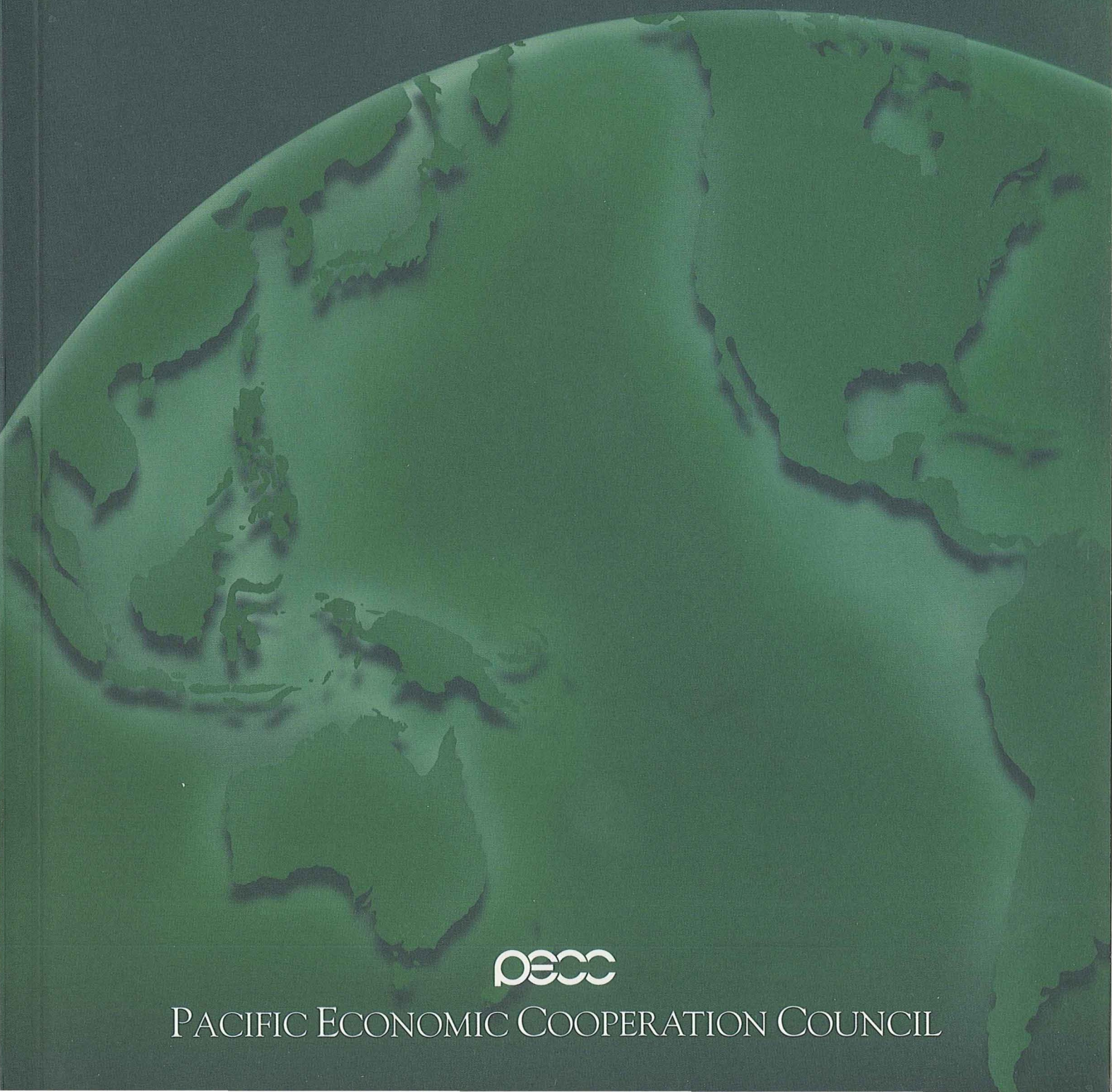


PACIFIC FOOD OUTLOOK

1997 - 1998

November 1997



PECC

PACIFIC ECONOMIC COOPERATION COUNCIL

Sponsors for the Pacific Food Outlook

Asia-Pacific Economic Cooperation
National Federation of Coffee Growers of Colombia
Mitsui & Co., Ltd
U.S. Farm Foundation
Economic Research Service U.S. Department of Agriculture
World Perspectives, Inc
Cargill Asia Pacific Ltd
Winrock International
University of Hawaii

**United States National Committee for
Pacific Economic Cooperation**
1112 16th Avenue, NW, Suite 520
Washington, DC 20036
Telephone (202) 293-3995
Facsimile (202) 293-1402

**Pacific Economic Cooperation Council
International (PECC) Secretariat**
4 Nassim Road
Singapore 258372
Telephone (65) 737-9823
Facsimile (65) 737-9824

PACIFIC FOOD OUTLOOK

1997 - 1998

November 1997



PACIFIC ECONOMIC COOPERATION COUNCIL

PECC Pacific Food Outlook, 1997-1998
Copyright © 1997 by PECC International Secretariat
4 Nassim Road, Singapore 258372

All rights reserved.
ISBN No: 981-00-9607-0

Designed by Graphic Direction Pte Ltd

THE PACIFIC ECONOMIC COOPERATION COUNCIL

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 22 Asia Pacific economies to share perspectives and expertise in search of broad-based answers to regional economic problems.

Founded in 1980, PECC now comprises member committees from the economies of 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 from April 1997. The Pacific Basin Economic Council (PBEC) and Pacific Trade and Development Conference (PAFTAD) are institutional members of PECC.

The governing body, the Standing Committee, 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, fora, 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 also supports regional forums on trade policy, food and agriculture, minerals, energy, telecommunications, and transportation, as well as a Pacific Economic Outlook, and a Pacific Food Outlook.

At the regional level, the most important link with government is through APEC. PECC is the only non-governmental organization among the three official observers of APEC. PECC representatives attend APEC Ministerial Meetings, the Senior Officials Meetings, and working group meetings. PECC also seeks to work with other international organizations such as the World Trade Organization, the OECD, the Asian Development Bank, the World Bank, and United Nations agencies.

For more information on PECC, please contact the PECC International Secretariat, 4 Nassim Road, Singapore 258372, Tel: 65-737 9823, Fax: 65-737 9824.

TABLE OF CONTENTS

Pacific Economic Cooperation Council	3
Foreword and Acknowledgements	5
Summary - The Pacific Food Outlook, 1997-98	7
Figures	14
Australia	16
Canada	22
Chile	28
China	32
Colombia	37
Hong Kong, China	42
Indonesia	46
Japan	52
Korea	55
Malaysia	59
Mexico	63
New Zealand	68
Peru	73
The Philippines	77
Singapore	82
Chinese Taipei	86
Thailand	91
United States	94
Vietnam	100
Papua New Guinea	103
Key Food System Indicators	106
Pacific Food Outlook Coordinators and Forecasting Panels	123
Pacific Economic Cooperation Council Members	125

Acronyms:

AFTA-ASEAN Free Trade Area

APEC-Asia Pacific Economic Cooperation Forum

ASEAN-Association of Southeast Asian Nations

BSE-Bovine Spongiform Encephalopathy

CIF-Commodity, Insurance and Freight

EEP-Export Enhancement Programme

FAIR-Federal Agricultural Improvement and Reform Act

FDI-Foreign Direct Investment

HACCP-Hazard Analysis Critical Control Point-an internationally recognised food safety methodology which provides the framework for hazard identification and control.

PSE-Producer Subsidy Equivalent

URA-Uruguay Round Agreement

WTO-World Trade Organization

PACIFIC FOOD OUTLOOK: FOREWORD AND ACKNOWLEDGEMENTS

The Pacific Food Outlook (PFO) represents the first region-wide coordinated effort to provide the short-term outlook for the Pacific food system. The food system includes not just production agriculture, but a whole set of economic relationships and linkages that tie the region's food consumers to producers. It is hoped that the Pacific Food Outlook will make a significant contribution to improving the knowledge and understanding of the diverse components of this vital segment of the global economy.

Both private and public decision-makers are demanding high quality information and forecasts of conditions in the Pacific Rim's food and agriculture system. The reasons are several. The Pacific Rim is one of the most important and dynamic regions in the world for food consumption and trade; economic growth in the Asia Pacific continues to outpace other regions of the world with substantial impact on food demand. The value of trade in consumer-ready and intermediate products is significantly more important than the value of trade in agricultural raw materials with food sector investment expanding rapidly. While new technologies are changing agricultural production and marketing, the infrastructure to support the safe and efficient movement of agricultural and food products to domestic and overseas markets appears as a potential limiting factor to the growth in delivering products that meet market demand. In addition, governments are keen to work with the private sector in reducing food costs and maximizing the access to food by the region's population.

The PFO concept was introduced in 1994 at PECC's first Food and Agriculture Forum in Singapore. At this meeting it was recognized that most research is concentrated primarily in the area of production agriculture — supply-demand analysis of basic agricultural raw materials and crop forecasts. However, in the participants' view, what was missing was a comprehensive and ongoing assessment of the Pacific Rim food system, emphasizing not just production, but also food consumption, food prices, marketing and infrastructure, as well as the trade and investment climate, policy framework and regulatory standards.

In September 1996, the PECC Standing Committee met in Cartagena, Colombia and endorsed the development of the first PFO. Since then, Dr. Robert Thompson, President and CEO of Winrock International and I have worked together to advance this project. Mr. William Coyle, Economist, Economic Research Service (ERS), United States Department of Agriculture (USDA), and Ms. Constanza Valdes, also an Economist at ERS and seconded to the PECC International Secretariat in Singapore, have had key roles in laying the groundwork for the first issue. Mr Coyle and Ms Valdes developed the concept for the first PFO, coordinated the first meeting of PFO forecasters in Honolulu, Hawaii, April 16-18, 1997, and compiled and edited the report. Dr. Mark Borthwick of the United States National Committee for Pacific Economic Cooperation (USNCPEC) has provided counsel and support from the beginning.

Sponsors of the 1997-1998 PFO Report are the APEC Economic Committee, Cargill Asia Pacific Ltd, Mitsui Corporation, Ltd, the National Federation of Coffee Growers of Colombia, US Farm Foundation, and the University of Hawaii. We are very grateful for their support. We also wish to acknowledge the important input from the OECD and FAO in advancing this project.

As Chairman of PECC's Food and Agriculture Forum, I want to thank the PFO project coordinators and forecasting panel for their tremendous contribution to this project, the PECC Standing Committee, the PECC International Secretariat, and most especially the sponsors from both government and industry for helping turn this concept into a reality that can serve in advancing the Pacific Food System's development, growth and integration.

Carole Brookins

Chair

Food and Agriculture Forum, PECC

THE PACIFIC FOOD OUTLOOK 1997-1998

INTRODUCTION

The Pacific Rim is one of the most populous regions in the world, and represents a significant share of global Gross Domestic Product (GDP). As the region continues to move toward closer economic integration, the market environment over the next few years will change. The Asian part of the PECC will accelerate its trend towards becoming a larger net importer of food and agricultural products. High rates of economic growth and urbanisation, limited agricultural land resources, and infrastructural constraints will put unprecedented stress on Asia's food system as consumers demand lower prices, more diversity, convenience and freshness. As surplus food producers and exporters, Oceania and the Western Hemisphere PECC economies will face different consumer issues with less disposable income spent on food than in Asia, and higher daily caloric intake.

The Pacific Food Outlook (PFO) presents assessments of the food system in individual PECC markets. These assessments focus on policy and economic developments that contribute to sustaining economic growth in the region, giving consumers greater access to markets through higher incomes, and improving the efficiency in the processing and marketing of food products.

A key indicator is the percentage of disposable income spent on food. By reducing the share of disposable income spent on food, a greater share can be spent on other goods and services. Furthermore, since food is a significant factor in wage demands, economies that meet these rising food demands at the lowest possible cost, may also enjoy a competitive advantage in international markets for other goods and services.

Under the auspices of PECC's Food and Agriculture Forum (FAF), experts from 17 PECC member economies met in mid-April 1997 in Hawaii to provide individual economy assessments about their respective food systems, supported by data and indicators. The emphasis of this PFO report has been placed on the consumer side of the food system, by focusing on food prices, consumer food expenditures, the status of food-related infrastructure, food safety, and the flow of foreign investment into the region's food processing sector. Other institutions, like FAO, the OECD and USDA, are commended to the reader for their work on the outlook for agricultural production and trade. The outlook orientation of the report is primarily short-term, covering 1997-98, with background information for 1990-96.

In the PFO most data and information are drawn from 20 PECC economy market reports. The economies covered are Australia, Canada, Chile, China, Colombia, Hong Kong (China), Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Peru, The Philippines, Singapore, Chinese Taipei, Thailand, United States, Vietnam, and Papua New Guinea. These market reports are structured to provide a comprehensive review of the diverse factors that comprise the food system. These include:

- food prices and consumption;
- food processing and marketing including basic infrastructure components;
- agricultural production; and
- food and agricultural policies.

Two significant observations should be noted. Firstly, governments need to enlarge their statistical coverage of the food system beyond production agriculture to encompass key food system information such as transportation, power for the cold chain, storage and other food system infrastructure, disposable income spent on food, demographic data, as well as other indicators. This information is essential for the monitoring and forecasting of the outlook of the food system, a sector with a strategic economic role within each economy, as well as of growing importance to regional policy.

Secondly, inconsistencies will always plague an exercise like this with definitional differences and the general difficulty in measuring complex phenomena. Statistics are used best as an approximation which reflect trends in the food system.

In spite of the obstacles and inconsistencies thus noted, we believe the executive summary and the full PFO report will provide an excellent introductory overview of food system developments throughout the PECC region. Another less easily measured, yet possibly more substantial dividend is the creation and expansion of a network of business, academic and government contacts concerned about the current status and future prospects of the region's food system.

MARKET STRUCTURE OUTLOOK

The main demand drivers and indicators of market potential, affecting the food outlook for the PECC economies in 1997-98 are:

- **Rapid economic growth** - Economic growth as measured by GDP growth has distinguished the PECC region for some time, particularly the Asian economies. The outlook for 1997 and 1998 indicates no impending recession or serious moderation of economic growth in most of the region. There is growing concern about the short-term outlook for the Southeast Asian economies, given the recent currency devaluations and sharp declines in equity markets. However, the relatively small size of these economies suggest that the impact on the food system in the rest of the PECC region and the world should be modest. In the affected economies, slower income growth will reduce growth in consumption, especially of the more demand elastic processed foods and at restaurants and other food outlets. Imports of food and agricultural products by Southeast Asia will be constrained by higher foreign currency prices for bulk and consumer-ready products and exports will become more competitive in external markets. Growth in the PECC region is forecast at 4.1 per cent for 1997, and 4.1 per cent again for 1998. This is 30 per cent faster than the world average.
- **Increased intra-regional agricultural trade** - Increased intra-PECC trade is leading to a more integrated regional food system. Trade data provides ample evidence of rising

agricultural imports by the Asian part of PECC and a strong trend toward increased agriculture trade among economies in the region. PECC economies now export about 65 per cent of their food and agriculture products to other PECC economies, a degree of trade integration close to that of the European Union (Figure 1). This increased intra-regional trade is explained by relatively rapid economic growth in Asia, compared to other regions in the world, and its limited agricultural land resources.

- **Infrastructure development** - Infrastructure is a critical issue for the future of the food system in the less developed areas of the Pacific Rim region. The Asia Development Bank 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 may be required to build infrastructure now and through the year 2010. Unless massive new demand for infrastructure in East Asia is met, high economic growth cannot be sustained. Less developed markets in PECC lag behind the developed ones in infrastructure (Figure 2).
- **Slowing total population growth** - Total population growth in the PECC region is slowing, as the people of the region, particularly in the more developed countries, are having fewer children. Total population growth is expected to average about one per cent per year in 1997-98. Nevertheless, population growth still adds 25 million people each year to the region's population; an increase roughly equal to the population of Malaysia. Annual growth rates range from less than one per cent in China, other East Asia, the United States, Canada and Russia, to near or over two per cent in Malaysia, the Philippines, Vietnam and Mexico (Figure 3).
- **Increased urbanisation** - Rural-urban migration is symptomatic of a general movement from a subsistence-type to a more market-based food system in many of the region's economies. The growth in the region's urban population is about two per cent, twice the rate of total population growth. Urban population in PECC now surpasses 1.1 billion, and accounts for more than 45 per cent of the region's total population (Figure 4). By 2000, 11 of the world's 21 megacities (populations greater than 10 million) are expected to be in the PECC region.

OUTLOOK FOR FOOD PRICES AND CONSUMPTION

Food prices in the PECC region are forecast to moderate in 1997-98 compared to the more rapid rates in mid-decade. As in the recent past, food prices will rise more slowly than the CPI (Figure 5). Year-to-year food price changes vary dramatically from economy to economy. Nevertheless, the general trend even in the inflation-plagued economies is for food prices to decline in the near-term. Factors explaining the decline are market liberalisation, lower commodity prices, and fierce competition in the food processing sector, which include stable costs associated with food production such as labour, packaging, transportation, and advertising.

Per capita food consumption levels are forecast to remain relatively stable in the region, with dietary composition changing slowly. Caloric intake levels range from 2,200 kilocalories in Peru to 3,600 in the United States (Figure 6). Consumption of meat is a key area of change in the PECC region, particularly in Asia, as income growth in the Asian economies continues to raise the proportion of calories from animal products.

Rapid economic growth is pushing increasing numbers of the region's population into a middle class, whose food preferences and buying habits converge with those of the more

developed economies: more livestock products, less direct consumption of grain, and greater demand for services connected to food either in the processing and packaging of it, or in away-from-home dining. Rising affluence is leading to a declining share of income spent on food, but rising caloric intake (Figure 6). This is reflected in data from economies at opposite ends of the development spectrum in the region. At the one end, consumers in Vietnam, Indonesia, Peru and urban coastal China are spending more than one-third of their incomes on food, but consuming an average of 2,450 daily calories, compared to less than 15 per cent in Australia, Canada, New Zealand, Chinese Taipei and the United States for an average of 3,200 daily calories.

Food demand will also be affected by the age composition of the population, because caloric and nutritional needs change as people age.

OUTLOOK FOR FOOD PROCESSING AND MARKETING

Food processing and marketing are becoming more important dimensions to the region's evolving and ever more sophisticated food system, reflecting changes in consumer demand and advances in marketing and shipping technology. Cold chains have to be established and maintained from the point of production to the point of consumption to provide timely delivery of fresh and frozen produce. Transportation and communication networks need to function efficiently to make sure that the food system provides the maximum opportunity to add value to farm production, while delivering safe, diverse food products to all consumers in the region.

The following issues will influence the outlook for the region's food processing and marketing sector:

Vigorous competition will keep prices low and maximise consumer choice - In many of the developed markets, consumers can expect the food industry - processing, wholesaling, retailing, and food service - to compete vigorously for the consumer's food expenditures, through advertising, the introduction of new products, and price competition.

New business relationships will enhance market coordination and expedite delivery of products - Vertical coordination throughout the supply chain, such as contracts, alliances and joint ventures, predominate in the region. Small- and medium-sized enterprises pursue strategic alliances vertically and / or horizontally, strengthening links with retailers through private labeling, or vertical coordination with primary producers.

Most food processing will be done domestically - Throughout the developed parts of the region, food processing will usually take place close to the point of consumption. However, in small markets domestic production of food requirements, including raw materials for processing, will be insufficient to meet demand. In these cases, a substantial amount of processed foods, as well as raw materials used in domestic processing, will be imported.

Consolidation and concentration in the food sector may raise competition - Consolidation has the benefit of allowing firms to take advantage of scale economies, but could raise regulatory scrutiny of the competitive environment in some parts of the region.

Demand for dependability, high quality, and convenience will strengthen - Fast food outlets have grown rapidly in popularity in the past 15 years across the PECC region in response to consumer demand for brand names, dependability in quality, and convenience. Consumers' interest in dependability and quality is reflected in the increased standardisation of products, the development of standardised coding systems, improved packaging, labeling, and the use of franchising. Some food processors in the PECC region face difficulties in procuring local supplies of a consistent quality on a regular basis and thus must turn to imports.

Foreign direct investment will supplement local capital—Foreign capital flows into the food sectors of other economies often surpasses trade in food products. In many instances, sales of foreign affiliates in the food processing sector are several times the value of exports of comparable products. This trend will continue as the barriers to investment are reduced.

Global competition in food markets will require deregulation and reform - As border measures restricting commodity trade and investment flows are reduced, individual PECC economies will undertake reform in labour policy, financial markets, and in other areas that affect the international competitiveness of food products.

A dual system—modern and traditional- continues to service some economies - Often in many developing as well as some developed PECC markets, the food industry is fragmented, dominated in number by small-sized family-owned enterprises using traditional means of food processing. The majority of these small-scale operators employ low level technology, R&D and marketing expertise. On the other hand, there is a sizeable number of large-scale food processing manufacturers, sometimes foreign owned. These companies have access to high technology, R&D and global marketing channels which enable them to produce products which meet international standards.

Food processing industry in developing PECC region may need assistance - In its elementary stage, local entrepreneurs lack the investment capital and infrastructure to establish food processing plants. Furthermore, there is high processing costs of agricultural products because of the lack of scale-economies.

Improvement in the transportation and communication infrastructure is a key issue for the future of the food system in the Pacific region - Throughout the region, particularly in developing areas, inadequate infrastructure constrains development of the food system and raises the cost of food to the consumer. Governments are undertaking programs to improve port facilities, refrigerated warehouse capacity, and roads to reduce delivery times and wastage for both agricultural raw materials and consumer-ready food products.

OUTLOOK FOR AGRICULTURAL PRODUCTION AND TRADE

Production agriculture in the region is responding to a profound change in consumption; that is, the rising per capita levels of meat consumption in the Asia PECC driven by greater affluence and a degree of leveling off of meat consumption in some of the developed markets as a result of health concerns. As a result, the region's self-sufficiency in grain is trending downward as economies like China and Thailand have switched from net exports of feedgrain to net imports as domestic supplies are being used to support expanding poultry and pig industries. Although the data is incomplete, many of the individual economy assessments describe a positive outlook for poultry and pork consumption and production, consistent with income-driven dietary upgrading and diversification. In Japan, fears of *bovine spongiform encephalopathy* (BSE) and *e. coli* (O-157) have temporarily dampened demand for beef, thus benefiting the pork and poultry sectors, at least for the short run.

There are growing uncertainties about the implications of *El Nino*, a well-known climatic phenomenon in the region. There appears to be positive impacts in some areas (such as eastern Pacific fisheries), and negative impacts in others (dry conditions in Southeast Asia and Oceania). Total global cereal production in 1997 has thus far not been greatly affected. Sustained Southern Hemisphere drought could boost livestock slaughter and lower meat prices in the short term. Grain crops have been affected by drought in Indonesia, the Philippines and Australia. Other crops like coffee and cocoa could be adversely affected by both drought in Asia and too much moisture in Latin America. The region's forestries and fisheries have also been affected: warmer waters off the eastern Pacific coast have increased fish catches in some areas, while dry conditions in Indonesia are adversely affecting tree crops and fuel supplies from wood.

Resource endowments give clues about the future of agriculture production and trade in the region. The abundant resource in Asia, is labour, both skilled and unskilled, not agricultural land. We can expect with continued economic growth and policy reform in the Asia PECC, that comparative advantage will come into freer play. This will mean that the Asian PECC economies will generally become larger markets for “land extensive” bulk commodities from other parts of PECC, namely Oceania and North America. As this process moves along, agricultural resources will shift from land extensive activities to labour- and capital-intensive ones, horticultural products instead of grains for example. The exporting countries, however, will not just limit themselves to bulk commodities, but will compete in many non-bulk areas as well where there might be seasonal or cost advantages.

The location of the value-adding of processed food products across the region will increasingly be dictated by the relative cost of the agricultural raw material to the value-added cost of processing and marketing.

OUTLOOK FOR FOOD AND AGRICULTURAL POLICY

The role of governments is changing in the Pacific food system. Inward-looking policies are being replaced by trade facilitating ones that are making the food system more efficient, enabling it to deliver more, higher quality, and lower priced foods to the region’s 2.5 billion consumers. Assuring access to food is a key objective of all governments in the region. As a key, wage-good, the cost of food has implications for an economy’s health; likewise healthful food is obviously vital to human health and longevity.

Nevertheless, while some progress is being made, many government policies still interfere with the performance of the Pacific food system. According to the OECD Producer Subsidy Equivalent calculations for six PECC members—Australia, Canada, Japan, Mexico, New Zealand, and the United States—food and agricultural policies in 1996, increased the consumer food bill by about \$84 billion in those countries. Frequently, distortionary farm policies are defended on food security grounds. Food security is a widely-supported principle across the PECC region. Even in the free port of Hong Kong (China) regulations, now under review, are imposed on the rice trade, requiring importers to import rice in accordance with quotas so that a reserve stock is maintained for emergency situations.

In Japan and other East Asian economies, food security is often associated with self-sufficiency policies for grain and other commodities. In other developed economies, internal support policies are dependent on border measures that restrict opportunities for foreign suppliers, like dairy products in Canada and the United States. These policies, which often result in high consumer prices, act as a tax, reducing consumer choice and market efficiency.

However, it is clear from many of the individual economy assessments that policy reform either in rhetoric or reality is shifting toward more open markets and a facilitative role for governments. According to the economy assessments, governments in the PECC region are redefining their roles to include:

- providing food security and freedom from hunger;
- protecting the economy from animal and plant diseases and tainted food through quarantine and inspection services; thus protecting human, animal and plant health through sound scientific means;
- regulating the efficient and orderly distribution of fresh primary food products in major urban cities;
- providing infrastructural and technical support to develop farming and fisheries, such as support for irrigation and drainage improvement;
- encouraging public-private partnerships such as for large-scale infrastructural projects;

- encouraging a more liberal market environment to improve productivity through more efficient use of agricultural resources;
- reducing tariffs and other barriers in accordance with multilateral and regional obligations;
- promoting joint and direct marketing by reducing the number of middlemen;
- supporting agricultural research and extension services;
- protecting intellectual property rights;
- containing food price inflation, particularly in low-income economies, where food represents a significant wage-good; and
- attaining better living standards in the rural sector through greater access to basic goods and services such as food, shelter, health, employment, education, and social services.

All PECC economies belong to one or more regional groupings. ASEAN, Closer Economic Relations (Australia-New Zealand, 1983), NAFTA, the Andean Community, and APEC, among others, in many ways reinforce the principle of policy reform and trade liberalization advocated by the WTO. Most members of PECC are also members of the WTO, with the exception of China, Chinese Taipei, Russia and Vietnam. Following are agreements and policy actions taken by PECC economies that will influence the outlook for the Pacific food system:

The Association of Southeast Asian Nations (ASEAN) signed a free trade agreement in 1994 in which they committed to adopt a Common Effective Preferential Tariff of 0-5 percent by 2008. The timetable was later shortened to 2003. ASEAN includes Brunei, Burma, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, and Vietnam (Burma and Laos are not members of PECC). While processed foods are included, raw agricultural products are exempted in the initial market opening commitments.

- The North American Free Trade Agreement (NAFTA), signed in 1994, will be fully implemented by 2008. Tariffs are being cut and markets opened for agriculture and other sectors. Between the United States and Mexico, free trade in agriculture will be achieved by the year 2008, with most barriers removed by the end of 2003.
- The "APEC Economic Leaders' Declaration of Common Resolve", issued in November 1994 from the APEC Ministerial meetings in Bogor, Indonesia, announced that members were adopting the long-term goal of free and open trade and investment in the Asia Pacific region. This goal would be pursued by further reducing barriers to trade and investment and by promoting the free flow of goods, services, and capital within the region. The APEC members pledged to pursue the goal of regional liberalisation in a GATT-consistent manner and would promote the notion of "open regionalism" allowing benefits from trade liberalisation undertaken by members to also accrue to non-members. Developed economies would fully liberalise their economies by 2010 and other members by 2020. At the Osaka Ministerial in November 1995, APEC members reaffirmed the free trade goal, calling for comprehensive treatment, including controversial sectors like agriculture, but flexibility in dealing with various trade sectors in meeting this goal. Action plans were tabled at the Manila Ministerial meeting in November 1996 for implementation beginning in 1997. Peer pressure would be the vehicle for ensuring comparability in commitments among the 18 economies. Members would pursue "concerted unilateral liberalization", but in consultation with and under the scrutiny of other members. Action plans would be updated and revised on an annual basis.

Figure 1 — PECC increasingly integrated through agricultural trade

Percent exported to other group members

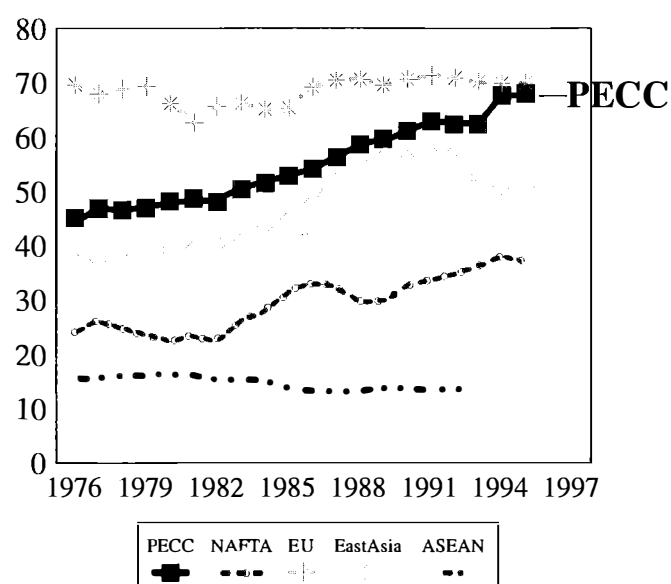
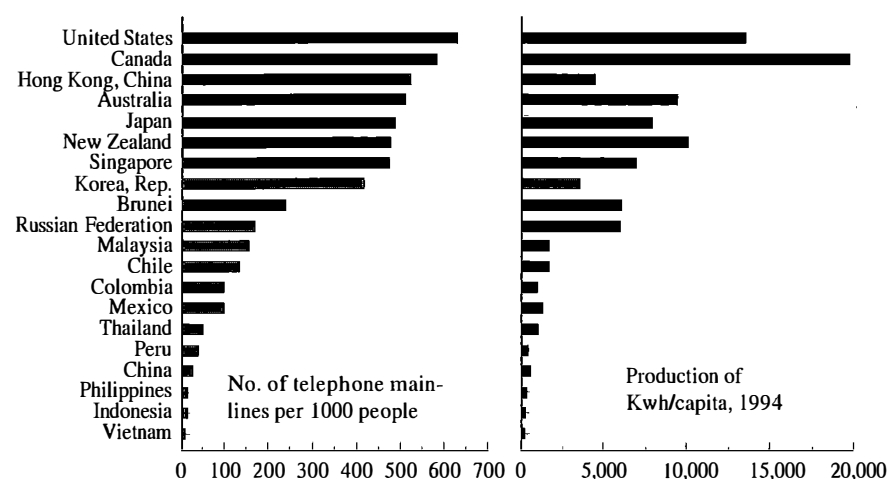


Figure 2 — Infrastructure constraints in less developed markets of PECC



Source: World Development Indicators on CD-ROM, 1997

Figure 3 — Average annual growth in PECC population about one per cent, adding 25 million people per year

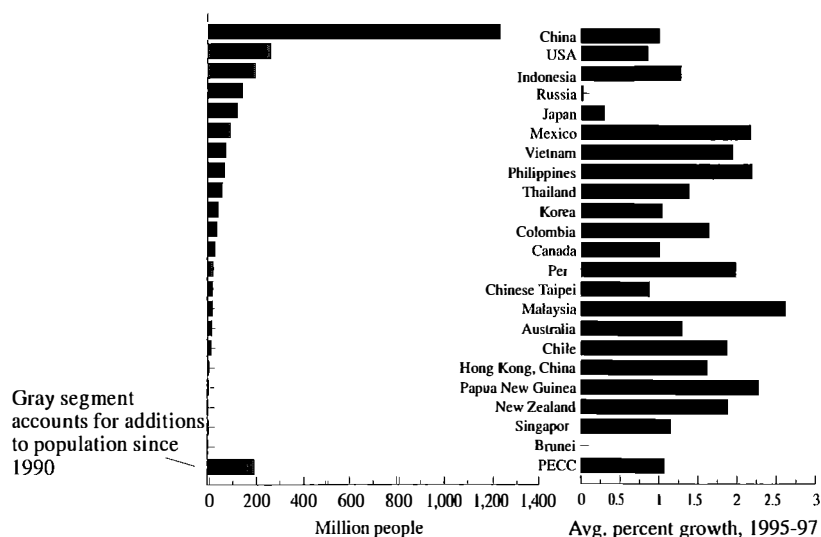
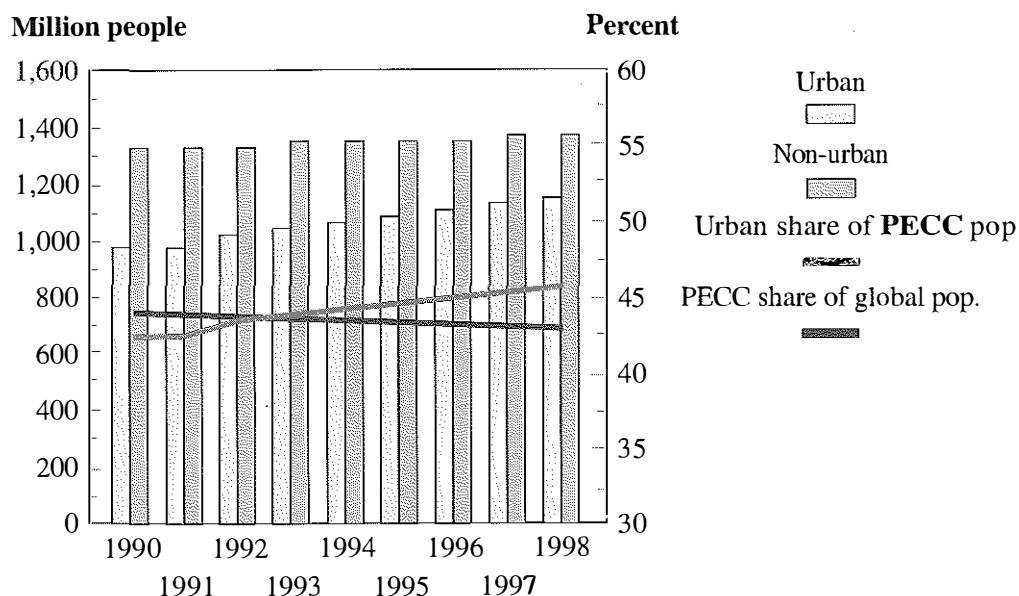
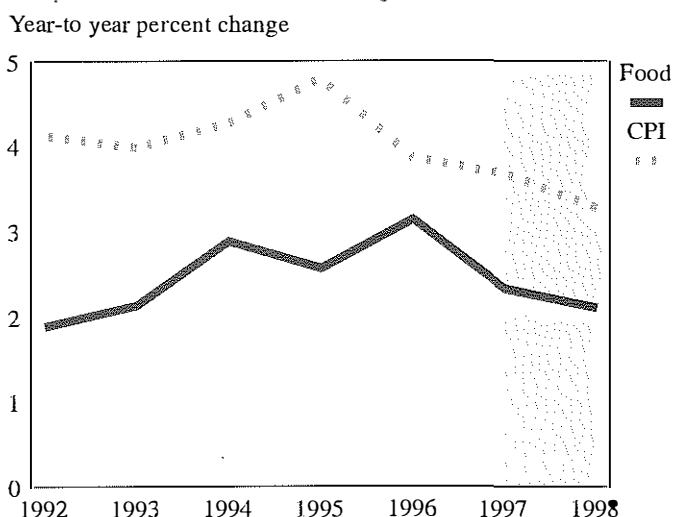


Figure 4 — Urban population in PECC nearing 1.2 billion



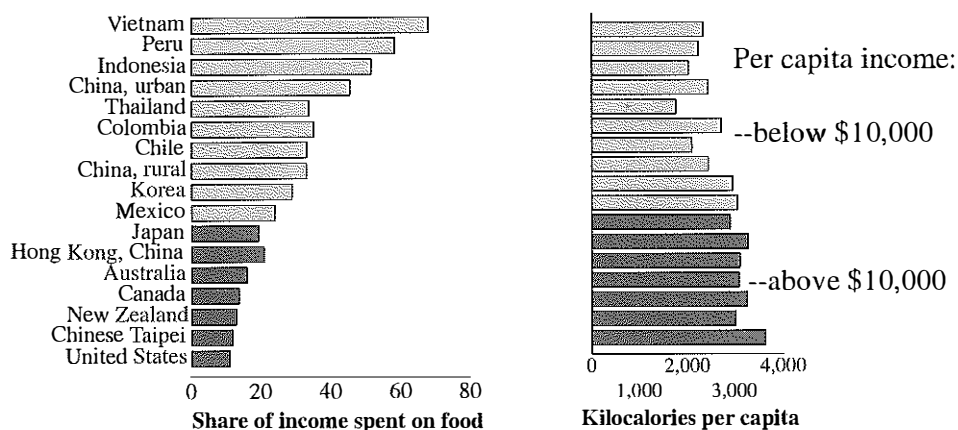
Source: PFO country reports.

Figure 5 — Food price inflation in the PECC region is forecast to decline in 1997-98



Source: PFO country reports;

Figure 6 — As disposable income spent on food declines, per capita calories rise



Source: PFO country reports; data on income are for 1995 except for Mexico (1994) and Vietnam (1993); in most cases, data include expenditures on food consumed away from home. Caloric intake data are from PFO country reports and are for 1994.



AUSTRALIA

SUMMARY

Australia is a net exporter of highly processed foods and beverages: in fiscal 1995 – 96 (July-June), exports were valued at A\$4.5 billion (US\$3.4 billion), while imports amounted to A\$2.6 billion (US\$ 2.0 billion). With strong economic growth expected to continue in the Asia-Pacific region, the outlook for Australia's food-producing industries is bright. The food-producing industries are expected to benefit from a range of microeconomic reforms aimed at removing regulatory impediments to the efficient functioning of the economy.

Food-producing industries can also be expected to benefit from continued Government efforts aimed at improving market access through multilateral trade forums and bilateral negotiations.

FOOD PRICES AND CONSUMPTION

With relatively high levels of economic development and incomes, food consumption patterns in Australia are similar to those in other developed economies with a predominantly Western culture.

The index of Australian food prices has risen 16 per cent during the 1990s. This is slightly less than consumer prices generally, which rose by about 19.4 per cent over the same seven years. In 1997 and 1998 food prices are likely to rise at about the same rate as inflation — around 5.5 per cent overall — as prices of basic commodities such as beef and dairy products recover from recent world market-induced lows.

Apart from the cost of food raw materials, which tend to be influenced by international market developments, major factors affecting prices of food to Australian consumers include processing, distribution and retailing costs. Because of this, the food industry stands to benefit from the various macroeconomic reforms being pursued by governments in Australia — particularly in the areas of transport, port operations, power generation and distribution, the labour market, and the financial sector.

Reforms in these areas, leading to a more economically efficient allocation of productive resources in the community, have potential to bring significant benefits to both food producers and consumers.

As is typical of countries with relatively high standards of living, the proportion of incomes spent on food in Australia tends to be small relative to the situation in less well-developed economies. In 1990, Australians spent around 14.5 per cent of their disposable incomes on food. This amount has risen steadily since, and is forecast to be around 16.6 per cent in 1998. From 1990 to 1996, per person disposable income in Australia rose by about five per cent in real (net of inflation) terms. With economic activity assumed to grow in 1997 and 1998, further increases in disposable incomes are in prospect.

With changing work patterns, lifestyles and rising real incomes, Australian consumers are spending more on eating out. Expenditure in this area, as a proportion of disposable incomes, rose 15 per cent from 1990 to 1996, and is likely to rise further. A slight upward trend in the cost of food in terms of calories consumed reflects the tendency for a growing proportion of expenditure on food to be for additional services embodied in items purchased. These added services include such things as more expensive packaging and growing household preferences for pre-prepared foods.

Consumption of animal products (such as meat and dairy products) has trended slowly up over the past decade and a half, while vegetable consumption has increased more strongly. Assuming a continuation of past trends, per person intake of calories from vegetable products is forecast to be around 1990 calories a day in 1998, and calories from animal products about 1,113 a day.

Year-to-year variations in the consumption of carbohydrates and fats have been relatively low, but around a clear long-term upward trend in both cases. In 1996, around 35 per cent of the calorie intake of the average Australian is estimated to have come from fat, half from carbohydrate sources, and 13 per cent from protein. These basic trends are likely to continue.

FOOD PROCESSING AND MARKETING

The Australian food industry is rapidly becoming an important exporter of high quality processed food and beverage products — particularly to the Asia-Pacific region. In fiscal 1995–96 (July–June), 11 of the top 15 markets for Australian exports of highly processed food were in the region. Shipments to Asia-Pacific markets accounted for 78 per cent of Australia's highly processed food and beverage exports, totaling A\$4.5 billion (US\$3.4 billion). Japan was the main destination for these exports, accounting for 28 per cent of the total. Other major Asia-Pacific markets for highly processed food exports from Australia include New Zealand, the Philippines, Chinese Taipei, Hong Kong, Malaysia, Singapore and Thailand — each accounting for five to eight per cent of the total.

Approximately 3,500 businesses are engaged in the manufacture of processed food and beverages in Australia, and these employed 188,000 staff from 1995 to 1996. Employment in the sector accounted for 17 per cent of the total employed in manufacturing. Assistance to the industry is minimal, with the nominal rate of protection in fiscal 1995–96 estimated at three per cent, and the effective rate at two per cent. Output from the food, beverage and tobacco manufacturing sector was valued at A\$14 billion (US\$10.6 billion) in 1995–96, some 21 per cent of total gross product from the Australian manufacturing industry. In terms of the national economy, food and beverage manufacture contributed close to three per cent of gross domestic product in 1995–96.

Although fluctuating from year to year, private new capital investment in food manufacturing in Australia trended upward in the first half of the decade from A\$1.2 billion (US\$0.9 billion) in 1990–91 to A\$1.9 billion (US\$1.4 billion) in 1995–96. Expenditure in 1995–96 amounted to some 19 per cent of the total new investment in manufacturing. Foreign investment in the Australian food industry is substantial. In 1995–96, for example, foreign direct investment in the food industry totaled US\$8 billion — much of it from other PECC countries such as the United States — and with the majority of it in the form of equity investment.

Overseas investment by Australian food and beverage manufacturers has varied over the years, but appears to have been more active in recent times. There has been a significant

increase in Australian producers using local partners to provide such input as marketing and distribution skills. Also, some global manufacturers are implementing business strategies which use their Australian interests as the base for tapping into other markets in the region. These trends are expected to continue.

In recognition of the potential for the food industry to become a more significant player in the Asia-Pacific market, the Australian Government established a Supermarket to Asia Council in 1996. The Council consists of a number of Government ministers, including the Prime Minister, and industry leaders from the farming, food-processing, packaging, transport, research, trade union and retailing sectors.

The Council is a facilitation body with its primary role being to provide strategic direction and priority setting for the agri-food industry, so as to enable various policy, structural and market impediments to growth to be effectively addressed by Government and industry. Particular attention is being given to the removal of barriers to exports, to the development of a stronger export culture in Australia's agri-food industry, and to the promotion of the benefits of the industry's products in Asia.

Working groups have been established covering 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 prioritise the key problems affecting export growth and to develop plans and timetables to overcome them.

AGRICULTURAL PRODUCTION AND TRADE

Australia is self-sufficient in the major agricultural commodities, with imports usually occurring only in relation to some dairy products (speciality cheeses in particular), oilseeds to complement domestic supplies to crushers, some horticulture products (partly to meet seasonal gaps in supply), and occasionally, some cereal grains for livestock feed in times of severe and widespread drought.

As a net exporter of most of the major agricultural commodities and with relatively low or non-existent import protection or subsidies, prices received by Australian producers largely reflect developments in world markets. Because of this linkage to world markets, exchange rate movements are important. In developing its forecasts of commodity prices for 1997 and 1998, the Australian Bureau of Agriculture and Resource Economics (ABARE) has assumed the Australian dollar will average around US77 cents in both years — marginally above the calendar 1996 average.

With world grain prices forecast to be lower, the total area planted to winter crops in Australia in 1997 is expected to be down about 2.6 per cent to 17.3 million hectares. Forecast changes in relative returns for winter crops, combined with an expected return to more usual crop rotations, favour increased plantings of oilseeds and pulses — particularly canola — at the expense of wheat and barley.

With plantings expected to be lower, and assuming a return to average yields, Australian wheat production is forecast to fall over 20 per cent to around 18 million tonnes in marketing year 1997–98 (October–September).

Reflecting the record crop of 23.5 million tonnes in 1996–97, wheat exports are estimated to rise 30 per cent to 15.4 million tonnes in fiscal 1996–97 (July–June). Exports of around 14.5 million tonnes are in prospect for fiscal 1997–98.

In response to expectations of lower world prices, Australian growers are likely to reduce barley plantings in 1997, with 1997–98 (November–October) production falling eight per cent to 5.6 million tonnes; about 40 per cent of which is anticipated to be suitable for malting. Barley exports are estimated to be 3.9 million tonnes in fiscal 1996–97, falling to about 3.4 million tonnes in 1997–98.

A major part of Australia's pulse production is for feed rather than food. However, output of food pulses such as chickpeas, lentils and faba, mung and navy beans is growing. Relatively favourable gross margins for chickpeas and lentils compared with field peas is expected to result in the area planted, to the first two rising in 1997 at the expense of the latter. The total area sown to food pulses in 1997 is forecast to be around 400,000ha, rising to 420,000ha in 1998.

The principal oilseed grown in Australia for human consumption is canola. Expectations of continued relatively favourable grower returns, and the release of several new varieties, is forecast to boost canola plantings in 1997 by over 50 per cent to 565,000ha. With average yields, this is forecast to result in a record crop of 822,000 tonnes in 1997–98. Exports from the 1997–98 crop are forecast to be around 570,000 tonnes. The area planted to canola is projected to rise another 13 per cent to 636,000ha in 1998.

The Australian rice crop (harvested in the first half of calendar 1997) is estimated to have been a record 1.46 million tonnes (paddy). As a result, the volume of exports in the 1997–98 (April–March) marketing year is forecast to rise by over 70 per cent to 820,000 tonnes. Production is forecast to fall in 1997–98 because of likely constraints on the availability of irrigation water.

Prospects for Australia's meat industries in 1997–98 are likely to include improved returns for beef, continuing favourable returns for sheep meat, and increased profitability in the pig and poultry industries. Beef and veal account for over half of total Australian meat output. The improved outlook depends importantly on the combined expected influences of lower non-fed beef production in the United States, growing Asian demand for meat, and lower feedgrain prices.

Cattle slaughterings are estimated to rise two per cent in fiscal 1997–98, with a commensurate rise in beef production to around 1.74 million tonnes (dressed weight). A further rise in slaughterings, from a slightly larger herd, is anticipated for 1998–99, with forecast output of beef and veal of about 1.9 million tonnes.

Exports of Australian beef to the United States are forecast to increase by almost three per cent to 180,000 tonnes (shipped weight) in fiscal 1997–98 as US demand for imported manufacturing beef strengthens. Australian exports to Japan are forecast to increase by four per cent to 300,000 tonnes as Japanese consumer concerns over BSE and E.coli recede, and exports to South Korea are forecast to rise 10 per cent to 66,000 tonnes.

During the course of 1997 and 1998, the number of cattle on feed in Australia is expected to rise. The extent of the increase will be influenced by changing expectations about Japanese beef import demand, by competition in Japan from US exports of grain fed beef, and by grain price movements and their effect on the profitability of feeding. Live cattle exports from Australia are growing strongly, reflecting strong demand for feeder cattle in South-east Asia.

With production of lamb expected to rise five per cent in fiscal 1997–98, exports are forecast to increase 10 per cent to 63,000 tonnes (shipped weight), and by a further 2,000

tonnes the following year. The United States will remain an important market for high valued chilled product. Mutton production is forecast to increase by one per cent in 1997–98, and exports to rise three per cent to 146,000 tonnes (shipped weight) in response to stronger overseas demand.

The pig and poultry industries are expected to benefit from lower feed costs in 1997–98, and to provide strong competition for beef and lamb in the domestic retail market. Both meats form an important part of Australian consumers' diets, with annual consumption of pig meat being around 19kg per person, and poultry meat (principally chicken) around 27kg. (Total per person consumption of meat in Australia is currently around 98kg a year). Exports of both meats are relatively small, accounting for less than two per cent of production.

Australian milk supply is forecast to increase by around four per cent in 1997–98 as the cow herd continues to expand and milk yields rise. Reflecting improved world prices for dairy products, Australian exports of butter, cheese and milk powders are forecast to rise by over three per cent. Exports of higher valued dairy products, such as yoghurt and ice cream, will also rise. Sugar production is forecast to increase by 2.5 per cent in 1997–98, despite an expectation of lower prices. Both the value and volume of Australian sugar exports are forecast to rise.

FOOD AND AGRICULTURAL POLICY

The Australian Government is currently considering or implementing policy changes aimed at improving the international competitiveness of the food producing sector and at complying with commitments under the Uruguay Round of the GATT. Policies affecting marketing and industry structures are also under review and could result in changes which will have a bearing on future industry performance in domestic and export markets. For example, industry reviews conducted in the context of Australia's national competition policy have potential to bring significant change in the structure and roles of statutory organisations in areas such as grain marketing.

Dairy product marketing arrangements are currently being transformed to comply with Australia's commitments under the Uruguay Round of the GATT. The intent of the revised arrangements is to ensure that farmgate prices for milk used in manufacturing are based directly on the export prices achieved by individual processors. Farmers pay a levy (1.9 cents [US1.5 cents] a litre in 1996–97) on milk consumed domestically as drinking milk, while manufacturers are levied (approximately 3.9 cents [US3 cents] a litre in 1996–97) on all milk used in the production of finished products for domestic sale. The money raised from these levies is used to make payments to farmers who supply milk for manufacturing. These payments — which are around 2.2 cents (US1.7 cents) a litre in 1996–97 — are being phased down and will be terminated in June 2000.

Policies relating to the operation of the Queensland sugar industry (which produces the bulk of Australian output) were reviewed in 1996. This review gave rise to a set of recommendations (subsequently adopted by the Australian and Queensland governments) which included the removal of the \$55 (US\$43) a tonne (\$37–\$38 a tonne for developing countries) tariff on imports of sugar into Australia; the elimination of differential returns on sugar in the two marketing pools; the pricing of domestically-consumed sugar at export parity; the retention of single desk acquisition and selling of raw sugar on the export and domestic markets; and the removal of some domestic cane supply restrictions. As a result of these changes, particularly the freeing up of land assignment restrictions on sugar cane

plantings, future Australian sugar production and exports are likely to be significantly greater than would otherwise have been the case.

Recent initiatives in relation to quarantine have potential to boost Australia's food exports and also result in easier access for imports of food. Themes emerging from a review of quarantine arrangements have been that a partnership approach involving government, industry and the public be used in relation to quarantine policy and administration; that greater emphasis be placed on pre-border and post-border quarantine measures; and that a structured process for conducting import risk analyses be adopted to provide a more open, better understood, and scientifically based foundation for taking a 'manageable risk' approach to quarantine.

Meat inspection has also been under review, with the cornerstone of proposed reforms being that there be a move to quality assurance based on company inspection. Under these arrangements, inspection functions would be integrated into the production process and monitored by government veterinarians and through regular audits. Requiring meat processing firms to adopt comprehensive quality assurance programmes is expected to result in reduced inspection costs and improved food safety standards.

Improving market access for food and agricultural products is a major priority for the Australian government. This objective has been pursued on a bilateral basis with foreign governments as well as on a multilateral basis through the World Trade Organisation (WTO) and Asia-Pacific Economic Council (APEC). Examples of bilateral food trade agreements achieved in the recent past include a specific commodity undertaking with the Philippines on imports of Australian fruit; a bilateral package with Chinese Taipei covering improved access for beef and apples and new access for stone fruit; a streamlining of Malaysian import procedures for fresh milk; and a pest risk analysis process with Japan (which is awaiting final Government agreement) to allow Tasmanian 'Fuji' apples to enter the Japanese market.

CANADA



SUMMARY

Increases in food consumption due to population and income growth in Canada will be modest. Such factors as immigration, population aging and changes in household structure contribute, however, to measurable shifts within consumers' food baskets. Structural adjustment continues in the food and beverage processing industry, with the more successful firms extending cost and quality control measures up and down the value chain. Agricultural policy rationalisation is helping to underpin adjustments in the processing industry. Improved and secure access to markets through international trade agreements, availability of cost-competitive inputs and technologies, and an effective system of innovation, product development and product differentiation are essential ingredients of the future operating environment of Canada's increasingly outward oriented agri-food businesses.

FOOD PRICES AND CONSUMPTION

Canada's economy is characterised by moderate growth and low inflation. The economy is expected to grow by 2.9 per cent in 1997 and by 2.7 per cent in 1998. Economic growth is expected to be around three per cent per annum for a few years thereafter. Per capita income exceeds CAN\$26,000 and per capita personal disposable income, net of direct taxes, is around CAN\$18,000. The Consumer Price Index (CPI) is expected to increase by around two per cent annually in 1997 and 1998. The CPI for food is expected to rise more slowly, at about 1.5 per cent in 1997 and 1998, and growing by less than two per cent in the following years.

The Canadian food market is mature, and the share of disposable income spent on food at home is less than 10 per cent. Expenditure on food in Canada is expected to increase by 1.5 per cent per year in real terms over the next 15 years. Canada's population grows by about 1.3 per cent per year. As the income elasticity of food is low and income is growing slowly, the increase in food consumption due to income growth is minimal.

The composition of food consumption is changing, however, as a result of three major factors: aging of the population, changing ethnic mix, and changing household structure. Ageing affects consumption patterns because people's nutritional needs change with age. By the year 2006, about 23 per cent of the population will be in the 40 – 54 age group, in addition to which 13 per cent will be in the group 65 and older. While the proportion of the population 65 or older is projected to grow only from 12 per cent in 1996 to 13 per cent in 2006, the growth rate will increase rapidly in the following years. Demand for certain kinds of food will increase: foods that are convenient to prepare, in smaller portion sizes, food of high quality but less energy content, and food with less saturated fat, sodium, and sugar, and with more fibre and calcium.

The relative importance of families in Canada of exclusively European or North American background is declining, while that of families of Asian-Chinese and South Asian origins is increasing. This should increase demand for pork, chicken, fish, rice, fresh fruit and vegetables, fats and oils, while demand for fluid milk, cheese, speciality meats, bakery products, and sugar-based products would not increase as strongly.

The composition of Canadian households is changing, with an increasing number of single-person and single-parent households. The average household is becoming smaller, and women participate in the labour force in increasing numbers. This should increase demand for prepared foods and foods prepared outside the home.

Many of the costs associated with food production and marketing (labour, packaging, transportation and advertising), and which account for some 80 per cent of the retail price of processed foods, are not expected to change much in the next few years. While retail prices for total food are projected to increase by about 1.5 per cent per year in 1997 and 1998, retail prices of food from stores are expected to increase somewhat less, and prices of food from restaurants somewhat more. Retail prices of cereal and bakery products are expected to register only modest increases of one to 1.5 per cent in 1997 and 1998, as falling grain prices offset somewhat rising costs in processing and marketing.

Retail prices of beef are projected to increase by about 0.5 per cent in each of 1997 and 1998, following a significant decline in 1996. After rising by more than five per cent in 1996, retail prices of pork may increase by a further three per cent in 1997, followed by declines in 1998 and 1999. After having increased by two to three per cent in 1996, retail prices of chicken and turkey are expected to remain fairly static in 1997 and 1998, with increases ranging from 0 to 1.7 per cent. This relative stability is predicated on correspondingly stable input costs and retail margins.

The retail price of fluid milk is expected to increase by 0.5 to two per cent annually over the next four years. This is a slower increase than that experienced in 1995 and 1996, when feed grain prices were high. Butter prices are expected to begin declining sometime after 2000, when industrial milk quota is changed from being measured in terms of butterfat to solid non-fats. Retail prices of eggs are expected to increase by one to two per cent in 1997, and then drop by the same amount in 1998.

FOOD PROCESSING AND MARKETING

The agriculture and food sector in Canada contributes more than eight per cent of total Gross Domestic Product (GDP) and more than 14 per cent of total employment. The share of total GDP accounted for by the agriculture and food and beverage processing sector is less than five per cent and declining, while the share of agri-food service industries (including retailing and wholesaling) in total GDP is stable at around four per cent. The meat and meat products industry has the largest value of shipments in Canada's food and beverage processing industry, followed by dairy products, and frozen food and food preparations.

Food and beverage firms in Canada have the benefit of competitive input and support industries, including rail, air and truck transportation, which are becoming increasingly cost-competitive through deregulation and trade liberalisation. Canada maintains excellent marine shipping facilities on both the Pacific and Atlantic coasts to serve all types of vessels and cargoes. Canadian food processors also have access to large supplies of fresh water; an essential ingredient in most food and beverage manufacturing.

The food processing industry in Canada is highly concentrated. Out of the total number of establishments (2,737 in 1994), 71 per cent were small, with annual shipments of each valued at less than \$10 million. About seven per cent of the total number of plants (about 200 plants) account for 57 per cent of the value of all shipments in the industry. The 12 largest firms alone (those with sales exceeding \$1 billion) generate about 50 per cent of the value of shipments.

Total annual capital investment in Canada's food and beverage industry is of the order of \$2 billion or roughly three per cent of the value of shipments. Much of this investment is directed toward meeting volume and quality demands of export markets. Most of the top 50 food and beverage manufacturing firms in Canada are Canadian-controlled. Nearly all of the rest are controlled by interests in the United States or the United Kingdom.

In the first half of the 1990s, the value of foreign investment in the Canadian food and beverage processing sector increased by more than 50 per cent. This increase is faster than in many other parts of Canada's manufacturing sector. The overwhelming majority of the inward foreign direct investment is sourced in the United States, with only a very small portion coming from other PECC countries (primarily Japan). The increase in foreign investment observed in Canada is believed to be associated with the freer trade and larger market resulting from the implementation of regional trade agreements and with other policy changes favouring investment.

The food distribution segment of the processing and marketing industry includes food brokerage, food retail, food wholesale, foodservice distribution, and foodservice operation. The food retail sector is more highly concentrated in Canada than in the United States. Competition between retail store types, chain grocery stores, especially warehouse clubs and mass merchandisers, account for an increasing share of sales, while that of convenience stores is declining.

Food products moving through wholesalers and distributors represent 75 per cent of the total flow from manufacturers, and the remaining 25 per cent moves directly to retail stores and operations. Only about 25 per cent of the total food tonnage in Canada is handled by brokers, in contrast to the 60 per cent share observed in the United States. The share of foodservice in the total food distribution industry has declined over several years, reaching 36 per cent in 1995. Branded products, which often generate higher returns to retailers, are more common in the Canadian food processing industry than in the US industry.

AGRICULTURAL PRODUCTION AND TRADE

The commodities generating the largest farm cash receipts in Canada are red meats (beef, pork, sheepmeat), followed by grains and oilseeds (of which wheat, barley, corn, canola and soybeans are most important). Milk production ranks third in farm cash receipts. Canada's agriculture is oriented towards exports, especially in grains, oilseeds, beef and pork.

Prices in Canada's crop sector are expected to continue softening in 1997 and 1998 and in the following years, but they are still expected to exceed the levels of the early 1990s. Because of the relative strength of grains and oilseeds prices, not much more diversification into special crops is expected to occur in western Canada for the next few years. Although not a major user of land in Canada, the production of ginseng is expected to increase rapidly.

Increased domestic use of grains and oilseeds is expected. More grains and oilseeds will be used for feed as beef and hog production expands. Construction of new ethanol plants will increase industrial use of corn, in addition to which a barley ethers facility is scheduled

to start production in 1999. Oilseed crushing capacity in Canada has increased considerably in the 1990s, generating a larger domestic demand for oilseeds in addition to the growing export demand.

Canada's cattle industry is adjusting as low cattle prices and high feed grain prices have encouraged cattle liquidation. Increased slaughtering capacity in western Canada, combined with larger cattle marketings, made Canada a net exporter of beef from 1996 while remaining a net exporter of live animals. While most of the additional exports of boxed beef will go to the United States, some are expected to go to East Asia as well.

Hog inventories in Canada are on an upward trend, with herd expansion being the strongest in western Canada. Restructuring and expansion in the packing industry, new marketing arrangements that allow increased producer-processor integration, innovative equity financing schemes, and cost saving hog production technologies combine to make possible increasing exports of pork over the next several years. While the US is expected to remain the major destination of Canada's pork exports, Asian-Pacific destinations are forecast to become more important. Canada expects to take advantage of the supply disruptions in the Pacific pork market caused by the outbreak of foot-and-mouth disease in Chinese Taipei.

Production of turkey and eggs in Canada is expected to increase only slowly over the next few years, in line with increasing consumption, with chicken production increasing more rapidly. Canadian exporters are expected to continue to meet a growing demand for specialised breaker egg products. Exports of chicken may increase under schemes that would allow production for exports at world prices.

In dairy, it is expected that production of milk in Canada in future years will continue to slightly exceed the level established through quota, with much of the over-quota production being processed into butter and skim milk powder for export. However, such exports will likely decline from the levels seen in 1995 and 1996.

The value of Canada's agriculture and agri-food exports reached unprecedented high levels in 1996 and 1997. While export quantities increased, high world prices, particularly for grains, were more important in raising the value of exports. As world prices of commodities important to Canada's exports decline in 1998 and 1999, the nominal value of exports is expected to decline (in spite of quantities continuing to grow), before recovering around the year 2000. Increasing export quantities of value-added products should also contribute to a recovery in value of exports.

Much of Canada's imports of agriculture and agri-food products consist of fruits and vegetables and such products as chocolate, sugar, and spices. The value of imports to Canada of agriculture and agri-food products is expected to continue its steady increase beyond 1997. Imports of many horticultural products, especially in the off-season, help to improve the diversity of choice for Canadian consumers.

FOOD AND AGRICULTURAL POLICY

Agriculture and agri-food policies in Canada are changing rapidly in response to both domestic and international pressures and commitments. Reducing the budget deficit is one key determinant of policy emphasis. Priorities include market development (domestic and foreign), strong foundations for the agriculture and agri-food sector and rural communities, innovation for economic development and environmental sustainability, and safe and high-quality agricultural and agri-food products.

Canada's food inspection, and plant and animal health system will continue to underpin the industry's ability to provide high quality products for domestic and international customers. Regulations and standards affecting the food and beverage processing industry are increasingly science-based, and new technologies for inspection, such as HACCP, are being introduced. Costs of inspection services are being contained through various means, such as cost avoidance, cost reduction, and cost sharing arrangements with industry. The creation of the new Canadian Food Inspection Agency in 1997 consolidated all federal food inspection, animal health, plant health and quarantine services previously provided by three departments. The Canadian Grain Commission maintains its mandate to assure consistent, safe and dependable shipments of grain that meet contract specifications.

The sustained competitiveness of Canada's food and agriculture is improved through the development and transfer of innovative technologies. Priorities for 1997–2000 include maintaining the health and safety of the food supply, fostering environmental sustainability, and enhancing the value-added component of Canadian agri-food production, either as food or non-food industrial products. To encourage increased private sector investment in agri-food research and development and the acceleration of technology transfer, the federal government is providing progressively larger funding for research under the Matching Investment Initiative in 1997–2000.

The elimination in 1995 of subsidies on the transportation of grains and oilseeds from western Canada reduced farmgate prices of these products. This removed a longstanding disincentive to livestock feeding and other crop-based value-adding activities in that part of the country. Several adjustment and transition programmes have been used to assist the industry, over several years, to adapt to new marketing, diversification, and value-added processing opportunities, including those resulting from an unsubsidised transportation environment. These programmes are generally designed to be non-trade-distorting and tend to feature targeted one-time or time-limited payments. Adjustments should take the form of more diversified production patterns as well as expanded livestock production and associated processing, marketing and exports. The federal/provincial framework of agreements for farm income safety nets is being strengthened, and design improvements in the Net Income Stabilisation Accounts and Crop Insurance programmes are being considered.

In dairy, the new pooling system for industrial milk (from the 1995–96 dairy year), places milk destined to produce products for the export market and milk to produce products that will be used for further domestic processing, in a special class. Milk in this special class is sold at world prices. The system allows producers to produce over their quota if they are willing to accept a return equal to world product prices less domestic processing margins. The federal dairy subsidy, which helps to maintain the target price for industrial milk, is to be eliminated gradually through five annual reductions which were introduced on August 1, 1997. As the industrial milk target price is not expected to be affected by these reductions, consumer prices of dairy products should rise correspondingly.

Through the year 2000, Canada is implementing its commitments as scheduled under the WTO Agreement on Agriculture, with regard to market access (including such action as reduction of tariffs), domestic support and export subsidies. The 1995 removal of freight subsidies on Western grains and oilseeds, constituted the elimination of export subsidies in that sector.

Under the North American Free Trade Agreement (NAFTA), most of Canada's agricultural and food imports from the United States and Mexico already enter free of duty. The NAFTA eliminates remaining tariffs on imports from the United States by January 1, 1998. It phases out remaining tariffs on imports from Mexico in five, 10, or 15 years (a special safeguard applying to some horticultural products allows for the re-imposition of duties on imports exceeding a certain quantity during the phase-down period).

The Canada-Chile Free Trade Agreement came into force on July 1, 1997. It provides for the elimination of Canada's tariffs on fresh horticultural products (the majority of Chile's exports to Canada), which already enter Canada duty-free during the winter period. The same applies to Chile's exports of processed food products. These changes will take place either upon implementation of the agreement or in six years.

Canada has indicated in its APEC action plan that it is willing, within the WTO context, to enter into discussions towards the elimination of tariffs in the area of oilseeds and oilseed products.

Canada's CSE for many years comprised two major elements associated with two sets of market regulations: first, the transportation policy that raised prices of grains and oilseeds in western Canada, ultimately constituting a transfer from consumers, and, second, the maintenance of high domestic prices of milk, chicken, turkey, and eggs with the help of supply management instruments. Eliminating the Western grain transportation policy in 1995 removed this element from the CSE, contributing to a considerable reduction in CSE (from -17 per cent in 1994 to -13 per cent in 1996). Tariffs on imports of corn from the United States will be eliminated by 1998, contributing to a further decline in CSE.

Changes in Canadian agricultural policy have substantially reduced policy transfers to producers, largely as a result of cutbacks in income support programmes, and the termination of transportation subsidies. At the same time, there has been a shift from trade-distorting forms of support to non-trade-distorting forms. Expected reductions in Government expenditures indicate a continued reduction in policy transfers to agriculture in future years.

References

Agriculture and Agri-Food Canada. 1997-98 Estimates — A Report on Plans and Priorities: Pilot Document, Minister of Supply and Services, Ottawa, 1997.

Canadian Grocer, The Canadian Grocery Industry: Executive Report, Maclean Hunter Publications, Toronto, 1995.

Conference Board of Canada (The). Canadian Outlook: Economic Forecast, Winter 1997, Vol. 12, No. 2, Ottawa, 1997.

Economic and Policy Analysis Directorate. Medium Term Baseline, Policy Branch, Agriculture and Agri-Food Canada, Ottawa, 1996.

Food Bureau. The Canadian Food Processing Industry — An Analysis of Opportunities and Challenges at the Dawn of the 21st Century, unpublished draft, Market and Industry Services Branch, Agriculture and Agri-Food Canada, Ottawa, 1997.

Statistics Canada. Industry Profile: Canada's Food Processing Industry, Cat. 15-515-MPE, Ottawa, 1996.

CHILE



SUMMARY

For the past 14 years, Chile's national income has grown at an average annual rate of more than six per cent. The principal reason for this economic expansion has been the export boom of goods and services, which now account for more than 35 per cent of the GDP. It is estimated the economy will grow at a rate of 5.6 per cent in 1997; growth for 1998 is currently estimated at 6.3 per cent.

Inflation has gradually declined from double- to single-digit levels. From less than nine per cent in 1994, the inflation rate fell to 6.5 per cent in 1996, its lowest point in 36 years, and is projected to continue declining in 1997 (5.5 per cent) and 1998 (4.5 per cent). Urban unemployment has been below ten per cent since 1990.

Total foreign investment in Chile topped US\$41 billion during the period 1974–1996, of which slightly more than half, \$21.8 billion, occurred in 1990–1996. On the other hand, Chilean foreign investment has accelerated since 1990, amounting to almost \$15 billion, of which less than three per cent was outside Latin America.

FOOD PRICES AND CONSUMPTION

Chilean food prices are determined mainly by exogenous factors, such as exchange rates and international market conditions, because the Chilean economy is very open with relatively low tariffs, and generally accepted sanitary and phyto sanitary restrictions. Nevertheless, it is the relationship between international food prices and import duties on the one hand, and domestic food production and prices on the other hand that ultimately determines the mix of the domestic food supply. In addition, food processing and distribution costs greatly influence final retail prices.

For the period 1990–1996, the US dollar (up 35 per cent) has not appreciated at the same rate as the domestic Consumer Price Index (CPI), up 88 per cent. The resulting revaluation of the Chilean peso is a potential threat to the export sector.

Currently nominal import duties are a flat 11 per cent (Law #19065 of 1991), and are expected to be lowered to eight per cent in the near future. However, the effective rate is somewhat lower, because Chile is continuously signing bi- and multilateral free trade agreements. Chile's sanitary and phyto sanitary restrictions on food imports conform to generally accepted international standards for the protection of public health. Domestic food prices have fallen continuously during the last ten years due to decreases in both international food prices and the real exchange rate. Declining prices have resulted in increased aggregate food availability and consumption.

The signing of bilateral and regional free trade and economic integration agreements should permit Chile to increase, or at least maintain, the current level of food availability. These agreements should also allow Chile to negotiate the export of agricultural products with a higher degree of value-added.

In Chile, wheat, sugar, and meat have traditionally been the ranking sources of calories. Protein has mainly come from wheat, meat, and milk. Due to increased income, Chilean customers have tended to upgrade their diets with pastas, yoghurts, and cheese, or to include more expensive products such as meat. In fact, meat consumption in Chile has increased steadily from 38.2kg per capita in 1990 to 60kg in 1996.

In the short term, food prices are not expected to change in real terms, since inflationary expectations are low and the price of the US dollar is not expected to vary greatly. Any nominal increase in prices would be offset by growth in personal disposable income, which has grown steadily, in real terms, during the past few years. An unexpected increase in world wheat, meat, rice and milk prices (all imported items) will be responded to by expanded domestic production, as occurred in 1996–1997. However, larger producers, such as neighbouring Argentina, have a greater ability to expand wheat and meat output by incorporating more modern and expensive technologies, fertilisers and irrigation systems.

Although part of Chile's milk supply is imported, domestic production has reached record levels in recent years. The country's milk processing plants received 1,358 million litres in 1996, compared to 890 million litres in 1990. In addition, the production of some dairy products, such as yoghurt and cheese, has increased. For example, cheese output has risen from 24,510 tons in 1990 to 42,177 tons in 1996, and yoghurt production from 50,940 tons in 1990 to 73,744 tons in 1996.

FOOD PROCESSING AND MARKETING

Chilean agribusiness, including food processing, has experienced impressive growth in the last two decades. Food and agricultural exports have risen from US\$1.2 billion in 1990 to \$2.6 billion in 1996. The food processing factor will be strengthened due to the Ministry of Agriculture's recently developed comprehensive Action Plan, which will foster the development of rural areas, which in the past were considered only to be the source of primary production, and not a suitable location for food processing or other related businesses.

The future of the Chilean food processing and marketing sectors will depend to some extent on continual foreign investment as has occurred in recent years in areas such as salmon farming (Japan, USA), dairying (Italy, Switzerland, New Zealand) wine production (Spain, France, Italy, USA, etc), fruit farming (Germany, USA) and forestry (Germany, Canada, USA, New Zealand) and has led to an increase in production and exports. In addition to these foreign investments, some Chilean companies are listed on US stock exchanges. For example, San Pedro (wine and beer) is listed on the NASDAQ, and Concha y Toro (wine), Soquimich (fertilisers), and Santa Isabel (supermarkets) are on the NYSE. Chilean foreign investment in neighbouring countries has taken place in such diverse industries as food processing, brewing and wineries, tomato paste, supermarkets, financial services and electric utilities.

The outlook for food production, processing, distribution, and retailing is very positive, especially considering the foreign investments taking place in exportable products. For instance, fish exports grew from US\$860 million in 1990 to \$1.6 billion in 1996.

Wine exports have also been increasing. Between 1990 and 1995 they increased threefold from \$51.6 million to \$300 million, and for 1997, are projected to be about \$400 million. One of the main reasons for this growth is the flow of foreign investment and technology from overseas investors. The presence in Chile of such noted European wine makers as Rothschild and Miguel Torres contributes to improving the quality of local production and facilitating the marketing of such a sophisticated product in a very competitive market.

Other promising products are pasta, candy and chocolates, which until a few years ago barely figured in export statistics. Exports of these products reached \$100 million in 1996 (up from \$14.7 million in 1990). They are competitive in international markets due to lower prices for raw materials, much of which are imported from neighbouring countries and the efficiency of local processors.

Since food is increasingly distributed through large supermarket chains, marketing has become more sophisticated, and there has been a corresponding concentration among food processors and/or distributors. Supermarket sales have increased by approximately 10 per cent annually during the past decade. With almost complete coverage in the upper income areas of Santiago, supermarkets are gradually expanding into lower-income areas by segmenting the market via the development of different quality level stores. This valuable acquired marketing know-how has contributed to the expansion of Chilean supermarkets into Argentina and Peru. It also accounts for the change in Chilean consumption patterns for dairy products (yoghurts, cheese, etc) meats (especially poultry and pork), and improvements in the quality and presentation of fruits and vegetables.

AGRICULTURAL PRODUCTION AND TRADE

Within the framework of an open economy, food supplies depend on world agricultural production and the prevailing prices in international markets. The agricultural sector has contributed to Chilean food supplies in two important ways:

1. by generating foreign exchange through food and agriculture exports, which have risen impressively in recent decades; and
2. by expanding domestic production. In the case of imported products (wheat, rice, meat, and milk, to name a few), output fluctuated according to international prices, and imports filled the gap to meet the demand.

Corn imports are directly related to poultry and pork production. In 1996, they totalled 430,000 tons and are expected to reach 500,000 tons in 1997 and 550,000 tons in 1998. Due to recent drought, rice imports are expected to increase from 50,000 tons in 1996 to 80,000 tons in 1997, and then return to 50,000 tons in 1998.

Per capita wheat consumption has declined slightly due to increased meat consumption which serves as a protein substitute. Nevertheless, the production and imports of wheat are still very important economic activities. Wheat imports were 733,390 tons (\$177.6 million) in 1996. Since more hectares were planted due to high international prices, the resulting 1997 bumper crop (harvested between December and March) should cause wheat imports to fall to 250,000 – 300,000 tons this year. In 1998, they are projected to increase to approximately 400,000 tons.

Chile imported 61,600 tons of beef in 1996, with a total value of \$140.5 million. Beef imports for 1997 and 1998 are projected to remain stable, with increased domestic pork and poultry production accounting for the increase in overall meat consumption.

Despite rising domestic production, imports of dairy products still account for roughly 12 per cent of consumption. In 1996 they totalled 35,520 tons worth \$75.6 million. Chile is highly dependent on edible oil imports, which amounted to 155,600 tons (\$186 million) in 1996. Sugar imports totalled \$64.9 million in 1996. Domestic production is based on sugar beets.

FOOD AND AGRICULTURAL POLICY

EMPORCHI, the Chilean Port Authority is being restructured into two separate operating units to attract private investment and improve efficiency. It will eventually be privatised. This will benefit food exports.

In early 1977, the Ministry of Agriculture announced a new set of policies; 1) to promote the internationalisation and competitiveness of the agricultural sector; 2) to develop export markets; 3) to protect natural resources and improve agricultural and livestock sanitary and phytosanitary standards; 4) to foster water resource management and irrigation projects; 5) to promote modern technologies; 6) to improve farm management; and 7) to increase the availability of farm credit.

The policies are based on existing trade agreements that have been signed in recent years. Chile became a founding member of GATT in 1947 along with 23 other countries. During the Tokyo Round of GATT talks, Chile signed a protocol consolidating its import tariff at a maximum ceiling of 35 per cent. In 1981, this protocol was ratified by the national legislature. During the Uruguay Round, Chile participated in the Cairns Group with a view of obtaining greater liberalisation in agricultural markets. Most recently, it joined the WTO in April 1994 in Marrakech, Morocco.

With regard to tariffs, Chile's reductions exceed its Uruguay Round commitments. Presently, the generally-applied import tariff is 11 per cent ad valorem, plus a one per cent customs clearance duty on the CIF value of the imported good (which includes the 11 per cent tariff). The country's trade policy is transparent, open, simple and non-discriminatory. It has already eliminated most non-tariff trade barriers and any remaining ones will be eliminated by 2010. Sanitary restrictions are clear, transparent and in accordance with FAO treaties and Food CODEX regulations. The only non-tariff trade barrier that exists is a system of flexible price bands that seeks to stabilise internal prices against sudden international price variations. These price bands apply to wheat, vegetable, oil and sugar.

REFERENCES

Pacific Economic Outlook 1997–1998

Pacific Outlook Data and Indicators

Annex, Food Outlook Data and Indicators

CHINA



SUMMARY

Income and population growth have been important determinants of China's food balance in the past, and will remain so in the future. Rising incomes mean an increasing demand for almost all food products, particularly meat. This, in turn, may result in increased demand for feed grains. A more diverse diet will affect China's food processing sector and its grain marketing system.

China, with more than 1.2 billion people at the end of 1996, is the world's most populous country. China has experienced substantial increases in per capita food consumption over the last few decades. This increase in food availability was achieved almost exclusively through increases in domestic production. The movement of the population from rural to urban areas is expected to continue. The changes in tastes and lifestyles engendered by urban living are likely to have a significant influence on food demand. The influences of urbanisation and food market development, are perhaps as strong as the well-documented influences of household incomes and food prices.

Food self-sufficiency has been, and will continue, to be the central goal of China's agricultural policy. The Ninth Five-Year Plan for 1996–2000, envisages continued growth in food and agricultural production and farmer incomes of four per cent per annum, near maintenance of food self-sufficiency levels, and eliminating absolute poverty. A number of new measures have been adopted since 1995 to achieve these targets.

FOOD PRICES AND CONSUMPTION

Food prices in China should remain stable in 1997 and 1998. The level of food price inflation was reduced from record levels of 32 per cent in 1994 and 23 per cent in 1995 to 7.6 per cent in 1996. One of the most significant declines in food price inflation was that of grain. Grain consumer price inflation fell from 51 per cent in 1994 to 37 per cent in 1995 and to 6.5 per cent in 1996. The decline in food price inflation has been a major contributor to the slowdown in the increase of the overall consumer price index (CPI) in China. This is because food accounted for about 49 per cent (or 58.5 per cent) of total income (or expenditure) of rural consumers and about 46 per cent (or 51 per cent) of total income (or expenditure) of urban consumers in the early 1990s. The rise in the CPI fell from 24 per cent in 1994 to 8.3 per cent in 1996 in response to record levels of food production and increased grain imports in 1995 and 1996, as well as various Government measures to control inflation. A recent survey of food prices in China indicates that food price inflation has been continually declining since early 1997.

China has experienced substantial increases in levels of per capita food consumption over the last few decades. Average per capita food availability increased from less than 1,700 kilocalories in 1960 to over 2,727 kilocalories per day in 1995. This increase in food availability was achieved almost exclusively through increases in domestic production. During the same period, protein intake per capita per day also increased from 42gm to 70gm, and fat consumption from 17gm to 52gm. These exceed average nutrient availability in countries with a per capita GNP comparable to that of China.

Consumers in China, on average, spent 54 per cent of their consumption expenditure budget on food in 1996 (down from 56 per cent in 1995). But there were large differences between rural and urban consumers. In the urban areas, food expenditure accounted for about 49 per cent of the consumer's budget, while it was 56 per cent in the rural areas in 1996. Per capita food grain consumption in China hit its zenith in the early 1990s. In urban areas, food grain (in traded form) consumption per capita fell from 135kg in 1985 to 102kg in 1994. While per capita food grain consumption in rural areas fell only in 1994 (from a peak level of 266kg, measured in unprocessed grains, in 1993 to 261kg in 1994). In contrast, per capita consumption of meat and fish rose significantly throughout 1980s and early 1990s.

Since 1978 when China opened up and gradually began to broaden the role of the market mechanism in its economy, it has enjoyed spectacular economic growth. The growth rate of gross domestic product (GDP) during the reform period was roughly double that of the immediate pre-reform period of 1970 to 1978.

Although near-record growth rates in the Chinese economy (GDP), averaging about 13 per cent a year between 1992–95, slowed down to 9.7 per cent in 1996 as a result of various stabilising measures adopted by the Government to cool the overheated economy, strong growth in the country's economy is expected to continue in the coming years.

China, with more than 1.2 billion people at the end of 1996, is the world's most populous nation, and since the late 1980s, annual increases in population were 13 million to 14 million in the early 1990s and will remain about 11 to 13 million in the second half of the 1990s. The movement of the population from rural to urban areas is expected to continue. The changes in tastes and lifestyles engendered by urban living are likely to have a significant influence on food demand. The influences of urbanisation and food market development are perhaps as strong as the well-documented influences of household incomes and food prices.

Recent changes in the urban economy have made consumers almost entirely dependent on markets for their consumption needs. In this sector, price and income changes will likely be the fundamental forces driving changes in consumption patterns. At the current average level of income for most urban residents, food grain consumption might not rise with new increments in income. Meat consumption, however, is still strongly influenced by income changes.

Although rural incomes have grown slower than urban incomes, demand for foodgrains and meat products will increase with rural income growth. Farmers in many remote areas face limited choices in their consumption decisions. Since many of the products they desire on a daily basis, such as meat and fresh fruit, are not always available, even though they have a higher income level. Discontinuous free markets (periodical rural fare market) and lack of refrigeration have also been shown to strongly affect the consumption patterns of rural consumers in China.

FOOD PROCESSING AND MARKETING

The food processing industry in China has grown rapidly since the early 1980s. The number of food processing manufacturers reached 62,000 with a gross output value of 520 billion yuan in 1995. It contributed nearly 10 per cent of the total industrial sector output value or seven per cent of added value of the whole sector. The food processing sector employed 4.43 million workers in 1995. The sector consists of six major food processing sub-sectors: the grain and edible-oil processing industry, the meat processing industry, the beverage manufacture, the sugar industry, the food canning industry, the salt, and dairy industry.

Real output value of the food processing industry grew at about eight per cent per year in the 1980s. Since the early 1990s, the industry has expanded more rapidly. The annual growth rate of the output value was of more than 12 per cent during 1990–1995. The most significant growth within the food processing industry is in beverage manufacture, meat processing industry, and food canning industry. The share of the beverage industry in the total food industry increased from less than 10 per cent in the early 1980s to more than 22 per cent in 1994–95.

A large number of new food processing enterprises have emerged in the private, collective and joint-venture sectors since 1980s. With the emergence of the private enterprises, the structure of the food processing industry changed significantly. The share of non-state owned food processing enterprises in the total food processing industry in terms of output rose significantly from a negligible level in the early 1980s to more than 50 per cent by 1995. The rapid growth of the food processing industry is also associated with several favourable policies which have been applied to many sub-sectors of the food processing industry.

AGRICULTURAL PRODUCTION AND TRADE

The growth of agricultural production in China since the 1950s has been one of the main accomplishments of the country's development and national food security policies. Decollectivisation, price increases, and the relaxation of trade restrictions on most agricultural products accompanied the take-off of China's food economy in 1978–84. Grain production increased by 4.7 per cent per year; the output of fruits rose by 7.2 per cent. The most spectacular growth was enjoyed by oil crops, livestock and aquatic products which expanded in real value terms by 14.9 per cent, 9.0 per cent and 8.8 per cent annually, respectively. While dropping below the rate of growth generated in the early reform period, production of rice, other grains, and cash crops has continued to expand since 1985. Annual growth in grain production averaged 1.7 per cent, exceeding the population growth rate of 1.36 per cent in 1985–95.

1996 was the first year of the Ninth-Five Year Plan for 1996–2000. Despite high growth in agricultural and food sector in 1995, the general performance of the agricultural and food sector was better than anticipated. Grain (except soybeans) exhibited remarkable growth. Grain production reached a new record level of 490 mmt in 1996, an increase of 23.5 mmt or five per cent more than in the previous year (it was 4.8 per cent in 1995). Among grains, cereal production grew even at a higher rate (8.4 per cent). Within cereal grains, rice, wheat and maize all hit historical high levels of 195.1 mmt, 110.31 mmt, and 127.46 mmt with growth rates of 5.3 per cent, 8.2 per cent and 13.8 per cent, respectively.

The outlook is mixed for grain production in 1997 and 1998. A significant increase (42 per cent) in the government grain procurement prices in 1996, raised average grain procurement prices from 1.04 yuan/kg to 1.48 yuan/kg (close to 1995 market prices). This could stimulate farmers to produce more grain in 1997. An increase in the Government

investment in irrigation in the early 1990s and the recent strengthening of the agricultural technology extension system, will affect grain production in 1997 and 1998. However, a decline in the free market price of grain in real terms in 1996 and in nominal terms in early 1997 could have a negative impact on grain production in the coming years. On average, the prices of the three major grains (rice, wheat and maize) declined by 6.7 per cent in nominal terms during the first quarter of 1997. Grain price growth is expected to be low, if not negative, in the rest of 1997 and 1998. Given this situation, if there is no significant increase in the Government procurement price for grain in 1997 and 1998, grain production is projected to be between 485 mmt to 490 mmt in 1997 and 1998. China is expected to continue importing grain. Imports are forecast to be between 10 to 15 mmt in 1997 and 1998.

In 1996 the livestock sector continued to grow at a rapid rate as incomes increased and demand for meats increased. Total production of red meat (pork, beef and mutton) hit a historical high and reached 47.72 mmt (note: meat production is believed to have been historically overestimated, no effort is made to correct this error in this report), 11.9 per cent more than in 1995. Production of pork, the most consumed meat in China, continued to grow at a significant rate of 10.7 per cent in 1996. Moreover, the number of hogs at year-end increased to 457.13 million, 3.5 per cent more than in 1995, indicating that there will be further stronger growth in pork production in 1997. Beef and mutton production grew at 19 per cent in 1996. Fisheries production also experienced one of the highest growth levels in 1996.

The pattern and structure of agricultural trade has continued to change. In 1995, the export of textiles and fibre, the main export of China, dropped significantly, while imports increased. Textiles and fibre are the biggest net imports of agricultural products. On the other hand, vegetable, fruit, aquatic products, meats and meat products rose to become the main export products. The most significant change was that China became a net grain exporter in 1992–1994, and then quickly turned to be one of the world's largest grain importers in 1995.

A decline in grain production, together with grain exports in 1994, resulted in a further tightening of domestic grain supplies and an increase in food price inflation. As a result of this food inflation and supply deficit, grain exports were banned in order to stabilise the domestic grain market and prices. As a result, net imports of grain rose sharply and hit a historical high in 1995. Total grain imports reached 20.7 mmt with a net import of 19.7 mmt (nearly four per cent of total consumption) in 1995.

Increases in grain production in 1995 and 1996 resulted in a significant decline in grain net imports to 10.57 mmt in 1996. Grain imports in 1997 and 1998 are estimated to be between 10 and 15 mmt, if no bad weather and other unforeseen incidents occur in China in the coming years.

While importing grain, China simultaneously exports various food products with high added value. For example, between 1985–1995, the export value of Chinese food products including live animals reached US\$ 75.6 billion, with imports at US\$34 billion, making China a net exporter of food products.

FOOD AND AGRICULTURAL POLICY

The Ninth Five-Year Plan and the National Long Term Economic Plan envisage continued growth in food and agricultural production and farmer income at four per cent annually, nearly maintaining food self-sufficiency levels and eliminating absolute poverty.

The strategy for achieving the goals includes measures to deepen rural economic and institutional reforms; improve incentives for farmers and the local Government to invest in agriculture, particularly land; provide incentives through input and output prices to increase the multiple cropping index; and further open China's agriculture sector to foreign investment.

China's exchange rate policy during the reform period has successfully depreciated the real exchange rate. Whereas real exchange rates remained constant, and even appreciated over three decades prior to the reform period, real exchange rates rapidly depreciated during the reform period except for a couple of years after 1985, when high domestic price inflation occurred. Within 15 years, the real exchange rate depreciated by more than 400 per cent. The success of the exchange rate adjustments stemmed mainly from the productivity effects of the economic reforms and technological innovations in agriculture, foreign trade, and industry which contributed to relatively low inflation.

Foreign trade has also been liberalising. Prior to the reform period, the allocation of imports and exports including foreign exchange were strictly based on administrative planning and undertaken by 12 foreign trade corporations (FTC). The process of trade policy reform has involved the introduction of greater competition in international trading and the gradual development of instruments for indirect controls. In 1984 the foreign trade system was decentralised to a considerable extent. Provincial branches of national FTCs were allowed to become independent and each province allowed to create its own FTCs. By 1986, there were more than 1200 FTCs. By the early 1990s the number was more than 3,000.

Tariffs on cereals, live animals and feed stuffs have been kept at relatively low levels in China. For many years, the import tariff on grain was zero; now it is only one to three per cent for various grains and 12 to 13 per cent for edible oil. On the other hand, quantitative trade controls either through import/export controls or licensing are commonly applied to agricultural products. Sometimes they are used to protect domestic producers, as in the case of fertilisers. Export controls/licensing have also been adopted to capture monopoly rents in the world market, as in the case of beef, pork, and vegetables in Hong Kong (China). In the case of rice, corn, and textiles and fibre, export controls/licensing have been aimed mainly to keep domestic prices low for domestic consumers/agro-processing industries.

More recently, a series of liberalisation measures have been adopted by China to accelerate its bid for admission to the WTO. In early 1993, China reduced its tariffs on 3,371 import items and abolished import control on 367 commodities. The action reduced the trade weighted average tariff by 7.3 per cent (from 27 per cent to 19 per cent). At the APEC summit meeting in November 1995, China's President Jiang Zemin made a commitment to cut tariffs by at least 30 per cent in 1996. According to China's General Administration of Customs, this new liberalisation effort includes substantial tariff cuts on 4,994 tariff lines and lowers China's simple average tariff to 23.2 per cent. China also eliminated quotas, licensing and other import controls on 176 tariff lines, or more than 30 per cent of commodities subject to these restrictions. Negotiations between China and WTO members are ongoing. China has offered to reduce its average tariffs to around 13 per cent by the year 2000. It can be expected that as China's bid for WTO membership continues and after China formally enters the WTO, further reforms of its trade regime will occur.

China has a similar position with respect to APEC activities and its trade liberalisation programme in investment and trade, as well as technical cooperation are in accordance with APEC's Action Plans. China however takes the position that liberalisation in APEC should not outpace that of the WTO.

COLOMBIA

SUMMARY

Colombia's food prices are expected to rise 18 per cent both in 1997 and 1998, lower than the annual 23 per cent average between 1990 and 1996. Real incomes per capita are expected to rise by 1.7 per cent in 1997, and 3.3 per cent in 1998, compared to the annual 2.4 per cent growth in 1990–96, and in turn food demand would rise between 2.5 per cent and 3.6 per cent. Food production grew 3.4 per cent annually since 1990, reflecting productivity gains since cultivated area declined by 10 per cent. Overall economic growth is forecasted at 3.4 per cent for 1997 and five per cent for 1998, with total agricultural production expected to increase by three per cent both years. Colombia is 70 per cent self-sufficient in grains and 104 per cent in horticultural products. Food and agricultural imports, which represent 12 per cent of total agricultural production, would increase 12 per cent in 1997 and 18 per cent in 1998, after rising over four times since 1990. Agricultural exports, which rose at a more moderate one third, represent 21 per cent of agricultural production, would grow by 7.5 per cent in 1997 and 1998. Colombia's agricultural policy will continue focusing on modernising the sector and its institutions to compete in the international market, promoting private enterprise development and a better quality of life for rural people.

FOOD PRICES AND CONSUMPTION

Real per capita income growth is expected at 1.7 per cent for 1997 and 3.3 per cent in 1998. To attain this objective, inflation targets set by the Central Bank for both years are 18 per cent, with interest rate levels at 6 to seven points below 1996, and a devaluation rate of 15 per cent to maintain real exchange rates. Under this scenario, the food price index must not exceed the targetted 18 per cent in either year, while food consumption is expected to grow between 2.7 per cent and three per cent in 1997–98 with particular strength in meats, fruits vegetables, and processed foods.

Between 1990 and 1996, the food price index rose at an annual average of 23 per cent, higher than the forecast increase for 1997 and 1998. It rose faster in the first three years, and in 1994, but it has slowed down since 1995. The average weighted contribution of the food price index to the consumer price index is 35 per cent. The consumer price index rose at an annual 25 per cent average from 1990–96, but the rate of increase has slowed since 1995.

Although first quarter 1997 estimates indicate consumer prices are rising within target, recent increases in world coffee prices will result in higher income, and thus higher demand for food and agricultural products in the coffee production areas. This in turn may exert an upward pressure on the food price index, as it has happened in the past when coffee prices have risen, aggregate food demand has increased and concurrently food production has declined in the coffee areas.

Producer prices rose at a slightly lower pace than the consumer prices from 1990 to 1996, indicating that the margin between the two indexes is widening. This is possibly happening because of more product processing and transformation before reaching the consumer, a situation which has not been taken into account in estimating the food price index. The upward price behavior is not uniform among all agricultural products. It appears that prices of non-tradable products have increased at a higher rate than the prices of tradable goods, including main food commodities, although production has kept up with demand during the years analysed mostly by productivity gains. Gains have been smaller for non-tradable products likely because of lack of competition.

Total real income grew since 1990 at an annual average of 4.2 per cent, while population increased at an average 1.7 per cent (the growth rate is decreasing slowly every year, but a higher per centage of the population is becoming urban). Per capita income increased at an average 2.4 per cent, above the forecast increase for 1997 but below the 1998 forecast. This income growth rate is reasonable by developing country standards, yet Colombia's per capita income is below that of Mexico, Chile, and Peru. The dollar value of income has increased at a much higher rate, however part of this increase is due to the revaluation of the peso (the real exchange rate index, based on 1986=100, moved from 111.53 in 1990 to 88.61 at the end of 1996). The proportion of income spent on food is expected to remain at about 35 per cent.

FOOD PROCESSING AND MARKETING

Although most current thinking points out the negative impact of trade liberalisation on the Colombian agricultural economy, it appears to have positively influenced growth in the food industry during the past seven years. As indicated, more processing and transformation of agricultural products is taking place before they reach the consumer, responding to an increasing demand for processed foods resulting from rising consumer incomes, urbanisation, and changing consumer preferences for further processed food.

Efforts to improve post-harvest handling of agricultural products are underway. In the early 1990s losses were estimated between 12 per cent and 30 per cent, depending on the product. Transportation and storage are receiving attention. The road system in Colombia is among the less developed in Latin America in terms of paved road kilometers per inhabitant. Public investment in road construction and maintenance has increased and, in the case of some important highways, concessions are being awarded to private firms for road construction and maintenance.

Food cold storage capacity owned by the public and private sector is estimated at 166,000 cubic meters. A recent study indicates that there is need to expand capacity to add an additional 1.5 million metric tons of food per year which are currently not benefiting from cold storage services. There is increasing interest in private investment to expand cold storage facilities.

Private administration is taking over Colombia's six major seaports, and significant investment has been directed to improve facilities, resulting in lower handling costs. Three of these ports have import (grain silos) and export (banana handling) infrastructure. Airport facilities have also improved with expanded warehouse capacity in the five major airports. Also a second runway to Bogotá's international airport, the country's busiest, should contribute to better handling of an increasing trade volume of perishable products, mainly flowers, fruits and vegetables.

The food industry shows signs of expansion in the last seven years. Its output in 1996 amounted to US\$38 billion, representing 26 per cent of total industrial production and five per cent of GDP. The food industry output rose at an average annual 3.5 per cent between 1992 and 1996, and it is expected to continue increasing at four per cent in 1997 and 1998. Recent survey information indicates an expanding and diversified number of enterprises in food processing, including flour mills, meat processing and packing, dairy processing, fruit and vegetable processing, confectionery and candy among others. Foreign investment in the food industry has increased substantially, from just over US\$1 million in 1990 to US\$220 million in 1996. The trend is expected to continue in 1997–98, as first quarter 1997 estimates indicate.

Spot and forward markets are still in their earlier stages of development in Colombia. The Farm Commodity Exchange (Bolsa Nacional Agropecuaria) trades mainly grains, oilseeds and powder milk, but recently has been experimenting with fruits and vegetables. There is potential in Colombia for expanding agricultural commodity forward operations through the Exchange, to develop a system of grades and standards, and to provide incentive for more competition by encouraging private warehouses to become more active in the market.

AGRICULTURAL PRODUCTION AND TRADE

During the current decade food production has grown every year, with the exception of 1992 when total agricultural output declined due to a combination of factors including lower international prices and drought. Annual growth averaged 3.4 per cent. Total cultivated area has decreased by about 370,000ha, representing a decline of 10 per cent, thus production increases can be attributed mainly to productivity gains. Production composition changed: production of grains and vegetables declined and there has been a move away from annual crops to perennial crops and cattle production. Expected overall growth for the economy for 1997 is 3.4 per cent and five per cent for 1998. Within this framework, total agricultural production is expected to increase three per cent both in 1997 and in 1998.

Agricultural producer prices rose at a 23 per cent annual average between 1990 and 1996, but increase rates slowed since 1995 and the trend is continuing through the first three months of 1997, according to estimates. As indicated, devaluation is expected at 15 per cent to maintain real exchange rates.

Colombia has been, historically, a relatively food self-sufficient country, with the exception of grains, particularly wheat. Colombia's grain self-sufficiency declined from 81 per cent in 1990 to 70 per cent in 1996. It is expected to remain at such level in 1997 and rise to 73 per cent in 1998. The country, which has moved from being a rice exporter to an occasional importer, is expected to export rice again. On the other hand, Colombia's self-sufficiency in horticultural products is 104 per cent, and is expected to remain at that level in 1997 and rise to 105 per cent in 1998.

Since 1990 food and agricultural imports have increased more than four times, the share of total imports growing from eight per cent to 15 per cent. This in part reflects trade liberalisation during these years, since import tariffs in the average were reduced from 30 per cent to 15 per cent, along with a marked trend towards importing fresh perishable products and processed foods. However, food imports still represent only 12 per cent of total agricultural production. They are expected to increase by 12 per cent in 1997, and 18 per cent in 1998.

Agricultural exports (mainly coffee, cut flowers, bananas, and tropical fruits and juices) represent 21 per cent of total agricultural production. Between 1990 and 1994 agricultural exports rose by almost 50 per cent, but growth declined afterwards. Overall, exports increased by over one third during the entire period. Their share of total exports rose from 37 per cent in 1990 to a high of 43 per cent in 1994, and declined to 32 per cent in 1996 because lower agricultural world prices (mainly coffee and bananas) and increases in the value of non-agricultural exports like petroleum and minerals. Agricultural exports are expected to increase by 7.5 per cent in 1997 and 1998.

FOOD AND AGRICULTURAL POLICY

Colombia's current agricultural policy is primarily based on the Agricultural Law of 1993, which was designed to respond to the nature of its economic problems and to make the agricultural sector able and efficient to compete in the international market. The main elements are modernisation, enterprise development, improving the quality of life of rural people, and decentralizing the government to give more autonomy to departments and municipalities. The 1993 law provides special protection to food production and sets priorities on agricultural development. The main components are marketing, investment subsidies, and credit. It also created the National Agricultural Commission to oversee policy implementation and public participation in setting goals and priorities.

Historically, the Government intervened agricultural product markets through the national agricultural marketing agency (IDEMA) which had monopoly on imports and commodity storage. As a result of trade liberalisation, the role of the government diminished, support prices were replaced by minimum guarantee prices and price bands to stabilise production of main tradable products, particularly importables (grains, soybeans, powder milk), and management of inventories and agricultural imports was transferred to private hands, mainly the commercial bank-owned warehouses known as the Almacenes Generales de Depósito. The Government thus has become the purchaser of last resort in areas where marketing is restricted and communications poor, and its actions were directed to provide incentives for further private involvement in developing enterprises for buying and marketing agricultural commodities.

Agricultural international trade legislation focuses on trade liberalisation and globalisation. Nevertheless, agriculture in Colombia is still protected with respect to the rest of the economy. To enter into international trade agreements, the 1993 Law stresses equity, reciprocity and meeting national macroeconomic and social goals. The law also establishes instruments to prevent unfair trade practices including antidumping actions, countervailing duties and safeguards. Colombia, as a member of the World Trade Organization (WTO), keeps all trade mechanisms within its guidelines and rules.

Colombia has signed a number of international bilateral and multilateral trade agreements, mainly focusing on value-added products. As an Andean country it receives preferential treatment within the drug eradication programmes of the European Union and the United States. The Andean Pact, now Andean Community, over 30 years old, is currently strengthening the Common Tariff and the Andean Price Band System. Colombia also has agreements with Chile, Ecuador, Mexico, Venezuela, and the CARICOM countries, treaty revisions underway with Costa Rica and other Central American countries, and negotiations of the Andean Community with MERCOSUR (South American Southern Cone countries). Colombia is participating in deliberations on the proposed Free Trade of the Americas Agreement (FTAA) and has applied for APEC membership.

Tools to promote exports include maintaining competitive prices, trade agreements and institutional support. Real exchange rate band targets set by the Central Bank aim at preventing revaluation of the currency. Within the WTO framework, export subsidies are temporary and are geared towards improving long-term competitiveness. The Foreign Trade Bank, BANCOLDEX, has a solid portfolio from current and past earnings to lend exporters at favorable interest rates to enhance exports in 1997. Risk insurance opportunities have been provided to exporters. Promotion and support is led by a state financed agency, PROEXPORT, which provides comprehensive assistance to exporters through diverse mechanisms including over 30 agreements with international entities, as well as information, services, and promotional events. The Colombia International Corporation, created in 1991 as a publicly and privately funded organisation, identifies and promotes new export products, particularly fruits and vegetables and is developing a grading system according to international standards.

Import targets of agricultural products that compete with domestic production are determined within the foreign trade council (Consejo Superior de Comercio Exterior) when domestic production does not meet demand at minimum guaranteed price levels. The Ministry of Agriculture and Rural Development has veto power on certain products and maintains procurement agreements. Such measures are considered temporary and seek to guarantee consumption of national production before import licenses are approved. As a more recent example, the Council, with the consent of the Andean Community, imposed in April of 1997 additional tariffs on all imports, ranging from five per cent to 15 per cent for three months, to help in alleviating the Government's fiscal deficit. This is a temporary measure which in no way should derail trade liberalization policies.

To facilitate trade, the Customs Administration has simplified its regulatory framework to speed up the moving of products through customs and avoid fraudulent invoicing, is allowing in-land clearance of goods, and is improving the information system.

Finally, other Government policies in support of agriculture include credit promotion and regulation at competitive interest rates, research and technology transfer in partnership with the private sector, land reform and an overall effort to modernize and adapt the Ministry of Agriculture and Rural Development and all institutions that support the agricultural sector in order for them to meet the needs of the coming century, increasing their coverage of people served and improving their efficiency in the cost of services provided.

HONG KONG, CHINA

SUMMARY

Hong Kong, China is a small and open economy that follows a free trade policy. With limited land resources and rapid urbanisation, 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, have to face very keen competition in the market and under the free trade policy, no direct subsidy is provided by the Government to the local agricultural sector. The Government's role in food supply has been limited, and is mainly confined to ensuring food hygiene and facilitating food trading. In view of its close link and special relationship with mainland China, Hong Kong, China has been able to enjoy the benefits of an assured, adequate and steady supply of food at reasonable prices from China, particularly live and perishable items, during the past years.

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

With continued impressive economic growth and associated changes in lifestyle, the food consumption pattern of Hong Kong, China people, who are now more health-conscious, is changing from low cost food to high quality and hygienic foodstuffs. There is also an increasing acceptance of chilled meat products. The premium and processed food market in Hong Kong, China is expanding. At the same time, the opening of the Chinese economy has created a lot of profitable opportunities for joint ventures and private enterprises in the production of quality food, not only for the markets in Hong Kong, China and other countries, but also for China's own internal market.

FOOD PRICES AND CONSUMPTION

Hong Kong, China is a small territory with more than six million people living in about 1,092 square kilometres of land, most of which is not habitable. 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 3.6 nights on average, with per capita spending of about HK\$7,100 (US\$910).

Apart from population, growth in incomes is considered one of the major factors affecting food consumption patterns as it increases effective demand for food. Other socio-demographic characteristics such as family size, employment status of housewives (extent of meals taken away from home and ready-to-cook food), age and gender distribution of the population (food intake differs by age and sex), and the extent of urbanisation (as it would affect lifestyle) are also recognised as influential.

Hong Kong, China gross domestic product was estimated to be HK\$1071.37 billion (US\$137.4 billion) in 1995. The annual growth rate over the period averaged 14.6 per cent (7.5 per cent in real terms over the past two decades), 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 per cent) of the economy.

Hong Kong's, China population was an estimated 6.27m at the end of 1995. The annual growth rate over the decade averaged 1.4 per cent. Policies are framed to limit permanent population growth to a level with which the territory can cope, and to control the entry of foreign workers. The major variable is, however, the in and out-migration which is volatile. Population is expected to reach 7.52m by 2011.

The main diet and the staple food for people in Hong Kong, China is rice. Total consumption has been quite steady at around 320,000 to 370,000 tonnes per year, but per capita consumption dropped from 68.75kg in 1982 to 53.08kg in 1995, a trend also generally observed in other countries with improving and developed economies. People tend to shift their consumption of cereals after reaching saturation level to less essential, but high quality foods such as livestock products, fruits and processed food. Other cereals of importance include wheat, barley and maize. They are mainly used as raw materials in the manufacturing of processed food or animal feed.

The Chinese have a special preference for fresh foodstuffs such as vegetables, fruit, fish, poultry meat, pork and beef. Indeed, in the early years, consumers preference for 'freshness' dictated that the various types of meat supplied in the markets have to be within hours of the birds and animals being slaughtered. 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). Consumption of vegetables also appears to be at a saturated level. With meat products, there tends to be a shift from beef and pork to poultry in recent years as people are more and more concerned about health issues.

FOOD PROCESSING AND MARKETING

Income growth increases consumers' preferences and willingness to pay for food safety, convenience, diversity and other attributes (e.g. health foods) or utilities that are added to raw food products. 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's, China 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 are of a relatively small scale (85 per cent) and employ less than 20 workers, while a small number of notable producers have 500 or more employees. The local market occupies a dominant share (80 per cent) of total sales. In view of the rising living standards in the Pearl River Delta, Hong Kong's, China food manufacturers have begun targeting the China 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 Hong Kong's, China economic growth. The food and beverage industry took up about five per cent each year.

The Government's roles have been confined to that of providing necessary physical infrastructure and facilitating compliance of procedures and regulations governing trade (e.g. the inspection of production processes and the issue of certificates). Hong Kong's, China present food labelling law affecting all packaged food came into effect in August 1987.

In 1995, an average household spent about 1.4 per cent of its income on raw cereal products, mainly rice, 13 per cent on fresh foodstuffs, 0.9 per cent on frozen meat and poultry, 6.5 per cent on processed food, including non-alcoholic beverages, and 20.4 per cent on meals away from home. The average inflation rate over the period was 8.7 per cent as reflected by the movement of the CPI, but the overall increased rate for foodstuffs at retail level, in particular the fresh and perishable items such as fish, beef, pork, vegetables, fruit, eggs and sugar was much lower, due mainly to the ready and sufficient supplies from mainland China. This is beneficial to the community as a whole, but this also infers that for people who are working in food-related businesses, particularly in production and wholesaling, they are relatively worse-off than others in the same community.

AGRICULTURAL PRODUCTION AND TRADE

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, China will remain dominant in view of its close geographical and transport linkage with Hong Kong, China. While Hong Kong, China consumers have been enjoying the benefits of more supplies at lower prices during the past years of economic liberalisation in mainland China, it is not clear whether China, now being more conscious of market forces and costs, can more successfully 'regulate' its supplies, as in the past, to ensure steady supplies at reasonable prices. The economic improvement and population growth in China could itself generate increases in demand for fresh and quality foodstuffs in the affluent cities in China. Further development in and application of modern technologies for food storage, processing, packaging and transportation will likely erode China's dominant position in the supplies of perishable products in Hong Kong, China.

Local agriculture, together with the fishing sector, contributes US\$186m (0.1 per cent) to the GDP. Local agricultural production mainly concentrates on vegetable growing, pig and poultry raising, fish farming and marine fishing — supplying about 17 per cent, eight per cent, 22 per cent, 11 per cent and 70 per cent of domestic needs respectively. Local supplies are generally of higher quality, and play a significant role in price stabilisation and enhancement of market competition.

It is noted that there has been a significant drop in the local agricultural production due mainly to :

- (i) Continual loss of agricultural land to infrastructural projects and urban development in the rural areas; negative impact on the effective use of agricultural land brought along by the urban property boom and speculation;
- (ii) The implementation of the livestock waste control scheme;
- (iii) Shortage of farm labour, as the old farmers retire while young people are reluctant to move in;
- (iv) Unfavourable prices of farm produce because of increasing supplies from mainland China, particularly the southern parts, which are close to Hong Kong.

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 infrastructural and technical support to increase productivity necessary for the development of farming and fisheries as far as they are viable and economical. Such supports include irrigation and drainage improvement; provision of wholesale market facilities; technical advice on treatment and prevention of crop, animal and fish diseases, farm husbandry and fishing; low interest agricultural/fishery loans and assistance to rehabilitate abandoned farm land. Drastic schemes such as guarantee price, import tariff and quota, 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 (liquors, tobacco, hydrocarbon oil and methyl alcohol), irrespective of whether they are imported or locally manufactured. Hong Kong, China only maintains those non-tariff measures required to protect public health safety, security and the environment, and to fulfil Hong Kong's, China obligations under international agreements.

Customs control on imported goods is done through inspection of documents such as licences and certificates, and where necessary, 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. Export is therefore negligible. There is, however, a sizeable export of processed foods using imported raw agricultural products.

Because of the geographical, historical and cultural link, China has always been the major supplier of fresh foodstuffs to Hong Kong, China. For live produce such as cattle, pig and poultry, it is almost the only import supplier. Indeed, during the past 35 years China has maintained a special programme to ensure an adequate and steady supply of fresh and live produce regulated under a quota system through the setting up of cargo trains and production units especially designated for the Hong Kong, China market. Much of the supplies in the earlier years were of lower value but the quality of the produce has been significantly improved recently as producers pay more and more attention to the need of the market following the liberalisation of the economy since 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 labour costs and land) for the production of foodstuffs. 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.

Looking ahead, the economy and the population of Hong Kong will continue to grow, and its special links with Chinese economy which is a vital factor in Hong Kong's, China success, will be further strengthened, now that it has become a Special Administrative Region of the People's Republic of China.. Hong Kong's, China food system will remain intact. We can expect that the food market in Hong Kong will continue to be expanding, stable, competitive and flourishing.

Resources:

Hong Kong 1997 Economic Outlook. Speech by the Financial Secretary on 27.2.97)

INDONESIA

SUMMARY

Food prices are expected to continue rising, as demand for high quality food, staples, and feed, is increasing simultaneously. Very rapid economic growth, coupled with a host of government programmes targeted at poverty alleviation — over the last two decades more than 33 million from the rural and urban populace have moved out of poverty — have unleashed a large demand for food. Despite the great strides made by local agribusinesses, demand for higher-quality and processed food which has come on top of ever-increasing demand for grains, is not being met locally. Although this year's rice harvest looks very promising, impending signs of El Nino are generating concern over yields in 1998. Demand for wheat — met entirely through imports — is estimated to be four million tons this year, and expected to run up to five million tons by 2000. Other food imports are also expected to continue increasing into the near future. The Government has been investing in infrastructure and will continue to issue deregulation packages to render the food sector more market responsive. Furthermore, urbanisation has been proceeding very rapidly, and the more than 30 million urban dwellers with growing buying power present a market of great potential.

FOOD PRICES AND CONSUMPTION

Improved diets and health delivery systems are increasing life expectancy, and rising affluence, is changing food consumption patterns. Demand for high quality food is therefore expected to increase. Food prices are estimated to rise by 15 per cent per annum to 1998; with more than half the price hike attributable to high-value and processed foods.

Due to the very large income elasticities, demand for processed food is projected to continue to increase into the near future. Despite the remarkable progress in poverty alleviation, household consumption remains far below ideal levels: consumption of animal protein is merely 53 per cent of ideal intake, while that for fruits and vegetables — 59 per cent — is not much higher. Therefore, although average caloric intake has surpassed the targeted (ideal) intake level of 2,100Kcal, the consumption of micronutrients leaves much to be desired.

Recent data reveal, however, that demand for the basic staple, rice, has already begun to decline, except in the lowest 30 per cent of the households, where it remained constant between 1990 and 1996. Even at the current level of average income, 15 per cent of the population is already being classified as obese, i.e., more than 30 per cent heavier than its ideal weight. Nevertheless, advances in education, communication, and health delivery systems, are stretching life expectancy at birth from 58.9 years in 1990 to 70.8 years in 2020.

Current estimates put the middle and upper income groups (defined loosely as households with GDP per capita incomes higher than US\$725) as 15 per cent of the population. By this account, Indonesia has more than 30 million consumers with an effective demand for high-quality food. At the same time, urbanisation has been progressing very rapidly: during the '80s it jumped from 22.3 per cent to 30.9 per cent. It is now being projected that urbanisation will reach 41.8 per cent in the year 2000, implying that 87.5 million will have become urban dwellers by then. In the capital city of Jakarta alone, its 10 million inhabitants have a per capita income of between \$ 3,500–\$ 4,000. Out of this, two million may well have a per capita income higher than US\$ 20,000.

Rapid urbanisation and rising incomes throughout Indonesia have led to lifestyle changes that are influencing consumer purchases along with food and entertainment choices. Some of the major trends in purchasing patterns observed to date are:

- households are shrinking due to the smaller number of children per family as well as the trend away from an extended family;
- more urban women are entering the workforce and choosing to stay there after marriage and children. With less time available for grocery-shopping and cooking, their penchant for convenience foods is increasing;
- larger disposable incomes are enabling Indonesian households to spend more on entertainment/recreation and family outings;
- more Indonesians have travelled, studied or worked abroad, becoming more familiar and more adventurous with different types of food; and
- growth of the professional class has resulted in greater spending power for individuals and a greater emphasis on business entertaining;

Despite these favourable trends, the number of modern kitchen appliances is still very low. For example, in Jakarta, the most prosperous city by far, it is currently estimated that only 43 per cent of households own a refrigerator, 27 per cent have a gas stove, and a mere 10 per cent possess microwave ovens.

Seasonality, marked by religious observances, plays a big role in consumer spending and food consumption. During the month-long fasting period of Ramadan, food consumption increases significantly. The same surge is experienced at the Idul Fithri (at the end of the fasting) celebrations, Lunar New Year, and Christmas.

FOOD PROCESSING AND MARKETING

The food distribution system is expanding very rapidly in response to a surge in demand for high-quality and processed food. The Government is also investing in harbours and port facilities to help expedite movement of goods, but a great deal more will have to be done to bring the distribution system to a level of sophistication demanded by the increasingly discerning consumer.

Indonesian agro-industry has gained in prominence after experiencing rapid growth from a very low base, increasing its contribution to GDP, from 3.7 per cent to 5.8 per cent between 1985 and 1990. There are almost a million agroindustries, employing a workforce of around three million. Most of these are household industries, with less than five workers. The middle-large industries, with more than 20 workers, which comprise only five per cent of the total number of agroindustries, currently produce 88 per cent of the output and generate 92

per cent of the added-value. The household industries, on the other extreme, which make up the remaining 95 per cent and employ 60 per cent of the work force only produce eight per cent of the output and generate six per cent of the added-value.

Indonesia has a mushrooming food processing sector. It currently boasts the largest and fastest growing instant noodle industry in the world. *Indofood*, the main noodle producer with many other food products as well, claims to be the largest food processor in the world.

Sustained economic growth, the growing middle class, the concentration of retail outlets in cities, the greater number of foreign investment and joint ventures, increasing mobility, and the emergence of news media, particularly commercial television, have combined to create a retail environment with more sophisticated marketing and branding strategies. Further expansion is anticipated in the retail sector to overcome the very minute number of nationwide distributors: currently only 10 out of the 50,000 distributors enjoy such status. Future changes are also predicted for food retailing, with little proliferation of mini-markets. Other anticipated developments are the increased standardisation of products, and the development of a standardised coding system, improved packaging, labelling, and in-store product displays, and the continued use of franchising to enter the Indonesian market.

The importing scene is relatively new for food products, nevertheless, agro-industrial imports have already begun rising sharply. Imports of all consumer goods jumped by almost 90 per cent in 1995. Vegetable imports (such as sweet corn, French fries, dehydrated spinach, as well as mixed vegetables) quadrupled between 1992 and 1994.

It is interesting to note that, with the exception of shrimp, food processors face difficulties in procuring local supplies of a consistent quality on a regular basis. For example, local drink producers usually purchase imported fruit concentrates, even for fruits that are plentiful in Indonesia, such as oranges. Currently, the US is the largest supplier of fruit juice concentrate. Soybeans for producing tofu and tempe are purchased from the US because the quality of the local products do not meet industry requirements.

These agroindustries generate a large demand for PECC commodities with milling capacity expected to reach 20,000 metric tons per day in 1997, wheat imports will climb to more than 4.0 million metric tons in 1998. Present plans to automate the off-loading of bulk commodities will further open up the rapidly expanding Indonesian market to imports of feed grains, oilseeds, and meals. The food processing industry will continue to grow as a result of increasing local and export demand, low labour costs, and a more attractive business environment for investment. The larger importers and manufacturing companies have their own distribution networks, but most smaller firms do not. Only a few distributors cover islands other than Java which are primarily served by ship. However, markets in Bali and Sumatra can be reached by overland transportation using ferries.

Food products can be imported freely by registered importers, except for meat, poultry and spirits which require special import licenses. Since retailers cannot import directly, they usually have sister companies to handle imports. However, retailers rely on many independent importers to obtain a full range of products. For example, one large warehouse type store uses 600 importers/distributors for its food section alone. The trade in fresh fruit differs from that of other consumer-ready food products in that fresh fruit imports are dominated by trading houses that specialise in fruit, whereas other food items are widely traded.

Complaints by the restaurants and retailers alike centre around difficulties in procuring a consistent supply of quality food products. Restaurants and retailers complain about the

large number of distributors they must deal with, since most of the distributors carry only a handful of products. On the other hand, distributors have to deal with poor infrastructure, product clearance uncertainties at the port of entry, and thousands of retail outlets that are spread out over an area the same distance as that between California and New York.

Tourism is fast becoming an important component of national income and foreign exchange earnings. Indonesia hosted 4.3 million tourists in 1995 and expects to receive six million by the year 2000. Improved airports, expanded air carrier service, and the rapid development of hotels support the industry's growth. Tourists and business people are a significant part of the restaurant business. Imports of wines, spirits, choice cut meats, seafood and other gourmet items are primarily for the tourism, business and expatriate sectors.

Over the past 25 years, Bali, the major tourist destination, has been transformed into a service-oriented tourist haven of hotels with about 26,000 rooms at various price ranges. All of the major food distribution companies have cold storage facilities on Bali to handle the enormous quantities of imported food products demanded by the hotels and restaurants. The increasing number of supermarkets in Bali has expanded many imported products to the local population.

In terms of restaurants, fast food has always been a part of the Indonesian eating culture, with Padang food being one of the quickest to serve. However, Westernised fast food outlets have grown rapidly in popularity during the past 15 years. Many other US fast food chains and some Japanese chains are present in Indonesia, and the number of outlets is growing at an astounding rate. Whereas hotels commanded most of the restaurant trade five years ago, they are now being challenged by independent restaurants. Food courts offering a variety of US, Japanese and Indonesian cuisine are present in all new malls and shopping centres.

AGRICULTURAL PRODUCTION AND TRADE

The agricultural sector, which now accounts for about only 17 per cent of GDP and employs less than half the labour force, still remains a top priority for the Government. Currently, growth of the agricultural sector has already slowed down to 3.8 per cent per annum, from the average of four per cent per annum registered in previous years. Studies indicate that the average growth of the agricultural sector in the seventh Five Year Development Plan or Repelita (1998/99 – 2001/02) will decline to 3.5 per cent per annum. The loss of prime agricultural land to industry and urbanisation is causing a great deal of concern to policy-makers who transformed the world's largest rice importer into a country self-sufficient in rice. Plans are underway to bring a million hectares of swampland into cultivation. Although the 1997 main rice harvest looks promising, there is concern that El Nino will severely curtail yields in 1998. Wheat imports will reach record highs in 1997, as will soyabean imports. On the other hand, an intensive campaign to increase maize production should contain import demand for corn.

International price prospects for the major Indonesian commodities are mixed: palm oil prices are expected to weaken from US\$628/mt in 1995 to US\$500/mt in 1998 as supplies increase. Rice prices are predicted to increase very slightly, from US\$321/mt in 1995 to US\$330/mt in 1998. Over the same period, prices for sugar and rubber are expected to decline from US\$25/kg to US\$20/kg, and from US\$132/kg to US\$117/kg, respectively.

The Government is teaming up with the private sector to develop port facilities in several potential locations on Java, Sumatra and Sulawesi. This effort is aimed at reducing port congestion which hampers the inflow of food and bulk commodities. At the same time, it

would enable major agriculture producing countries to export directly to Indonesia, avoiding costly transshipment.

FOOD AND AGRICULTURAL POLICY

Indonesia's schedule of commitments contained in Schedule XXI annexed to the Marrakech Protocol lists for each and every product, the maximum tariff it is entitled to charge on imports from other GATT /WTO members. In Indonesia's case initial tariffs range between 10 per cent and 238 per cent. Those at 10 per cent (cereal flour other than wheat flour) are to be reduced to nine per cent over the implementation period of 10 years starting January 1, 1995 and finishing January 1, 2004, while those at 238 per cent (some dairy products) are to be reduced to 210 per cent over the same period.

During the Uruguay Round, Indonesia gave the US reduced-tariff access of 70,000 tons (at a 90 per cent tariff) of rice. Other ceiling bindings were meat (70 per cent), some fruit and vegetables (90 per cent), tea, coffee, and spices (100 per cent), margarine (110 per cent), sugar (110 per cent), alcohol products (170 per cent), and cigarettes (130 per cent). As some of the dairy product tariff lines had already been bound, the Indonesian Schedule includes current access — a tariff quota representing 414,700 tons of products (fresh milk equivalent) at a tariff rate of 40 per cent.

The Indonesian Schedule shows no non-exempt domestic subsidies; however policies acceptable under the Marrakech Accord amounted to about Rp 850 billion, and development programmes to about Rp 1500 billion during the 1986–88 period. On the export subsidy commitment side, Indonesia's base period export subsidies are shown to be equal to US\$ 28.3 million applying to 299,750 tons of rice. These amounts are to be reduced to US\$ 21.5 million and 257,758 tons by the year 2004.

Few trade barriers, besides the relatively high tariff rates (around 15– 25 per cent for most products), exist for consumer-ready food products. All products must be registered through the Ministry of Health to obtain an import license number. However, the majority of imported products on supermarket shelves are not registered and enter the market in mixed container loads. Normally the importer registers the product but has little incentive to do so if the quantities imported are small. The registration process can be lengthy, bureaucratic and costly. Increasingly, exporters who consider the Indonesian market promising are registering their products themselves.

The population of around 200 million is more than 90 per cent Muslim. Therefore, the recently-passed law mandating that all products containing meat products be certified the Muslim designation of halal, comes as no surprise. However, the Government has managed to withstand pressure to turn it into another trade barrier.

At the same time, it is imperative that agroindustrial policy enforces the quality standards stipulated by the Sanitary and Phyto-Sanitary component of the Marrakech Accord. The 1996 Food Law comprises an initial step in the right direction, but major work is still required to consolidate policy-making authority currently dispersed among a number of government institutions.

In terms of imports, any licensed importer can freely import all food items except for meat, poultry and alcohol which require special licenses. In addition, only two importers are licensed for alcohol imports, which now have tariffs equal to about 300 per cent and a quota of 50,000 units. As a consequence, it is estimated that only half of the meat and poultry

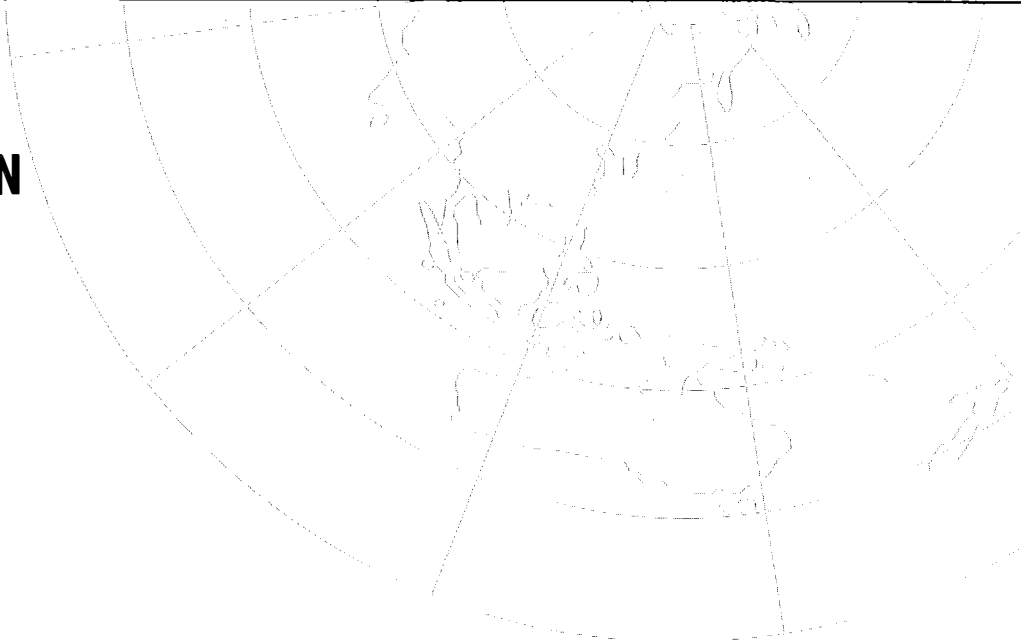
and about 10 per cent of the alcohol imported are legally licensed. Most of these restricted products are purchased for the food service sector and the Duty Free Stores catering to the expatriate community.

The Indonesian government continues to implement major deregulation packages, providing for new opportunities for agricultural imports.

The most recent deregulation package, announced on June 7, 1997, comprises yet another step forward. Designed to assist small and medium-scale entrepreneurs — particularly those in the regions — by exempting them from regional levies and business licenses, it has further lowered tariffs on 136 agricultural commodities and products. It has also converted the previous viable levy export tax formula designed to stabilise domestic prices of Crude Palm Oil and Olein into a straightforward ad-valorem tax, effectively lowering it from around 10 per cent to five per cent. This package has also enabled licensed importers to import raw sugar, breaking the monopoly held by BULOG for decades. Even more significant is the lifting of restrictions on imports of used-vessels. Not only would this provide a much-needed boost to the national fishing industry, but it should also serve to lower interinsular freight rates, strengthening distribution networks.

The unfinished policy agenda consists of exposing the strategic industries to international competition. Deregulation continues to lower prices, reducing the high profits that currently accrue to the limited number of producers and/or distributors who, in many cases, are located on Java. In this way deregulation would substantially raise the real incomes of consumers, particularly those with lower incomes and households in the outer islands, further increasing the demand for food.

JAPAN



SUMMARY

The Japanese economy continues to move toward recovery in FY 1997. Thus, the real GDP growth rate is expected to be 1.9 per cent. The consumer price index of food is expected to increase by 1.0 per cent because of a hike in the consumption tax rate. Reflecting these changes, beef consumption will expand by one per cent, and rice consumption will decline by 1.9 per cent. Food imports are also expected to expand: beef imports by four per cent and dairy products by one per cent. Moreover, based on the Uruguay Round Agreement, 600,000 tons of rice will be imported.

Cultivated area is expected to decrease by one per cent in 1997. Agricultural labor force is also expected to reduce by 2.5 per cent. Reflecting these trends, rice production will decline by four per cent and vegetables and beef by one per cent. As a whole, the quantity index of agricultural production is expected to decline by one per cent.

FOOD PRICES AND CONSUMPTION

Per capita caloric intake declined slightly in the early 1990s, but then it started to rise again. This pattern is similar to that of the early 1970s. Thus, if this upward trend continues, it will reach 2,923 Cal/day in 1997. The proportion of fat in the total calorie intake has been increasing while that of carbohydrates has been decreasing.

Per capita GDP has been steadily growing. Reflecting this income growth, per-capita consumption of rice is expected to decline by 1.9 per cent in FY 1997. On the other hand, beef consumption is expected to increase by one per cent.

The consumer price index of food in FY 1997 is expected to be 107.2 (FY 1990=100) because of a hike in the consumption tax rate. Among commodities, the price index of vegetables is expected to expand while that of fruits is expected to decline. Meat prices will remain stable.

Reflecting the change in taste, beef has been substituted for pork. During the years FY 1991 to FY 1995, per capita consumption of beef largely increased from 3,201 to 3,612 g/year while that for pork was stable at around 4,697 g/year. However, in FY 1996, the former dropped to 3,205 g/year because of concerns about *bovine spongiform encephalopathy* and the outbreak of O-157 bacteria.

Increase in women's participation in the labour market generally induces the consumption of food away from home. The participation ratio reached 41 per cent in 1996. The household expenditure on restaurants (food plus associated services) increased by 30 per cent in real terms during the years FY 1980 to FY 1993 reaching US\$ 114.7 billion FY 1995. This is equivalent to 4.7 per cent of total household expenditure.

As a result, the market size (domestic sales) of "food away from home" in 1995 increased by 0.5 per cent and reached US\$ 244.0 billion. This is equivalent to 3.3 times as much as that of 1975. The number of restaurants is 839,000, and 3.7 million people are employed by them. If the sales of take-out food at super markets, etc. are included, the market size rises to US\$ 271.3 billion.

FOOD PROCESSING AND MARKETING

Total value added in the food processing sectors (excluding cigarettes) increased by 12 per cent in real terms during the years 1980 to 1993. It reached US\$106 billion in 1995. Among sub-sectors, seafood processing recorded the fastest growth. Similarly, the beverage sector increased. That of the miscellaneous food sector expanded slightly. In contrast, the value added in the meat processing and dairy sectors declined.

The bursting of the bubble economy and subsequent recession, the yen appreciation, expansion of the government budget deficit, and international trade conflicts induced the retail revolution. The Large-scale Retail Stores Law was revised in January 1992 and May 1994. This made it easier for large chain-stores to launch large, new outlets. The Liquor Law which had restricted the number of licenses was also liberalized. Moreover, the status of the Fair Trade Commission and its role in enforcing anti-trust laws, was strengthened.

The number of household refrigerators increased from 4,631,000 to 5,035,000 during 1990 to 1996. Reflecting the changes in life style, the number of small size (less than 120 litre) and large size (larger than 300 litre) refrigerators increased while that of middle size refrigerators decreased.

AGRICULTURAL PRODUCTION AND TRADE

Number of young people willing to go into farming has been declining while middle-aged farmers leaving farming has been increasing. As a result, the agricultural labor force decreased by 1.8 per cent in FY 1996. If this trend continues, it will decrease by 2.5 per cent in FY 1997. Ageing of the farm population is another problem. 41.4 per cent of farmers were over 65 years in FY 1996. This problem is all the more serious for rice producers whose ratio already exceeds 50 per cent.

In FY 1996, rice production decreased by four per cent. The major cause was the reduction of cultivated area. Production of fruit and beef also decreased while vegetables, milk, and eggs increased. The quantity index of production declined by two per cent in FY 1996.

Relatively bad weather is forecast for FY 1997. Thus, the production of rice will decrease by four per cent and vegetables by one per cent. On the other hand, wheat is expected to increase by 13 per cent, recovering from the previous year's poor harvest. Fruit production is expected to increase by four per cent. As for the livestock sector, milk and eggs are expected to increase by one per cent. Beef is expected to decline by one per cent. Pork and broiler production will be the same as last year. As a whole, the quantity index of production will decrease by one per cent in FY 1997.

Food imports exceeded US\$ 25 billion in 1994. In terms of quantity, import growth was modest: rice imports increased from 379,000 to 455,000 tons FY 1995-96. This is based on the Uruguay Round agreement. Wheat also increased by 2.7 per cent. On the other hand, fruit imports decreased by 1.4 per cent because of the poor weather in major exporting countries. As for livestock products, beef imports declined by eight per cent. Fears of *bovine spongiform encephalopathy* and the O-157 bacteria were the main causes. On the other hand, imports of pork and chicken increased. As a whole, the quantity index for import increased 1.2 per cent in 1996.

In FY 1997, fruit imports are expected to remain at the previous year's level. For other products, imports of apple juice are expected to increase; beef is expected to increase by four per cent; dairy products by one per cent. On the other hand, pork imports are forecast to decline. As a whole, the quantity index for imports is expected to remain at the previous year's level.

Rising imports in recent years will lower the self-sufficiency ratio of caloric intake to 42 per cent in FY 1996 and that of total grain to 29 per cent. Production/supply ratios of cereals of UK, Germany, and Japan were almost the same in the middle of the 1960s; however, the Japanese recent trend is in contrast to the UK and Germany.

FOOD AND AGRICULTURAL POLICY

The government has been maintaining and strengthening the multilateral free trade system centered upon the WTO. While steadily implementing the Manila Action Plan, the Government is liberalizing trade and investments and is promoting economic and technical cooperation. Based on the Uruguay Round Agreement, minimum access imports of rice started in 1995. The amount will increase to 758,000 tons in 2000.

Policies related to production and distribution of rice were the main targets of recent reforms. The Law for the Stabilization of Supply-Demand and Price of Staple Food was introduced in 1995. Under this Law, a basic plan, based on adequate supply and demand forecasts, is settled on each year by the minister of MAFF. To ensure that the rice required by consumers is supplied according to the basic plan and in a stable manner, producers are required to sell or consign their rice to first-type registered shippers as orderly shipped rice, (the orderly shipped rice includes rice for distribution through either voluntary or government channels). In other words, the obligation of farmers to sell rice to the Government was abolished. Instead, they are required to sell rice through specified channels. On the other hand, non-orderly shipped rice, which is not supplied according to the basic plan, may be sold in any manner if the volume is declared.

A registration system for rice shippers and sellers will be adopted in place of the designation and license system. Price formation for voluntarily marketed rice was institutionalized in order to reflect the actual supply and demand situation. The Government purchase price reflects price trends of voluntarily marketed rice.

In sum, private-sector channels have become the main channel for rice distribution. The Government manages rice stockpiles and imported rice under the minimum access commitment. The government also purchases rice from farmers who participate in its rice production adjustment program.

References

- Economic Planning Agency*[1996], *National Account 1995*, EPA.
- Economic Planning Agency*[1997], *Basic Policy Stance on Economic Management for FY 1997*, EPA.
- Economic Planning Agency*[1996b], *SNA Input-Output Tables 1980-1993*, EPA.
- Economic Planning Agency*[1997b], *SNA Input-Output Tables 1995*, EPA.
- Food and Agricultural Organization*[1996], *FAOSTAT 96*, FAO.
- Japan Food Service Association*[1997], *JF Net, WWW Home Page*, JF. (in Japanese)
- Management and Coordination Agency*[1996], *Rodoryoku Chosa Nenpou (Annual Survey of Labor Force)*, MCA.
- Ministry of Agriculture, Forestry, and Fisheries* [1995], *An Outline of the Staple Food Law, The Law for Stabilization of Supply-Demand and Price of Staple Food*, MAFF.
- Ministry of Agriculture, Forestry, and Fisheries* [1997], *'97 Outlook*, MAFF. (in Japanese)
- Prime Minister's Office*[1996], *Consumer Price Index 96*, PMO.
- World Bank*[1997], *World Development Indicators on CD-Rom*.

KOREA

SUMMARY

Implementation of the Uruguay Round agreement will greatly impact Korean agriculture. Market-access is the most far-reaching component. Converting all non-tariff barriers into tariffs (tariffication) and subsequently reducing the tariffs will provide increased market access opportunities to exporters. A reduction in domestic price supports will reduce production and increase prices. Import demand will increase in Korea.

Food consumption in Korea will mostly be affected by income growth and international food prices in the next 12 to 24 month period. Changes in international food prices will become the major determinant affecting food costs and demand as Korea imports over 75 per cent of its grain. The recent economic recession in Korea will probably continue until the end of 1997, which will dampen the increase in food consumption. Population growth is projected to be more than 0.4 million a year and the total population should reach 46 million in 1997.

The production of major crops, as well as the area under cultivation decreased significantly. Price support commitments in the Uruguay Round agreement will result in a significant reduction in grain production. On the other hand, production of livestock, vegetables and fruits has increased significantly. This trend is expected to continue.

FOOD PRICES AND CONSUMPTION

Major factors affecting food consumption are economic variables, socio-demographic variables and diet patterns. In the short run, economic variables are the most significant determinants of food consumption. Socio-demographic variables and dietary patterns are fairly stable.

Per capita consumption of grain in Korea has decreased significantly. Consumption of rice, the staple in the Korean diet, has declined over time (116 Kg in 1990 to 104 Kg in 1996 per capita per year). Per capita consumption of wheat, barley and corn remains stable at 30 Kg, 2 Kg and 3 Kg a year, respectively. On the other hand, per capita consumption of vegetables and fruits increased to 153 Kg and 174 Kg respectively, from 133 Kg each for the same period. Per capita meat consumption reached 30 Kg in 1996. Beef consumption is only about half that of pork mainly because of limited supply and high beef prices. The Korean diet pattern has changed from grains more income elastic, higher quality foods such as meat, fruits, and vegetables. The per capita calorie intake has been stable at around 2,900 Kcal/day. Per capita income grew from \$5,883 in 1990 to \$10,076 in 1995 and income growth will continue to expand although the pace will gradually slow down (six to seven per cent in real terms). Food prices increased by 43 per cent for the 1990–96 period. If

weather conditions remain favourable, prices are likely to increase by less than three per cent per year, far below the increase in the consumer price index. The decline of the Engel index is expected to continue, from 32.5 per cent in 1990 to 28.1 per cent in 1998. Demand for food prepared outside the home will continue to expand. Expenditures on food outside the home as a proportion of disposable income is expected to reach 12 per cent in 1998, a substantial increase from seven per cent in 1990.

Population growth is projected to be more than 0.4 million a year, and the total population should reach 46 million in 1997. The rural population will decline from 6.7 million in 1990 to 4.2 million in 1998, largely through migration and the expansion of urban areas. The urban population will grow to 42 million in 1998, an increase of six million compared to 1990.

FOOD PROCESSING AND MARKETING

The Ministry of Agriculture and Forestry has various promotional programs for the food processing industry to increase farm income and diversification of the rural economy. Demand for processed food is rapidly increasing because of changes in food consumption patterns, increase in disposable income and women's social participation. The amount of food and beverage production in value added terms was about 10 trillion won or equivalent to 3.3 per cent of GNP and 46.3 per cent of the total production of agriculture, fisheries and forestry in 1994. Although the share of food and beverage production in GNP decreased from 4.7 per cent to 3.3 per cent, the absolute value of production of this sector increased 2.7 times during the last decade.

The food processing industry also contributes to the creation of employment opportunities. The number of workers in the food processing industry was 200,000 persons or the equivalent of one per cent of Korea's total employment and 7.4 per cent of employment in the agricultural, fisheries and forestry sector. The number of workers in this sector has remained stable at about 197,000 since 1985.

During the last decade, the number of businesses in the food processing industry increased from 4,659 to 5,858 firms. Korea's food processing industry is progressively becoming more capital intensive. The average fixed capital per firm in the food processing sector has increased significantly, from 600 million won to 1.8 billion won. Capital endowment per worker in the industry has also increased from 14 million won to 53 million won during the same period. Increased capital endowment per worker has been a key contributor to increased production.

The food processing industry can be divided into two categories: the food industry, and the beverage industry. The food industry consists of marine product processing (about 15 per cent of the total in terms of production value), dairy product processing (20 per cent), bakery and noodle products (17 per cent), grain processing (nine per cent), meat processing (10 per cent), fruits and vegetable processing (five per cent), vegetable oil (six per cent) and miscellaneous others. The beverage industry consists of alcoholic beverages (about 70 per cent of the total beverage industry in terms of value of production) and non-alcoholic beverages. The share of meat processing, fruit and vegetable processing and grain processing in the food industry has increased significantly, while the share for marine product processing and bakery and noodle has decreased.

The Ministry of Agriculture and Forestry has implemented three types of programmes for the promotion of the food processing industry: Farm Product Processing Industry Promotion (FPPI), Construction of Rural Industrial Estates (CRIE), and Other Food Processing

Industry Promotion (OFPI). The FPPI program is based on the "Act to Promote the Farm Product Processing Industry and Quality Control of 1989." This programme provides financial support for businesses that utilise domestic farm products and locate in rural areas. The CRIE programme facilitates rural industrialisation through the construction of industrial estates in rural areas. Food processing firms can acquire relatively cheap land and waste-treatment facilities with financial support. The main purpose of the OFPI program is to enhance the marketing efficiency for farm products.

AGRICULTURAL PRODUCTION AND TRADE

Korea has two million hectares of arable land and 1.5 million farm households. Major crops are rice, barley, corn, beans, and potatoes. Vegetables and fruits are also important agricultural products. The production of major crops, as well as the area under cultivation decreased significantly. Rice production dropped by 15.7 per cent during 1990–96. The area for cultivation declined by 13.7 per cent during the same period, contributing to the drop in rice production. A price support programme has been implemented in the rice sector, but the commitment to limit price supports as part of the Uruguay Round agreement will accelerate the reduction of paddy area.

The production of other major crops, except potatoes, decreased more than that of rice. The major factor affecting the rapid reduction is a reduction in the planted area. Barley production decreased by 43.8 per cent over the past six years. The price support policy for barley has managed to maintain barley as a second crop in paddy areas. Price support commitments in the Uruguay Round agreement will result in a significant reduction in barley production. Potatoes, produced in the mountainous cool areas of Kangwon province are the only major crop that has maintained the production level of the 1970s and 1980s. Production of vegetables and fruits has increased significantly. During the period 1990–1996, vegetable production increased from 8.9 million tons to 9.5 million, while fruit production increased from 1.8 million tons to two million tons. The cultivated area for vegetables and fruits has increased by 10,000 ha and 5,000 ha a year since 1990, respectively.

Meat production has increased from 770,000 tons in 1990 to 1.09 million tons in 1996. Last year, beef and pork production was 130,000 tons and 700,000 tons, respectively. Chicken accounts for 20 per cent of total meat production, or 260,000 tons in 1996.

Korea's self-sufficiency rate for grain dropped from 43.1 per cent in 1990 to 25.9 per cent in 1996. Recently, the self-sufficiency rate for rice dropped below 100 per cent. However, a rice surplus from the mid 1980s to the early 1990s has enabled Korea to avoid imports. Korea wheat consumption is entirely dependent upon imports. The domestic supply of corn and beans accounts for just 1.4 per cent and 13.8 per cent of consumption, respectively. Increasing demand for beef is being met by imports. Agriculture as a share of GNP will continue to decrease, from 8.7 per cent in 1990 to 5.6 per cent in 1998.

While the overall demand for food has increased in line with income and population growth, domestic food supply has decreased. The total value of agricultural imports reached \$8.2 billion in 1996. Feed grains, meat, and fruits have soared to become major agricultural imports. Other major imports are corn (\$1.6 billion), wheat (\$725 million), beef (\$503 million), pork (\$160 million), and soybeans (\$473 million). The US is the largest supplier of Korea's agricultural imports, accounting for 35 per cent of the market. China is the second largest supplier, exporting over \$800 million worth of agricultural goods. The other top eight suppliers are Australia, Brazil, New Zealand, Thailand, Japan, Indonesia, Russia, and Malaysia.

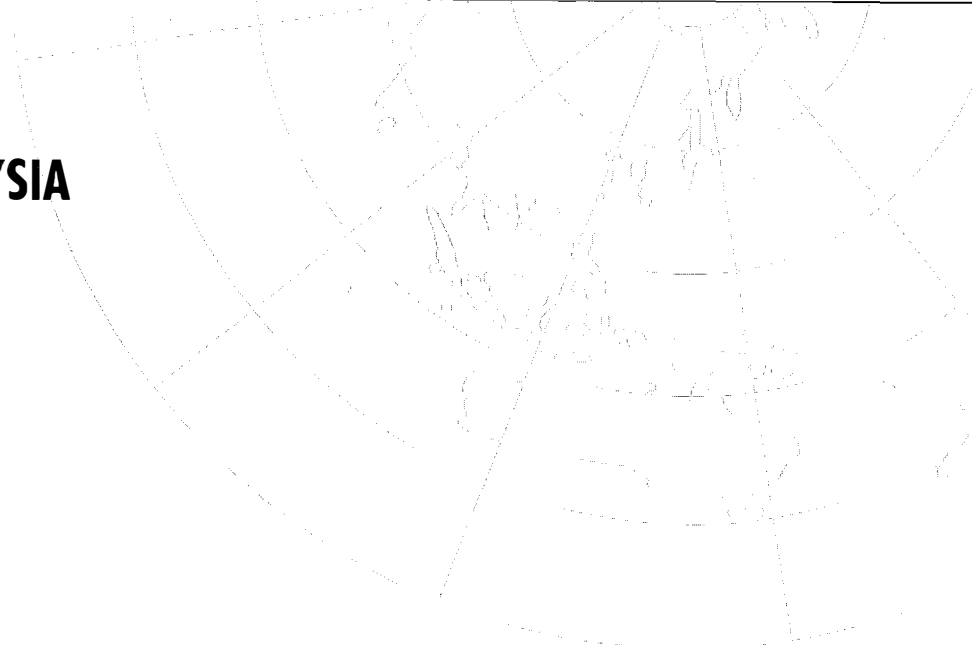
The total value of Korea's agricultural exports was \$1.4 billion in 1996. Japan is the largest export market, accounting for over 60 per cent of Korea's agricultural exports. Other major export markets are the US, Hong Kong, (China), Chinese Taipei, Singapore, Russia, China, and Indonesia. Major Korean agricultural exports in 1996 were ginseng products (\$113 million), kimchee (\$39 million), fruits (\$62 million), vegetables (\$46 million), flowers (\$5 million), and pork (\$194 million).

FOOD AND AGRICULTURAL POLICY

Korean agricultural trade policy as well as its domestic agricultural policy will be adjusted in accordance with the Agreement on Agriculture of the Uruguay Round. Restrictive agricultural trade policies such as import quotas and licenses have been removed in favour of tariffs except for rice. Korea also allows minimum or current market access for major agricultural commodities.

The total aggregate measurement of support (AMS) of 2.25 trillion won will be reduced to 1.49 trillion won by 2004. Almost 90 per cent of the AMS to be reduced centers on rice price supports. The base year price support for rice is 2.11 trillion won and it will be reduced to 1.36 trillion by 2004, a reduction of 75 billion won per year. In 1997, the AMS for rice will be reduced to 1.88 trillion won. Korea has agreed to the elimination of non-tariff barriers and market liberalisation except for rice. Tariffs and tariff equivalents will be reduced 26.7 per cent on an average over 10 years. The minimum market access quantity for rice will be 77,000 tons and 90,000 in 1997 and 1998, respectively. Commodities scheduled for liberalisation in 1997 include pork (frozen), chicken, natural honey, oranges, tangerines and orange juice. Beef and rice will have non-tariff barriers until 2000 and 2004, respectively. In Korea, the Government has designated import agencies to import MMA quantity and return the economic rents accrued from imports to the agricultural sector. The Korean government is likely to maintain a state trading system for key agricultural commodities.

MALAYSIA



SUMMARY

Income growth, population growth, and rapid urbanisation have increased the demand for food, put tremendous pressure on food prices, and generated changes in food habits, food purchasing and consumption patterns. Food imports which grew at an average rate of 11 per cent per annum for the period 1991 to 1995, recorded strong growth of 13 per cent and 22 per cent in 1994 and 1995 respectively. This will continue to be the major source to meet the increased demand for food. Local production of food will increase, albeit at a slow rate, given the production constraints due to shortages of labour, low levels of investment and competition from imports. However, there are tremendous opportunities in the food processing and marketing industry which will become more market-driven, with greater product specialisation, more standardised product quality and more convenient products with longer shelf life and higher nutritional value.

FOOD PRICES AND CONSUMPTION

The Malaysian economy recorded another year of high growth of 8.2 per cent in 1996. The economy is expected to grow at 8.0 per cent in 1997. Inflation remains low at below 3.7 per cent over the last four years. Per capita income has increased from US\$ 4,023 in 1995 to US\$4,447 in 1996. Per capita income is expected to improve further by 9.5 per cent to US\$4,868 in 1997. The strong growth of the economy has brought with it a new set of challenges for economic management. The broad thrust of policy is now to steer the economy towards sustainable growth with price stability over the medium and longer term.

Rapid socio-economic development has brought significant changes in the lifestyles of Malaysians, including food habits, and food purchasing and consumption patterns.

The household expenditure surveys (HES) indicate that households in Malaysia, spent 28.4 per cent of their total budget on food in 1980, and this increased to 30.2 per cent in 1994, comprising expenditure of food at home at 23.4 per cent, and expenditure of food away from home at 6.8 per cent. The 1994 HES showed that the major items of food expenditure were: food away from home (22.3 per cent); fresh meat (10.8 per cent); fresh fish (9.8 per cent); fresh vegetables (8.1 per cent); rice (8.1 per cent); fruits (5.5 per cent); and milk products (5.3 per cent).

There has been an increase in per capita availability of calories, protein and fat in Malaysia from 1971 to 1992. Total per capita availability of calories has increased from 2,445 Kcal/day in 1971 to 2,830 Kcal/day in 1992. The percentage of calories from animal sources increased from 11.8 per cent in 1971 to 16.2 per cent in 1992. In the same period, per capita

availability of protein increased from 49.8 g/day to 58.3 g/day. The most significant change in sources of protein is from meat, which increased from 5.7 g/day in 1971 to 22.8 g/day in 1992, and the percentage increased from 33.5 per cent to 47.8 per cent. Per capita availability of fat doubled from 50.0 g/day in 1971 to 100.0 g/day in 1992. The percentage of fat from animal sources decreased from 77.6 per cent to 30.7 per cent during the period.

The change in the composition of food demand is consistent with the generally-observed patterns for nations with increased per capita income. As incomes rise, the general trend is for the Malaysian consumers to shift to more livestock products and to diversified diets including more fruit, vegetables and seafood. The frequency of consumption of meals away from home has increased over the years, and this trend will continue. In connection with meals away from home is the increased consumption of Western-style 'fast foods' in the country.

FOOD PROCESSING AND MARKETING

The main sub-sectors within the food processing industry are dairy products, pineapple canning, meat and seafood products, processed cereals and cereal preparation, sugar manufacture, cocoa, chocolate and sugar confectionery, animal feeds, beverages and miscellaneous food products.

The industry is fragmented, and mainly dominated by about 5,000 small-sized and family-owned enterprises (SMI), the majority of which employ low levels of technology, R&D and marketing expertise. Nevertheless, there is a sizeable number of large-scale food processing manufacturers, mainly foreign-owned, involved in the manufacture of dairy, processed cereals and cereal preparation, chocolate, confectionery and beverage products.

The food processing industry grew 10.2 per cent in 1995, from US\$2,856 million in 1994 to US\$3,148 million in 1995. The dairy products, processed cereals and cereal preparation, sugar manufacture and animal feed sub-sectors accounted for 71.6 per cent of the output, expanding 9.5 per cent, 19.3 per cent, 10 per cent and 14 per cent respectively. These sub-sectors are mainly dominated by large scale manufacturers, equipped with modern machinery and technology.

Many of the manufacturers have diversified to produce a wide range of food products, such as processed UHT milk, ice-creams, breakfast cereals, instant coffee, sauces and beverages. The modernisation and rationalisation of the Malaysian food processing industry is currently taking place among the large-scale manufacturers, as well as through joint ventures between multinational corporations and local manufacturers.

The export of processed food products has increased by 5.5 per cent from US\$997 million in 1994 to US\$1,052 million in 1995. Among the factors accounting for this increase was the significant growth in the export of miscellaneous food products, processed cereals and cereal preparations and beverages, which comprised 46.9 per cent of the export of manufactured food products.

The import of processed foods increased by 16.5 per cent from US\$1,250 million in 1994 to US\$1,455 million in 1995. The main import items were dairy products, processed cereals and cereal preparations, processed fruit and vegetables, sugar-manufactured products, animal feed and miscellaneous products. The domestic production of food requirements, including raw materials for processing, is still insufficient to meet demand. A substantial amount of processed foods and an estimated 70 per cent of the raw materials used in the industry is imported.

The food processing and marketing companies are responding to the rapid changes in the food needs of the modern and more affluent and urbanised Malaysian society. The size of the urban population increased by 4.5 per cent per annum from 9.5 million in 1991 to 11.3 million in 1995. As a result, the proportion of the population residing in urban areas increased from 51 per cent in 1991 to 54.7 per cent in 1995. Several demand-side events are generating changes in the nature and composition of food demand. These include the introduction of brand names for poultry products, fruits, rice, cooking oil and other food items, the marketing efforts to develop consumer allegiance to brand names, the ever-increasing food volumes marketed through fast-food outlets, restaurants and modern retail outlets and the increasing health consciousness of the consumers. These demand-side events will interact with supply-side events to change the structure of the food industry to a more sophisticated industry. The trend is for companies to go more into market development and product development as the industry becomes more market driven. There will be greater product specialisation, more standardised product quality, more convenient products with longer shelf life and products with higher nutritional one. The development of wider distribution networks will become more important as a strategy to acquire market power and market share.

AGRICULTURAL PRODUCTION AND TRADE

Output of the agriculture sector is expected to grow at a slightly higher rate of 1.6 per cent in 1996 (1995 = 1.1 per cent). In 1996, output of palm oil, the most important agricultural commodity in Malaysia, is envisaged to increase at a more moderate rate of 2.9 per cent. Overall, the growth in the agriculture sector continues to be lacklustre and consequently, its share to GDP is envisaged to drop further to 12.7 per cent in 1996 (1995 = 13.5%). Agriculture output growth is expected to remain low at 1.4 per cent in 1997.

Local production of food will increase, albeit at a comparatively slow rate, given the production constraints due to shortages of labour, low levels of investment and competition from imports. Food imports which grew at an average rate of 11 per cent per annum for 1991 to 1995 and recorded strong growth of 13 per cent and 22 per cent in 1994 and 1995 respectively, will continue to be major sources of meeting the incremental demand of food.

Malaysia's agricultural trade (excluding forestry and fish products) expanded by an average rate of 12.8 per cent per annum between 1991 and 1995. The value of agricultural exports which grew at an average rate of about 13.2 per cent during this period, rose from US\$4,937 million in 1991 to US\$8,585 million in 1995. Consistent with past trends, traditional export commodities such as palm oil, rubber, cocoa and pepper continued to dominate, while food items (excluding fish products) on average accounted for only about 22 per cent of total agricultural exports. The value of food exports grew at an average rate of about six per cent per annum during the period, indicating that the exports of this sub-sector grew slower than the exports of the agricultural sector as a whole. This trend is expected to continue in view of the higher domestic demand for food and the slow expansion rate of local food production.

Imports of agricultural produce likewise recorded a general upward trend, rising from US\$2,818 million in 1991 to US\$4,329 million in 1995, growing at an average rate of 12 per cent per annum over the five-year period.

The relative share of food imports appears to have remained within the range of 65 per cent to 68 per cent of total agricultural imports. Food imports (excluding fish products) grew at an average rate of 11 per cent per annum between 1991 to 1995, and recorded strong growth of 13 per cent and 22 per cent in 1994 and 1995 respectively. The lowering (or abolishment) of import tariffs through the last four years, partly in adherence to the nation's

commitments to the WTO, and the further reduction of tariffs in accordance with the Association of South-east Asian Nations (ASEAN) Common Effective Preferential Tariff (CEPT) scheme, further contributed to this increase in agricultural imports.

The import bill for grains (eg. rice, wheat and maize), increased from US\$603 million in 1991 to US\$818 million in 1995. The quantity of imports increased from 3.3 million metric tonnes (m.t.) to 4 million m.t. during the period. The most significant item was maize, which recorded an average annual growth in quantity of 11 per cent, consistent with the expansion of the poultry and pig sectors. Between 1991 and 1995, imports of maize rose from 1.3 million m.t. to 2.1 million m.t. Poultry production has increased from 385,900 m.t. in 1990 to 647,000 m.t. in 1995, an average annual growth of about 11 per cent.

Rice is an important component of overall cereal imports, as it is the chief source of caloric needs of Malaysians. It accounted for 33 per cent of daily per capita calorie supply in 1992. The per capita consumption of rice has dropped from 87kg in 1990, to 80kg in 1995, and is expected to decline further to 75kg by the year 2000. Despite the fall, imports of rice grew at an average rate of 6.7 per cent per annum from 330,340 m.t. in 1990 to 427,570 m.t. in 1995. Stagnating domestic production and the demand from an expanding population have contributed to the increase in rice imports. Current policy on rice is to maintain a minimum self-sufficiency level of 65 per cent. Food security coupled with strategic and domestic resource cost consideration underlie this policy. In pursuit of this policy, paddy production in the grain producing areas totalling about 200,000ha, and which currently contributes about 70 per cent of total paddy production, would be further intensified to meet the self-sufficiency level.

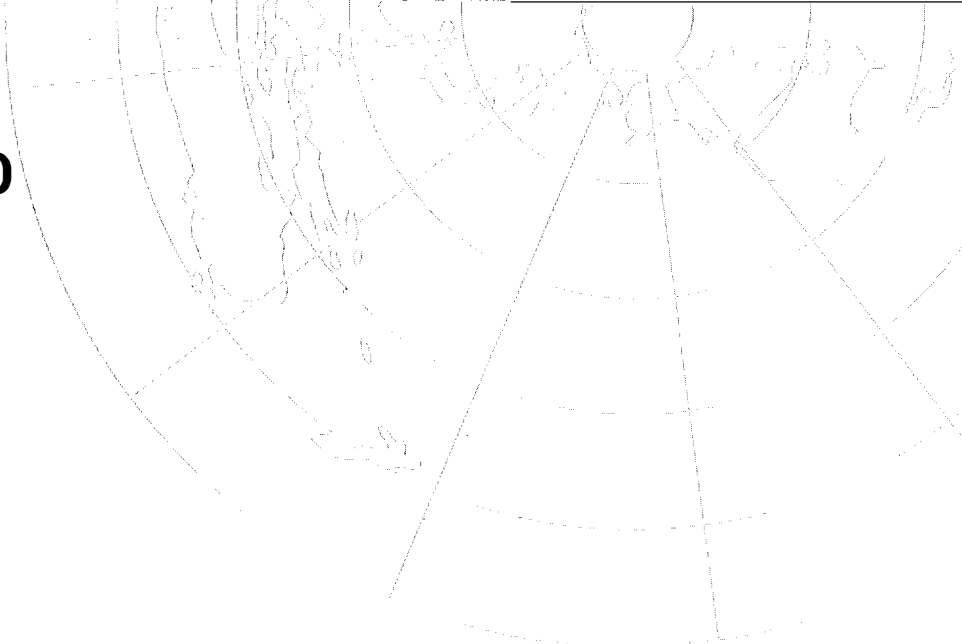
FOOD AND AGRICULTURAL POLICY

An influx of foreign workers and income growth have increased the demand for food, and have put tremendous pressure on food prices. Containing food price pressures will continue to be given priority in the next few years, as inflationary risks remain amidst an economy experiencing rapid expansion accompanied by rising domestic demand and supply constraints, particularly with regard to labour and food.

Malaysia is committed to further liberalisation of trade. The Fifth ASEAN Summit in Bangkok in December 1995 further strengthened and consolidated ASEAN cooperation in the economic field. The summit endorsed the revised time-frame for realising the ASEAN Free Trade Area (AFTA) to the year 2003. The inclusion of unprocessed agricultural products into the CEPT Scheme will promote intra-ASEAN trade in agricultural produce, and will certainly contribute to the further increase in the import bill for food.

In view of the rapid structural changes in the economy, the inflationary pressures and global competition, Malaysia is reviewing its National Agricultural Policy. Broadly, the policy directions of agricultural development during the next 15 years (1996 to 2010) are to improve productivity through more efficient and greater utilisation of agricultural resources, and encourage increased private sector investment in agriculture on a large-scale basis, particularly in the production of food commodities and high-value produce, with the Government providing the requisite support services.

MEXICO



SUMMARY

Mexico has radically altered the direction of its economic and agricultural policies in recent years. With greater emphasis on the role of markets, deregulation, privatisation and more liberal trade, Mexico has progressed from a relatively closed to a more open economy, moving away from the most distorting forms of agricultural support (market price support) to direct income support to farmers, decoupled from the production of specific commodities. It has also emphasised infrastructure developments programmes, research extensions, and other 'green box' policies (Alliance for Agriculture). These developments, and in particular joining NAFTA, have strongly influenced the evolution of the nation's agricultural sector.

Agricultural policy reforms creating new changes have brought about new settings that will allow more efficient resource allocation, economic growth and higher standards of welfare in rural areas. All major markets for agricultural products are now linked to international markets, with the exception of beans and sugar. Life expectancy has grown for both genders, reaching 69.6 years for males 75.1 years for females in 1996. For 1998 the improvement in the economy should increase the demand for livestock products. For the year 2000 the agricultural and livestock trade balance deficit is expected to be reduced by 50 per cent.

FOOD PRICES AND CONSUMPTION

With 91 million people in 1995, the growth rate of population in Mexico, at nearly two per cent annually, is about three times the average growth rate of developed economies, resulting in a relatively high proportion of young people in the labor force. Population growth in Mexico in recent years has added to the demand for jobs, including those in rural areas, and has been a major source of labour to the economy. An important demographic characteristic has been the high rates of both permanent and seasonal migration from rural to urban areas in Mexico, and to a lesser extent to other countries, particularly the United States.

The relatively high growth rate of the population, combined with modest growth in GDP, has led to a moderate growth in real incomes per capita during recent years. In 1995, per capita GDP was about US\$2,840. The male/female division in the population is close to 50 per cent. Life expectancy has grown for both genders, reaching 69.6 years for males 75.1 years for females in 1996. For 1998 per capita caloric consumption is expected to remain at about 3,050 kilocalories a day, with calories from animal products at around 17 per cent of the total and likely to rise with increasing consumer purchasing power.

Agriculture is by far the main employer of people in rural areas. Despite relatively high birth rates in the rural areas, the growth of the population in rural areas has been slower than that of urban areas, due to rural migration. Rural areas in the middle and southern parts of the country show higher rates of poverty.

In 1994, the percentage of income consumers spent on food was about 24 per cent. However, the share spent by the lowest decile of households was 37 per cent. The main consumption items by the lowest income group were grains and cereal products; at higher levels of income, vegetables, milk and meat account for a larger proportion of food consumption.

The developments in the overall economy, the wide disparity in incomes levels, and the large share of the population living in rural areas have been important influences on the food consumption pattern in Mexico. Overall, the share of increase spent on food in expenditure is relatively high compared to developed countries, reflecting the relatively low level of household income.

Maize, wheat, beans and sugar are the main sources of food (the per capita annual direct consumption of maize is 145Kg, of sugar 41Kg, and of beans 15Kg), and while there has been a long-run shift towards livestock products, falling real wages in recent years have hampered this trend. Consumption of beef and veal has been substituted to some extent by poultry. For 1998 the improvement in the economy should increase the demand for livestock products.

Food consumption patterns in Mexico have been undergoing rapid changes. Per capita consumption of rice, a staple food, has declined, while beans and maize consumption have increased. The increase in maize consumption is related to the expansion in industrial and feedlot area. Other products such as wheat, meat (especially poultry), oilseeds, fruits and vegetables have also shown increases in consumption.

Today, the only food products subject to price controls are maize tortillas and flour in bulk for use in the tortilla-making industry. Consumer price ceilings for beans and rice were abolished in 1989; for vegetable oils and fats in 1991; and for wheat flour, bread and maize flour sold in urban areas in 1kg bags in 1995.

Given the level of economic development in Mexico, and the importance of food in consumer expenditures, Mexico is implementing certain targetted consumer policies. For 1998, subsidies on food consumption will tend to be more closely linked to broader development programmes. During 1997 the Ministries of Health, Education and Social Development joined efforts to create a new program called Programa de Alimentación, Salud y Educación (PASE). This programme will focus mainly on families that live in extreme poverty conditions, and will help improve family diets, increase the accessibility of health services, as well as ensure that children complete at least an elementary school education.

FOOD PROCESSING AND MARKETING

The agribusiness sector (food, beverage and tobacco) currently accounts for around 5.4 per cent of the total GDP. The main agribusiness activities during 1995 were meat and dairy products which represent 18.7 per cent of the total agribusiness sector; followed by maize milling (10.9 per cent), soft drinks and water (10.8 per cent), wheat milling industry (9.2 per cent) and the beer and industry (7.3 per cent). In recent years, the main agribusiness export industries have been the beer, processed fruits and vegetables, liquors (aguardiente), and processed coffee industries.

The main destination for Mexican agri-food products is the United States. The share of Mexico's exports to its NAFTA partners of agro-food exports was 89 per cent in 1993-94. Some agro-industries, such as beef and veal, have become highly complementary and integrated between Mexico and the United States. Mexico exports live cattle, which are then fed at a lower cost in the United States, and subsequently imports beef and veal. Processed fruits and vegetables are also important.

Mexican agribusiness firms are increasingly concerned about the quality of primary products for processing. Contracting between food processors and producers has gained importance during recent years, especially in the wheat milling, milk and dairy products, tobacco, sugar cane, malting barley, among other sectors.

Until 1989, the Compañía Nacional de Subsistencias Populares (CONASUPO), purchased large shares of the domestic production of 12 crops (maize, beans, wheat, barley, rice, sorghum, soybeans, safflower, cottonseed, copra, sunflower and sesame). CONASUPO was also involved in the storage, transportation, processing and retailing of these commodities. Since 1990, CONASUPO reduced its intervention to only maize and beans, letting the marketing of other crops be undertaken by the private sector. However, in certain years, Apoyos y Servicios a la Comercialización Agrícola (ASERCA), has given support payments to help producers of some crops in disadvantaged regions. Since 1995, to protect producers interests and encourage the development of a private marketing sector, floor prices were set for maize and beans at an import parity level price.

To modernise the marketing infrastructure, the Government continues with the privatisation of Almacenes Nacionales de Depósito (ANDSA) and Ferrocarriles Nacionales de México (FERRONALES), which store and transport a large part of the commercial production and imports of agricultural commodities. Also CONASUPO continues the transfer of ownership of its rural warehouses (BORUCONSA) to producers.

AGRICULTURAL PRODUCTION AND TRADE

Agriculture is a significant sector in the Mexican economy. Agriculture and livestock currently account for around six per cent of total GDP while the agri-food sector (agriculture, livestock, food, beverage and tobacco) accounts about 12 per cent. Agriculture accounts for a quarter of total employment and is the major activity in rural areas in terms of employment and income generation. Most of the labour force in Mexican agriculture is seasonal or part time, supplementing their incomes from non-agricultural activities.

The geographical position of Mexico favours the production of a great variety of commodities, ranging from temperate to tropical crops. Around two thirds of the value of agricultural output in Mexico is from crop production. Maize (principally for human consumption) is the main agricultural commodity, by value and in terms of crop area, followed by sugar, beans, wheat, and sorghum. Coffee, citrus, and other fruits and vegetables are also important. Beef and veal are the major livestock products, followed by dairy products.

Overall, the volume of agricultural output has grown about two per cent annually since 1980. For 1998 the implementation of the Alliance for Agriculture Programme will promote yield increases. Mexico's agriculture has shown poor economic performance in recent years.

Medium term targets for agricultural production were established in the Programa Nacional de Financiamiento y Desarrollo (PRONAFIDE programme), launched in 1997. The objectives of this programme for the agricultural sector are to increase the profitability of farm products; create more jobs in the countryside, make agricultural and livestock

production grow at a faster rate than population; promote agricultural and livestock; and, above all, fight poverty in rural areas. The production of basic grains in 1997 is expected to reach 33 million tons, and by the year 2000, a projected 37 million tons. During the period 1997–2000 the target is to increase the production of animal protein by a million tons.

In 1996, the agricultural and livestock trade balance registered a deficit of \$1.3 billion, while in 1995, a trade surplus of 1.3 billion dollars was reported. For the year 2000 a surplus of \$69.2 million is forecast. During 1996, the agri-food trade balance registered a deficit of \$2 billion, while in 1995 it showed a surplus of 637 million. For the year 2000 the agri-food trade deficit is expected to be reduced to around \$512 million.

For 1996, Mexico's agricultural and livestock exports reached \$3.3 billion. Coffee was the leading commodity, accounting for 20 per cent of the total. Vegetables represented 22 per cent, tomatoes 16 per cent and fresh fruits 12 per cent. These export items account for more than 70 per cent of the total value of Mexico's agricultural and livestock exports.

In 1996 exports of food and beverages increased 23 per cent compared to 1995. Beer was the main export in this category, representing 15.6 per cent of the total value, with steady growth. For the year 2000 agri-food exports are projected to increase 67 per cent (from \$4.1 in 1996 to \$6.8 billion). During 1996, sugar production reached a record level and boosted Mexico's sugar exports. Sugar was 9.2 per cent of the total value of food and beverage exports.

In 1996, the main markets for Mexican exports were the United States and Canada. Excluding, NAFTA partners, the most important markets were Japan, Spain, Brazil, Chile, Germany and the United Kingdom. Mexican exports to non-NAFTA countries rose 17.8 per cent in 1996.

In 1996, Mexico's agricultural and livestock imports rose 77 per cent from 1995. The main import products were soybeans and corn, representing 19.3 and 22.8 per cent of the total import value. Other important imports were barley, beans, wheat and poultry.

In 1996, food and beverage imports increased 19 per cent from the previous year. Powdered milk imports rose significantly from \$267 to \$368 million. Other important import products were fresh or frozen meat and vegetable oils and fats, representing 16.8 and 12.1 per cent of the food and beverage import value.

In 1995, the share of agricultural products in total trade represented around four per cent of imports and five per cent of exports. During 1995 the agricultural trade balance became positive due to the devaluation of the peso at the end of 1994, which raised the competitiveness of Mexican agricultural exports.

FOOD AND AGRICULTURAL POLICY

The combination of domestic economic reform, the privatisation of state-owned agricultural marketing and processing enterprises, trade liberalisation, and the shift to more market oriented agricultural policies, have been major forces for adjustment. All major markets for agricultural products are linked to international markets, with the exception of sugar. Nevertheless, all agricultural trade will be completely liberalised by 2009 with NAFTA partners and other countries under preferential trade agreements.

In 1994, the PROCAMPO programme was introduced. PROCAMPO, conceived as an adjustment mechanism to free trade, has been substituting price support for direct payments. Since PROCAMPO payments are based on historical hectareage and not related to the level

of current output, they allow for a greater role for markets in determining production patterns. These payments also benefit subsistence farmers who previously did not receive any price support and were often taxed by higher international food prices.

The reform of land tenure in 1992 established a new legal framework for property rights. Under the new law, ejido farmers can sell, rent or mortgage their plots of land. Private corporations are allowed to invest in joint ventures in agriculture. It is expected that land reform will contribute to the adjustment process in agriculture.

To achieve the goals of agricultural policy the Alliance for Agriculture Programme plays a key role. This programme aims to improve farmers skills, stimulate technological development and induce private investment in infrastructure at the farm level. A key feature of the Alliance is the decentralisation of decision-making from federal to the regional level. Agricultural producers decide for themselves what programmes are best suited for their specific needs for support. The Alliance is a 'menu' of programmes. Co-financing between the Federal Government, State Governments and producers is a requirement for all programmes.

In 1986, Mexico's accession to the GATT was aimed at increasing trade in all sectors of the economy. In the late 1980's, Mexico went beyond its GATT commitments and unilaterally reduced the maximum tariff rate to 20 per cent. Mexico was active in the Uruguay Round negotiations and was willing to liberalise trade and reduce domestic and export subsidies to a greater extent than was actually achieved. Given the shortcomings of the Uruguay Round, the signing of NAFTA by Mexico, the United States and Canada has had a major impact on the region's economy. Mexico has also signed preferential trade agreements with several Latin America countries and is pursuing an aggressive agenda of negotiations with other important trade partners. In 1996 the National Phytosanitary and Sanitary Commission was created. The establishment of this autonomous Commission will improve sanitary and phytosanitary conditions across the country and will increase the efficiency of border inspections to facilitate trade. Mexico is also modernising its legislation regarding rules for the establishment of grades, standards, labeling and consumer information.

NEW ZEALAND

SUMMARY

Underlying annual inflation is forecast at 1.5 per cent by March 1998, and will then rise, but stay under three per cent. Food prices are expected to show similar increases. Food consumption patterns will show little change in the short term, but over the medium term will continue the trends to less fats and sugar, and less meats overall, but higher consumption of poultry and fish. Increased production is forecast for dairy and fruit, but sheep numbers will continue to decline. Forecast prospects for the food processing industries are strong, particularly in the dairy and non-primary food sectors. Growth in organically-produced foods is forecast to continue.

New Zealand's rate of economic growth, which had been static for almost a decade following deregulation, burst into a 6.2 per cent rate of growth during the year-ended March 1994, and continued to grow by 5.4 per cent and 3.1 per cent over the following two years. Real GDP is forecast to grow at rates of two per cent, 2.7 per cent and 4.3 per cent over the years (ending March) of 1997, 1998 and 1999 respectively.

Productivity and efficiency have also increased in New Zealand's food processing and marketing systems since the deregulation, primarily due to port and labour market reforms. Comparing 1989 to 1986 for example, the number of waterside workers had declined by 34 per cent, payout per worker had risen by 45 per cent, and tonnage handled per worker rose by 53 per cent. Labour market reforms have had particular impact in the meat processing industry — over the last decade nearly 25 per cent of the larger and older processing companies were closed down as livestock numbers fell, and investment in new technology was required by the market. Such marketing reforms have affected prices received by farmers, and such productivity gains in farm production, processing and marketing have helped to compensate for the loss of competitiveness caused by the appreciating currency.

FOOD PRICES AND CONSUMPTION

Food prices rose by a total of just 4.4 per cent between 1990 and 1996, and are forecast to rise by 1.5 per cent and three per cent over both 1997 and 1998. Total food consumption per capita is forecast to remain around 3,300 Kcal/day, and the protein-fat-carbohydrate composition of that consumption is expected to remain unchanged from recent years. Poultry is now the second most popular meat after beef, and if recent growth continues, consumption of chicken will surpass that of beef by the end of the century.

The 1989 24-hour diet recall survey revealed that the average adult male derived 42 per cent of his total energy intake from carbohydrates, 15 per cent from protein and 38 per cent

from fat. For women, the proportions were 45 per cent carbohydrate, 10 per cent protein and 37 per cent fat. Of the 66 per cent of respondents in 1989 who had made dietary changes the previous year, the most frequent changes were reduced fats, more fruit, vegetables and wholemeal, less sugar and salt, and less meat overall, but more poultry and fish. The FAO food balance sheet data, and other national data, confirm some of these trends and their continuation through the 1990s. While total energy intake levels have remained rather static in recent times at around 3,300 Kcal per person per day, the proportion derived from animal products has fallen. Comparing average proportions over 1985–89 with those in 1990–94, the proportion of energy provided by animal products has fallen from 42 per cent to 37 per cent, and therefore that from products of vegetable origin has risen from 58 per cent to 63 per cent. Changes in meat consumption patterns also indicate consumers' efforts to shift to diets that they perceive to be healthier. While consumption of all meats increased from 93.2Kg per person in 1989 to 100Kg in 1995, its composition has altered markedly. The proportion of pork in total meat consumption remained at about 15 per cent, that of beef and sheepmeat fell from 66 per cent to 58 per cent, while poultry consumption rose from 19 per cent of total meat consumption to over 26 per cent.

FOOD PROCESSING AND MARKETING

Food processing is the sixth largest sector in the New Zealand economy, with dairy and meat processing the dominant activities. Net investment was negative in the early 1990s as over-capacity in the meat industry led to plant closures, although new investment has occurred in the establishment of new, smaller scale and high technology plants. Investment in dairy processing is forecast to increase over the next five years as mergers see closures of older plants and expansions of newer sites.

Forecast prospects for the food processing industries are strong, particularly in the dairy and non-primary food sectors. Dairy processing is facing strong world demand, and strengthened prices as overseas subsidies are phased out as part of the GATT Uruguay Round Agreement. Non-primary food sales will expand along with improved domestic income growth. In the year ended March 1996, this sector's contribution to GDP is estimated at US\$3.4 billion with exports worth US\$6 billion. Real GDP growth within the food processing sector is forecast to grow at rates of 2.3 per cent and 4.5 per cent during the years ended March 1997 and 1998. Export growth over the same two years is forecast at 2.3 per cent and 3.9 per cent. Within the dairy processing industry there is an emphasis on development of new products — one fifth of current turnover comes from products developed in the last five years — and industry restructuring to reduce costs and raise productivity. There is also a developing emphasis on new products within the sheepmeat industry, including chilled product for export, encouraged by increased access to EU markets following the Uruguay Round Agreement.

Recognising the growing concern over ecological issues, food and beverage exporters are developing 'eco-labels' that will help establish a worldwide reputation for safe and environmentally sustainable products and create a competitive advantage. Although data is hard to come by, both inward and outward foreign investment is taking place in the New Zealand food processing sector. Foreign investment in meat, fruit and vegetable, and ice-cream manufacture have taken place recently, while a vegetable-processor has relocated from New Zealand to Australia. New Zealand food companies are also major investors overseas in countries such as Chile, with investments in fruit, dairy products and fish.

AGRICULTURAL PRODUCTION AND TRADE

With the marked changes in land use patterns in recent years reflecting the relative decline of the sheep sector, dairy farming is increasingly dominating New Zealand farming. During the year ended March 1996, milk production and the farmgate price both reached record highs. Production is forecast to increase by three per cent in 1996/97, although prices paid to farmers are expected to decline by over seven per cent. Japan passed the USA as New Zealand's second largest dairy export destination after the EU in 1994/95 — the fourth and fifth largest export markets were also in Asia, being Malaysia and Chinese Taipei. The switch to dairying from sheep farming is expected to continue over the medium term. Several dairy processing companies are increasing their manufacturing capacity, to achieve product diversification and also to cope with the increased volume of milk production. Two new cheese plants began operations during 1995/96; one of these, with an annual capacity of 70,000 tonnes of cheese, is the world's largest single-site cheese plant.

Falling sheepmeat and wool prices relative to alternative land uses has seen sheep numbers decline steadily from 70 million in 1984 to a forecast 47 million by the year ended September 1997, and this trend is expected to continue. Sheepmeat prices received by farmers were higher in 1995/96 than a year earlier, influenced in large part by a demand increase as consumers switched away from beef in the major export markets. This increased demand due to the BSE crisis is not expected to be sustained, and prices will weaken next year. Sheepmeat exports declined seven per cent from 1995 to 1996, and a further six per cent decline is forecast in 1997.

Although North Asia is increasing in importance as an export destination for New Zealand beef, the US remains the dominant market. Increasing production there has led to declining prices received by New Zealand beef farmers, by about 30 per cent over the 1994–1996 period. As a result, the past herd expansion has been reversed — beef production in the year ended September 1997 is forecast to be seven per cent below that of the year earlier, after reaching a record high in 1995. Prices are expected to remain low until next year, when increased Asian demand and lower US production should contribute to a modest price recovery.

Venison, pork and poultry are minor players in the New Zealand meat industry. Increasing domestic demand, especially from fast food outlets, has contributed to rapid increases in poultry production. Output rose 20 per cent in the year ended September 1995, by a further seven per cent in 1996, and another per cent growth is forecast for 1997. Poultry imports are restricted due to disease risks. Pork production in New Zealand has been relatively stable in recent years, but current lower levels of profitability will see declines in sow numbers over the next year or two. Imports of pork rose by 15 per cent (by volume) in 1996, and a further increase of 55 per cent is forecast for 1997. New Zealand, with over 40 per cent of the world's farmed deer, is the largest exporter of venison. Global demand for New Zealand venison is expected to continue to grow reflecting market initiatives to heighten consumer awareness of the product as a healthy uncontaminated meat, and to industry branding strategies. Deer numbers are forecast to rise by almost five per cent during the year ended June 1997, but venison production will decline in the short-term due to herd rebuilding. Export prices for venison rose by 11 per cent in 1995 and by 20 per cent in 1996, and a further rise is forecast for 1997.

Apples and kiwifruit make up over half of New Zealand's total horticultural exports. The EU remains the major market for apples with the USA number two, but exports to Asia grew by over 70 per cent to around 75,000 tonnes in the year ended September 1995. Apple production and prices paid to growers both increased in 1996 — production is forecast to

expand by a further 10 per cent in 1997, but prices will soften. Apple production is expected to expand further over the medium term as young trees mature. New Zealand kiwifruit producers face strong competition from other producers, and grower returns fell 15 per cent in 1996. Stable or declining global kiwifruit production over the medium term should help limit further price falls, but prospects will not be helped, as kiwifruit continues to lose its 'novelty' value. New Zealand production is forecast to increase by five per cent in 1997, but prices to growers will decline somewhat.

The value of horticultural exports, other than apples and kiwifruit, rose by 7.5 per cent between 1994 and 1995. Processed products provided a significant share of this growth. Exports of processed fruit products increased by five per cent in 1995, with juices and wines accounting for over half of processed fruit exports. Major growth products included jams and jellies, and canned apples. Processed vegetable exports continued to increase in 1995, being 12 per cent greater than the previous year. Major items are frozen products, and niche markets for frozen organic vegetables are being developed.

FOOD AND AGRICULTURAL POLICY

The major reforms of agricultural policies were implemented in 1984 and years immediately following. These reforms and their impacts have been well documented elsewhere. Presently, the policy parameters for agriculture continue to be set in the macroeconomic environment.

The Food Act of 1981 requires food for sale to be safe, and not labelled or advertised in a misleading manner. In December 1995, a treaty between New Zealand and Australia was signed to establish a joint food standards-setting system based on extension of the then-current Australian National Food Authority. The treaty establishes a single regulatory system shared by the two countries. The Australia-New Zealand Food Authority will be responsible for recommending standards that, when agreed to by relevant ministers, will have the force of law in both countries. The Food Act 1981 was amended to provide for the standard setting system. Transitional food standards apply in both countries from 1996 to 1999, while a major review of all food standards is undertaken, and the Australia New Zealand Food Standards Code is completed. The new system will eliminate the differences which have often operated as technical barriers to trade, and allow the food industry to take full advantage of the free trade agreement between the two countries. Benefits for the food industry in New Zealand include greater economies of scale, new market opportunities and faster responses to market demands. Consumer benefits are expected to include greater product variety, more competitive pricing and more consistent labelling.

Most of New Zealand's agricultural and horticultural exports are controlled or influenced in some way by producer boards or licensing authorities. Several changes have been made in recent years, taking account of the current deregulatory framework in New Zealand. Starting in the mid-'80s, marketing boards responsible for the domestic sale of wheat, eggs and liquid milk were completely deregulated. Producer board access to Reserve Bank funds at subsidised interest rates to finance export and stabilisation activities was removed, and since 1988, producer board earnings have been taxable.

Changes to marketing board legislation in the 1990s were aimed mainly at improving the accountability of the boards to the producers who fund them. The New Zealand Dairy Board (NZDB) undertakes the export and marketing of all dairy products manufactured for export in New Zealand, although the board can and does license other exporters to operate.

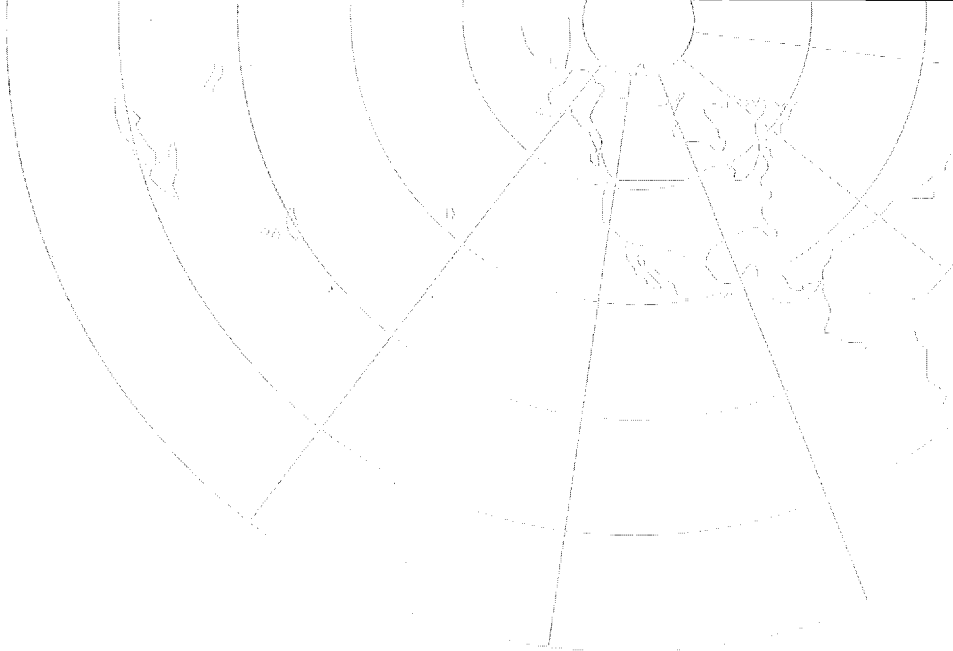
The Dairy Board Amendment Act 1996 provides for shares in the NZDB to be owned by dairy companies in proportion to the quantity of milk solids supplied by them to the NZDB.

Existing suppliers who increase output, and new suppliers, will be required to purchase additional shares. The Act also contains the provision for the transfer of the board's assets (including brands) and liabilities to other entities, should the NZDB ever be dissolved. The New Zealand Apple and Pear Marketing Board is responsible for all export marketing of apples and pears produced in New Zealand. The NZAPB, like the Dairy Board, is able to license additional exporters, and a 1993 amendment to its Act required it to make more transparent the guidelines by which it would assess applications from prospective exporters.

Legislation governing the operation of the New Zealand Horticultural Export Authority (NZHEA) provides for horticultural products to become 'prescribed products', the establishment of marketing strategies for those products and for the licensing of exporters. A 1992 amendment to that legislation gave greater powers to the NZHEA, so that limits can be imposed on the volume of a prescribed product to be exported to a specific market, and on the number of licensed exporters for any product.

Tariff cuts on July 1, 1996 reduced New Zealand's average tariff for manufactured foods from 5.5 per cent to 4.9 per cent. The cuts were greatest for the relatively high tariff items including bakery products (from 11.5 per cent to 9.4 per cent), soft drinks (9.8 per cent to 8.4 per cent) and cocoa, chocolate and sugar products (9.7 per cent to 8.1 per cent). This round of tariff cuts also reduced tariff escalation as rates on fully- and semi-processed items fell from 6.2 per cent to 5.6 per cent and from 5.8 per cent to 4.9 per cent respectively, while those on unprocessed products fell from 1.1 per cent to 0.9 per cent. The greater reduction on highly processed items is important, as these products account for four fifths of non-preferential imports of manufactured food products. New Zealand is currently implementing a four-year programme of tariff cuts, due to be completed on July 1, 2000. For example, by the latter date tariffs on items that were between zero and five per cent in 1996 will be zero, while those between five per cent and 15 per cent will become five per cent. Other than tariffs and sanitary and phytosanitary requirements, no border measures apply to imports of processed foods.

PERU



SUMMARY

Peru's agriculture and food systems have significant growth potential. GNP growth, lower inflation, and modernisation will attract new investments and provide a solid foundation for growth in food consumption and food system growth. Competition in food wholesaling, retailing and food services is intensifying, especially in urban areas.

Government policies for agriculture and the food system are designed to improve the physical infrastructure and to make legal conditions more predictable for firms. Development of Peru's agriculture and food system is a key Government strategy for future economic growth.

FOOD PRICES AND CONSUMPTION

General inflation in the Peruvian economy has been under control since 1990 due to structural changes implemented in different sectors of the economy. Specifically, since 1993 annual inflation has declined to around 11 per cent and is expected to be about nine per cent in 1997 and 1998. Food and beverage inflation has been under the general inflation rate in recent years (general inflation was 15.4 per cent, 10.2 per cent, 11.8 per cent in 1994, 1995 and 1996, respectively; inflation for food and beverages was 12.1 per cent, 9.6 per cent and 11.3 per cent), although there have been some periods when food price inflation was greater. Consumer prices for the most important food staples have declined in real terms in recent years. Food price inflation is expected to continue to decline in the future but at more moderate rates. The prevailing market structure for some food products, such as poultry and grains, will not allow prices to decline much. The transition to a more competitive food market structure will take time. In addition, agricultural wholesalers have distorted market prices, by buying from farmers at low prices and charging consumers much higher ones. The margin between one and the other can reach 400 per cent, in some cases.

Based on the most recently available information for 1990–95, per capita total expenditures (a proxy for per capita income) grew 54 per cent nationwide and 41 per cent in rural areas. The percentage of disposable income spent on food rose from 49.5 per cent in 1992 to 58.1 per cent in 1994, according to a survey of Lima. Lima has almost one third of the total population and accounts for almost 50 per cent of total food consumption. Due to economic growth, it is expected that the income share spent on food will decrease in the future, thus enhancing consumer welfare.

Per capita consumption of calories increased 18 per cent in 1990–95. Caloric intake from animal products rose 21 per cent, while those from vegetable products rose 18 per cent. The Peruvian diet still derives most of its calories from vegetable sources. While per capita caloric

intake is rising, a considerable share of the population still suffers from nutritional deficiency. Since Peru opened its economy to the international market, there have been important changes in the diet, with the introduction of fast food and the rising consumption of processed food. Also, increasing female participation in the labour force and a relatively young population have led to growth in food consumption outside the household, which is expected to continue in the future.

Food consumption in the future will change along with demographic changes. Annual population growth in 1972–1981 period was 2.5 per cent, declining to two per cent in 1981–1993. It is estimated that the rate will further decline to 1.8 per cent in the near term. With income growth and an ageing population, daily caloric intake is forecast at about 2,400 in 2,000; with protein consumption rising from 59.9 gr./day in 1995 to 61 gr./day by the beginning of the new century.

FOOD PROCESSING AND MARKETING

Most of Peru's agricultural production is marketed domestically, and is consumed in fresh form, reflecting the predominant preference of consumers. The market for processed food is still relatively small. The agribusiness sector is involved in food processing such as the preparation of juices, pulps, nectars and fruit concentrates. Almost 90 per cent of food processing takes place in the coastal region, near the production of agricultural raw materials.

The industries which have shown steady growth in the last three years are: elaboration of cocoa butter (24 per cent annual average growth between 1994 and 1996), oats (15 per cent growth), cheese (two per cent), oils and edible fats (six per cent), and evaporated milk (11 per cent). The sugar industry is also expanding, while production of noodles has had a variable performance.

Since 1990, many reforms have been implemented to reduce trade costs. Public investments have been made to improve port facilities, to maintain and improve highways, to improve the cold chain infrastructure, and to improve the energy capacity at some ports. The Government has privatised some public enterprises in the trade services sector. It is foreseen that investment in private storage for the maritime trade and for international airports will increase. Between 1990–1995 investment in the food industry was about US\$150 million. Foreign investment in agribusiness in Peru has been oriented toward expanding existing firms as well as developing new ones. Food industries most targetted for foreign investment are: milling, dairy products, and edible oils. It is expected that total foreign investment in the food industry could reach US\$155 million in the next four years.

Around 80 per cent of fresh products are traded in Lima through local markets. There are many distribution channels for manufactured food: wet markets (64.2 per cent), supermarkets (9.2 per cent) and grocery stores (16.8 per cent). Outside Lima, food products are traded in local markets; supermarkets are likely to appear more in the near future.

The recent creation of the Agricultural and Livestock Products Board of Trade, focussing initially on grains, should help level the playing field by providing the same information to various players in the market.

AGRICULTURAL PRODUCTION AND TRADE

Agriculture in Peru, which accounts for 12 per cent of GDP, increased five per cent per year in 1990–1996. This growth breaks down to 9.2 per cent for food, 4.2 per cent for industrial crops, and 4.7 per cent for livestock. The most important crops are potatoes, corn, rice, barley, wheat, bananas and beans.

The structure of the nation's agriculture has changed in recent years. Demand for poultry meat has risen, linked to income growth and the high income elasticity of demand for the product. Five enterprises account for 80 per cent of total chicken production, which is largely dependent on imported corn. It is estimated that this sector will grow eight to nine per cent yearly until the beginning of the next century. Demand for beef and sheep meat is expected to fall.

Future farm prices are expected to reflect the same pattern as in the past, with a downward tendency. Declining prices will be offset by improvements in performance, via greater economies of scale and marketing efficiency, thus sustaining profitability in the sector. Agricultural GNP in Peru is forecast to grow five per cent per year in 1997-98. This will be possible due to public investments like medium-scale irrigation projects, as well as the increasing capital inflow to agriculture as a consequence of rising interest by agriculture business organizations and farm sector reforms. In the short run, the El Nino phenomenon may adversely affect coastal crops like cotton and lemons as well as livestock production in the southern part of the country.

Peru had a deficit in its agriculture trade balance of more than US\$460 million in 1996. Between 1990 and 1996 the deficit averaged US\$313 million per year. In part, it is explained by what some consider an undervalued currency of about 20 per cent, which promotes imports and reduces the competitiveness of agricultural exports.

Peru's agricultural exports are divided into traditional products such as grains and other agricultural raw materials, and non-traditional products, mainly those requiring more handling and containing more value-added. Agricultural exports constitute 52 per cent of total exports and have more than doubled in the last seven years, reaching about US\$600 million in 1996.

The leading traditional exports are coffee and cotton. Among non-traditional exports, asparagus and fruits are leading products. Canned asparagus has become one of the most important export products; other growth areas include mangos, butter, cacao oil, cochinita, dried onions, nuts and vegetables.

Asparagus, cochinita and marigold meal have shown sustained growth for more than 10 years. Mango, lemon, tomato, nuts, palmetto, tara, onions and grapes have excellent potential. Currently, the export promotion agency PROMPEX is developing new markets for agricultural exports. Asia is seen as a good prospective market for beans, coffee, fresh and processed asparagus, legumes and dried vegetables, dried or fresh bananas, and tomato juices.

Agriculture raw materials account for 70 per cent of total agriculture-related imports, 19 per cent for processed products, and 10 per cent for agriculture production inputs. It is expected that by the year 2000, Peru's agricultural exports will reach US\$1 billion, with its imports declining to US\$680 million.

In 1996, food imports represented more than a half the imports of non-durable consumption goods. Primary agricultural imports are rice, sugar, and dairy products. In the first two cases, imports are necessary to meet domestic supply shortages; in the third case, imports help meet consumer's demand for product diversity.

Future prospects for Peru's agricultural trade balance will depend on its further integration into the hemisphere and world economy. Peru has recently re-entered the Andean Community. Peru left the Community because of objections about the level of common external tariffs, which were considered too high. After recent negotiations,

Peru will gradually return to the Free Trade Zone, and eventually permit free access of Andean products to its market. In exchange, Peru will receive preferential access to other member economies.

Peru is studying the possibility of joining MERCOSUR, and has a growing interest in becoming a member of APEC.

FOOD AND AGRICULTURAL POLICY

Government intervention in Peru's agriculture and economy and particularly in the agricultural sector has changed since 1990. The Government role is now limited to enhancing infrastructure; the market now is much more central to determining equilibrium prices in the agriculture and the food sector. The Government promotes private sector participation in technical assistance, domestic and international trade and research.

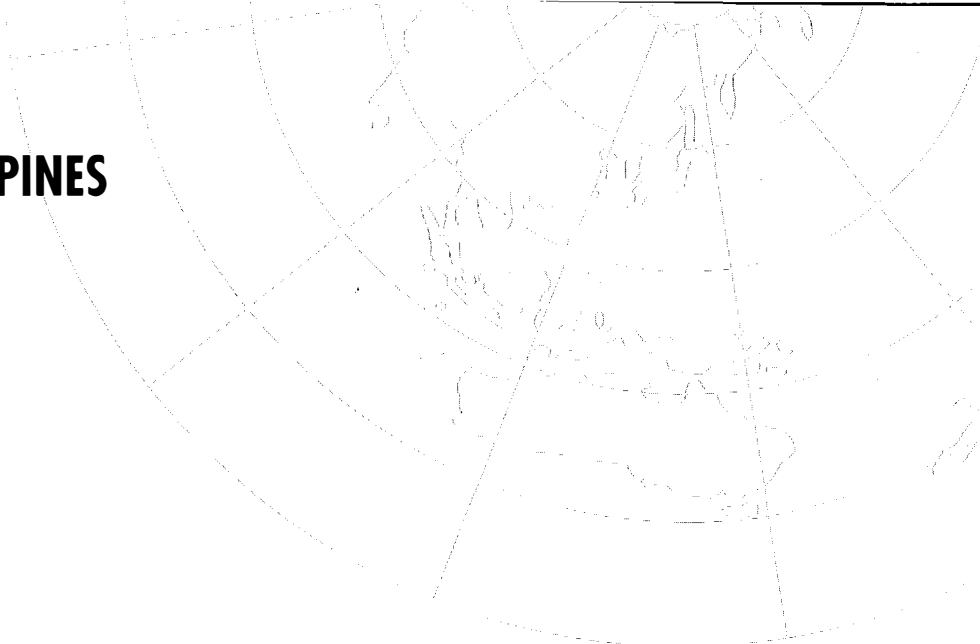
Peru has become an attractive host for foreign investment, with a favourable legal environment, stable regulations, free availability of foreign currency, and non discrimination. Peru has signed promotion and mutual protection of investment agreements with many countries like Chile Colombia, Korea, China and Thailand.

Peru's tariff barriers essentially have been eliminated. The only trade-restricting mechanism in use since 1991 is a price band system for imports of rice, corn, wheat, sugar and dairy products. The objective of this system is reduce price fluctuations in the targeted markets. A surcharge is applied when the international price falls below a certain level.

Peru participates in the Generalised System of Andean Tariff Preferences (SGP) that allows Peru to export some goods to the United States at zero tariff. The same applies to Peruvian agricultural exports to the European Union.

Internal policies was liberalised in 1990. Consumer subsidies and input subsidies for producers have been eliminated. There is food aid through the National Program of Food Assistance, which provides food free of charge from international donors. Likewise, the Government underwrites some of the daily food costs for poor people.

PHILIPPINES



SUMMARY

Economic growth has consistently accelerated since 1993, from 5.1 per cent in 1994 to 5.9 per cent in 1995, and further projected to increase to an average of six to seven per cent per annum in 1997–2000. Food consumption is projected to grow at 4.5 to 5.5 per cent annually in the next four to six years.

The declining poverty level, the declining income gap between the rich and the poor, and the increasing population in the middle income group augur well for a favourable outlook in food consumption.

The rate of population growth of more than 2.4 per cent exceeded the growth in domestic food production. The demand pressure on food resulted in increasing food prices and larger food imports. Cereal imports had increased to 3.1 million tonnes of wheat, rice and corn (with wheat constituting almost 65 per cent of grain imports) from 2.3 million tonnes in 1993. The import of meat, and even fish or marine products, had been on the upswing along with marginal increases on the importation of fruits, vegetables, legumes, and nuts. Because of trade liberalisation and increasing per capita income, food imports are expected to further increase to satisfy the rising demands of the fast growing population. The increasing inflow of food imports to augment total food supply has moderated the pace of increases in domestic food price increases.

The Government seeks to modernise and increase the competitiveness of the Philippine agriculture and fisheries sector through increased public sector investments in agricultural infrastructure, research and development, and an agrarian reform programme.

FOOD PRICES AND CONSUMPTION

An analysis of the 1994 NSO family income and expenditure survey revealed that the Philippines' aggregate income in 1994 posted at US\$40.3 billion (P1.06 trillion), was 35.6 per cent higher than the 1991 level of US\$29.7 billion. The aggregate expenditure on food increased by 36.6 per cent in three years, from US\$11.5 billion in 1991 to US\$15.75 billion in 1994. This effectively increased by an annual average rate of 10.9 per cent (3.6 per cent in real terms). The declining poverty level (35 per cent in 1994), the declining income gap between the rich and the poor (as evidenced by GINI coefficient which decreased from 0.468 in 1991 to 0.454 in 1994), and increasing population of the middle income group (46 million in 1994), augur well for a favourable outlook in food consumption.

Per capita income, which almost doubled from 1990 (US\$717) to 1996 (US\$1,200) is projected to increase to US\$1,550 in 1997. The proportion of disposable income spent on

food decreased from almost 51 per cent in 1988 to about 48 per cent in 1994. While most of the food consumed was prepared at home, the expenditures on dining outside increased from 3.4 per cent in 1988 of the disposable income spent on food to 4.2 per cent in 1994. Currently, there are concrete indications on the continuing proportionate decline of disposable income spent on food. However, an increase in proportion of expenditures outside the household is occurring, as evidenced by mushrooming sidewalk eateries, restaurants and fast food centres. Eating out spending registered the fastest growth in 1985 – 1991 period with Metro Manila (11.7 per cent) and Luzon (9.8 per cent) as leaders. A marginal growth of almost two per cent occurred in Mindanao.

Real food prices more than doubled from 1988 to 1996 (217.4). This is largely attributed to the effects of trade protectionism, inappropriate food policies, and declining per capita food production. Overall, the food production growth has been fluctuating mainly because of weather aberrations, increasing land conversion to non-agricultural uses, and shift of a 'cultural production' to non-food commodities. For instance, food production exhibited a negative growth of 1.8 per cent, and then posted a positive growth of 12.3 per cent in 1988. It further declined in the succeeding years until 1992, at almost minus one per cent, and then grew again to 3.4 per cent in 1994 before plunging to a negative growth in 1995 mainly because of the rice crisis. Per capita food supply declined to minus one per cent in 1993 and minus three per cent in 1991.

The population growth of more than 2.4 per cent per year outpaced the growth in domestic food production. The pressure on food demand resulted in increasing food prices and dependence on food imports. Cereal imports increased (3.14 million tonnes of wheat, rice, and corn, with wheat constituting almost 65 per cent of grain imports) from 2.36 million tonnes in 1993, representing a 3.3 per cent increase over the three-year period. The imports of meat, and even fish or marine products, had been on the upswing (US\$411 million in 1995), with marginal increases on the importation of fruits, vegetables, legumes and nuts. Because of trade liberalisation and increasing per capita income, food imports are expected to further increase to satisfy the food security needs of the fast growing population. The increasing inflow of food imports to augment total food supply has moderated domestic food prices. The removal, however, of subsidies in global food production and exports is expected to put upward pressure on internationally-traded food items (cereals, grains, meat, milk) resulting in higher food prices.

FOOD PROCESSING AND MARKETING

The increasing demand for ready-to-cook and processed food has been facilitated by rapid diffusion of refrigeration and cold chain distribution systems. Trade liberalisation, increasing investment in post-harvest facilities, and reduced tariffs on agricultural inputs promote better access to modern processing equipment, and technology which, in turn, will result in higher efficiency, productivity and quality.

Initiatives by the Philippine Government to develop power, transport and communication systems include:

- Innovative infrastructure schemes such as the Build-Operate-Transfer (BOT) modalities that facilitate significant private sector (local and foreign) investment in power, transport and communication networks and facilities that inhibit efficient food production and movement of agricultural inputs, food and agricultural products;
- Improvements in inter-island shipping and international container services are a result of de-monopolisation of cargo handling and port services. Such policy reforms led

to the establishment of the bulk handling facility, Asian Terminal, Inc. in Bataan and international grade seaport services in Batangas City, Cagayan de Oro City, Davao City, General Santos City and Cebu City; opening up of Subic Port as an alternative trans-shipment facility to Hong Kong and Singapore. Due to dismantling of barriers to entry in 1992, and improved pricing of transportation services, existing operators have begun investing in more modern vessels and deployed them in routes that are more profitable. Three shipping companies have formed a joint-venture to compete with new entrants and foreign investors, thereby achieving economies of scale and competitive pricing of shipping services;

- In addition to seaport transport reforms, improved air cargo facilities allow for better handling of goods and services in terms of timely delivery and required volume of shipment for both food imports and exports. The opening up of Subic and Clark International airports facilitates the entry of international courier services, particularly Federal Express and United Parcel Services. The removal of the Philippine Airlines monopoly and the liberalisation of airline transport and international landing rights, has resulted in the entry of at least four new commercial domestic and international airlines, and has reduced the cost of transportation with commitment to value added in terms of improved services. The competitive pricing policy has resulted in 20 per cent reduction in domestic fares. Recent oil industry deregulation is expected to facilitate the entry of new players, e.g. distributors or refineries, which will result in the adjustment of fuel prices to international rates.

The slow application of cold chain technology to the food crops sub-sector resulted in the deterioration in quality of agricultural produce and in large post-harvest losses (30–60 per cent of production). With the current thrusts on agribusiness systems' approach to the modernisation of a cultural sector, and recent launching of the *Gintong Ani* (Golden Harvest) High Value Commercial Crops Programme of the Department of Agriculture, the prospects for fast tracking the refrigeration technology from the farm to the retail or export market appears quite bright. Once implemented, the medium-term prospects for reducing food costs will considerably improve.

AGRICULTURAL PRODUCTION AND TRADE

The rice crisis and paddy price increases resulted in greater profitability in rice production in late 1995, 1996 and into 1997. In response farmers increased paddy production in 1996 by more than seven per cent (11.3 million tonnes of *palay* equivalent to 7.34 million tonnes of rice). Average national farm prices of *palay* continue to be on the uptrend, rising to almost US\$31.1/kg paddy, which is slightly above the Government support price of US 30 cents/kg. The Department of Agriculture projects an import volume of around 650,000 metric tonnes of rice in 1997 compared to 1.2 million tonnes in the 1995 – 1996 period.

The retail price index of selected agricultural commodities between 1990 and 1996, revealed that:

- a) prices of special and ordinary rice practically doubled;
- b) corn prices mainly for animal feeds, increased by almost 56 per cent, while white corn grain and corn grits as staple food surged by 74 per cent and 88 per cent, respectively;
- c) local fish prices increased by 66 – 67 per cent or almost 10 per cent per year;
- d) pork and beef prices increased almost 50 per cent for beef and 65 per cent for pork;

- e) vegetable prices increased from a low of 11 per cent for cabbage to a high of 73 per cent for eggplant. Some fruits like mango and banana, surged in prices by 57 per cent and almost 72 per cent, respectively.
- f) egg prices increased by almost 42 per cent, prices for dressed chicken increased by only 29 per cent, or four per cent per year. The highly integrated broiler industry can still be made more efficient with access to competitive corn prices.

Although the country has been importing only a minor portion of its total food supply, the increasing reliance on imported food has registered a staggering annual growth rate of 48.5 per cent from 1990 to 1996. The available per capita domestic food production has also been decreasing, due to the fact that population increases outstrip the growth in domestic food production. From about 423Kg per person in 1990, per capita food supply decreased to only 379Kg in 1995. Over the 1985 – 1995 period, per capita domestic food supply recorded an average decrease of 0.35 per cent per year.

The major factors and issues that affect domestic agricultural production and seemingly low levels of agricultural productivity include the following:

- Adverse policies and programmes. Among those are ones that cover crop-specific policies such as the direct interventions of the National Food Authority in rice and corn trade; import bans on garlic, onions, potatoes, cabbages and other agricultural products; banana hectareage limitation; excessive price protection for corn, sugar and rice, protectionist provisions in the Seed Law and Magna Carta for Small Farmers, weaknesses in the budgetary allocation, and releases in the agricultural sector and inefficient institutional arrangement and linkages in the agricultural bureaucracy. Excessive Government interventions in the price and market mechanisms result in price distortions that constrain production growth, increase food imports, discourage private investment, and weaken food security situation.
- High post-harvest losses. Addressing post-harvest losses (five to 15 per cent for paddy, 15 – 30 per cent for corn, 10 – 60 per cent for fruits, vegetables and perishable products) is a priority concern of the Philippine Government, through improved drying, handling and storage facilities, particularly during peak harvest months for grains, and adoption of cold chain or refrigeration technology from the farm level to retail market outlets and households for perishables, could significantly improve the levels of agricultural profitability and competitiveness and boost domestic food production and supply;
- Limited access to credit to finance production and marketing activities, particularly for cooperatives and small holders, are serious constraints that hinder the adoption of improved farm technology and limit the viability of agricultural enterprises. The limited inflow of agricultural credit and inefficient rural financial market also hinders the adoption of improved farm methods.
- The inadequacy of timely and accurate market information for small farmers and agricultural producers limits their understanding of market opportunities and ability to plan investments for optimising returns to land, labour, and capital. There is also a dearth of agricultural marketing research, and limited efforts are made in exploring the domestic and world market and identifying niche markets for food and agricultural products;
- Inadequacy of rural infrastructure; public investments in irrigation, farm to market roads, and post-harvest facilities are inadequate to ensure the competitiveness of the agricultural sector. The high cost of transport and handling and high post-harvest

losses are consequences of poor rural infrastructure which further result in low profitability of agriculture and low levels of investment in the sector.

FOOD AND AGRICULTURAL POLICY

The Government is committed to ensure food security and has tasked the Department of Agriculture to implement several strategies called for under the food security action plan which include the following:

- implementation of a revitalised and refocused nationwide food production programme to sustain and increase domestic grain, crops, livestock and fisheries production (*Giniong Ani*) mainly through productivity enhancing measures;
- formulation and implementation of policies to stabilise food prices and reduce supply fluctuations, including importation and counter trade without adversely affecting domestic production;
- maintenance of a buffer stock during the lean production periods and emergencies and price stabilisation measures to be administered by the NFA; and
- provision of subsidised rice and other essential foodstuff to the poorest segments of the population, employing the food stamp concept, and administered by the Department of Social Welfare and Development (DSWD).

Estimated external financing requirement of US\$880 million from 1996 to 2000, of which, technical assistance component comprises US\$129 million or about US\$26 million per year.

An updated Medium Term-Philippine Development Plan for 1996 – 1998 targets an annual average growth rate of 2.3 – 3.5 per cent for the agricultural sector, broken down as follows:

- a. 2.2 – 3.5 per cent for 'cultural crops' (*palay*, corn, coconut, sugarcane, banana, root crops and other Agri crops);
- b. 5.5 – 5.9 per cent for livestock and poultry; and
- c. 1.3 per cent for fisheries.

In addition to fulfilling the trade liberalisation commitments under the ASEAN Free Trade Area (AFTA), World Trade Organization (WTO), and Asia Pacific Economic Council (APEC), the Philippines has started to rationalise the tariff structure from the previous four tiers (three, 10, 20 and 30 per cent) to two tiers (three per cent for raw materials and 10 per cent for finished goods) by year 2003, and a uniform tariff of five per cent by 2004.

While the Philippines economy moves towards open market competition, the agricultural sector seems to be going towards protectionism. In March 1996, the Ramos Government supported the enactment of Agricultural Tariffication Law (RA 8 178), imposing a provisional 100 per cent tariff on agricultural imports previously protected by Quantitative Restrictions (QRs). The sole exception is rice, which will continue to be subject to QRs. The high tariff rate was adopted despite evidence that some of the affected crops were previously being accorded nominal protection with much less than 100 per cent, giving producers of those crops a substantial protection windfall. In 1995, David (1996) estimates that the recent nominal protection rates of rice, corn and sugar reached 65, 150 and 104 per cent, respectively. These represent significant increases from corresponding average nominal protection rates of 19, 76 and 80 per cent during the 1990 – 1994 period.

References

University of Asia and Pacific, 1996.

Recide, 1996.

SINGAPORE

SUMMARY

Singapore enjoys the fruits of full employment and low inflation. Per capita income, which has almost doubled between 1990 and 1995, continues to rise. As Singaporeans enjoy higher incomes, they spend less on food, and more on other goods and services such as entertainment and recreation, transport, and education. Increases in food prices are low by international standards. All major food items exhibit stable prices. Only cooked food and seafood show greater price increases than the national average increase in price, which has not exceeded four per cent over the last decade. Singaporeans, on the whole, show an increasing preference to consume more vegetables and less meat. This is in line with the increasing emphasis that is placed on a healthy lifestyle that encompasses eating the right foods and exercising to keep fit. It is therefore not surprising that life expectancy in Singapore is relatively long at 74 years for males and 79 years for females.

Singapore has done well economically. GDP growth rates ranged from nine per cent in 1990 to seven per cent in 1996, as per capita incomes almost doubled from US\$12,511 in 1990 to US\$24,673 in 1995. At the same time, Government foreign reserves also increased by about one and a half times from US\$26.8 billion in 1990 to US\$69 billion in 1995. The unemployment rate has remained low at around 2.7 per cent, with foreign labour accounting for more than 20 per cent of total employment.

FOOD PRICES AND CONSUMPTION

Life expectancy in Singapore has been increasing over the years, which is indicative of continued improvement in the standard of living for Singaporeans. In 1990, life expectancy for males and females was 73.1 years and 77.6 years, respectively. In 1996, life expectancy for males and females has increased to 74.4 years and 78.9 years, respectively. This shows that Singaporeans have done well in terms of choice of diet and other considerations, such as better lifestyles, including adoption of desirable social habits, especially in relation to exercise, smoking and drinking.

Based on FAO Food Balance sheets, per capita daily caloric intake of Singaporeans was 3,114 in 1990. The per capita caloric intake per day from animal products was 760 and from vegetable products was 2,354. The per centage of calories contributed by protein was 11 per cent, by fat 24 per cent, and by carbohydrates 64 per cent. However, it should be noted that the FAO Food Balance Sheets are based on food data availability, which is not based on actual consumption of food.

In 1993, the Food and Nutrition Department of the Ministry of Health (MOH), Singapore, conducted a study on food consumption patterns. According to the survey, per capita caloric

intake per day for Singapore in 1993 was 1,981, which is much lower than would have been indicated according to the FAO Balance Sheets. No attempts were made to distinguish in the MOH survey whether the calories came from the consumption of animal products or vegetable products. In terms of distribution of calories, protein consumption accounted for 15.5 per cent while fat consumption and carbohydrate consumption accounted for 29.6 per cent and 54.4 per cent respectively.

In terms of types of food consumed, per capita consumption of chicken meat was 32.5Kg in 1991; this increased to 41.9Kg in 1996. However, Singaporeans are generally careful with their diet. They have often been reminded of the dangers of high cholesterol through the mass media, and consequently are made aware that too much meat in the diet is not good for their health. Consistent with this pattern, Singaporeans have consumed more vegetables over the years, per capita consumption of vegetables increased from 72.7kg in 1991 to 81.8kg in 1995.

Using 1990 as a base, food prices increased slowly from 101.5 in 1991 to 112.2 in 1996, about 10 per cent, or 1.7 per cent per year. In the case of non-cooked foods, meat and poultry, dairy products and eggs, vegetables, fruits, sugar and non-alcoholic beverages, the respective price indices did not exceed 110 in 1996. Food items for which the price increase was higher, were seafood, rice and other cereals as well as cooked food. The price index for seafood rose to 123.8 in 1996, while that for rice and other cereals and cooked food rose to 115.6.

Prices of manufactured food products have been generally stable over the years. The exceptions were fish and fish preparations, whose prices increased by about 22 per cent over the decade, as well as cereals and cereal preparations, whose prices increased by 11 per cent. The reasons for these two exceptions was increased demand for fish and fish-related foodstuffs as Singaporeans turned to cholesterol-free or low cholesterol foods and to imported cereals for more healthy and convenient breakfasts. The largest fall in prices was for coffee, and spices, which fell by about 31 per cent over the decade, and sugar and sugar preparations which fell by about 29 per cent over the same period.

FOOD PROCESSING AND MARKETING

Singapore's private consumption expenditure in 1990 was \$37 billion, out of which \$6 billion was spent on food and beverages, which represented 16.4 per cent of total private consumption expenditures. The proportion of expenditure on food and beverages remained almost the same in 1995 at 16.3 per cent. Food and beverages was the largest expenditure item in the early 1990s. However, since 1993, expenditure on transport and communications has taken over as the largest expenditure item in Singapore. Other items, such as recreation and education, have also risen substantially as consumers with rising incomes are likely to spend more on these activities. We expect that the share of food and beverages in total private consumption expenditures will gradually decline in the future as other items are more income elastic.

The manufacturing sector accounts for about 25 per cent of Singapore's GDP. In 1990, the food and beverages industry contributed 3.6 per cent of total manufacturing output. It can be seen from this that food production in Singapore is insignificant. This is because Singapore is land-scarce. Even as it is, the contribution of the food and beverages industry to total manufacturing output declined to 2.9 per cent in 1995. However, while the importance of the food and beverages industry in manufacturing declined, the value of output of the food and beverages industry increased from \$2.6 billion in 1990 to \$3.2 billion in 1995. The number of establishments in the food and beverages industry also increased from 279 in 1990 to 320 in 1995. In terms of exports, however, the food and beverages industry contributed

less than 0.5 per cent to total manufacturing exports. It is expected that the share of the food and beverages industry in total manufacturing output would continue to fall gradually.

Food is easily accessible in Singapore. In 1990, there were 8,240 licensed food establishments scattered over the island, comprising restaurants, eating houses, snack bars, canteens, coffee shops, and supermarkets. The figure rose to 9,199 in 1995, representing an increase of 10.4 per cent over the five-year period. On the other hand, the number of licensed hawkers in Singapore declined from 16,484 in 1990 to 15,434 in 1995, representing a 6.4 per cent fall over the same period. There is a host of reasons underlying the decline of licensed hawkers in Singapore, among which is the fact that many young Singaporeans prefer not to take up a lifestyle which involves long hours, low pay, and keen competition.

As Singaporeans become richer, many of them frequent more often restaurants and fast food outlets. Using 1990 as a base, the sales turnover index of restaurants increased to 128.3 in 1995. The increase in sales turnover for fast food outlets was even more striking, registering an index of 157.0 in 1995 over 1990. As for other eating places, the corresponding figure for 1995 was 116.7.

AGRICULTURAL TRADE

The agricultural sector in the economy is tiny. Its contribution has never exceeded more than 0.3 per cent of Singapore's GDP. However, as Singapore is an entrepot, we also export and import agricultural products. In 1990, Singapore imported US\$3.2 billion worth of food, comprising cereals, cereal preparation, fruits, vegetables and coffee and spices, beverages and tobacco. The import of food, however, only accounted for 0.05 per cent of Singapore's total imports. In 1995, although Singapore's food imports rose to US\$ 5.1 billion, in terms of total imports, the proportion fell by one-fifth to 0.04 per cent. With regard to export of food, in 1990, the total export of food was US\$2.3 billion. As with imports, export of food accounted for only 0.04 per cent of total exports. Export of food rose to US\$4.1 billion in 1995, but remained in importance at about 0.04 per cent of Singapore's total exports. Thus, both import and export of food are a very insignificant component of total trade in Singapore. A comparison of imports and exports indicates re-exports account for about 80 per cent of food imports. The remaining balance does not represent consumption solely by Singaporeans; six million tourists visit Singapore every year.

INVESTMENT IN THE FOOD SECTOR

Foreign investment in Singapore in 1990 was US\$32 billion, of which 87 per cent was direct equity investment. Foreign direct equity investment in agricultural and fishing was small, about US\$64.5 million in 1990, which was equal to two per cent of total foreign direct equity investment. As Singapore does not have a comparative advantage in agricultural products, foreign direct equity investment in this sector declined to US\$22.6 million in 1993. For the food and beverages industry within the manufacturing sector, foreign investment reached US\$164 million in 1990, and almost doubled to US\$293 million in 1993.

Singapore welcomes foreign investment. In 1994, 410 manufacturing establishments received pioneer status for which taxes on profit are exempted for five years. Among the 410 firms, nine were in the food and beverage industry. These nine firms contributed less than 0.01 per cent to total value-added and total export of the 410 firms. This insignificant amount of foreign investment in the food and beverage industry shows that Singapore's comparative advantage does not lie in this area.

Total investment in Singapore's manufacturing sector increased from US\$1.4 billion in 1990 to US\$4.8 billion in 1995. However, total investment in the food and beverage industry has been fluctuating. From US\$24 million in 1990, it increased to US\$57 million in 1993, then fell to US\$24 million in 1994 before increasing to US\$73 million in 1995.

Singapore believes in buying food from the cheapest sources. The best way to achieve this objective is through the promotion of free trade. Singapore has to compete in the world market in order to earn foreign exchange, which can then be used to buy food and other equally essential things. Singapore relies on the manufacturing sector and the financial sector for growth and sources of foreign exchange earnings. The financial sector has been doing well because the Singapore dollar has been appreciating. However, the strong Singapore dollar has not helped the manufacturing sector to export. Fortunately, as Singapore is a city-state with no agricultural sector, it imports food, raw materials, intermediate products, etc. Thus, the strong Singapore dollar has helped to lower the import prices of food such as eggs, meat, fruit, vegetables, raw materials, as well as intermediate products.

The strength of the Singapore dollar is determined by the health of the Singapore economy and international prices. Singapore has a compulsory savings scheme known as the Central Provident Fund (CPF) scheme. Under this scheme, employees in Singapore save 40 per cent of their pay, which is kept by the CPF board. Moreover, the Government has a budget surplus each year, which is in the order of 0.08 per cent of GNP. The CPF contributions and the budget surpluses represent a liquidity drain in the system and the Monetary Authority of Singapore is expected to re-inject liquidity into the system. At the same time, Singapore has been enjoying a balance of payments surplus which has created a shortage of Singapore dollars in the foreign exchange market. If the Monetary Authority of Singapore does not release a sufficient amount of Singapore dollars, the Singapore dollar will appreciate substantially and rapidly against major currencies, such as the US dollar. This would act as a constraint on Singapore's manufacturing sector.

The conduct of Singapore's exchange rate policy is dictated by two related fundamental concerns, i.e. to maintain the export competitiveness of the manufacturing sector and to keep imported inflation low. If global inflation is high, the Singapore dollar is likely to appreciate. However, since global inflation is not expected to be high, nor international prices of food likely to rise rapidly, the export market for manufactured goods should remain competitive and the Singapore dollar stable against the US dollar and other major currencies.

References

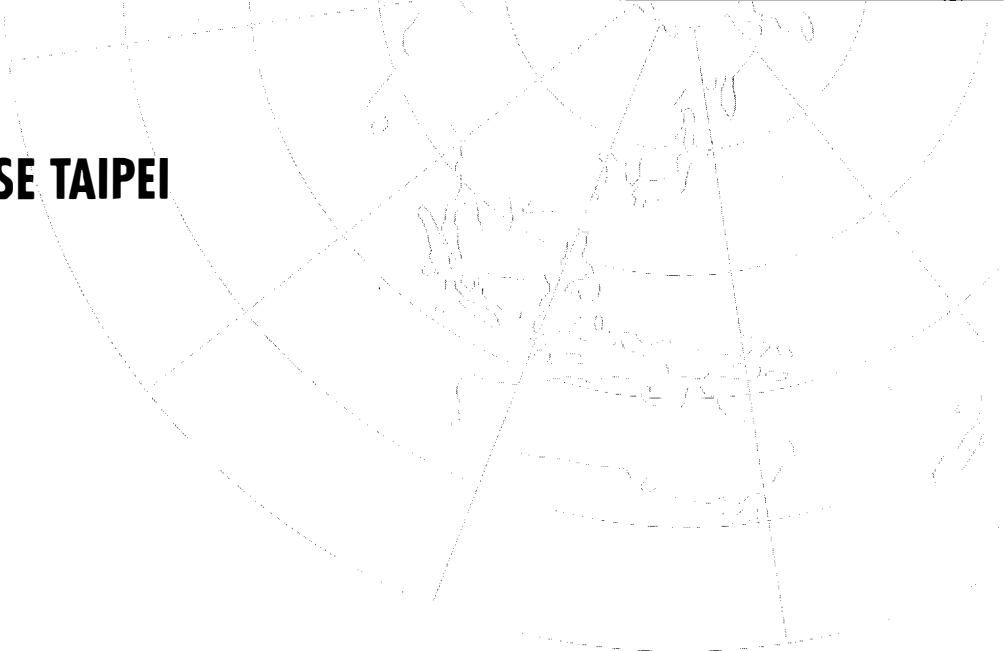
Lim Chong Yah, and Associates, Policy Options for the Singapore Economy, McGraw Hill, 1988

Tan Teck Meng, Low Aik Meng and Chew Soon Beng, Development Experience of Singapore, Allied Publisher, India, 1996.

Statistical Yearbook of Singapore, Department of Statistics, Singapore, various years.

Report on the Census of Industrial Production, Department of Statistics, Singapore, various years.

CHINESE TAIPEI



SUMMARY

Rising consumer incomes have reduced the proportion of income spent on food, and changed the pattern of food consumption in Chinese Taipei. Due to a more open market, food prices and costs have been increasing modestly. Nutrient concerns in Chinese Taipei have focused on nutrient imbalances, and over eating rather than nutrient deficiencies. In the future, food purchasing behaviour will be influenced mostly by concerns about food safety, convenience, diversity and healthfulness. The food distribution channels face keen competition with a growing number of convenience stores, supermarket chains, hypermarket chains, and wholesale distribution centres.

Rice production will emphasise more balanced and diversified sources of supply rather than self-sufficiency. The livestock and fishery industries are fast growing, and the production of fruits and vegetables is expanding to meet strong domestic demand.

Chinese Taipei has accelerated the pace of trade liberalisation, while formulating measures to minimise the impact on local industries. It is believed that a positive aggregate benefit from policy adjustment will emerge in the future.

Before the mid-1990s with changes in disposable income, relative price increases, the rising opportunity cost of women's time, and urbanisation, the food consumption pattern in Chinese Taipei has changed significantly.

Although entering the World Trade Organisation (WTO) is an important Chinese Taipei goal, the trade liberalisation that would follow is expected to have a negative impact on agriculture because of the small scale of domestic agricultural production, and its lack of international competitiveness. In order to reduce these potential ill effects, the Government is promoting policies to improve efficiency in the domestic food system to enhance the competitive advantages of Chinese Taipei agribusinesses in the international market.

FOOD PRICES AND CONSUMPTION

In Chinese Taipei, while expenditure on food has increased, the share of disposable income spent on food has been declining over the last four decades. During this time, the pattern of food consumption has changed as well, with rising levels of sugar, meat, fruits, eggs, fish, milk, fats and oils, and declining levels of cereals and sweet potatoes. Higher income levels, changes in demographics, household structure, and lifestyle, as well as the development and dissemination of nutrition information, are all responsible for the changing pattern of food consumption.

In recent years, Chinese Taipei has reduced many trade barriers. As a result of this, and the rapid appreciation of the NT dollar, and rising incomes, food and agricultural imports have increased. The relatively low price of foreign commodities compared to local products, has benefited Chinese Taipei consumers. The food price index, for example, rose at a slower pace than the consumer price index (CPI) in 1995 (4.25 per cent compared to 3.68 per cent). Between 1990 and 1996, the average cost of calories rose from US\$0.019/Kcal to US\$0.027/Kcal, and the share of disposable incomes spent on eating away from home rose from 2.3 per cent to three per cent. The overall proportion of disposable incomes spent on food declined from 13.7 per cent in 1990 to 11.6 per cent in 1996.

According to the *Food Balance Sheet* published by the Council of Agriculture, per capita daily nutrient availability has remained stable in recent years, 2,955 Kcal in 1990 and 2,960 Kcal in 1996. This trend seems likely to continue in the future.

The structure of Chinese Taipei meat consumption should change significantly in the short-run due to the outbreak of foot and mouth disease in March 1997. Higher meat prices will lower consumption, benefiting consumers' health in the long run. In the future, food purchasing behaviour by consumers will be increasingly influenced by the safety, convenience, diversity and healthfulness of foods.

FOOD PROCESSING AND MARKETING

In the early stages of economic development in Chinese Taipei, the food processing industry played an important foreign-exchange-earning role, providing employment opportunities, and enhancing farm income. Until the mid-1980s, the growth and development of the food processing industry relied completely on exports. But the appreciation of the NT dollar, and the increase in labour costs and raw material costs, made the export of frozen foods in the 1990s less competitive. The domestic market is now more important as a factor in the growth of the food processing industry in Chinese Taipei. Marketing and food technology shall likewise become an important segment of that transformation.

The rise in female labour force participation, as in other developed countries, has put a higher premium on time, and has led to an increased demand for more convenient forms of food and for eating out. Modern kitchen facilities, such as ovens, microwave ovens, and freezers, have become more popular among family households. The eating habits of the family depend more heavily on ready-to-eat or semi-ready 'to-eat' foods.

The average life span is getting longer in Chinese Taipei, helped by improved eating habits among the aged. They are able to afford a better balance of foods, including high quality fruits, vegetables, meats, and fishery products.

The stepped-up growth rate of the urban population since the late 1980s has stimulated a transformation in the retail food system to provide lower prices and a greater variety of products. Thus, raw and fresh-food supermarkets and convenience stores were introduced. By 1994, there were 3,500 convenience stores in Chinese Taipei, with annual sales of US\$1.5 billion, an increasingly important force in the food market. In 1989, the launching of Macro Super Warehouse Store and Carrefour Hypermarket, brought on a new wave of change in the Chinese Taipei's food distribution system. Chain convenient stores, raw and fresh food supermarkets and hypermarkets, are expanding their roles at the expense of traditional grocery stores.

The Chinese Taipei Government has implemented several policies to enhance the food processing and marketing system. One is to substantially utilise domestic raw farm products to develop the food processing industry, so as to increase the value-added of farm products.

Another is to strengthen the quality grading and labeling system. The third is to guide agribusiness to a system of contracts for sales and production to stabilise supply and demand, and to maintain the benefits of both agriculture and industry.

According to the Government's Year 2002 Food Industry Development Plan, the value of processed food production is projected to reach US\$24.6 billion, an annual growth rate of three per cent. High value added and Chinese-style processed foods will have significant potential for export. However, the food processing industry will be primarily oriented toward the domestic market. Packaging standards, automation, R&D, and product management, will be crucial to the future of the food processing industry.

AGRICULTURAL PRODUCTION AND TRADE

Agricultural production, trade, and agricultural policy in Chinese Taipei have responded to changes in food consumption patterns. The rice production policy is now focused less on self sufficiency and more on balanced and diversified sources of supply. The production of fruits and vegetables, animal products and fishery products will continue to become relatively more important.

Rice is the major staple crop in Chinese Taipei. In order to alleviate excess rice production and storage problems, Chinese Taipei implemented a paddy field diversion programme in 1984. Rice planted hectareage was 390,000ha, and rice production was 1.82 million tonnes in 1996. Planted area and production targets for 1998 are 355,000ha and 1.54 million tonnes, respectively.

Chinese Taipei has reduced price supports for dryland grain, such as corn, sorghum, and soybeans. Thus, guaranteed price schemes will be replaced by direct income payments. Feed grain production is expected to decline gradually.

Sugar exports made an important contribution to foreign exchange earnings in the 1950s and 1960s. With the decline in domestic sugar cane production since the early 1980s because of high contract prices, Chinese Taipei imported raw sugar to refine in 1995. Planted area and sugar cane production are forecast to decline to 51,000ha (60,500 in 1996) and 380,000 tonnes (460,000 tonnes in 1996) in 1998.

Pork production grew dramatically since 1975, and became the most important agricultural sector, surpassing rice, in recent years. In 1995, Chinese Taipei produced 1.23 million tonnes of pork. However, growth in consumption has been slower than growth in production, leading to rising exports, especially by large commercial farms. Chinese Taipei developed from a moderate exporter to the second-largest supplier of pork to the Japanese market, taking advantage of its closer proximity to Japan. Pork exports in 1995 were 198,000 tonnes, accounting for 38 per cent of Japanese imports. Unfortunately, the outbreak of foot and mouth disease in March 1997, will lead to a significant reduction in hog production, and as an unintended consequence help in solving a critical pollution problem on the island.

Poultry production has received less Government assistance than hog production, but its production gains have been remarkable. Unlike the hog industry, the poultry industry relies almost entirely on the domestic market. Only small amounts of poultry meat are either imported or exported. Poultry meat consumption has increased steadily in Chinese Taipei;

chicken production has increased by 2.3 per cent annually. Chicken production is forecast at 650,000 tonnes in 1998 (590,000 tonnes in 1995).

Chinese Taipei's agriculture relies heavily on foreign trade. During the last four decades, the structure of agricultural exports shifted significantly from labour-intensive crops to high-value capital intensive products. In the 1980s and 1990s, major agricultural exports included frozen pork and marine products. Agricultural imports did not change as much as exports. Raw materials, such as cotton, feed grains, logs and lumber, hides and leather, have been major imports for some time, and reflect the derived demand associated with the development of the textile, shoe, lumber and livestock industries.

Relative to the economies of South-east Asia, Chinese Taipei's agricultural sector has lost competitiveness, due to currency appreciation and rising wages in the course of rapid growth. Chinese Taipei's investments in South-east Asia (excluding Singapore) have been motivated by the desire to relocate traditional labour-intensive, export-oriented industries to countries with lower cost labour and land. Chinese Taipei became a net capital exporting economy in 1987, ranking as the ninth largest global investor, with cumulative investment of US\$27 billion in South-east Asia by the end of 1996. Currently, Chinese Taipei is Vietnam's largest foreign investor. It ranks second in mainland China and Malaysia, fourth in Thailand and the Philippines, and seventh in Indonesia.

Chinese Taipei's foreign direct investment in the food sector has been mainly concentrated in Asia. Thailand and Vietnam are major recipients of Chinese Taipei food industry investments. During 1984–1994, the total value of Chinese Taipei food industry outward FDI in South-east Asia and mainland China amounted to US\$636.1 million. These investments have led to purchases of intermediate inputs and machinery equipment from Chinese Taipei. On the other hand, they have reduced the domestic output of the Chinese Taipei food industry, lowering employment opportunities. In addition, the outward FDI of Chinese Taipei food industry has generated positive export trade effects, but reduced the derived demand for domestic agriculture.

FOOD AND AGRICULTURAL POLICY

Chinese Taipei has reduced many trade barriers, including tariffs and nontariff restrictions. After applying for admission to the WTO in 1990, Chinese Taipei has accelerated the structural adjustment of its agriculture and food system.

Since 1981, Chinese Taipei's foreign reserves have accumulated rapidly due to sustained trade surpluses. Since most of the trade surplus is with the United States, Chinese Taipei was requested by the US Government to further deregulate its protectionist trade measures.

Within 10 years, the nominal average duty rate for agricultural products dropped from 34.8 per cent in 1986 to 21.6 per cent in 1994. Now over 90 per cent of food and agricultural products listed in the Custom Import Tariff Schedule, are free import items.

Between 1990 and 1997, agriculture's contribution to gross domestic product (GDP) fell from 4.1 per cent to 3.4 per cent, and is forecast to be 3.3 per cent in 1998. However, Chinese Taipei has decided that future agricultural development will give greater emphasis to qualitative improvements rather than quantitative growth. In anticipation of free trade's impact on the agricultural sector, comprehensive adjustment measures have been planned by the Chinese Taipei Government. Thus, Chinese Taipei is accelerating the pace of trade liberalisation on the one hand, and formulating a series of coordinated measures to minimise the adverse impacts on the other.

To maintain the pace of agricultural development, and to achieve an efficient food system in Chinese Taipei, the Council of Agricultural (COA) has completed the drafting of the 'Over Century Agricultural Construction Program (1997 – 2001)'. This programme proposes the following policy measures with respect to Chinese Taipei's agriculture and food system:

- Development of designated high quality and value-added farm products, set up a prevision system of sales and production so as to enhance the market competitiveness of domestic agricultural products;
- Establishment of a food security system, with priority given to the development of rice, wheat, meat, vegetables, and fish sectors;
- Advocacy of both horizontal and vertical integration of farmers' organisation by using sales-operation procedures to reduce agricultural production and marketing costs;
- Promotion of joint marketing and direct marketing through reducing the number of middlemen;
- Adjustment of customs tariffs according to the WTO's agricultural regulations and the liberalisation goals of APEC;
- Implementation of the paddy field and direct income payments to farmers; and
- Improvement of agricultural research and extension, and the strengthening of quarantine and sanitary inspection to enhance agricultural competitiveness.

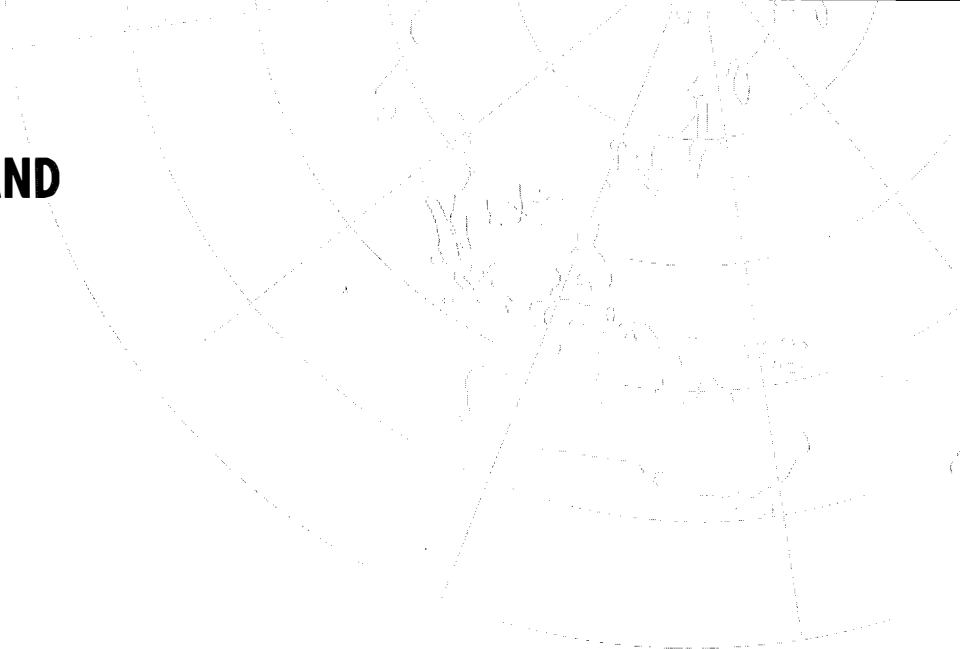
Among proposed strategies, pensions for aged farmers, licenses for farmers to raise poultry and hogs, liberalisation of the land tenure system, and direct income payments to farmers are being considered and reinnovated. Since these programmes would require significant public expenditure and risk, careful evaluation is ongoing.

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 cost of adjustment, the degree of market distortion, and the implementation process can be minimised.

References

- Asian Productivity Organisation (APO), Growth of the Food Processing Industry in Asia and the Pacific, APO, Tokyo, 1995.*
- Asian Productivity Organisation, Changing Dietary Intake and Food Consumption in Asia and the Pacific, APO, Tokyo, 1996.*
- Asian Productivity Organisation, Agricultural Trade Policy in Asia and the Pacific, APO, Tokyo, 1996.*
- Peng, Tso-Kwei, Changes in Food Consumption Patterns-Implication to the Rice Economy of Chinese Taipei, Extension Bulletin No.272, FFTC, Taipei November, 1988.*
- Peng, Tso-Kwei, The Impacts of Trade Liberalisation on Agricultural Production and Farmers' Share in Chinese Taipei, Journal of Ag. Econ., No. 47, National Change Hsing University, Taichung, Chinese Taipei, June, 1990.*
- Peng, Tso-Kwei, Chinese Taipei's Involvement in South-east Asian Agribusiness, paper presented at the International Seminar on Development of Agribusiness and Its Impacts on Agricultural Production in Southeast Asia, Tokyo, Japan, November, 1996.*

THAILAND



SUMMARY

During the first half of 1997, food prices rose 5.6 per cent. After the baht devaluation, food inflation is expected to rise even more. The Government has launched measures to protect consumers from high inflation. While the impact of the baht devaluation on domestic food demand is expected to be negative due to high inflation and the low purchasing power of the average consumer, prospects for processed food and agricultural exports are positive. However, for improving Thailand's competitiveness in the international market, the quality of food exports is of great concern. The agricultural sector was expected to grow three per cent in 1997 prior to the currency devaluation, now growth expected to be 1.2 – 1.5 per cent if the government succeed in keeping inflation under six to seven per cent.

FOOD PRICES AND CONSUMPTION

The typical Thai dietary pattern relies on rice as the main source of calories. The National Food and Nutrition Survey of 1995 revealed that per capita caloric intake was 1751 Cal/day, 88 per cent of the Thai Recommended Daily Allowance standard (RDA). The data also indicated that protein consumption provided 13.2 per cent of the total calories (equivalent to 58.07 grams, 149 per cent of the Thai RDA). The proportion of animal protein to total protein was 51 per cent. Protein consumption increased somewhat from 1986 to 1995, as did the animal protein proportion of total protein. People in urban areas consumed more animal protein than in rural areas. On average, protein intake was appropriate both in terms of quantity and quality. Fat consumption was 22.2 per cent of total calories. In 1995, average fat intake was relatively low. However, with those in urban areas consumed more fat than in rural areas. The data also revealed that carbohydrate consumption accounted for more than 60 per cent of total calories in both urban and rural areas.

During the first six months of 1997, food and beverage prices rose 5.6 per cent over the same period of the previous year while non-food prices were up 3.4 per cent. The consumer price index rose at an annual rate of 4.3 per cent. The prices of rice, meat, pork, chicken, eggs, milk, soft drinks and instant noodles all rose on the first half, while the prices of some fruit and vegetables fell compared to the previous year.

After the Government's decision to float the baht by abandoning the fixed exchange rate regime used for the last 13 years, is expected that annual GDP growth will slip to three to four per cent, compared to eight to nine per cent before the crisis. Price are expected to rise, starting with oil and energy, then spreading to consumer goods. Many consumers blame the current economic crisis on the Government's mismanagement of economic policy.

However, to prevent traders from taking advantage of the baht float which is certain to increase inflation, the Ministry of Commerce has launched measures to protect consumers. Traders are not allowed to store goods or quote unreasonable prices for basic necessities. The Ministry of Commerce will attempt to keep the rise in price to more than 4.4 per cent in 1997. However, it is expected that the currency devaluation will boost inflation above that predicted figure.

FOOD PROCESSING AND MARKETING

At present, the food processing industry is one of the most significant economic sectors in Thailand. Food products are produced for both domestic and export markets with approximately 50 per cent of locally-produced food products is exported. In 1996, food products accounted for about 25 per cent of total Thai exports. The Thai food processing industry has been heavily involved in world markets for some time.

Prior to the devaluation demand for processed food products was rising. Afterwards, it is believed that prospects for processed food will remain positive, canned fruits and vegetables in particular. However, the quality of food products is of great concern. Even though Thailand has obtained increased opportunities for exporting processed food to the world market, quality remains an issue for Thai products. Upgrading the quality of food products will be important in keeping Thailand's competitive edge. In 1998, the Ministry of Commerce plans to strengthen the economy's competitiveness by providing analytical services for the export and import of agricultural products. At the same time, efforts are being made to reduce red tape at all stages of trading.

AGRICULTURAL PRODUCTION AND TRADE

The agricultural sector of Thailand was expected to grow three per cent in 1997, prior to the devaluation. Now it is expected that there will be an impact on both agriculture and agribusiness. Thai exports of agricultural products (rice, cassava flour, rubber, and animal products) are expected to increase more than 3.8 per cent in 1997. Fresh and frozen shrimp exports are expected to decline eight per cent in 1997 from last year's value, due to the tariff increase imposed under the EU's Generalised System of Preferences (GSP). In addition, since the frozen shrimp industry depends on imported feed, costs are likely to rise by as much as 15 per cent as a result of the baht devaluation. Thai exporters of seafood compete with shrimp exporters from India, Bangladesh and Vietnam.

The most important factor eroding the country's competitiveness is the increasing use of non-tariff barriers, particularly sanitary measures. Thailand must improve the sanitary standards of its food exports to improve its international competitiveness. When the Hazard Analysis Critical Control Point (HACCP) system is adopted in many importing countries to prevent the importation of less sanitary products, food manufacturers will have to eradicate contaminants at the earliest stages of production.

The baht devaluation is having a negative impact on the agricultural sector by raising production costs through higher prices of imported inputs, like fertilizer, agricultural chemical, seeds and fuel. If the Government cannot control inflation to six to seven per cent, it is expected that growth in agricultural production will decline to 1.2 to 1.5 per cent in 1997.

FOOD AND AGRICULTURAL POLICY

Through the 8th Agricultural Development Plan (1997-2001) the Ministry of Agriculture (MOA) and Cooperatives is committed to addressing issues related to trade and the environment through the implementation of policies, programs, projects, and activities that will improve the competitiveness of Thai agricultural products through the use of advanced technologies; to more sustainable agricultural development through improved management of natural resources, upon which food and agricultural production are dependent; and, to increasing the capacities of farmers and community level institutions and organizations to adapt to the globalization of the agricultural sector, through an emphasis on human resources development.

Development highlights in this regard include establishment of central markets for farm produce in producing areas, rubber sheet manufacturing development and livestock market development, combined with farm quality improvement. Crops with trade potential such as fruit crops, tree crops, cattle and mixed farming are being provided as substitutes for rice, cassava and pineapple. Aquaculture is also being promoted with the development of 77,000 farm ponds in 1996, this programme will continue to be expanded.

The objective of agricultural policy is to promote international competitiveness, increase productivity, to reduce production costs and to provide marketing institutions so that farmers receive fair prices. The major measures implemented by the government during the 7th National Economics and Social Development Plan (1992-1996) were as follows:

- 1) Production targets for 23 major farm commodities were established to keep pace with market demand.
- 2) The agricultural restructuring programme was launched to assist producers in shifting from low-price commodities like rice, cassava, coffee and pepper, to higher return cash crops, fish, orchards, beef cows, dairy cows and other livestock. The Government supported participating farmers by subsidising production inputs and financing low-interest loans.
- 3) To improve productivity, the Government promoted the high yielding varieties of rice, corn, soybeans and cassava, by selling seed to farmers at subsidised prices under the condition that participating farmers who received one portion of principle seeds (i.e., sock seeds) were obliged to contribute three portions of growing seeds (i.e., farmer multiplied seeds) to their neighbours. The Government also provides farmers low-priced fertiliser and marketing facilities, warehouse etc, to reduce cost.
- 4) The Government established central markets in major producing areas to help stabilise income and prices.
- 5) The Government provided incentives to agro-industries to locate in provinces besides Bangkok and its environs.
- 6) Under the WTO agreement, Thailand opened markets for 23 farm commodities which formerly were restricted. Soybeans, soymeal, maize, onion seeds, coconut, palm oil and milk powder are particularly allowed to bring in more than tariff quota basically binding to WTO.



UNITED STATES OF AMERICA

SUMMARY

Moderate but steady economic growth, low inflation and high employment, with sustained increases in disposable personal income will provide a solid foundation for expansion of consumer food spending and growth in the US food system. Food prices are expected to rise 2.8 per cent in 1997 and 1.7 per cent in 1998, while the per centage of income US citizens spend on food will fall to an all time low 11 per cent.

Competition in the food processing, wholesaling, retailing, and food service sectors will moderate food price increases as costs for labour, energy, packaging, transportation, and advertising rise. Life expectancy is expected to reach an all-time high, 79.5 years for females, and 72.8 for males. These changes are strong reflections of overall consumer wealth, high incomes, and the general productivity and competitiveness of the US food and agricultural sectors. On the down side, a major problem continues to be that of consumption of calories, protein, and fats which do not commensurate with physical activity levels. Recent farm legislation will make agriculture more competitive in the global marketplace and reduce the role of the Government. Wheat prices may remain under pressure in 1997, while corn prices firm up. Beef, pork, and poultry prices will increase, but the real price of dairy products should decline in 1997. US trade in high value products is expected to increase, but exports of bulk commodities will remain stable in 1997 and 1998, but below 1996 levels.

FOOD PRICES AND CONSUMPTION

Prices for food at home are projected to rise 1.7 per cent in 1998, with the strongest price increases generally occurring among the more highly processed foods, such as cereals and bakery products and other prepared foods. Prices of these foods are related more to the costs of processing and marketing, whose costs are expected to rise faster than the costs of farm commodities. General inflation is expected to be about three per cent in both 1997 and 1998. Four factors should moderate food prices in the near future: low overall inflation, which means that costs related to food production and marketing (labour, packaging, transportation, and advertising), which account for 75 per cent of retail food costs, are not expected to rise substantially; a stable farm value of the food dollar, about 22 cents in 1998; the trend toward increasing economies of size in the agricultural sector should continue, which slows the increase in per-unit production costs; and a fiercely competitive environment in the food processing and manufacturing industries, as well as in the food service and retailing sectors. Prices for food-away-from-home items, which contain a large service component and are influenced by developments in the non-farm markets, are expected to rise faster than food-at-home prices, 3.1 per cent in 1997 and 2.3 per cent in 1998. However, competition in the food service industry will prevent complete pass-through of higher wages and raw materials' costs to consumers.

Still, the per centage of income that consumers spend in the food service industry will continue to climb, reaching 4.5 per cent in 1998. By 1998; more than 47 per cent of the consumers' food dollar will be spent away from home, compared to 32 per cent in 1980.

The per centage of disposable income spent on food continues to decline - from 11.6 per cent in 1990 to a projected 11 per cent in 1998. Rising household income will cause per capita food expenditures to climb from \$6.15 per day in 1990 to an estimated \$7.40 in 1998. Per capita caloric availability is expected to increase to 3,900 Kilo-calories a day from 3,600 in 1990 - an 8 per cent rise.

A high caloric intake coupled with low activity levels has resulted in an overweight population. About 33 and 36 per cent of adult males and females, respectively, were overweight in 1994, a new record. Not only are caloric intake levels high, but Americans will continue to eat a diet far too high in fat - 36.5 per cent of calories in 1998 versus 38.5 per cent in 1990. US Dietary Guidelines recommend that diets contain only 30 per cent or less of calories from fat.

Roughly 35 per cent of US caloric intake in 1990 came from animal sources and the remainder from vegetables. The American diet is slowly becoming more plant-based. Per capita consumption of pork, poultry, dairy products, fruit, and vegetables will increase in 1998; beef and shell egg consumption will decline.

The mix of races in America is changing rapidly, and will impact the consumption patterns. Fifteen years from now more than 40 per cent of children in grades one to eight will be non-white compared to about 32 per cent currently. Relative to whites, non-whites eat fewer fruits, vegetables and dairy products, but eat more dark green vegetables, rice, legumes, pork, fish, poultry, and eggs. Hispanics prefer high-fat milk to lower-fat varieties, and generally eat more meat products than non-Hispanics.

About 300,000 premature deaths a year in the US can be attributed to poor diets and inactivity levels. Poor diets cost society \$78 billion annually in medical costs, premature deaths, and lost productivity. Many Federal government and private nutrition education efforts, such as the 5-A-Day Programme, an advertising campaign to encourage people to eat five daily servings of fruits and vegetables, and the Food Guide Pyramid are underway in attempts to change poor dietary practices and modify sedentary lifestyles. The Federal Government spends about \$400 million annually on nutrition education efforts.

FOOD PROCESSING AND MARKETING

The US food marketing system in 1998 will likely consist of a million food processing, wholesaling, retailing, and food service establishments that receive almost 80 cents out of every consumer dollar spent on food.

This system should continue to be one of the largest economic sectors in the US economy, accounting for about a tenth of the value added to Gross Domestic Product, and is the nation's largest employer, with more than 13 million Americans, 10 per cent of the labour force, directly employed. In contrast, approximately 3.2 per cent of US farms, or 62,000, produce 50 per cent of all food and fibre. These farms employ 96,000 people which represents far less than one per cent of the total US labour force.

In 1998, consumer food and alcohol expenditures should near the \$900 billion mark. About \$400 billion is expected to be spent in retail foodstores and \$350 billion in foodservice establishments. An additional \$100 billion will be spent on alcoholic beverages and drinks.

Consumers can expect firms in all sectors of the food industry - processing, wholesaling, retailing, and food service - to compete vigorously for the consumer's food dollar, through massive advertising, the introduction of new products, and price competition. This will help hold food prices to only a 1.7 per cent increase in 1998. Food marketing firms will likely spend about \$13 billion on direct advertising to the consumer. An estimated 17,000 new products, many short-lived, are likely to appear on grocery shelves, with many making health claims, such as low in fat, sodium, or calories. More importantly, however, consumers should benefit from price discounts expressed either as manufacturer or store coupons, or lower prices as processors and retailers try to acquire or maintain their market share. The food system should continue to be profitable, and perform well for its common stockholders. Sharp increases in automation will further productivity gains, and increased global market penetration from both exports and foreign direct investment should further characterise the system.

Wage rates, packaging, energy, transportation and advertising costs, as well as other inputs into the food production system are expected to keep pace with the overall inflation rate, estimated to be 2.9 per cent in 1998. Wages rates will likely increase 3.5 per cent in 1998, slightly above the 3.3 per cent rise in 1997. Increases in the Federal minimum wage rate had limited impact on prices in the food service industry, a sector employing many minimum wage workers. This was probably related to the intense competition in the fast food industry.

Future consolidation in the food marketing system is expected to proceed at about the same pace as in the past 15 years. During a typical year, between 400 and 500 mergers, leveraged buyouts, and divestitures take place in the food system. Consolidation has the benefit of allowing firms to take advantage of scale economies, but may lessen the competitive environment. For example, the top 50 food manufacturing firms accounted for 35 per cent of output in 1982, and should account for about 55 per cent in 1998. The top 20 grocery store firms' share of output grew from 35 per cent in 1982, to a projected 44 per cent in 1998. Despite control of production by larger firms, new firms will likely be entering the food processing sectors. In recent years, the number of new plants and firms has been increasing for the first time since the 1920s.

Consumers are likely to benefit from innovation, research, and automation in 1998 through lower prices, higher-quality products, and more variety. The American food system is one of the world's most highly automated, reflecting years of heavy capital expenditures and research and development. A projected 400 plants will be built in 1998, while productivity in most food processing industries should continue the gains made in recent years. The food sector is expected to spend an estimated \$2 billion on research and development.

US food processors have established numerous affiliates in many foreign countries. Sales from these affiliates grew from \$88 billion in 1992 to a projected \$145 billion in 1998. Foreign firms also own food processing plants in the US. Sales from US plants that are foreign owned increased from \$47 billion in 1992 to a projected \$52 billion in 1998.

AGRICULTURAL PRODUCTION AND TRADE

In 1997 and 1998, US agriculture and agribusiness firms will continue to adjust to the increasing risks and opportunities that accompany changes in domestic farm and trade policies as well as the profusion of emerging technologies and marketing arrangements. These opportunities will provide the chance to lower costs, improve products, shift risks, and open new markets internationally. In the near-term, greater planting flexibility, trade

liberalisation, and more private stockholding should be stabilising forces. But several factors such as smaller Government stocks and foreign supply shocks as trade liberalisation becomes more important suggest the chance of greater variability in the near future.

US processed food exports are led by meats, poultry, seafood, grain milling, soybean oil milling, and processed fruits and vegetables. The top destinations for processed food products are Japan, Canada, Mexico, and Korea. Rising incomes in Pacific Rim Countries has led to upgraded diets and a shift toward meat, livestock and other processed products. Seven out of the top 10 destinations for US processed food exports are Pacific Rim nations.

Both bulk commodities and high value products are expected to maintain steady growth into the next decade. The US Department of Agriculture (USDA) projects strong gains of more than three per cent per year during 1995 - 2005 for US bulk commodity exports and gains of five to seven per cent for high-value products. Much of this growth will occur in APEC countries.

Despite the positive long term outlook, USDA projects a decline in agricultural exports (excluding distilled beverages and seafood) for 1997, but a slight rebound in 1998. Total agricultural exports are projected to be \$55.5 billion in 1997 and \$56.3 billion in 1998 compared to \$59.8 billion in 1996. Bulk commodity exports are expected to be \$22 billion in both 1997 and 1998, compared to \$27.9 billion in 1996. However, high-value exports, \$31.9 billion in 1996, will reach \$33.5 in 1997 and \$34.3 in 1998.

The projected decline in overall exports is due primarily to an expected reduction in US exports of grains and feeds. USDA expects that increased foreign competition in global feed grain markets will dampen the prospects of US exports of corn and feed wheat in 1996/1997. US coarse grain exports are projected to decline to the lowest level since 1993/1994. Wheat prices are expected to remain under pressure as carryover stocks rise and production in 1997/98 is expected to be similar to 1996. However, smaller crops are expected in most major exporting countries which should provide some recovery in US exports. US corn production is expected to rise in 1997, but higher exports and domestic use will firm up prices. On the other hand, soybean stocks are the lowest in 20 years, which coupled with only a modest increase in production, will mean higher prices. Rice production may increase in 1997 in response to higher international prices.

Beef production is expected to decline in 1997 and 1998, increasing prices. Hog production is expected to be the same in 1997 as 1996, but with increase exports, hog prices may rise. Broiler prices will rise as increased production is absorbed by exports. Poultry will account for all the increases in meat production in 1997, and exports are forecast to be up again to all major buyers - Russia, China, Hong Kong (China), and Japan. In 1997, beef exports are expected to rise, particularly to Mexico and South Korea, although the rising dollar is a new factor. Major growth markets for pork will be in the Pacific Rim nations and Mexico. Milk production is expected to rise only slightly in 1997. Although milk to feed price ratios could become less favourable, dairy productivity gains associated with improved technology are expected to continue, pushing milk output per cow higher and real costs lower. Real milk prices are expected to fall.

Prices for fruits and vegetables are very dependent on weather and, hence, difficult to predict. However, demand is expected to continue to be strong as consumers move, although slowly, to a more plant-based diet, and exports become increasingly important.

Despite the reduced expectations for coarse grains, prospects for other US agricultural exports remain good. Continued growth is expected in US meats and oilseeds in 1997. In

recent years, the rising incomes and negotiated increases in market access in East Asia, the FSU, and China, have led to strong growth of US meat exports. Although concerns about 'Mad Cow' disease (BSE) and E. coli had a negative effect on US beef exports to Japan in 1996, and a strong dollar may reduce export growth in 1997, the long term outlook for beef remains strong.

Pork and poultry products were not affected by safety concerns, and may have benefited as consumers switched from beef to other meats. Also, US pork exports may rise in the near-term because of an outbreak of hoof and mouth disease, and suspension of exports in Chinese Taipei pork sector. USDA projects an increase in US exports in all meat categories in 1997 and 1998. An increase in US exports of soybeans is expected in 1997 due to increased US production, and increased demand for soybeans and meal among Asian Pacific Rim countries.

US exports of horticultural products are expected to increase five per cent in 1997. The forecast is based on ample availability of US products and on various assumptions about market conditions. Canada, the European Union and Japan accounted for two-thirds of export sales in 1996. Growth in these markets is contingent on the continued lowering of duties with Canada under the free trade agreement and no further significant appreciation of the dollar against the yen. Continued steady growth in key East Asian and Latin American markets - Hong Kong (China), Mexico, Chinese Taipei, Korea, Brazil, Singapore, and the Philippines - is also important to further growth in horticultural exports. In recent years, these smaller markets have been more dynamic than the larger ones. As with the larger markets, a strong US dollar may weaken the expected US export performance.

US agricultural imports are projected to grow to \$34 billion in 1997 and \$34.7 billion in 1998. Seafood imports and distilled liquors add another \$8.5 billion to the total. Meats, fresh fruit, fruit juices, vegetable oil, and wine and malt beverages will continue to be the major US agricultural imports in 1997. Most fresh fruit imports are bananas and non-citrus fruit, such as grapes, peaches, and pears, that come from Chile during the winter and spring months. Much of the imported fruit juice is used as an ingredient by US manufacturers. US orange juice processors blend imported orange juice with a domestic product to achieve the desired colour and sugar-to-acid ratio. Imports add variety to consumers' diets, increase competition, and are a sole source for some food items.

One factor to watch in 1997/98 is the exchange rates. The dollar is now about 20 per cent stronger against the yen than in 1995. That has the effect of raising US export prices to foreign buyers, and will partly offset some of the US crop price declines in 1997. It will especially hurt meat and other high-value exports that have prices which do not drop in 1997. The stronger dollar will also add to the overall US trade deficit.

FOOD AND AGRICULTURAL POLICY

The Federal Agriculture Improvement and Reform (FAIR) Act of 1996 was a milestone in US agricultural policy. The Act, in effect through 2002, fundamentally changes US agricultural programmes by eliminating supply management, increasing planting flexibility, and changing income supports for contract crops, including wheat, corn, grain sorghum, barley, oats, rice, and upland cotton. Trends toward greater market orientation in agriculture are accelerated, as the 1996 FAIR Act emphasises efficiency in production and exports. Under the new farm law, producers will respond to signals from the marketplace rather than to Government commodity programmes, making agricultural production economically more efficient.

The Act eliminates provisions for price-sensitive deficiency payments, provides for seven years of predetermined direct payments to farmers, eliminates most hectareage use restrictions, suspends the Farmer-Owned Reserve programme, and eliminates dairy price support starting in the year 2000. The conservation and wetland reserve programmes are extended, and several new conservation programmes are authorised. Farm credit and agricultural commodity promotion programmes are modified by the Act.

Trade programmes in the 1996 FAIR Act are focused more heavily on market development, including an emphasis in some programmes on emerging markets with high potential for US export growth. Under the Farm Act, high-value products are emphasised, and viewed as the greatest potential for US export gain. Total Export Enhancement Programme (EEP) funding is reduced in the early years. Targetting of trade programmes is expected to enhance the effectiveness of those programmes.

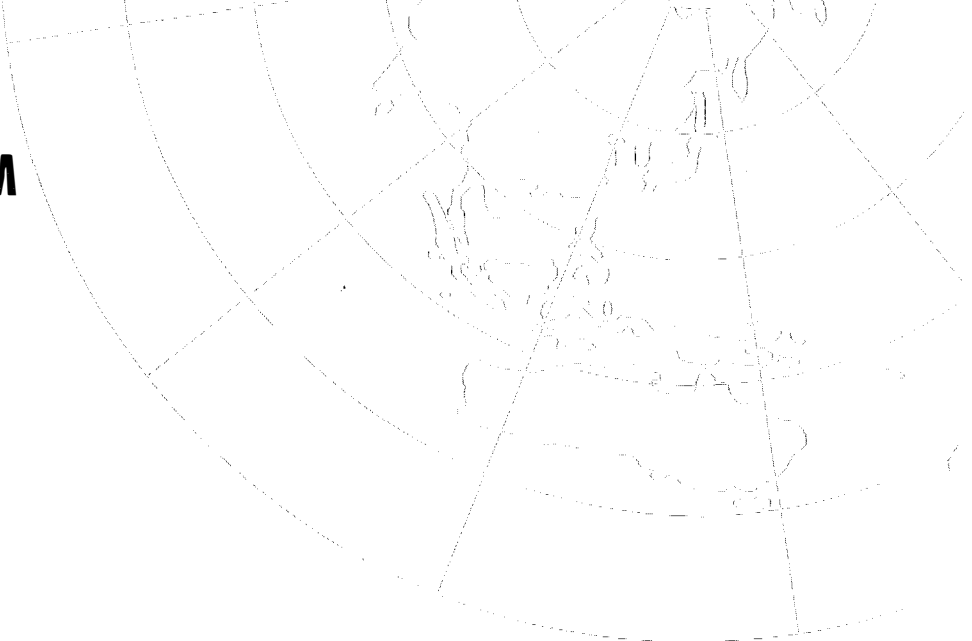
Expiration of authority for Acreage Reduction Programmes and suspension of the Farmer-Owned Reserve benefit US exports by no longer limiting production, and marketing in times of large supplies. Wheat and barley exports could decline somewhat initially, reflecting reductions in EEP funding. Impacts would be small because export subsidies add little to total exports when prices are strong. Rice exports will decline as the elimination of the minimum planting requirement reduces available supplies.

The US has judiciously implemented its commitments under GATT, and is working through the committees of the World Trade Organisation to ensure that other countries also implement their GATT commitments. Full implementation of GATT in the coming years will ensure that the US APEC Action Plan becomes a reality.

Government efforts to ensure the safety of the US food supply are important to maintain consumer confidence. Recently, President Clinton announced a Food Safety Initiative that makes several proposals: enhance and expand foodborne disease surveillance, enhance early detection of foodborne disease nationwide, modernise public health laboratories, create a national electronic network for bacterial 'fingerprint' comparisons, and increase national surveillance for antimicrobial resistance of foodborne pathogens. Other recent actions include rules to enhance the safety of meat, poultry and seafood, including labels describing safe-handling practices on all packages of raw meat and poultry sold at retail.

With abundant wealth and efficient agriculture, the percentage of income that Americans spend on food is the lowest in the world, about 11 per cent. However, poverty and hunger still exist. The US administers 15 domestic food-assistance programmes that represent the nation's commitment to the principal that no one in our country should fear hunger or experience want. Federal outlays for food-assistance totalled almost \$38 billion, adding an estimated \$9 billion to total food spending. Also, changes in the 1996 FAIR Act reduce the likelihood that the Federal government will accumulate surplus commodities under old price support operations. These surpluses were distributed to the poor.

VIETNAM



SUMMARY

As a rice exporting country, food supply in Vietnam is ample. Food availability across the country is improving, and fast growing incomes, including in some of the poorer segments, now allow most people better access to food. Consumption of rice — the main staple — is growing at about 2.5 per cent a year. Much of the population is now shifting away from rice to non-rice staples and other higher quality foods. Food production is forecast to grow four to five per cent a year, compared to about two per cent growth in the population, freeing up surpluses for export, processing, and feed use. Significant improvements will be made in infrastructure, including roads, ports, communication, rice drying and storage. More liberalised trade regulations are being applied, especially for rice exports. All these will help to stabilise the domestic market, and make the Vietnamese food system more integrated with the international market.

FOOD PRICES AND CONSUMPTION

In 1996 food consumption in Vietnam rose with income and population growth as prices of main food products, such as rice, fell. Prices of vegetables, fruits and meats were up at about the rate of inflation (4.5 per cent).

In 1997–98, food consumption in the country will likely increase as well. The economy will likely continue to grow at nine to 10 per cent, while the population will grow at the rate of about two per cent. Income in both the urban and rural sectors will grow fast. Government efforts to alleviate poverty will give better access to consume more food for the poorest 20 per cent of the population.

Rice consumption in the country will increase at about 2.5 per cent, mostly in the poorer regions. Rice consumption in the top 20 per cent income group, mostly in big cities such as Ho Chi Minh City and Hanoi, will decline as growing income allows them to shift to higher quality non-rice foods.

Rice production will likely continue to grow at four to five per cent. Growth in production of vegetables, fruits, and meats will increase faster than population and domestic demand growth, putting downward pressure on prices, unless export opportunities arise.

Food distribution is becoming more efficient. Recently, the Government decided to totally liberalise the domestic rice market. Measures are also being taken to ensure stable food supply everywhere in the country.

FOOD PROCESSING AND MARKETING

Development of the transportation system in the country will strongly affect the cost of food. Improvements on the North-South highway, in sea ports as well as in the river port in Can Tho (in the middle of the Mekong delta — the main rice growing area in Vietnam), will create better opportunities for narrowing the rice price gap between the South and North from 10 cents (in 1996) to two to three cents/kg at peak times. Rice prices in the North — a food shortage region — will likely fall because of greater supply potential from the South.

The Government is trying to improve rural roads, including those in remote areas. Although these efforts have just been started and will take time to have widespread impact, many remote areas will eventually have better access to cheaper food.

Development in telecommunications will help make domestic food trade more efficient. Lack of timely information has made food marketing over long distances very risky. For this reason, there are not so many traders in business today. Domestic trade liberalisation and improvement in the transportation and communication infrastructure will probably have strong impacts in the next two years.

The main food processing challenges in the next two years will be improvements in rice-drying and storage facilities in the Mekong Delta. To meet these challenges, the Government is planning to assist farmers and traders with credit facilities. Limited rice-drying capacity after the rainy-season harvest leads to high physical and quality losses of rice. Limited storage capacity and cash requirements are forcing about 70 per cent of farmers in the Mekong river delta to sell their rice right after the harvest, suffering costly losses. Increasing drying and storage capacities will reduce both physical and quality losses, and at the same time, help stabilise food supply and prices throughout the country.

Processing of other food products, especially vegetables and fruits, will probably gain some momentum, as the supply of these products increases rapidly, and raw material prices will likely remain low. Although most processing of vegetables and fruits will be for export; there are enough fresh vegetables and different fruits around the year to meet the needs of the population, which prefers fresh products, and rarely consumes processed horticultural products.

Rice production will continue to expand for the following reasons:

- The Government will continue to invest in irrigation, allowing rice acreage to expand by about 200,000 ha; and
- Improvement in irrigation and the application of new technologies will probably sustain growth in rice and maize yields, 0.08 and 0.13 tonnes /ha/year, respectively.

On the other hand, there is low probability that the weather during 1997 – 98 will be as bad as in 1996, when the Mekong delta suffered two continuous years of heavy flooding and the North experienced the worst typhoons in 20 years.

Production of maize is expected to expand quickly. It doubled in the last five years, due to the introduction of high-yielding varieties. Until 1992, average maize yields were 1.57 tonnes/ha. There are now hybrids, with three to four tonnes/ha yields, and in the best cases, up to eight tonnes per ha. New hybrids make maize growing more profitable than many other crops, especially in rain-fed areas. Lately, both hectareage and average yields of maize have been growing fast.

Production of sweet potatoes and cassava will be stable or decline because of competition from other crops for land. Fast growing demand for vegetables and fruits creates favourable conditions for increasing production of these products. Ample supply and low prices of food grains are favourable for the livestock sector, especially for pork production.

It is likely that in 1997 – 98, Vietnam will continue to export large quantities of rice, about three million tonnes per year. In 1996, total rice exports were 3.05 million tonnes, valued at \$865 million. Although, Vietnam is a leading rice exporter, about 400,000 tonnes of staple food are imported annually, mostly wheat and wheat flour. In the next two years, imports of wheat and wheat flour will likely increase in order to satisfy growing demand among the richer urban populations.

FOOD AND AGRICULTURAL POLICY

The major food and agricultural policy changes in the next two years are expected in trade of agricultural products and inputs. With rapid expansion in agricultural production, a liberalised trade regime is important in promoting and sustaining growth in the food sector.

Until recently, Vietnam restricted rice exports. Annual quotas were allocated to 15 state-owned food export companies, belonging primarily to two general food corporations. Besides the quotas, a zero to three per cent export tax was applied. In order to facilitate rice exports, the Government recently decided to decentralise decision-making on exports. Most of the 2.5 million tonne quota is allocated initially to the authorities of the rice surplus provinces in the Mekong delta. They are then responsible for organising rice procurement and exports. They can appoint exporters. Depending on the size of the harvest, the quota can be expanded.

The Government is trying to assist provinces with credit facilities for buying rice from farmers for export in order to maintain high domestic prices. At the same time, the Government is assisting farmers to plant the better-quality high-yielding varieties. Marketing infrastructure is also being improved. These measures will likely increase Vietnam's competitiveness in the world rice market. Firstly, it will allow the large price gap between Vietnamese and competitor rices to narrow, and for domestic food prices to move more closely with international market prices. There are no quantitative restrictions on exports or imports of other food products, only licensing requirements. Domestic trade of these products is free. Wholesale, revenue and profits' taxes, however, are applied.

Since 1991, Vietnam has maintained a stable exchange rate of about 11,000 VND / US\$. However, inflation is creating pressure to devalue the currency. Recently, the market rate has risen slightly, putting upward pressure on domestic rice prices.

In 1995, Vietnam joined ASEAN, and now is preparing to join the WTO and APEC. The country is streamlining its trade policy, making it more transparent and in sync with international requirements. Vietnam has committed itself to implement tariff reductions along with other members of the ASEAN. Joining the WTO and APEC would require many changes in Vietnam's trade regime. Implementation of these changes are not likely to significantly influence food costs in the next two years.

Except for the land law, there are no other significant changes in law that are expected to affect food costs in the next two years. It is expected that the new land law, which may be approved within the next two years, will make property rights on land clearer, while land ownership will remain with the state. These would encourage farmers to invest in the land, as well as to take better care of it.

PAPUA NEW GUINEA



SUMMARY

Agriculture remains the major economic activity in Papua New Guinea (PNG), as is evidenced in terms of i) sustaining livelihood of over 3.4 million people; ii) providing employment for 25 per cent of the workforce iii) contributing 14 per cent to national foreign exchange earnings; iv) constituting 25 per cent of the GDP; and v) providing labour, capital and market for industry and service sectors. Subsistence and cash cropping continues to be the most important activity for the large proportion of the population, which is predominantly rural.

The value and volume of food imports show a steady rise in certain food items such as wheat products (seven per cent per annum), and rice (four per cent per annum.), together with large increases in imported beef and lamb products.

FOOD PRICES AND CONSUMPTION

As the national demand for food rises due to increasing population and cash incomes, traditional food production must be maintained and increased. About three quarters of the population of PNG is dependent on a combination of subsistence production and cash cropping. Only a small, but declining, proportion of the population is estimated to be purely subsistence-oriented, while only one in 20 families is active in cash farming only.

The traditional foods are produced for own consumption, and the surplus is increasingly sold at urban and rural markets for cash. On the other hand, imported foods are sold in the formal market system, and over the last five years, food imports have increased by 4.2 per cent.

In 1994 the devaluation of the PNG kina led to an increase in the consumer price index by three per cent. Among the worst affected were food prices with an increment of six per cent, followed by clothing with an increment of four per cent, and household equipment with an increment of three per cent. Because there is a high disparity of household incomes, particularly with fairly low income among 80 per cent of the rural households, the devaluation has affected the consumption and welfare of the population, especially that of the rural people. So, there is a negative effect on consumption as real income declines. On the supply side, there was an increase in real prices of imported inputs for domestic goods and a rise in the price of working capital. However, it is expected that over the next two to three years, there will not be any drastic increases in prices of imported and traditional foods. At the most, prices are expected to increase only by three per cent.

The average household income ranges from US\$10 per head to US\$100 per head annually,

and the national GNP is recorded at US\$1,144 per capita. However, the majority of the population is engaged in the subsistence economy, and only a minority in the cash economy.

The level of disposable income for food has generally declined because of the Government's policy on wage freezes, and increases on prices of imported and locally-produced food. This led to only minimal growth on employment. In the wage employment sector, wages have been stagnant, and the disposable income for food is expected to remain stagnant over a medium term.

The average daily calorie availability is 2,600 per adult. The poorest one-quarter of the population has an average calorie availability of 1,800 which is only 80 per cent of the requirement. Approximately one-third of children aged less than six years old are malnourished in some way (low weight-to-height or low height-to-age in comparison with international standards). To address this problem, the Government instituted the PNG National Nutrition Policy in 1995, with its broad goal to improve the nutritional well-being of those suffering from nutritional disorders and to maintain adequate nutrition level for the general population.

FOOD PROCESSING AND MARKETING

The processing of agricultural products in PNG is still in its elementary stages. This problem will remain for some time because PNG has small and fragmented markets, along with the problems of land tenure and ownership, poor and high cost infrastructure, high labour costs, lack of technical managerial and marketing skills and expertise, leading to low productivity and firm inefficiency in the processing sectors.

Generally, there is a lack of investment capital available to local entrepreneurs for establishment of processing plants in PNG. Furthermore, the cost of processing agricultural products is high as a result of low throughput or over capacity and high costs of inputs, which are essential to processing plants. For the processors or exporters, there are also the problems of high level of competition, the need to meet the quality standards required to compete in the world market, and high internal transport costs. In many cases, more support is required for initial establishment of processing plants.

The marketing of food crops is largely carried out through the urban open markets and at informal roadside markets. In 1988, 25 major urban and rural markets in PNG were surveyed, and it was found that nationwide, a total of 29,600 tonnes of fresh produce are sold per year, comprising nearly half (49 per cent) traditional staples, 27 per cent vegetables, and 24 per cent fruit. According to the national population statistics, about 292,000 rural households are engaged in the marketing of fresh produce, approximately 50 per cent of all rural households in PNG. The majority of the remaining 50 per cent were growing food for their own consumption.

AGRICULTURAL PRODUCTION AND TRADE

Agricultural exports remain limited to tree crops (coffee, cocoa, oil palm and coconut) and some minor crops including tea, rubber, pyrethrum, fruits and nuts, spices, oil crops, orchids, butterflies and other insects. Export earnings from the agriculture sector on average is only 80 per cent of the value of agricultural imports. Imports of food items (such as wheat, rice, meat, fish and processed foods), and general agricultural inputs have increased during the last five years. This is largely due to increased income levels and changes in consumption patterns.

The overall food supply and its distribution in PNG is insufficient to meet the increasing domestic demand, especially in urban areas and mining towns. Therefore, imports have been on the rise with an average cost of US\$ 210-260 million per year. Efforts toward import substitution are receiving some emphasis.

Some schemes initiated recently to boost food sector growth include the establishment of a Fresh Produce Development Company (FPDC), Citrus Tree Fruit Development Project (CTFDP); Rice and Grains Development Project (RGDP); and the Village Livestock Development Project (VLDP). These initiatives are focused on promoting agriculture diversification, import substitution, and improved nutrition.

PNG is highly vulnerable to the potential impacts of climate changes, given its 17,000km of coastline, rugged terrain, and extensive flood plains. There are locations in PNG which experience frequent and prolonged droughts, regular flooding, cyclones and volcanic eruption.

FOOD AND AGRICULTURAL POLICY

The PNG Government in 1996 adopted a Five-Year Strategic Development Plan to implement the policies and programmes outlined in its White Paper on Agriculture: Sectoral Policies 1996-2000. The agricultural development plan is currently being implemented.

Under the UR Agreement, the PNG Government agreed to allow limited access to certain agricultural products over the next 14 years. It agreed to lift the current ban on some products, including beef, pork, chicken and certain fruits and vegetables. The tariffs on agricultural products are to be progressively lowered over the 14 years of implementation.

PNG has initiated steps to implement the UR and WTO rules, and has moved to address issues on technical barriers to trade (TBT) and on the application of sanitary and phytosanitary (SPS) measures.

References

- ANZDEC, 1990; *Agriculture Extension Improvement Study, Vol.1* ANZDEC Limited, New Zealand.
- AusAID, *The Economy of Papua New Guinea, 1996 Report*, IDI No.46, July 1996.
- DAL, 1996, *White Paper on Agriculture: Sectoral Policies Beyond 2000*.
- DAL, 1996, *Agriculture Sector Per Cent Year Strategic Development Objectives*,
- National Statistical Office, *Population Count: A summary of the 1990 Population and Housing Census in PNG*, March 1995.
- Institute of National Affairs, *Papua New Guinea National Nutrition Policy Workshop 1992*, DAL, INA Discussion Paper No.54, Port Moresby
- Australian National University, July 1995, *Pacific Economic Bulletin, special issue on PNG*, Vol. 10, National Centre for Development Studies, Canberra, Australia.
- Ausaid, September 1993, *Renewable Resources Sector Study*, Canberra, Australia.
- Bank of PNG, 1996, *Quarterly Economic Bulletin*
- National Statistical Office (NSO), 1994
- PNG Commodity Board Industries, 1996, PNG
- Department of Health (DOH), 1996b, *PNG Health Plan (1996-2000), Volumes I and II*, Media Production Unit, Port Moresby: DOH.
- United Nations Children Fund (UNICEF), October 1996, *Children, Women and Families in PNG*, Morobe Business Systems, Port Moresby, PNG.

AUSTRALIA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns ^a										
Per capita caloric intake	Cal/day	3086	3082	3073	3069	3097	3103	3109	3116	3122
From animal products	Cal/day	1167	1117	1118	1118	1121	1123	1125	1128	1130
From vegetable products	Cal/day	1918	1965	1955	1951	1976	1980	1984	1988	1992
Protein (% of calories)	%	13.7	13.6	13.3	13.5	13.4	13.5	13.5	13.5	13.5
Fat (% of calories)	%	34.1	34.3	34.2	34.4	34.7	34.8	34.8	34.9	35.0
Carbohydrates(% of calories) ^{bc}	%	48.8	48.4	49.9	49.6	49.7	49.8	49.9	50.0	50.1
Income and Food Prices										
Per capita income ^{def}	US\$/capita	10503	10219	10344	10283	10584	10798	11016	11241	11538
% of disposable incomespent on food ^f	%	14.5	15.2	15.6	15.5	15.5	15.9	16.2	16.4	16.6
% spent eating out	%	2.0	2.1	2.2	2.0	2.1	2.2	2.3	2.5	2.6
Food price index ^h	1990=100	100.0	103.4	104.8	107.3	108.6	112.9	116.0	118.7	121.9
General price index (CPI) ^h	1990=100	100.0	103.2	104.2	106.1	108.1	113.2	116.1	116.6	118.8
Population ^e										
Total population	Million	17.1	17.3	17.5	17.7	17.8	18.1	18.2	18.4	18.6
Urban ⁱ	Million	13.5	13.6	13.8	13.9	14.0	14.2	14.4	14.5	14.7
Non-urban	Million	3.6	3.7	3.7	3.8	3.8	3.8	3.9	3.9	4.0
Share of population in the following age groups ^{bk}										
0-4 years	%	7.4	7.5	7.5	7.5	7.6	7.6	7.5	na	na
5-14 years	%	14.6	14.7	14.8	14.9	15.0	15.1	15.2	na	na
15-19 years	%	8.2	8.00	7.8	7.6	7.5	7.4	7.5	na	na
20-44 years	%	39.5	40.1	40.5	40.7	40.9	41.1	41.4	na	na
45-64 years	%	19.2	19.6	20.2	20.7	21.3	21.9	22.6	na	na
65-79 years	%	8.9	9.2	9.4	9.6	9.8	9.9	10.1	na	na
80-over	%	2.2	2.3	2.4	2.5	2.6	2.7	2.8	na	na
Median age of population	Years	32	32	32	33	33	33	34	na	na
Female labour force participation ^l	%	52.2	52.0	52.0	51.8	52.6	53.8	53.8	na	na
Life Expectancy ^m										
Males	Years	73.0	74.7	74.7	74.7	74.7	74.7	74.7	75.4	75.4
Females	Years	79.4	80.6	80.6	80.6	80.6	80.6	81.2	81.2	81.2
Food Infrastructure										
Trade capacity										
Grain exports ⁿ	1000 Tons	14764	15248	11011	14018	16952	9307	20194	23740	16342
Grain imports ⁿ	1000 Tons	25	28	28	25	84	385	40	25	25
Total food and agricultural trade ^f	Million US\$	12626	14684	14927	14817	15654	13857	16818	18277	17602
Total food and agricultural exports ^{fn}	Million US\$	10975	13032	13167	12903	13572	11556	14597	16031	15352
Perishable products ^{fn}	Million US\$	2932	3294	3567	3492	3523	3234	3286	3647	3871
Fishery exports ^o	Million US\$	612	683	764	798	953	982	994	1020	1018
Total food and agricultural imports ^{fp}	Million US\$	1651	1652	1760	1914	2082	2301	2221	2246	2250
Perishable products ^{fp}	Million US\$	402	443	480	492	492	543	557	514	500
Fishery imports ^p	Million US\$	331	327	321	322	367	369	383	na	na
Percent of population with refrigerators	%	100	100	100	100	100	100	100	100	100
Foreign Investment in the Food Sector ^{bq}										
Inward FDI in the food sector, total	Million US\$	4704	6208	6170	6333	8261	8046	na	na	na
From other PECC economies	Million US\$	1266	3118	3115	3424	5230	5203	na	na	na
Outward FDI in the food sector, total	Million US\$	na	na	1153	906	1147	1303	na	na	na
To other PECC economies	Million US\$	901	1025	865	401	547	606	na	na	na
Role of Agriculture and Trade in the Economy ^d										
Agriculture as a share of GDP ^d	%	3.8	3.7	3.8	4.0	3.2	3.2	3.7	3.5	3.4
Self sufficiency in grains ^{br}	%	331	215	300	291	174	291	396	263	239
Self sufficiency in horticultural products ^{bop}	%	164	155	186	180	164	170	na	na	na
Policy Transfers ^s										
Consumer subsidy equivalents	%	-9	-8	-8	-6	-7	-6	na	na	na
Total transfers (subsidy/tax)	Million US\$	-338	-374	-345	-272	-373	-341	na	na	na
Total transfers per capita	US\$/capita	-23	-22	-20	-15	-21	-19	na	na	na
Exchange Rate ^t										
	AU\$/US\$	0.779	0.776	0.732	0.676	0.728	0.738	0.779	0.772	0.775

na= not available.

e= estimates.

Sources:

a. FAO database

b. Data on a financial year (June-July) basis (1990=1990-91)

c. ABS, Apparent Consumption of Foodstuffs and Nutrients Australia, cat. No. 4306.0 Data beyond 1992 have been from historical trend

d. ABS, National Income, Expenditure and Product, cat no.

e. ABS, Australian Demographic Statistics, cat. No. 3101.0

f. Data expressed in average 1989-90 prices

g. ABS, Retail trade, cat no. 8501.0

h. ABS, Consumer Price Index, cat no. 6401.0

i. Defined as sum on population in population centres greater than 30000 residents

j. ABS, Household Expenditure Survey - Detailed Expenditure Items, cat no. 6535.0

k. ABS, estimated Resident Population of Australia, cat no.3201.0

l. ABS, Labour Force, cat no. 6202.0

m. United Nations, World Population Prospects 1994 revision

n. ABS, Foreign Trade: Magnetic Tape Service, cat no.5464.0

o. ABS, Merchandising Exports - Australia, cat no. 5432.0

p. ABS, Merchandising Imports - Australia, cat noi. 5433.0

q. ABS, Detailed Country By Industry, Foreign investments In Australia and Australia Investment Abroad

r. ABARE, Australian Commodity Statistics, 1996

s. OECD, Agricultural Policies, Markets and Trade in OECD Countries: Monitoring and Evaluation 1996

t. ABARE, Australian Commodities

CANADA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/ day	3014	2898	3020	3074	3080	3079	3101	3122	3144
From animal products	Cal/ day	947	936	924	900	926	911	903	895	887
From vegetable products	Cal/ day	2067	2054	2096	2174	2154	2168	2198	2227	2257
Protein (% of calories)	%	15.3	15.8	15.1	14.8	15.0	14.8	14.7	14.5	14.4
Fat (% of calories)	%	34.5	35.5	34.2	33.7	34.0	33.9	33.6	33.3	33.1
Carbohydrates(% of calories)	%	50.2	48.7	50.7	51.5	51.0	51.3	51.8	52.2	52.6
Income and Food Prices										
Per capita income	US\$/ capita	13966	14481	13885	13103	12408	12522	12776	13269	13823
% of disposable income spent on food	%	13.6	13.5	13.4	13.5	13.7	13.7	13.6	13.7	13.7
% spent eating out	%	4.3	4.2	4.2	4.2	4.4	4.4	4.3	4.3	4.4
Food price index	1990=100	100	104.8	104.3	106.1	106.6	109.1	111.2	112.9	114.5
General price index (CPI)	1990=100	100	105.6	107.2	109.2	109.4	111.8	113.8	115.9	118.2
Population										
Total population	Million	27.9	28.2	28.7	29.1	29.4	29.7	30.0	30.3	30.6
Urban	Million	21.4	21.6	22.0	22.3	22.5	22.8	23.1	23.4	23.6
Non-urban	Million	6.5	6.6	6.7	6.8	6.8	6.9	6.9	7.0	7.0
Share of population in the following age groups										
0-4 years	%	na	na	7.0	6.9	6.9	6.7	6.5	6.3	6.1
5-14 years	%	na	na	13.7	13.6	13.5	13.5	13.5	13.5	13.5
15-19 years	%	na	na	6.8	6.7	6.7	6.7	6.7	6.7	6.7
20-44 years	%	na	na	41.2	41.0	40.5	40.2	39.9	39.6	39.3
45-64 years	%	na	na	19.8	20.1	20.5	20.9	21.3	21.7	22.1
65-79 years	%	na	na	9.1	9.2	9.3	9.3	9.4	9.5	9.6
80-over	%	na	na	2.5	2.5	2.6	2.7	2.8	2.9	3.0
Median age of population	Years	na	na	33.6	33.9	34.4	34.8	35.2	35.6	36.0
Female labour force participation ^a	%	56.9	57.0	56.8	57.1	57.0	56.0	57.2	56.7	56.7
Life Expectancy										
Males	Years	na	74.6	74.8	74.9	75.1	75.4	75.6	75.8	76.0
Females	Years	na	80.9	81.0	81.0	81.1	81.3	81.3	81.4	81.5
Food Infrastructure										
Trade capacity										
Grain exports	1000 Tons	22952	28759	27407	22582	26496	21262	20527	22627	22732
Grain imports	1000 Tons	4253	3135	3903	5980	8211	7129	6621	6933	7086
Total food and agricultural trade	Million US\$	16431	17126	18744	18415	20075	21998	23612	24159	24592
Total food and agricultural exports	Million US\$	9218	9676	11053	10339	11329	12764	13746	13818	13737
Perishable products	Million US\$	1617	1521	1649	1829	1964	2295	2490	2692	2766
Fishery exports ^b	Million US\$	2254	2147	2043	1984	2087	2200	2157	2105	2100
Total food and agricultural imports	Million US\$	7213	7450	7690	8076	8746	9234	9866	10341	10855
Perishable products	Million US\$	3534	3795	3788	3897	3871	4012	4091	4211	4358
Fishery Imports	Million US\$	621	684	660	791	879	991	1170	1182	1271
Percent of population with refrigerators	%	99.5	99.7	99.4	99.8	99.4	99.7	99.6	99.6	99.7
Foreign Investments in the Food Sector										
Inward FDI in the food sector, total	Million US\$	7905	9052	9608	9047	9152	9699	9948	10197	10446
From other PECC economies ^c	Million US\$	4182	4774	4746	4803	4869	5948	6324	6379	6002
Outward FDI in the food sector, total	Million US\$	6516	7087	6949	6100	6362	6215	6085	5956	5826
To other PECC economies	Million US\$	3309	3423	3614	3027	3416	2904	3319	3115	3072
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	2.2	2.2	2.0	2.1	2.1	2.1	2.2	2.1	2.1
Self sufficiency in grains	%	na	238.1	218.7	189.7	165.1	174.4	197.6	188.9	187.5
Self sufficiency in horticultural products	%	0.7	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9
Policy Transfers										
Consumer subsidy equivalents	%	-25	-24	-22	-21	-17	-12	-13	-13	-12
Total transfers (subsidy / tax)	Million US\$	8388	10305	8171	6835	5845	5740	4825	3975	3825
Total transfers per capita	US\$/ capita	302	359	281	232	197	191	158	131	125
Exchange Rate	CAN\$/ US\$	1.17	1.15	1.21	1.29	1.37	1.37	1.37	1.36	1.35

na= not available.

e= estimates.

a. Women over 25 years of age.

b. The data includes all seafoods, not just fish.

c. This is an estimated series based on sectoral U.S. foreign direct investment supplied by Statistics Canada and information regarding overall FDI trends from other countries.

CHILE

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	1731	1836	2076	1883	2093	2151	2078	na	na
Income and Food Prices										
Per capita income	US\$/capita	2112	2426	3010	3148	3894	4594	4867	na	na
% of disposable income spent on food	%	33.0	33.0	33.0	33.0	33.0	33.0	33.0	na	na
Food price index	1990=100	100.0	127.9	143.6	155.7	166.4	181.6	189.1	na	na
General price index (CPI)	1990=100	100.0	118.6	133.7	150.0	163.5	176.9	188.6	na	na
Population										
Total population	Million	13.2	13.4	13.6	13.8	14.0	13.3	14.4	na	na
Urban	Million	11.0	11.2	11.3	11.5	11.7	12.0	12.2	na	na
Non-urban	Million	2.2	2.2	2.3	2.3	2.3	2.3	2.2	na	na
Share of population in following age groups										
0-4 years	%	11.2	11.1	10.9	10.9	10.8	10.6	10.0	na	na
5-14 years	%	19.4	19.4	18.5	19.7	19.8	19.8	23.6	na	na
15-19 years	%	9.4	9.1	9.1	8.6	8.4	8.4	8.8	na	na
20-44 years	%	39.2	39.3	39.5	39.4	39.3	39.3	37.2	na	na
45-64 years	%	14.8	14.9	15.4	15.2	15.4	15.6	15.0	na	na
65-79 years	%	4.9	5.0	5.2	5.1	5.2	5.2	5.0	na	na
80-over	%	1.1	1.1	1.3	1.1	1.1	1.1	1.1	na	na
Median age of population	Years	28.7	28.9	29.1	29.2	29.4	29.6	29.8	na	na
Female labour force participation	%	29.6	29.9	30.7	31.6	31.7	31.7	na	na	na
Life Expectancy										
Males	Years	69.6	71.5	71.6	71.5	71.5	72.3	72.3	na	na
Females	Years	75.9	77.4	77.4	77.4	77.4	78.3	78.3	na	na
Food Infrastructure										
Trade capacity										
Total food and agricultural trade	Million US\$	1568	2074	2368	2268	2604	3207	3818	na	na
Total food and agricultural exports	Million US\$	1222	1580	1730	1606	1824	2208	2626	na	na
Perishable products	Million US\$	792	1049	1077	970	1083	1287	1493	na	na
Fishery exports	Million US\$	857	1331	1242	1095	1265	1650	1641	na	na
Total food and agricultural imports	Million US\$	346	495	639	662	780	1000	1191	na	na
Perishable products	Million US\$	30	50	109	135	146	186	217	na	na
Fishery Imports	Million US\$	4.5	3.5	2.9	3.1	10.4	23.1	13.2	na	na
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	7.9	7.5	7.3	6.9	7.1	6.9	6.5	na	na
Self sufficiency in grains	%	94.0	81.4	66.1	61.9	53.0	38.6	45.8	na	na
Self sufficiency in horticultural products	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	na	na
Exchange Rate										
	CLPeso/US\$	304.9	349.2	362.6	404.2	420.2	396.8	412.8	na	na

na= not available.

e= estimates.

Sources:

a. ODEPA

b. FAO

c. Central Bank

d. INE-CELADE, FAO

e. Information provided by household appliances manufacturers

CHINA

	Units	1990	1991	1992	1993	1994	1995	1996
Food Consumption Patterns								
Per capita caloric intake	Cal/day	2662	2670	2717	2499	2445	2727	na
Income and Food Prices								
Per capita income ^a	US\$/capita	289.0	291.4	332.0	402.8	369.7	463.4	527.4
% of disposable income spent on food	%	50.0	50.7	48.4	45.3	44.7	45.4	43.5
% spent eating out	%	na	na	3.8	3.0	2.8	2.9	2.7
Food price index	1990=100	100.0	103.0	107.5	114.0	131.4	122.9	107.6
General price index	1990=100	100.0	103.4	110.0	126.2	156.7	183.3	198.5
Population								
Total population	Million	1143.3	1158.2	1171.7	1185.2	1198.5	1211.2	1223.9
Urban	Million	301.9	305.4	323.7	333.5	343.0	351.7	359.5
Non-urban	Million	841.4	852.8	848.0	851.7	855.5	859.5	864.4
Share of population in the following age groups:								
0-4 years	%	na	na	na	na	8.2	7.3	na
5-14 years	%	na	na	na	na	18.8	19.4	na
15-19 years	%	na	na	na	na	8.1	7.4	na
20-44 years	%	na	na	na	na	42.3	42.1	na
45-64 years	%	na	na	na	na	16.2	17.1	na
65-79 years	%	na	na	na	na	5.5	5.8	na
80-over	%	na	na	na	na	0.8	0.9	na
Life Expectancy								
Males	Years	66.8	na	na	na	na	na	68.7
Females	Years	70.4	na	na	na	na	na	73.0
Food Infrastructure								
Grain exports	Million tons	5.8	10.9	13.6	15.4	13.5	1.0	1.4
Grain imports	Million tons	13.7	13.5	11.8	7.5	9.2	20.4	12.0
Total food and agricultural exports	Million US\$	10204	11620	12045	12197	14580	14324	na
Fishery exports	Million US\$	1316	1181	1366	1254	1816	2087	na
Total food and agricultural imports	Million US\$	9794	9429	9800	8569	12419	18256	na
Fishery imports	Million US\$	na	na	323	364	574	599	na
Percent of population with refrigerators	%	42.3	48.7	52.6	56.7	62.1	66.2	69.7
Role of Agriculture and Trade in the Economy								
Agriculture as a share of GDP	%	26.6	23.8	21.0	19.1	19.7	20.8	20.0
Self sufficiency in grains	%	98.0	99.3	100.5	102.0	101.1	95.8	97.7
Exchange Rate	Yuan/US\$	4.8	5.3	5.5	5.8	8.6	8.4	8.3

na= not available.

e= estimates.

a. Refers to urban per capita income.

COLOMBIA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	2613	na	2677	na	2710	na	2743	na	2777
From animal products	Cal/day	428	na	418	na	428	na	433	na	439
From vegetable products	Cal/day	2185	na	2260	na	2282	na	2309	na	2338
Protein (% of calories)	%	8.5	na	8.1	na	8.5	na	8.6	na	8.7
Fat (% of calories)	%	31.0	na	30.8	na	29.8	na	29.0	na	29.0
Carbohydrates(% of calories)	%	60.5	na	61.1	na	61.7	na	62.4	na	62.8
Income and Food Prices										
Per capita income	US\$/capita	1133	1140	1338	1491	1842	2083	2257	2263	2320
% of disposable income spent on food	%	35.0	34.5	34.7	34.9	34.1	35.0	35.0	35.0	35.0
% spent eating out	%	1.3	1.4	1.4	1.8	1.5	1.6	1.8	1.6	1.7
Food price index	1990=100	100.0	130.3	169.7	196.8	237.8	283.5	329.7	389.0	459.0
General price index (CPI)	1990=100	100.0	130.4	165.6	202.5	249.1	288.3	363.8	429.3	506.5
Population										
Total population	Million	35.5	36.2	36.8	37.4	38.1	38.7	39.4	40.1	40.7
Urban	Million	25.5	26.1	26.9	27.6	28.3	29.1	29.9	30.7	31.2
Non-urban	Million	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.5
Share of population in the following age groups										
0-4 years	%	12.1	na	na	na	na	11.8	na	na	na
5-14 years	%	21.6	na	na	na	na	21.1	na	na	na
15-19 years	%	11.7	na	na	na	na	11.6	na	na	na
20-44 years	%	36.1	na	na	na	na	36.2	na	na	na
45-64 years	%	14.7	na	na	na	na	14.8	na	na	na
65-79 years	%	3.1	na	na	na	na	3.3	na	na	na
80-over	%	0.7	na	na	na	na	1.2	na	na	na
Median age of population	Years	21	na	na	na	na	22	na	na	na
Female labour force participation	%	21.9	21.9	21.9	22.0	22.0	22.1	22.2	22.3	22.3
Life Expectancy										
Males	Years	68.5	68.7	68.9	69.3	69.5	69.7	69.9	70.1	70.3
Females	Years	71.7	71.9	72.1	72.3	72.5	72.7	72.9	73.2	73.5
Food Infrastructure										
Trade capacity										
Grain exports	1000 Tons	54	83	0	3	2	5	0	5	5
Grain imports	1000 Tons	889	799	1031	1201	1211	1218	1423	1480	1554
Total food and agricultural trade	Million US\$	2967	3011	3428	3411	4767	5064	5290	5773	6295
Total food and agricultural exports	Million US\$	2504	2625	2704	2540	3668	3588	3382	3636	3817
Perishable products	Million US\$	602	791	838	858	965	966	917	986	1035
Fishery exports	Million US\$	112	147	156	140	193	196	140	151	158
Total food and agricultural imports	Million US\$	463	386	724	871	1099	1476	1908	2137	2478
Perishable products	Million US\$	111	72	223	269	487	560	728	757	795
Fishery imports	Million US\$	na	na	6	11	21	38	29	30	32
Foreign Investment in the Food Sector										
Inward FDI in the food sector, total	Million US\$	1	19	6	20	53	160	220	237	248
From other PECC economies	Million US\$	0	15	5	14	40	119	164	177	185
Outward FDI in the food sector, total	Million US\$	9	0	58	40	9	6	9	10	10
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	22.5	22.3	21.0	20.6	19.7	19.7	19.5	18.2	17.9
Self sufficiency in grains	%	81	84	78	75	76	74	70	70	73
Self sufficiency in horticultural products	%	104	105	105	104	105	105	104	104	105
Policy Transfers										
Consumer subsidy equivalents	%	4.0	-1.0	0.5	na	na	na	na	na	na
Total transfers (subsidy / tax)	Million US\$	327.9	804.8	na	na	na	na	na	na	na
Total transfers per capita	US\$/capita	9.2	22.2	na	na	na	na	na	na	na
Exchange Rate	COPeso/US\$	502	614	680	786	826	912	1036	1191	1370

na= not available.

e= estimates.

Sources:

FAO

CEPAL

Departamento Nacional de Estadística -DANE-, Colombia

Banco de la República, Colombia

HONG KONG, CHINA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	3232	3208	3186	3190	3280	na	na	na	na
From animal products	Cal/day	962	927	938	873	997	na	na	na	na
From vegetable products	Cal/day	2270	2281	2248	2322	2282	na	na	na	na
Income and Food Prices										
Per capita income	US\$/capita	12573	14069	16151	18036	20184	21209	na	na	na
% of disposable income spent on food	%	15.6	14.5	13.5	13.0	13.0	12.7	na	na	na
% spent eating out	%	10.7	9.9	10.1	9.4	8.5	8.1	na	na	na
Food price index	1990=100									
General price index (CPI)	1990=100	100.0	111.6	122.0	132.5	143.2	155.7	165.0	na	na
Population										
Total population	Million	5.7	5.8	5.8	5.9	6.0	6.2	na	na	na
Urban <i>a</i>	Million	5.4	5.4	5.5	5.6	5.7	5.8	na	na	na
Non-urban	Million	0.3	0.4	0.3	0.3	0.3	0.4	na	na	na
Median age of population	Years	31.0	31.5	32.1	32.6	33.1	33.6	na	na	na
Female labour force participation <i>b</i>	%	46.8	47.8	46.2	46.4	46.9	47.6	na	na	na
Life expectancy										
Males	Years	74.6	75.1	74.8	75.3	75.7	76.0	na	na	na
Females	Years	80.3	80.6	80.5	80.9	81.5	81.5	na	na	na
Exchange Rate	HK \$/US\$	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	na

na= not available.

e= estimates.

a. People living in urban areas, including new towns.

b. The female participation rate increased significantly in the age interval 25-34, but decreased significantly in the age groups 15-24 and 55 and above.

Sources:

FAO

INDONESIA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	1983	1990	1997	2019	2019	2019	2020	2031	2042
From animal products	Cal/day	280	284	288	301	308	316	338	346	354
From vegetable products	Cal/day	1703	1706	1709	1718	1711	1704	1682	1685	1688
Protein (% of calories)	%	9.6	9.6	9.6	9.7	9.9	10.1	10.8	11.6	12.5
Fat (% of calories)	%	10.2	10.2	10.3	10.5	10.6	10.7	11.0	11.2	11.4
Carbohydrates(% of calories)	%	68.3	67.5	66.8	64.6	63.7	62.7	60.0	62.4	64.8
Income and Food Prices										
Per capita income	Rp/capita	647	679	711	1758	1860	1981	2102	2551	2841
% of disposable income spent on food	%	60.0	59.4	58.8	57.0	56.0	51.4	41.0	32.8	24.6
Food price index	1990=100	100.0	110.0	117.0	123.0	141.0	161.0	170.0	174.0	204.0
Population										
Total population	Million	179.0	183.0	186.0	189.0	193.0	195.0	198.0	201.0	204.0
Urban	Million	55.0	58.0	64.0	65.0	67.0	70.0	74.0	77.0	80.0
Non-urban	Million	124.0	124.0	122.0	124.0	129.0	125.0	125.0	125.0	124.0
Food Infrastructure										
Trade capacity										
Total food and agricultural exports	Million US\$	6519	7468	8884	10674	11730	11203	9779	11202	11467
Fishery imports	Million US\$	48	52	65	109	137	125	137	165	182
Foreign Investment in the Food Sector										
Inward FDI in the food sector, total	Million US\$	98.9	381.9	212.8	161.6	1234.8	1331.8	1437.8	1685.0	1933.4
Role of Agriculture and Trade in the Economy										
Agriculture as a share of GDP	%	20.2	19.4	18.6	17.8	17.0	16.1	15.5	14.9	14.3
Self sufficiency in grains	%									
Exchange Rate	Rupiah/US\$	1848	1951	2031	2087	2161	2249	2340	na	na

na= not available.

e= estimates.

a. Corn, rice, wheat, barley, sorghum, oats, rye, millet.

Sources:

Central Bureau of Statistics

Directorate General of Fisheries

Bank of Indonesia, Monthly Statistics

JAPAN

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	2899	2891	2883	2887	2899	2907	2915	2923	2923
From animal products	Cal/day	605	593	586	598	594	598	602	606	606
From vegetable products	Cal/day	2294	2298	2297	2289	2305	2310	2314	2319	2319
Protein (% of calories)	%	13.3	13.4	13.5	13.5	13.7	13.6	13.7	13.7	13.7
Fat (% of calories)	%	28.4	28.5	28.7	29.1	29.4	29.5	29.6	29.7	29.7
Carbohydrates(% of calories)	%	58.3	58.1	57.8	57.3	57.0	56.9	56.8	56.6	56.6
Income and Food Prices										
Per capita income	US\$/capita	24273	27597	30028	34452	37618	41045	41369	41369	41369
% of disposable income spent on food	%	19.5	18.7	17.9	17.0	16.2	15.4	14.6	13.8	13.8
% spent eating out	%	4.0	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8
Food price index	1990=100	100.0	104.8	105.4	106.5	107.4	106.1	106.5	107.2	107.2
General price index (CPI)	1990=100	100.0	103.3	105.0	106.4	107.1	107.0	107.4	108.1	108.1
Population										
Total population	Million	124	124	124	125	125	126	126	126	127
Urban	Million	95	96	96	97	97	98	98	98	99
Non-urban	Million	28	28	28	28	28	28	28	28	28
Life Expectancy										
Males	Years	75.9	76.1	76.1	76.3	76.6	76.4	76.4	76.4	76.4
Females	Years	81.8	82.1	82.2	82.5	83.0	82.8	82.8	82.8	82.8
Food Infrastructure										
Trade capacity										
Grain exports	1000 Tons	436	420	411	453	429	na	na	na	na
Grain imports	1000 Tons	27008	27918	27683	28035	29937	29391	29966	30566	31211
Total food and agricultural exports	Million US\$	1120	1245	1391	1485	1599	na	na	na	na
Total food and agricultural imports	Million US\$	28885	30044	31830	32131	38245	41816	44316	46816	49316
Percent of population with refrigerators	%	98.2	98.9	98.1	98.0	97.9	97.8	98.0	98.0	98.0
Foreign Investment in the Food Sector										
Inward FDI in the food sector, total	Million US\$	29	124	9	87	30	43	na	na	na
From other PECC economies	Million US\$	na	63	5	66	25	29	na	na	na
Outward FDI in the food sector, total	Million US\$	821	632	517	888	1260	854	na	na	na
To other PECC economies	Million US\$	613	578	493	867	1131	808	na	na	na
Role of Agriculture and Trade in the Economy										
Agriculture as a share of GDP	%	1.8	1.8	1.7	1.6	1.6	1.6	1.5	1.5	1.4
Self sufficiency in grains	%	30	29	29	22	33	30	30	30	29
Policy Transfers										
Consumer subsidy equivalents	%	-48	-49	-52	-53	-51	-50	-46	na	na
Exchange Rate										
	Yen/US\$	145	135	127	111	102	94	109	121	119

na= not available.

e= estimates.

Sources:

FAO: FAO STAT (CD DATA)

Ministry of Agriculture, Forestry and Fisheries, 1997 Outlook MAFF

Economic Planning Agency (EPA), National Accounts, 1995

Prime Minister's Office, Consumer Price Index 1996

OECD, Monitoring Report

KOREA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	2853	2876	2912	2872	2950	2980	3024	3068	3114
From animal products	Cal/day	395	370	398	408	416	439	452	465	480
From vegetable products	Cal/day	2457	2506	2514	2464	2534	2541	2572	2603	2634
Protein (% of calories)	%	16.9	15.1	15.8	15.9	16.3	16.4	16.5	16.7	16.8
Fat (% of calories)	%	13.9	16.6	16.6	18.2	18.4	18.6	18.8	18.9	19.1
Carbohydrates(% of calories)	%	69.2	68.3	67.6	65.9	65.3	65.0	64.7	64.4	64.1
Income and Food Prices										
Per capita income	US\$/capita	5883	6757	6988	7484	8467	10037	10548	10000	na
% of disposable income spent on food	%	32.5	31.8	30.4	29.3	29.5	28.8	28.1	27.5	26.8
% spent eating out	%	7.0	7.3	7.6	8.2	9.0	9.6	10.3	11.1	11.9
Food price index	1990=100	100.0	112.4	119.3	123.8	135.4	140.4	143.3	147.0	151.4
Population										
Total population	Million	42.9	43.3	43.7	44.2	44.6	45.1	45.5	46.0	46.4
Urban	Million	36.2	37.2	38.0	38.8	39.4	40.3	40.9	41.6	42.3
Non-urban	Million	6.7	6.1	5.7	5.4	5.2	4.8	4.6	4.4	4.2
Life Expectancy										
Males	Years	67.7	68.1	68.5	68.8	69.2	69.6	70.6	71.6	72.5
Females	Years	75.7	76.0	76.4	76.7	77.1	77.4	77.6	77.9	78.1
Food Infrastructure										
Trade capacity										
Grain exports	1000 Tons	1	12	2	0	0	0	0	0	0
Grain imports	1000 Tons	10070	11184	12100	12352	13172	14258	15310	16381	17453
Total food and agricultural exports	Million US\$	795	756	800	809	952	1242	1424	1495	1645
Perishable products	Million US\$	121	111	135	233	256	327	407	513	647
Total food and agricultural imports	Million US\$	3751	4420	4767	4571	5426	6899	8152	8967	9864
Perishable products	Million US\$	506	951	834	974	1335	1680	1739	1994	2286
Percent of population with refrigerators	%	99.8	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	8.7	7.7	7.4	7.1	7.0	6.6	6.3	5.9	5.6
Self sufficiency in grains	%	43.1	37.6	34.1	33.8	28.0	29.1	26.7	25.0	23.4
Exchange Rate	Won/US\$	708	734	781	803	804	807	807	na	na

na= not available.

e= estimates.

Sources:

Ministry of Agriculture and Forestry, *Handbook of Agriculture Statistics*, Seoul, Korea, 1997

Ministry of Health and Welfare, *Nutrition Survey Results*, Seoul, Korea, 1997

Agency of National Statistics, *Major Economic Indicators*, Seoul, Korea, 1997

MALAYSIA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns ^a										
Per capita caloric intake	Cal/day	2711	2830	na	na	na	na	na	na	na
From animal products	Cal/day	434	458	na	na	na	na	na	na	na
From vegetable products	Cal/day	2277	2372	na	na	na	na	na	na	na
Protein (% of calories)	%	8.3	8.2	na	na	na	na	na	na	na
Fat (% of calories)	%	31.0	31.8	na	na	na	na	na	na	na
Carbohydrates(% of calories)	%	60.7	60.0	na	na	na	na	na	na	na
Income and Food Prices										
Per capita income	US\$/capita	2311	2474	2882	3224	3597	4023	4447	4868	na
Food price index	1990=100	100.0	104.9	11.7	114.3	120.3	126.2	133.5	na	na
General price index (CPI)	1990=100	100.0	104.3	109.3	113.1	117.4	121.4	125.6	na	na
Population										
Total population	Million	17.8	18.6	19.0	19.6	20.1	20.7	21.2	na	na
Urban ^b	Million	na	9.5	na	na	na	11.3	na	na	na
Non-urban	Million	na	9.1	na	na	na	8.3	na	na	na
Life Expectancy										
Males	Years	68.8	68.9	69.1	69.1	69.3	69.5	na	na	na
Females	Years	73.4	73.2	73.5	73.6	74.0	74.1	na	na	na
Food Infrastructure										
Trade capacity										
Grain exports ^c	1000 Tons	77	130	123	121	169	207	na	na	na
Grain imports	1000 Tons	2700	3302	3267	3363	3571	4027	na	na	na
Total food and agricultural trade ^d	Million US\$	7231	7755	7956	8263	10700	12914	na	na	na
Total food and agricultural exports	Million US\$	4779	4937	5116	5203	1079	8585	na	na	na
Perishable products ^e	Million US\$	128	176	159	199	193	183	na	na	na
Total food and agricultural imports	Million US\$	2452	2818	2840	3060	3621	4339	na	na	na
Perishable products	Million US\$	310	357	359	416	473	546	na	na	na
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	18.7	17.2	16.7	16.1	14.6	13.5	12.7	11.9	na
Self sufficiency in grains	%	43	39	41	42	41	36	na	na	na
Exchange Rate	Ringgit/ US\$									

na= not available.

e= estimates.

a. Based on FAO data for 1988-90 and 1990-92.

b. The estimates were based on past and current demographic trends and analysis of the results of the Population and Housing Census from 1991.

c. Maize, rice and wheat.

d. Excluding forestry and fish products.

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

MEXICO

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	3038	3038	3053	3053	3053	na	na	3053	3053
From animal products	Cal/day	474	474	512	512	512	na	na	na	na
From vegetable products	Cal/day	2564	2564	2541	2541	2541	na	na	na	na
Income and Food Prices										
Per capita income	US\$/capita	2976	3461	3872	4847	4563	2569	2863	2995	3132
% disposable income spent on food	%	29.8	na	26.1	na	23.9	na	na	na	na
Food price index	1990=100	100.0	122.5	136.4	145.8	154.2	214.7	304.1	377.1	441.2
General price index (CPI)	1990=100	100.0	122.7	141.7	155.5	166.3	224.5	301.7	347.0	390.4
Population										
Total population	Million	81.3	na	85.6	na	na	91.2	93.0	94.9	96.8
Urban	Million	71.3	na	na	na	na	73.5	na	na	na
Non-urban	Million	28.7	na	na	na	na	26.5	na	na	na
Share of population in the following age groups										
0-4 years	%	12.5	na	12.3	na	na	11.8	na	11.7	11.7
5-14 years	%	25.8	na	25.3	na	na	23.6	na	23.5	23.4
15-19 years	%	11.9	na	11.7	na	na	11.1	na	11.0	11.0
20-44 years	%	34.1	na	34.2	na	na	37.1	na	37.4	37.5
45-64 years	%	10.9	na	12.1	na	na	11.7	na	11.7	11.7
65-79 years	%	3.2	na	4.4 <i>a</i>	na	na	3.5	na	3.6	3.7
80-over	%	1.0	na	na	na	na	0.9	na	0.8	0.9
Not specified	%	0.6	na	0.0	na	na	0.2	na	0.2	0.2
Life Expectancy										
Males	Years	67.9	68.2	68.4	68.6	68.9	69.1	69.6	69.8	70.2
Females	Years	73.9	74.1	74.4	74.6	74.9	75.1	76.7	76.7	77.4
Food Infrastructure										
Trade capacity										
Total food and agricultural trade <i>b</i>	Million US\$	7614	7843	9284	9598	11391	11082	13533	12994	13293
Total food and agricultural exports	Million US\$	2910	3200	3141	3683	4116	5861	5782	5935	6145
Total food and agricultural imports	Million US\$	4704	4643	6143	5915	7274	5222	7752	7059	7148
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	7.8	7.5	6.7	6.3	5.7	5.5	5.4	5.4	5.4
Exchange Rate	MXPeso/US\$	2.81	3.02	3.09	3.12	3.49	6.49	7.61	7.85 <i>c</i>	na

na= not available.

e= estimates.

a. Includes people 65 year old and older.

b. Includes Agriculture, Livestock, Food, Beverages and Tobacco. Fishery is not included

c. Average exchange rate from January through October 1997.

Sources:

Banco de Mexico

Instituto Nacional de Estadística, Geografía e Informática (INEGI)

Secretaría de Agricultura, Ganadería y Desarrollo Rural (SAGAR)

NEW ZEALAND

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake <i>a</i>	Cal/day	3352	3228	3384	3304	3255	3331	3336	3340	3351
From animal products	Cal/day	1329	1196	1200	1262	1166	1206	1191	1175	1143
From vegetable products	Cal/day	2023	2031	2184	2042	2088	2125	2145	2165	2208
Protein (% of calories)	%	15	14	15	15	15	14	14	14	14
Fat (% of calories)	%	37	38	37	38	38	37	37	37	37
Carbohydrates (% of calories)	%	44	48	48	47	48	48	49	49	49
Income and Food Prices										
Per capita income	US\$/ capita <i>c</i>	8095	8006	7470	7420	8358	9549	10515	11116	10748
% of disposable income spent on food <i>d</i>	%	13.2	13.7	13.2	13.4	13.3	12.8	13.0	12.9	12.8
% spent eating out <i>d</i>	%	2.7	2.7	2.5	2.5	2.7	2.8	2.8	2.9	2.9
Food price index <i>e</i>	1990=100	100.0	100.9	101.0	102.1	101.7	103.1	104.4	105.4	na
Population										
Total population, March year <i>g</i>	Million	3.4	3.4	3.5	3.5	3.5	3.6	3.7	3.7	3.7
Urban <i>h</i>	Million	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.1	3.1
Non-urban <i>h</i>	Million	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Life Expectancy										
Males	Years	72.4	72.8	73.1	73.4	na	na	na	na	na
Females	Years	78.3	78.7	78.9	79.1	na	na	na	na	na
Food Infrastructure										
Trade capacity										
Grain exports <i>a</i>	1000 Tons	33	31	58	29	37	na	na	na	na
Grain imports <i>a</i>	1000 Tons	272	216	153	275	309	na	na	na	na
Total food and agricultural trade	Million US\$	6124	5807	6123	6349	7254	8165	8803	7948	7364
Total food and agricultural exports <i>j</i>	Million US\$	5351	5087	5403	5522	6270	6991	7541	7948	7364
Perishable products <i>k</i>	Million US\$	3766	3834	4158	4331	4841	5233	5783	6279	5748
Total food and agricultural imports <i>l</i>	Million US\$	773	720	720	828	984	1174	1262	na	na
Perishable products <i>k</i>	Million US\$	291	288	301	349	418	492	535	na	na
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP <i>m</i>	%	6.4	5.4	6.2	5.9	6.2	5.8	5.7	5.6	5.5
Self sufficiency in grains <i>n</i>	%	85.8	84.7	89.5	81.6	80.2	78.0	83.1	84.9	na
Policy Transfers										
Consumer subsidy equivalents <i>o</i>	%	-5	-4	-3	-4	-6	-7	-6	na	na
Total transfer (tax / subsidy)	Million US\$	-42.4	-30.7	-24.2	-34.6	-56.0	-75.0	-65.0	na	na
Transfers per capita	US\$	-12.6	-9.0	-7.0	-9.9	-14.9	-23.0	na	na	na
Exchange Rate	NZ\$/ US\$	0.5973	0.5791	0.5382	0.5413	0.594	0.6564	0.6872	0.693	0.6453

na= not available.

e= estimates.

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 & vegetable products only. Forecasts based on NZIER data.

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

m. Statistics New Zealand , NZIER estimates and forecasts; estimates for 1995' 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)

PERU

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	1863	1941	1884	2080	2238	2277	2260	2317	2345
From animal products	Cal/day	263	262	258	281	297	318	322	326	330
From vegetable products	Cal/day	1600	1679	1626	1727	1072	1942	1966	1991	2015
Protein (% of calories)	%	51.2	51.1	49.4	53.7	57.9	60.0	62.2	na	na
Fat (% of calories)	%	42.8	46.6	50.4	49.1	51.2	52.8	54.4	na	na
Carbohydrates(% of calories) bc	%	56.1	59.7	61.8	65.1	66.9	66.8	66.9	na	na
Income and Food Prices										
Per capita income	US\$/capita	1116.5	1464.0	1413.5	1318.1	1541.3	1755.6	1812.5	na	na
% of disposable income spent on food	%	61.7	42.3	49.46	49.46	58.05	58.05	58.05	na	na
Food price index	1990=100	100.0	203.7	323.1	438.7	491.8	539.0	599.9	642.5	687.5
General price index (CPI)	1990=100	100.0	509.5	884.2	1313.7	1625.5	1806.4	2006.7	2187.3	2373.2
Population										
Total population	Million	21.6	22.0	22.4	22.7	23.1	23.5	23.9	24.4	24.8
Urban	Million	14.8	15.2	15.6	16.0	16.3	16.8	17.1	17.5	17.8
Non-urban	Million	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.9	7.0
Share of population in the following age groups										
0-4 years	%	13.4	13.2	13.0	12.8	12.6	12.3	12.1	11.9	11.7
5-14 years	%	24.9	24.6	24.4	24.1	23.9	23.6	23.3	23.0	22.7
15-19 years	%	10.9	10.9	10.9	11.0	11.0	11.0	10.9	10.8	10.7
20-44 years	%	34.9	35.2	35.4	35.7	36.0	36.2	36.6	36.9	37.3
45-64 years	%	12.0	12.1	12.2	12.3	12.4	12.5	12.7	12.8	13.0
65-79 years	%	3.5	3.5	3.6	3.6	3.7	3.7	3.8	3.9	4.0
80-over	%	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7
Median age of population	Years	20.9	20.6	20.4	20.4	20.3	20.2	20.2	20.2	20.2
Female labour force participation	%	38.2	38.6	39.0	39.4	39.8	40.2	40.8	41.3	41.9
Life Expectancy										
Males	Years	63.3	63.8	64.2	64.6	64.9	65.2	65.5	65.8	66.1
Females	Years	68.1	68.5	69.0	69.4	69.2	70.1	70.4	70.7	71.0
Food Infrastructure										
Trade capacity										
Grain exports	1000 Tons	151.6	152.9	125.9	100.6	153.7	190.8	196.9	203.6	210.5
Grain imports	1000 Tons	1749	1772	1949	2001	2053	2255	2296	1560	1553
Total food and agricultural trade	Million US\$	843	831	842	866	1171	1466	1702	1872	985
Total food and agricultural exports	Million US\$	293	352	279	268	468	619	621	883	971.3
Perishable products	Million US\$	86	127	149	169	199	231	232	330	na
Fishery exports	Million US\$	452	550	528	718	981	1011	1121	1118	1159
Total food and agricultural imports	Million US\$	550	479	563	599	703	847	1081	989	985
Perishable products	Million US\$	70	60	78	85	102	109	139	127	na
Fishery imports	Million US\$	0	0	0	0	0	0	0	0	0
Percent of population with refrigerators	%	na	na	65	63	62	67	70	73.5	na
Foreign Investment in the Food Sector										
Inward FDI in the food sector, total	Million US\$	2.3	0.6	3.3	14.0	0.8	na	na	na	na
Role of Agriculture and Trade in the Economy										
Agriculture as a share of GDP	%	13.4	13.4	12.6	12.9	13.0	13.1	13.3	14.0	13.2
Self sufficiency in grains	%	54.4	49.6	38.0	46.5	68.9	48.1	49.6	na	na
Self sufficiency in horticultural products	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Policy Transfers										
Total transfers (subsidy / tax)	Million US\$	39925	67644	119858	131827	100265	55459	na	na	na
Total transfers per capita	US\$/capita	1848.4	3047.7	5350.8	5807.4	4340.5	2359.9	na	na	na
Exchange Rate										
	New Sol/US\$	0.20	0.77	1.25	1.99	2.20	2.25	2.45	2.65	2.85

na= not available.

e= estimates.

Sources:

Instituto Nacional de Estadística e Informática (INEI)

Instituto CUANTO S.A.

Ministerio de Agricultura-Oficina de Información Agraria

Comisión Nacional de Inversión y Tecnología Extranjera (CONITE)

Superintendencia Nacional de Aduanas (SUNAD)

Interviews with import agencies and storehouse

SINGAPORE

	Units	1990	1991	1992	1993	1994	1995	1996	1997e
Food Consumption Patterns ^a									
Per capita caloric intake	Cal/day	na	3114 ^a	na	1981 ^a	na	na	na	na
From animal products	Cal/day	na	760	na	na	na	na	na	na
From vegetable products	Cal/day	na	2354	na	na	na	na	na	na
Protein (% of calories)	%	na	11	na	15.5	na	na	na	na
Fat (% of calories)	%	na	24	na	29.6	na	na	na	na
Carbohydrates(% of calories)	%	na	64	na	54.4	na	na	na	na
Income and Food Prices									
Per capita income	US\$/capita	12511	14092	15913	17701	21033	24673	na	na
% disposable income spent on food	%	na	na	na	26.4	na	na	na	na
% spent eating out	%	na	na	na	13.2	na	na	na	na
Food price index	1990=100	100.0	101.6	102.9	103.7	107.4	109.8	na	na
General price index (CPI)	1990=100	100.0	103.4	105.8	108.2	111.5	113.5	na	na
Population									
Total population	Million	2.7	2.8	2.8	2.9	2.9	3.0	na	na
Urban	Million	2.7	2.8	2.8	2.9	2.9	3.0	na	na
Non-urban	Million	0	0	0	0	0	0	na	na
Share of population in the following age groups									
0-4 years	%	na	na	na	na	na	na	na	na
5-14 years	%	na	na	na	na	na	8.6	na	na
15-19 years	%	na	na	na	na	na	8.4	na	na
20-44 years	%	na	na	na	na	na	52.8	na	na
45-64 years	%	na	na	na	na	na	22.4	na	na
65-79 years	%	na	na	na	na	na	3.1	na	na
80-over	%	na	na	na	na	na	4.8	na	na
Female labour force participation	%	50.3	50.5	51.3	50.6	50.9	50.0	na	na
Life expectancy									
Males	Years	73.1	73.4	73.8	74.0	74.2	74.2	74.4	na
Females	Years	77.6	77.9	78.3	78.3	78.5	78.7	78.9	na
Food infrastructure									
Trade capacity									
Grain exports	1000 Tons	104	121	125	131	167	187	na	na
Grain imports	1000 Tons	247	258	289	317	340	369	na	na
Total food and agricultural trade	Million US\$	3688	4444	4803	4916	5735	6143	na	na
Total food and agricultural exports	Million US\$	1508	1756	1833	1801	2319	2507	na	na
Perishable products ^b	Million US\$	765	886	874	895	1073	1125	na	na
Total food and agricultural imports	Million US\$	2175	2689	2969	3115	3416	3636	na	na
Perishable products	Million US\$	1524	1831	2000	2104	2203	2395	na	na
Fishery Imports	Million US\$	na	na	na	na	na	na	na	na
Foreign Investments in the Food Sector									
Inward FDI in the food sector, total ^c	Million US\$	228	173	316	267	325	na	na	na
Role of Agriculture and trade in the Economy									
Agriculture as share of GDP	%	0.26	0.22	0.21	0.18	0.18	0.17	na	na
Exchange Rate	SG\$/US\$	1.81	1.73	1.63	1.62	1.53	1.42	1.41	15.8

na= not available.

e= estimates.

a. Figures for 1991 are based on FAO Food Balance sheets on the basis of food availability. Figures for 1993 are supplied by the Food and Nutrition Department of the Ministry of Health (Singapore) on the basis of actual food consumption

b. Perishable products include live animals, meat and preps, dairy produce and eggs, fish and fish preps, vegetable and fruit.

c. Including agriculture and fishing, manufacturing in food, beverage and tobacco.

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	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	2955	2970	2860	2905	3012	2955	2960	2966	2970
From animal products	Cal/day	937	956	754	789	826	736	697	659	620
From vegetable products	Cal/day	2018	2014	2106	2116	2186	2219	2263	2307	2350
Protein (% of calories)	%	12.6	12.5	12.7	12.9	12.7	13.0	13.0	13.1	13.2
Fat (% of calories)	%	38.2	38.3	38.3	38.5	39.6	41.1	41.5	42.2	42.8
Carbohydrates(% of calories)	%	49.2	49.2	49.2	48.8	47.5	45.9	45.5	44.7	44.1
Income and Food Prices										
Per capita income	US\$/capita	8111	8982	10470	10852	11597	12439	13395	14249	15102
% disposable income spent on food	%	13.7	13.5	13.0	12.7	11.8	11.8	11.6	11.4	11.2
% spent eating out	%	2.32	2.42	2.51	2.59	2.78	2.81	2.86	2.91	2.96
Food price index	1990=100	100.0	103.6	108.3	111.4	116.0	120.3	124.0	128.0	132.0
Population										
Total population	Million	20.4	20.6	20.8	20.9	21.1	21.3	21.5	21.7	21.9
Urban	Million	16.1	16.4	16.4	17.0	17.1	17.4	17.7	18.0	18.2
Non-urban ^a	Million	4.3	4.2	4.1	4.0	4.0	3.9	3.8	3.7	3.7
Life Expectancy										
Males	Years	71.3	71.8	71.9	71.6	72.1	72.2	72.2	72.3	72.4
Females	Years	76.6	77.2	77.2	77.6	77.8	78.0	78.2	78.3	78.5
Food Infrastructure										
Trade capacity										
Grain exports	1000 Tons	115	185	136	121	149	222	166	208	219
Grain imports	1000 Tons	6294	6737	6675	6856	7517	7936	8075	5867	4965
Total food and agricultural trade	Million US\$	9750	11052	11574	11962	13690	15323	15842	15876	16209
Total food and agricultural exports	Million US\$	3661	4153	4101	4194	4843	5619	5624	4965	4604
Perishable products	Million US\$	2420	2875	2795	2822	2990	7402	3412	2586	2760
Total food and agricultural imports	Million US\$	6088	6899	7473	7768	8847	9704	10219	10911	11606
Perishable products	Million US\$	968	1063	1244	1282	1385	1491	1600	1704	1807
Foreign Investments in the Food Sector										
Inward FDI in the food sector, Total	Million US\$	110	38	55	55	93	43	108	na	na
From other PECC economies	Million US\$	80	35	42	50	88	31	106	na	na
Outward FDI in the food sector, Total	Million US\$	164	33	50	339	211	151	148	na	na
To other PECC economies	Million US\$	164	33	50	339	211	130	144	na	na
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	4.1	3.7	3.5	3.6	3.5	3.5	3.4	3.4	3.3
Self sufficiency in grains	%	38.6	37.6	35.6	37.2	35.6	32.7	31.3	29.6	28.4
Policy Transfers										
Consumer subsidy equivalents	%	-32.9	-32.1	-30.7	na	na	na	na	na	na
Total transfers (subsidy / tax)	Million US\$	-1569.1	-1598.7	-1515.6	na	na	na	na	na	na
Total transfers per capita	US\$/capita	-77.1	-77.8	-73.0	na	na	na	na	na	na
Exchange Rate	NT\$/US\$	26.9	26.8	25.2	26.4	26.5	26.5	27.5	27.5	na

na= not available.

e= estimates.

a. Non-urban population is farm population.

Sources:

Council of Agriculture, Food Balance Sheet.

Department of Budget, Accounting & Statistics, Report on Survey of Family Income & Expenditure

Investment Commission Ministry of Economic Affairs.

Council of Agriculture, Basic Agricultural Statistics.

Council of Agriculture, Food Self Sufficiency Ratio

THAILAND

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/day	1766	1766	1766	1766	1766	1751	1751	1751	1751
From animal products	Cal/day	92	92	92	92	92	119	119	119	119
From vegetable products	Cal/day	112	112	112	112	112	113	113	113	113
Protein (% of calories)	%	11.5	11.5	11.5	11.5	11.5	13.2	13.2	13.2	13.2
Fat (% of calories)	%	21.8	21.8	21.8	21.8	21.8	22.2	22.2	22.2	22.2
Carbohydrates(% of calories)	%	66.7	66.7	66.7	66.7	66.7	64.3	64.3	64.3	64.3
Income and Food Prices										
Per capita income	US\$/capita	1027	1151	1277	1394	1540	1760	1893	2035	1834
% of disposable income spent on food	%	36.2	36.2	34.8	34.8	33.6	33.6	32.0	32.0	31.8
% spent eating out	%	5.6	5.6	6.7	6.7	6.0	6.0	6.1	6.1	6.3
Food price index	1990=100	100.0	107.0	112.0	114.0	122.0	132.0	144.0	147.0	153.0
General price index (CPI)	1990=100	100.0	106.0	110.0	114.0	120.0	126.0	134.0	137.0	143.0
Population										
Total population	Million	56.3	57.0	57.8	58.3	59.1	59.5	60.1	60.6	61.2
Urban	Million	9.4	10.0	10.2	10.3	10.7	10.8	11.0	11.2	11.4
Non-urban	Million	46.4	46.9	47.6	48.1	48.4	48.1	49.1	49.4	49.8
Share of population in the following age groups										
0-4 years	%	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.8	8.7
5-14 years	%	10.5	10.3	10.1	10.0	9.8	9.6	9.4	9.2	9.0
15-19 years	%	10.3	10.2	10.2	10.1	9.9	9.8	9.7	9.6	9.4
20-44 years	%	39.6	40.0	40.4	40.7	41.0	41.3	41.5	41.6	41.7
45-64 years	%	14.8	15.0	15.2	15.4	15.7	16.0	16.2	16.6	17.0
65-79 years	%	3.1	3.2	3.2	3.2	3.4	3.5	3.6	3.7	3.8
80-over	%	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7
Life Expectancy										
Males	Years	66.5	66.5	66.5	66.5	66.5	67.4	67.4	67.4	67.4
Females	Years	71.0	71.0	71.0	71.0	71.0	71.7	71.7	71.7	71.7
Food Infrastructure										
Trade capacity										
Grain exports	1000 Tons	5290	5707	5332	5217	5011	6308	5724	5801	5879
Grain imports	1000 Tons	395	539	565	667	788	736	932	1057	1199
Total food and agricultural trade	Million US\$	9235	10127	11580	11169	13041	16418	16887	18718	20746
Total food and agricultural exports	Million US\$	6082	6674	7599	7007	8368	10810	10848	11981	13232
Perishable products	Million US\$	665	895	996	1024	1212	1394	1616	1848	2112
Fishery exports	Million US\$	2255	2893	3072	3397	4182	4443	5240	5977	6816
Total food and agricultural imports	Million US\$	3153	3453	3981	4162	4673	5608	6039	6737	2514
Percent of population with refrigerators	%	31.6	31.6	38.9	38.9	49.2	49.2	61.1	61.1	76.3
Foreign Investment in the Food Sector										
Inward FDI in the food sector, total	Million US\$	73.9	69.5	66.2	53.9	60.4	44.3	43.2	38.2	28.3
Outward FDI in the food sector, total	Million US\$	11.3	9.2	15.8	15.5	17.1	5.4	9.4	8.6	6.6
Role of Agriculture and Trade in the Economy										
Agriculture as a share of GDP	%	13.7	13.6	13.4	12.3	11.9	11.2	10.6	10.1	9.6
Self sufficiency in grains	%	64.7	75.2	64.3	67.5	77.2	66.6	66.7	67.8	na
Self sufficiency in horticultural products	%	85.1	84.0	78.0	89.5	90.7	74.4	67.7	73.4	71.7
Exchange Rate										
	Baht/US\$	25.496	25.416	25.320	25.220	25.050	24.815	25.244	25.951	na

na= not available.

e= estimates.

UNITED STATES OF AMERICA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns ^a										
Per capita caloric intake	Cal/day	3457	3496	3533	3591	3629	3603	3700	3750	3800
From animal products	Cal/day	960	971	985	986	1000	989	1000	1050	1075
From vegetable products	Cal/day	2497	2525	2548	2605	2629	2514	2700	2700	2725
Protein (% of calories)	%	12.4	12.4	12.3	12.3	12.3	12.2	12.2	12.2	12.2
Fat (% of calories)	%	35.9	36.3	35.9	36.1	35.7	35.5	35.3	35.2	35.1
Carbohydrates (% of calories)	%	51.7	51.3	51.7	51.7	51.9	52.3	52.5	52.6	52.7
Income and Food Prices										
Per capita income ^b	US\$/capita	16707	17230	18092	18581	19297	20240	21066	22010	23016
% disposable income spent on food ^c	%	11.6	11.6	11.1	11.1	11.2	11.0	11.0	11.0	11.0
% spent eating out ^c	%	4.3	4.2	4.1	4.3	4.3	4.3	4.4	4.4	4.5
Food price index ^d	1990=100	100.0	102.9	104.2	106.4	109.0	112.1	115.8	119.0	121.7
General price index (CPI) ^d	1990=100	100.0	104.2	107.3	110.6	113.4	116.6	120.0	123.6	127.6
Population										
Total population ^e	Million	249.4	252.1	255.0	257.8	260.4	262.9	265.3	268.0	270.3
Urban ^f	Million	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2
Non-urban ^f	Million	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
Share Population Age Groups ^e										
0-4 years	%	7.6	7.6	7.6	7.6	7.6	7.4	7.3	7.2	7.1
5-14 years	%	14.1	14.2	14.3	14.4	14.4	14.4	14.5	14.5	14.6
15-19 years	%	7.1	6.8	6.7	6.7	6.8	6.9	7.0	7.1	7.2
20-44 years	%	40.1	40.3	39.5	39.4	39.0	38.6	38.2	37.8	37.2
45-64 years	%	18.6	18.5	19.0	19.2	19.5	19.9	20.3	20.6	21.2
65-79 years	%	9.7	9.7	9.7	9.7	9.7	9.7	9.6	9.6	9.5
80-over	%	2.8	2.9	2.9	3.0	3.0	3.1	3.1	3.2	3.2
Median Age Population ^e	%	32.8	33.1	33.4	33.7	34.0	34.3	34.6	34.9	35.2
Female Labour Force Participation ^e	%	57.5	57.4	57.8	57.9	58.8	58.9	59.3	59.6	59.8
Life Expectancy ^g										
Males	Years	71.8	71.9	72.2	71.9	72.2	72.3	72.5	72.6	72.8
Females	Years	78.8	78.9	79.2	78.9	79.0	79.2	79.3	79.4	79.5
Food Infrastructure										
Trade capacity ^h										
Grain exports	1000 Tons	91758	85860	89439	86983	77274	103096	na	na	na
Grain imports	1000 Tons	2171	2807	3667	4603	7204	4795	na	na	na
Total food and agricultural trade	Million US\$	72299	71303	76714	76594	83233	96098	101943	108154	114743
Total food and agricultural exports	Million US\$	45211	44631	48247	47795	52332	62259	66536	71106	75990
Perishable products ⁱ	Million US\$	6814	7434	8353	8602	9769	11211	12394	13702	15148
Fishery exports	Million US\$	2799	3062	3377	2985	3033	3177	3269	3362	3454
Total food and agricultural imports	Million US\$	27088	26672	28467	28799	30901	33839	35407	37048	38765
Perishable products ^j	Million US\$	7879	7304	7438	7605	7703	7747	7862	7979	8098
Fishery imports	Million US\$	5519	5949	5975	6158	8940	7100	7473	7846	8219
Percent of population with refrigerators ^k	%	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7
Foreign Investments in the Food Sector ^k										
Inward FDI in the food sector, Total	Million US\$	2024	2146	2140	896	849	5514	na	na	na
Outward FDI in the food sector, Total	Million US\$	5877	2619	3843	6214	4927	2952	na	na	na
To other PECC economies ^l	Million US\$	1331	939	941	1968	1453	578	na	na	na
Role of Agriculture and Trade in the Economy ^k										
Agriculture as share of GNP (GDP)	%	1.6	1.2	1.3	1.1	1.2	1.1	1.1	1.1	1.1
Self sufficiency in grain ^m	%	169	159	170	150	161	156	na	na	na
Self sufficiency in horticultural products ⁿ	%	106	105	109	110	111	107	na	na	na
Policy Transfers ^o										
Consumer subsidy equivalents ^p	%	-11	-11	-11	-11	-10	-8	na	na	na
Total transfers (subsidy / tax) ^p	Million US\$	-11520	-11520	-11520	-12021	-11294	-8873	na	na	na
Total transfers per capita	US\$/capita	-46	-46	-45	-47	-43	-34	na	na	na

na= not available.

e= estimates.

Sources:

a. Food and Agriculture Organization of the United Nations.

b. US Department of Commerce, Bureau of Economic Analysis, "Economic Indicators". Data for 1997 and 1998 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) 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 1996-98 are ERS estimates.

d. US Department of Commerce, Bureau of Labour Statistics. 1997 and 1998 are ERS estimates.

e. US Bureau of Census, Current Population Reports and unpublished data. 1997 and 1998 resident population data are estimates.

f. US Bureau of Census: 1990 Census of Population and Housing, Population and Housing Unit Counts (1990 CPH-2). Data only available for census years

g. US Social Security Administration, Office of Actuary. Trustees Report to Congress, 1996.

h. Comtrade database of UN Statistics Division.

i. Excludes Nursery products.

j. US 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. Survey of Current Business, US Department of Commerce, Bureau of Economic Analysis. August 1994 and September 1996.

l. Canada, Chile, Colombia, Peru, Mexico, and all countries of Asia and the Pacific.

m. ERS supply and use estimates, includes wheat, rice, rye, corn, oats, barley, and sorghum. 1996 through 1998 are expected to exceed 100 per cent.

n. ERS supply and use estimates. Includes only fresh fruits and vegetables.

o. OECD, "Agricultural Policies, Markets and Trade in OECD Countries: Monitoring and Evaluation 1996".

p. 1990 through 1992 are the average of the three years, 1995 is an OECD estimate.

VIETNAM

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/ day	2230	2242	2275	2297	2334	na	na	na	na
From animal products	Cal/ day	180	178	200	205	211	na	na	na	na
From vegetable products	Cal/ day	2050	2064	2075	2092	2123	na	na	na	na
Protein (% of calories/ day)	%	50.9	50.9	52.4	53	54.5	na	na	na	na
Fat (% of calories/ day)	%	27.8	28.3	30.2	31.4	32.8	na	na	na	na
Income and Food Prices										
Per capita income	US\$/ capita	na	85.07	148.9	176.5	211.6	276.3	290.0	292.0	315.0
% disposable income spent on food	%	na	na	na	67.6	na	na	na	na	na
Food price index	1990=100	100.0	172.4	182.2	194.7	240.7	293.3	306.3	318.0	331.0
General price index (CPI)	1990=100	100.0	167.5	196.8	207.0	236.9	266.9	279.0	239.0	308.0
Population										
Total population	Million	66.2	67.8	69.4	71.0	72.5	74.0	75.5	77.0	78.5
Urban	Million	13.3	13.6	13.3	13.6	14.1	15.0	15.3	15.6	15.9
Non-urban	Million	51.9	53.1	55.1	56.3	57.4	58.0	59.2	60.3	61.6
Share of population in following age groups										
0-4 years	%	na	na	na	12.1	na	na	na	na	na
5-14 years	%	na	na	na	25.6	na	na	na	na	na
15-19 years	%	na	na	na	10.8	na	na	na	na	na
20-44 years	%	na	na	na	34.2	na	na	na	na	na
45-64 years	%	na	na	na	11.9	na	na	na	na	na
65-79 years	%	na	na	na	4.7	na	na	na	na	na
80 over	%	na	na	na	0.7	na	na	na	na	na
Median age of population	Years	na	na	na	26.1	na	na	na	na	na
Female labour force participation	%	na	na	na	na	na	48.2	na	na	na
Life Expectancy										
Males	Years	na	na	na	na	na	na	62	na	na
Females	Years	na	na	na	na	na	na	67	na	na
Food infrastructure										
Trade capacity										
Grain exports	1000 Tons	1624	1033	1946	1722	1893	2052	3046	3500	3500
Grain imports	1000 Tons	141	197	252	251	260	294	332	375	425
Total food and agricultural trade	Million US\$	897	766	968	1126	1479	1401	1956	2240	2587
Total food and agricultural exports	Million US\$	783	628	828	920	1253	1141	1657	1906	2192
Total food and agricultural imports	Million US\$	114	138	140	206	226	260	299	334	395
Foreign Investment in the Food Sector										
Inward FDI in the food sector, Total	Million US\$	37.1	53.8	62.2	110.5	279.1	420.1	228.9	300.0	500.0
Role of Agriculture and Trade in the Economy										
Agriculture as share of GDP	%	37.5	40.5	33.9	29.9	28.7	27.6	26.0	24.4	23.0
Self sufficiency in grains	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Exchange Rate										
	Dong/US\$	na	13.3	10.7	10.9	11.1	10.9	11.2	12.0	12.0

na= not available

e= estimates.

PAPUA NEW GUINEA

	Units	1990	1991	1992	1993	1994	1995	1996	1997e	1998e
Food Consumption Patterns										
Per capita caloric intake	Cal/ day	2080	2185	2403	na	na	na	na	na	na
From animal products	Cal/ day	183	182	202	na	na	na	na	na	na
From vegetable products	Cal/ day	586	547	486	na	na	na	na	na	na
Income and Food Prices										
Per capita income	US\$/ capita	860	984	1056	1280	1279	1154	1145	1069	na
% disposable income spent on food	%									
Food price index	1990=100	100.0	107.9	111.2	114.9	116.0	137.0	na	na	na
Population										
Total population	Million	3.8	3.9	3.8	4.0	4.1	4.2	4.3	4.4	na
Urban	Million	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	na
Non-urban	Million	3.2	3.2	3.3	3.4	3.4	3.5	3.6	3.9	na
Life Expectancy										
Males	Years	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	na
Females	Years	50.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7	na
Food Infrastructure										
Trade capacity										
Total food and agricultural exports	Million US\$	285	215	215	239	375	498	na	na	na
Total food and agricultural imports	Million US\$	214	205	203	203	338	340	na	na	na
Perishable products	Million US\$	40.3	41.5	42.4	42.1	58.4	88.0	na	na	na
Role of Agriculture and Trade in the Economy										
Agriculture as share of GNP (GDP)	%	28.2	28.0	26.7	28.0	28.5	na	na	na	na
Self sufficiency in grains	%									

na= not available

e= estimates.

PACIFIC FOOD OUTLOOK COORDINATORS AND FORECASTING PANELS

PECC COORDINATORS

Carole Brookins
Chair of PECC Food & Agriculture Forum
Chairman & CEO, World Perspectives, Inc.

Robert L. Thompson
Senior Coordinator,
Pacific Food Outlook
President and CEO, Winrock International
Institute for Agricultural Development

Constanza M. Valdes
Project Director,
Pacific Food Outlook
PECC International Secretariat

William T. Coyle
Senior Economist, Market and Trade
Economics Division
Economic Research Service,
US Department of Agriculture

AUSTRALIA

Terry Sheales
Chief Commodity Analyst
Mark Brice, Senior Research Officer
Australian Bureau of Agricultural and
Resource Economics (ABARE)

CANADA

Brad Gilmour
Lars Brink
Claver Gatete
Foreign Agrifood Analysis Section
Agriculture and Agrifood Canada

CHILE

Jose Garrido
Professor
University of Chile

CHINA

Lu Xiaoping
Economist, Deputy Division Director
Department of International Cooperation
Ministry of Agriculture

COLOMBIA

Enrique Ospina
Subgerencia de Estudios Economicos
Unidad de Investigaciones
Banco de la Republica.

HONG KONG, CHINA

Lau Pui King
Associated Professor and Associated Head
Department of Business Studies
Hong Kong Polytechnic University

Lee Chi Chung Derek
Economist
Economic Analysis Division,
Financial Services Branch
Hong Kong Government

INDONESIA

H. S. Dillon,
Ministry of Agriculture

JAPAN

Natsuki Fujita
Professor of Agricultural & Resource
Economics
The University of Tokyo

Osamu Koyama
International Research Coordinator
Japan International Research Center for
Agricultural Sciences(JIRCAS)

KOREA

Choi Sei-Kyun
Research Fellow
Korea Rural Economic Institute

MALAYSIA

Dato Ahmad Zabri Ibrahim
Lim Eng Siang
Ministry of Agriculture

MEXICO

Andres Rosenzweig Pichardo
Director General Ag. Sector Studies
Alejandro Vazquez Salido
Director of Economic Studies
Secretaria de Agricultura, Ganaderia y
Desarrollo Rural, SAGAR

NEW ZEALAND

Allan Rae
Department of Applied & International
Economics, and Centre for Applied
Economics and Policy Studies,
William Bailey
Dept. of Agribusiness and Res. Mgt.
Massey University

PERU

Miguel Angel Alcantara
Professor
School of Economics and Planning
Agrarian National University La Molina
Elsa Galarza
Researcher
Research Centre
Universidad del Pacifico (CIUP)

THE PHILIPPINES

Pablito M. Villegas
Professor
Department of Agriculture
University of the Philippines

SINGAPORE

Chew Soon Beng
Associate Professor
Nanyang Technological University
Singapore

Rosalind Chew
Senior Lecturer
Nanyang Technological University
Singapore

CHINESE TAIPEI

Peng, Tso Kwei
Dean of the College of Agriculture
National Chunghsing University

THAILAND

Kajonwan Itharattana
Senior Policy and Plan Analyst
Office of Agricultural Economic (OAE)
Ministry of Agriculture and Cooperative
(MOAC)

UNITED STATES

James Blaylock
Associated Director
Food and Consumer Economics Division
Economic Research Service
United States Department of Agriculture

VIETNAM

Cao Duc Phat
Director
Department of Agriculture and Rural
Development Policy
Ministry of Agriculture and Rural
Development

PAPUA NEW GUINEA

Francis Mangila
Director Policy and Planning
Department of Agriculture and Livestock

APEC

Julie Gould
Director (Program)
Asia -Pacific Economic Cooperation
Singapore

FAO

Mechel Paggi
Senior Commodity Specialist
Food and Agriculture Organization of the
United Nations, Rome, Italy

OECD

Josef Schmidhuber
Administrator
Organization for Economic Cooperation
and Development, Paris, France

PACIFIC ECONOMIC COOPERATION COUNCIL MEMBERS

PACIFIC ECONOMIC COOPERATION COUNCIL

Pacific Economic Cooperation Council International Secretariat

4 Nassim Road
Singapore 258372
Tel: 65-737 9822/23
Fax: 65-737 9824

AUSTRALIA

Australian Pacific Economic Cooperation Committee (AUSPECC)

JG Crawford Building
Australian National University
Canberra ACT 0200
Australia
Tel: 61-6-249 0153
Fax: 61-6-249 0169

BRUNEI DARUSSALAM

Brunei Darussalam National Committee for Pacific Economic Cooperation (BDCPEC)

Economics Department
Ministry of Foreign Affairs
Jalan Subok
Bandar Seri Begawan 1120
Brunei Darussalam
Tel: 673-2-261 274, 261 177
Fax: 673-2-261 703

CANADA

Canadian National Committee for Pacific Economic Cooperation (CANCPEC)

Asia Pacific Foundation of Canada
666-999 Canada Place
Vancouver, BC, V6C 3E1
Canada
Tel: 1-604-684 5986
Fax: 1-604-681 1370

CHILE

Chilean National Committee for Pacific Economic Cooperation (CHILPEC)

Chile Pacific Foundation
Av. Los Leones 382, Of. 701
Providencia
Santiago, Chile
Tel: 56-2-334 3200
Fax: 56-2-334 3201

CHINA

China National Committee for Pacific Economic Cooperation (CNCPEC)

China Institute of International Studies
3 Toutiao Taijichang
Beijing
China 100005
Tel: 86-10-6513 1421
Fax: 86-10-6523 5135

COLOMBIA

Colombia National Committee for Pacific Economic Cooperation (COLPECC)

Calle 10 No 5-51
Santafe de Bogota
Colombia
Tel: 57-1-233 2625, 286 3925
Fax: 57-1-283 8441

HONG KONG, CHINA

Hong Kong Committee for Pacific Economic Cooperation (HKCPEC)

c/o Trade Department
18/F Trade Department Tower
700 Nathan Road
Kowloon
Hong Kong, China
Tel: 852-2398 5305, 2398 5447
Fax: 852-2789 2491, 2787 7799

INDONESIA

Indonesian National Committee for Pacific Economic Cooperation (INCPEC)

Centre for Strategic and International Studies (CSIS)
Jalan Tanah Abang III/23-27, Jakarta 10160
Indonesia
Tel: 62-21-386 5532/5, 380 9637/9
Fax: 62-21-384 7517, 380 9641

JAPAN

Japan National Committee for Pacific Economic Cooperation (JANCPEC)

The Japan Institute of International Affairs (JIIA)
11F Kasumigaseki Building
3-2-5 Kasumigaseki, Chiyodaku
Tokyo 100 Japan
Tel: 81-3-3503 7744
81-3-3503 7758 (Triple-T)
Fax: 81-3-3503 6707

KOREA

Korea National Committee for Pacific Economic Cooperation
(KOPEC)
300-4, Yeorngok-dong, Seocho-gu
Seoul 137-800, Korea
Tel: 82-2-3460 1239, 1240
Fax: 82-2-3460 1244

MALAYSIA

Malaysia National Committee for Pacific Economic Cooperation
(MANCPEC)
Institute of Strategic and International Studies (ISIS)
No. 1 Pesiaran Sultan Salahuddin
PO Box 12424 50778 Kuala Lumpur
Malaysia
Tel: 60-3-293 9366, 293 9439
Fax: 60-3-293 9430

MEXICO

Mexico National Committee for Pacific Economic Cooperation
(MXCPEC)
General Director for Economic Affairs with Asia, Pacific and North America
Ministry of Foreign Affairs
Eje Central Lazaro Cardenas
No. 257, Cuerpo B, 1st Floor
06900 Mexico, DF
Tel: 525-782 4158, 327 3507
Fax: 525-117 4218

NEW ZEALAND

New Zealand Committee of the Pacific Economic Cooperation Council
(NZPECC)
c/o Asia 2000 Foundation
Level 7 AMP House
109 Featherston Street
PO Box 10144
Wellington
New Zealand
Tel: 64-4-471 2320
Fax: 64-4-471 2330

PERU

Peruvian National Committee for Pacific Economic Cooperation
(PERUPEC)
Ministry of Foreign Affairs
Palacio Torre Tagle
Jr. Ucayali 363
Lima, Peru
Tel/Fax: 51-1-426 0130
Tel/Fax: 51-1-426 2686

THE PHILIPPINES

Philippine Pacific Economic Cooperation Committee (PPECC)
APEC Foundation of the Philippines, Inc
8/F Ramon Cojuangco Building Makati Avenue,
Makati City Philippines
Tel: (63)-2-817 1970, 816 8115, 8102323
Fax: (63)-2-810 4444, 843 3333

RUSSIA

Russian National Committee for Pacific Economic Cooperation
(RNCPEC)
Ministry of Foreign Affairs of the Russian Federation
Department of Economic Cooperation

Arbat 54/2
121200 Moscow
Russian Federation
Tel: 7-095-241 3530
Fax: 7-095-253 9088

SINGAPORE

Singapore National Committee for Pacific Economic Cooperation
(SINCPEC)
School of Accountancy and Business
Room 01A-09
Nanyang Technological University
Nanyang Avenue
Singapore 639798
Tel: 65-799 4761
Fax: 65-793 0523

CHINESE TAIPEI

Chinese Taipei Pacific Economic Cooperation Committee
(CTPECC)
Taiwan Institute of Economic Research (TIER)
8F, 16-8, Tehwei Street
Taipei, Taiwan
Tel: 886-2-586 5000
Fax: 886-2-594 6528 (Direct)
586 8855

THAILAND

Thailand National Committee for Pacific Economic Cooperation
(TNCPEC)
Department of Economic Affairs
Ministry of Foreign Affairs
Saranrom Palace, Bangkok 10200
Thailand
Tel: 66-2-225 7385, 221 2839
Fax: 66-2-226 1841, 224 6790

UNITED STATES

United States National Committee for Pacific Economic Cooperation
(USNCPEC)
1112 16th Street, N.W.
Suite 520
Washington, D.C. 20036
USA
Tel: 1-202-293 3995
Fax: 1-202-293 1402

VIETNAM

Vietnam National Committee for Pacific Economic Cooperation
171 Vo Thi Sau, Q3
Ho Chi Minh City SR Vietnam
Tel: 84 8 823 0301
Fax: 84 8 829 4472

SOUTH PACIFIC FORUM

Forum Secretariat
Private Mail Bag, Suva Fiji
Tel: 679-312 600, (Direct) 302 375
Fax: 679-301 102

FRANCE (PACIFIC TERRITORIES)

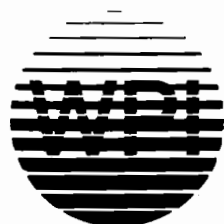
France (Pacific Territories) National Committee for Pacific Economic Cooperation (Associate Member)
c/o HEC EURASIA INSTITUTE
78351 Jouy-en-Josas
Cedex - France
Tel: 331-39 67 70 25
Fax: 331-39 67 73 99

Pacific Food Outlook Sponsors



CARGILL ASIA PACIFIC LTD

Farm Foundation



**WORLD
PERSPECTIVES,
INC.**

