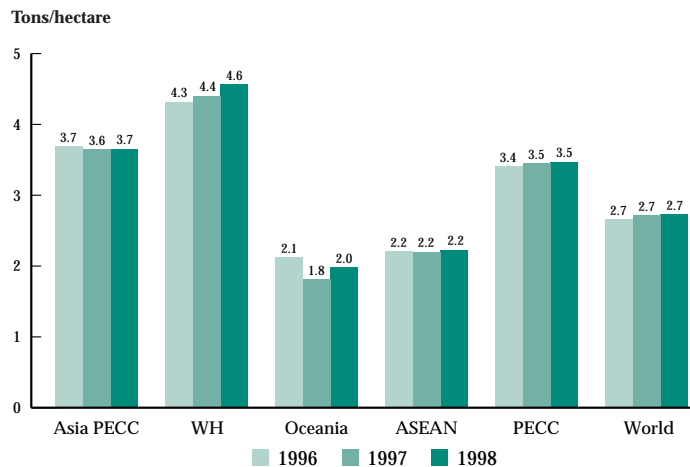
Urban Areas Hurt More Than Rural Areas

As stated above, food price inflation and a collapse in purchasing power among a large share of the urban population has already contributed to political instability in Indonesia—the PECC economy currently experiencing the most severe economic conditions. Rising food prices are contributing to political unrest in the urban centers of the most affected economies where unemployment has risen and incomes have fallen. The urban poor cannot afford to pay the higher food prices. Food price hikes in May 1998 led to widespread rioting in Indonesia, bringing an end to Suharto's 32-year-old regime, and in Korea, urban labor unrest is on the rise, with potentially negative implications for the government's economic reform program.

However, relatively large shares of the population in some of these economies live in rural areas where landholders benefit from higher agriculture commodity prices and farm income (Figure 4). Fruit and vegetable production is expanding in Malaysia because of cost advantages over imports.

Figure 5—Grain Yields in PECC*

Source: PS&D View, USDA



*Total grain equals rice, wheat, and coarse grain

Traditional export crops, like rice, palm oil, cocoa, spices, and coffee, are also doing well in some of the economies because of rising local currency prices from strong export demand. On the other hand, livestock production in ASEAN is being hard hit by the crisis because of shrinking meat demand in urban areas and the high cost of feed, much of which is imported. Higher commodity prices now should draw more crop area into production in 1999. Some urban poor are returning to rural areas where many have family connections and a better chance of subsisting. For specific examples of these dynamics in the most affected Southeast Asian economies, see the profiles of Indonesia, Malaysia, the Philippines, and Thailand.

■ *Major Food Exporters Selling Less in the Region*

Net exporters of agricultural and food products in the PECC region—Australia, Canada, New Zealand, and the United States—are being adversely affected by reduced demand in the most affected economies and higher import costs in local currency, which is shrinking food and agricultural import markets. For example, U.S. agricultural exports to Asia were down by 15 percent in 1998, though U.S. exports to non-Asian destinations were up by 6 percent. Australian exports are also down, including certain categories of high-value products like live cattle to Indonesia, which have contracted greatly. The shrinking Asian markets are not offset by growth elsewhere; thus, export revenues are off in non-Asian markets as well.

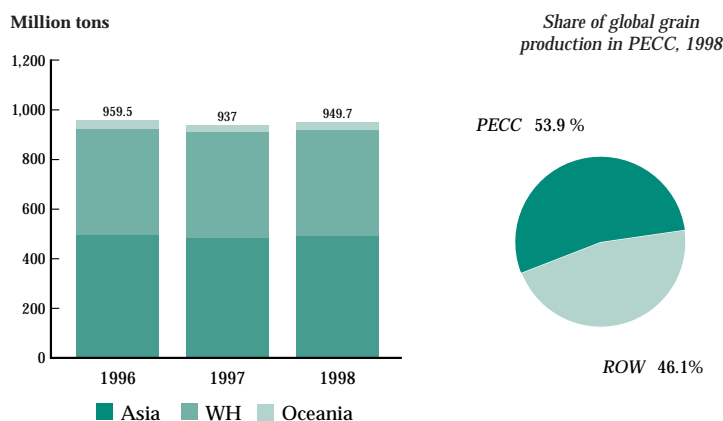
While exports have been adversely affected, not all the effects of the crisis have been negative. The flow of Asian capital into the United States and other “safe haven” markets in the PECC region, while bidding up exchange rates, is lowering interest rates and import prices and, thus, stimulating consumer spending and investment in these economies. This is leading to a modest structural shift in non-Asian economies from an emphasis on exports to one on domestic demand, with the effects on production differing by sector according to the sector’s sensitivity to interest rates and trade exposure. The food grain sector in the United States, for example, is being hard hit by the crisis because it relies on export markets for 40 to 50 percent of production. On the other hand, the U.S. livestock sector depends much less on export markets and more on the domestic market.

Another offsetting effect for food and agriculture exporters is expanding market opportunities in North America and elsewhere outside the Asia Pacific region. For example, New Zealand’s dairy exports to Asia, including Indonesia, are off, but its apple exports are doing better because they go primarily to the United States and European markets that are still expanding.

Export shares of food trade are being affected by changes in relative exchange rates. Since the

Figure 6—Grain Production in PECC*

Source: PS&D View, USDA



*Total grain equals rice, wheat, and coarse grain

Australian, Canadian, and New Zealand currencies have depreciated against the U.S. dollar, agricultural and food exports from these economies will be relatively less expensive than U.S. products (Figure 1). Any downturn in Asian demand for grains is expected to affect U.S. and Canadian suppliers more than Australian suppliers.

■ Other Factors in the Outlook

While the region's financial crisis is the most important factor affecting the outlook for the food system, it is not the only factor. Abundant agricultural supply in many of the net exporting economies combined with shrinking effective demand in Asia is putting deflationary pressure on world commodity prices, reducing them to very low levels. With large grain crops and declining prices forecast, it is evident that the widely publicized El Nino and La Nina phenomena so far has had only a modest overall impact on the region's food supplies. Regional and global average grain yields and production have remained stable with no change forecast (Figures 5 and 6). Yet, we do not want to underestimate the devastating impact of recent weather anomalies on certain parts of the PECC region and neighboring areas. For example, the worst flooding this century occurred in the middle and lower reaches of the Yangtze River areas, causing severe crop damage. However, that damage was offset by good harvests in other provinces of China. Drought and fires in Indonesia led to lower rice yields and import requirements of more than 4 million tons in 1998–99. North Korea, not a member of PECC but a close neighbor, has had a serious food shortage for three years owing to drought, flooding, inadequate availability of farm inputs, and long-term, systemic economic and political problems. We acknowledge that weather is always unpredictable from growing season to growing season and can quickly become a significant factor in the food system outlook.

Looking Forward: Infrastructure's Role in the Pacific Food System

Infrastructure issues and their implications for the food and agriculture systems will be the central theme of the next Pacific Food Outlook (1999–2000). At the forecasters meeting in Chinese Taipei in May 1998, economists from around the region discussed the role of infrastructure in the performance of their economies' food systems.

Investment in infrastructure—transportation systems, port facilities, refrigerated warehouse capacity, communications, power generation, irrigation, water and sewage capacity, and financial services—is essential to the development of the Asia Pacific food system. According to the World Bank, for every 1 percent growth in per-capita GDP, infrastructure investment needs to increase by about 1 percent (World Development Report, 1994). With adequate infrastructure, rural populations both on and off farms can respond to, and benefit from, market opportunities; adjust to international competition; and reap the benefits of trade expansion and market globalization. Physical infrastructure, combined with education and medical systems, serves to create a “seamless” national economy and permits diversified industries to locate outside of major urban areas and compete in global markets.

The importance of infrastructure to the Pacific Rim was highlighted in an initiative on infrastructure adopted by the Ninth APEC Ministerial Meeting in Vancouver, Canada, in 1997. This initiative was in the Joint Statement, under the heading “Economic and Technical Cooperation,” and noted that “improving infrastructure in rural communities—including roads, telecommunications, power generation, and capacity building—is critical to the region’s development and cannot be overlooked.”

Extending infrastructure into rural areas is critical to the future of the region’s food system, particularly in the less developed areas of the region. The ADB estimates that the region’s governments will be hard pressed to come up with their share of the projected \$1.5 trillion in investment that will be required to build infrastructure through 2010. Unless massive new demand for infrastructure in East Asia is met, high economic growth cannot be reached and sustained. A significant share of the World Bank Group’s lending to the Asia Pacific region is targeted for infrastructure development (US\$2.23 billion in 1997). Such investments will help reduce the more than 15 percent of food production lost between the farm gate and the consumer because of poor roads and a lack of storage facilities (World Development Report 1994).

The rapid rate of urbanization in the PECC region, about twice the rate of population growth, increases the urgency for investment in infrastructure over the next decade. Urban population in the region now surpasses 1.1 billion and accounts for more than 45 percent of the region’s total population. The ADB estimates that the population of Asian megacities (cities with populations over 10 million) will triple by 2025. Thus, the food security of these vast urban areas, particularly in the less developed areas, will depend on adequate investment in food distribution systems, food processing capacity, and storage and marketing facilities. As important is extending basic infrastructure beyond urban areas to permit more balanced economic growth and mitigate the environmental and social problems stemming from intense urbanization.

The need to improve infrastructure in the region is a concern shared by all PECC members. Governments are undertaking programs to improve port facilities, to develop and expand refrigerated warehouse capacity, and to improve and develop roads to speed up delivery times and reduce post-harvest losses of food products.

PFO forecasters cited various programs in their economies that will streamline food system-related infrastructure. Below is a sampling of some of the programs underway across the region.

Many of the world's megacities are in the PECC region

CITIES: IN PECC	1990 MILLION	2000
Tokyo	25013	27956
Shanghai	13447	17407
New York	18058	16645
Mexico City	15085	16190
Beijing	10867	14366
Jakarta	9206	13380
Los Angeles	11456	13151
Seoul	10979	12949
Manila	8882	12582
Tianjin	9249	12508
Osaka	10482	10601

OUTSIDE OF PECC

Bombay	12223	16142
Calcutta	10741	12675
Karachi	7943	11895
Delhi	8171	11692
Dacca	6578	11511
Sao Paulo	16119	22558
Lagos	7742	13480
Buenos Aires	11448	12822
Rio de Janeiro	10948	12162
Cairo	8633	10761

Source: United Nations

■ *Infrastructure oriented toward integrating rural, urban, and international markets*

Transportation (roads, railroads, ports, airports)—Transportation systems provide the basic links between farmers, processors, and consumers.

Roads

- In the United States, the Transportation Equity Act for the 21st Century, signed into law in June 1998, reflects a continuing commitment to investment in highway systems.
- Malaysia's north-south toll road and other highway projects link Malaysia, a net food importer, with the port of Singapore and Thailand, a net food exporter.
- China's express and paved highways have increased 18 percent a year in the last decade, reducing inter-provincial food marketing costs.
- Vietnam's Rural Transport Project, financed by the World Bank and the Vietnamese government, will expand and rehabilitate rural access roads.
- The Philippines, under the Agriculture and Fisheries Modernization Act of 1997, is accelerating construction of new roads and bridges, linking food production areas with regional markets.
- Chile's commitment to new roads and improvements to various segments of the Pan-American highway have helped it become an important exporter of horticultural products.
- Colombia is upgrading its highway infrastructure and has completed 1,100 kilometers of new highway and rehabilitated 1,500 kilometers of existing roads since 1994.

Railroads

- Australia is slowly standardizing rail track widths between high-volume regions.
- Mexico is privatizing its railroad system to reduce transportation costs.
- China has expanded its rail routes 50 percent in the past decade and upgraded parts of its rail-way system that are aging.

Seaports

- Hong Kong, China, the number one container port in the world, handles 13.2 million TEUs (twenty-foot equivalent units) annually and needs new road and rail infrastructure to overcome growing congestion problems (APEC 1997).
- The port of Singapore, with turn-around time for average container ships less than half the average time for other ports and a key factor in shipping perishable food products, is expanding its capacity to service the Southeast Asian region.
- Malaysia plans to expand the port of Kelang through 2010 to become a transshipment hub for the Southeast Asian region.
- The Philippines is reducing inter-island shipping costs for food through shipping sector reform and improved road and rail access to ports.
- New Zealand is consolidating its North Island ports to increase efficiency.
- Canada is privatizing its ports by transferring management functions to port authorities with industry, labor, and government representatives.
- Colombia's 10 major seaports, privatized in 1993, have improved facilities, higher (tons per hour) productivity, and lower handling costs for food products.

Airports

- Colombia has improved and expanded its five major airports, readying them for privatization. A second runway at Bogota's international airport, the country's busiest, is increasing throughput of perishable products such as flowers, fresh and frozen fruits and vegetables, and processed foods.

Communications—Communication systems and technology facilitate the movement of information that is critical to decision-making by farmers, processors, traders, and policymakers and improve coordination functions for marketing time-sensitive products, like perishable foods, over long distances.

- About 20 percent of Australian farmers have access to the Internet, improving their communication links with markets in urban areas
- Telecommunications development in rural areas of Chile and China in the last few years is attracting private agro-industry investment.

The Cold Chain: Refrigeration and Cold Storage—Cold chains are needed to assure the quality and freshness of fresh and frozen produce moving from production areas to domestic and foreign consumers.

- Mexico is developing state-of-the-art systems for refrigerating produce for the export market, including the use of controlled atmosphere containers.
- Peru has installed a cold chamber in Lima's international airport for storing perishable foodstuffs waiting for export.
- China is expanding and improving its cold storage capacity; food shops with refrigerators are now ubiquitous, while 15 years ago even large cities like Beijing had few shops equipped with refrigerators.

■ *Infrastructure oriented toward productivity gains in food producing areas*

Rural Power Generation—Public utility supply increases food system productivity by maintaining and expanding communication services, refrigeration capacity, power supply for food processing, and power for a variety of farm-level needs (e.g., heat and light).

- In China and the Philippines, power projects serving rural areas have been developed under Build-Operate-Transfer (BOT) programs.

Irrigation and Water Drainage Facilities—Irrigation and water drainage increases farm sector productivity by allowing arid and water-logged areas to be brought into food production.

- Chile reports the doubling of investment in large and medium irrigation works between 1993 and 1997.
- The Philippines, under the Water Resources Development Program 1999–2004, intends to expand irrigated area by 70 percent

■ *Infrastructure oriented toward reaching consumers more efficiently*

Wholesale and Retail Market Infrastructure—Public and private investments in wholesale and retail marketing infrastructure and storage facilities reduce consumer costs, food spoilage, and health risks.

- Australia's National Competition Policy includes AU\$16 billion to develop and upgrade the food distribution system in the states and territories (NCC 1997).
- Mexico is developing industrywide standards for grading and packaging fresh produce.

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Australia

Australia has a relatively large trade sector, with total exports of goods and services accounting for about 24 percent of GDP in 1996–97. About half of Australia's merchandise exports (around A\$45 billion [US\$35 billion] in 1996–97) are shipped to Asia.

With economic growth in Southeast likely to be poor in the short term Asia—particularly in Indonesia, Thailand, and South Korea—and economic prospects in Japan also looking stagnant, the outlook for Australian agricultural exports to that region has deteriorated relative to expectations of just a year ago. Given the substantial dependence of the Australian economy on trade, domestic economic growth is also likely to be adversely affected. This is despite solid short-term growth in domestic demand in response to low interest rates. Net exports are expected to be lower in the next two years as imports grow faster than (substantially Asian-oriented) exports. The current account deficit is expected to increase, reflecting a deteriorating trade account and the revaluation of Australia's foreign debt due to a weaker Australian exchange rate against the U.S. dollar.

Cost pressures in the domestic economy, along with exchange rate movements, will be important in determining how well Australian processed foods compete internationally. Inflation in Australia has been relatively low over the past five years, increasing by 2 to 3 percent a year. Inflation is forecast to remain low in the short term, with the general price level increasing by 2 percent in 1998 and by 2.5 percent in 1999. Higher consumer prices are expected as a result of rising import prices stemming from a weaker Australian dollar, particularly against the U.S. dollar. Given the outlook for continued relatively low inflation, but a fairly volatile Australian dollar, prime lending rates should re-

main at around 8.5 percent in the short term.

The Australian exchange rate depreciated markedly against the U.S. dollar in the latter part of 1997 mainly in response to the Asian crisis, but also because of the underlying strength of the U.S. dollar against most other currencies. The story is somewhat different on a trade weighted basis, with the Australian dollar appreciating marginally over the same period due mainly to its strength against the currencies of a number of Australia's important Asian trading partners. The Australian dollar is expected to average around US\$0.58 in 1998–99, down from US\$0.68 in 1997–98.

Trade in processed foods and beverages is of growing importance to Australian agriculture. The recent economic upheavals in parts of Asia, the principal market for Australian processed food exports, are expected to result in a slowing of this trade over the next few years. However, with perhaps a few exceptions, Asian economic growth, and hence demand for imported food products, is expected to substantially recover after 2000. The growing willingness on the part of agricultural producers and processed food manufacturers in Australia to seek new markets offshore and to tailor their output to those markets' requirements has been critical to the growth in trade. Government policies aimed at reducing regulatory and structural impediments to the development of a more export-oriented food producing system have helped create the necessary environment.

■ Food Prices and Consumption

Despite slightly higher inflation forecasts for 1998 and 1999, food prices are forecast to increase at a slower pace than general inflation. Weaker prices for some basic foodstuffs, such as grains, will be the main dampening factor. Apart

from the cost of raw food materials and imported processed foods, which tend to be influenced by international market developments and the transmission effects of fluctuations in currency exchange rates, major factors affecting food prices for Australian consumers include processing, distribution, and retailing costs. Because of this, the food industry and consumers stand to benefit from the various microeconomic reforms being pursued by the Australian government.

Filmer and Dao (1994) found that the Australian agri-food industry could receive substantial economic benefits from microeconomic reform. Using input-output data, they estimated that the food industry could achieve a 16 percent increase in output value from a given level of inputs as a result of various microeconomic reforms. The reforms covered in their analysis include: reductions in tariffs and subsidies, labor market reform, regulatory reform to enhance market operations, transport and communications reforms, government-business enterprise reform, international negotiations aimed at reducing impediments to trade, and support for emerging exporters.

■ Food Processing and Marketing

The Australian food industry is rapidly expanding its exports of high-quality processed food and beverage products, particularly to Asia. In the Australian FY1996–97 (July–June), seven of the top ten markets for Australian exports of processed food were in Asia (total exports in 1996–97 were A\$10.9 billion [US\$8.5 billion]). Japan was the main destination for these exports, accounting for 23 percent of the total. Other major Asian markets for processed food exports from Australia in 1996–97 included Chinese Taipei; the Philippines; Hong Kong, China; Malaysia; Singapore; and Korea, each of which accounted for an average of about 3 percent of total processed food exports.

Given the importance of Asia as a destination for Australian exports of processed food products, the financial upheavals in the region are likely to dampen export performance in the short term. An indication of the potential effects on trade in primary and processed agricultural products of lower economic growth in East and Southeast Asia has been obtained using the general equilibrium MEGABARE model developed by the Australian Bureau of Agricultural and Resource Economics (ABARE). The model estimates suggest that by the year 2000, Australian exports of primary and processed agricultural products to Japan and Korea will be 6.3 percent lower and to the ASEAN countries as a group

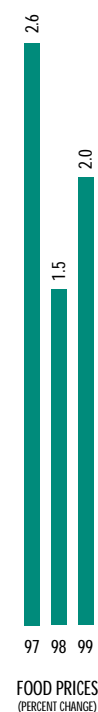
will be 4.8 percent lower because of the economic downturn. The estimated decline in exports reflects lower demand in these Asian countries because of lower consumer incomes. The effect of lower import demand on exports is estimated to be partly offset by improved Australian competitiveness relative to other exporters of processed food products to the region. The improved competitiveness reflects the depreciation of the Australian dollar relative to competing suppliers' currencies.

The growth in importance of Australian processed food exports is a relatively new phenomena. Historically, the processed food industry in Australia has concentrated on the domestic market. But in recent years, the industry has begun to tap into offshore markets as food processors have become more competitive in international markets. As a result, exporters of processed food products have moved from being opportunistic suppliers to being longer-term suppliers in key markets. The practice of developing products tailored to the needs of specific export markets, rather than supplying products designed to meet Australian domestic market needs, is growing.

In recognition of the potential for the food industry to become a more significant player in the Asian market, the Australian government established the Supermarket to Asia Council in 1996. The primary role of the council is to provide strategic direction and to set priorities for the agri-food industry so that various policy, structural, and market impediments to growth can be effectively addressed by government and industry.

The council has established working groups to address food quality and safety; business competitiveness; Asian marketing; small- to medium-sized enterprises; market access; communications, transport, and logistics; and research, technology, and innovation. The major role of these groups is to identify and prioritize the key problems affecting export growth and to develop plans and timetables to overcome them.

Given the assumption that the Asian financial upheavals are likely to be relatively short term, they are unlikely to significantly impede plans to develop or upgrade Australia's food system infrastructure. However, the situation is very different for the once-booming live cattle trade to Southeast Asia. Several companies had made significant investments to ensure that sufficient shipping was available to transport cattle to these markets as required. In addition, substantial infrastructure in the form of road and rail capacity, shipboard fodder supply facilities, and exporting companies specializing in livestock has been set up to service the industry.



With the dramatic contraction of trade in the latter half of 1997, some of these operations may no longer be economically viable and sustainable, resulting in some loss of facilities and skills to service the industry.

■ *Agricultural Production and Trade*

The rapid growth in shipments of processed food products means there has been some decline in the relative importance of Australia's traditional agricultural products in the overall export mix. However, the production and export of raw or lightly processed primary commodities is still far and away the backbone of Australian agriculture.

With good rains in most grain-growing areas in April and May, the area sown to winter crops in Australia is forecast to be around 19 million hectares in 1998, up about one million hectares from the relatively large area planted in 1997. Expected better returns from oil seeds, particularly canola, has resulted in increased plantings of these crops at the expense of coarse grains.

Assuming average yields, the production of wheat (Australia's most important crop) is forecast to be around 23.5 million tons in 1998–99. Coarse grain production is forecast to remain constant at a little over 9 million tons. Australian pulse production is forecast to rise in 1998–99, with field peas (up 14 percent) and chickpeas (up 54 percent) being the main contributors.

The principal oil seed grown in Australia for human consumption is canola. Despite lower prices for canola in 1998–99, production is forecast to rise 85 percent to a record 1.6 million tons. Driving this expansion is a 60 percent rise in area planted, better seasonal conditions, and the introduction of new varieties that are boosting yields and can be grown under a wider range of agronomic conditions.

There are prospects for improved returns for Australia's meat producers in 1998–99, with prices of beef (the largest of the meat industries) forecast to increase 7 percent as slaughterings decline with better pasture growth and increased retention of cows and heifers for herd rebuilding. Australian lamb production is forecast to rise by 2.5 percent to 288,000 tons in 1998–99 as producers reduce emphasis on wool production in response to poor returns from wool relative to sheep meat. Increased production in the lamb industry is expected to lead to slightly lower saleyard prices. With pig prices currently low, and sow numbers falling, output of pig meat is expected to fall in 1998–99. Some improvement in profitability in the pig and poultry industries is possible, however, because of low feed grain prices.

The recent economic difficulties in Southeast Asia may dampen import demand for some Australian grains in 1998–99. However, with the Australian dollar having depreciated relative to its U.S. and Canadian counterparts, Australian grains have become more competitive relative to North American supplies. Thus, any downturn in Asian demand for grains is expected to affect U.S. and Canadian suppliers more than Australian suppliers.

Australian wheat exports are forecast to rise 14 percent to 16.5 million tons. Exports of coarse grains and oil seeds, particularly canola, are also forecast to increase.

Exports of Australian beef are expected to remain virtually unchanged from 1997–98, at around 775,000 tons (shipped weight), due to less production. Australia's live cattle exports have fallen sharply and are expected to contract 30 percent in 1998–99. In the first half of 1998, exports to Indonesia, previously Australia's largest market for live cattle exports, was virtually non-existent. With expected higher lamb production, lamb exports are forecast to grow 7 percent in 1998–99. The pig industry increased exports to Japan in 1997–98, following the closure of that market to imports from Chinese Taipei. It is expected to maintain shipments to all destinations at about 12,000 tons this year.

■ *Food and Agricultural Policy*

For at least two decades, the policy thrust in Australia has been toward improving economic efficiency across all sectors of the economy. The reduction and eventual removal of direct government support (such as tariffs and subsidies) for the industry sector, and the removal of impediments to the more efficient functioning of markets generally have been key features of the reform process. The food and agriculture sector in Australia will be affected by various policy reforms and initiatives adopted over the next few years. These include the current review of food regulations in Australia; developments in water resource management; and trade reforms under the auspices of the WTO and APEC.

The Food Regulation Review has the task of reporting on ways to reduce the burden on the food industry of regulations imposed by the three levels of Australian government (commonwealth, state/territorial, and local). The aim is to consolidate and simplify the food regulatory, administrative, and enforcement systems in place around Australia, while maintaining or improving public health and safety, market access, and consumer confidence.

In the area of water resource management,



the Australian and state governments have agreed to implement a water reform agenda by 2001 aimed at improving the efficiency and sustainability of Australia's water resource use. Key features of the reform include charging for water based on full cost recovery and considering environmental objectives when allocating water to irrigators. These changes are likely to result in less water flowing to established irrigation areas while at the same time encouraging more efficient use of that water in the production of irrigated crops. A key feature of the reforms aimed at improving water use efficiency has been the allocation of water (entitlements) to existing users and the establishment of markets where these entitlements can be traded.

Improving international market access for food and agricultural products has been a major priority of Australian governments for many years. Trade liberalization is being pursued on a bilateral basis with foreign governments as well as on a multilateral basis through the WTO and APEC processes. The benefits of freer trade include more efficient resource allocation and expanding market opportunities. In the case of

Australia, and other countries that have followed such a course, economic gains have been realized through unilateral action to reduce protection, with further gains coming from improved access to the markets of trading partners.

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Canada's food processing and wholesaling industry has gone through consolidation and increased concentration. Competition between types of retail stores is heightening and the line between retail stores and restaurants is becoming increasingly blurred. Price increases of most foods are expected to be modest in 1998 and 1999 as costs of inputs, including raw materials, are likely to change only a little. The value of agri-food exports should remain stable in 1998 and 1999 under the influence of opposing forces such as the decline in demand resulting from the Asian financial crisis and the change in value of the Canadian dollar, which has fallen relative to the U.S. dollar but increased relative to many currencies in the Asia Pacific region. Canada's agri-food policy remains focused on increasing market orientation rather than on income support from the government. Infrastructure, such as facilities needed for transportation and communications, is being upgraded, often with less government involvement than in earlier years.

Although Canada's growth rate will slow slightly, it will remain at about 3 percent in 1998 and 1999. Canadian economic fundamentals remain sound; the federal budget deficit was eliminated faster than expected, the unemployment rate has fallen, and consumer spending and investment have been buoyant. Interest rates are increasing slightly in 1998. Remaining difficulties include unemployment at more than 8 percent, negative interest rate spreads between Canada and the United States, the continuing current account deficit, and a sizeable public debt in relation to GDP.

A robust U.S. economy in combination with an undervalued Canadian dollar helped Canada's exports of goods and services to increase by as much as 8 percent in 1997. The outlook for overall agri-food exports in 1998 and 1999 re-

mains favorable, with total export values remaining close to the 1997 level. Canadian exports to Asia Pacific are slowing in 1998 because of the higher value of the Canadian dollar relative to many currencies of the region (despite the significant depreciation relative to the U.S. dollar) and slower economic growth in the region. The continued malaise in the Asia Pacific region will dampen export prospects for several years. However, economic growth in Western Europe will stimulate exports to that region.

■ *Food Prices and Consumption*

In recent years, food price increases in Canada have been small, due to several factors, including: low inflation, stable to declining wage rates in the processing sector, economies of scale in the farm sector, reduced waste, and vertical coordination in the value chain. The increases in CPI for food from stores and food from restaurants were both low in 1997 (about 2 percent), due partly to large supplies of competing meats, adequate supplies of fresh fruits and vegetables, increased sugar production, and strong competition in the soft drink and prepared food industries. These increases were smaller than those experienced in the United States.

On average, 80 percent of the retail food price derives from costs associated with food production and marketing, with the remaining 20 percent constituting operating margin for retailers. The costs of labor, packaging, transportation, advertising, and other inputs are expected to be fairly stable over the next few years, possibly declining slightly due to improved technology. In some processing industries, wages have been either frozen or cut in response to global competition. Consequently, retail prices for total food are projected to increase only modestly, by 1.9 and 2.5 percent in

1998 and 1999, respectively.

Two unknowns could temper the outlook for specific products. The first is the degree to which Asian demand for agri-food imports will remain soft. The second unknown is the duration and severity of the unsettled weather patterns associated with the ocean current, El Nino. In 1997, serious droughts in South America and Southeast Asia, devastating ice storms in Eastern Canada and the U.S. Northeast and weather-related impacts on agricultural production elsewhere around the Pacific, were attributed to this phenomenon.

Increases in North American meat prices are moderated by both large supplies and reduced prospects for exports in 1998. Currency devaluations in other countries and the need to find alternative markets because of reduced imports in Asia will increase competition in North American markets and will temper increases in retail prices of meat, poultry and fish. Retail pork prices in Canada could register declines of more than 7 percent in 1998, while retail beef prices could show a gain of around 1 percent in 1998. Prices of both pork and beef should increase in 1999. Retail prices of poultry meat are expected to be fairly constant in 1998 and 1999.

Retail prices of cereal and bakery products are expected to register small increases of 1 to 2 percent 1998 and 1999 as lower grain prices offset small increases in processing and marketing costs. Fats and edible oil prices are expected to increase a modest 1 to 3 percent in 1998. Since fats and oils are highly processed food items, their price change is influenced by the general inflation rate in addition to North American and world supplies of vegetable oils.

Retail prices of citrus and tropical fruits are likely to decline in 1998 and 1999 as U.S. and Central and South American production capacity has increased. Replantings in U.S. citrus fruit areas devastated by frost in the late 1980s are now reaching maturity and will produce increasingly larger crops into the early 2000s. Prices for temperate fruits should strengthen in 1998 and 1999, starting from a low base. Fresh vegetable prices may rise by 2 to 3 percent due to unsettled conditions in growing areas in both Canada and the United States. Processed fruit and vegetable prices are expected to rise by 1 to 2 percent in 1998 and 1999, with the increase moderated by ready availability of citrus and tropical fruit supplies.

■ Food Processing and Marketing

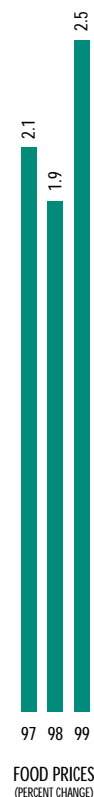
Food processors have undertaken remarkable rationalization since the late 1980s, and market

share will continue to consolidate among fewer, bigger firms. Because of Canada's liberal trade regime, Canada's agri-food markets are nevertheless relatively open to competition. Growing vertical coordination in the value chain leads wholesalers to take on many new roles. They are becoming value adders of third-party service, logistics, information, marketing, merchandising, and advertising programs in the supply chain. Aggressive wholesalers also take on some manner of retail function and provide further services such as warehouse outlets.

Chain supermarket sales grew by around 8 percent in 1997, as did voluntary group or franchised supermarkets. Both format types regained some of the ground they had lost to warehouse clubs and mass merchandisers. Better merchandising, category management, training, and more efficient warehousing and logistics systems, and grocery chains reduce costs and provide a wider offering to customers. Further consolidation in the industry is likely. The floor area of stores closed does not come close to the amount of new floor area being opened by chain and independent supermarkets. Nevertheless increases in floor area have been outpacing Canada's population growth. More floor area and better techniques for managing inventory to further heightened retail competition.

Canadian consumer products companies are consolidating in order to benefit from economies of scale. Retailers operate on lower gross margins, less inventory, and faster inventory turnover. They plan to build fewer stores, but each with higher traffic and lower overhead costs. Retailing will be more consumer responsive, with suppliers, retailers and consumers becoming more tightly integrated, increasing the pressures on wholesalers. Unaffiliated independent grocery stores and convenience stores bear the brunt of these competitive pressures. Convenience store sales were stable to slightly down in 1997 and the number of such stores shrank. Unaffiliated independent grocery stores saw sales decline by 12 percent, although their number declined proportionately less.

Canadian families now eat at less expensive restaurants and do so less frequently. Since 1992, the number of restaurant meals fell by 14 percent (breakfasts), 13 percent (lunches) and 9 percent (dinners). Over the same period, grocery stores increased their share of all food consumed as sales of convenient, time-saving home-meal replacements increased dramatically. For example, when remodeling, 30 percent of retail supermarkets added a prepared foods section. Supermarkets now account for 17 percent of "take-out" food, cutting into the shares of fast



food outlets (35 percent) and conventional restaurants (26 percent). Ready-to-eat meal sales almost tripled in 1997.

Home delivery and provisioner services are increasing their share of the market. Such services are likely to show strong growth, supported by more secure electronic transmission technologies and better quality assurance mechanisms. By 2005, electronic retailing may account for 10 percent of the grocery market. Both retailers and their food suppliers will continue to cut costs, using strategies that include vertical cooperation and inter-firm alliances.

■ *Agricultural Production and Trade*

Net cash income is expected to drop in 1998, after hitting a record high in 1997, but rise again in 1999 and beyond as global demand and world prices recover. Although government payments are projected at lower levels than in earlier years, net cash income for the next several years is expected to exceed the 1992–96 average. The greater reliance on market performance in Canadian agriculture explains this. Crop receipts in 1998 and 1999 are expected to remain somewhat below the 1997 level. Livestock receipts should show a slight increase over the next several years, which is partly due to higher cattle and hog marketings.

The use of land in Canada for producing grains, oil seeds and specialty crops is closely tied to the area put in summer fallow (mainly for soil moisture management purposes). While the tendency for several years has been to reduce the area in summer fallow, the decline is small and will allow for only a marginal increase in crop area in 1998 and 1999, compared with 1997. The expansion of livestock production, especially in Western Canada, will result in increased use of feed barley and sustain the trend toward decreased exports of such barley.

Ample meat supplies both in Canada and the United States will restrain increases in livestock and meat prices in 1999. After becoming a net exporter of beef for the first time in 1996, Canada is expected to continue to increase exports of low-quality beef to the United States and high quality beef to the rest of the world (including Japan). In the hog and pork sector, restructuring in the packing industry and expansion in the processing industry are expected to sustain increased exports of pork, especially to the United States, Korea, and Japan. Over the longer term, red meats (beef, pork) and other further processed products are expected to make up a larger share of exports while bulk commodities, such as grains, account for smaller share.

■ *Food and Agricultural Policy*

Canada has carried out a significant reinstrumentation of farm income support policy by reducing government expenditures on commodity support and putting in place whole-farm safety nets. These comprise Crop Insurance, Net Income Stabilization Account (NISA), and province-specific companion programs and are designed to create no or little distortion of production and trade. The level of support to Canada's major crops is now considerably below that of the United States and close to Australia's.

Canada is moving away from ongoing passive income support toward targeted, transparent, and temporary policy transfers designed to facilitate adjustment, decoupled from production decisions. Adjustment programs include the Canadian Adaptation and Rural Development Fund (CARDF), the Western Grain Transportation Adjustment Fund, and the Feed Freight Assistance Adjustment Fund. As they are transitional programs, they are funded for only a few years. CARDF supports adaptation programming to promote changes fostering industry self-reliance and prosperity. It helps farmers and rural communities adjust to an environment of less ongoing farm income support; this requires solutions that emphasize training, facilitate mobility, and develop entrepreneurship.

Other initiatives include the Matching Investment Initiative (MII) for Canadian agri-food research, which allows the government to stretch its resources while encouraging greater collaboration between private and public institutions. Several hundred MII projects have been approved for initiation between 1997 and 1999. For example, researchers work with milling companies to improve the marketability of durum wheat through selection on the basis of agronomic, disease, and quality information and the strong gluten characteristics that millers want. To meet the specific demands of customers in East Asia, the Greenhouse and Processing Crops Research Centre in Harrow, Ontario, develops soybean varieties with end-use traits suitable for producing tofu, miso, or soymilk.

The federal government's International Investment Promotion Framework for the Agri-Food Sector seeks to attract foreign direct investment into the Canadian agri-food sector; to facilitate the establishment of new strategic alliances and other partnerships; and to facilitate the retention and expansion of existing investment and strategic alliances between Canadian and foreign firms.

The Canadian Food Inspection Agency is moving in the direction of a risk-based system. Non-core services, such as grading, have been

transferred to third parties. A joint industry-government review of food labeling policies and regulations is underway.

The Canadian Wheat Board Act was amended in 1998. Major elements include the introduction of operational flexibilities relating to grain purchases; authority to increase initial payments in response to market conditions; replacement of the appointed commissioner structure of senior management with a president and a (partially) producer-elected Board of Directors; and introduction of a provision allowing for the establishment of a contingency fund to backstop for potential losses in certain specific circumstances.

The supply management system for dairy and poultry clearly remains a major element of Canadian agri-food policy. Changes to this system have been introduced to improve industry responsiveness to changing consumer demands. The US\$117 million (CAN\$160 million) million dairy subsidy is being phased out over a period that ends January 31, 2002. The chicken, turkey and egg national agencies can now include nominees of downstream interests (such as processors) as members.

Agricultural policy change in Canada has been substantial in recent years. The budget of the federal department of agriculture has declined from an average of US\$2.8 billion (CAN\$3.3 billion) billion in the 1988–92 period to US\$1.3 billion (CAN\$1.8 billion) in 1997. Provincial government spending has also declined significantly. While the reduction in policy support to agriculture is evident in various measurements, a major part of support now derives from market transfers from consumers in sectors such as dairy. The average Consumer

Subsidy Equivalent (CSE) level for all commodities is expected to remain around -14 percent and the Producer Subsidy Equivalent (PSE) at about 20 percent.

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Chile

As of mid-1998, the Asian economic and financial crisis had had a moderate impact on the Chilean food sector, affecting the balance of trade but not the financial sector *per se*. The Chilean economy does not have close financial ties with the countries most seriously affected by the crisis, but it does have close trade ties. Exports to the Asia Pacific region represent 34 percent of total Chilean exports. As a direct result of the crisis, exports to Asia fell by 25 percent during first-quarter 1998, which led to a 10 percent decline in total Chilean exports. During the same period, Chilean imports from Asia increased 34 percent compared with first-quarter 1997 as currency devaluations made Asian exports more competitive.

The current account deficit for 1998 is forecast at 6.5 percent of GDP, up from 5.5 percent in 1997, with the increase owing not only to the deterioration of Chile's terms of trade but also to the increase in external financing of the investment. A 5 percent decline in the trade terms is expected for 1998 due to the lower price of copper and other important export commodities, which will not sufficiently compensate for the lower prices for petroleum imports. While the Asian crisis has found the Chilean economy in an expansionary cycle, most analysts agreed that the economy would have had to decelerate even without the crisis. The current account deficit is expected to be financed through capital inflows rather than by using net reserves although further losses in reserves are possible depending on the exchange rate policy followed during the rest of the year. Despite the large current account deficit, net reserves have remained above Ch\$7,280 billion (US\$16 billion), equivalent to 20 percent of GDP, which places Chile 10th in the world in terms of its reserves-to-GDP ratio.

In light of the crisis, the government has reduced fiscal expenditures for investment pro-

jects by more than 5 percent in real terms (US\$340 million). Current fiscal expenditures were also reduced by Ch\$77.4 billion (US\$170 million), which is equivalent to half a point of GDP and will affect a total of 17 branches of government and 5 public enterprises. Chile's financial system remains healthy, with only 1 percent in past due loans compared with 15 to 20 percent in the Asian countries being affected by the crisis. Chile's short-term external debt represents just over 1.7 percent of GDP.

The subsectors most directly affected by the crisis are those with the strongest trade links: fisheries, forestry products, and fresh fruits. In response, Chilean exporters have been actively pursuing alternative markets. The crisis is expected to result in a larger trade deficit, lower GDP growth for 1998, and deferrals of planned investments in infrastructure, particularly roads and irrigation systems. However, agricultural policies are not expected to change. Trade liberalization through bilateral trade agreements and unilateral tariff reductions continues to be an important policy objective for the Chilean government.

■ Food Prices and Consumption

Current forecasts indicate that the external shocks from the Asian crisis will result in a lower economic growth rate for at least the next two years. From 1990 to 1997, Chile grew at an annual average rate of 7 to 8 percent. Before the crisis, a similar growth rate was expected for 1998. Now, economic growth has been adjusted downward to 5.5 to 6 percent in 1998. OECD's economic projections are even lower: 5 percent in 1998 and 4 percent in 1999. The more optimistic projections in Chile, versus those of OECD, are based on a more favorable outlook for the nontradable sector. For tradables, the sit-

uation is considerably less favorable, particularly for agriculture, forestry, and fisheries. For 1998, a 3 to 3.5 percent growth rate is forecast for agriculture and forestry, 4.5 percent for fisheries, and 3.8 percent for the industrial sector. The expected rate of inflation for 1998 of 4.5 percent has not been modified, but if the external accounts deteriorate further, the exchange rate policy might have to compensate.

During 1998 food prices have been falling, contributing to maintenance of a low rate of inflation. Food prices in Chile basically depend on international prices and the exchange rate. International food prices in U.S. dollars fell by 18.8 percent during the 12 months ending in April 1998. In Chile, the CPI for food fell by 1.8 percent during first-quarter 1998, whereas the overall CPI increased by 1.4 percent. Prices have declined for fresh fruits, vegetables, and tubers. The decline in prices for fresh fruits is due to declining exports and the corresponding increased supply in the domestic market.

Food consumption in 1999 is expected to increase due to income and population growth. However, average per-capita food expenditure will continue to decline in importance in family budgets. The current food share of family budgets is 27 percent.

The current population growth rate of 1.4 percent represents a slowing trend that is expected to continue, as is the trend of rural to urban migration. These factors will influence the structure of consumer expenditures, lowering the importance of total food expenditures in the consumption basket, but increasing the importance of more value-added food items such as meats, dairy products, fresh and frozen vegetables, and fresh fruits.

■ Food Processing and Marketing

The food processing industry continues to develop, though at a different pace in different subsectors. A large part of the horticultural processing sector is oriented to the export market, where it faces strong competition in Europe and North America and, in some cases, very low international prices. The situation is made more difficult by the ongoing appreciation of the Chilean peso relative to the currencies of major markets, rising labor costs, and high domestic interest rates. As a result, several mergers have occurred in the agro-industrial sector, increasing vertical integration. In many instances, multinationals have acquired the few remaining local firms.

In stark contrast to the horticultural processing sector, the Chilean wine sector is currently experiencing a boom in terms of both

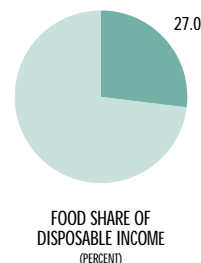
exports and investments. This trend is expected to continue for the next few years, owing not only to strong international demand but also to the sector's new orientation toward producing the varieties of wine in demand abroad as well as improved marketing efforts. An increasing number of joint ventures with foreign firms is also foreseen.

The dairy industry, an import-competing activity, is expected to continue to develop rapidly as domestic demand grows, despite declining domestic prices. The domestic market for meats is again very dynamic. The poultry and pork industries, which are both also beginning to enter the export business, have been growing very rapidly. The domestic beef sector, however, registers much poorer performance as imported beef from Argentina and Paraguay supplies most of the domestic market.

The participation of hypermarkets and supermarket chains in the Chilean retail food sector continues to increase, and foreign supermarket chains, such as Carrefour (France), have recently become established in the market. In central Chile, the most densely populated area, a total of five chains account for 66 percent of the total volume marketed through supermarkets. The total investment of supermarket chains in 1998 is expected to reach Ch \$227.5 billion (US\$500 million). The number of supermarket outlets in the country (712 in mid-1998) is expected to double within the next 10 years.

Numerous improvements are being made to food safety regulations as well as to automation, grading, and labeling systems. The types of foods, degrees of processing, and types of packaging being introduced in the market closely follow the trends observed in more developed nations. As larger integrated retail stores become increasingly popular, medium-sized firms and smaller food processing industries are finding themselves constrained by supermarket space, required volumes, and financial capacity. At the wholesale level, new private sector infrastructure investments are being made. A new wholesale market for meats and horticultural products, a private venture, is scheduled to open in 1998 in Santiago, the capital. Plans call for expanding it in the near future to include cold storage, offices, and a shopping center.

The most important infrastructure elements for the Chilean food and agricultural system include ports, roads, and irrigation. The most important ports are located in central Chile and are used for most fresh fruit exports and for imports from North America and Europe. These have been administered by the public sector (EMPORCHI), but are being privatized in 1998. The



most important roads for the Chilean food sector include the north-south highway and port access roads. A Ch\$71 billion (US\$156 million) proposal to construct 12 roads across the Andes Mountains to connect Chile with MERCOSUR as stipulated in their signed trade agreement and planned for construction by 2000 has not been modified as a result of the Asian crisis. In terms of irrigation infrastructure, an ambitious plan was set in motion in 1990 to build and improve large and medium irrigation works, with public investment growing from Ch\$15 billion (US\$33 million) in 1993 to Ch\$28.7 billion (US\$63 million) in 1997. Irrigation investments had been expected to reach Ch\$ 34.5 billion (US\$76 million) in 1998, but due to the Asian crisis and the general cutback in public expenditures, these investments will be cut by Ch\$1.1 billion (US\$2.4 million).

Also significant is Chile's impressive recent progress in developing telecommunications systems, an important factor in attracting private investments in trade and manufacturing. New products and technologies are being introduced as soon as they are developed abroad, and due to the competitiveness developing in this sector, tariffs on telecommunications services are declining. There also has been considerable private sector investment in cold storage and packing facilities, which will facilitate future development of food production and marketing. In 1995, the latest year for which data is available, total available cold storage in the country was estimated at 3 million cubic meters.

■ *Agricultural Production and Trade*

The growth rate of the agriculture and fisheries sector in 1997 was very low due to the continuous appreciation of the Chilean peso throughout the 1990s and the effects of the El Nino weather phenomenon. In the fisheries sector, El Nino has also negatively affected fishing of jack mackerel.

In general terms, the Asian crisis has had a mixed effect on agricultural and food production in Chile. Production levels in 1998 responded to the prices achieved in 1997 at a time when the full implication of the crisis was still unclear. The lower international food prices for some agricultural commodities observed in 1998 will probably result in a reduction in area sown and livestock production for the coming production cycle. In general, the outlook for food production includes:

- A reduction in area harvested, with a shift in land planted to cereal or for livestock production toward forestry

- An increase in farm size and herd size
- The conversion of arable land into leisure holdings, and
- A continuation of the recent trend of combining farm properties in Chile with properties in Argentina (Chilean farmers and firms purchasing lands in Argentina for joint operation)

In terms of traded commodities, fresh fruits have fared better than fishery, forestry, and agro-industrial products in light of the crisis. The fresh fruits sector, which is export-oriented and very closely linked to Asia, has been affected by the lower volumes now being sold to Asia. However, the impact of the crisis has been softened somewhat by the success of the fruit exporting companies in redirecting trade to other regions of the world. Thus, in general, there are no changes in the outlook for the fresh fruit sector as a result of the crisis, except for some varieties of grapes and apples that are grown especially for the Asian market, such as Red Globe grapes and bicolor apples. The lower prices currently being paid by the processing plants for milk, another important traded commodity, increasingly are believed to be a result of the Asian crisis (i.e., lower-priced dry milk imports from New Zealand).

So far, the major impact of the Asian crisis has been felt by exporters of fishery, forestry, and agro-industrial products. The fisheries sector has been most deeply affected by the crisis, and the situation is expected to continue in the near term. About 55 percent of fish exports—fish products and seafood—are exported to Asia. The major markets are Japan and Chinese Taipei. Exports to Asia decreased by almost one-third during the first six months of 1998, mostly due to lower volumes sold, with just a 3.5 percent decline in export prices. Price drops have been most dramatic for frozen products, while the price of fishmeal has increased significantly due to a supply scarcity as a result of El Nino.

Asian countries represent 48 percent of the export market for forestry products. During first-quarter 1998, forestry exports to Asia declined by 47 percent. Even after finding alternative markets, the forestry industry saw total exports fall by 19 percent.

Agro-industrial exports, only 9 percent of which are sold to Asia, have not been as severely affected by the crisis. Exports of agro-industrial products to Asia fell by 29 percent during first-quarter 1998, but only 2.4 percent in terms of total exports to the world. China is currently offering a valuable alternative market for Chilean agricultural exports. Agricultural ex-

ports to China jumped 948 percent during first-quarter 1998, equivalent to about a Ch\$10.5 billion (US\$23 million) increase.

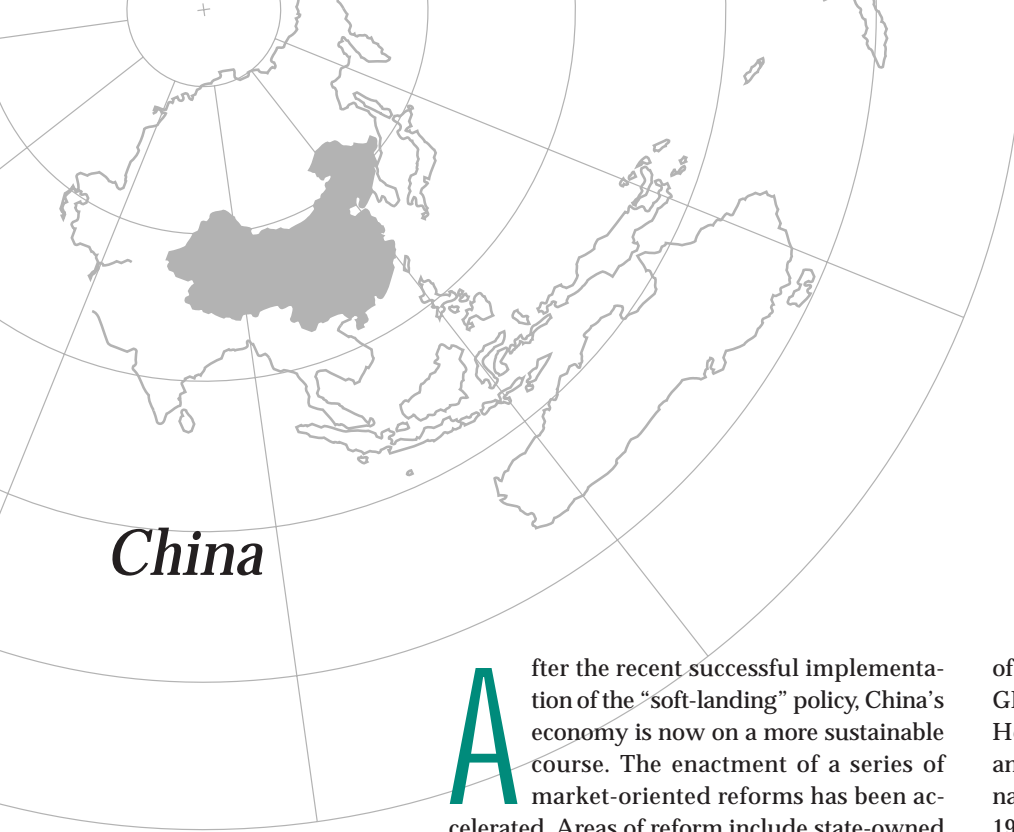
■ *Food and Agricultural Policy*

The government of Chile continues to promote its policy of trade liberalization through bilateral agreements, both within and outside Latin America. Chile signed free trade agreements with MERCOSUR in 1996 and with Canada in 1997. MERCOSUR accounts for 40 percent of Chile's agricultural imports. The agreement with MERCOSUR calls for a gradual lifting of the effective import tariff for most commodities imported from MERCOSUR, beginning in 1998 at a rate significantly below the original uniform tariff of 11 percent and reaching zero by 2011. The agreement with Canada, an important supplier of cereals, particularly wheat, will have a similar effect. For the past 12 months, Chile has been renegotiating its trade agreements with Colombia, Mexico, and Venezuela, seeking to eliminate all previous exemptions to trade liberalization. Chile is currently in talks with Peru to negotiate a trade agreement.

Even more important than tariffs in determining the competitiveness of the food sector is the impact of the exchange rate policy. The real appreciation of the Chilean peso since 1990 due to the success of the export promotion policy and the attraction of foreign capital flows has had a negative impact on the performance of the food sector, reducing the real prices of exportables and import-competing commodities.

New government policies are aimed at assisting the agricultural sector in facing competition from abroad. The main pillars of this policy are;

- Irrigation improvements
- Recuperation of degraded soils, especially pasture lands
- Promotion of technological innovations
- Improvement of management practices by farmers and firms
- Protection of farmers from monopolistic practices of the agro-industrial sector
- Stabilization of border prices (price bands), promotion of export market opportunities, and new plantations in the forestry sector, particularly for medium- and small-sized farmers, through new risk-sharing schemes.



China

After the recent successful implementation of the “soft-landing” policy, China’s economy is now on a more sustainable course. The enactment of a series of market-oriented reforms has been accelerated. Areas of reform include state-owned enterprises, housing, medical care, financial systems, and government organizations. Government policy is now focused on maintaining an 8 percent growth rate, expanding demand, and creating new jobs. Inflation and interest rates will remain low into 1999.

The food market was sluggish in the first half of 1998. Slight price recovery was expected, especially for feed grain, in the second half of the year. A great disparity in food consumption patterns remains and will only very slowly narrow in the future. Given higher livestock consumption in urban households, increasing urbanization will result in disproportionate growth in demand for livestock products.

Agricultural production for 1998 is expected to remain at the 1997 level. Food and agricultural trade has been weakened by the Asian financial crisis. Food exports to those countries had already declined by mid-1998.

Reforms in domestic and trade policy will continue to favor liberalization and integration of markets. Another large cut in import tariffs in October 1997 shows China’s willingness to internationalize. However, maintaining a high degree of grain self-sufficiency will continue to be the major policy goal.

■ *Macroeconomic Situation*

China’s GDP reached 7.48 trillion Yuan (US\$901 billion) in 1997, an increase of 8.8 percent over 1996 in real terms. This growth rate, though the highest in the world, was the lowest in China since 1991. The economic slowdown is a result

of the government’s “soft-landing” policies. The GDP growth target for 1998 was set at 8 percent. However, due to a sluggish domestic market and a world market depressed by the Asian financial crisis, the growth rate in the first half of 1998 reached only 7 percent. Given increased investment and other measures taken to stimulate and expand demand, the year-end growth rate is expected to achieve the 8 percent goal. Growth is expected to continue into 1999, with the rate reaching 9 percent for that year.

Inflation, which was in double digits in the mid-1990s, has been brought under control. In 1997, it was down to 0.8 percent for retail prices and 2.8 percent for consumer prices, the lowest rates since 1979. Inflation rates were negative for the first half of 1998, -2.1 percent for retail prices and -0.3 percent for consumer prices. The goal of capping inflation at 3 percent in 1998 will be easily achieved. The inflation rate will continue to be low in 1999, most likely under 3 percent.

Interest rates have been cut substantially several times since 1995. The interest rate on savings for one-year deposits, for example, was reduced from 12.24 in 1995 to 5.67 percent in 1997 and to 4.77 percent in July 1998. A further cut in interest rates is unlikely in 1998 but possible in 1999 if the market remains sluggish.

The Chinese currency, the RMB, has remained stable despite strong pressure from currency devaluations in Southeast Asian countries and in Japan. The Chinese government has repeatedly declared its determination to protect the value of the RMB. China’s foreign exchange reserves reached a new peak in 1997 and continued to grow in the first six months of 1998, standing at over US\$140 billion as of June 30, 1998.

The government’s financial situation has shown continued improvement. In 1997, state revenue reached 864.2 billion Yuan (US\$104 bil-

lion), up by 16.7 percent from 1996, while state expenditures were up by 15.9 percent to around 919.7 billion Yuan (US\$ 111 billion). The deficit has been narrowed to 55.5 billion Yuan (US\$6.7 billion). The share of state revenue in GDP increased to 11.6 percent in 1997 owing to revenue's faster growth rate. State expenditures are expected to grow rapidly in 1998 to finance efforts to expand domestic demand, especially in infrastructure improvements.

Unemployment pressure is mounting. The registered unemployment rate in urban areas rose to 3.1 percent at year-end 1997 despite various measures adopted by the government to solve the problem. The unemployment trend in general, though still tolerable, has worsened since 1992 when the urban unemployment rate was 2.3 percent. The government's push to reform unprofitable state-owned enterprises, which began in early 1998, will only increase the number of unemployed despite efforts to mitigate the impacts. The urban unemployment rate is expected to hit 3.5 to 4 percent for 1998 and is likely to rise to 4.5 to 5 percent for 1999. Rising urban unemployment and the efforts of city authorities to re-employ these urban workers are driving rural migrants out of the urban labor market, resulting in worsening rural underemployment.

The natural population growth rate dropped to 1 percent for 1997. Rates of 2.9 percent for the urban population but only 0.2 percent for the rural population imply that urbanization is accelerating. However, the urban share of population is still low, accounting for only 30 percent of the total by year-end 1997.

Total trade registered US\$325.1 billion in 1997, an increase of 12.1 percent over 1996. Exports grew by 20.9 percent, far exceeding import growth of 2.5 percent and resulting in a trade surplus of US\$40.4 billion. As a result of the financial turmoil in Asia, however, the growth rate dropped substantially in 1998, registering only 7.6 percent for exports and 2.2 percent for imports as of June 30. The declining trend in foreign trade growth is expected to continue into the second half of 1998 with a rebound expected in late 1999 due to the impact of export promoting policies such as an export tax refund. Agricultural exports in 1997 amounted to US\$16.9 billion, 9.3 percent of total exports.

Agriculture's share in the national economy continued to decline. Agricultural value added in 1997 rose by 3.5 percent in real terms to 1.37 trillion Yuan (US\$165 billion), accounting for 18.7 percent of GDP. Employment in the agricultural sector continued to decrease in 1997 to 343 million, which represented 49.3 percent of total employment.

■ Food Prices and Consumption

Following three consecutive years of increases, food prices have stabilized and declined slightly since 1997 at both the producer and consumer level. Almost all major products including grains, vegetables and fruits, meat, and fish have been experiencing price losses. State quota procurement prices for grain were raised significantly in early 1997 while corresponding market prices have been declining since summer 1997. As a result, the relationship between the two prices has reversed. Since year-end 1997, open market prices for major grain products have been lower than state quota procurement prices. Meat prices declined by over 10 percent between July 1997 and June 1998, with pork being the biggest loser (down by 20 percent). Fish prices fell by close to 10 percent. Prices are expected to recover somewhat in late 1998 and early 1999, provided the new policies intended to expand demand are successful.

The food consumption patterns of urban and rural households differ significantly due to the large income disparity between the two groups. With incomes one-and-a-half-times higher than their rural counterparts, urban residents consume roughly twice as much livestock products and half as much grain as rural residents. Since 1990, the per-capita consumption of grain and meat in rural households has not changed much, but that of edible vegetable oil, eggs, aquatic products, and liquor has risen steadily. The per-capita consumption of poultry, beef, and mutton in urban households remained stable, while that of aquatic products, eggs, edible vegetable oil, and liquor has risen and consumption of grain, vegetables, pork, and sugar has declined. The general trend is expected to be more consumption of high-value products and less of grain. The share of income spent on food has continuously declined for both urban and rural households, though both are still relatively high at 37 percent for urban households and 43 percent for rural. Further declines in food's share of income are expected as income continues to improve for both urban and rural populations. Income spent on food away from home is set at around 4 percent, but the statistical figure does not appear to sufficiently reflect general observations about the rapid growth of traditional and fast food restaurants.

■ Food Processing and Marketing

Food processing has been a very fast-growing sector in China in recent years. New products, new varieties of traditional products, and new brands of existing products are being brought



onto the market literally every day. From 1990 to 1996, for example, canned food and beer production doubled. Various kinds of fresh fruit and vegetable juices have been developed. New varieties of milk and meat products have been produced and brought to consumers along with the widespread introduction of refrigeration facilities. Even grain, the most basic food in China, has been introduced in a great variety of new processed products such as instant noodles, frozen Chinese dumplings, and steamed bread that are now available almost everywhere.

Rising incomes and the associated requirements for higher-quality and more convenient food are the major driving forces for an ever-expanding market for processed foods. On the supply side, a surplus of farm products has provided both sufficient raw materials for increased food processing and an incentive to expand the market. The many new joint ventures such as Coca Cola and Nescafe have brought in additional investment, products new to China, and the technology and entrepreneurial know-how for market development. The food processing industry still has great potential for expansion. The rural sector includes many small township and village enterprises that need to improve the quality and standards of their products.

For the advanced food processing sectors in cities, reducing production costs and thus prices will be important to facilitating further market expansion. Wholesale markets for trading large-volume farm products such as grain, edible oils, and fruits and vegetables have been developed as part of marketing reform in China over the past two decades, especially since 1990. The infrastructure in those markets varies greatly from very poor to rather advanced, but is continually improving. Farm products also are listed in several futures markets, such as the Zhengzhou Futures Market and Shanghai Futures Market. The future trend in wholesale markets may not be an increase in the number of markets, but improvement of the existing markets, including better physical facilities and better services. The services that need improvement include information and, most important, credit.

Free markets in cities and small towns are crucial channels for food wholesaling and retailing in China. Those markets have increased in number only slightly since 1990, but have grown tremendously in trade volume, which has increased almost ten-fold in urban areas and five-fold in rural areas. The volume of agricultural products traded through those markets increased 1.7 times in real terms between 1990 and 1996, equating an annual growth rate of 18 percent.

In the retail sector, the development of West-

ern-style supermarkets, including chains, has mushroomed recently in China. Some supermarkets are newly established, while others have been developed from former state grain shops, state nonstaple food shops, and small private food shops. Supermarket development has occurred simultaneously with development of the food processing industry, the latter making it possible for supermarkets to have colorful and abundantly stocked shelves. Supermarket development is still in its infancy, however, and concentrated in big cities. It is expected to continue at a brisk pace and spread gradually to small cities and towns.

Infrastructure, while much improved in the past decade, is still a bottleneck in China, with development lagging far behind the needs of the robust economy. This has a significant, direct effect on food and agricultural trade.

For individual farmers, good transportation means physically easy access to markets. Research shows that farmers located close to good transportation systems (railways, highways, and waterways) have relatively less on-farm grain stock than other farmers. The decentralized market policies demand a higher level of cereal reserves in each province than if free product movement was allowed across provincial borders. The total reserve demand for grain safety and for storage capacity is estimated at 100 to 200 percent higher when each province individually strives for high grain self-sufficiency.

China's insufficient transportation capacity, including port capacity and inland transportation capacity, is often used as an argument for maintaining high grain self-sufficiency. Imports of more than 5 percent of grain consumption are unlikely due to current transportation constraints.

Insufficient transportation and storage capacity also hamper integration of domestic markets. For example, corn prices vary greatly from province to province. Corn prices in the southwest provinces have been double those in the northeast provinces. Freight trains are the major transportation mode used for interprovincial grain trading. The long-standing shortage of rail capacity has impeded liberalization of the domestic grain market, since it is almost impossible for private grain marketing enterprises to obtain licenses to use rail transportation. Furthermore, due to the lack of storage facilities, a significant amount of grain stock is kept in the open in most major producing areas under very poor conditions.

For livestock and horticultural products, cold storage and refrigeration facilities play a decisive role. The widespread introduction of refrigeration facilities in urban retail shops over the past 15 years has substantially improved the

marketing of meat, milk, and fish products in terms of variety, safety and stability. In addition, it has made it possible to market a variety of traditional Chinese staple foods in precooked or half-prepared forms. But the lack of refrigeration facilities for long-distance transport has greatly impeded the interprovincial trade of most livestock products. For example, Sichuan province is the most important pork producer in China, but marketing of Sichuan frozen pork to large consumption centers such as Beijing is only possible in cold winter months when regular cars and trucks can be used. The lack of refrigerator cars leads to pork supply surpluses in the summer months in Sichuan, while in Beijing, local pork producers require a significant public subsidy to maintain a stable meat supply.

Capacity shortages in transportation, storage, processing, and communications are believed to be the major reason for the severe market surplus of fruits, especially apples and citrus fruits, in China.

Improved infrastructure will not only enable efficient marketing processes and better market balance in terms of quantity, quality, and timeliness, but also will contribute greatly to a more open and integrated food and agricultural system, both nationally and internationally.

■ *Agricultural Production and Trade*

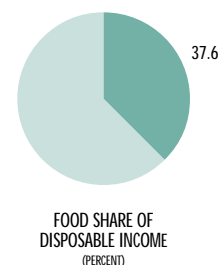
Total grain production in 1998 is estimated at 492.5 million tons, equaling the 1997 level. Crop losses due to heavy flooding in the middle and lower reaches of the Yangtze River during summer 1998 are expected to be offset by production growth (including area expansion and yield increases) in other parts of the country. Production of oil seeds is likely to exceed 22 million tons; cotton should exceed 4 million tons. Sugar crops and tobacco production will equal their 1997 levels. After several years of double-digit growth rates, livestock production will grow only moderately, probably around 5 percent for all meat categories, which is sufficient to meet the growth in demand. A positive factor affecting livestock production is expanding domestic demand; the chief negative factor is a feed price rise in 1998. The Asian financial crisis made foreign trade of Chinese agricultural products more challenging in 1998. Food exports to Southeast and East Asian countries had already declined by as much as 30 to 40 percent by mid-1998. Great efforts have been made to expand the market for Chinese food exports in other parts of the world, but this structural adjustment may take some time.

■ *Food and Agricultural Policy*

The goals of agricultural policy in China during the past decade have been market liberalization. Markets for almost all nongrain products had been liberalized by the early 1990s. Even for grain, the most strictly regulated farm product in China, significant market reforms have been accomplished, though the reform process has not been very smooth. The goals of food and agricultural policy, which were once focused solely on obtaining hard currency and promoting development of urban industries, have shifted to include consideration of such issues as food security, market stability, farmer income, sustainable development, and economic efficiency. Growth in production is still the top priority, though now quality and variety, not just quantity, are emphasized. Future agricultural policy in China will emphasize strengthening the land tenure system (household-responsibility system), market liberalization, improvement in the economic and technical performance of the input industries, resource management, and investment in production facilities and agricultural research and technology.

In the interest of trade system reform and market liberalization, China has cut the average import tariff rate four times since 1991. The average import tariff dropped from 47.2 percent in 1991 to 17 percent in 1997. For agricultural goods, the import tariff was cut from 32.6 percent to 20.4 percent over the same period. Further cuts are expected in the coming years. Efforts have also been made to eliminate nontariff barriers to trade. Import licensing has been abolished for over 700 tax items and import license requirements have been reduced to 36 categories with 354 tax items. Of those, 28 categories, including wool, rubber, sugar, chemical fertilizer, tobacco, cotton, and edible vegetable oil, are quota managed and eight, including pesticides and grain, are nonquota managed. On the export side, food and agricultural product subsidies have been abolished.

More and more agricultural policymakers in China have recognized that China can be fed better and more efficiently with improved international cooperation and greater emphasis on the principle of comparative advantage. This leads to optimism about China's progress toward a more market-oriented and open food system. China will open its door much wider to food and agricultural trade provided it feels its food security and national sovereignty are not threatened by world food powers.





The Colombian economy is still recovering from the sharp slowdown that began in late 1995 and continued through first-quarter 1997. Preliminary estimates indicate that GDP grew by 3.1 percent in 1997, up from the 2 percent growth rate registered in 1996. Growth within the sectors was uneven. Manufacturing output increased by 2.5 percent; construction and agriculture declined by 0.2 percent and 0.7 percent, respectively. Other sectors—commerce, transportation, communications, services, and public administration—rose by 4 percent in 1997. Domestic demand rose by 3.9 percent in 1997. Despite the significant recovery in private investment and the steady pace of private consumption, growth was moderate as the government continued to hold down public expenditures to reduce the fiscal deficit. The unemployment rate, which had reached 13.7 percent in 1996, fell to 12 percent at the end of 1997 and rose to 15.8 percent in second-quarter 1998.

Forecasts for economic growth in Colombia are 3.3 percent in 1998 and 4.5 percent in 1999, spearheaded by manufacturing, retail sales, and oil production. Food prices, originally expected to rise at or below 16 percent in 1998 to meet the inflation target, rose by 21.7 percent on an annual basis in the second quarter and are expected to rise by 22 percent for the year. However, second quarter 1998 results showed food prices rising by 21.7 percent annually, faster than initially forecasted. Per-capita income was expected to rise by 1.5 percent in 1998 and food demand from 2 percent in 1997 to 2.5 percent in 1998. With no lingering effects from the El Nino weather phenomenon, food production is expected to increase by 2.1 percent in 1998, an improvement over 1997. Food and agricultural exports are forecast to rise by 3 percent, while food imports are forecast to increase by only 3 to 6 percent, significantly less than the 23 percent

annual growth rate achieved from 1990 to 1997.

The annual devaluation rate, which was 10 percent in 1997, could be as high as 26 percent in 1998. Because of the balance of payments deficit, net international reserves, which decreased by US\$15 million in 1997, will drop another US\$1.3 billion in 1998. Total exports are expected to grow from 2 to 4 percent in 1998 led by higher oil and nontraditional exports, while imports will grow close to 6 percent, below previous years because of lower investment in oil and infrastructure. However, both the trade balance and the services deficits will rise due to declining oil and coffee prices, higher interest payments and dividend outflows, and lower foreign investment inflows resulting from a decline in oil investment, privatization, and difficulties raising foreign capital in international markets.

Expected effects of the Asian financial crisis include a smaller inflow of foreign investment. Since Colombian exports to Asian countries represent less than 3 percent of the total, exports are not expected to change significantly. More significant are the effects of lower oil prices on export revenues, and the economic slowdown in neighboring Ecuador and Venezuela, which import from Colombia. The new administration, which took office in August 1998, is following current policies on trade liberalization, modernization of the economy, and building the infrastructure necessary for international competitiveness.

■ *Food Prices and Consumption*

Although growth in consumer demand is expected to maintain a slow pace, food consumption is expected to increase by 2.5 percent in both 1998 and 1999, with particularly strong demand for meats, fruits and vegetables, and processed foods. Per-capita income, which rose at an annual rate of 2.4 percent from 1990 to 1996, rose

only by 1 percent in 1997, with increases of 1.5 to 2 percent expected in 1998 and 2 percent in 1999. Moreover, the dollar value of personal income (which rose fast in the early 1990s, in part because of the revaluation of the peso), will rise more slowly because of the sharper devaluation trend that began in 1997 and is expected to continue through 1998. The proportion of income spent on food is expected to remain at between 30 and 32 percent, while the proportion of food consumed away from home may move closer to 2 percent.

To meet the inflation target in 1998, the food price index should not exceed 16 percent because of its effect on consumer expenditures. In fact, the inflation target was met in 1997 largely because food prices rose by just 16.4 percent. However, the situation in 1998 appears to be different due in part to the lingering effects of El Nino on food supplies and the higher devaluation rate since the middle of 1997. In the first half of 1998, consumer food prices increased by 21.7 percent on an annual basis and are now forecast to rise by 21 percent for the year, thus contributing to an expected increase in the CPI of 18.5 percent.

■ Food Processing and Marketing

Despite negative perceptions about its impact on the Colombian agricultural economy, trade liberalization appears to be continuing to benefit the food industry. An increasing demand for processed foods resulting from rising consumer incomes, urbanization, and changing consumer preferences for easier-to-prepare and ready-to-serve foods means that more agricultural products are being transformed before they reach the consumer.

Efforts to improve post-harvest handling of agricultural products continue to reduce losses now estimated at between 12 and 30 percent, depending on the product. Total cold storage capacity in both the public and private sectors is estimated at 166,000 cubic meters. Additional capacity to store up to 1.5 million metric tons of food per year could be needed, making this an attractive investment area.

Food industry output, which expanded at an average annual rate of 3.5 percent between 1992 and 1996, had a negative growth rate in 1997 (-0.19 percent), reflecting the sluggish performance of the economy. Foreign investment in the food industry reached US\$178 million in 1997, a somewhat lower total than in the previous year. The 1998 total is expected to be slightly higher.

Volumes traded at the Farm Commodity Exchange (*Bolsa Nacional Agropecuaria*) increased in 1997 for grains, oil seeds, powdered milk, and

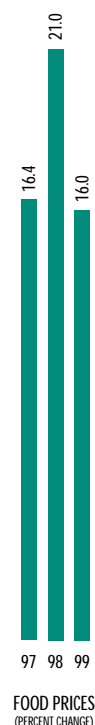
fruits and vegetables. Commodity forward operations are expanding, a new system of grades and standards is being designed, and more incentives are being offered to encourage private warehouses to be more active in the market. Wholesale fruit and vegetable price information published by the Corporación Colombia Internacional is improving and reaching a wider audience via a monthly bulletin and daily quotes in the news media.

To compete in international markets and respond to trade liberalization challenges, Colombia has begun investing in improvements in transportation (highway, rail, port, and airport), telecommunications, and power generation and encouraging privatization in these areas. Although the current administration considers such infrastructure investments a high priority, budget restrictions aimed at lowering the fiscal deficit are forcing reductions in investment plans and thus delaying planned projects.

■ Agricultural Production and Trade

In 1997, the 0.7 percent decline in food production was attributed mainly to the effects of El Nino and continuing insecurity in the countryside. Even though these effects lingered through May, agriculture is forecast to grow by 2.1 percent in 1998. Production increases are expected for rice, corn, fruits, vegetables, poultry, and milk. As a result, rice imports, after growing in recent years, are expected to decline in 1998. Grain self-sufficiency may rise slightly to 73 percent and horticultural products self-sufficiency will reach 105 percent.

Food and agricultural imports, which grew at an annual rate of 27 percent from 1990 to 1996, were up by 7 percent in 1997 because of lower consumer income increases and greater currency devaluation. The main imports were cereals, soybeans and derivatives (poultry industry inputs), fresh fruits and vegetables, and processed foods. Food imports may be 3 to 6 percent higher in 1998 despite drought-related scarcities in the first half of the year. Agricultural exports (coffee, cut flowers, bananas, and tropical fruits and juices) increased by 26 percent in 1997, significantly above the annual 9 percent rise of previous years. Although higher international coffee prices contributed to this performance, noncoffee agricultural exports rose by 10 percent in response to more favorable exchange rates. Agricultural exports are expected to increase by 2 percent in 1998, while noncoffee exports may rise by 10 percent. Overall agricultural trade may be 5 percent above the 1997 level. The agricultural export forecast has



been revised downward because of lower coffee prices and difficult economic conditions for Colombia's main Andean trade partners, Venezuela and Ecuador.

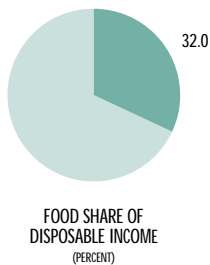
■ *Food and Agricultural Policy*

Despite mounting pressure from agricultural groups to slow the pace of trade liberalization, the new administration has announced that Colombia's agricultural and macroeconomic policies are likely to continue to be focused on reform and the opening of the economy, with emphasis on structural change to reduce the fiscal deficit. .

Negotiations continue within the Andean Community partners (Bolivia, Ecuador, Peru, Venezuela) to further open the markets and lower trade restrictions. The Andean System of Price Bands is expected to continue to be used to protect sensitive commodities such as wheat, rice, corn, barley, milk, and poultry products. On other fronts, negotiations between the Andean

countries and MERCOSUR countries (Argentina, Brazil, Paraguay and Uruguay) are underway. Proposals are being prepared to negotiate within the framework of the Free Trade Agreement of the Americas (FTAA). Colombia will also take a leading role in the new round of WTO agricultural trade talks scheduled for 1999.

Sustainable exports are based on maintaining competitive prices, seeking trade agreements, and providing institutional support. The Central Bank real exchange rate band targets were revised recently to maintain competitive exchange rates. Within the WTO framework, any remaining export subsidies are temporary and aimed at long-term competitiveness. The Ministry of Foreign Trade and the foreign trade bank, BANCOLDEX, are promoting exports through credit, information, services, and events. The Colombia International Corporation is developing a grading system for fruits and vegetables that will conform with international standards.





Hong Kong, China

Hong Kong, China, is a small and open economy that follows a free trade policy. With limited land resources and rapid urbanization, local production of fresh food is insignificant, and Hong Kong, China, has to rely heavily on imports for its food supply. All suppliers, including local producers, face keen competition in the market. Under the free trade policy, no direct government subsidy is provided to the local agricultural sector. The government's role in maintaining the food supply has been limited and is mainly confined to ensuring food safety and facilitating food trade. For many years, Hong Kong, China, has enjoyed an assured, adequate, and steady supply of food at reasonable prices from mainland China, particularly live and perishable items.

The above factors have combined to create in Hong Kong, China, a competitive food market in which supply is adequate and steady and consumers have a variety of choices. The nutritional status of the residents of Hong Kong, China, is among the highest in the world.

With continued impressive economic growth and associated lifestyle changes, the typical food consumption pattern of the residents of Hong Kong, China, is changing. Instead of low-cost food, the now more affluent and more health-conscious population is demanding higher-quality, more hygienic foodstuffs. There is also an increasing acceptance of chilled meat products. As the premium and processed food market in Hong Kong, China, has been expanding, the opening of the Chinese economy has created profitable opportunities for joint ventures and private enterprises that produce quality food, not only for the markets in Hong Kong, China, and for export to other countries, but also for mainland China's own internal market.

In 1998, Hong Kong, China's economy was

adjusting to the profound impact of regional financial turmoil. Exports slackened during the first half of 1998, hit by reduced regional demand as recession loomed in the affected economies. Yet inbound tourism began to show signs of revival.

■ *Macroeconomic Situation*

In real terms, GDP fell an estimated 5 percent in second-quarter 1998 compared with second-quarter 1997. This followed a 2.8 percent decline in the first quarter and mainly reflected further slackening of both local consumer and export demand in the second quarter. Peak GDP growth in second-quarter 1997 also rendered a high base of comparison for that quarter.

Local consumer spending was depressed. The slackened income and increased unemployment brought about by the downturn in the economy, together with a further decline in asset prices, affected local consumer confidence. In addition, high interest rates discouraged spending on high-value items, while also reducing the disposable income of households carrying mortgages. For local retailers, the continued weakness in tourist spending dampened sales even further. The volume of retail sales was down by 15 percent for the first half of 1998 compared with the same period in 1997. Sales of basic necessities such as foodstuffs and commodities in supermarkets were less affected.

The continuing economic downturn and uncertain business outlook, caused some employers to further downsize their workforces. Increased entry of fresh graduates and school dropouts into the workforce further increased unemployment. The seasonally adjusted unemployment rate and the underemployment rate were 5 percent and 2.5 percent, respectively, in the three months ending in August 1998.

The composite CPI fell to an 11-year low of 3.2 percent in July 1998 for an average increase of 4.5 percent in the first seven months of 1998. Domestically generated inflation stayed mild, while imported inflation was virtually nonexistent.

GDP for 1998 as a whole was forecast to contract by around 4 percent in real terms. This was mainly a reflection of the economy's lackluster performance in the first two quarters as well as the subdued economic sentiment, slack employment conditions, high interest costs, and local credit constraints, which were expected to continue to hamper consumer and investment demand for the rest of the year.

Externally, weak economic conditions in most parts of the region, and particularly in Japan, will continue to curtail Hong Kong, China's export performance. The disruption in cargo handling services at the new airport aggravated the decline in exports in the third quarter. The expected improvement in inbound tourism may nevertheless provide a partial offset.

With the inherent flexibility of costs and prices in Hong Kong, China, the economy has been adjusting speedily to uphold competitiveness. Wages are softening. Property prices and rentals have already fallen substantially from their peaks in 1997. As inflation is now down to its lowest level since 1986, the cost of living and cost of doing business in Hong Kong, China, have both moderated. Consumer price inflation in terms of the composite CPI is now forecast to average around 3.5 percent for 1998. The local workforce is adapting to the more difficult employment conditions, and the corporate sector is thinning ranks for better cost economy and greater operational efficiency. Thus, once the regional environment and consumer confidence improve, Hong Kong, China, should return to positive growth.

■ *Food Prices and Consumption*

Hong Kong, China, is a small territory with more than 6 million people living in about 1,092 square kilometers of land, most of which is uninhabitable. It is one of the most densely populated places in the world. The majority of the local people are ethnic Chinese. Additionally, more than 10 million tourists visit Hong Kong, China, each year, staying for 3.7 nights on average, with per-capita spending of about HK\$7,000 (US\$890).

The GDP of Hong Kong, China, was about HK\$1,340 billion (US\$172 billion) in 1997. The annual growth rate from 1994 through 1997 averaged 4.8 percent in real terms, led mainly by the surge in exports, and in recent years re-exports,

of goods and services. The local agriculture and fishing food production sectors constitute only a very small part (0.1 percent) of the economy.

The population of Hong Kong, China, was about 6.5 million at year-end 1997, with an annual growth rate of 2.5 percent from 1994 through 1997. Policies are framed to limit permanent population growth and to control the entry of foreign workers. The major variable is in- and out-migration, which is volatile. Population is expected to reach 7.8 million by 2011.

The main diet and the staple food in Hong Kong, China, is rice. Total consumption has been steady at around 320,000 to 370,000 tons per year, but per-capita consumption dropped from 68.8 kilograms in 1982 to 51.7 kilograms in 1997, a trend also generally observed in other countries with improving and developed economies. There is a shift toward less essential, but high-quality foods such as livestock products, fruits, and processed food. Other cereals of importance include wheat, barley, and maize, which are mainly used as raw materials in the manufacturing of processed food or animal feed.

The Chinese prefer fresh foodstuffs such as vegetables, fruit, fish, poultry meat, pork, and beef. Indeed, in years past, consumers' preference for freshness dictated that meat had to be supplied to markets within hours of slaughter. In recent years, there has been a gradual drop in the consumption of all types of fresh meat and poultry (apparently replaced by chilled/frozen meat and poultry). There also has been a shift from beef and pork to poultry consumption as consumers have become more health-conscious. Consumption of vegetables also appears to have reached the saturation point.

■ *Food Processing and Marketing*

Due to improved production techniques and intensive marketing, increasing acceptance of Chinese food by Westerners, and the opportunities offered by the opening of the Chinese economy, Hong Kong, China's, food processing industry is expanding. Baking is the largest sector in terms of employment. Major products include instant noodles, macaroni, spaghetti, biscuits, pastries, and cakes. Other significant sectors include canning, preserving, and processing of seafood and dim sum; manufacturing of dairy products; and the production of spirits and sauces. The majority of the processed food and beverage factories (85 percent) are relatively small in scale and employ fewer than 20 workers, while a small number of notable producers have 500 or more employees. The local market accounts for a dominant share (80 percent) of

total sales. In view of the rising living standards in the Pearl River Delta, food manufacturers in Hong Kong, China, have begun targeting the Chinese market. Manufacturers market their products through local trading firms, overseas importers/exporters, and supermarket chains. Overseas buyers' brands are often used under agreements. External investment in manufacturing industries is a significant factor in the economic growth of Hong Kong, China. Investment in the food and beverage industry increases about 5 percent each year.

The government's role has been confined to providing necessary physical infrastructure and facilitating compliance with procedures and regulations governing trade (e.g., inspections and certificates). The current food labeling law affecting all packaged food took effect in August 1987.

In 1995, an average household spent about 1.4 percent of its income on raw cereal products, mainly rice, 13 percent on fresh foodstuffs, 0.9 percent on frozen meat and poultry, 6.5 percent on processed food, including nonalcoholic beverages, and 18.1 percent on meals away from home. Price increases for foodstuffs at the retail level—in particular fresh and perishable items such as fish, beef, pork, vegetables, fruit, eggs, and sugar—was much lower than for all prices, due mainly to the ready and sufficient supplies from mainland China.

■ *Agricultural Production and Trade*

The supply of items such as rice, fruit, eggs, and dairy products and frozen meat and poultry will continue to be determined in the world market through the interaction of a chain of factors governing production and marketing. For relatively more-perishable items, such as live produce and fresh vegetables, mainland China will remain dominant because of its close geographic and transport ties to Hong Kong, China. While Hong Kong, China, consumers enjoyed the benefits of greater supply at lower prices during the years of economic liberalization from mainland China, it is not clear whether China, now being more conscious of market forces and costs, can continue to successfully regulate its supplies to ensure steady access at reasonable prices. The economic improvement and population growth in China could generate increases in internal demand for fresh and quality foodstuffs in affluent areas. Further development in and application of modern technologies for food storage, processing, packaging, and transportation will likely erode China's dominant position as the supplier of perishable products to Hong Kong, China.

Local agriculture, together with the fishing sector, contributes US\$185 million (0.1 percent) to the GDP. Local agricultural production consists mainly of vegetable growing, pig and poultry raising, fish farming, and marine fishing, which supply about 15 percent, 11 percent, 22 percent, 10 percent, and 69 percent of domestic needs, respectively. Local supplies are generally of higher quality and play a significant role in price stabilization and enhancing market competition.

Local agricultural production has dropped significantly due mainly to

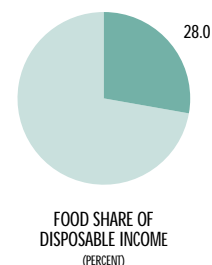
- Continual loss of agricultural land to infrastructure projects and urban development in the rural areas
- Negative impact of the urban property boom and speculation on the effective use of agricultural land
- The implementation of the livestock waste control scheme
- A shortage of farm labor—old farmers are retiring while young people are reluctant to move in, and
- Unfavorable prices for farm produce because of increasing supplies from mainland China, particularly from those areas close to Hong Kong, China

■ *Food and Agricultural Policy*

The government does not give direct subsidies to primary industries, nor does it seek to protect them from the free operation of market forces. It does, however, provide infrastructure and technical support to aid development of viable farming and fisheries operations. Such support includes irrigation and drainage improvements; provision of wholesale market facilities; technical advice on treatment and prevention of crop and animal and fish diseases; farm husbandry and fishing; low interest agricultural/ fishery loans; and assistance to rehabilitate abandoned farm land. Price guarantees and input subsidies do not exist in Hong Kong, China.

Hong Kong, China, is a free port and does not apply any tariffs, quotas, surcharges, trade-related subsidies/taxes, or restraint arrangements. The government collects excise duties on only four types of goods (liquor, tobacco, hydrocarbon oil, and methyl alcohol), irrespective of whether they are imported or locally manufactured. Hong Kong, China, only maintains those nontariff measures required to protect public health and safety and the environment and to fulfill Hong Kong, China's obligations under international agreements.

Customs control on imported goods is exercised through inspection of documents such as



licenses and certificates and, where necessary, by physical examination of goods. Physical examinations are conducted on a selective basis through the shipping company, airline, or cargo forwarder concerned.

Local agricultural food products, which are virtually all of a perishable nature, are consumed locally. Exports are negligible. However, export of processed foods using imported raw agricultural products are sizeable.

Because of geographic, historical, and cultural links, mainland China has always been the major supplier of fresh foodstuffs to Hong Kong, China. For live produce such as cattle, pigs, and poultry, mainland China is almost the only import supplier. Indeed, during the past 35 years, mainland China has ensured Hong Kong, China, an adequate and steady supply of fresh and live produce by maintaining a quota system and setting up special cargo trains and production units. In the past, supplies were of lower value, but the quality of the produce has been

significantly improved as producers began paying more attention to the needs of the market following the liberalization of mainland China's economy in the early 1980s.

As a result of the decline in local agriculture, more of the local producers are moving northward to set up joint ventures in mainland China, contributing the required capital and management know-how and making use of lower labor and land costs. Opportunities exist for further and closer cooperation to augment and upgrade the production capacity, targeting not only the Hong Kong, China, market but also other markets in the Asia Pacific region.

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Indonesia

A reversal of economic fortune of the scope and magnitude of that currently being experienced by Indonesia is unprecedented in recent history. The national currency, the rupiah, has been in a dizzying fall, losing more than 80 percent of its value since July 1997, unemployment has more than doubled, and inflation is threatening to break into triple digits. Foreign creditors have abandoned Indonesia, and investors are nowhere to be seen. Growth declined to 1 percent in 1997–98, contracting from an average of 6 percent over the last decade. As of mid-1998, it was estimated that the economy might contract by more than 15 percent by year's end. To prevent a total collapse, the IMF has drawn up a US\$43 billion bailout package, with US\$6 billion earmarked for disbursement before March 1999. Although the Consultative Group on Indonesia pledged US\$7.8 billion in late July 1998, it is feared that the worst is yet to come. Economic adjustment is expected to take at least five years, contingent on adoption of the requisite policy reforms.

Such a sharp break from past trends renders forecasting economic variables, including food prices, extremely difficult. In line with a general collapse in aggregate demand, demand for high-value food is continuing to decline, driven by sharply escalating prices and depressed incomes. Massive government subsidies on imported food commodities are providing a safety net for the poor, whose ranks are now feared to have trebled to around 80 million. Education and health services, including baby milk powder and pharmaceuticals, are also being subsidized to prevent an irreversible deterioration in the welfare of the most vulnerable. These subsidies are serving to stave off riots, such as those that triggered the mass plundering, murder, and rape of ethnic Chinese in May 1998 and brought

a dramatic end to President Suharto's 32-year authoritarian regime.

The current administration's Ministry of Agriculture is attempting to reverse years of complacency by launching a crash program to increase production of rice, maize, and soybeans to substitute for imports. At the same time, the government is strongly supporting cooperatives as well as small and medium enterprises in their efforts to take over the food distribution system from the entrenched large distributors. The food marketing system is currently in flux, but it is expected to be more transparent and efficient once the crisis has passed.

Budgetary constraints are forcing the government to place almost all new investment on hold. Without a return of corporate confidence, no investment in food-related infrastructure is expected over the next two years.

■ *Macroeconomic Situation and Outlook*

As of mid-1998, the IMF program had undergone four revisions since its launch in November 1997 in an effort to arrest a continually worsening economic situation and outlook. The last of these, on June 25, 1998, along with the Second Supplementary Memorandum on Economic and Financial Policies, called for subsidies on food, fuel, electricity, and pharmaceuticals to serve as a social safety net. This was deemed necessary as the initial economic program, which was drawn up by the Indonesian government and the IMF in cooperation with the World Bank and the Asia Development Bank and which sought to stabilize the rupiah by imposing strict budgetary discipline and restructuring the financial sector, had been driven far off track by the social unrest and political change. Rapidly changing economic prospects had forced three revisions of the 1998–99 budget by mid-1998.

The five-point policy agenda being espoused by the international community as of mid-1998 encompasses: 1) protecting the poor by making food and other essentials available at affordable prices, creating employment opportunities, and preserving the availability of key social services, especially basic health and education; 2) obtaining substantial additional foreign financial aid; 3) dealing with the debt overhang; 4) resuscitating the banking sector; and 5) improving both state and corporate governance.

The budget showed a surplus of 1 percent of GDP in 1996–97 and 1997–98, but the 1998–99 budget as revised in July 1998 projects a deficit of 8.5 percent of GDP. At mid-year, it was feared that the GDP could fall by as much as 15 percent in fiscal year 1998–99 and remain stagnant during fiscal year 1999–00. The cost of the safety net program was estimated at 7.5 percent of GDP fiscal year for 1998–99.

Investment, which fell by 47 percent in 1997–98, is expected to fall a further 55 percent in 1998–99 before growing by 4 percent in 1999–00. Imports will shrink by another 20 percent in 1998–99 after falling by almost 37 percent in 1997–98; however, they are expected to recover and grow by 5 percent in 1999–00 and by another 9 percent in 2000–01. Due in large part to the sharp contraction in imports, the balance of payments is expected to record a current account surplus for the next two years, around 1.8 percent of GDP for 1998–99 and 2.3 percent of GDP for 1999–00.

Government policy continues to call for a tight monetary policy to stabilize the exchange rate and contain inflation, despite demands for lower interest rates from the commercial sector. In an attempt to restore severely eroded confidence, the government moved to accelerate financial restructuring of the corporate sector by negotiating the Frankfurt Agreement. This scheme establishes a framework through the Indonesian Debt Restructuring Agency for corporations to voluntarily restructure debts owed to foreign banks on terms that are in line with Indonesia's overall external payments capacity, providing cash flow relief to domestic corporations.

To alleviate some of the debt-servicing pressure, the government has asked the chairman of the Paris Club to help reschedule its public debt. The government is also instituting an effective bankruptcy system to prod debtors into negotiations with their creditors. A government regulation in lieu of law issued in April 1998 that modernizes the bankruptcy system and provides for the fair and expeditious resolution of commercial disputes took effect on August 20, 1998. An antitrust law is also on the books. Fur-

thermore, the government is proceeding with structural reforms, such as imposing resource rent taxes, preparing environmental guidelines, and dissolving marketing boards. Finally, international standard audits will be undertaken of the financial accounts of Pertamina (the state petroleum corporation), PLN (the state electrical corporation), BULOG (the national logistics agency), and the Reforestation Fund.

■ *Food Prices and Consumption*

With a monthly inflation rate of 8.56 percent in July, the accumulated inflation during the first seven months of 1998 reached 59.1 percent. Inflation is being fueled by escalating food prices, including prices for rice, poultry/eggs, and cooking oil, which continue to fluctuate and at mid-year 1998 were at least 50 percent higher than in fourth-quarter 1997. The government is struggling to contain prices for rice and other essentials such as sugar, soybeans, and wheat through price subsidies, which are forecast to climb to more than 6 percent of GDP during the 1998–99 fiscal year. On top of this, targeting is being attempted by selling 10 kilograms of rice per household to the neediest at Rp 1,000 per kilogram, half the market price.

Although the corporate sector has demonstrated its responsibility by distributing free food packages to the needy, the sustainability of massive government subsidies is becoming a major concern. Some prices have been allowed to rise gradually, but even though the price of wheat has already gone up by 61 percent, it would need to rise an additional 30 percent before the subsidy could be totally eliminated. The government will likely be unable to eliminate all food subsidies in 1998 given the official estimate that the number under the poverty line will grow by year's end to 80 million, almost 40 percent of the population, compared with 11 million in 1996.

The new price structure for wheat includes an increase in the processing fee from Rp 84.07 per kilogram to Rp 136 per kilogram. Retail prices adjusted accordingly by rising to Rp 3,150 per kilogram from Rp 2,150 per kilogram. Egg prices remain high at around Rp 4,675 per kilogram compared with the November–December 1997 price level of Rp 2,650 to Rp 2,900 per kilogram. Likewise, the retail price of beef has increased 50 percent, rising from Rp 12,000 per kilogram in November 1997 to Rp 18,000 per kilogram. The price of cooking oil, also considered to be an essential, has more than trebled to Rp 6,000 per kilogram from the pre-crisis level of Rp 1,700 per kilogram.

Economic hardship is not confined to those under the official poverty line; it has begun afflicting even the previously well off. The government pawnshop authority has put a cap on loans at Rp 5 million to better allocate its limited cash. In mid-1998, demand for cash was running 50 percent above projections. In the face of such strong demand, the pawnshops have raised their interest rates to around 54 percent on an annual basis. The local press has reported cases where hordes have descended on shrimp ponds and carried away the harvest and where villagers have harvested coffee plantations belonging to large corporations. Farmers who were forcibly evicted from their land years ago are returning to stake out golf courses in rural Java where they hope to eke out a subsistence by planting tubers and vegetables. The police have had to resort to force to maintain law and order and protect private property in many such instances.

■ Food Processing and Marketing

It is estimated that almost half of the country's supermarkets and fast food restaurants were burned and/or looted in the May 1998 riots, although many may have since reopened. But the most important factor affecting decisions to import high-value food is the industry's reported uncertainty about whether the government will allow another such incident to occur. The Indonesian Chinese who own most of these businesses perceive that the violence was directed at them and wonder if the military will protect them should the violence reoccur.

Owners of surviving supermarkets report higher than expected sales in rupiah terms owing to the demise of some of their competition (other supermarkets, small stores, and markets). In dollar terms, however, sales are down by about 20 to 30 percent. In mid-1998, the major constraint on supermarket business was lack of product. Hit hard by the depreciating and fluctuating rupiah, both importers and manufacturers have significantly scaled down. Importers are unwilling and/or unable to keep stock on hand as a result of the foreign exchange risk. For the first time, supermarkets are ordering containers directly, and importers are assisting with customs and clearance. In general, supermarkets are substituting local for imported goods whenever possible, but demand remains for imported fruit, alcohol, and dry goods.

Very few hotels were damaged in the riots, but occupancy rates of 20 percent are expected to be the norm for some time. The surviving fast food franchises and restaurants were also victimized and dollar sales are down since some

customers are still frightened to dine out.

One of the most disturbing discoveries brought to light by this economic crisis is how many of those in the food distribution channel lack understanding of even basic economic concepts and accounting. In general, people are confused and do not know how their businesses should react to such a deterioration in the business environment. High-profile companies with trained economists and financial officers are having a difficult time dealing with the erratic exchange rate and the liquidity crunch, so it is easy to imagine the challenge self-taught business people are facing.

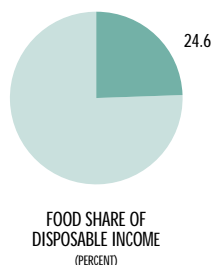
■ Agricultural Production and Trade

To compensate for the dramatic production shortfall, rice imports totaled more than 3 million metric tons during the first half of 1998 alone. The State Minister of Food and Horticulture Affairs maintains that national rice stocks stood at 2.4 million metric tons at the end of June 1998. A number of countries, including Australia, Brunei, China, Japan, Chinese Taipei, Thailand, the United States, and Vietnam, were expected to provide another 2.4 million metric tons, either on a strictly commercial basis or as loans. With that, stock levels should be about adequate through 1998. Should government policy aim to dampen the strong inflationary push through BULOG market operations (i.e., by making larger rice sales to consumers), then additional imports will be necessary. Although government officials admit that at least 5 million metric tons of rice will be clearing Indonesian ports this year, a number of experts predict that another million tons will be necessary to ensure adequate supplies countrywide.

Despite hefty hikes in wheat prices, preliminary statistics reveal that wheat imports totaled 1.8 million metric tons during the first half of 1998. Consumption is forecast to increase even with the significant erosion of buying power. Imports for calendar year 1998 are forecast at 3.5 million metric tons, compared with 3.3 million metric tons for 1997.

Although the government lifted its ban on private-sector soybean imports in February 1998, inadequate trade financing had dampened the enthusiasm of potential importers. Consequently, in 1998 no soybean were imported from April to May though about 120,000 tons were expected to arrive between June and August and another shipment of 30,000 tons was expected to be in Indonesian ports by September to augment BULOG's stocks, which stood at 120,000 in early July.





The government's sale price for soybeans remained unchanged in the first half of 1998 at Rp 1,845 per kilogram, but the free market wholesale price jumped up to Rp 2,700 per kilogram at mid-year from Rp 2,200 per kilogram in early May. The retail price of soybeans also doubled at mid-year from only about Rp 2,500 per kilogram in May. Despite these price hikes, monthly domestic consumption remained unchanged from May to July at 30,000 to 40,000 tons.

In poultry, broiler production plummeted by about 25 to 30 percent from the pre-crisis level of 12 to 13 million birds per week. Although the retail price of dressed broilers in Jakarta is as high as Rp 9,000 per bird, live broiler prices at the farm gate are less than Rp 5,000 per bird, which is lower than production costs, estimated at Rp 5,600 per bird.

Egg production also collapsed and is now estimated at approximately 40 percent of last year's level of 1,800 to 2,100 tons per day. Retail prices of around Rp 4,675 per kilogram, compared with the November 1998 price level of Rp 2,650 per kilogram, has depressed demand.

There have been no feeder cattle imports since December 1997 and none expected until the economic situation improves. From the pre-crisis total of 41 feedlots, not more than seven are currently in operation. Small landholders still have local cattle, but the number is declining steadily. As farmers are having great difficulty with their cash flow, they are now even slaughtering productive female cattle.

Consequently, feed production in mid-1998 was estimated to be at 20 to 30 percent of the pre-crisis level. Despite the dampening effect of the importation of 134,278 million tons of soybean meal at the subsidized exchange rate of Rp 6,000 to the U.S. dollar, feed prices increased sharply in June 1998. This was believed to have been caused by the rising price of corn due to large imports to Malaysia. Corn prices escalated sharply from Rp 550 per kilogram in March 1998 to Rp 1,200 per kilogram in June 1998 and were expected to remain at that level until the new harvest in August. Feed trade was being conducted strictly on a cash-and-carry basis. The price of feed for broiler starters increased from Rp 1,178 per kilogram to Rp 2,878 per kilogram, while the cost of broiler finisher feed jumped from Rp 1,689 per kilogram to Rp 2,839 per kilogram.

■ Food and Agricultural Policy

The triple bind of the collapse of the rupiah, the production shortfall, and widespread layoffs left the government with no other option than to subsidize food imports. Rice, soybean, and

wheat price subsidies are major contributors to the safety net and are forecast to account for up to 8.5 percent of the budget. Fears of food shortages and fresh riots still preoccupy a large number of Indonesian households, according to a poll conducted by Jakarta's leading daily newspaper.

The State Ministry of Food and Horticultural Affairs and BULOG are already working at targeting to ensure that subsidies reach the most needy. The rapidly swelling ranks of the urban poor have rendered targeting almost futile in the major cities.

The crisis has exposed the poor agricultural policymaking of recent years. The Ministry of Agriculture is trying to shake off its complacency and has launched a crash program with the following express objectives:

- Increase production of rice, corn, and soybeans to substitute for expensive imports
- Generate employment for landless rural laborers and reverse migrants, and
- Enhance the rural economy

The targets the ministry have set are

- Increase rice productivity by 0.3 tons per hectare over 2.2 million hectares, leading to a production surplus of 627,000 tons of mill-dry paddy. The intensification of another 376,000 hectares will bring in an additional 940,000 tons. Intensification of yet another 124,000 hectares is predicted to add a further 496,000 tons to produce a surplus of more than 2 million tons of mill-dry paddy.
- Raise soybean productivity by 0.2 tons per hectare over 500,000 hectares, producing a surplus of 100,000 tons. Bringing 164,000 hectares of fallow land into cultivation will add another 164,000 tons; bringing the total surplus production of soybeans to 264,000 tons.
- Enhance corn productivity by 0.5 tons per hectare over 680,000 tons, generating a surplus production of 340,000 tons. Planting 117,000 hectares of fallow land in corn will yield another 35,000 tons, bringing the total surplus production of corn to 691,000 tons.

The crash program is expected to cost Rp 417,710 million, with an additional Rp 469,295 million for fertilizer subsidies. State banks are expected to channel in another Rp 1.269 trillion in the form of production credit. If properly implemented, this program will help to generate employment for reverse migrants.

On a completely different and much brighter note, the sharp depreciation of the rupiah has brought a windfall to producers of traditional

export commodities. Small landholders cultivating cloves, cocoa, coffee, and spices—situated mostly on the Outer Islands—are garnering very high rupiah prices for their produce and are basking in their newfound riches.

However, it would be difficult to expect a strong aggregate supply response from the food and agriculture sector, as almost all government

investment is being placed on hold. Both national and foreign corporate interests appear to be waiting for a return to normalcy, wherein private property is duly respected and returns are more predictable, before committing themselves. Consequently, very little investment in food-related infrastructure is likely to be undertaken through the end of this century and perhaps longer.



will be stable in 1998 and 1999 as a result of weak consumer demand.

Import activity is expected to be sluggish and exports also stagnant because of the widespread Asian economic crisis. Thus, reduction of the surpluses in both the trade and service accounts and the current account is expected to continue at a slower pace.

Household spending took its biggest fall on record in FY 1997 (April '97–March '98), dropping 2.1 percent in real terms. The average propensity to consume of wage-earning families fell by 1.1 points to a record low of 71.2 percent in FY1997. The CPI rose by 0.1 percent in FY1996 and by 1.7 percent in FY1997.

■ Food Prices and Consumption

The food price index declined by 0.1 percent in FY1996, but rose by 2.2 percent in FY1997. In FY1998, the CPI is expected to increase by an estimated 0.7 percent. Food prices are expected to be stable in 1998 and 1999. Staples such as rice and eggs contribute to price stability. From FY1990 through FY1997, the governmental selling price of rice declined from ¥18,396 to ¥17,831 per 60 kilograms and the retail price of eggs in Tokyo declined from ¥316 to ¥260 per kilogram.

Per-capita calorie intake rose to 2,651 kilocalories per day in FY1996, after fluctuating around 2,630 kilocalories per day since FY1990. The proportion of fat in total calorie intake has been increasing, while carbohydrates have been decreasing. In FY1996, fat and carbohydrates represented 29.7 percent and 56.7 percent, respectively, of total calorie intake. The proportion of protein increased through FY1994, then decreased slightly in FY1995 and FY1996.

The number of calories supplied per person per day is thought to have leveled off, and the decline in the calories supplied by rice has been

Japan's economy faced serious strains in 1998. Estimates of GDP growth range from -1.5 to -0.5 percent in real terms. In 1999, the economy is expected to begin a slow recovery from recession with GDP growth rate estimates ranging from -1.5 to 0 percent. Prices for consumer goods, including food, will remain stable in 1999, reflecting weak consumer demand.

The Japanese food consumption pattern has stabilized, but the food distribution and processing industry is rapidly changing as a result of deregulation and globalization. The quantity and value of agricultural imports were stagnant in 1998, trends that will continue well into 1999, reflecting the sluggish economy.

Increasing environmental awareness has prompted the food industry—farmers, food processors, and retailers—to strengthen efforts to reduce and recycle inputs and waste.

Japan's economy grew by 3.2 percent in 1996, but by April 1997 a slowdown had begun triggered mainly by a hike in consumption taxes from 3 percent to 5 percent. The financial system unrest that followed resulted in a further deterioration of the situation. In 1997, GDP dropped by 0.7 percent and household spending per unit fell by 2.1 percent in real terms, according to preliminary estimates by the Economic Planning Agency.

Japan's economic situation remained strained in the first half of 1998 as the unemployment rate hit a postwar high of 3.9 percent in March. At midyear, the GDP growth rate for 1998 was expected to range from -1.5 to -0.5 percent in real terms, down from the December 1997 estimate of 1.9 percent. The range of estimates partly reflects the difficulty of gauging the effects of the economic stimulus package of over ¥16 trillion (US\$119 billion) announced by the government in April.

Consumer prices rose by 1.3 percent in 1997 because of the consumption tax increase. They

offset by a rise in the consumption of animal products, fats, and oils. The per-capita supply of proteins per day increased by 30 percent between 1960 and 1996, and the supply of fats increased by 300 percent.

Per-capita consumption of rice decreased from 70 to 67.3 kilograms per year from FY1990 through FY1996. Consumption of meat increased from 28.5 to 31.3 kilograms per year from 1990 through 1995, but declined to 30.9 kilograms per year in FY1996 due to the incidence of “mad cow disease” and illnesses caused by the *E. coli* 0157 bacteria.

An increased concern for health and safety has led to increased demand for such foods as dairy products, fermented soybeans (natto), and organic foods in general. The increasing participation of women in the labor market and the trends toward smaller and single-person households have increased demand for ready-made foods from the service sector such as prepared lunches, fast foods, and convenience foods. The proportion of household expenditures spent in restaurants was estimated at 4.7 percent in 1996, but since this figure does not include expenditures on take-out food, the actual share might be much larger.

General changes in eating habits include an increasing number of people who go without breakfast, especially males in their 20s. Forty percent of people who skip breakfast do it on a daily basis and the rate is increasing. Family eating habits have also changed, with family members often eating alone at different times.

■ Food Processing and Marketing

Total value added in the food processing industry as a whole amounted to ¥13.5 trillion (US\$ 144 billion) in FY1995. Among the subsectors, seafood processing recorded the fastest growth. This sector’s value added increased by 71 percent from 1990 to 1996. Similarly, value added by cigarettes increased by 5.9 percent. In contrast, the value added in the meat processing and dairy sector, other food processing, and beverage sectors decreased by 27.8, 18.7, and 21.6 percent, respectively.

Approximately 75 percent of such fresh foods as vegetables and fruits were estimated to have been distributed through wholesale markets in 1995. These markets offer an important link between production and consumption by functioning as central storehouses where a variety of food products can be amassed in bulk and broken down into smaller quantities under quick and fair pricing mechanisms.

Rapidly changing consumer-purchasing patterns have led to rapid growth in sales at con-

venience stores and self-service supermarkets. The number of 24-hour retail food outlets has also increased markedly.

A comparison of purchasing decisions made by housewives in 1984 with those made in 1996 shows an increase in the number of purchases made after 5:00 pm. Other changes in food purchasing habits include buying fewer vegetables and shopping more frequently in supermarkets.

The restaurant industry, which recorded sales of approximately ¥28.8 trillion (US\$ 264 billion) in 1996, has started to address health and safety concerns by adding organic dishes to menu offerings and listing calorie counts. The processed foods industry, reflecting the trend toward convenience, has increased its range of frozen prepared foods, retort-type products, and other convenience foods.

The bursting of the bubble economy and subsequent recession, yen appreciation, socioeconomic forces of deregulation, and internationalization drove the retail revolution: The Large-Scale Retail Stores Law was revised in January 1992 and May 1994, making it much easier for large chain stores to launch new outlets. The liquor law, which had restricted the number of licenses, was also liberalized. Moreover, the status of the Fair Trade Commission, the organization that enforces the Anti-Trust Law, was strengthened.

Some farm households are diversifying into food processing and sales. Farms that sell high volumes of processed foods tend to have sales channels independent of agricultural cooperatives and other existing routes. The largest of these independent sales channels have their own retail sales facilities. Seventy percent of the farmers that have gone into food processing have experienced increased sales. The most important contribution of farm-based processing businesses is in improving the economy of the locality. In the mountainous regions, such businesses offer employment to returnees and newcomers, thus playing an important role in economic revitalization.

There are no serious infrastructure shortages in Japan. For example, refrigerated warehouse capacity as monitored by the Ministry of Transportation expanded about 20 percent from 1990 to 1995, despite sluggish economic growth.

■ Agricultural Production and Trade

Cultivated area decreased by 0.9 percent to 4.9 million hectares in FY 1997. Despite repeatedly expressing the intention to intervene, the government has not stopped the declining trend in cultivated area. Because of labor shortages, farm



size is slowly increasing, especially in Hokkaido. However, alternative demands on Japan's tiny land base appear to obstruct its further expansion. As a result, the average farm size in 1997 was only 1.5 hectares.

Agricultural production generally has been stagnant. But in FY1997, fruit production increased by 14.5 percent, offsetting declines in other products such as rice and raising the quantity index of agricultural production by 1 percent. Supermarkets and convenience stores are rapidly emerging as the favored retail outlets for rice. And the purchase of lower-priced rice increased in FY1997 over the previous year.

Until 1996, Japan's agricultural imports had been steadily increasing due to such factors as the long-term effects of the higher yen and changes in consumer demand. There have also been qualitative changes in imports. Imports of unprocessed foods such as cereals and oil seeds have decreased, while imports of processed foods and fresh foods have increased.

In 1997, food and agricultural imports dropped for the first time, both in terms of quantity and value, reflecting the stagnant economy and yen depreciation.

Grain imports declined by 4.1 percent in FY1997 as a result of decreases in corn and wheat imports. Following the Uruguay Round Agreement in 1994 rice imports increased by about 20 percent and Japan started the Minimum Access rice import program. The rice import total will be 758,000 metric tons in 2000. Similarly, other food imports, such as whey powder, are expected to increase. Moreover, Japan will cut the tariff rate on several processed foods such as frozen pizza. The imports of grains will be sluggish in coming years reflecting stagnant feed consumption.

Imports of vegetables declined for the first time in FY1997, dropping by 4.7 percent. They are expected to remain sluggish for some years to come.

Imports of beef increased by 7.8 percent in FY1997 after declining by 7.2 percent in FY1996.

Pork imports have been steadily increasing, and emergency tariff measures have been activated every year since 1995. In 1997, an outbreak of foot-and-mouth disease forced a ban on all pork imports from Chinese Taipei, Japan's main source of pork. This ban caused a 22 percent decline in pork imports and a sharp rise in the price of wholesale pork in Japan even though tariffs on pork imports were lowered as a relief measure. Domestic production of beef is expected to decline by 3 percent in FY1998, so beef imports are expected to increase. Likewise imports of chicken and fruits should increase as

domestic production declines, provided a severe economic recession is averted. Pork imports in FY1998 should recover from the sharp decline in FY1997.

In general, the volume of agricultural imports is expected to remain stagnant as long as the yen remains weak and the recession continues.

Since imports of items such as feed grains have increased in response to the changing diet, Japan's self-sufficiency rate in terms of original calories has been on a long-term decline, reaching about 42 percent in FY1996 and remaining stable in FY1997.

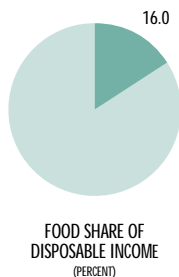
The value of agricultural imports in 1997 totaled US\$39 billion while exports totaled US\$1.6 billion. Thus, the net value of agricultural imports totaled US\$37.4 billion. Both imports and exports will be stable as long as the world market situation and the domestic economy do not change significantly.

■ Food and Agricultural Policy

In accord with the Uruguay Round Agreement, Japan has worked to improve market access for agricultural imports and has steadily increased imports of rice and other food products under the tariff quota system. Japan has also promoted economic and technical cooperation. As a part of such efforts, the Ministry of Agriculture, Forestry, and Fisheries (MAFF) announced the loan of 500,000 tons of rice to Indonesia under a new plan for large-scale emergency food aid. The plan aims to spread the financial burden of leasing food over several years. Japan plans to lend Indonesia another 100,000 tons of rice for Indonesia purchased on the international market from Thailand and Vietnam.

Japan's rice market is currently experiencing a glut, largely owing to consecutive bumper harvests and a decline in the price of voluntarily marketed rice. In response, MAFF reviewed its rice policies with the aim of stabilizing the supply-demand situation, thereby fulfilling the objectives of the Staple Food Law. MAFF announced new rice policies in November 1997. New measures to promote production adjustment were introduced, including the creation of a Rice Supply-Demand Stabilization Program, which is funded jointly by farmers and the government.

On December 19, 1997, the Investigative Council on Basic Problems Concerning Food, Agriculture, and Rural Areas, an advisory committee to the prime minister, published an interim report. Council members were divided over whether domestic agricultural production should be the basis for a stable food supply, although the majority of the members supported



this idea. Council members also disagreed on whether the self-sufficiency rate should be a major focus of agricultural policy.

Five percent of rice farmers practice sustainable or so-called environmentally friendly farming by reducing the amount of agricultural chemicals and fertilizers they use. So-called organic farm products sell at higher prices than products from ordinary farms, but they are more labor-intensive and costly to produce. One of the problems of so-called organic food is the lack of standards or criteria for applying the term, not only in Japan but also internationally.

With increasing urbanization, disposing of barnyard manure and night soil creates environmental problems for livestock farms. MAFF launched a livestock-breeding program designed to reduce odor and water pollution caused by livestock. However, the use of manure-based fertilizers is encouraged in order to reduce the burden on the environment and to make effective use of recycling.

Waste generated by the food industry—including wastewater sludge and other organic

residues—has increased at every stage of the production and consumption of food. Therefore, there is an urgent need to promote and establish systems for recycling organic compounds, taking advantage of the characteristics of organic waste as well as redoubling efforts to prevent waste.

In many cases, organic waste is disposed of in landfills or through incineration. Owing mainly to cost considerations, recycling as compost or feed is uncommon. In cases where compost is sold to farmers, securing regular buyers is difficult, making the production of compost an unstable source of income. The price of compost is also limited by farmers' ability to pay, as well as by the market-driven relationship between compost and fertilizer prices. Another constraining factor is the large capital outlay required for a compost plant. Costs for composting are clearly going to be much higher than for using landfill and/or incineration disposal contractors. From an agricultural point of view, increased compost utilization is a prerequisite for sustainable agriculture. It also responds to strong public demand for organic agricultural products.



The Korean economy currently is experiencing high unemployment, increased prices, and negative growth. Under the IMF program, the economy is undergoing structural reform. Economic adjustment is expected to take at least three years, depending on the direction and speed of corporate and financial sector reform.

Because the current macroeconomic situation is unprecedented, forecasting economic variables, including food-related variables, is difficult. Generally, however, demand for food is decreasing, due to both higher prices and lower incomes related to unemployment and recession. Those agricultural sectors most dependent on imported inputs are expected to show the greatest decline.

The Ministry of Agriculture and Forestry under the new administration elected in November 1997 established three joint commissions to recommend new programs, which were announced in July 1998. The new government's agricultural policy stresses self-sufficiency in rice production, the reform of the agricultural marketing system, the promotion of pro-environmental practice, and the promotion of agricultural exports.

■ *Macroeconomic Situation and Outlook*

Since the IMF program was initiated in December 1997, Korea has been facing an unprecedented economic situation. The IMF provided a bailout loan of US\$55 billion in cooperation with the World Bank, the Asia Development Bank, and the G7 countries (the United States, Japan, Canada, United Kingdom, France, Germany, and Italy). Inherent weaknesses in the economy, such as the lack of international competitiveness, and the downgrading of Korea's credit rating led to the current situation.

The Korean government is committed to implementing the IMF program, which is subject to quarterly revisions. According to the revision dated May 7, 1998, the objectives of the IMF program are:

- To restore confidence and consolidate the progress made in resolving the external financing crisis
- To minimize disruptions to the real economy and support economic recovery and
- To restructure the financial and corporate sector to minimize the risk of future crises

More precisely, the requirements of the IMF program are a tight fiscal policy, liberalization of trade and capital accounts, and labor market reform. It also stipulates the following macroeconomic projections for 1998:

- Real GDP growth must be -1 percent
- The inflation rate must be below 10 percent by the end of 1998 and
- The current account surplus must be US\$21 to US\$23 billion (about 7 percent of GDP)

The IMF program has caused serious difficulties in most sectors of the Korean economy. The unemployment rate has risen as high as 5.9 percent from the usual level of around 3 percent, but unemployment in agriculture, forestry, and fisheries increased at a relatively low rate compared with other sectors. Overall industrial production and shipping recorded big declines. Interest rates have increased significantly and the stock market index has plunged.

As required by the IMF program, the Korean economy is making a fundamental switch from a partly open to a completely open economy, especially in terms of the capital markets. This liberalization implies more uncertainty in

the economy, including instability in the foreign exchange rate that should last for about a year.

The recession is expected to continue for two to three years and corporate and individual bankruptcies will increase. As a result, the domestic demand for goods and services will not recover in two years. Resources are expected to be concentrated on exporting industries because of the high value of foreign exchange. Wealth is becoming increasingly concentrated as lenders get richer from high interest rates while low-income workers suffer from layoffs and feel the burden of high interest rates.

According to the recently adopted Three-Year Economic Recovery Program, the government will focus on accomplishing structural reforms in 1998 despite increasing unemployment. In 1999, the target of economic policy is to overcome the crisis and to achieve a growth rate of over 5 percent in 2000. If the corporate and financial reforms are not successful, however, the Korean economy could experience a longer recession.

■ Food Prices and Consumption

Food prices increased by 3.8 percent in 1997 while the CPI increased by 4.5 percent during the same period. With the increase in input costs including fertilizer, fuel, and feed, agricultural prices will increase by 2 to 12 percent depending on the level of dependence on imported inputs. Price increases are expected to be highest for pork and chicken followed by beef and dairy products. The rate of increase ranges from 9 to 17 percent. Fruit prices are expected to increase by 2 to 5 percent. Prices for rice, which uses little imported input, are expected to increase by 2 percent. The food price index is likely to increase by more than 7 percent in 1998.

Total grain consumption in Korea increased to 20.7 million tons in 1997 from 16.3 million tons in 1990 at an annual rate of 3.5 percent. Grain consumption in 1998 is expected to decline to 19.5 million tons as feed grain demand decreases. Since domestic livestock slaughter is expected to increase due to high feed costs, total beef consumption should go up in 1998. In contrast, domestic pork consumption is expected to decline and chicken consumption should remain at about the same level as in 1997.

Per-capita income declined from US\$10,543 in 1996 to US\$9,511 in 1997 and is expected to go lower. The Engel index, which was 28.7 in both 1996 and 1997, is likely to stop declining because during times of economic crisis people tend to cut spending for nonfood items. Expenditures on food outside the home as a proportion of disposable income is expected to stay at 10 percent

in 1998. In times of economic difficulty, people tend to refrain from eating out.

Total population is expected to reach 46.4 million in 1999. The rural population will continue to shrink—from 5.1 million in 1997 to an estimated 4.7 million in 1999—but at a slower pace due to the economic difficulties in the urban sector. The urban population will grow to 42.6 million in 1999.

■ Food Processing and Marketing

In terms of added value, food and beverage production increased to about W11.9 billion or 3 percent of GDP in 1996 from W10.3 billion or 2.9 percent of GDP in 1995. In 1996, the food and beverage industry accounted for 48.4 percent of total agriculture, forestry, and fisheries production. This upward trend reflects the expansion of the food processing industry, but in 1998 some food businesses are expected to shut down due to reduced demand and increased costs. Most at risk are relatively large businesses producing products that use imported inputs, such as bakery and noodle products and vegetable oil. Moreover, the Ministry of Agriculture and Forestry, which implements programs to promote the food processing industry, suffered a 1998 budget cut of 40 percent, significantly higher than the average budget cut of 9.3 percent.

While the typical marketing channel for agricultural products in Korea has traditionally been wholesale markets and small retailers, large-scale retailers that offer one-stop shopping are rapidly gaining favor. Supermarket chains, including overseas chains, are also establishing a foothold. As a result, the Korean government is reassessing the marketing policy that has emphasized the construction of large-scale public wholesale markets in major metropolitan areas.

The new government is seeking various new less-costly marketing routes including rural-to-urban direct marketing, and plans to speed up construction of large-scale agricultural distribution centers, which also function as low-margin retailers.

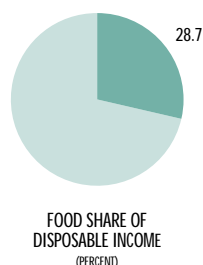
As a result of the GATT Uruguay Round agricultural negotiations, the Korean government increased investment in agricultural infrastructure for production and marketing to enhance international competitiveness. Since infrastructure is generally characterized by high fixed costs, the government planned to invest in the sector during the implementation period of the Uruguay Round commitments (1995–2004).

Agricultural and food system infrastructure includes production facilities, such as irrigation and drainage and land improvement; storage



facilities; and transportation and communication systems. This infrastructure is either in the private sector or under public control. The Ministry of Agriculture and Forestry invests in such projects directly or supports the local government's investments with matching funds. Transportation facility improvements—roads, railroads, and port facilities—are controlled by other relevant ministries.

Korean food policy has been following two parallel routes regarding cereals: one aims to maintain a high self-sufficiency ratio for rice, the staple food, the other to secure a stable supply of other grains from the international market. The infrastructure for rice production and storage has been given high priority as have port and elevator facilities for other grains. This policy direction is expected to continue.



■ *Agricultural Production and Trade*

With favorable weather conditions and government efforts to maintain the cultivated area, rice production increased in 1997. This upward trend is expected to be reversed through 1998 since much of the paddy field flooded due to the heavy rain falls during August. The self-sufficiency ratio of rice grew to 105.6 percent in 1997 from 89.5 percent in 1996. Production totals for most horticultural products were up in 1997 over 1996. In 1998, horticultural production is expected to decline because of extraordinarily warm spring weather and increased input prices.

Meat production increased from 1.09 million tons in 1996 to 1.25 million tons in 1997. Beef and pork production totaled 233,000 tons and 741,000 tons, respectively, in 1997. Chicken accounts for 22 percent of total meat production, or 278,000 tons in 1997. Fluctuations in the exchange rate have a mixed influence on meat production. As the price of feed increases, more cattle are slaughtered and beef production increases. At the same time, the consumption of imported beef declines as the price gap between domestic and imported beef narrows. Cost increases are expected to dampen pork and chicken production.

Korea's agricultural exports were valued at US\$1.5 billion in 1997, with pork exported to Japan contributing significantly to the increase. In contrast, the total value of agricultural imports dropped 6.5 percent to US\$7.6 billion in 1997 due to declining import prices. Since the Korean government is currently pursuing an aggressive export policy to earn foreign exchange, the target for agricultural exports in 1998 is higher than in 1997. The high value of the dollar is expected to help achieve this objective.

Agricultural imports are likely to decrease in 1998 and 1999, especially for the high value-added products. To facilitate U.S. grain imports, the Commodity Credit Corporation agreed to provide Korea US\$1.5 billion worth of credit from the General Sales Manager (GSM) program during 1998. The credit matures in a maximum of two years and will be repaid in four installments, two each year. Between 1979 and 1996, Korea used US\$7.7 billion worth of GSM credit for agricultural products including cotton, flour, and corn.

■ *Food and Agricultural Policy*

The economic crisis and the IMF-initiated mandatory reform programs have transformed the agricultural policy environment since the end of 1997. The demand for agricultural products is expected to decrease, while production costs increase due to the high exchange rate. Increased costs most seriously affect the high energy consuming sectors and those that use imported inputs. Furthermore, due to the tight government budget, agricultural investment and loans have been slashed. Funding levels for investment programs already underway in 1998 were lower than originally planned.

The economic shock struck Korean agriculture during the GATT-Uruguay Round implementation period. Achieving the structural adjustments in agriculture with a tighter budget is challenging; achieving institutional reforms will also be complex. Consequently, the efficiency of agricultural programs will receive more attention than ever before.



Malaysia

GDP growth for Malaysia will contract an estimated 4 to 5 percent in 1998 as a result of the economic crisis triggered by the sharp devaluation of regional currencies in 1997. Only a modest recovery of 2 percent is expected in 1999. Food and agriculture have been especially affected by the economic downturn. Malaysia has significant import dependence for all major food items except vegetable oils. Most affected have been the poultry and livestock industries with their heavy dependence on imported feed ingredients. Consequently, consumer food prices are forecast to rise by 9.3 percent in 1998 and 5.8 percent in 1999. Two key export commodities, palm oil and cocoa, which together account for almost half of Malaysia's agricultural production, have benefited from rising world and domestic prices. However, any production response to this upturn for these perennial crops will be very limited in the next two years.

■ *Macroeconomic Situation and Outlook*

The suddenness and severity of the financial crisis triggered by the devaluation of the ringgit and other regional currencies starting in July 1997 has dramatically changed the economic climate in Malaysia. The Malaysian economy had been growing at an average annual rate of more than 8 percent from 1990 to 1996, and even managed a growth rate of 7.8 percent in 1997, but economic activity actually declined by 1.8 percent on an annual basis in first-quarter 1998. Clearly, the economic crisis is worse than it initially appeared. The change in the economic climate has set in motion a number of major adjustments that pervade both the public and private sectors of the economy.

Malaysia, unlike its neighbors Indonesia and Thailand, has been able to avoid seeking as-

sistance from the IMF, primarily because it does not have a large foreign debt. Nevertheless, a 50 percent decline in the stock market in 1997 combined with high internal debt (estimated at 160 percent of GDP) and the fall in the ringgit have precipitated a growing crisis for Malaysia's financial institutions. Although nonperforming loans are currently estimated to be roughly 9 percent of the total, many sources expect that this figure may reach 20 percent by the end of 1998. Banks may be subject to further pressure on their balance sheets as an already weakened property market faced a growing oversupply with the completion of major residential and commercial projects in advance of the September 1998 Commonwealth Games. A fall in real estate prices will only worsen the financial sector problems.

One bright spot in the economic picture is an increase in the external trade surplus to a record RM8.8 billion (US\$2.38 billion)¹ in first quarter 1998 from a RM1.7 billion (US\$460 million)¹ surplus in the previous quarter. Although exports and imports declined by 10.6 and 18.6 percent on a dollar basis, respectively, the greater relative decline in imports led to the record surplus.

Although Malaysia has not accepted assistance from the IMF, it has taken a number of steps endorsed by the fund. The government budget was cut by 3 percent in October 1997 at the beginning of the crisis and another 18 percent in January 1998. A number of large projects have been stopped or deferred. Bank Negara (Central Bank) raised interest rates to defend the ringgit, and by the end of March 1998, the commercial bank base lending rate stood at 11.96 percent. Bank Negara also sought to encourage the consolidation of commercial banks through mergers and acquisitions into six major banks in order to strengthen the financial system.

Growing concern with the increase in non-

performing loans and the lack of liquidity in the financial system led to the government announcement in May 1998 of plans to establish the Asset Management Corporation (AMC), an entity patterned after the Resolution Trust Corporation created by the United States to resolve the savings and loan crisis of the mid-1980s. The AMC plans to buy up problem loans at troubled financial institutions with money raised through a bond issue. To allay fears that government resources will be used to bail out troubled banks at inflated prices, the AMC has pledged to maintain transparency in all its transactions.

Malaysia's dependence on foreign workers has continued despite the economic crisis. Before the onset of the financial crisis, an estimated 1.7 million of the 8.6 million workers in Malaysia's labor force were foreigners. These workers, primarily from Indonesia, Bangladesh, and the Philippines, fill low-skill manual labor positions in agriculture, construction, and manufacturing shunned by most Malaysians. The government policy since the beginning of the crisis has been to tighten enforcement of immigration laws and deport or repatriate many of the workers. However, the foreign labor force remains significant and shortages persist for low-skilled workers, especially in the plantation sector.

Prospects for a rapid rebound from the financial crisis are becoming more remote. After -1.8 and -6.8 percent growth in first- and second-quarter 1998, respectively, forecasts for year-end growth, assuming no further currency devaluations, were between -4 to -5 percent. This implies an even greater fall in per-capita income as the projected increase in population of 2.3 percent will exacerbate the effects of the negative GDP growth. Measures to address the weakness of financial institutions and revitalize the economy will take time to implement. Commercial bank base lending rates will have to remain near the mid-1998 level of 12 percent for Bank Negara to support the value of the ringgit. The value of the ringgit will likely stay in the range of RM4 to the U.S. dollar unless there is a sustained decline in the Japanese yen or a devaluation of the renminbi.

The Malaysian economy should begin to show signs of recovery in 1999 barring any new major external shocks. Japan's economic recovery, continued growth in China, the United States, and Europe and relative currency stability are crucial to Malaysia's trade-based economy. Progress on restructuring the financial sector and a stable ringgit will allow Bank Negara to gradually reduce interest rates. If these conditions are met, Malaysia can achieve a very

modest economic growth rate in the range of 2 percent in 1999.

■ *Food Prices and Consumption*

Malaysia depends significantly on imports for all major food items except vegetable oils. Even for food items for which Malaysia is self-sufficient, it is heavily dependent on imported feedstuffs. Poultry and pork are almost totally dependent on imported feed grains and protein meal, which is either imported directly or produced from imported soybeans. Although Malaysia is technically self-sufficient in marine fish, it still depends heavily on trade, exporting high-value fish and importing low-value fish for the domestic market. Fruits and vegetables have a similar supply-use trade pattern with Malaysia exporting tropical products (the largest share going to neighboring Singapore) and importing temperate ones. For beef and mutton, Malaysia is almost entirely dependent on imports. Since rice is a staple in the Malaysian diet, the government has taken measures to insure that Malaysia maintains at least 65 percent self-sufficiency in rice.

The CPI for food, which has the highest weight in the overall CPI basket of goods (34.9 percent), increased at a rate of 6.6 percent in first-quarter 1998 compared with 5.9 percent in first-quarter 1997. Among the major food items that recorded significant price increases were administered foods. The ceiling prices of broilers and cooking oil were raised in December 1997, while the prices of another three administered items (sugar, milk, and flour) were raised in February 1998. Nevertheless, because of the importance of administered items in the CPI basket of goods, the CPI understates the actual increase in consumer prices.

For 1998 as a whole, the CPI for food is expected to increase by an average of about 9.3 percent, due largely to higher prices for imports from countries whose currencies have recently appreciated against the ringgit. For 1999, assuming no further depreciation of the ringgit and the moderation of demand pressure as the economy adjusts to the ringgit depreciation, the CPI for food is expected to increase but at a lower rate of 5.8 percent. This forecast lower rate of increase also assumes that the prices of imports from some countries in the region will fall if the currencies of these countries remain at their current levels with the ringgit.

■ *Food Processing and Marketing*

Food processing, broadly classified, includes

processors using imported materials to produce products for the domestic market and those using domestically produced raw materials for exports. Examples of the former in Malaysia include the feed-livestock industry and wheat products; the latter includes palm oil and cocoa products. Those most affected by the devaluation of the ringgit include animal feed millers (and downstream dairy, poultry, and livestock production) and flour millers, which depend on imported grain and soybeans. The major adjustment available to these industries is changing their import sources, which have traditionally been the United States, China, Argentina, and India. For instance, the U.S. market share for corn declined from 60 percent in 1995/96 to 33 percent in 1996/97. In 1998 and 1999, the U.S. share is expected to fall further and be offset by imports from Argentina and China.

Palm oil and cocoa are traded in U.S. dollars. Rising world prices and the ringgit devaluation have dramatically increased returns for these crops. However, as perennial crops, the potential for short-term production expansion of these commodities is limited and processing activities may expand only marginally in the next two years.

At the retail level, with increases in income and urbanization, the nature and composition of food demand has changed. Large, modern retail outlets have developed rapidly in the urban centers and are expected to expand further in the future.

Malaysia has been investing heavily in the development of new infrastructure over the past decade, including major improvements to interstate highways, public transit, and port facilities, a new international airport, and improved electric power generation. The financial crisis has led to the cancellation of one of the highway projects, still in its early planning stages, and the cessation of work on the Bakun Hydroelectric Dam in Sarawak, but most of the other infrastructure projects have proceeded.

■ *Agricultural Production and Trade*

Agricultural production in Malaysia is dominated by perennial crops, which account for almost 60 percent of agricultural output when fisheries and forestry are included. Cocoa and rubber production were on the decline in Malaysia before the economic crisis because of rising costs, low world prices, and the attractiveness of palm oil as an alternative product. The decline in cocoa may have slowed because of a recovery in prices, both in dollar and ringgit terms. World palm oil prices have strengthened

over the last year as strong global demand and interruptions in Indonesian supplies have created a sellers' market. Consequently, palm oil output is expected to continue to gradually expand constrained only by the availability of labor and suitable land for expansion.

The outlook for food commodities is linked to the income and price effects of the financial crisis. Malaysia's food consumption is linked closely to world trade. Rising import costs have put pressure on the prices of a number of commodities including chicken and pork (which are almost totally dependent on imported feeds) beef, mutton, wheat, and temperate fruits and vegetables.

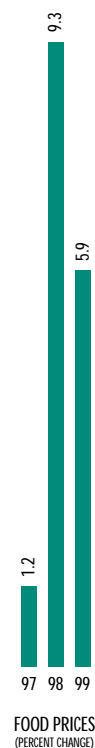
Poultry production is likely to decline in the next year because of the decline in incomes and the reduced profitability of chicken production. Government price controls at the retail level have prevented producers from passing through the full effects of the increase in imported feed costs.

Rice production and prices are tightly controlled and not likely to be directly affected by the crisis. Indirectly, rice consumption is expected to increase as consumers limit purchases of higher-cost foods.

The financial crisis is likely to have only a limited effect on food production. Perennial crop production in terms of value added in 1978 prices is likely to be close to the target of RM10,389 million for the year 2000 set in the Seventh Malaysia Plan presented in 1996. Total production of food commodities is forecast at RM4,004 million in 2000. Among food commodities, rice output will continue to be a function of government support policies, which are not likely to change. However, production of livestock will likely decline, at least in 1998, due to its dependence on imported feeds and sensitivity to changes in income. Marine fish production will continue to increase slowly as domestic output replaces imports. Production of fruits and vegetables will continue to expand owing to the cost advantage of domestic versus imported produce.

■ *Food and Agricultural Policy*

Most food commodities are largely free of government intervention. The government does control prices of some staples, including rice, wheat flour, and cooking oil, at the retail level. With the recent devaluation of the ringgit, this has put wheat millers in a difficult position. They have to buy the raw product on the world market in U.S. dollars and sell flour in the Malaysian market at government-controlled



ringgit prices. The government realizes the need to allow these companies to raise retail prices, but would like to limit the increase to minimize the burden on low-income consumers. Cooking oil and rice do not present the same problem because they are primarily domestic products.

The government continues to address the issue of supply constraints, particularly on such foods as fish, vegetables, and meat, which have been major contributors to the increase in the CPI. To further increase the supply of fish, the Fisherman's Initiative Fund was launched in

June 1997 to help traditional fishermen obtain interest-free loans to finance their fishing activities. The fund is expected to benefit about 25,000 fishermen throughout the country. In addition to efforts to encourage state governments to provide suitable land for cultivation and production activities, the Fund For Food continues to provide attractive loan opportunities for fruit and vegetable producers. Specific measures have also been taken to address the problem of price increases for meat, which ranked fourth (after rice, fruit and vegetables, and fish) in the food basket, through efforts to seek new import sources.



Mexico

During 1997, Mexico consolidated its economic recovery. The 7 percent GDP growth for 1997 was the highest rate attained in 16 years in the context of declining inflation. In 1997, the 16 percent inflation rate compared favorably with the corresponding figures for 1996 (27.7 percent) and 1995 (52 percent). Whereas the domestic savings rate increased to 24.6 percent of GDP in 1997 from 22.7 percent in 1996, interest rates as measured by the average annual 28-day CETES decreased from 31.3 percent in 1996 to 19.8 percent in 1997. In 1997, the public finance deficit registered 0.76 percent of GDP. The foreign trade surplus for 1997 was US\$623.5 million, significantly lower than the US\$6.5 billion surplus registered in 1996.

While the increase in per-capita income, consumption, and investment strengthened the domestic market, domestic demand did not hinder the growth of exports. The value of Mexican merchandise exports reached US\$110.4 billion in 1997, 15 percent higher than the previous year, and merchandise imports amounted to US\$109.8 billion, 22.8 percent above the 1996 figure. Non-oil exports showed continued growth with a 17.5 percent annual increase in 1997. Long-term capital inflows were substantial in 1997 as well, leading to a US\$5.4 billion capital account surplus, enough to finance a current account deficit of US\$7.5 billion. In 1997, the Mexican economy registered record levels for direct foreign investment at US\$12.5 billion. Both, employment and labor productivity figures showed an increase with an estimated 1 million jobs created in 1997.

Due to the soundness of the so-called fundamentals of the economy, Mexico has been only marginally affected by the Asian economic crisis and the more recent drop in international oil prices during first-quarter 1998. Taking into con-

sideration these two factors, the government estimates for GDP growth in 1998 is 5 percent. The year-end 1998 exchange rate is expected to be 8.74 pesos per U.S. dollar, and the inflation rate is expected to be 12 percent. Mexican exports face stiffer competition from cheap Asian exports in 1998, especially in the industrial sector. Significantly, Mexico is gaining access to the markets of its NAFTA partners, not only because of the reduction in tariffs, but also through the elimination of some nontariff barriers.

■ Food Prices and Consumption

For the first time in several decades, there are almost no price controls for agricultural products or manufactured food and beverages. In 1995, the price controls on wheat flour, bread, and sugar were eliminated. Official prices for milk were eliminated in December 1996. The only food exempted from price deregulation is corn tortillas, a central staple of the Mexican diet.

In place of price controls, the government has been implementing a targeted policy of direct food subsidies to poor families. Currently 2.1 million families are granted one kilogram of tortillas per day at no cost, and 5.3 million families have access to a milk supply program.

At the end of 1997, the government of Mexico launched a new program called PROGRESA to combat poverty in both urban and rural areas. This program links food subsidies to education and health programs.

After the collapse of the Mexican peso in December 1994, real wages dropped sharply. The demand for high-value food products was reduced and consumption patterns shifted from animal protein products to cheaper food. Demand for beef fell in favor of less expensive poultry products. The demand for milk and other dairy products decreased. As a result of

the economic recovery in 1996 and 1997, consumption generally has recovered.

The gradual implementation of NAFTA is strengthening Mexican agriculture's ties to international markets. Following international market trends, average producer prices for grain in Mexico declined by 3.4 percent in 1997 from 1996 prices. The Producer Price Index for all crops rose 15.9 percent, close to equaling the rate of inflation.

■ Food Processing and Marketing

From 1994 to 1997, the Mexican food industry grew at an average annual rate of 2.5 percent. In 1997, economic recovery led to a 3.9 percent growth rate in the processed food industry. The processed food industry accounts for approximately 6 percent of GDP. The agri-food sector's overall share of GDP is 12.1 percent.

Direct foreign investment has been very dynamic in recent years. From 1994 to 1997, Mexico was just behind China in terms of its ability as a developing country to attract investment. Investments channeled into Mexico during that time period represented about 10 percent of total direct foreign investment flows into developing countries and about 40 percent of the investments received by Latin-America and Caribbean countries. Foreign investment in the Mexican agri-food sector from 1994 through 1997 reached US\$5.2 million, representing 18.4 percent of total direct foreign investment.

The Mexican distribution system is viewed as rather inefficient. The Central de Abastos de la Ciudad de Mexico markets about 40 percent of total fruit and vegetable production. While intermediaries still play the largest role in supplying the central market, wholesalers and retailers are the main buyers. Intermediaries and wholesalers are able to fix prices through an oligopolistic market structure. It is not uncommon for produce to be shipped to Mexico City and then back to where it originated, rather than for local production to supply local stores directly.

Self-service stores (mega-, hyper-, and super-markets) have been gaining importance in the Mexican distribution system during the past few years. Quality is crucial in supplying self-service stores. Tianguis and public markets operate in the main consumption areas and are basically oriented to poor and middle-class consumers.

The marketing of livestock products also relies heavily on intermediaries. Producer organizations have invested in modern slaughter houses with high quality standards (refers to *rastros* "Tipo Inspección Federal"). But these facilities operate below capacity because local au-

thorities have not closed slaughter houses that operate with low standards.

In mid-1998, Mexico had 861 convenience stores, 72 percent of which were owned by a single company. A total of 404 hypermarkets operate across the country and the two largest companies account for 60 percent of them. Megamarkets have gained an increasing market share. Foreign investment has been a key factor in the surge of this type of market.

The main ports on the Pacific Coast are Lazaro Cardenas, Manzanillo, and Guaymas. While Mexican ports are designed to receive imports, adjustments are necessary to improve the logistics for exports. For example, there are almost no refrigerated warehouse facilities. Veracruz, on the Gulf of Mexico, is the main commercial port in Mexico. Most of Mexico's grain imports arrive at this port, which serves the major cities in Central Mexico (including Mexico City, Puebla, and Toluca).

To improve bulk trade, the Mexican government is in the process of privatizing the railroad system. The roads from Mexico City to the northwest coast and northeast borders have a strategic role in enhancing trade.

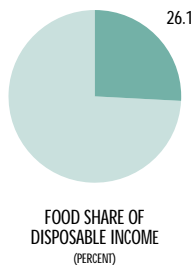
■ Agricultural Production and Trade

In 1996, Mexico achieved record production levels by historical standards, due to the implementation of the new agricultural programs. With the rainy season lagging behind schedule and drought in several areas, production of the top 10 crops in the autumn/winter 1997-98 harvest season was down by 5.6 percent. The spring/summer 1998 season is expected to show a decrease of 2.1 percent from 1997 levels and a decrease of 16 percent from 1996.

From 1994 to 1997, poultry and pig meat production increased at average rates of 8.6 percent and 2.5 percent, respectively. Beef and veal production, however, declined by 0.6 percent because the drought that affected the northern states during 1995 and the first half of 1996 prompted cattle owners to slaughter part of their herds. In 1997, livestock activity showed signs of recovery, with an increase of 0.8 percent compared with 1996. Nevertheless, grass-fed cattle activity in 1998 will probably be affected by the low levels of rain expected for the year.

In 1997, fresh milk production rose by 3.4 percent compared with the previous year. Some of the factors that might explain this result include better prices paid to producers at the farm level and higher international prices for skimmed milk powder.

During 1997, the agricultural and livestock trade balance registered a deficit of US\$490.3



million, 61.3 percent lower than the previous year. Including agri-business, the trade balance showed a deficit of US\$1.3 billion while a year earlier it showed a deficit of US\$2 billion. In 1998, higher demand for imports in volume terms and lower prices for grains and oil seeds are expected to have a marginal effect on the agricultural trade balance.

■ *Food and Agricultural Policy*

Mexico is actively promoting preferential trade agreements with other countries on a reciprocity basis. Moreover, Mexico intends to sign trade agreements with other Latin-American countries and other important trading partners, particularly within the EU.

Economic and trade liberalization, particularly the NAFTA implementation, has had a strong influence on the Mexican agricultural sector. Mexico has replaced market price supports with nondistorting direct payments under

the PROCAMPO agricultural program.

PROCAMPO was created in 1994 as a 15-year program to provide direct payments to farmers on a per-hectare basis. The objectives of PROCAMPO are to support the incomes of producers in the context of increased foreign competition, while allowing domestic grain prices to align with international levels, thereby fostering competitiveness in the agri-business sector.

The objectives of agricultural policy reform have been reaffirmed in the Alliance for Agriculture Program for 1995–2000. The program consists of specific measures primarily aimed at improving farmer's skills and stimulating technological development to increase the productivity and competitiveness of the farm sector. A key feature of the alliance is the decentralization of decision making from the federal level to state governments and agricultural producers. Joint councils with both government and industry representatives are responsible for assessing and approving specific projects.



New Zealand

The Asian economic downturn, El Nino-related weather problems, and a weakened dollar all combined to take much of the enthusiasm out of last year's positive growth projections. Inflation is forecast at slightly over 2 percent for 1999, the 1998 growth rate has been revised downward from 4 percent to 2.7 percent, the current account balance is expected to slightly improve but remain negative in 1999–00. An important aspect of the food and agricultural industry in 1999 will be the manner in which the dairy, apple, and kiwifruit industries adjust to the loss of single-seller status.

Extreme droughts that plagued parts of the country should end with the departure of El Nino and provide a boost to primary industry confidence. Nevertheless, primary industries will remain under considerable stress as exports are expected to react slowly to a weaker dollar and face intense competition from a number of countries. Emphasis on reduced government intervention in the marketplace will continue, as will tariff reductions on manufactured foods.

■ *Macroeconomic Situation and Outlook*

The outlook for the New Zealand economy for 1999 is reasonably positive. However, the following issues could negatively influence the overall economy: declining consumer confidence, a large negative current account balance (8 percent of GDP); and increasing unemployment. Inflation, forecast at slightly over 2 percent for 1999, remains within the Reserve Bank target band of 0 to 3 percent and is consistent with the 1997 *Pacific Food Outlook* forecast. Tax cuts instituted in July 1998 reflect a projected budget surplus in excess of NZ\$1.3 billion (US\$5 billion), that is expected to grow to over NZ\$2 billion (US\$1 billion) by the end of 1999.

Originally pegged at 4 percent, the 1998 growth rate is now expected to be 2.7 percent. Growth is expected to pick up and reach 3.9 percent in 1999 as the effects of the Asian downturn moderate. The decline in the growth rate reflects a decline in economic activity through the first half of 1998, owing largely to Asian developments and reduced domestic confidence. Weaker international demand is expected to adversely affect export activity, domestic business and consumer activity, and the terms of trade through at least the first half of 1999. However, the impact of these effects will be much more subdued in 1999.

Uncertainty over inflation is based on the trade-off between possibly higher import-led price pressures in the near term as a result of the lower exchange rate and possibly reduced domestic price pressures in the medium term. A key uncertainty is how much the recent decline in the New Zealand dollar will increase the New Zealand dollar price of imports.

Since the last *Pacific Food Outlook*, the kiwi dollar has weakened considerably. It has lost 6 percent against the Australian dollar—the currency of New Zealand's most significant trading partner—almost 20 percent against the U.S. dollar, and 10 percent against the yen. However, the weakening of the currency has not resulted in an upturn in commodity prices or rural sector confidence. When the dollar appreciated strongly between 1994 and 1997, retail prices were very slow to decline. Similarly, with the sharp drop in the value of the dollar, retail prices have been slow to increase. The rural sector remains disappointed in the lack of market response to lower product prices resulting from the weaker dollar.

Some analysts believe the kiwi dollar is undervalued at current rates and expect it to strengthen to approximately 0.63 to 0.64 to the U.S. dollar by

mid-1999. However, the Asian crisis, with the surrounding uncertainty and ongoing bad news, will probably continue to put bearish pressure on both the rural sector and the kiwi dollar.

■ *Food Prices and Consumption*

Increased prices for fresh fruits and vegetables, resulting from El Nino-related droughts, have had a significant impact on overall inflation. However, prices for these products are expected to decline in 1999 as weather patterns return to normal. With underlying inflation expected at slightly over 2 percent, food prices should return to more normal levels and increase less than 1 percent in 1999. Possible increases in food prices could result from a weaker dollar. Because of the increased preference for ethnic food, the weaker dollar—the impacts of which have not yet fully worked their way through the economy—may mean an increase in prices in 1999.

Current consumer preferences in New Zealand—for wholesome food, ease of preparation, and smaller/single servings—are similar to those of consumers elsewhere in the world. In addition to these factors, a combination of travel, immigration, and education have changed New Zealander's eating habits over the last decade. Ethnic foods have taken a growing share of household food expenditures. This shift has also been reflected in the growing availability of ethnic foods in supermarkets around New Zealand. While supermarkets have been slow to reflect changing consumer eating habits, the reaction of consumers to the availability of an increasingly broad range of food products—convenience foods, ready-to-eat meals, and fresh cuts—has been very positive. Eating habits have changed to encompass more variety and convenience. Sanitary concerns have occasionally been expressed about food bars in supermarkets, but their use is growing. One indicator of the popularity of both convenience food and ethnic food is the growth in demand for ready-to-eat pasta dishes and Mexican-style foods available from take-aways, in-store delicatessens, and restaurants.

■ *Food Processing and Marketing*

Competition in the retail food sector is limited to three large companies: Progressive Enterprises Ltd., Dairy Farm International Group, and Foodstuffs N.Z. Ltd. While each company has a different structure—Progressive Enterprises, with about 28 percent of the market, is Australian controlled; Dairy Farm International, with 14 percent of the market, is Hong Kong, China, owned; and Foodstuffs, with about 45 percent of the retail

market, is a retailer-owned cooperative—they have similar strategies: divide the market into full-service and warehouse supermarkets, with no further apparent segmentation. This limited attempt to differentiate products—either through service or product offerings—is a classic oligopolistic response to competition. As a result, little differentiates full-service and warehouse supermarkets and one chain from another. Strategies to influence customer loyalty (i.e., attempts to establish a point of difference in their products) are based on purchasing/procurement strategies rather than other more aggressive attempts to differentiate. Consequently, retail markets in New Zealand are expected to change only marginally in the near term.

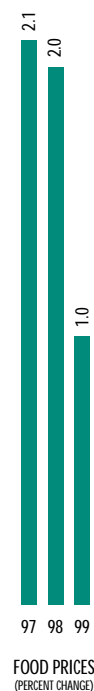
In partial response to the inability of the retail sector to meet the rapidly changing demands of consumers, local farmers' markets have grown significantly. While reflecting a distinctive ethnic base, these markets have begun to include more traditional New Zealand foods, both fresh products and prepared foods. They represent a vibrant and growing, but little recognized, segment of the retail and wholesale food industry.

■ *Agricultural Production and Trade*

An important issue that will have implications for the food and agriculture system is government's role in assuring the adequacy of transportation infrastructure. For example, roads throughout the country are supported by user taxes while railroads, and increasingly ports and airports, receive little or no government funding. This means the country's only railroad, using capital requiring a market rate of return, must compete and upgrade against a road financing system that does not have similar constraints.

Although this report focuses on the food industry and not commodity production, the majority of New Zealand agricultural exports are commodities. For example, over 56 percent of New Zealand's total exports are agriculturally based exports. The Asian economic crisis has had different effects on different commodity areas. For example, the dairy industry has been hurt more than the apple industry. The dairy industry had targeted several Asian countries, including Indonesia, for growth in value added exports, but the apple industry has most of its exports going to Europe and the United States.

Severe drought in significant production areas reduced sheep and beef production by forcing stock onto the market when pasture conditions could not provide adequate feed. Weather patterns are expected to return to normal in 1999. As a result, production is expected to respond more to market signals than to weather-related prob-



lems. However, the weather-related drop in sheep and beef numbers likely will reduce production in 1999 as farmers rebuild their herds. The trend of declining sheep numbers will continue.

Approximately 15 percent of all agriculture and horticulture exports are value-added products. This segment of the industry has shown the most growth over the past several years. Consequently, most commodity groups are attempting to add value in some manner to shift away from commodity trading to consumer goods trading. However, most efforts to add value have focused on a branding strategy for unprocessed products rather than adding value by transforming or further processing the product. For example, kiwifruit has been renamed Zespri; venison is marketed as Cervena; and wool as Wools of New Zealand. However, these are all unprocessed products. This means that commodity production trends drive the food export effort.

A review of several broad commodity segments indicates the following:

- **Dairy production**, despite El Nino, reached a record high in 1997 and is expected to increase again in 1998
- **Apple prices**, which experienced lower returns during the last few years due to lower production caused by hail storms and other weather-related problems, are expected to remain under pressure
- **Venison prices** were strong in the past several years, which resulted in considerable growth in production that, combined with reduced demand from Korea and Germany, will keep venison prices under pressure through 1999

■ *Food and Agricultural Policy*

The New Zealand government is continuing efforts to deregulate the country's producer

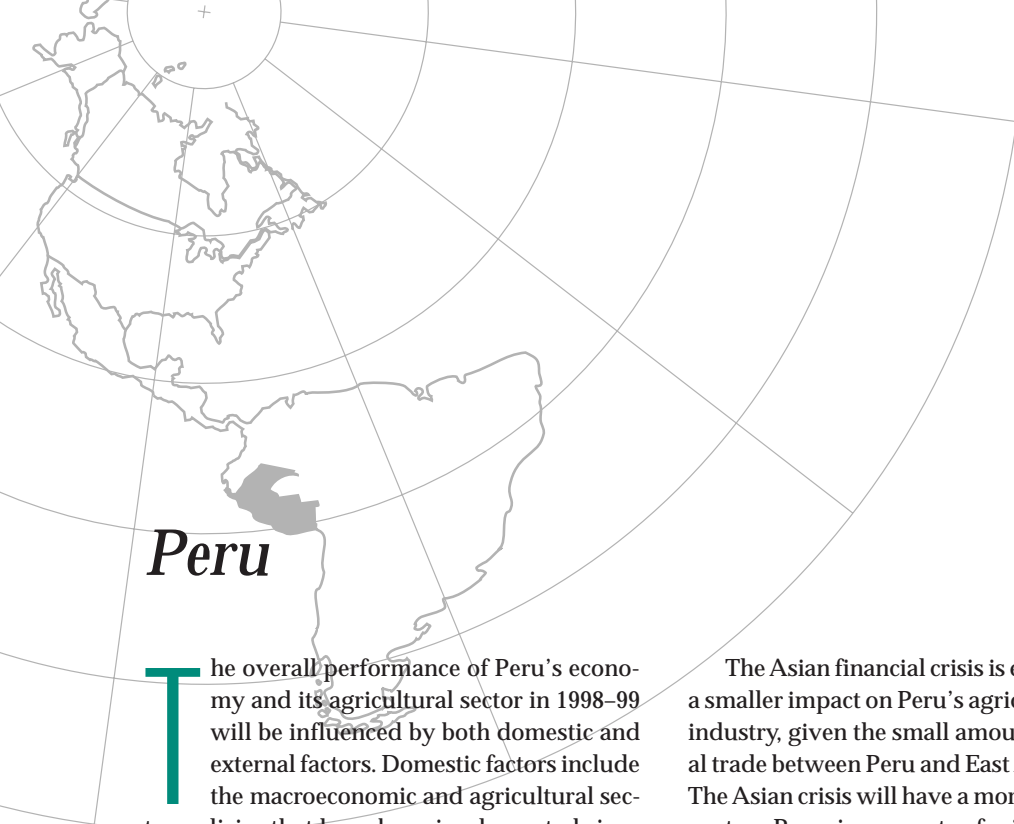
boards. The boards were required to have plans for deregulation in place by November 15, 1998.

The producer boards, which focus on exports, have a broad range of powers. The Dairy Board, the Apple and Pear Marketing Board, and the Kiwifruit Marketing Board have monopoly power over exports, but no control over domestic production and marketing. The Hop Marketing Board and the Raspberry Marketing Board, on the other hand, have control over both domestic and export issues. The Wool Board, the Meat Board, the Pork Industry Board, the Game Industry Board, and the Horticultural Export Authority, while not directly involved in purchasing or selling products, have substantial roles in export licensing and market development, promotion, and research.

While changes to the producer boards were signaled to the industry well in advance of the recent initiative, considerable opposition to the efforts remains. Producer boards, particularly those with single-seller status, have been the cornerstone of New Zealand exports for decades. While their powers have diminished over the last 15 years, the changes will have enormous implications with outcomes not yet certain.

In addition to the significant changes in the status of the producer boards, two other issues have arisen that will impact the New Zealand food industry into 1999. First, imports of genetically modified soybeans resulted in considerable public outcry. While no government action was taken, the issue of genetically modified organisms captured the public's attention. And second, the government agency responsible for inspecting both imported and exported food products is gradually turning away from government funding to industry funding (contestable funding). This process may culminate within the next year, making food quality inspection a private industry responsibility instead of a government responsibility.





The overall performance of Peru's economy and its agricultural sector in 1998–99 will be influenced by both domestic and external factors. Domestic factors include the macroeconomic and agricultural sector policies that have been implemented since 1997. The government modified the import tariff structure in April 1997, increasing tariffs on food items being produced domestically and reducing tariffs for selected agricultural inputs. In August 1997 and during first-quarter 1998, the government exempted selected agricultural inputs from tariffs and value-added taxes to further offset increases in transportation costs.

The principal external factors influencing the Peruvian economy include the El Nino weather phenomenon and the effects of the Asian financial crisis. Both factors are expected to lead to a moderate contraction in output and exports. Agricultural and food production in Peru is expected to increase by only 2 percent in 1998, down from the 5 percent average growth rate registered in the previous three years. This disappointing performance is the result of a reduction in cultivated land area and crop losses due to floods and droughts in the northern and southern regions of the country.

In addition, some major highways and rural roads have deteriorated due to intensive rains and overflowing rivers, increasing the food industry's transportation and marketing costs. Between June 1997 and March 1998, the government spent over US\$253 million on infrastructure to prevent and mitigate disasters caused by El Nino. These expenditures still fall far short of the total economic damage to infrastructure caused by El Nino, estimated at US\$604 million, and the additional US\$625 million needed to repair damage to housing. Overall, economic losses from El Nino are estimated at over US\$1.5 billion.

The Asian financial crisis is expected to have a smaller impact on Peru's agriculture and food industry, given the small amount of agricultural trade between Peru and East Asian countries. The Asian crisis will have a more significant impact on Peruvian exports of minerals and fishmeal destined for Asian markets, which currently represent 20 percent of the country's total exports. The resulting reduction in export revenue is expected to contribute to increases in both the balance of trade and the current account balance.

■ *Macroeconomic Situation and Outlook*

The Peruvian economy grew by 7.4 percent in 1997, up significantly from the 2.6 percent growth rate registered in 1996. Several factors help explain this growth: increased foreign investor confidence in the country's economic stability, the elimination of terrorism, increasing exports, a low and steady inflation rate (6.5 percent in 1997, the lowest rate in 30 years, reflecting the declining trend of oil and electricity prices), and the adoption of policies to control public consumption.

In 1997, private investment rose by 14.6 percent and exports by 14.3 percent, whereas public investment increased by 7.8 percent and private consumption by 4.2 percent, thus explaining overall GDP growth. As a result of a more aggressive tax collection policy and higher revenues, for the first time in 20 years the government registered a budget surplus, which was equivalent to 2.1 percent of GDP. On a worrisome note, short-term debt climbed alarmingly to US\$5.7 billion by year-end 1997.

The current account balance improved slightly in 1997 compared with 1996 (to -5.1 percent from -5.9 percent), due to a lower trade balance deficit (-2.8 percent of GDP) and reduced



payments to financial services. International reserves increased to a level equivalent to 11 months of imports (US\$10.17 billion). In December 1997, the Peruvian exchange rate reached a value of 2.72 soles per U.S. dollar, a 5.4 percent devaluation compared with the year before.

Fiscal and monetary policy will be moderately expansive into 1999 to support spending for El Nino-related rehabilitation. The fiscal budget surplus is forecast to be 1 percent of GDP in 1998, lower than the 2.1 percent 1997 surplus and the 1.5 to 2 percent surplus forecast by the IMF for 1998–99.

Foreign investments are expected to continue but at a slower pace due to instability in world financial markets. The mining sector will be negatively affected by the Asian crisis since almost 30 percent of its exports are oriented to these markets, thus affecting the country's balance of payments. Fishing and agricultural exports will be down for some time due to the damaging effects of El Nino.

Peru's GDP is expected to grow by 3.5 percent in 1998 and by 5.8 percent in 1999. Inflation is projected to increase by 8.7 percent in 1998 and by 7.3 percent in 1999. The real rate of exchange will maintain its downward trend, with a projected devaluation of 6.6 percent in 1998 and 7 percent in 1999. A deficit trade balance of US\$2.7 billion in 1998 and US\$2.8 billion in 1999 is expected, accounting for 3.8 percent and 3.9 percent of GDP, respectively, as a result of trade deterioration and diminished fishing and agricultural exports.

■ Food Prices and Consumption

Food prices in Peru have followed the trend of the General Price Index. However, when global inflation rises, the food price index is slightly higher. Given both global inflation and food price increases during the first months of 1998, a consequence of both reduced production and increased transportation costs due to El Nino, food inflation is forecast to be 9 to 10 percent in 1998 and 6 to 8 percent in 1999.

The combined effects of higher demand for food and lower food supply due to El Nino will stimulate a rise in agricultural prices. Given the high projected food inflation rate, a contraction in food consumption is expected, mainly in the population's lowest income stratum, thus affecting their food security and nutritional welfare. Local and central government food security programs for poor children and women are expected to play a key role in maintaining a minimum per-capita food intake of 2,404 calories per day in 1998 and 2,452 calories per day in 1999.

Price formation in the food sector remains largely inefficient due to low quality standards,

lack of infrastructure, and too few institutions able to fulfill contractual agreements made at different points on the producer-to-consumer food chain. The government has announced a new stock exchange mechanism for a group of agricultural products to correct inefficiencies by inducing improvements in price and market information.

■ Food Processing and Marketing

Some parts of the food industry have been adversely affected by El Nino, especially the preserved and processed fruits and vegetables subsector. In contrast, subsectors that employ imported inputs, such as the milling and oil and oil seed products industries, have been able to maintain or increase their production levels.

Close to 70 percent of the markets for major food products, including pasta, flour, cookies, coffee, and edible oils and fats, are under the control of the recently created consortium ALICORP S.A. This consortium is expected to expand in 1998, especially given its plan to form an alliance with a Mexican entrepreneurial group associated with the bakery industry.

Supermarkets still account for a low proportion of retail food sales in Peru, despite the opening of two more supermarket chains. Small food supply stores, markets, and informal sellers capture most of the retail market. Nevertheless, with urban growth and modernization in Lima, transportation infrastructure could also be instrumental in stimulating agri-industrial production.

At the wholesale level in Lima, La Parada, a big distribution center, specializes in vegetables and lightly processed foods and maintains a 50 percent share in the sale of potatoes and maize. Another distribution center for fruits, located in the San Luis neighborhood, operates as a wholesale market primarily selling apples, peaches, and oranges. This and other district markets also distribute poultry and beef. Live poultry accounts for 53 percent of market sales, followed by beef at 27 percent. A new wholesale market with more modern facilities is recognized as a prerequisite to a more efficient marketing process.

■ Agricultural Production and Trade

The 1997–98 crops were hit hard by El Nino. Major agricultural crops such as potatoes, cotton, maize, and fruits suffered heavy flood damage. Consequently agricultural production in 1998 is forecast to grow by only 2 percent, with the forecast for 1999 just slightly higher. The competitiveness of Peruvian agricultural exports in fiscal year 1997–98 was affected by a

prevailing 25 to 35 percent overvaluation of the real exchange rate compared with the 1996–97 rate, a consequence of an excess supply of foreign currency. This trend is expected to continue through 1998–99.

Import tariffs on food and agricultural inputs have been instrumental to the government's effort to collect revenues of around US\$180 million annually. Wheat, yellow maize, sugar, dairy, and soybeans are the main high-value imports that make this possible. However, revenues collected are expected to diminish in 1998–99, due to tax exemption measures applied to a selected group of agricultural inputs and the possible elimination of a 5 percent surcharge on imported wheat.

The volume of Peruvian food products exported to East Asia is small. In 1997, cotton, processed tomatoes, and coffee were the only agricultural items exported to Chinese Taipei; Korea; Hong Kong, China; Malaysia; Indonesia; and Thailand. Peruvian exports to these countries in 1997 represented US\$20 million or 0.4 percent of Peru's total world exports (US\$6.2 billion). Given the small trade volume, the Asian crisis is not expected to significantly affect the food and agricultural sectors. However, since 20 percent of Peru's total mining and fishing exports are oriented to these East Asian markets, the Asian crisis will ultimately affect both Peru's balance of trade and current account balance.

■ Food and Agricultural Policy

Both trade and price policy will continue to be at the center of Peru's food and agricultural policies into 1999, with the aim of creating a structure of incentives for investment in agriculture.

According to the government, changes in the import tariff structure implemented in April 1997 are expected to provide both increased protection for domestic goods that compete with imported goods and reduced importation costs for key agricultural inputs. While this measure is a necessary first step, it is not sufficient to guarantee the competitiveness of the Peruvian agricultural sector nationwide or even regionwide. Furthermore, it is also believed that this measure's primary goal was to increase import revenues rather than to stimulate domestic production.

Recent measures that exempt a selected group of agricultural inputs (e.g., fertilizers, agro-chemicals, seeds, bovine and ovine breeding cattle, and irrigation equipment) from certain taxes (import tariffs, sales tax, and consumption

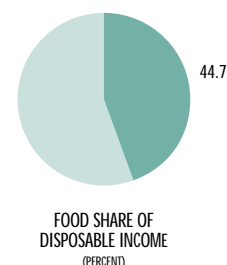
tax) are expected to reduce agricultural importation and production costs, thus freeing up potential investments in technology that will increase yields and enhance competitiveness.

The government is also considering the elimination of the 5 percent surcharge on imported wheat, which would mean a cut in revenue of US\$9.8 million annually, assuming that world prices maintain their declining trend, in addition to cuts from the tax exemption measures discussed above. Those opposed to the current government believe that these apparently contradictory measures are politically motivated attempts to secure reelection to another five-year term; however, this needs to be analyzed more carefully.

Agricultural sanitation policies are the responsibility of the Peruvian National Service for Plant and Animal Health (SENASA), which was created in 1993 to formulate rules and policies that promote food sanitation and plant and animal health without creating barriers to world agricultural trade. SENASA allows the private sector to help exporters meet sanitation standards and to help with disease control and quarantine programs. When SENASA finds it necessary to block importation of contaminated imports, the product's relative price structure might temporarily be affected. This happened when SENASA prohibited the importation of rice infested with the Khapra weevil and also when SENASA banned cattle imports from Ecuador.

Social programs such as the National Fund for Compensation and Social Development (FONCODES) and the National Program of Food Assistance (PRONAA) secure a support price for small and poor producers by purchasing and selling food aid in the market. These programs provide food assistance to children ages five and under and temporary employment to low-income adults. A good determination of this floor price is critical to ensuring that these programs do not perpetuate price distortions and production inefficiencies that have prevailed in some urban and rural parts of the country.

The government has taken several measures to stimulate investment in the agricultural sector. Within the context of the Law of Promotion of Agricultural Sector Development, the tax rate for agricultural businesses was cut from 30 percent to 15 percent and the agricultural sector was also exempted from payments to the National Fund for Housing (FONAVI). The above-mentioned law will be extended until December 2006 and modified to include tax deductions and credits on net assets and a sales tax for investors in untilled land.





The Philippines

The Asian financial crisis has resulted in a sharp drop in both the GNP and GDP growth rates in the Philippines, which were 2 percent and 1 percent, respectively, for 1998. The inflation rate has increased significantly, from 5.1 percent in 1997 to about 10 percent for the first two quarters of 1998. While the Philippine economy is forecast to improve in 1999, growth rates will continue to be far below those achieved before the financial and currency crisis.

Food prices are up sharply due to the effects of the El Nino phenomenon and the rising cost of agricultural production. The latter is due to the substantial depreciation of the peso against the dollar since June 1997 and the concurrent rise in interest rates. The rise in food prices will result in an increase food consumption costs as a proportion of total income. This will put at risk the lower-income groups, which will have to adjust by shifting to cheaper and less nutritious foods.

Food manufacturing has seen erratic growth over the past decade, with a sharp increase from 1994 to 1997. It now accounts for 35 percent of the country's total manufacturing output. The Asian financial turmoil has slowed the food manufacturing growth rate, which went from 6.8 percent in 1996 to less than 1 percent in 1997. For 1998, output is expected to slow further due to rising production costs resulting from more expensive imported raw materials and high interest rates. In addition, consumer demand for processed foods is slowing perceptibly.

Agricultural policy in the medium term will consist of programs that will improve food security, especially for the disadvantaged and the poor. This is consistent with the twin goals of food security and poverty alleviation that are the top priorities of the new Estrada administration. The Agriculture and Fisheries Modernization Act (AFMA), landmark legislation

passed in 1997, defines the components that need to be in place to ensure sustainable agricultural growth. The challenge for the new administration is to provide the necessary funding to develop these components as required by the law. Unfortunately, formal implementation of the law has been postponed until next year due to a lack of funds.

■ *Macroeconomic Situation and Outlook*

The Asian financial crisis hit the Philippines just as the economy had about recovered from almost a decade of contraction, near zero growth, and lackluster performance. In 1997, despite disruptions caused by the regional currency turmoil in the latter half of the year, GNP and GDP growth rates were 5.8 and 5.1 percent, respectively, down slightly from 6.9 and 5.7 percent, respectively, in 1996.

The pre-crisis economic turnaround resulted from a macroeconomic stabilization program and a series of structural reforms initiated by the Ramos administration between 1993 and 1997. These measures, designed to correct basic economic weaknesses that had impeded growth in the past, helped open up and liberalize the economy. A deficit reduction program was also put in place that involved a package of adjustments on the revenue side and a rationalization of government spending. Public investments also improved in quality through careful selection of projects and fewer time and cost overruns.

The regional currency crisis resulted in rapid depreciation of the Philippine peso from about P26 to the U.S. dollar in June 1997 to around P43 to the U.S. dollar in September 1998 after a series of adjustments. This 40 percent depreciation of the peso against the dollar was initially viewed as positive since it would make Philippine exports more competitive abroad. Howev-

er, in an effort to contain the speculative attacks on the peso, the government raised its prime annual lending rate from 12 percent to about 20 percent. The higher interest rates have made it more difficult for business to raise capital. A number of businesses have folded, many have downsized, and planned investments in the property, agricultural, and industrial sectors have been aborted due to anticipated decline in demand, increasing difficulty obtaining operating funds from the financial sector, and rising interest rates. In addition, the real estate and property sectors are having difficulty servicing old loans (some foreign denominated) and obtaining fresh funds at reasonable interest rates.

In June 1998, just when the Philippines was confident that the worst of its economic difficulties were over, developments at home and abroad resulted in further depreciation of the peso and a hike in interest rates. On the domestic front, business confidence appeared to be shaken by a number of factors, including pronouncements by newly installed President Joseph Estrada that the government was bankrupt, thus raising doubts about its ability to finance its development program. Moreover, initially the new government appeared to be suffering a crisis of leadership and to lack a well-defined and coordinated economic plan to deal with the financial and currency crisis.

The important external factors that affected the exchange rate and interest rates include the weakening of the Japanese yen, which as of mid-August 1998 was lower than 140 yen to the U.S. dollar, the fear of devaluation of the Chinese yuan, and the devaluation of the Russian ruble. The exchange rate would have dropped below the psychological barrier of P45 to the dollar had the government not intervened by trading dollars in the foreign exchange market. This also sent overnight interest rates rocketing upward in an effort to prevent speculative attacks on the peso.

The inflation rate nearly doubled from 5.5 percent in August 1997 to 10.5 percent in August 1998 due primarily to the financial crisis and the effects of the El Nino phenomenon, which severely damaged crops in certain regions of the country. Food prices increased but not as much as prices for durable commodities with import content. The government optimistically forecasts that the overall inflation rate for 1998 will be in single-digits.

Philippine stocks plunged to their lowest composite level in six years, with the Philippine Stock Exchange index reaching 1266.

The financial crisis has had a drastic effect on overall investments, including agricultural in-

vestments. The foreign exchange turmoil has led to a sharp drop in exports, moribund real estate and stock markets, massive unemployment, a sharp decline in consumption, increased bankruptcies, and business closures.

The unemployment rate increased from 10.4 percent in April 1997 to 13.3 percent in April 1998. The reasons for these job cuts, according to reports by firms to the Department of Labor, are related to the financial and economic crisis and include a lack of markets, high production costs, high operating costs, lack of capital, streamlining, downsizing, uncompetitive prices, peso devaluation, currency crisis, and financial reserves. Labor unrest is expected to worsen as businesses are forced to lay off workers either temporarily or permanently. The total number of strikes in 1998 is expected to be double the number for all of 1997 (54) as firms attempt to trim costs.

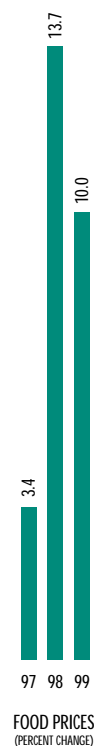
Second-quarter 1998 national accounts show that the GNP contracted by 0.7 percent and GDP by 1.2 percent. This was attributed to agriculture's 11.5 percent contraction and manufacturing's 5 percent contraction. The IMF predicted that the Philippines would be unlikely to achieve a 1 percent growth rate by year's end. However, government economic managers predicted that agriculture would rebound leading to positive growth for the year.

■ Food Prices and Consumption

In June 1998, the inflation rate for food, beverages, and tobacco prices was 10.1 percent compared with 3.3 percent a year earlier. The inflation rate for food in May 1998 was 9 percent, up from 7.1 percent just a month earlier. By July, the inflation rate for food had increased to 10.3 percent compared with 3.2 percent a year earlier. The year-on-year rate for eggs went up to 11.3 percent from 8.3 percent; for corn to 6.2 percent from 5 percent, for fruits and vegetables to 25 percent from 23.9 percent; for dairy products to 14.6 percent from 14.2 percent; and meals eaten away from home to 6.2 percent from 6 percent. Slower rates of inflation were recorded for meat prices (to 7 percent from 8.8 percent) and fish (to 11.4 percent from 12.2 percent).

The price surge is blamed primarily on El Nino-related crop damage. Among the most badly affected areas were northern Luzon and Mindanao. Production losses for major crops, such as rice and corn, reached 20 percent and higher.

Food prices may also have been affected by rising production costs due to higher costs for imported inputs such as fertilizer and pesticides. Cost for some key inputs have risen as much as 30 percent. In addition, interest rates on



agricultural credit, if available, have risen from about 15 percent to more than 20 percent.

Food prices increases mean that a larger proportion of income is devoted to food purchases. In 1998, this proportion was 45.0 percent, up slightly from the 1997 rate of 43.9 percent. Urban consumers spent 40 percent of their income on food compared with 51.9 percent for rural consumers. Another consequence of rising food prices, particularly for low-income groups, is a shift to less nutritious foods (e.g., fewer meats and vegetables and more grains and root crops). In the face of higher rates of unemployment and underemployment, higher food prices will put a double squeeze on the unemployed and underemployed.

With the departure of El Nino, food production was expected to rebound in the second half of 1998, slowing the upward trend of prices. Barring devastating effects on agriculture from La Nina, prospects for stabilizing food prices are expected to be much better in 1999.

■ *Food Processing and Marketing*

After suffering from lackluster performance and occasional negative growth rates due to the weak economy of the 1980s and persistent power outages in the early 1990s, the food processing sector grew at an average rate of about 5 percent per year from 1994 to 1997 in terms of gross value added. Food manufacturing constitutes about 35 percent of total manufacturing output, but this rate is expected to decline gradually as the economy expands.

Large-scale agro-industrial corporations dedicated primarily to supplying the fast-growing domestic market dominate food processing. A few large multinational corporations produce products for both domestic and export markets. A myriad of small and medium-sized companies also produce processed foods requiring relatively low technology.

Several subsectors of the food processing industry rely on significant quantities of imported ingredients and additives. These include the baking, fruit/vegetable canning, meat processing/canning, beverage, and dairy product sectors. Cereal preparations, dairy and egg products, fruits and vegetables, meat preparations, and spices and confectioneries normally account for the largest share of imported inputs. Other imported raw materials include dried fruits, nuts and flavorings, meat and meat ingredients. The beverage industry uses a sizeable amount of barley malt and hops for beer and flavorings/colorings for soft drinks.

In view of the high volume of imported raw

materials and the high interest rates, food processing is expected to suffer from the Asian financial crisis. Already, some firms have scaled down production. Mid-year 1998 production statistics of selected industries showed that although food processing was still posting positive growth, its growth rate was slowing down consistent with the drop in manufacturing output, particularly during the second quarter of the year.

The distribution network for most processed foods is centered mainly in urban areas, where about 50 percent of the population lives and which are growing at a rate double the population growth rate. Geography is a constraint to food distribution for the other 55 percent of the population, which is spread over 10 main islands from Luzon in the north to Southern Mindanao.

■ *Agricultural Production and Trade*

Agriculture posted an overall growth rate of 2.8 percent in 1997, only slightly lower than the 3.1 percent recorded in 1996. Agricultural output was buoyed by increased production in the livestock and poultry sector and the better-than-expected performance of certain commercial crops despite the onset of the El Nino-induced drought. However, in first-quarter 1998 the havoc wreaked by El Nino registered a 3.6 percent decline in agricultural output and an 11.5 percent decline in the second quarter.

The Asian financial crisis is also creating difficulties for agriculture by effectively raising production costs for all agricultural commodities. Most agricultural enterprises—whether growing crops, raising livestock and poultry, or operating fisheries—use imported inputs or inputs with high import content. These include fertilizers and pesticides, other chemicals, machinery, feed ingredients (particularly corn and other coarse grain), and veterinary supplies. In addition, the annual interest rates for agricultural loans have risen from about 15 percent to about 22 percent. Both the higher cost of inputs and higher cost of borrowing have reduced productivity and profitability and have exacerbated the ill-effects of the El Nino phenomenon. The impending La Nina is expected to bring about strong winds, rain, and massive flooding that could further affect food production unfavorably.

Rice production during first-quarter 1998 was 13.3 percent lower than in the same quarter in 1997 and 9.4 percent lower than in the previous quarter (fourth-quarter 1997). In Mindanao, irrigated and rainfed rice production fell by 15.2 percent in the second quarter. Corn output was down 71.7 percent in second-quarter 1998 com-

pared with second-quarter 1997. Other crops including pineapple, sugarcane, and coconut also suffered production declines due to the effects of El Nino.

The decline in agricultural output may result in domestic supply shortages. Hence, imports of rice and corn are expected to increase dramatically in 1998. Although the devaluation of the peso was expected to boost the competitiveness of the country's high-value agricultural exports—including mangos, bananas, pineapples, and copra—rising production costs and El Nino damage nearly offset the devaluation's effect on prices.

The government was optimistic that the situation would improve in the second half of 1998 with the onset of the rainy season. Agricultural output is expected to recover in 1999.

■ Food and Agricultural Policy

The Estrada administration has declared that its focus will be on food security and poverty alleviation. The administration's action points on agriculture focus on food security, public investment in irrigation, research and development, public works, and the full implementation of agrarian reform. In addition, it aims to have an internationally competitive agricultural sector by increasing resource-based export earnings.

The Agricultural and Fishery Modernization Act (AFMA), which was enacted in December 1997, will define agricultural policy in the Philippines for the next several years. Essentially the AFMA prescribes urgent measures to modernize agriculture and fisheries for enhanced profitability and to meet the challenges of globalization. The AFMA will promote food security and sufficiency in the staple crops: rice and white corn.

Meeting the objectives of the AFMA will be a challenge for the new administration, given the current deplorable state of the agricultural sector and the paucity of government funds. Fully implementing the act would require more than P100 billion over the next seven years. The Department of Agriculture's 1998 budget was P14 billion, far short of the P20 billion required for the first year of implementation of the Agriculture and Fisheries Modernization Act.

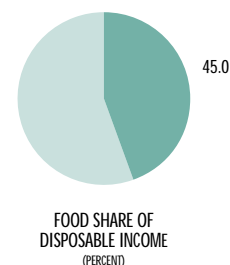
Infrastructure development, which was a high priority program under the Ramos administration, is also high on the agenda of the Estrada

administration. The achievements of the previous administration are impressive in a number of areas, particularly in electric power generation, construction of new roads and bridges that link production areas to local markets, and construction of port facilities, airports, and post-harvest infrastructure. Irrigation development was also advanced by shifting attention to large-scale irrigation projects from small pump systems and water impoundment projects. The recently passed Agriculture and Fisheries Modernization Act of 1997 addresses vital infrastructure development needs in the agricultural sector, as does the Philippine National Development Plan: "Directions for the 21st Century and the Updated Medium-Term Development Plan (1996–1998)." The construction of farm-to-market roads, the development of irrigation facilities, and the provision of post-harvest facilities are given particular attention in the modernization act. Other vital infrastructure includes shipping ports, airports, railways, and communication facilities intended to overcome the problems posed by the country's numerous islands.

The most important policy reform adopted by the government was to encourage greater private-sector participation in funding vital infrastructure projects. This has resulted in great success in the provision of necessary infrastructure support to link productive areas in the country and to solve the power crisis. The Build-Operate-Transfer (BOT) and related schemes were implemented to give the private sector a number of options for investing in infrastructure projects.

To achieve the overall vision for the infrastructure sector, some of the strategies being pursued by the government include

- Close cooperation and collaboration among government, private sector, and civil society in infrastructure planning, design, construction, and operation of projects
- Integrated planning for managing diverse issues, including local and regional economic impacts, equity access for the poor, gender-specific concerns, rural-urban linkages, and environmental considerations
- Investment in regional growth centers rather than megacenters such as metropolitan Manila
- Closer interface with agri-industrial development and environmental management through physical regional planning





Author's Note: The basic content of this paper was written in May 1998 and does not reflect the major implications of Russia's economic crisis, devaluation, financial default, and political change in August/September. It is difficult to predict future agri-food policy. However, a brief summary of the potential impacts follows.

At present, almost nothing can be predicted with certainty about Russia's food system, except a much higher rate of inflation and decreased purchasing power. Although the economic and political instability now is in its early stages, long-term impacts on the food system need to be considered. Short-term, the macroeconomic crisis comes at the same time as a serious drop in annual grain production, which may produce food shortages this winter in regions including parts of Northeast Russia.

Moreover, there could be offsetting effects on industries and markets. For example, ruble devaluation could improve the competitive position of domestic processed food products relative to imported foods. Importers will try to maintain market share while domestic industries' capacity to build share will depend on access to financing and willingness to undertake operational reforms.

Reduced purchasing power will depress short-term demand for meats and milk, thus accelerating bankruptcies and consolidations in those industries. This consolidation over the longer term could produce a stronger and more efficient livestock processing sector. Of course, the financial crisis is key. It will adversely impact not only food industries, but also will restrain credits to production agriculture, thus reducing working capital and access to farm inputs, while resulting in further expansion of barter transactions.

While financial resources are critical for the

sector, the most serious unanswered question is whether the new government will liberalize markets, imports, and production or will seek to impose greater controls. Those decisions will determine the viability and development of the Russian food system in the near and longer term.

The timing of this crisis and its impacts are very unfortunate, because the macroeconomic situation began to stabilize in 1997, creating a new environment for the agri-food sector in Russia.

Prior to the crisis of August/September 1998, positive benefits were beginning to accrue to the food system. First, falling interest rates made economic investment in the economy, including agriculture, more attractive. Second, growth in real income led to growth in the demand for food, especially animal products with high elasticities of demand. Third, economic growth and stabilization provided more secure conditions for foreign direct investment (FDI), which began to grow, and in turn created increased demand for domestic agricultural products.

At the same time, the agri-food sector began to adjust to the new market environment and to react adequately to market signals. Agricultural inputs increased (e.g., fertilizers) and livestock productivity grew. As a result, agriculture showed an upward trend in 1997 for the first time since reforms began in 1992. However, the Asian financial crisis led to a deterioration in the macroeconomic situation and correspondingly to worsening of the credit terms for agriculture.

In 1997, GDP grew by 0.4 percent while gross industrial product grew by 1.9 percent. This was the first expansion since reforms began.

The 1997 inflation rate was 11 percent. The consolidated budget deficit in November was equal to 4 percent of GDP, down from 4.1 percent in 1996.

However, weak tax collection meant that the state sector was unable to consistently fund its payroll. As of January 1, 1998, wage debts to the

employees in the state sector equaled 4,940 billion rubles (~\$823 million).

Aggregate money supply (M2) grew by 29.5 percent from January to October, while the CPI was up 9.3 percent. This slowdown in money turnover was further evidence of greater financial stability. The Central Bank rate, which started the year at 48 percent, was lowered four times to 21 percent, but was increased to 28 percent in November 1997 and 150 percent in May 1998 in response to the Asian economic crisis.

As of January 1, 1998, internal debt had risen to 384.9 trillion rubles (~US\$64.2 billion), an increase of 62.3 percent from a year earlier.

Real income was up by 3.5 percent in 1997 after falling 0.9 percent in 1996. Of the total population, 20.8 percent had incomes under the minimum living standard in 1997, down 5.5 percent from the 1996 level.

The total number of unemployed has been steadily decreasing, from 7 million people in March 1997 to 6.4 million at the end of the year.

■ Food Processing and Marketing

In 1997, three sectors of the food processing industry showed output gains: second-year sugar and flour showed modest gains and vodka and liquor jumped ahead sharply. Nevertheless, most of the food industry suffered declines. Meat and dairy processing showed the most precipitous drops with bread and groats production falling more slowly.

Efforts to stabilize the economic situation in the country stimulated FDI growth that can be characterized as follows:

- FDI was the dominant type of foreign investment in the agri-food sector (87 percent of total foreign investment)
- FDI is geographically concentrated in the Moscow area (60 percent) and
- in the food industry tends to be in high value-added processing and public catering
- Barter deals increased in 1997. Although the original state program of commodity credit was abolished, many intermediaries (i.e., procurement agencies and processors) charged with allocating centralized loans directed them to agricultural producers in commodity form. Almost all of these intermediaries insisted on payment in crops.

In addition, in 1997 the practice of in-kind tax collection (mostly in grain) spread in the major grain production areas. Farms' debts were purchased in exchange for crop (grain) deliveries.

So, most tradable crops were delivered both under direct contracts and as barter deals, re-

sulting in a lack of market transparency and arbitrage. Official price statistics represent only the cash part of the market.

Trade barriers imposed by regional authorities significantly increased in 1997. This practice was stimulated by the agriculture promissory bill, which prompted territories to close borders to make farms deliver crops to the regional funds to cover previous debts (commodity credit of 1996). As a result, farms that had better opportunities for cash sales outside the region, which would have enabled them to pay their debts in cash, had to deliver their crops to the regional authorities at lower prices.

The growth in real income in 1997 caused an increase in retail food sales. In the first three quarters of 1997, the increase in real income and in retail food sales coincided. In the last quarter real income fell slightly and the share of the population with average incomes below living standard increased, but retail food sales continued to grow.

Meat and meat products, milk and dairy, and bread and bread products dominate sales. During the past five years, the shares of fish and fish products and vegetables increased while the shares of sugar and butter declined.

The share of imported foodstuffs in total retail sales remained stable. Imported foodstuffs represent a larger share of retail sales than of total food consumption since a huge proportion of consumed foodstuffs do not pass through retail outlets (e.g., household production, food transactions between relatives, shadow transactions, and "street trade").

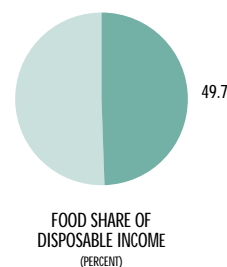
■ Agricultural Production and Trade

For the first time since the start of reforms, the agriculture sector expanded in 1997, by a slight 0.1 percent. Without doubt, the major factor contributing to this growth was favorable growing conditions after two years of drought. At the same time, there was evidence of higher yields both in crop production and livestock husbandry.

The almost continuous growth in real income in 1997 coupled with certain trade protectionism measures caused an increase in retail food sales and gross output in a number of food industries.

Budget financing for agriculture in 1997 was more favorable than for other economic sectors. As of December 1, 1997, budget allocations for agriculture amounted to about 5 percent of the total federal budget. Agriculture also received other federal outlays for special initiatives such as to fight crop pests.

Livestock farm-gate, wholesale, and retail prices in 1997 rose about 110 percent. The ratio of farm livestock prices to input prices improved, with input prices up 108.2 percent and



livestock product prices up 108 percent, compared with increases of 128.1 percent and 118.3 percent, respectively, in 1996.

The crop production situation is rather different. The growth in grain output caused grain prices to fall by an average of 2 percent. As a result, grain producers tended to hold back supplies waiting for a stronger market. Other crops experienced price increases. Agri-food's share of total imports in 1997 amounted to 27.7 percent, up slightly from 1996, while agri-food exports declined. Therefore, the agri-food trade balance became even more negative in 1997. Broken down by commodity, there were no significant changes in the mix of agri-food imports.

A rapid increase in meat demand and slow growth in domestic meat production led to a 40 percent jump in meat imports in the first half of 1997. In the third quarter, however, imports were down 22 percent.

Agri-food trade with the Commonwealth of Independent States (CIS, the union of 13 former Soviet republics excluding the Baltics) continued to grow in 1997. The share of trade with OECD countries, especially those within the EU, grew as well, which is notable since OECD countries are the major source of agri-food imports to Russia. Agri-food trade with China was down in 1997, due in part to a temporary ban on Chinese meat imports.

■ *Food and Agricultural Policy*

In 1997, significant changes were made in Russian food and agriculture policy. These changes had no immediate effect on food production or consumption, but are evidence of an important trend.

A presidential decree in March 1996 concerning citizen's land rights was implemented that had the effect of increasing the size of individual farms. In accordance with this decree, users of farmland would enter into contracts with owners. The terms for these leases were better than before. Thus, during the reform years, the average size of a private farm was around 43 to 44 hectares; last year the average rose to 48 hectares.

The controversial Land Code was adopted by the State Duma in summer 1997 and subsequently vetoed by the president, leaving the issue in limbo.

In 1997, an effort was made to introduce a competitive selection process for awarding contracts for the federal food fund instead of relying on designated suppliers. The open tenders for deliveries to the state food reserves began in spring 1997. In addition, a commission was set up to provide tenders for a state leasing program involving seeds, veterinary medicine, and equipment for baby food production.

Despite their ineffectiveness, the principal federal food subsidy programs in place in 1996 were unchanged in 1997; subsidy rates, however, were reviewed.

The State Duma adopted two food-related laws: On the State Regulation of the Agri-Industrial Complex and On Food Security. The new laws identify the entire arsenal of possible regulatory tools, but do not explain the legal implementation of the policy. Neither law is likely to have any real impact on agriculture and food policy in the near term.

Several steps were taken to further liberalize the agri-food market. State purchases were reduced. The Federal Food Corporation, which was set up three years ago as the major state procurement agency, was eliminated in 1997. Its functions were being reviewed by an independent auditing company. A new agency on Agri-Food Market Regulation will replace the corporation and have roughly the same functions.

The Fund on Preferential Credit to the Agri-Industrial Complex was set up in 1997. Initial plans called for using budget transfers and the repayment of 1996 loans (around 9 trillion rubles or US\$1.5 billion) for funding. Loans are to be repaid in one year at a subsidized interest rate of one-quarter of the Central Bank rate.

In 1997, major trade regulation changes were made regarding sugar and tea. In 1995–96, the domestic sugar market was adversely affected when 4 million tons of white sugar was imported from the Ukraine, 84 percent of which was allowed in duty free. According to estimates of the Ministry of the Economy, 50 percent of this sugar was produced from raw sugar delivered to the Ukraine from Cuba and Russia. The wholesale price of this sugar was 20 percent less than the cost of refined Russian sugar produced from Russian sugar beets.

In May 1997, a 25 percent import duty was imposed on refined sugar imported by Russia, including sugar from the other newly independent states except for Belarus, Kazakhstan, and Kyrgyzstan, which are members of a customs union of which Russia is also a member. Also, plans were made to introduce quotas for Ukrainian sugar imports, but negotiations between Russia and Ukraine delayed their introduction.

In June 1997, the import duty for packaged tea under three kilograms was increased from 10 to 20 percent. The unpackaged tea import duty remained at 5 percent. According to the Tea Association of Russia, packaged tea makes up 80 percent of the Russian tea market. India and Sri Lanka are the major sources of imports in Russia. In 1996, 34,000 tons of packaged tea was imported from India and 23,300 tons from Sri Lanka.



Singapore

Before the Asian currency crisis erupted in 1997, Singapore had enjoyed two decades of full employment and low inflation. Per-capita income more than doubled between 1990 and 1996 and increased another 6.8 percent in 1997.

However, in U.S. dollar terms, per-capita income fell by 4.8 percent in 1997 compared with 1996. This was due to the impact of the Asian currency crisis on the Singapore dollar, which depreciated by 12.1 percent against the U.S. dollar in 1997. Nevertheless, compared with 1994, the rate of depreciation was still small at 3.3 percent.

It is not surprising, therefore, that inflation of food prices is still low by international standards, with food prices increasing by an average of about 2.2 percent per year between 1992 and 1997, and prices were, in fact, slightly lower in 1997 than in 1996.

The impact of the currency meltdown in Southeast Asia is continuing to unfold. The initial impact on the value of the Singapore dollar was relatively marginal. In fact, the Singapore dollar appreciated against the currencies of neighboring countries in late 1997–98, although it depreciated against the U.S. dollar. In terms of food prices, Singapore has actually benefitted since Singapore imports food from the countries against whose currencies the Singapore dollar appreciated. However, as the currency crisis deepens, it will affect the stock market, the property market, and the labor market.

The most pressing problem facing the government is alleviating the impact of the currency crisis on employment as there are indications of increasing layoffs. Although the problem is not critical, as most Singaporeans have voluntary savings, the government has devised a package of cost-cutting measures to help companies retain their employees. This is very likely to include a reduction of variable wage components such as bonuses.

■ Food Prices and Consumption

From 1993 to 1997 food prices rose slowly, increasing by about 10 percent or 2 percent per year. In 1997, food prices increased by 2.2 percent compared with 1996 prices. Among uncooked foods, rice saw the steepest price increase, up 23 percent in 1997 over 1996, followed by seafood prices, which rose by about 6 percent. The price of poultry was up by only about 2 percent and dairy products by about 3 percent. On the other hand, the price of mutton increased by less than 1 percent, while the prices of eggs and beef fell, the former by about 2 percent and the latter by about 1 percent. Fruit and vegetable prices generally did not increase and, in some cases, fell by about 1 percent. The price of sugar, too, fell marginally while the prices of nonalcoholic beverages remained about the same.

■ Food Processing and Marketing

The proportion of income spent on food and beverages in Singapore remained stable in 1996 at 16.5 percent. While food and beverages constituted the largest expenditure item in the early 1990s, expenditures on transportation and communication took over the top spot in 1993. At the same time, expenditure on other items, such as recreation and education, have risen substantially. However, with the current recession, it is expected that the food and beverage share of total private consumption will increase as incomes fall and unemployment rises.

The manufacturing sector accounts for about 25 percent of Singapore's GDP. In 1990 and 1993, the food and beverages industry accounted for 3.6 percent of total manufacturing output. Since then, the share has declined, to 3 percent in 1996 and to 2.8 percent in 1997. Food production in Singapore is insignificant because of the scarcity of land. Furthermore, while the

value of output of the food and beverages industry increased from S\$3.1 billion (US\$1.94 billion) in 1993 to S\$3.6 billion (US\$2.57 billion) in 1996, it fell by 14 percent to S\$2.2 billion in 1997. (However, about 65 percent of the decline was due to the depreciation of the Singapore dollar against the U.S. dollar. On the other hand, the number of establishments in the food and beverages industry increased from 313 in 1996 to 320 in 1997.

The food and beverages industry contributed about 3 percent to total exports in 1997. The share of the food and beverages industry in total manufacturing output and in total exports is expected to continue to fall.

Food is very plentiful in Singapore. In 1993, there were 9,082 licensed food establishments scattered over the island, comprising restaurants, eating houses, snack bars, canteens, coffee shops, and supermarkets. The figure rose to 9,743 in 1997, an increase of 661 establishments or 7.3 percent over a five-year period. On the other hand, the number of licensed hawkers in Singapore declined from 4,286 in 1993 to 3,867 in 1997, representing a 9.8 percent fall over the same period.

■ *Agricultural Production and Trade*

The agricultural sector in the economy is of little significance and is devoted mainly to the production of eggs, fish, and vegetables for local consumption and orchids and ornamental fish for export. In fact, land for farming has declined over the years. Less than 2 percent of the total land area in Singapore is currently devoted to farming. To counter this decline, the government has initiated development of agro-technology parks to house large-scale intensive farms.

The most important farming activity is hen egg production, which meets about 35 percent of local demand for egg consumption. There are seven large-scale layer farms in the agro-technology parks now under development. These agro-farms are expected to produce about 1.6 million eggs per day, which would be about 53 percent of projected daily consumption in 2000.

Local fish production is mainly from the sea as there are not many aquaculture fish farms. Ninety marine farms culture high-value fish such as groupers and sea bass for the live fish market. Singapore has at present 104 fish processing establishments, of which 87 percent

manufacture fish products for the domestic market and 13 percent manufacture fish products for export to EU markets.

Agriculture's contribution to Singapore's GDP has never exceeded 0.3 percent. However, as Singapore is an entrepot, it also exports and imports agricultural products. In 1993, Singapore imported S\$5 billion (US\$4.4 billion) worth of food, including cereals, cereal preparations, fruits, vegetables, coffee and spices, beverages, and tobacco, which accounted for only 5 percent of Singapore's total imports. In 1997, Singapore's food imports rose to S\$5.2 billion (US\$5 billion). In terms of total imports, the proportion fell by one-fifth to 4 percent. Export of food, at S\$2.9 billion (US\$3.3 billion) in 1993, accounted for even less of total exports at 4.4 percent. Export of food rose to S\$3.2 billion (US\$3.8 billion) in 1997, which represented a 2.6 percent increase in total exports. A comparison of exports, domestic exports, and imports indicates that re-exports accounted for about 72 percent of food exports and about 53 percent of imports in 1997.

Foreign investment in Singapore in 1993 was US\$45.2 billion, of which 86 percent was direct investment. Foreign direct investment in agriculture and fishing was only about US\$22.6 million in 1993. As Singapore does not have a comparative advantage in agricultural products, foreign direct investment in this sector accounted for a mere 2 percent of total foreign direct investment. However, there was a small increase to US\$24.2 million in 1995. Nevertheless, this represented less than 0.5 percent of total foreign direct investment—a decline of about 80 percent in contribution to total foreign direct investment. Within the manufacturing sector, net investment commitments in the food and beverages industry was US\$57.3 million in 1993. This increased to US\$105.9 million in 1997, almost double that in 1993. Nevertheless, in percentage terms as a proportion of total net investment commitments, this represents a decrease from 2.4 percent in 1993 to 2 percent in 1997, a decline of 17 percent.

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Chinese Taipei

The economy in Chinese Taipei performed relatively well in 1997. The annual rate of GDP growth was about 6.7 percent, up from 5.7 percent in 1996. The agricultural sector's share of GDP continued to decline, accounting for only 2.8 percent in 1997. The industrial sector's share, which accounted for 34.8 percent, also declined. By contrast, the service sector maintained its upward trend, reaching 62.4 percent in 1997. While the outlook for the world economy is sustained growth, more moderate growth is expected in Chinese Taipei. A huge budget deficit will limit government expenditure and the financial turmoil in the Asian Pacific area will hamper trade performance. The real annual growth rate of GDP is expected to be no more than 5.5 percent in 1998 and 5.6 percent in 1999. The service sector will continue its strong performance and will enjoy a higher growth rate than the industrial sector due to the continuous expansion of the finance, insurance, and real estate sectors and the implementation of national health insurance. The industrial sector will maintain a steady recovering trend in the next two years, but this sector's share will continue to decline to an estimated 33.75 percent in 1998 and 32.97 percent in 1999.

The Asian financial crisis has caused a decline in the stock and foreign exchange markets in Chinese Taipei. After several years of appreciation, the NT dollar has reversed the trend and begun to depreciate. The average NT/US. exchange rate declined from NT\$27.5 in 1996 to NT\$32.6 in 1997. It is expected to reach NT\$34.1 in 1998 and NT\$33.5 in 1999. Both export demand and import growth in 1998 will be weakened by the Asian financial crisis. The CPI is expected to rise by 2.3 percent in 1998 and 2 percent in 1999. Overall, the medium-term economic outlook depends not only on the

stabilization of the Asian financial markets, but also on improvement in political and economic relations with mainland China.

■ Food Prices and Consumption

During the past four decades (1956–1995), the population of Chinese Taipei increased at an annual rate of 2.5 percent while agricultural production grew at 3.5 percent. This indicates that agriculture in Chinese Taipei has been able to provide enough food at reasonable prices to meet the changing demands of a growing population. Daily per-capita calorie intake, which has remained stable in recent years, was 2,994 calories in 1997, up from 2,877 calories in 1990.

Rice consumption has been falling in Chinese Taipei since the early 1970s, with the annual decline averaging 2.6 percent from 1970 to 1996. Per-capita rice consumption in 1996 was 58.8 kilograms (milled basis), down 0.5 percent from 1995. The increase in meat and fish consumption has not only provided an opportunity for the development of poultry, livestock, and fishery industries, but also has resulted in substantial increases in feed grain and soybean imports. Annual consumption of cereals used as animal feed has increased from eight kilograms per capita in 1952 to 372 kilograms in 1995. Increases in the consumption of vegetables and fruits have provided market incentives for farmers to change their crop composition. Increases in the level of food intake, combined with changes in consumption patterns and slower growth in agricultural production, have resulted in a decline in the food self-sufficiency ratio, particularly for cereal (rice excluded), pulses, and dairy products.

Rising income levels and reduced trade barriers have led to an increase in food imports. The relatively low price of foreign food commodities

has benefited consumers in Chinese Taipei. The food price index rose more slowly than the CPI in 1997 as the overall proportion of disposable income spent on food declined to 11.4 percent.

■ Food Processing and Marketing

The strong NT dollar, which until recently had been steadily appreciating, and the increase in labor and raw material costs have made the Chinese Taipei food processing industry less competitive in the world market. The domestic market is now an important factor in the growth of the food processing sector. The growth of female participation in the labor force and an expanding urban population have stimulated demand for more convenient forms of food and transformed the retail food system. Families now depend more heavily on ready-to-eat or semi-ready-to-eat foods. Convenience stores, supermarkets, and hypermarkets are expanding at the expense of the traditional grocery store. Raw and fresh-food supermarkets and convenience stores were introduced during the late 1980s. By 1994, there were 3,500 convenience stores in Chinese Taipei with annual sales of US\$1.5 billion. In 1998, there will be 4,500 convenience stores.

According to the government, the value of processed food production is projected to reach US\$24.6 billion by 2002 at an annual growth rate of 3 percent. High value-added and Chinese-style processed food have significant export potential, but the industry will be primarily oriented toward the domestic market. Automation, research and development, food safety standards, grading and labeling systems, and sales management will be crucial to the future of the food processing industry.

■ Agricultural Production and Trade

The average annual growth rate of agricultural production, which was 4.8 percent from 1952 to 1980, decreased to 2.1 percent between 1981 and 1995. Production of crops, livestock, and fishery products increased while forestry production declined. In 1995, crops accounted for 41 percent of total production, with forestry at 0.2 percent, fishery at 24.5 percent, and livestock 34.3 percent. In 2001, crops are expected to account for 39.5 percent, forestry 0.2 percent, fishery 25 percent, and livestock 35.3 percent. The production of fruits and vegetables, livestock, and fishery products will continue to become relatively more important in the future.

Rice is the country's staple crop. While self-sufficiency was once the goal, rice production

policy now focuses on balanced and diversified sources of supply. Since annual per-capita rice consumption is steadily decreasing and government rice stocks are high, the government has implemented a paddy diversification program to balance supply and demand. Rice cultivated areas and production will be reduced progressively as urban and industrial development encroaches on farmland. Planted area and production targets for 1998 are 355,000 hectares and 1.5 million metric tons, respectively. In 2001, the targets are 340,000 hectares and 1.5 million metric tons.

Due to the structural change in consumption, trade liberalization, and reduced import tariffs, the value of agricultural imports has increased annually. In 1996, agricultural imports totaled about US\$ 10 billion and accounted for 9.7 percent of Chinese Taipei's total imports. By volume, feed grains are the leading agricultural import. Increased meat and milk production has increased demand for corn imports. In 1981, 2.6 million metric tons of imported corn accounted for 60 percent of total grain imports. In 1996, the quantity of corn imported more than doubled and accounted for 84 percent of total grain imports.

Until June 1993, wheat imports were subject to government restrictions that in effect gave the 35 members of the Chinese Taipei Flour Mills Association a stranglehold on the market. Wheat imports were deregulated to comply with the domestic Fair Trade Law. Wheat can now be imported by government food administrative agencies and grain dealers, as well as by flour processors who use wheat as the main ingredient in their products. Due to a more open wheat import policy, 1993 imports totaled 918,000 metric tons, up 3 percent from the previous year. Wheat imports in 1996 reached a record high of 1 million metric tons.

Agricultural production has been constrained by high production costs and public concern about food safety and environmental protection. These factors have also contributed to a loss of competitiveness for many export products on the world market. For example, sugar cane was an important export during the 1950s and 1960s, but because of a decline in sugar cane production beginning in the early 1980s, Chinese Taipei started importing raw sugar to refine in 1995. Pork is an important recent export. In 1995, Pork exported to Japan alone totaled 198,000 metric tons, accounting for 38 percent of Japanese imports. But the outbreak of foot-and-mouth disease in March 1997 led to a ban on pork exports and huge losses for hog producers. In 1996, agricultural exports accounted for 4.7 percent, or US\$5.6 billion, of total exports valued at US\$116 billion.



■ Food and Agricultural Policy

To maintain the pace of agricultural development and to achieve an efficient food system in Chinese Taipei, the Council of Agriculture has launched the Over the Century Agricultural Construction Program (1997–2001). The main purposes of this program are to

- Modernize the agricultural sector through improvement in production efficiency and stability
- Construct a sustainable production environment and upgrade the standard of living in rural communities, and
- Enhance the welfare of both farmers and consumers.

The specific goals of this program include:

- Real GDP growth in agriculture of 0.5 percent annually
- An increase in the value of agricultural production from 1985's NT\$411 billion to NT\$505 billion in 2001
- An increase of average farm household income from 1984's NT\$623,000 to NT\$900,000 in 2001, and
- Annual growth in agricultural labor productivity of 3.6 percent

To help achieve these goals, the government proposes the following policy measures:

- Strengthen the food security system by promoting sustainable farmland use
- Develop high value-added farm products to enhance market competitiveness
- Advocate both horizontally and vertically integrated farmers' organizations
- Establish efficient and service-oriented food marketing systems
- Provide appropriate safety nets and associated measures to assist producers
- Develop new technologies including biotechnology and information technology
- Provide infrastructure to upgrade the living environment of rural communities
- Promote environmentally friendly farming and conservation practices

- Improve the efficiency and sustainability of natural resource management
- Enhance consumer confidence in and support of domestic products
- Strengthen international cooperative projects and multilateral trading arrangements and
- Improve the country's economic relationship with mainland China

The world is adapting to the challenges of globalization and evolving public expectations. The government of Chinese Taipei is committed to examining the future role of the food sector and related policies in light of recent developments, in particular the outcome of the Uruguay Round Agreement on Agriculture. The adjustment to free trade in agriculture will not be without winners and losers. However, if the proper approaches are used, the welfare of farmers can be maintained or even improved, while the costs of adjustment can be minimized. Nevertheless, the government recognizes that structural adjustment and policy reform are ongoing and that much more needs to be done.

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Thailand

During the past two decades, Thailand recorded the highest and most sustained national economic growth rates in the world. In the sixth national plan period (1987–1991), growth was especially strong, averaging 11 percent annually due to significant expansion in exports, tourism, and investment. During the seventh plan period (1992–1996), growth remained high but slowed to 8.5 percent per year. Since 1997, the economy has been stymied by the Asian economic crisis, which hit Thailand hard and forced the country to float its currency as of July 2, 1997. Since then, the economy has been continuously contracting. GDP growth for 1998 is estimated at -7 percent. This precipitous drop resulted from production cuts due to decreased domestic demand. A sharp reduction in private investments as a result of tightened liquidity in the domestic financial system also hampered production and exports.

Since mid-1977, the inflation rate has risen rapidly, from 4.4 percent in June to 7.7 percent in December 1997 and 10.7 percent in June 1998. The average inflation rate for the first half of 1998 was 9.7 percent, up from 4.4 percent during the same period in 1997. Increases in both food and nonfood prices were the chief inflationary forces. The inflation rate was expected to fall a little in the second half of 1998 for an annual average of no more than 10 percent. Possible factors that will help curb inflation include a less volatile baht and gradual interest rate reduction.

Private consumption is down due to a decline in purchasing power combined with the contraction of economic activities. The economic downturn has also had a widespread social impact. By year-end 1998, unemployment figures were expected to reach 2 million or approximately 4 percent of the labor force. Rural

areas are faring somewhat better than urban areas. Farm income has continued to expand, so agricultural development appears to be one possible strategy to alleviate the crisis.

Export volume increased by an average of 14.1 percent in the first half of 1998, but prices fell by an average of 16 percent as a result of the baht devaluation. Thus, export value in U.S. dollar terms was down by 4.1 percent compared with the same period in 1997. Economic turmoil in major Thai export markets and tightened domestic liquidity also curbed export growth.

Import value in U.S. dollar terms decreased by 38.1 percent during the first half of 1998 due to domestic liquidity problems, high interest rates, and domestic economic contraction. Reduced production in various sectors affected the decline in imports in all categories. Fuel imports decreased by 46.7 percent while imports of capital goods, raw materials, consumer goods, and vehicles were down by 32.8 percent, 35.6 percent, 35.7 percent, and 89 percent, respectively. The balance of trade in the first half of 1998 showed a surplus of B229,573 million (US\$5,494 million).

Liquidity remains a problem in the financial system due to the outflow of net capital to repay the foreign debt of commercial banks and government measures to strengthen financial institutions. Business faces a liquidity shortage, especially the export business, which was unable to apply for an increase in packing credit to cope with the baht weakness.

A possible recovery for the Thai economy in the second half of 1998 that would continue into 1999 depends on both internal and external factors. If the government is able to ease the problems of the financial system, the economy is expected to stop contracting. However, the general Asian economic crisis and its impact on the world economy may obstruct any Thai recovery.

■ Food Prices and Consumption

During the first half of 1998, food and beverage prices rose by 11.8 percent compared with a 3.4 percent increase during the same period in 1997. While prices for all food items increased, the steepest increases were for rice, flour, and flour products, which rose an average of 41.5 percent due to increased foreign demand from the effects of the baht devaluation. Prices of chicken meat and egg and dairy products rose at the composite rate of 12.1 percent, which was in line with price increases for feeds and production inputs. In addition, the abnormally hot weather caused a reduction in the hatching rate. Hot weather also affected fruit and vegetable prices, which were up by 10.7 percent due to heat-related crop damage and additional production costs. Prices of groceries and ready-to-eat foods increased at the rate of 8.3 and 8.8 percent, respectively.

■ Food Processing and Marketing

The production of manufactured food fell by 12.9 percent during the first five months of 1998 compared with a 0.5 percent drop during the same period in 1997. Raw materials shortages forced factories to lower production capacity, especially for sugar and canned pineapple. In early 1998, exports of canned and processed fruits, particularly pineapple, were trending downward. The 1997 pineapple crop was damaged by drought, resulting in a 13 percent drop in pineapple exports in early 1998 versus early 1997.

Thailand has a well-developed chicken industry, with full-cycle production that includes raising, producing feed, slaughtering, and processing. The baht devaluation has made the chicken industry more competitive in world markets.

In the wholesale and retail sectors, the value-added component had a declining trend due to cuts in production, imports, and consumer spending.

The wholesale price index increased by 19.2 percent during the first half of 1998 compared with 0.9 percent over the same period in 1997. Prices for agricultural and food products rose by 26.1 percent and 17.5 percent, respectively, while the feeds and manufactured foods climbed 27.8 percent and 17.4 percent, respectively.

■ Agricultural Production and Trade

During the first half of 1998, prices for most agricultural products were on the rise due to the weakness of the baht. Despite drought damage to some fruit crops and high production costs, overall production in the agricultural sector is expected to expand by 2.9 percent in 1998. The

crop subsector is expected to grow by 3.3 percent. High prices in 1997, a rise in both domestic and foreign demand, and sufficient rain resulted in expected production increases for such major crops as rice, soybeans, maize, and sugarcane.

Livestock production also increased by an estimated 3.3 percent in 1998 as a result of increased broiler output. Fishery production was up slightly at 1.9 percent following enactment of a government policy to expand marine coastal waters. In addition, high prices induced farmers to expand the production of black tiger prawns.

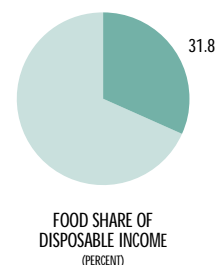
The export value of agricultural commodities in baht terms increased by 56 percent in the first half of 1998 compared with the same period in 1997. However, the export value in terms of U.S. dollars decreased by 7.4 percent because the baht was much weaker in the first half of 1998 than in the first half of 1997. In addition, the demand response to price changes of various food products is inelastic, according to the Office of Agricultural Economics. Among major products, sugar exports dropped sharply (38 percent), as did rubber (32.2 percent), and cassava (17 percent) exports, while rice exports grew considerably (22.1 percent). Frozen shrimp and prawn exports rose by 8.4 percent. Exports of canned seafood and rubber products increased by 30.6 percent and 13.7 percent, respectively.

Export value in baht terms was expected to rise in the second half of 1998 due to continuing increases in demand and a stable currency. Major export items expected to rise in baht value included rice, sugar, cassava products, prawns, and chicken.

Average farm prices for agricultural products were trending upward during the first half of 1998. Price improvement was achieved for almost all products, including paddy rice, jasmine rice, maize, sugarcane, palm oil, cassava, broilers, and black tiger prawns. Hog prices fell by 13 percent due to a decrease in demand. Farm prices were expected to continue rising in the second half of 1998. Agricultural production is projected to grow by at least 3 percent in 1999.

■ Food and Agricultural Policy

Since the onset of the financial crisis, the eighth national plan (1997–2001) has been revised to emphasize maintaining economic stability and safeguarding the social safety net. The agricultural sector is considered a possible source of hope for relief from the economic strain and a return to normalcy. Under conditions imposed by the IMF as the basis for its emergency loan package, the Thai government is committed to pursuing macroeconomic and financial reforms. To



maintain a monetary surplus in the government sector, the government has reduced budget expenditures to balance with revenues.

The Ministry of Agriculture and Cooperatives (MOAC) responded to the IMF conditions by adjusting its action plan, which aims to

- Maintain growth in the agricultural sector
- Accelerate increases in farmer income
- Increase agricultural sector competitiveness
- Accelerate the export of agricultural products
- Stimulate domestic production to substitute for imports
- Adjust agricultural systems to absorb unemployed laborers returning to rural areas and
- Prepare for global climate change

To achieve the MOAC objectives, agricultural policies have been formulated, including the following:

- The agricultural sector will be restructured, focusing on integrated production linked to markets and processing. In addition, sus-

tainable agriculture will be supported to reduce the risks to small farmers and to conserve natural resources

- Research and development into appropriate technologies will be undertaken to find ways to increase production efficiency and reduce costs
- To improve the quality of agricultural products and agro-processing operations, export quality standards will be established as necessary and appropriate; research into and development of quality control technologies is also planned
- To make farmer groups better able to help themselves, a campaign to promote savings in rural areas will be undertaken through agricultural cooperatives
- The MOAC will be restructured to allow it to provide services in an integrated manner, maintain and rehabilitate natural resources efficiently, provide information to farmers directly, and facilitate research with academic institutions and the private sector



United States

The U.S. economy entered 1998 having achieved a stellar GDP growth rate of 3.8 percent in 1997, the strongest rate in seven consecutive years of expansion. The associated gains in employment and modest increases in real wages have raised disposable income. This, combined with strong gains in the stock market, turned consumer spending into the dominant engine of growth. On the supply side, although unemployment dropped to a record low of 4.9 percent, productivity gains exceeded real wage increases, keeping inflation for consumer goods at a modest 2.3 percent, well below expectations earlier in the year. A higher valued U.S. dollar also helped cap inflationary pressures. The low inflationary pressures in turn helped stabilize lower interest rates, paving the way for higher corporate profits and lower costs for raw materials and oil and making business investment the auxiliary engine of growth.

No one knows with certainty the impact the still unfolding Asian economic crisis will have on the United States. In 1997, only 12 percent of U.S. GDP came from trade with the rest of the world. Because of the size and diversity of American economy, the post-mortem probably will reveal that it was a mixed blessing for the United States. One thing does seem certain: the sweeping tide of economic fallout from Asia is unlikely to significantly dampen overall economic activity in the United States. While a number of industries will suffer a loss of sales, others will prosper as interest rates remain steady or decline, oil prices drop, and Asian assets become less expensive. More imports and increased price competition will translate into lower consumer costs. On a national scale, the U.S. balance of trade is likely to deteriorate as imports increase and exports decline. GDP growth will decline by about 1 percent in 1998 compared with 1997. On the food and agricul-

tural side of the ledger, export levels will drop, with food leading the way.

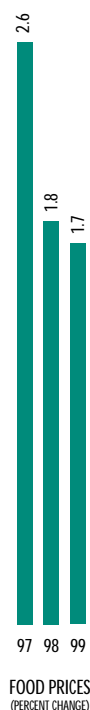
■ *Macroeconomic Situation and Outlook*

For a number of reasons, the U.S. economy is expected to slow from its above-average growth in 1997 to a more modest 2.7 percent growth rate in 1998 and a 2.3 percent growth rate in 1999. First, lower demand for consumer goods will slow growth. Second, because corporate profit growth is declining, previously fast-paced business equipment investment growth will slow. Third, current tight labor markets will limit employment growth. Finally, the Asian crisis and its spillover effects on other foreign economies will bring larger U.S. trade deficits.

Low oil prices and lower raw material prices supported by a strong dollar and solid productivity gains are expected to largely offset rising real wages. The inflation rate is expected to be about 2 percent, slightly lower than in 1997. Although bond yields are expected to drift up, they should average less than in 1997, providing a good interest rate environment for 1998. Continued productivity growth from recent investment, a competitive domestic and world economic environment, low raw material prices, and modest real wage increases are expected to result in continuing low inflation, with the 1999 rate projected at 2.7 percent.

The value of the dollar is expected to peak in 1998 but remain relatively strong in 1999, widening the trade deficit by promoting slower export and faster import growth. This will further limit inflation. The impact of the Asian crisis will primarily be felt through slower export growth because of slowing world economic growth and accelerating import growth. However, the slowdown in U.S. growth will curb import growth and partly offset the positive

impact of the stronger dollar on imports. Still, trade deficits will increase, slowing growth below what it would have been otherwise. However, with the economy near full employment, the overall impact will be slight. Asia's woes are expected to subtract 0.2 to 0.4 percent per year from U.S. growth during the next two to three years, while shaving 0.1 to 0.3 percent per year from inflation and reducing interest rates by roughly 0.1 to 0.25 percent. The Federal Reserve Board continues to weigh the signs of above-average growth against the dampening effect of the Asian crisis. For now, it appears that the crisis and its repercussions have obviated the need for a tighter monetary policy to restrain growth in consumer demand.



■ Food Prices and Consumption

Food prices are projected to rise by 1.8 percent in 1998 and 1.7 percent in 1999, after a 2.6 percent increase in 1997. In 1998, food at home is projected to rise less than 2 percent and food away from home is expected to be up 2.6 percent. Because of El Nino-related crop failures, the strongest price increases are expected to be for fresh fruits and vegetables. Prices for highly processed foods, such as cereals and bakery products and other prepared foods, are also expected to rise because of tight labor markets.

The following factors should continue to moderate retail food prices in the near future:

- Low overall inflation will dampen production costs (packaging, transportation, and advertising)
- High levels of productivity growth relative to wage gains will keep per-unit costs low
- Stable farm value of the food dollar, about 21 cents in 1998 and 20 cents in 1999, will keep the cost of raw commodity inputs in check and
- A fiercely competitive environment in the food processing, manufacturing industries, and food service and retailing sectors will limit price increases

Prices for food away from home, which contain a large service component influenced by nonfarm market developments, are expected to rise faster than food-at-home prices, 2.6 percent in 1998 and 2.5 percent in 1999. The 1997 price increase of 2.8 percent for food away from home was the largest since 1991 and was driven partly by tighter labor markets. However, continued strong competition in the food service industry will prevent higher wage and raw materials costs from being completely passed through to consumers.

Record red meat and poultry production,

along with clouded export prospects due to economic problems in Asia, drove livestock prices downward in 1998. Although meat supplies are abundant, retail meat prices are expected to drop only 1 to 2 percent from 1997. In addition to large U.S. meat supplies, the currency devaluations in other countries and the need to find alternative meat markets due to economic problems in Asia are making the United States a more attractive market for foreign exporters.

The percentage of disposable income spent on food will continue to decline, from 11.6 percent in 1990 to a projected 10.3 percent in 1999. The percentage of income that consumers spend in the food service industry will similarly continue to fall, reaching 4 percent in 1998 and 1999. However, by 1999, more than 47 percent of consumers' food dollars will be spent on food away from home, compared with 39 percent in 1968. Rising household incomes will cause per-capita food expenditures to climb to an estimated \$7.71 in 1999 from \$6.15 per day in 1990. By 1999, per-capita caloric availability is expected to increase to 3,800 kilocalories a day from 3,457 in 1990, a 9 percent rise.

■ Food Processing and Marketing

The food marketing system continues to be one of the largest sectors in the U.S. economy, accounting for a tenth of the value added to the GDP and directly employing 10 percent of the nation's labor force. Employment has remained stable in the food processing sector at about 1.6 million persons, but has grown rapidly in both the food store and food service sectors. By 1999, the food marketing system is expected to earn \$.80 of every \$1 spent by consumers on food, up from \$.76 in 1990.

Retail food expenditures are divided between the away-from-home or food service industry and the at-home or food store industry. The food service industry's steadily growing share of total food expenditures seems to have leveled off in 1997 at 47 percent. Part of the reason may be a blurring of the distinction between the food service and food store industries. As incomes grow, consumers continue to purchase more prepared ready-to-eat food. But more of these purchases are being made at supermarkets and convenience stores as these outlets fight for market share with an ever-widening selection of freshly made foods. Supermarkets have expanded their delicatessens and many are experimenting with chef-prepared home meal replacements in an effort to compete with the food service industry.

Food store sales totaled \$430 billion in 1997

and are projected to reach \$444 billion in 1999. Grocery stores, including supermarkets and convenience stores, account for nearly 95 percent of food store sales with specialized food stores (e.g., produce stores and meat stores) accounting for the rest. The supermarket industry is facing more competition from nontraditional food retailers such as Wal-Mart, which operate supercenters (large general-line discount stores with a full supermarket section). There are about 800 supercenters in the United States and the concept is growing at 80 to 100 stores per year.

Sales of meals and snacks in the food service industry reached \$299 billion in 1997 and are projected to grow to \$326 billion in 1999. The commercial sector of the food service industry, including separate eating and drinking establishments, accounts for 79 percent of total sales. The institutional sector (food service operations in schools, hospitals, nursing homes, office buildings, and military installations) accounts for the remaining 21 percent.

Merchant food wholesalers take ownership of products from manufacturers and distribute to food stores and the food service industry. The largest supermarket firms tend to operate their own wholesale distribution centers and are not included in the food wholesaling industry. Wholesalers generally specialize in serving either the food service industry or retail food store outlets. Merchant wholesale food sales grew to \$329 billion in 1997 and are projected to reach \$358 billion in 1999.

The food processing sector consists of about 15,000 firms and over 20,000 establishments. Sales from these food processing establishments reached \$465 billion in 1997 and are projected to grow to \$495 billion in 1999. Meat products is the largest industry group, followed by beverages, dairy products, grain mill products, and preserved fruits and vegetables.

To maintain profits despite slow growth in domestic real sales and low inflation, food marketing firms have focused on reducing costs, restructuring by consolidation and spinning off noncore assets, and globalization through both trade and foreign direct investment.

Merger and acquisition activity in the food marketing sector nearly reached the record high set in 1986. But nearly half of all acquisitions were also divestitures, as firms sold off noncore or underperforming assets. While many firms are increasing their vertical integration activities, especially in the meat sector, other firms are moving away from vertical integration. Some supermarket firms have sold their dairy processing and baking plants, while packaged food firms have divested flour mills, oil seed crushing mills,

and can manufacturing operations. Merger activity among the relatively fragmented food service industry was at a record high for the second consecutive year. The food wholesaling industry has undergone rapid consolidation, especially among food service distributors. Supermarket industry mergers also increased as several large West Coast firms were acquired. Merger activity among food processors was down in 1997 for the second straight year. For 1998 and 1999, merger activity in the food marketing system is expected to continue at a pace of about 400 to 500 acquisitions and divestitures per year.

U.S. food processors have established affiliates in many foreign countries. U.S. foreign direct investment in these affiliates (cumulative value of assets on a historical cost basis) grew from \$16 billion in 1990 to over \$36 billion in 1996. Sales from these affiliates, which are over four times larger than U.S. exports of processed food products, grew from \$76 billion in 1990 to \$113 billion in 1995 and are projected to be \$155 billion in 1999. About 55 percent of U.S. foreign direct investment is concentrated in Europe, with 18 percent going to Asia and other Pacific Rim countries, and 9 percent to Canada.

Foreign firms have also heavily invested in U.S. food processing plants. About 12 percent of the U.S. food processing industry is foreign owned. Foreign direct investment in U.S. food processing increased from \$22 billion in 1990 to \$28 billion in 1996. Sales from these foreign-owned establishments increased from \$47 billion in 1990 to \$51 billion in 1995 and are projected to be \$54 billion in 1999. The sources of inward foreign direct investment are roughly the same areas that are the targets of U.S. outward investment: 66 percent comes from Europe, 18 percent from Asia and other Pacific Rim countries, and 13 percent from Canada.

As processed food trade and foreign direct investment grow to meet consumer demand for more variety and convenience, U.S. food commerce requires infrastructure development to provide the transportation, terminal, storage, and freezing/cooling facilities needed to bring safe, nutritious food products to consumers in the United States and throughout the world.

To reduce the cost of serving multiple markets, companies seek greater uniformity in rules for shelf-life and labeling of ingredients and nutritional content. If a food product is intended for consumers in a foreign market, it must be subject to WTO requirements including:

- Nondiscriminatory treatment upon arrival at its destination
- Timely inspection at the border



- Notification in advance if import requirements change
- Reasonable recognition of the equivalence of processing methods based on scientific evidence and
- Transparency in import regulations generally

■ *Agricultural Production and Trade*

Strong global trade prospects and a market-oriented domestic agricultural policy combine to produce a favorable outlook for U.S. food and agriculture. The U.S. Department of Agriculture expects generally favorable global economic growth and trade liberalization through WTO regional and bilateral agreements. Greater market orientation in the domestic agricultural sector under the 1996 Farm Act puts U.S. farmers in a favorable position for competing in the global marketplace.

U.S. export and import forecasts for 1998 and 1999 have been revised to reflect changing conditions, particularly the effects of the Asian economic crisis. Weakened purchasing power and devalued exchange rates in Southeast Asian countries are expected to slow the pace of food product exports and quicken the growth of imports. Overall, food exports are expected to fall again in 1998 before resuming growth in 1999. Food imports are expected to continue growing in both years.

Export growth areas for 1998 include vegetable oils, live animals, dairy products, horticultural products, rice milling products, pet food, and wine, despite lower Asian demand. Corn exports are expected to decline in 1998 due to weaker Asian demand and stronger competition from China, Eastern Europe, and Argentina. Soybeans also face strong competition from South America.

Imports are expected to continue rising during 1998 because other countries' currencies have been depreciating, making imports from many places relatively less expensive. Coffee, the largest import item, leads import growth. Almost all the other import categories also have increased in 1998, except for rubber and sugar.

In addition to the above factors, the rate of trade growth is also subject to business expectations of further trade liberalization through the Free Trade Area of the Americas, APEC's liberalization of multiple sectors including processed foods and oil seeds, and regional trade agreements in South America and Central America.

Expansion of food business trade and foreign direct investment may be hindered by lack of fast-track negotiating authority, but anticipated trade liberalization is expected to act as a catalyst to further growth.

■ *Food and Agricultural Policy*

The U. S. government is committed to greater market orientation in agriculture. The Federal Agriculture Improvement and Reform Act of 1996, in effect through 2002, will eliminate supply controls and increase planting flexibility. By responding to market signals rather than government programs, agricultural producers will become more efficient.

Trade in food products, particularly fresh fruits and vegetables, may be affected by food safety concerns. Imported produce has been identified as the source of several highly publicized outbreaks of food-borne disease. After a government report found federal efforts to ensure the safety of imported foods to be "inconsistent and unreliable," a new initiative was announced to promote the safety of imported fresh produce. The initiative includes:

- Enhanced U.S. Food and Drug Administration oversight and inspection of imported foods
- Development of guidance on good agricultural and manufacturing processes for foreign growers and
- Improved monitoring and inspection activities abroad

Despite abundant wealth and efficient food markets and agricultural producers, poverty and hunger exist. The United States administers 15 food assistance programs at a total annual cost of over \$38 billion. The programs reflect the government's commitment to increase food security, reduce hunger, and enhance nutrition.

The United States enjoys advanced transportation and telecommunications systems. The dramatic improvements over time have lowered the barriers to trade and made trade in some perishable products more feasible and competitive in geographically distant markets. U.S. policy is aimed at encouraging investment and innovation, thereby reducing the real cost of transportation and transactions, increasing trade flows, and shortening the economic distance among markets.



Vietnam

The effect of the Asian economic and financial crisis on the Vietnamese economy is reflected in a sharp drop in GDP growth for 1998. GDP had been growing at a healthy rate for the past few years (9.5 percent in 1995, 9.3 percent in 1996, and 9 percent in 1997), but government estimates indicate that GDP growth for the first six months of 1998 was just 6.6 percent. The year-end growth rate was expected to be from 6 to 7 percent. Challenges to the economy include a decline in foreign direct investment, an increase in unemployment, a wave of devaluations in other Asian countries that created stronger competition for international trade (export growth rate was down 50 percent from in 1997), a high deficit rate (4 percent of GDP), and unfavorable weather conditions.

■ *Food Prices and Consumption*

The population growth rate in Vietnam for 1998 is estimated at 1.8 percent and is expected to continue to decline by about 0.1 percent per year through 1999. Food demand in Vietnam is expected to expand with increases in household income. The recent slowdown in the growth rate of per-capita incomes (22 percent in 1995 but only 11.9 percent in 1996) is expected to worsen for 1997 through 1999. The lower rate of increase in income will result in a lower rate of increase in food consumption.

Although the inflation rate in 1996 and 1997 was 4 percent, food prices were quite low during this period. The growth rate for food prices in 1996 and 1997 was 0.4 percent and 2.1 percent, respectively. The growth rate for prices of industrial goods and services was 4.4 percent in 1996 and 8.1 percent in 1997. Although lower food prices encouraged food consumption in the urban areas and managed to partly offset the

reduction in consumption resulting from the reduction in incomes, the lower prices received by producers pulled down farmers' incomes. The growth rate of retail sales in 1997 was just half that of 1996.

Twice in 1998 Vietnam adjusted the official exchange rate, devaluating the Vietnamese dong against the U.S. dollar by 3.8 percent in February and 10 percent in August. In the first seven months of 1998, the inflation rate increased 5.6 percent and the average price of consumer goods rose 6.9 percent from December 1997. In addition, the demand for rice in international markets increased dramatically causing an increase in domestic rice prices. Food prices increased by 18.3 percent in 1998. Farmers' incomes are recovering, but prices for consumer goods and services increased more than 6 percent during the first half of 1998. Increases in domestic rice prices and total rice consumption are forecast to slow down in the future.

■ *Agricultural Production and Trade*

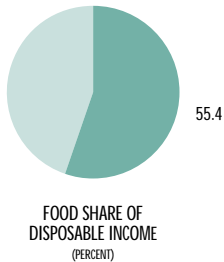
Despite serious effects from the El Nino, agricultural production in Vietnam continued to expand in 1997. Total food production increased by 4.6 percent in 1997 compared with 1996. Rice paddy production rose to 27.7 million tons in 1997. Production of other food, in paddy equivalent terms, totaled 2.9 million tons in 1997. Exports of rice increased by 18.2 percent in 1997, reaching a total of 3.5 million tons.

In addition to El Nino, Typhoon Linda at the end of 1997 and a severe drought in early 1998 caused crop damage estimated at 13,000 billion VND. Those losses equaled 16.8 percent of the sector's GDP in 1997 and reduced farm incomes and farmers' capital accumulation for reinvestment. Total production of the first paddy crop in 1998 was down by an estimated 1.5 percent from

a year earlier, but production of the second crop was about equal with last year's. Rice prices on the domestic market remain quite high, so rice exports are expected to be kept under control be somewhat constrained. For the first six months of 1998, rice exports totaled 2.7 million tons.

Paddy production in 1998 was expected to increase by about 3 percent with total production for the year reaching 28.5 million tons. The same rate of increase in paddy production is expected for 1999, with total production reaching 29 to 29.5 million tons. Record-high paddy production of 30 million tons is expected in 2000.

Despite the current rice exporting quotas, rice exports in 1998 and 1999 are likely to reach 4 million tons. As profits from rice production decline, farmers are expected to shift some land to production of other crops, including fruits and vegetables, for which export prospects may be better.



■ Food and Agricultural Policy

Both domestic and trade policies are expected to continue changing as economic reform proceeds, with the most significant changes in trade policies. Currently, export quotas are the only method available to the government for balancing the benefits of exports with the need for food security. Quotas are announced early in the year and allocated to every registered exporter, including local state enterprises and private companies. The quota volume depends on the current production and export situation.

Export taxes are low: between 1.5 percent for 25 percent broken rice and 2 percent for other types of rice. Domestic policies currently in place to strengthen the competitiveness of rice exports include rural credit availability, improvements in rural infrastructure, and investments in processing and marketing enterprises.

Australia

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS <i>a</i>							
Per-capita caloric intake	Cal/day	3013	3068	3066(E)	3063(E)	3059	3056
From animal products	Cal/day	1088	1044	1039(E)	1034(E)	1028	1023
From vegetable products	Cal/day	1925	2025	2027(E)	2029(E)	2031	2033
Protein (% of calories)	%	14.1	13.9	13.9(E)	13.9(E)	13.9	13.9
Fat (% of calories)	%	32.2	31.7	31.5(E)	31.4(E)	31.3	31.2
Carbohydrates (% of calories) <i>b, c</i>	%	49.7(E)	49.8(E)	49.9(E)	50.0(E)	50.1	50.2
INCOME AND FOOD PRICES							
Per-capita income <i>d, e, f</i>	US\$/capita	10582	10888	11157	11274	11519	11782
% of disposable income spent on food <i>d, g</i>	%	16.0	16.3	16.3	16.2	16.3	16.4
% spent eating out	%	2.2	2.4	2.4	2.3	2.4	2.5
Food price index <i>h</i>	1990=100	108.6	112.9	116.0	119.0	120.8	123.2
General price index (CPI) <i>h</i>	1990=100	112.2	116.1	119.4	121.7	124.1	127.2
POPULATION <i>e</i>							
Total population	Million	17.9	18.1	18.3	18.5(E)	18.7	18.9
Urban <i>i</i>	Million	14.5	14.7	14.9	15.1(E)	15.3	15.4
Nonurban	Million	3.4	3.4	3.4	3.4(E)	3.4	3.5
Share of population in the following age groups <i>b, j</i>							
0-4 years	%	7.6	7.6	7.6	7.6	na	na
5-14 years	%	15.0	15.2	15.3	15.4	na	na
15-19 years	%	7.5	7.4	7.5	7.6	na	na
20-44 years	%	40.9	41.2	41.4	41.7	na	na
45-64 years	%	21.3	21.9	22.5	23.2	na	na
65-79 years	%	9.7	9.9	10.1	10.2	na	na
80-over	%	2.6	2.7	2.8	3.0	na	na
Median age of population	Years	33	33	34	34	na	na
Female labor force participation <i>k</i>	%	52.6	53.8	53.8	53.7	na	na
LIFE EXPECTANCY <i>l</i>							
Males (E)	Years	74.7	74.7	75.4	75.4	75.4	75.4
Females (E)	Years	80.6	80.6	81.2	81.2	81.2	81.2
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports <i>m</i>	1000 Tons	18007	9315	20194	24537	19361	18191
Grain imports <i>b, m</i>	1000 Tons	32	206	104	43	35	35
Total food and agricultural trade <i>f</i>	Million US\$	15332	13466	15840	17648	16162	16232
Total food and agricultural exports <i>f, m</i>	Million US\$	13250	11165	13622	15293	13762	13782
Perishable products <i>f, m</i>	Million US\$	3478	3181	3223	3647	3507	3523
Fishery exports <i>n</i>	Million US\$	953	982	1008	1111	656	833
Total food and agricultural imports <i>f, o</i>	Million US\$	2082	2301	2219	2355	2400	2450
Perishable products <i>f, o</i>	Million US\$	492	543	556	541	550	550
Fishery imports <i>o</i>	Million US\$	366	369	383	373	na	na
Port capacity <i>p, q</i>	1000 TEUs	1605	1688	1868	2060	na	na
Road access <i>r</i>	1000 Kms	na	790	na	na	na	na
Rail access <i>s</i>	1000 Kms	na	53	na	na	na	na
Power generation <i>b, t</i>	GWh	167465	173163	176853	183129	191252	197910
Percent of population with refrigerators (E)	%	100.0	100.0	100.0	100.0	100.0	100.0
FOREIGN INVESTMENT IN THE FOOD SECTOR <i>b, u</i>							
Inward FDI in the food sector, total	Million US\$	8261	8046	na	na	na	na
From other PECC economies	Million US\$	5230	5203	na	na	na	na
Outward FDI in the food sector, total	Million US\$	1147	1303	na	na	na	na
To other PECC economies	Million US\$	547	606	na	na	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY <i>d</i>							
Agriculture as a share of GDP <i>d</i>	%	3.2	3.1	3.7	3.5	3.4	3.4
Self-sufficiency in grains <i>a, v</i>	%	290.5	174.4	291.1	400.8	301.9	277.2
Self-sufficiency in horticultural products <i>b, n, o</i>	%	180.6	164	170.8	194.9	na	na
POLICY TRANSFERS <i>w</i>							
Consumer subsidy equivalents	%	-6	-6	-6	na	na	na
Total transfers (subsidy/tax)	Million US\$	-316	-310	-288	na	na	na
Total transfers per capita	US\$/capita	-18	-17	-16	na	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	4.7	4.3	3.7	2.4	3.7	3
Interest rate	%	9.0	10.2	10.8	9.7	8.5	8.5
Exchange rate <i>b</i>	AUS/US\$	0.69	0.74	0.76	0.78	0.68	0.66

na = not available E = estimate F = forecast

Sources:

- FAO database
- Data on a financial year (July-June) basis (1990-1989-90).
- ABS, Apparent Consumption of Foodstuffs and Nutrients Australia, cat. no. 4306.0. Data beyond 1992 have been extrapolated from historical trend
- ABS, National Income, Expenditure and Product, cat. no. 5206.0
- ABS, Australian Demographic Statistics, cat. no. 3101.0
- Data expressed in average 1989-90 prices
- ABS, Retail Trade, cat. no. 8501.0
- ABS, Consumer Price Index, cat. no. 6401.0

- Defined as sum of persons in population centers greater than 30 000 residents
- ABS, Estimated Resident Population of Australia, cat. no. 3201.0
- ABS, Labour Force, cat. no. 6202.0
- United Nations, World Population Prospects 1994 revision
- ABS, Foreign Trade: Magnetic Tape Service, cat. no. 5464.0
- ABS, Merchandise Exports - Australia, cat. no. 5432.0
- ABS, Merchandise Imports - Australia, cat. no. 5433.0
- Total of major Australian ports of Brisbane, Sydney, Melbourne, Adelaide and Fremantle
- Bureau of Transport and Communication Economics, Waterline, issue no. 14

- Austroroads, Austroroads '96: An overview of Australia's road system and its use, 1997
- Department of Transport, Tracks to the nation: an overview of Australian railways, 1995
- ABARE, Australian Energy Consumption and Production: Historical Trends and Projections to 2009-10, 1997
- ABS, Detailed Country by Industry, Foreign Investment in Australia and Australian Investment Abroad - Total Direct Investment
- ABARE, Australian Commodity Statistics, 1997
- OECD, Agricultural Policies in OECD Countries, 1997

Canada

	UNITS	1994	1995	1996	1997E	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	3086	3093	3070	3075	3081	3080
From animal products	Cal/day	907	902	902	900	903	902
From vegetable products	Cal/day	2179	2191	2168	2175	2178	2178
Protein (% of calories)	%	15.0	14.8	14.7	14.5	14.3	14.1
Fat (% of calories)	%	34.0	33.9	33.6	33.3	33.1	32.9
Carbohydrates (% of calories)	%	51.0	51.3	51.8	52.2	52.6	53.0
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	12358	12530	12596	11600	11490	11805
% of disposable income spent on food	%	13.7	13.7	13.6	13.7	13.7	13.7
% spent eating out	%	4.4	4.4	4.3	4.3	4.4	4.4
Food price index	1992=100	102.1	104.6	106.0	108.2	110.2	113.0
General price index (CPI)	1992=100	102.0	104.2	105.9	107.8	110.2	112.9
POPULATION							
Total population	Million	29.4	29.7	30.0	30.3	30.6	30.9
Urban	Million	22.5	22.8	23.1	23.4	23.6	23.8
Nonurban	Million	6.8	6.9	6.9	7.0	7.1	7.1
Share of population in the following age groups							
0-4 years	%	6.9	6.7	6.5	6.3	6.3	6.3
5-14 years	%	13.5	13.5	13.5	13.5	13.5	13.5
15-19 years	%	6.7	6.7	6.7	6.7	6.7	6.7
20-44 years	%	40.5	40.2	39.9	39.5	39.2	39.2
45-64 years	%	20.5	20.9	21.3	21.6	22.1	22.1
65-79 years	%	9.3	9.3	9.4	9.5	9.5	9.5
80-over years	%	2.6	2.7	2.8	2.9	2.9	2.9
Median age of population	Years	34.4	34.8	35.2	35.6	36.0	36.3
Female labor force participation ^a	%	57.0	56.0	57.2	56.7	56.7	56.7
LIFE EXPECTANCY							
Males	Years	75.1	75.4	75.7	76.0	76.3	76.6
Females	Years	81.1	81.3	81.4	81.5	81.6	81.7
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	26295	21021	25574	24610	22702	24085
Grain imports	1000 Tons	1105	856	941	1136	1131	1297
Total food and agricultural trade	Million US\$	20012	22055	24461	25834	25056	26044
Total food and agricultural exports	Million US\$	11293	12801	14721	15099	14259	14733
Perishable products	Million US\$	8746	9234	9866	10341	10855	11395
Fishery exports ^b	Million US\$	2118	2232	2172	2119	2160	2171
Total food and agricultural imports	Million US\$	920	1050	1176	1141	1072	1109
Perishable products	1000 Tons	3871	4012	4091	4211	4358	4500
Fishery imports	Million US\$	920	1050	1176	1141	1072	1109
Port capacity ^c	Million tons	400	403	407	410	413	417
Road access	1000 Kms	895	898	902	905	907	908
Rail access	1000 Kms	85	83	80	80	78	77
Percent of population with refrigerators	%	99.6	99.7	99.6	99.8	99.8	99.8
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	9304	11645	13138	14449	16000	18000
From other PECC economies ^d	Million US\$	4869	5948	6324	6379	6000	6200
Outward FDI in the food sector, total	Million US\$	6362	6215	6085	5956	5800	6100
To other PECC economies	Million US\$	3416	2904	3319	3115	3100	3200
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	1.6	1.5	1.6	1.5	1.4	1.4
Self-sufficiency in grains	%	1.7	1.8	2.1	1.7	1.8	1.8
Self-sufficiency in horticultural products	%	0.9	0.8	0.9	0.9	0.9	0.9
POLICY TRANSFERS							
Consumer subsidy equivalents	%	-17.5	-11.7	-12.3	-14.4	-14.0	-14.0
Total transfers (subsidy/tax)	Million US\$	5810	5197	5237	4329	4300	4300
Total transfers per capita	US\$/capita	198	175	175	143	141	139
MACROECONOMIC INDICATORS							
Exchange rate	CAN\$/US\$	1.37	1.37	1.36	1.39	1.41	1.40

E = estimate F = forecast

a. Women over 25 years of age

b. Includes all seafoods, not just fish

c. Marine port estimated capacity

d. This is an estimate based on sectoral U.S. Foreign direct investment supplied by Statistics Canada and information regarding overall FDI trends from other countries

Chile

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2747	2740	2810	na	na	na
From animal products	Cal/day	580	589	605	na	na	na
From vegetable products	Cal/day	2168	2151	2205	na	na	na
Protein (% of calories)	%	11.0	11.0	11.0	na	na	na
Fat (% of calories)	%	25.0	26.0	26.0	na	na	na
Carbohydrates (% of calories)	%	64.0	63.0	63.0	na	na	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	3480	4415	4621	5113	5080	5425
% of disposable income spent on food	%	29.0	28.3	27.7	27.0	na	na
% spent eating out	%	3.7	3.7	3.7	3.7	na	na
Food price index	1990=100	166.4	181.6	189.1	206.6	na	na
General price index (CPI)	1990=100	163.5	176.9	188.6	200.0	209.0	217.4
POPULATION							
Total population	Million	14.0	14.2	14.4	14.6	14.8	15.0
Urban	Million	11.8	12.0	12.2	12.4	12.6	12.8
Nonurban	Million	2.2	2.2	2.2	2.2	2.2	2.2
Share of population in the following age groups							
0-4 years	%	10.8	10.3	10.2	10.0	9.8	9.6
5-14 years	%	19.8	19.1	19.1	19.1	19.1	19.1
15-19 years	%	8.4	8.5	8.4	8.4	8.4	8.4
20-44 years	%	39.3	39.5	39.4	39.3	39.1	38.9
45-64 years	%	15.4	15.9	16.1	16.4	16.6	16.9
65-79 years	%	5.2	5.5	5.5	5.6	5.7	5.8
80-over years	%	1.1	1.2	1.2	1.2	1.2	1.3
Median age of population	Years	26.7	27.0	27.3	27.5	27.8	28.0
Female labor force participation	%	30.7	31.5	31.9	32.3	32.7	33.0
LIFE EXPECTANCY							
Males	Years	71.6	71.6	72.2	72.3	72.3	72.4
Females	Years	77.5	77.5	78.2	78.3	78.3	78.4
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	68	89	91	99	na	na
Grain imports	1000 Tons	1270	1333	1421	1304	na	na
Total food and agricultural trade	Million US\$	4110	5252	5621	5539	na	na
Total food and agricultural exports	Million US\$	3286	4184	4324	4218	na	na
Perishable products	Million US\$	1079	1277	1487	1429	na	na
Fishery exports	Million US\$	1366	1782	1772	1873	na	na
Total food and agricultural imports	Million US\$	824	1068	1297	1321	na	na
Perishable products	Million US\$	170	216	260	272	na	na
Fishery imports	Million US\$	22	44	33	30	na	na
Port capacity	1000 Tons	26427	27657	30959	30917	na	na
Road access	Kms	79423	79032	79068	na	na	na
Rail access	Kms	6925	6445	5998	na	na	na
Power generation	GWh	25267	26742	30261	32332	na	na
Percent of population with refrigerators	%	54.6	54.6	54.6	54.6	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	75.8	52.9	37.7	26.0	na	na
From other PECC economies	Million US\$	8.6	23.0	19.7	13.3	na	na
Outward FDI in the food sector, total	Million US\$	0.0	0.0	26.6	1.4	na	na
To other PECC economies	Million US\$	0.0	0.0	0.0	0.0	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	7.1	6.9	6.5	6.0	na	na
Self-sufficiency in grains	%	68.8	68.8	66.0	71.2	na	na
Self-sufficiency in horticultural products	%	100.0	100.0	100.0	100.0	na	na
POLICY TRANSFERS							
Total transfers (subsidy/tax)	Million US\$	na	179.9	173.9	228.2	na	na
Total transfers per capita	US\$/capita	na	12.7	12.1	15.6	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	4.2	8.5	7.2	7.1	6.6	7.3
Interest rate	%	6.4	5.9	7.0	6.4	8.0	7.5
Exchange rate	CLPeso\$/US\$	420.20	396.80	412.30	419.30	460.00	465.00

na = not available E = estimate F = forecast

Sources:

Central Bank
FAO
ODEPA
INE
CELADE

Dirección de Vialidad - Ministerio de Obras Públicas
Empresa de Ferrocarriles del Estado y Ferrocarriles Particulares

Centro de Despacho Económico de Carga-SIC (Producción),
y Sociedad de Fomento Fabril (Índice de Consumo)
Subtel
Proyecciones GEMINES
Cámara Marítima y Portuaria de Chile
Instituto de Fomento Pesquero (IFOP)

China

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2328	na	na	na	na	na
From animal products	Cal/day	217	na	na	na	na	na
From vegetable products	Cal/day	2112	na	na	na	na	na
Protein (% of calories)	%	11.8	na	na	na	na	na
Fat (% of calories)	%	22.0	na	na	na	na	na
Carbohydrates (% of calories)	%	66.2	na	na	na	na	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	406	513	582	623	na	na
% of disposable income spent on food	%	40.7	41.2	39.3	37.6	na	na
% spent eating out	%	3.4	3.8	3.9	4.0	na	na
Food price index	1990=100	167.9	206.3	222.0	226.9	220.8	224.1
General price index (CPI)	1990=100	156.5	183.3	198.6	204.2	na	na
POPULATION							
Total population	Million	1198.5	1211.2	1223.9	1236.3	na	na
Urban	Million	343.0	351.7	359.5	369.9	na	na
Nonurban	Million	855.5	859.5	864.4	866.4	na	na
Share of population in the following age groups							
0–4 years	%	8.2	7.3	na	na	na	na
5–14 years	%	18.8	19.5	na	na	na	na
15–19 years	%	8.1	7.4	na	na	na	na
20–44 years	%	42.3	42.1	na	na	na	na
45–64 years	%	16.2	17.1	na	na	na	na
65–79 years	%	5.5	5.8	na	na	na	na
80–over years	%	0.8	0.9	na	na	na	na
LIFE EXPECTANCY							
Males	Years	68.7	na	na	na	na	na
Females	Years	73.0	na	na	na	na	na
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	11040	640	1240	8330	na	na
Grain imports	1000 Tons	9160	20400	10890	4170	na	na
Total food and agricultural trade	Million US\$	25240	29760	34570	26960	na	na
Total food and agricultural exports	Million US\$	15650	16150	16000	15160	na	na
Perishable products	Million US\$	515	585	669	1974	na	na
Fishery exports	Million US\$	1816	2087	1734	1881	na	na
Total food and agricultural imports	Million US\$	9590	13610	18570	11800	na	na
Perishable products	Million US\$	82	161	273	309	na	na
Fishery imports	Million US\$	574	599	597	544	na	na
Port capacity	1000 Tons	na	na	na	na	na	na
Road access	Kms	1117800	1157000	1185800	122600	na	na
Rail access	Kms	54000	54600	56700	57600	na	na
Urban	%	62.1	66.2	69.7	73.0	na	na
Rural	%	4.0	5.2	7.3	8.5	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GNP	%	20.3	20.9	20.7	18.7	na	na
Self-sufficiency in grains	%	100.4	95.9	98.1	100.9	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	12.6	10.5	9.7	8.8	8.0	9.0
Interest rate	%	11.0–12.4	11.0–12.4	7.5–11.0	5.7–7.5	4.8–5.7	5.0
Exchange rate	Yuan/US\$	8.26	8.35	8.31	8.29	8.30	8.30

na = not available E = estimate F = forecast

Colombia

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2710	na	2743	na	2777	na
From animal products	Cal/day	428	na	433	na	439	na
From vegetable products	Cal/day	2282	na	2309	na	2338	na
Protein (% of calories)	%	8.5	na	8.6	na	8.7	na
Fat (% of calories)	%	29.8	na	29.0	na	29.0	na
Carbohydrates (% of calories)	%	61.7	na	62.4	na	62.8	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	1842	2087	2264	2279	2343	2372
% of disposable income spent on food	%	34.1	33.9	33.2	32.8	32.0	31.0
% spent eating out	%	1.5	1.6	1.8	1.6	1.7	1.9
Food price index	1990=100	237.8	283.5	329.7	389.0	451.2	505.2
General price index (CPI)	1990=100	249.1	288.3	363.8	429.3	497.9	569.9
POPULATION							
Total population	Million	38.0	38.7	39.4	40.1	40.7	41.4
Urban	Million	28.3	29.1	29.9	30.7	31.2	31.9
Nonurban	Million	9.7	9.6	9.5	9.4	9.5	9.5
Share of population in the following age groups							
0-4 years	%	na	11.8	na	11.8	na	11.8
5-14 years	%	na	21.1	na	21.1	na	21.1
15-19 years	%	na	11.6	na	11.6	na	11.6
20-44 years	%	na	36.2	na	36.2	na	36.2
45-64 years	%	na	14.8	na	14.8	na	14.8
65-79 years	%	na	3.3	na	3.3	na	3.3
80-over years	%	na	1.2	na	1.2	na	1.2
Median age of population	Years	na	22	na	22	na	22
Female labor force participation	%	22	22.1	22.2	22.3	22.3	22.5
LIFE EXPECTANCY							
Males	Years	69.5	69.7	69.9	70.1	70.3	70.7
Females	Years	72.5	72.7	72.9	73.2	73.5	73.7
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	2	5	0	0	0	10
Grain imports	1000 Tons	2093	2169	2708	2903	3078	3231
Total food and agricultural trade	Million US\$	4621	5174	5263	6259	6445	6984
Total food and agricultural exports	Million US\$	3654	3580	3370	4238	4323	4755
Perishable products	Million US\$	965	966	917	986	1035	1139
Fishery exports	Million US\$	193	196	140	151	175	210
Total food and agricultural imports	Million US\$	966	1595	1893	2021	2122	2228
Perishable products	Million US\$	487	560	728	757	795	875
Fishery imports	Million US\$	21	38	29	30	32	36
Port capacity	1000 Tons	42.9	51.2	64.6	66.2	69.5	na
Road access	Kms	na	na	na	363	363	na
Rail access	Kms	na	na	na	3395	3395	na
Power generation	Million US\$	9600	9900	10163	10454	11050	11933
Percent of population with refrigerators	%	na	na	na	54.4	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	53	160	220	178	200	240
From other PECC economies	Million US\$	40	119	164	160	185	200
Outward FDI in the food sector, total	Million US\$	9	6	9	10	20	30
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	19.7	19.7	19.5	18.2	17.9	17.0
Self-sufficiency in grains	%	76.0	74.0	70.0	70.0	73.0	74.0
Self-sufficiency in horticultural products	%	105.0	105.0	104.0	104.0	105.0	105.0
MACROECONOMIC INDICATORS							
GDP growth	%	5.8	5.4	2.1	3.2	3.3	4.0
Interest rate	%	40.46	42.77	42.19	34.28	39.2	34.0
Exchange rate	COPeso/US\$	827	912	1037	1140	1324	1535

na = not available E = estimate F = forecast

Sources:

FAO

CEPAL

Departamento Nacional de Estadística - DANE-, Colombia

Banco de la República, Colombia. Ministerio de

Transporte, Colombia

Ministerio de Minas y Energía, Colombia

Hong Kong, China

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	3280	na	na	na	na	na
From animal products	Cal/day	997	na	na	na	na	na
From vegetable products	Cal/day	2282	na	na	na	na	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	12420	13956	15516	15504	na	na
% of disposable income spent on food	%	29.8	29.3	28.6	28.0	na	na
% spent eating out	%	18.5	18.1	17.7	17.4	na	na
Food price index	Oct 94-Sept 95=100	94.8	101.5	105.5	109.3	na	na
General price index (CPI)	Oct 94-Sept 95=100	93.4	101.9	108.3	114.7	na	na
POPULATION							
Total population	Million	6.0	6.2	6.3	6.5	6.7 ^a	6.8 ^a
Share of population in the following age groups							
0-4 years	%	6.2	6.1	6.0	5.7	5.4	5.3
5-14 years	%	13.6	13.3	12.9	12.4	11.9	11.8
15-19 years	%	6.9	6.8	6.7	6.7	6.2	6.2
20-44 years	%	45.5	45.3	45.1	44.8	46.0	45.4
45-64 years	%	18.4	18.7	19.2	20.0	20.4	20.9
65-79 years	%	7.9	8.1	8.2	8.5	8.3	8.4
80-over years	%	1.6	1.7	1.8	1.9	1.9	1.9
Median age of population	Years	33	34	34	35	35	36
Female labor force participation	%	46.9	47.6	47.8	48.0	na	na
LIFE EXPECTANCY							
Males	Years	75.7	76.0	76.3	76.8	na	na
Females	Years	81.5	81.5	81.8	82.2	na	na
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	112	132	141	91	na	na
Grain imports	1000 Tons	830	805	769	727	na	na
Total food and agricultural trade	Million US\$	6758	7866	8665	9008	na	na
Total food and agricultural exports	Million US\$	1826	2164	2567	2573	na	na
Perishable products	Million US\$	1034	1229	1620	1618	na	na
Fishery exports	Million US\$	615	578	583	573	na	na
Total food and agricultural imports	Million US\$	4932	5702	6098	6435	na	na
Perishable products	Million US\$	2981	3487	3731	3973	na	na
Fishery imports	Million US\$	1638	1821	1915	2089	na	na
Road access	Kms	1661	1717	1743	1831	na	na
Telecommunications ^b	1000 Lines	3114	3254	3508	3786	na	na
Power generation	Terajoules	111382	112817	115790	118088	70395	na
MACROECONOMIC INDICATORS							
GDP growth	%	5.4	3.9	4.6	5.3	-4.0	na
Exchange rate	HK\$/US\$	7.73	7.74	7.73	7.74	7.75 ^c	na

na = not available E = estimate F = forecast

a. Excludes military personnel and Vietnamese migrants

b. Telephone and fax lines

c. Jan.-Aug. average

Source:
FAO

Indonesia

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2019	2019	2020	2031	2042	na
From animal products	Cal/day	308	316	338	346	354	na
From vegetable products	Cal/day	1711	1704	1682	1685	1688	na
INCOME AND FOOD PRICES							
Per-capita income	Rp/capita	1860	1981	2102	2551	2841	na
% of disposable income spent on food	%	56.0	51.4	41.0	32.8	24.6	na
% spent eating out	%	na	12.6	9.1	na	na	na
Food price index	1990=100	157.0	179.0	190.0	205.4	449.8	540.0
General price index (CPI)	1990=100	163.0	178.0	190.0	211.0	380.0	na
POPULATION							
Total population	Million	196.0	195.0	199.0	202.0	204.0	na
Urban	Million	67.0	70.0	74.0	77.0	80.0	na
Nonurban	Million	129.0	125.0	125.0	125.0	124.0	na
Female labor force participation	%	44.5	41.0	44.6	46.2	na	na
LIFE EXPECTANCY							
Males	Years	na	62.4	na	na	na	na
Females	Years	na	66.2	na	na	na	na
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	13.8	18.7	12.8	7.0	na	na
Grain imports	1000 Tons	na	16.4	37.2	1.9	na	na
Total food and agricultural trade	Million US\$	2818	2888	2913	2668	na	na
Total food and agricultural exports	Million US\$	11730	11203	9779	11202	11467	na
Perishable products	Million US\$	77	73	86	68	na	na
Fishery exports	Million US\$	329	372	375	344	na	na
Total food and agricultural imports	Million US\$	na	5754	6647	5429	na	na
Perishable products	Million US\$	na	na	219	na	na	na
Fishery imports	Million US\$	137	125	137	165	182	na
Road access	Kms	356878	372414	385836	na	na	na
Power generation	1000 MWH	50966	54597	58712	na	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	1235	1332	1438	1685	1933	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	17.0	16.1	15.5	14.9	14.3	na
MACROECONOMIC INDICATORS							
Exchange rate	Rupiah/US\$	2161.00	2249.00	2340.00	na	na	na

na = not available E = estimate F = forecast

Sources:

Central Bureau of Statistics

Directorate of Fisheries

Bank of Indonesia, Monthly Statistics

Japan

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS ^a							
Per-capita caloric intake	Cal/day	2639	2638	2651	2650	2650	2650
From animal products	Cal/day	622	625	626	625	625	625
From vegetable products	Cal/day	2017	2013	2025	2025	2025	2025
Protein (% of calories)	%	13.7	13.7	13.6	13.6	13.6	13.6
Fat (% of calories)	%	29.4	29.4	29.7	29.7	29.7	29.7
Carbohydrates (% of calories)	%	57.0	56.9	56.7	56.7	56.7	56.7
INCOME AND FOOD PRICES							
Per-capita income ^b	US\$/capita	37542	41009	36575	30700	29000	29500
% of disposable income spent on food	%	16.9	16.4	16.0	16.0	16.0	16.0
% spent eating out	%	2.9	2.9	2.9	2.9	2.9	2.9
Food price index ^c	1995=100	101.2	100.0	99.9	102.1	102.2	102.2
General price index (CPI) ^c	1995=100	100.1	100.0	100.1	101.8	102.5	102.5
POPULATION							
Total population ^a	Million	125.0	125.2	125.8	126.0	126.0	126.0
Urban ^d	Million	na	81.0	na	82.0	na	na
Nonurban ^d	Million	na	44.0	na	44.0	na	na
Share of population in the following age groups							
0-14 years	%	16.3	15.9	15.6	15.3	15.0	14.7
15-64 years	%	69.6	69.4	69.3	69.2	69.1	68.9
65-over years	%	14.1	14.5	15.1	15.5	15.9	16.4
Female labor force participation	%	40.5	40.5	40.5	40.5	40.5	40.5
LIFE EXPECTANCY							
Males ^e	Years	76.6	76.4	77.0	77.2	77.3	77.4
Females ^e	Years	83.0	82.9	83.6	83.9	84.2	84.3
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports ^f	1000 Tons	0	13	0	36	600	0
Grain imports ^f	1000 Tons	29937	27269	26946	27871	27000	27000
Total food and agricultural exports ^f	Million US\$	1599	1722	1563	1633	1600	1600
Fishery exports	Million US\$	1211	1177	1230	1403	1200	1100
Total food and agricultural imports ^f	Million US\$	38245	41816	42684	39009	39000	39000
Fishery imports	Million US\$	16756	18447	17587	16107	16000	16000
Road access	Kms	1138	1142	1148	1155	1160	1165
Rail access	Kms	58008	54718	52800	51000	50000	49000
Telecommunications ^g	1000 subscribers	59926	61008	62500	64000	66000	68000
Power generation	1000kw	221	227	234	236	237	240
Percent of population with refrigerators ^h	%	97.9	98.4	98.7	99.0	99.0	99.0
FOREIGN INVESTMENT IN THE FOOD SECTOR [*]							
Inward FDI in the food sector, total ⁱ	Million US\$	30	43	3	6	6	6
From other PECC economies ^j	Million US\$	25	29	2	4	4	4
Outward FDI in the food sector, total ^h	Million US\$	1260	854	730	350	300	300
To other PECC economies ^h	Million US\$	1131	808	534	250	200	200
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY ^f							
Agriculture as a share of GDP	%	1.5	1.6	1.4	1.4	1.3	1.3
Self-sufficiency in grains	%	33.0	30.0	29.0	30.0	30.0	30.0
POLICY TRANSFERS ^k							
Consumer subsidy equivalents	%	-50.0	-51.0	-47.0	-46.0	-44.0	-42.0
Total transfers (subsidy/tax)	Million US\$	42.8	48.5	40.2	35.7	32.0	29.0
Total transfers per capita	US\$/capita	342.0	388.0	321.0	289.0	258.0	229.0
MACROECONOMIC INDICATORS							
GDP growth	%	0.6	1.4	3.6	0.1	-0.5	-0.4
Interest rate	%	1.8	0.5	0.5	0.5	0.4	0.5
Exchange rate	Yen/US\$	102.21	94.06	108.78	129.92	135.00	130.00

na = not available E = estimate F = forecast * = fiscal year.

Sources:

a. MAFF, Food Balance, supplied calorie base

b. MCA, World Statistics (GDP per capita)

c. Economic Planning Agency, Consumer Price Index Yearbook

d. MAC, National Statistics

e. Average life expectancy

f. Ministry of Agriculture, Forestry and Fisheries, 1997
Outlook MAFF

g. Number of Subscriber telephones

h. MCA, Household Statistics

i. Agrotade Handbook

j. MOF, Inward/Outward FDI

k. OECD Monitoring Report

Korea

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2950	2980	3024	3053	3053	3053
From animal products	Cal/day	416	439	452	462	462	462
From vegetable products	Cal/day	2534	2541	2572	2591	2591	2591
Protein (% of calories)	%	16.3	16.4	16.5	16.4	16.4	16.4
Fat (% of calories)	%	18.4	18.6	18.8	19.7	19.7	19.7
Carbohydrates (% of calories)	%	65.3	65.0	64.7	63.9	63.9	63.9
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	8467	10037	10543	9511	7000	9511
% of disposable income spent on food	%	29.9	29.0	28.7	28.7	28.7	28.7
% spent eating out	%	8.6	9.1	9.6	10.4	10.4	10.4
Food price index	1990=100	135.4	140.1	145.5	151.1	160.3	170.0
General price index (CPI)	1990=100	129.3	135.1	141.7	148.1	156.6	165.7
POPULATION							
Total population	Million	44.4	44.8	45.2	45.6	46.0	46.4
Urban	Million	35.2	38.9	40.2	40.5	41.3	42.6
Nonurban	Million	9.2	5.9	5.0	5.1	4.7	3.8
Share of population in the following age groups							
0-4 years	%	7.8	7.9	7.9	7.8	7.7	7.7
5-14 years	%	16.1	15.5	15.0	14.6	14.3	13.9
15-19 years	%	8.8	8.6	8.7	8.7	8.7	8.5
20-44 years	%	44.4	44.5	44.6	44.5	44.3	44.5
45-64 years	%	17.3	17.6	17.8	18.1	18.4	18.7
65-79 years	%	4.9	5.0	5.1	5.4	5.6	5.8
80-over years	%	0.8	0.8	0.9	0.9	0.9	0.9
Median age of population	Years	30.8	31.2	31.5	31.9	32.3	32.6
Female labor force participation	%	40.1	40.2	40.4	40.9	41.0	41.0
LIFE EXPECTANCY							
Males	Years	69.2	69.6	70.6	71.6	72.2	72.7
Females	Years	77.1	77.4	77.6	77.9	78.2	78.5
FOOD INFRASTRUCTURE							
Trade capacity							
Grain imports	1000 Tons	13172	14492	13136	13731	14353	15003
Total food and agricultural exports	Million US\$	952	1242	1424	1508	1652	1810
Perishable products	Million US\$	948	1235	1415	1471	1607	1756
Fishery exports	Million US\$	1647	1722	1635	1493	1490	1487
Total food and agricultural imports	Million US\$	5426	6899	8152	7619	8430	9328
Perishable products	Million US\$	3488	4518	4909	5051	5723	6484
Fishery imports	Million US\$	726	843	1080	1045	1215	1413
Port capacity	1000 Tons	276198	285200	299228	313948	329392	345595
Road access	Kms	73833	74237	82342	87621	93238	99216
Rail access	Kms	6559	6554	6559	6579	6600	6621
Telecommunications	1000 lines	20783	21684	22789	23795	25346	26998
Power generation	Million KWh	164992	184660	205493	224444	249277	276858
Percent of population with refrigerators	%	100.0	100.0	100.0	100.0	100.0	100.0
FOREIGN INVESTMENT IN THE FOOD SECTOR							
From other PECC economies	Million US\$	1316	1941	3203	6971	9492	12925
To other PECC economies	Million US\$	2298	3067	4220	2918	3421	4010
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	7.1	6.6	6.3	5.8	5.5	5.2
Self-sufficiency in grains	%	28.0	29.1	26.7	24.6	22.7	21.0
MACROECONOMIC INDICATORS							
GDP growth	%	8.6	8.9	7.1	5.5	-1.0	3.1
Interest rate	%	10.5	10.8	11.0	15.3	16.0	16.7
Exchange rate	Won/US\$	788.70	774.70	844.20	1415.20	1415.20	1350.00

na = not available E = estimate F = forecast

Sources:

Ministry of Agriculture and Forestry, *Handbook of Agriculture Statistics*, Seoul, Korea, 1999.
Ministry of Health and Welfare, *Nutrition Survey Results*, Seoul, Korea, 1997.
Agency of National Statistics, *Major Economic Indicators*, Seoul, Korea, 1997.

Malaysia

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS ^a							
Per-capita caloric intake	Cal/day	2786	2807	2813	2818	2822	2825
From animal products	Cal/day	507	516	524	533	539	543
From vegetable products	Cal/day	2279	2291	2289	2285	2283	2282
INCOME AND FOOD PRICES ^b							
Per-capita income	US\$/capita	3429	4012	4469	4316	3058	3214
Food price index	1990=100	120.3	126.2	133.5	135.1	147.7	156.4
General price index (CPI)	1990=100	117.4	121.4	125.6	128.6	138.3	145.2
POPULATION ^c							
Total population	Million	20.1	20.7	21.2	21.7	22.2	22.7
Urban	%	54.3	54.6	56.5	58.3	59.9	60.8
Nonurban	%	45.7	45.4	43.5	41.7	40.1	39.2
Share of population in the following age groups							
0-4 years	%	11.4	12.1	11.8	na	na	na
5-14 years	%	21.9	23.2	22.1	na	na	na
15-19 years	%	9.0	9.7	9.9	na	na	na
20-44 years	%	33.8	37.7	37.7	na	na	na
45-64 years	%	10.9	12.1	11.8	na	na	na
65-79 years	%	3.0	3.4	3.3	na	na	na
80-over years	%	0.5	1.0	0.9	na	na	na
Median age of population	Years	42.0	41.8	41.5	na	na	na
Female labor force participation	%						
LIFE EXPECTANCY							
Males	Years	69.3	69.5	69.6	69.7	69.9	70.1
Females	Years	74.0	74.1	74.2	74.4	74.6	74.7
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports ^{d, e}	1000 Tons	169	207	213	na	na	na
Grain imports ^f	1000 Tons	3571	4027	4043	4045	4063	4119
Total food and agricultural exports ^g	Million US\$	1079	8585	11876	na	na	na
Perishable products ^h	Million US\$	193	183	307	na	na	na
Fishery exports ⁱ	Million US\$	30685	30685	34127	na	na	na
Total food and agricultural imports ^g	Million US\$	3621	4339	6196	na	na	na
Perishable products ^h	Million US\$	473	546	542	na	na	na
Fishery imports ^f	Million US\$	26503	26503	na	na	na	na
Port capacity ⁱ	Million Tons	na	174	na	na	na	na
Road access ⁱ	Kms	na	64328	na	na	na	na
Percent of population with refrigerators	%	100.0	100.0	100.0	100.0	100.0	100.0
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	na	526481	na	na	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY ⁱ							
Agriculture as a share of GDP	%	14.6	13.5	12.7	11.9	12.3	11.2
Self-sufficiency in grains	%	41.0	36.0	na	na	na	na
Self-sufficiency in horticultural products	%	na	87.0	na	na	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	9.2	9.5	8.2	7.8	-1.5	2.0
Interest rate	%	6.8	8.0	9.2	9.3	13.0	11.0
Exchange rate	Ringgit/US\$	2.62	2.51	2.51	2.81	3.90	3.70

na = not available E = estimate F = forecast

Sources:

a. Food and Agriculture Organization (FAO). "FAO Yearbook Production". Various issues

b. Bank Negara Malaysia. "Quarterly Statistics Report 1997"

c. Department of Statistics Malaysia. "Yearbook of Statistics". Various issues

d. Department of Statistics Malaysia. "Export Malaysia". Various issues

e. Maize, rice, and wheat

f. Department of Statistics Malaysia. "Import Malaysia," various issues

g. Excludes forestry and fishery products

h. Fresh and frozen fruits, vegetables, meats and poultry, dairy products and eggs

i. Malaysia. "Seventh Malaysian Plan 1996-2000"

Mexico

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	3053	na	na	3053	3053	na
From animal products	Cal/day	512	na	na	na	na	na
From vegetable products	Cal/day	2541	na	na	na	na	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	4563	2569	2863	2995	3132	na
Food price index ^a	1990=100	154.2	208.2	279.8	337.5	240.9	236.5
General price index (CPI)	1990=100	166.3	224.5	301.7	364.0	407.7	440.3
POPULATION ^b							
Total population	Million	89.2	91.2	93.2	94.7	96.2	97.7
Urban	Million	65.2	67.0	68.8	70.3	71.4	72.5
Nonurban	Million	24.0	24.2	24.4	24.4	24.7	25.1
Share of population in the following age groups							
0-4 years	%	11.7	11.8	11.9	12.1	12.3	12.5
5-14 years	%	24.1	23.6	23.7	24.1	24.5	24.8
15-19 years	%	11.2	11.1	11.2	11.4	11.6	11.7
20-44 years	%	34.4	34.6	34.7	35.2	35.8	36.4
45-64 years ^c	%	11.1	11.7	11.5	11.7	11.9	12.1
65-79 years	%	3.6	3.5	3.3	3.4	3.4	3.5
80-over years	%	1.0	1.2	1.0	1.0	1.0	1.1
LIFE EXPECTANCY							
Males	Years	68.9	69.1	69.6	69.8	70.2	70.3
Females	Years	74.9	75.1	76.7	76.7	77.4	77.6
FOOD INFRASTRUCTURE							
Trade capacity							
Total food and agricultural trade ^d	Million US\$	-2822	1188	-1970	-1319	na	na
Total food and agricultural exports	Million US\$	4512	6431	5782	6379	na	na
Perishable products ^e	Million US\$	2895	3904	4353	4362	na	na
Fishery exports	Million US\$	4686	6806	7980	3876	na	na
Total food and agricultural imports	Million US\$	7334	5243	7752	7698	na	na
Perishable products	Million US\$	4439	2817	4491	3552	na	na
Fishery imports	Million US\$	1493	963	1041	675	na	na
Road access	Kms	303261	307830	312148	315889	na	na
Rail access	Kms	90940	92629	94755	96326	na	na
Telecommunications	1000 lines	8355	8802	8826	9083	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	1769	614	475	2334	na	na
From other PECC economies	Million US\$	5930	5388	4778	2011	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	5.3	5.0	5.4	na	na	na
POLICY TRANSFERS							
Consumer subsidy equivalents	%	-9.0	14.0	8.0	0.0	na	na
Total transfers (subsidy/tax)	Million US\$	5192.0	-11.0	1227.0	2431.0	na	na
Total transfers per capita	US\$/capita	102.5	-0.1	13.2	25.7	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	4.5	-6.2	5.2	7.0	5.2	na
Interest rate	%	14.1	48.4	31.4	19.8	na	na
Exchange rate	MXPeso/US\$	3.50	6.49	7.59	8.08	9.80	na

na = not available E = estimate F = forecast

- a. Index for Food, Beverages and Tobacco
b. Population increase rate of 7.8%
c. Includes people 65 years old and older
d. Includes Food and Agricultural results
e. For 1997, statistics are through November

Sources:
3er. Informe de Gobierno, 1997
Instituto nacional de Estadística Geografía e Informática (INEGI)
Secretaría de Comercio y Fomento Industrial (SECOFI)
Monitoring and Outlook, 1998 OECD
Secretaría de Agricultura Ganadería y Desarrollo Rural (SAGAR)

New Zealand

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake <i>a</i>	Cal/day	3255	3331	3336	3340	3342	na
From animal products	Cal/day	1166	1206	1191	1175	1134	na
From vegetable products	Cal/day	2088	2125	2145	2165	2208	na
Protein (% of calories)	%	15.0	14.0	14.0	14.0	14.0	na
Fat (% of calories)	%	38.0	37.0	37.0	37.0	37.0	na
Carbohydrates (% of calories)	%	48.0	48.0	49.0	49.0	49.0	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	8358	9549	10515	11116	11376	na
% of disposable income spent on food <i>d</i>	%	13.3	12.8	13.0	12.9	12.8	na
% spent eating out	%	2.7	2.8	2.8	2.9	2.9	na
Food price index <i>e</i>	1990=100	101.7	103.1	104.4	106.6	108.7	109.8
POPULATION							
Total population	Million	3.5	3.6	3.7	3.7	3.8	na
Urban <i>h</i>	Million	3.0	3.1	3.1	3.1	3.2	na
Nonurban <i>h</i>	Million	0.5	0.5	0.6	0.6	0.6	na
LIFE EXPECTANCY							
Males	Years	na	na	na	na	74.2	na
Females	Years	na	na	na	na	80.6	na
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports <i>a</i>	1000 Tons	37	na	na	na	0	na
Grain imports <i>a</i>	1000 Tons	309	na	na	na	230	na
Total food and agricultural trade	Million US\$	7254	8165	8803	7948	8678	na
Total food and agricultural exports <i>j</i>	Million US\$	6270	6991	7541	7948	8251	na
Perishable products <i>k</i>	Million US\$	4841	5233	5783	6279	6532	na
Fishery exports	Million US\$	na	na	na	na	na	na
Total food and agricultural imports <i>l</i>	Million US\$	984	2301	1262	na	na	na
Perishable products <i>k</i>	Million US\$	418	543	535	na	na	na
Road access	Kms	na	na	na	na	92000	92000
Rail access	Kms	na	na	na	na	4000	4000
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP <i>m</i>	%	6.2	5.8	5.7	5.6	5.5	na
Self-sufficiency in grains <i>n</i>	%	80.2	78.0	83.1	84.9	80.8	na
POLICY TRANSFERS							
Consumer subsidy equivalents <i>o</i>	%	-6.0	-7.0	-6.0	na	na	na
Total transfers (subsidy/tax)	Million US\$	-56.0	-75.0	-65.0	na	na	na
Total transfers per capita	US\$/capita	-14.9	-23.0	na	na	na	na
MACROECONOMIC INDICATORS							
Exchange rate <i>p</i>	NZ\$/US\$	0.59	0.66	0.69	0.69	0.49	na

na = not available E = estimate F = forecast

Sources:

- a. FAO AGROSTAT.PC; author's projections for 1995-98
- b. Hillary Commission, *Life in New Zealand*, vol. VI, Nutrition, 1991
- c. NZIER; nominal; March years
- d. Statistics New Zealand, 'Household Economic Survey', author's projections for 1996-98
- e. Computed as averages of quarterly indices, 1993(4)= 1000
- f. Statistics New Zealand, *Nominal*, December years. Author's forecasts for 1997-98

g. Statistics New Zealand, NZIER forecasts

h. Estimate from the 1991 Census

i. Statistics New Zealand, March years

j. Statistics New Zealand, June years. FOB. All agriculture products less fish and forestry products. Forecasts based on NZIER data

k. All meat products, dairy products and fruit and vegetable products only. Forecasts based on NZIER data

l. Statistics New Zealand. June years. CIF. All agriculture products less fish and forestry products

m. Statistics New Zealand, NZIER estimates and forecasts;

estimates for 1995 and 1996. Excludes food processing sector

n. Wheat, barley, maize and oats. 1996 estimate, 1997 forecast.

Source: Ministry of Agriculture

o. OECD, 1994 estimate, 1995 provisional

p. Mid-rate, average for period. Source: Reserve Bank of NZ;

NZIER Forecasts (March Quarters)

Papua New Guinea

	UNITS	1994	1995	1996	1997	1998E	1999F
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	1279	1154	1145	1069	na	na
Food price index	1990=100	116.0	137.0	na	na	na	na
POPULATION							
Total population	Million	4.1	4.2	4.3	4.7	na	na
Urban	Million	0.7	0.7	0.7	0.8	na	na
Nonurban	Million	3.4	3.5	3.6	3.9	na	na
LIFE EXPECTANCY							
Males	Years	48.7	48.7	48.7	48.7	na	na
Females	Years	50.7	50.7	50.7	50.7	na	na
FOOD INFRASTRUCTURE							
Trade capacity							
Total food and agricultural exports	Million US\$	375	498	na	na	na	na
Total food and agricultural imports	Million US\$	338	340	na	na	na	na
Perishable products	Million US\$	58	88	na	na	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	28.5	na	na	na	na	na

na = not available E = estimate F = forecast

Peru

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2172	2260	2308	2356	2404	2452
From animal products	Cal/day	297	318	779	796	812	828
From vegetable products	Cal/day	1875	1942	9466	9663	9860	10057
Protein (% of calories)	%	8.6	8.6	na	na	na	na
Fat (% of calories)	%	14.5	14.2	na	na	na	na
Carbohydrates (% of calories)	%	66.9	66.8	na	na	na	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	1134.1	na	1321.5	na	na	na
% of disposable income spent on food	%	49.4	na	44.7	na	na	na
% spent eating out	%						
Food price index	1990=100	1352.9	1479.1	1658.9	1776.0	1921.7	2080.2
General price index (CPI)	1990=100	1625.5	1806.4	2015.1	2187.3	2348.3	2534.1
POPULATION							
Total population	Million	23.1	23.5	23.9	24.4	24.8	25.2
Urban	Million	16.3	16.8	17.1	17.5	17.8	18.1
Nonurban	Million	6.8	6.8	6.8	6.9	7.0	7.1
Share of population in the following age groups							
0-4 years	%	12.6	12.3	12.1	11.9	11.7	11.5
5-14 years	%	23.9	23.6	23.3	23.0	22.7	22.4
15-19 years	%	11.0	11.0	10.9	10.8	10.7	10.6
20-44 years	%	35.9	36.2	36.6	36.9	37.3	37.6
45-64 years	%	12.4	12.5	12.7	12.8	13.0	13.2
65-79 years	%	3.7	3.7	3.8	3.9	4.0	4.0
80-over years	%	0.6	0.6	0.6	0.7	0.7	0.7
Median age of population	Years	20.2	20.2	20.3	20.3	20.4	20.4
Female labor force participation	%	39.8	40.2	40.8	41.3	41.9	42.5
LIFE EXPECTANCY							
Males	Years	64.9	65.2	65.5	65.8	66.1	66.3
Females	Years	69.2	70.1	70.4	70.7	71.0	71.3
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	17.0	20.0	14.0	14.7	na	na
Grain imports	1000 Tons	2053.0	2255.0	2296.0	2485.1	na	na
Total food and agricultural trade	Million US\$	1171	1466	1702	1804	na	na
Total food and agricultural exports	Million US\$	468	619	621	793	na	na
Perishable products	Million US\$	28	35	49	68	na	na
Fishery exports	Million US\$	981	1011	1121	1402	na	na
Total food and agricultural imports	Million US\$	703	847	1087	1011	na	na
Perishable products	Million US\$	113	122	132	118	na	na
Road access	Kms	69942	73439	73766	na	na	na
Rail access	Kms	2121	2121	1992	na	na	na
Telecommunications	Telephone lines	na	na	1309908	na	na	na
Power generation	Million US\$	15864	16058	24802	na	na	na
Percent of population with refrigerators	%	62.0	67.0	70.0	na	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	0.81	na	na	na	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	11.9	12.0	12.3	12.6	12.4	12.1
Self-sufficiency in grains	%	68.9	48.1	na	na	na	na
Self-sufficiency in horticultural products	%	100.0	100.0	100.0	100.0	100.0	100.0
POLICY TRANSFERS							
Consumer subsidy equivalents	%						
Total transfers (subsidy/tax)	Million US\$	100265	55459	na	na	na	na
Total transfers per capita	US\$/capita	4341	2360	na	na	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	12.9	6.9	2.8	7.4	3.5	5.8
Interest rate	%	na	28.3	25.0	25.1	24.7	24.0
Exchange rate	New Sol/US\$	2.13	2.33	2.58	2.72	2.90	3.10

na = not available E = estimate F = forecast

Sources:

Instituto Nacional de Estadística e Informca (IENI)
 Instituto CUANTO S.A.
 Ministerio de Agricultura-Oficina de Información Agraria.

The Philippines

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	1872	1903	1934	1956	1977	1999
From animal products	Cal/day	215	223	231	246	248	257
From vegetable products	Cal/day	1657	1680	1703	1710	1729	1741
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	na	1050.0	1133.0	1216.0	990.0	1051.0
% of disposable income spent on food	%	47.8	46.5	45.2	43.9	45.0	44.0
% spent eating out	%	4.2	4.3	4.5	4.7	4.8	4.9
Food price index	1988=100	180.7	197.9	217.4	224.8	255.6	281.1
General price index (CPI)	1988=100	194.3	210.0	227.7	239.1	264.2	290.6
POPULATION							
Total population	Million	66.8	68.3	69.9	71.5	73.1	74.7
Urban	Million	33.6	34.0	34.8	35.6	36.4	37.2
Nonurban	Million	33.2	34.3	35.1	35.9	36.7	37.5
Share of population in the following age groups							
0-4 years	%	13.8	13.7	13.6	13.3	13.1	12.8
5-14 years	%	24.8	24.7	24.2	24.1	23.9	23.7
15-19 years	%	11.0	10.9	10.5	10.5	10.4	10.4
20-44 years	%	35.7	35.9	36.0	36.2	36.4	36.5
45-64 years	%	11.3	11.4	12.1	12.3	12.5	12.7
65-79 years	%	2.9	2.9	3.1	3.2	3.2	3.3
80-over years	%	0.6	0.6	0.6	0.6	0.6	0.6
Median age of population	Years	20.0	20.5	21.0	21.5	22.0	22.5
Female labor force participation	%	35.7	35.3	34.5	36.3	37.0	37.0
LIFE EXPECTANCY							
Males	Years	64.4	64.8	65.1	65.4	65.7	66.0
Females	Years	70.0	70.1	70.4	70.7	71.0	71.3
FOOD INFRASTRUCTURE							
Trade capacity							
Grain imports	1000 Tons	na	392	1400	865	2165	1000
Total food and agricultural trade	Million US\$	3711	4261	4356	3053	3358	3526
Total food and agricultural exports	Million US\$	2798	3203	2876	1591	1750	1838
Perishable products	Million US\$	215	223	234	217	228	239
Fishery exports	Million US\$	406	329	310	291	305	320
Total food and agricultural imports	Million US\$	914	1058	1481	1461	1607	1688
Perishable products	Million US\$	363	425	452	477	264	277
Fishery imports	Million US\$	46	53	65	71	75	79
Port capacity	Number	1312	1422	1425	1454	1483	1512
Road access	1000 Kms	27	27	27	28	29	30
Telecommunications	Million Telephones	1.19	1.88	3.35	4.36	5.45	6.54
Power generation	Gigawatt Hour	31.28	33.22	36.69	39.88	41.87	43.96
Percent of population with refrigerators	%	26.60	28.00	30.00	33.10	33.90	35.60
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	2.88	0.81	3.34	11.42	5.00	10.00
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	22.4	21.5	21.1	20.5	20.0	19.4
Self-sufficiency in grains	%	100.0	90.0	90.9	94.5	86.6	93.9
Self-sufficiency in horticultural products	%	80.0	80.0	80.0	80.0	80.0	80.0
MACROECONOMIC INDICATORS							
GDP growth	%	4.4	4.8	5.8	5.2	1.0	2.0
Interest rate	%	13.0	11.0	12.0	12.8	17.4	15.0
Exchange rate	Currency/US\$	26.43	25.73	26.22	29.44	43.20	40.00

E = estimate F = forecast

Sources:

National Statistics Office
National Food Authority
Philippine Statistical Yearbook
Food Nutrition Research Institute
Banko Sentral ng Pilipinas

National Economic Development Authority
Board of Investments
Department of Trade and Industry
Philacor Manufacturing Company
Philippine Medium Term Development Plan

Russia

	UNITS	1994	1995	1996	1997	1998 ^E	1999 ^F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2427	2293	2200	na	na	na
From animal products	Cal/day	33	30	29	na	na	na
Protein (% of calories)	%	61.0	57.0	54.0	na	na	na
Carbohydrates (% of calories)	%	31.8	31.6	29.8	na	na	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	na	na	na	na	na	na
% of disposable income spent on food	%	46.8	51.5	49.7	na	na	na
% spent eating out	%	2.9	2.5	2.5	na	na	na
Food price index	1990=100	176160	393542	463199	500718	na	na
General price index (CPI)	1990=100	201193	465358	566806	629155	670679	704212
POPULATION							
Total population	Million	148.4	148.3	148.0	147.5	146.5	146.1
Urban	%	73.0	73.0	73.0	73.0	73.0	73.0
Nonurban	%	27.0	27.0	27.0	27.0	27.0	27.0
Share of population in the following age groups							
0–4 years	%	6.0	5.5	5.1	4.8	na	na
5–14 years	%	15.9	15.9	15.8	15.6	na	na
15–19 years	%	7.2	7.3	7.4	7.4	na	na
20–44 years	%	38.0	38.0	37.9	37.9	na	na
45–64 years	%	21.4	21.5	21.6	21.9	na	na
65–79 years	%	5.0	5.1	5.2	5.1	na	na
80–over years	%	6.5	6.7	6.9	7.3	na	na
LIFE EXPECTANCY							
Males	Years	58.0	58.0	60.0	na	na	na
Females	Years	71.0	72.0	72.0	na	na	na
FOOD INFRASTRUCTURE							
Trade capacity ^a							
Total food and agricultural exports	Million US\$	1.4	1.3	1.7	1.4 ^P	na	na
Fishery exports	Million US\$	282.4	211.7	205.1	267.6 ^P	na	na
Total food and agricultural imports	Million US\$	10.7	13.0	11.2	12.5 ^P	na	na
Fishery imports	Million US\$	177.1	252.9	297.5	297.7 ^P	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	na	1269	1540	1876(I–III)	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	7.0	8.9	8.8	na	na	na

na = not available E = estimate F = forecast P = preliminary.

Sources:

a. Customs Statistics

b. National Statistical Office

Singapore

	UNITS	1994	1995	1996	1997	1998E	1999F
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	21210	24755	26136	24880	na	na
Food price index	1990=100	109.8	112.2	113.8	116.1	na	na
General price index (CPI)	1990=100	111.5	113.5	115.2	117.5	na	na
POPULATION							
Total population	Million	2.9	3.0	3.0	3.1	na	na
Urban	Million	2.9	3.0	3.0	3.1	na	na
Nonurban	Million	0	0	0	0	na	na
Share of population in the following age groups							
0-4 years	%	8.3	8.3	8.0	8.0	na	na
5-14 years	%	14.7	14.7	14.8	14.9	na	na
15-19 years	%	6.8	6.7	6.7	6.6	na	na
20-44 years	%	46.0	45.5	45.0	44.5	na	na
45-64 years	%	17.5	18.1	18.6	19.3	na	na
65-74 years	%	4.2	4.2	4.3	4.4	na	na
75-over years	%	2.5	2.5	2.6	2.6	na	na
Median age of population	Years	31.4	31.8	32.2	32.6	na	na
Female labor force participation	%	50.9	50.1	51.5	51.1	na	na
LIFE EXPECTANCY							
Males	Years	74.2	74.2	74.6	75.0	na	na
Females	Years	78.5	78.7	79.0	79.2	na	na
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	167	187	na	na	na	na
Grain imports	1000 Tons	340	369	na	na	na	na
Total food and agricultural trade	Million US\$	5725	6132	5923	5344	na	na
Total food and agricultural exports	Million US\$	2315	2503	2264	2038	na	na
Perishable products ^a	Million US\$	1073	1125	na	na	na	na
Fishery exports	Tons	136518	136909	116396	10247	na	na
Total food and agricultural imports ^b	Million US\$	3410	3626	3659	3306	na	na
Perishable products	Million US\$	2203	2395	na	na	na	na
Fishery imports	Tonbs	178537	181090	156077	150257	na	na
Port capacity	1000 Tons	164	175	180	188	na	na
Road access	Kms	3027	3056	3072	3101	na	na
Power generation ^c	Million KWh	21721	23141	24610	27406	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	325	na	na	na	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	0.2	0.2	0.2	0.2	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	10.5	8.7	6.9	7.8	na	na
Interest rate	%	6.49	6.26	6.26	6.96	na	na
Exchange rate	SG\$/US\$	1.53	1.42	1.41	1.58	na	na

na = not available E = estimate F = forecast

- a. Perishable products include live animals, meat and preps, dairy produce and eggs, fish and fish preps, and vegetables and fruits
- b. Estimates based on inward sea cargo handled
- c. Based on total electricity generation and gas sales

Sources:
 Statistical Yearbook of Singapore, Department of Statistics, Singapore, various years
 Report on the Census of Industrial Production, Department of Statistics, Singapore, various years
 FAO, Food Balance Sheets
 Food and Nutrition Department of the Ministry of Health

Chinese Taipei

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2998	3000	2997	2994	2998	2998
From animal products	Cal/day	823	825	822	802	820	822
From vegetable products	Cal/day	2175	2175	2176	2192	2180	2178
Protein (% of calories)	%	12.7	12.9	12.9	13.3	13.4	13.5
Fat (% of calories)	%	40.4	40.9	40.7	39.5	40.5	40.4
Carbohydrates (% of calories)	%	46.9	46.2	46.4	47.2	46.1	46.1
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	11597	12396	12838	13233	13448	14523
% of disposable income spent on food	%	11.8	11.8	11.6	11.4	11.8	11.6
% spent eating out	%	2.8	2.8	2.9	2.9	3.0	3.2
Food price index	1990=100	92.5	96.4	100.0	99.1	102.6	104.7
General price index (CPI)	1990=100	93.6	97.0	100.0	100.9	103.4	105.3
POPULATION							
Total population	Million	21.1	21.3	21.5	21.7	21.9	22.0
Urban	Million	17.1	17.4	17.7	18.0	18.1	18.2
Nonurban	Million	4.0	3.9	3.8	3.7	3.8	3.8
Share of population in the following age groups							
0-4 years	%	7.6	7.5	7.5	7.4	7.3	7.3
5-14 years	%	16.8	16.3	16.3	15.3	15.2	15.3
15-19 years	%	9.3	9.4	9.4	9.3	9.3	9.3
20-44 years	%	42.9	42.9	42.9	42.6	42.4	42.2
45-64 years	%	16.0	16.4	16.4	17.5	17.6	17.6
65-79 years	%	6.4	6.6	6.6	6.9	7.1	7.2
80-over years	%	1.0	1.1	1.1	1.2	1.2	1.2
Median age of population	Years	29.1	29.6	30.3	30.7	30.7	30.9
Female labor force participation	%	38.4	38.6	39.3	39.4	39.2	39.4
LIFE EXPECTANCY							
Males	Years	72.1	72.2	72.2	72.3	72.4	72.5
Females	Years	77.8	78.0	78.2	78.3	78.5	78.7
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	149	222	166	208	219	180
Grain imports	1000 Tons	7517	7936	8075	5867	4965	5200
Total food and agricultural trade	Million US\$	13690	15323	15842	15876	16209	16695
Total food and agricultural exports	Million US\$	4843	5619	5624	4965	4606	3253
Perishable products	Million US\$	2990	7402	3412	2586	2760	2200
Total food and agricultural imports	Million US\$	8847	9704	10219	10911	11606	na
Perishable products	Million US\$	1385	1491	1600	1704	1807	na
Fishery imports	Million US\$	1012	1198	1093	1102	1160	1210
Port capacity	1000 Tons	769119	831148	891963	962185	1024156	1095847
Road access	Kms	31378	32197	32778	33433	34102	34784
Rail access	Kms	1108	1108	1108	1108	1108	1108
Telecommunications	Million US\$	8503	9175	10011	10862	11698	12633
Power generation	Million US\$	113251	120258	126956	133448	140120	147126
Percent of population with refrigerators	%	99.1	99.2	99.2	100.0	100.0	100.0
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	95	43	108	48	na	na
From other PECC economies	Million US\$	88	31	106	121	na	na
Outward FDI in the food sector, total	Million US\$	220	153	170	204	na	na
To other PECC economies	Million US\$	194	125	163	160	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	3.6	3.6	3.3	2.7	2.8	2.7
Self-sufficiency in grains	%	25.7	24.1	22.6	21.9	21.2	20.8
MACROECONOMIC INDICATORS							
GDP growth	%	8.6	8.1	8.5	8.8	9.0	9.3
Interest rate	%	7.2	7.0	5.9	6.8	7.1	7.0
Exchange rate	NT\$/US\$	26.24	27.27	27.49	32.64	34.05	33.50

na = not available E = estimate F = forecast

Sources:

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Thailand

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	1766	1751	1751	1751	1751	1751
Protein (% of calories)	%	11.5	13.2	13.2	13.2	13.2	13.2
Fat (% of calories)	%	21.8	22.2	22.2	22.2	22.2	22.2
Carbohydrates (% of calories)	%	66.7	64.3	64.3	64.3	64.3	64.3
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	1825	1954	2000	2010	2015	2023
% of disposable income spent on food	%	33.6	33.6	32.0	32.0	31.8	31.8
% spent eating out	%	6.0	6.0	6.1	6.1	6.3	6.3
Food price index	1990=100	122.1	132.0	143.7	158.8	166.7	175.1
General price index (CPI)	1990=100	119.5	126.4	133.8	146.8	154.1	161.8
POPULATION							
Total population	Million	59.3	59.6	60.6	61.2	61.9	62.4
Urban	Million	10.7	23.1	23.7	24.2	25.0	25.7
Nonurban	Million	48.4	36.8	36.9	37.0	36.9	36.7
Share of population in the following age groups							
0-4 years	%	9.2	9.1	9.9	8.8	8.7	8.5
5-14 years	%	18.9	18.5	18.2	17.9	17.6	17.4
15-19 years	%	9.9	9.8	9.7	9.6	9.4	9.3
20-44 years	%	41.0	41.3	41.5	41.6	41.7	41.7
45-64 years	%	15.7	16.0	16.2	16.6	17.0	17.4
65-74 years	%	3.4	3.5	3.6	3.7	3.8	4.0
75+ years	%	1.6	1.6	1.6	1.6	1.7	1.7
Median age of population	Years	26.3	26.4	26.5	26.7	26.9	27.4
Female labor force participation	%	73.9	73.0	71.4	71.0	70.9	70.8
LIFE EXPECTANCY							
Males	Years	66.5	67.4	67.4	67.4	67.4	67.4
Females	Years	71.0	71.7	71.7	71.7	71.7	71.7
FOOD INFRASTRUCTURE							
Trade capacity	1000 Tons	5714	7290	6618	6423	6880	7060
Grain exports	1000 Tons	5021	6329	5541	5560	5956	6071
Grain imports	1000 Tons	693	961	1077	863	924	989
Total food and agricultural trade	Million US\$	13969	15843	16211	15794	13592	14955
Total food and agricultural exports	Million US\$	8596	11217	11511	10803	9295	10197
Perishable products	Million US\$	1672	2109	2166	2220	1968	2183
Fishery exports	Million US\$	4215	4473	4145	4189	3595	3954
Total food and agricultural imports	Million US\$	5373	4626	4700	4992	4297	4758
Perishable products	Million US\$	142	190	241	243	225	277
Fishery imports	Million US\$	727	757	754	812	825	864
Road access	Kms	50155	51126	51242	51476	51762	51957
Rail access	Kms	3870	3976	4084	4124	4166	4207
Percent of population with refrigerators	%	58.0	58.3	58.7	59.0	59.2	59.5
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	2464.0	3064.2	3957.7	5292.2	2401.4	na
Outward FDI in the food sector, total	Million US\$	1134.3	1052.6	1679.0	1524.5	1064.6	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GNP (Real)	%	11.6	11.0	10.8	11.1	11.1	12.9
Self-sufficiency in grains	%	71.6	65.5	65.1	64.5	64.8	72.8
Self-sufficiency in horticultural products	%	93.0	93.0	94.0	93.0	92.0	90.0
MACROECONOMIC INDICATORS							
GDP growth	%	8.9	8.0	5.5	-1.6	-7.0	-4.0 to -5.5
Interest rate	%	11.75	13.75	13.00-13.25	15.25	15.25-15.50	na
Exchange rate	Baht/US\$	25.20	24.97	25.39	31.48	39.33	na

na = not available E = estimate F = forecast

United States

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS ^a							
Per-capita caloric intake	Cal/day	3629	3603	3700	3750	3800	3800
From animal products	Cal/day	1000	989	1000	1050	1075	1075
From vegetable products	Cal/day	2629	2514	2700	2700	2725	2725
Protein (% of calories)	%	12.3	12.2	12.2	12.2	12.2	12.2
Fat (% of calories)	%	35.7	35.5	35.3	35.2	35.1	35.0
Carbohydrates (% of calories)	%	51.9	52.3	52.5	52.6	52.7	52.8
INCOME AND FOOD PRICES							
Per-capita income ^b	US\$/capita	19293	20250	21149	21991	22958	23922
% of disposable income spent on food ^c	%	11.2	11.0	10.8	10.7	10.4	10.3
% spent eating out ^c	%	4.4	4.3	4.2	4.1	4.0	4.0
Food price index ^d	1990=100	109.0	112.1	115.8	118.8	121.5	125.0
General price index (CPI) ^d	1990=100	113.4	116.6	120.0	122.8	126.5	130.4
POPULATION							
Total population ^f	Million	260.4	262.9	265.3	268.0	270.3	270.3
Urban ^g	%	75.2	75.2	75.2	75.2	75.2	75.2
Nonurban ^g	%	24.8	24.8	24.8	24.8	24.8	24.8
Share of population in the following age groups ^f							
0-4 years	%	7.6	7.4	7.3	7.2	7.1	7.0
5-14 years	%	14.4	14.4	14.5	14.5	14.6	14.6
15-19 years	%	6.8	6.9	7.0	7.1	7.2	7.2
20-44 years	%	39.0	38.6	38.2	37.8	37.2	36.8
45-64 years	%	19.5	19.9	20.3	20.6	21.2	21.7
65-79 years	%	9.7	9.7	9.6	9.6	9.5	9.4
80-over years	%	3.0	3.1	3.1	3.2	3.2	3.3
Median age of population ^f	Years	34.0	34.3	34.6	34.9	35.2	35.5
Female labor force participation ^f	%	58.8	58.9	59.3	59.8	60.0	60.2
LIFE EXPECTANCY ^g							
Males	Years	72.2	72.3	72.5	72.6	72.8	72.9
Females	Years	79.0	79.2	79.3	79.4	79.5	79.6
FOOD INFRASTRUCTURE							
Trade capacity ^h							
Grain exports	1000 Tons	78383	104189	92947	na	na	na
Grain imports	1000 Tons	7363	4947	4420	na	na	na
Total food and agricultural trade	Million US\$	83233	96099	104149	105099	106261	109046
Total food and agricultural exports	Million US\$	52332	62259	66256	63486	62092	63365
Perishable products ⁱ	Million US\$	9769	11211	12394	13324	13031	13299
Fishery exports	Million US\$	3033	3177	3269	3362	3454	3169
Total food and agricultural imports	Million US\$	30901	33839	37893	41612	44170	45681
Perishable products ^j	Million US\$	7703	7747	7862	7974	8085	8197
Fishery imports	Million US\$	7043	7148	7085	7337	7589	7841
Port capacity ^k	Million Short Tons	2215	2240	na	na	na	na
Road access ^l	1000 Miles	3906	3912	3919	na	na	na
Rail access ^m	1000 Miles	137	136	136	na	na	na
Percent of population with refrigerators ⁿ	%	99.7	99.7	99.7	99.7	99.7	99.7
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total ^o	Million US\$	21411	26898	28089	na	na	na
From other PECC economies ^p	Million US\$	7172	8505	8985	na	na	na
Outward FDI in the food sector, total ^q	Million US\$	29588	32439	36179	na	na	na
To other PECC economies ^r	Million US\$	11791	12319	14088	na	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GNP (gdp)	%	1.2	1.1	1.1	1.1	1.1	1.1
Self-sufficiency in grains ^s	%	161.0	156.0	151.0	na	na	na
Self-sufficiency in horticultural products ^t	%	111.0	107.0	105.0	na	na	na
POLICY TRANSFERS ^v							
Consumer subsidy equivalents ^u	%	-10.0	-8.0	-9.0	na	na	na
Total transfers (subsidy/tax) ^u	Million US\$	-11294	-8873	10500	na	na	na
Total transfers per capita	US\$/capita	-43	-34	40	na	na	na
MACROECONOMIC INDICATORS							
GDP growth	%	3.5	2.0	2.8	3.8	2.7	2.3
Interest rate	%	7.1	8.8	8.3	8.5	8.5	8.5

na = not available E = estimate F = forecast

Sources:

- a. Food and Agriculture Organization of the United Nations
b. U.S. Department of Commerce, Bureau of Economics Analysis, "Economic Indicators." Data for 1998 and 1999 are ERS estimates
c. USDA's Economic Research Service estimates food expenditures by families and individuals. Food expenditures include purchases from grocery stores and other retail outlets, including purchases with food stamps and Women, Infants and Children (WIC) Supplemental Feeding Program vouchers, and Food produced and consumed on farms (valued at farm prices). Expenditures also include purchases of meals and snacks by families and individuals, and food furnished to employees. These estimates exclude government-donated foods and food paid for by government and business, such as food donated to schools, meals in prisons and other institutions, and expense-account meals. Data for 1998-99 are ERS estimates
d. U.S. Department of Commerce, Bureau of Labour Statistics, 1998 and 1998 are ERS estimates

- e. U.S. Bureau of Census, "Current Population Reports" and unpublished data. 1998 and 1999 resident population data are estimates
f. U.S. Bureau of Census: 1990 Census of Population and Housing, Population and Housing Unit Counts (1990 CPH-2). Data only available for census years
g. U.S. Social Security Administration, Office of Actuary, Trustees Report to Congress, 1996
h. Comtrade database of UN Statistics Division.
i. Excludes Nursery products
j. U.S. Bureau of Census, American Housing Survey for the United States in 1993 (H-150-93) 1990 through 1992 and 1994 through 1998 are ERS estimates
k. Waterborne Commerce. Source: U.S. Army Corps of Engineers, "Waterborne Commerce of the United States," annual
l. U.S. Federal Highway Administration, "Highway Statistics," annual
m. Association of American Railroads, Washington, D.C., "Railroad Facts, Statistics of Railroads of Class 1," annual and "Analysis of Class Railroads," annual

- n. Survey of Current Business, U.S. Department of Commerce, Bureau of Economic Analysis. August 1994 and September 1996
o. Survey of Current Business, U.S. Department of Commerce, Bureau of Economic Analysis. September 1997 and July 1993. Foreign direct investment position in the U.S. food processing sector on a historical-cost basis
p. Canada and all countries of Asia and the Pacific
q. Survey of Current Business, U.S. Department of Commerce, Bureau of Economic Analysis. September 1997 and August 1994. Foreign direct investment position abroad on a historical-cost basis
r. Canada, Chile, Colombia, Peru, Mexico, and all countries of Asia and the Pacific
s. ERS supply and use estimates. Includes wheat, rice, corn, oats, barley and sorghum. 1996 through 1998 are expected to exceed 100 percent
t. ERS supply and use estimates. Includes only fresh fruits and vegetables.
u. Agricultural Policies, Markets and Trade in OECD Countries: Monitoring and Evaluation 1996
v. 1990 through 1992 are the average of the three years

Vietnam

	UNITS	1994	1995	1996	1997	1998E	1999F
FOOD CONSUMPTION PATTERNS							
Per-capita caloric intake	Cal/day	2334	1940	na	2100	na	na
From animal products	Cal/day	211	na	na	296	na	na
From vegetable products	Cal/day	2123	na	na	1804	na	na
INCOME AND FOOD PRICES							
Per-capita income	US\$/capita	213	273	310	324	340	340
% of disposable income spent on food	%	54.3	52.2	55.3	na	na	na
Food price index	1990=100	240.7	293.3	294.5	300.7	354.8	369.0
General price index (CPI)	1990=100	236.9	266.9	279.0	239.0	308.0	na
POPULATION							
Total population	Million	72.5	74.0	75.5	76.7	78.0	79.0
Urban	Million	14.1	15.0	15.1	15.7	16.4	17.2
Nonurban	Million	58.4	59.0	60.4	61.0	61.6	61.8
Female labor force participation	%	na	48.2	na	na	na	na
LIFE EXPECTANCY							
Males	Years	na	na	62.0	na	na	na
Females	Years	na	na	67.0	na	na	na
FOOD INFRASTRUCTURE							
Trade capacity							
Grain exports	1000 Tons	1893	2052	3046	3680	3800	4000
Grain imports	1000 Tons	388	400	400	300	400	400
Total food and agricultural trade	Million US\$	1479	1401	1956	2240	2587	na
Total food and agricultural exports	Million US\$	1253	1746	2159	1906	2192	na
Total food and agricultural imports	Million US\$	226	399	419	334	395	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Inward FDI in the food sector, total	Million US\$	687	280	229	300	500	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GDP	%	28.7	25.4	24.3	23.6	22.7	22.0
Self-sufficiency in grains	%	100.0	100.0	100.0	100.0	100.0	na
MACROECONOMIC INDICATORS							
GDP growth	%	8.8	9.5	9.3	8.8	6.3	na
Exchange rate	Dong/US\$	11.1	10.9	11.2	12.0	12.0	na

na = not available E = estimate F = forecast

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Principal Sponsors

■ The Rabobank Group

<http://www.rabobank.com>

The Rabobank Group consists of 480 independent local Rabobanks, their umbrella cooperative Rabobank Nederland, of which Rabobank International is a part, and a number of subsidiaries, such as Interpolis (insurance company), De Lage Landen International (leasing and factoring), Nedship Bank (ship mortgage bank) and Gilde Investment Management (participation). The Robeco Group, the largest manager of investment funds in Europe, is also part of the Rabobank “family.”

Rabobank Nederland advises and supports the local Rabobanks and supervises their liquidity and solvency positions. The local Rabobank is an independent banking cooperative whose objective is to provide financial services to its business and retail clients in their communities.

Measured by total assets, Rabobank is the second-largest bank in the Netherlands, and by market share is the largest in the domestic market. Internationally, it is one of the 50 largest banks in the world.

The bank’s policy is to operate as a provider of financial services in the broader meaning of the term, based on the so-called Allfinanz-concept. Rabobank is in this respect responding to the growing demand from entrepreneurs and private customers for an integrated range of services and products in the fields of loans, savings, insurance, and investments.

To serve its clients worldwide, Rabobank—through its subsidiaries and Rabobank International—operates an international network of 95 offices in 32 countries. The bank’s European strategy is aimed at providing services to corporate clients, both through its own offices and through the 35,000 outlets of its strategic alliance partners.

Rabobank International is the Rabobank Group’s international wholesale arm. Its activi-

ties focus on the fields of corporate, investment, and private banking. In an environment of ongoing globalization, Rabobank International focuses these activities on a number of clearly defined target groups in three regional markets: Europe, the Americas, and Asia/Australia. Besides major Dutch corporations, the bank’s primary client target groups are international food and agribusiness and health care.

■ APEC

<http://www.apecsec.org.sg>

The Asia Pacific Economic Cooperation (APEC) was established in 1989 in response to the growing interdependence among Asia Pacific economies. Begun as an informal dialogue group, APEC has since become the primary regional vehicle for promoting open trade and practical economic cooperation. Its goal is to advance Asia Pacific economic dynamism and sense of community.

Despite the financial instability of 1997–98, the Asia Pacific remains one of the fastest growing regions in the world. It is a major contributor to global prosperity and stability. Today, APEC includes all the major economies of the region and the most dynamic, fastest-growing economies in the world. APEC’s 18-member economies had a combined GDP of over US\$16 trillion in 1995 and 44 percent of global trade. Malaysia is the APEC chair for 1998.

The APEC economic leaders agreed during their meeting in Vancouver in November 1997 to welcome Peru, Russia, and Vietnam as new members of the APEC community, effective in 1998. Their membership in APEC officially commences at the 10th APEC Ministerial Meeting, November 14–15, 1998, in Kuala Lumpur, Malaysia. During the transitional period, Peru, Russia, and Vietnam, as members designate, were invited to participate in APEC activities in the capacity of observers.

Contributing Sponsors

■ *Farm Foundation*

<http://www.farmfoundation.org>

Farm Foundation is a nonprofit organization, founded in 1933, to improve the well-being of U.S. agriculture and rural people. Farm Foundation acts as a catalyst to increase knowledge about agricultural and rural issues. Program activities stimulate the research agenda, improve educational programming through extension and other outreach education, and sponsor forums to foster policy dialogue on important issues facing agriculture and rural people. The foundation's niche is its emphasis on economic and social science aspects of issues. Its linkages to agricultural economists and social scientists bring disciplinary knowledge to bear on priority areas. The interaction of business and policy leaders, government officials and educators in its programs allows them to explore strategies and policy options. The results provide a solid basis for informed private and public sector decisions.

■ *Cargill Asia-Pacific*

<http://www.cargill.com>

Cargill started trading with Asian countries about 50 years ago. Today, it owns and operates businesses at nearly 80 locations in 15 countries. Its businesses include food processing, agricultural inputs, animal nutrition, commodity trading and financial services. Cargill employs about 7,000 people throughout the Asia Pacific region.

■ *Colombian Coffee Federation*

<http://www.juanvaldez.com/>

Recognized as the forerunner in marketing and promoting a pure, 100 percent coffee of origin, the Colombian Coffee Program is a joint effort of the National Federation of Coffee Growers of Colombia and roasters around the world to promote brands that consist of 100 percent Colombian coffee.

To help identify these brands, the federation created a Colombian Coffee trademark, which features Juan Valdez, his mule, and the Colombian mountains. When

seen on any brand, this trademark ensures that the contents are 100 percent Colombian Coffee, which meets the federation's rigorous quality control standards.

■ *Danone Group*

<http://www.danonegroup.com>

The Danone Group is a global food company established in 150 countries with three world core businesses: fresh dairy products (the world leader with major brands Danone, Galbani, Srenisima, Wahaha); biscuits (the world leader with major brands Danone, Lu, Bagley, Britannia); and beverages (second in the world in mineral water, with major brands Evian, Volvic, Dannon, Villa del Sur, and Aqua). Its brands of sauces (Lea & Perrins, Amoy, and Yeo's) have leading positions. It also operates a glass container division. Established in Europe and Eastern Europe, and the Americas, the Danone Group has been rapidly expanding in Asia since 1989.

■ *Economic Analysis Systems*

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Economic Analysis Systems is a consulting and software development firm. Its first software product, to be released in spring 1999, is EASI Vision for Agriculture, easy-to-use, state-of-the-art Windows-based projection and simulation software. EASI Vision's pre-specified economic relationships are customized to reflect country-specific market characteristics and policies, making it a valuable analytical tool for both quantitative economists and decision-makers.

■ *Economic Research Service*

<http://www.econ.ag.gov>

The Economic Research Service (ERS) is an agency of the U.S. Department of Agriculture. It employs 319 economists who engage in applied economics, providing analyses on efficiency, efficacy, and equity issues related to agriculture, food, the environment, and rural development to improve public and private decision making.

■ I-Mei Foods

<http://www.toyp.com.tw/ttyp0006/aaa5863.htm>

I-Mei Foods Co., Ltd., was established in Chinese Taipei in 1934 to manufacture bakery and confectionery products. Later developments include the opening of dairy farms, a trading firm, distribution companies, and chain stores.

I-Mei's 3,000 employees operate three food factories and produce over 1,000 items, ranging from bakery, biscuits, confectioneries, and snacks to dairy products, beverages, and frozen prepared foods. Today, I-Mei's products are distributed via some 25,000 outlets throughout Chinese Taipei. In addition, it represents and imports the following foreign brands: Blue Diamond, UMT, Sunsweet, Cinderella, Tri-Valley, Star, Frisco, O.K., and Colman's. For 64 years, the I-Mei brand has been recognized as the equivalent of "premium quality." This explains why most world-famous fast-food chains in Chinese Taipei, such as McDonald's, Burger King, and Kentucky Fried Chicken, persist in buying its hamburger buns and dairy products.

■ The International Food and Agribusiness Management Association

<http://iama.tamu.edu/iama>

The International Food and Agribusiness Management Association (IAMA) is an association of food and agribusiness industry leaders from around the world—including managers of public, private, and cooperative commercial organizations, educators, scientists, and policy-makers—who are concerned that the value-added food and fiber chains should be economically efficient, responsive to nutritional and other human needs, global, and sustainable.

To address these concerns, IAMA brings business leaders from all segments of the global food and fiber sector together with the academic and scientific communities and public policy makers at its annual World Food and Agribusiness Congress.

■ National Pork Producers Council

<http://www.nppc.org>

The National Pork Producers Council (NPPC) is one of the largest commodity organizations in the United States. With more than 80,000 producer members in 44 affiliated state associations, NPPC works to enhance opportunities for the success of U.S. pork producers and other industry stakeholders by establishing the U.S. pork industry as a consistent and reliable supplier of high-quality pork to the domestic and global marketplace.

NPPC is the primary liaison for U.S. pork

producers with Congress, various regulatory agencies, and the White House. It is involved in strategy development and implementation on national legislative and regulatory issues. NPPC also develops overseas markets for U.S. pork products, promotes industry trade policy positions, and is the chief liaison on pork industry foreign trade issues.

Domestically, NPPC carries out promotion, research and consumer information programs, including the coordination of the *Pork, The Other White Meat*® advertising/promotion program.

■ Winrock International

<http://www.winrock.org>

Winrock International is a private nonprofit organization that works with people to build a better world—increasing agricultural productivity and rural employment while protecting the environment.

Winrock works in five areas: agriculture, forestry and natural resource management, leadership and human development, renewable energy, and rural employment and enterprise development. Operations are headquartered at Morrilton, Arkansas, with an Arlington, Virginia, office serving the nation's capital. Field offices are located at Winrock headquarters in Arkansas; Salvador, Brazil; Beijing, China; New Delhi, India; and Manila, Philippines. Projects operate in some 40 countries each year, including the United States.

■ World Perspectives, Inc. (WPI)

<http://www.worldperspectives.com>

World Perspectives, Inc., (WPI) is a Washington, D.C.-based firm providing a wide range of market and policy strategic services to the private and public sectors. Established in 1980, it serves a global client base operating in the agri-food and related industries. The WPI team provides support in a variety of areas, including production, processing/manufacturing, training, transportation and handling, and marketing and promotion.

The company serves clients by means of studies and analyses, project consulting, policy seminars, and intelligence regarding all factors affecting the agri-food system, including production, trade and investment. WPI provides marketing and advertising services, including public relations, communications and market and consumer survey work through International Food Strategies, a joint venture company operated with True North Communications, the sixth largest advertising agency in the world.

