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# Southeast Asia

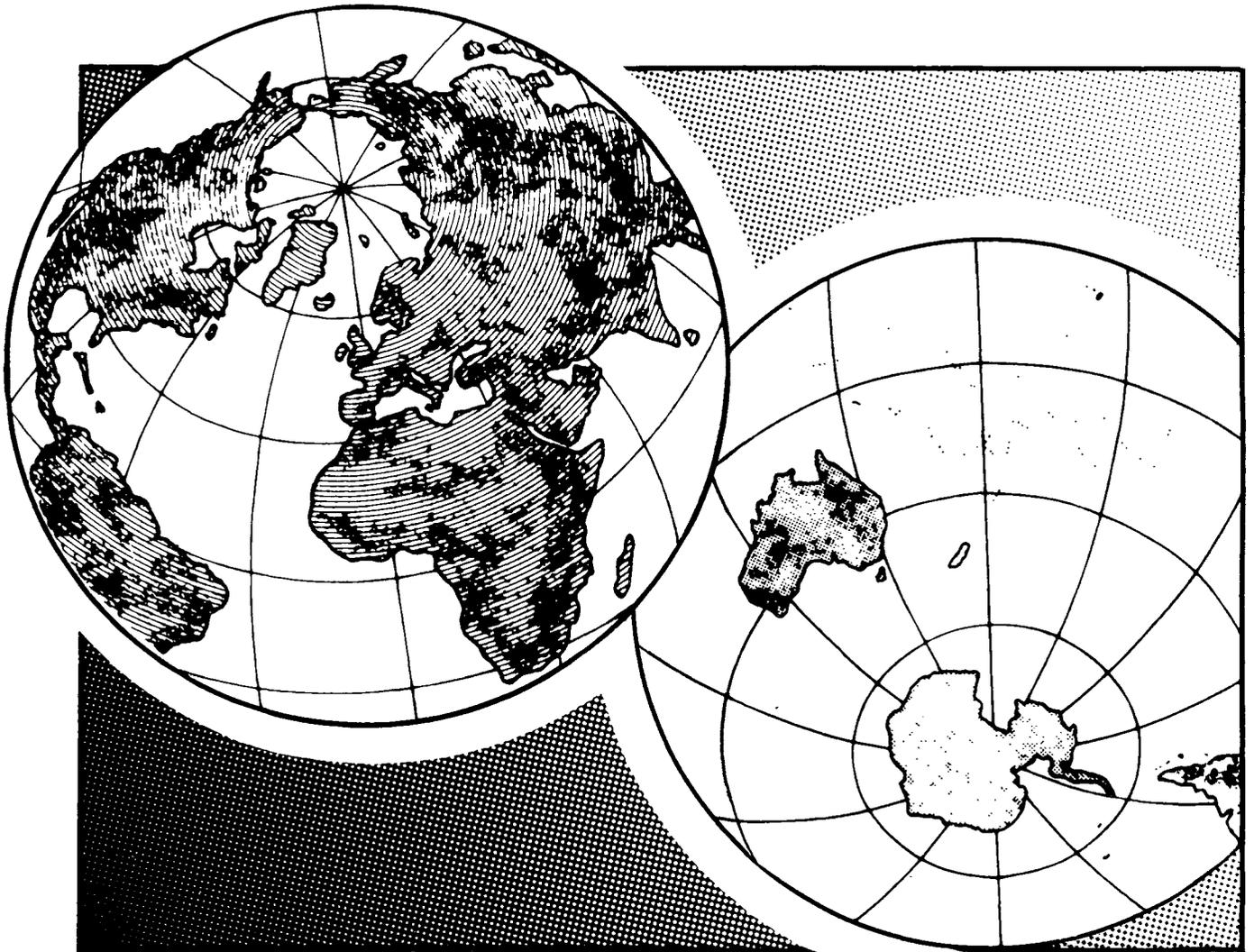
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## World Agriculture Regional Supplement

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Review of 1982 and Outlook for 1983



## ABSTRACT

For all Southeast Asian countries, economic growth was lower during 1982 than during 1981. For most countries, the trade deficit was higher, foreign exchange holdings lower, and commodity prices weaker. Agricultural output was up slightly during the year. U.S. farm exports to the region reached \$1.2 billion in 1982 and should be somewhat higher in 1983 as larger volumes again offset declining commodity prices. Agricultural production in Southeast Asia should increase 2 to 4 percent during 1983, with gains expected in the region's output of rice, coarse grains, and vegetable oil.

**KEYWORDS:** Southeast Asia, Burma, Indonesia, Kampuchea, Laos, Malaysia, the Philippines, Singapore, Thailand, Vietnam, economic growth, agricultural production, agricultural trade.

## FOREWORD

This report describes and analyzes recent developments in Southeast Asia that affect the agricultural trade of the United States. The area covered includes Burma, Indonesia, Kampuchea, Laos, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. This is the first ERS report to deal exclusively with Southeast Asia.

The report summarizes key events associated with the economic and agricultural performance of each country in the region. World and domestic policy developments are discussed in explaining the situation in 1982 and in providing the outlook for 1983. In addition, two special articles highlight significant issues in the region: prospects for expanded U.S. agricultural trade and the growing importance of livestock.

Wayne Denney directed and coordinated this report. Sections were written by John Dyck, Albert Evans, William Hall, Richard Nehring, and Leslie Ross. John Dunmore and Michael Kurtzig reviewed the report and provided valuable comments. Grateful acknowledgement is extended to the Foreign Agricultural Service, whose agricultural counselors and attaches provided much of the information contained in this report. Patricia Singer edited the report. Patricia Abrams, Rebekah Pearson, and Bernadine Holland typed the report.

The International Economics Division's program of agricultural outlook and situation analysis and reporting includes the following regularly scheduled publications: *World Agricultural Outlook and Situation*, published quarterly; *World Agriculture Regional Supplements*, a series of 11 reports, issued annually, covering China, East Asia, Eastern Europe, Latin America, the Middle East and North Africa, North America and Oceania, South Asia, Southeast Asia, the Soviet Union, Sub-Saharan Africa, and Western Europe; *Foreign Agricultural Trade of the United States*, published bimonthly; and *Outlook for U.S. Agricultural Exports*, published quarterly. Information on obtaining these publications is included elsewhere in this report.

The division also publishes the *Food Aid Needs and Availabilities* report and the *World Indices of Agricultural and Food Production*. For information on those publications, contact the International Economics Division, USDA, Rm. 348, 500 12th Street, SW., Washington, D.C. 20250.

We welcome any comments, suggestions, or questions about this report or other aspects of the agricultural situation in Southeast Asia. Responses should be directed to the Asia Branch, International Economics Division, Economic Research Service, USDA, Room 350, 500 12th Street, SW., Washington, D.C. 20250. Our telephone number is (202) 447-8229.

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Branch Chief

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## EXPLANATORY NOTES

Production is usually reported by calendar year. This includes crops harvested primarily in 1982 but continuing into early 1983. Unless otherwise stated, references to years are calendar years. Unless otherwise specified, split years (for example, 1981/82) mean July-June.

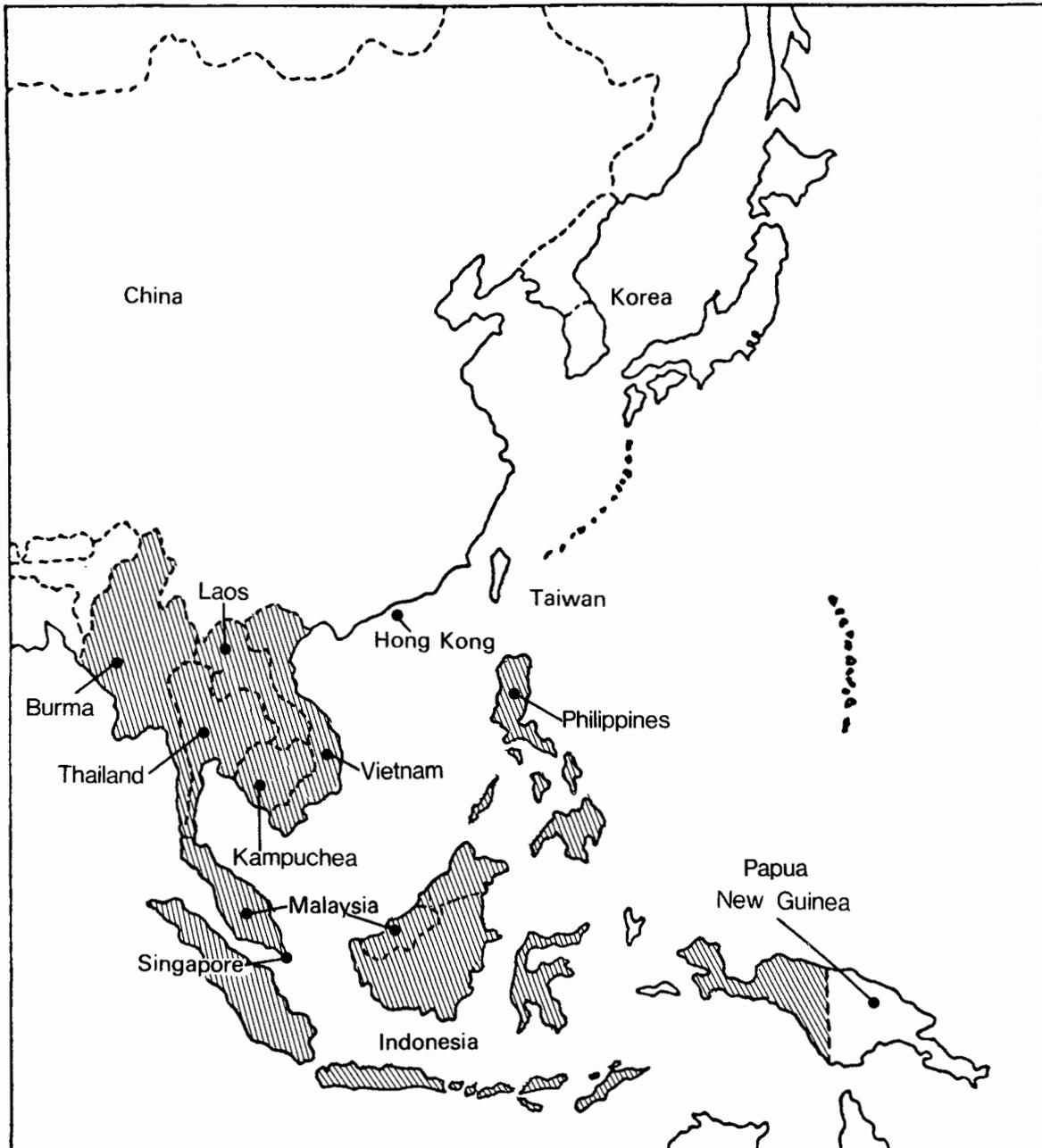
The share of production contributed by each commodity, which is calculated for most countries, is based on 1969-71 average producer prices for each commodity. Using these prices, the total value of agricultural production during 1982 is derived.

GNP refers to gross national product and GDP refers to gross domestic product. HYV refers to high-yielding varieties of a crop. All tons are metric. Dollars are U.S. dollars. On a table, a dash indicates zero or negligible quantities; NA indicates that data are not available or

not applicable. Rice data are for milled rice unless otherwise specified.

Subregions are defined as follows: Southeast Asia consists of Burma, Indonesia, Kampuchea, Laos, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. The Association of Southeast Asian Nations (ASEAN) consists of Indonesia, Malaysia, the Philippines, Singapore, and Thailand. East Asia consists of Hong Kong, Japan, South Korea, and Taiwan. South Asia consists of Afghanistan, Bangladesh, India, Nepal, Pakistan, and Sri Lanka.

Because of revision, numbers in this report may differ from those previously reported. This report is based primarily on information available by May 1, 1983.



# SOUTHEAST ASIA

## REVIEW OF AGRICULTURE IN 1982 AND OUTLOOK FOR 1983

### SUMMARY

The economic growth of every country in Southeast Asia slowed in 1982 although the area remains among the most rapidly growing regions in the world. Real gross domestic product growth averaged only 4 percent. Lower commodity prices kept inflation below 10 percent for the second consecutive year, but most of the other regional economic indicators reflected a deteriorating situation. The combination of world recession and growing protectionism in some industrial countries substantially weakened demand for the region's commodity exports.

#### Trade Deficit Widens

The region's total trade was in deficit by \$13.3 billion, up from \$9.9 billion a year earlier. Lower petroleum revenues in Indonesia prompted most of the \$3.4-billion decline, with all countries showing a trade deficit for the year and all countries except Thailand and Burma showing a deteriorating trade position. The region's trade problems were the principal reason for a \$2.7-billion decline in foreign exchange reserves during the year, with more than half of the decline occurring in Indonesia.

More than half of the work force is engaged in agriculture in all countries except Singapore (1 percent) and Malaysia (40 percent). Excluding Singapore, agricultural contribution to GDP ranges from 24 percent in Malaysia to 45 percent in Vietnam. Although the relative importance of agriculture in the region's economies has declined somewhat during the last 10 years, overall economic performance still depends heavily on agriculture.

#### Agriculture Dominates Region

During the past decade, agricultural output in Southeast Asia rose nearly 60 percent, more than for any other region in the world. The growth of Southeast Asian agriculture in the past 10 years was more than double that of South Asia and more than triple that of East Asia. Despite this history (6 percent average annual growth from 1977 to 1981), the 1982 output was up only 2 percent. Strong gains were made in Burma, Malaysia, and Vietnam, supplementing marginal increases in Indonesia and the Philippines, countries whose output contributes substantially to the regional total. Thailand's 1982 agricultural output remained the same as the 1981 record harvest.

Agricultural production has shown some diversification in recent years, but rice is still the most important commodity for every country except Malaysia, where it ranks fourth. It accounts for 41 percent of the value of food production in Southeast Asia and 35 percent of the value

of total agricultural production. Because of its importance, a successful rice harvest is normally associated with a good agricultural year. In 1982, rice output was up 2 percent to a record 60.8 million tons, primarily because of bumper harvests in Indonesia, Vietnam, and Burma. Vegetable oil output continued its steady climb and sugar rebounded from the low 1981 level, but the region's coarse grains declined. Domestically produced cotton accounts for about one-fourth of utilization in Southeast Asia; wheat production in the region remains insignificant.

#### Rapid Growth in Livestock

Livestock experienced rapid growth during the past decade and should make further gains during the 1980's (see the special article on livestock growth potential in ASEAN). A favorable economic outlook provides much of the basis for concluding that livestock products will be more important in Southeast Asian diets in the future. The broiler and pork sectors offer the best opportunities for significant advances during the 1980's. Expanded demand for livestock products in Southeast Asia will provide U.S. exporters with larger markets for feedstuffs, breeding stock, and poultry products.

Agricultural growth during 1983 is likely to be 2 to 4 percent. Lower commodity prices have reduced the incentive to expand area or use more inputs. The spring rice harvest in Malaysia should be above the drought-plagued crop of a year ago, but drought in late 1982 will probably result in a smaller 1983 harvest in Indonesia. Increased palm oil production in Malaysia and Indonesia should allow the region's vegetable oil output to reach another record. A better corn harvest in Thailand is expected to revive the region's coarse grain output. Lower sugar output seems probable from preliminary indications of a downturn in the Thai crop.

#### U.S. Farm Exports Rising

During fiscal 1982 (October 1, 1981, to September 30, 1982), Southeast Asia purchased \$1.2 billion of U.S. agricultural products, three-quarters of which were wheat, feed grains, soybeans, tobacco, and cotton (see the special article on U.S.-Southeast Asian trade). Compared with fiscal 1981, larger exports of most of these farm goods compensated for generally lower commodity prices. During fiscal 1983, U.S. farm exports are expected to continue their slight upward trend, as larger volumes again offset lower commodity prices. Because drought reduced Australian wheat, Thai and Philippine corn, and the 1983 Indonesian rice crop, U.S. export earnings are expected to rise by \$30-40 million. As usual, Indonesia and the Philippines will buy 55-60 percent of U.S. farm exports to the region.

**Table 1.—Southeast Asia: selected macroeconomic indicators, 1982**

Country	GDP <sup>1</sup> (current)	Real GDP <sup>1</sup> growth	Midyear population	Population growth <sup>2</sup>	Inflation rate	International reserves	Change in international reserves
	<i>Million dollars</i>	<i>Percent</i>	<i>Million</i>	<i>Percent</i>	<i>Percent</i>	<i>Million dollars</i>	
Burma	6,240	4.0	35.7	2.3	3.6	89	-140
Indonesia	95,900	3.0	153.9	2.1	9.7	4,200	-1,850
Kampuchea	NA	NA	6.0	2.6	NA	NA	NA
Laos	NA	NA	3.6	2.8	NA	NA	NA
Malaysia	27,300	3.9	14.7	2.2	6.5	4,000	-180
Philippines	41,494	2.6	51.8	2.4	8.5	1,720	-854
Singapore	14,177	6.3	2.4	1.0	3.7	7,632	+83
Thailand	36,196	4.2	48.4	2.0	5.2	2,428	+245
Vietnam	NA	NA	56.4	2.4	100.0	45	-3
Total	221,307	4.0	372.9	2.2	8.7	20,114	-2,699

NA = Not available.

<sup>1</sup>Gross national product for Burma, the Philippines, and Thailand. <sup>2</sup>Calculations made before rounding.

Sources: U.S. Bureau of Census, Department of Commerce; ERS estimates.

**Table 2.—Southeast Asia: fiscal year, currency, and exchange rates, 1982**

Country	Fiscal year	Currency and abbreviation	Midpoint rate of exchange for \$US1, June 1982
Burma	1 April to 31 March	Kyat (K)	7.894
Kampuchea	1 January to 31 December	Riel (KR)	NA
Indonesia	1 April to 31 March	Rupiah (Rp)	657.200
Laos	1 July to 30 June	New Kip (NK)	10.000
Malaysia	1 January to 31 December	Ringgit (\$M)	2.360
Philippines	1 January to 31 December	Peso (P)	8.470
Singapore	1 April to 31 March	Singapore dollar (\$S)	2.150
Thailand	1 October to 30 September	Baht (B)	23.000
Vietnam	1 January to 31 December	Dong	9.453

Source: Economic and Social Survey of Asia and the Pacific, 1982, United Nations.

**Table 3.—Southeast Asia: total exports and imports, 1980-82**

Country	Exports			Imports			Trade balance		
	1980	1981	1982	1980	1981	1982	1980	1981	1982
	<i>Billion dollars</i>								
Burma	0.4	0.5	0.4	0.8	0.7	0.6	-0.4	-0.2	-0.2
Indonesia	21.9	22.3	20.0	15.6	20.0	21.0	6.3	2.3	-1.0
Malaysia	12.9	11.1	11.6	10.6	11.4	12.3	2.3	-0.3	-0.7
Philippines	5.8	5.7	5.0	7.7	7.9	7.9	-1.9	-2.2	-2.9
Singapore	19.4	21.0	21.0	24.0	27.6	28.0	-4.6	-6.6	-7.0
Thailand	6.5	7.0	6.3	9.2	9.9	7.8	-2.7	-2.9	-1.5
Total	66.9	67.6	64.3	67.9	77.5	77.6	-1.0	-9.9	-13.3

Sources: International Financial Statistics; various country sources; ERS estimates.

**Table 4.—Southeast Asia: agricultural exports and imports, 1980-82**

Country	Exports			Imports			Trade balance		
	1980	1981	1982	1980	1981	1982	1980	1981	1982
<i>Million dollars</i>									
Burma	401	495	386	650	775	850	-249	-280	-464
Indonesia	2975	2110	1800	1564	1620	1500	1411	490	300
Malaysia	4009	3603	3200	1222	1375	1475	2787	2228	1725
Philippines	1989	1890	1650	595	664	750	1394	1226	986
Singapore	3161	2732	2350	3062	2849	2650	99	-117	-300
Thailand	3359	3954	3888	664	628	542	2695	3326	3346
Total	15,894	14,784	13,274	7,757	7,911	7,767	8,137	6,873	5,593

Sources: Various country sources; ERS estimates.

**Table 6.—Southeast Asia: production, trade, and stocks of selected agricultural commodities, 1981-83**

Commodity	Production	Imports	Exports	Ending Stocks
<i>1,000 tons</i>				
Rice (milled)				
1981	59,634	1,305	4,396	6,735
1982	60,673	1,130	4,095	5,897
1983 est.	60,594	3,070	4,022	6,234
Wheat				
1981	115	4,338	293	444
1982	115	4,565	295	478
1983 est.	120	4,715	300	493
Coarse grains				
1981	13,184	1,690	3,365	499
1982	11,938	1,921	2,487	547
1983 est.	12,385	2,090	2,790	498
Cotton <sup>1</sup>				
1981	417	1,080	76	204
1982	343	1,124	52	192
1983 est.	369	1,194	50	191
Vegetable oils				
1981	6,232	1,644	4,645	584
1982	7,115	1,586	5,234	741
1983 est.	7,574	1,666	5,114	649
Sugar <sup>2</sup>				
1981	5,656	1,352	3,517	1,180
1982	6,923	1,265	2,710	1,270
1983 est.	6,459	987	2,665	1,129

<sup>1</sup>Cotton data in thousand 480-pound bales. <sup>2</sup>Centrifugal white sugar

Sources: Various country sources; ERS estimates.

**Table 5.—Southeast Asia: selected agricultural indicators, 1982**

Country	Total area	Percent cultivated	Percent of work force in agriculture	Agriculture as percent of GDP
Burma	67.6	12	66	39
Indonesia	1,91.9	12	55	26
Kampuchea	18.1	11	74	NA
Laos	23.7	8	73	NA
Malaysia	33.0	13	40	24
Philippines	79.7	38	52	23
Singapore	.06	15	1	NA
Thailand	51.3	64	63	25
Vietnam	33.3	20	80	45

Source: ERS estimates.

## BURMA

### World Commodity Glut Dampens Economy

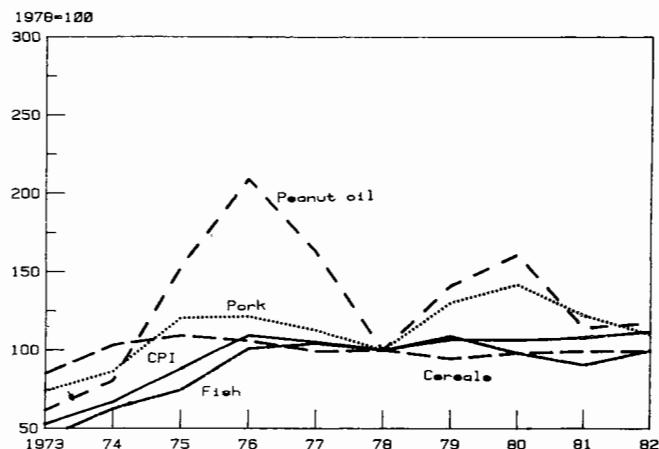
Burma registered an estimated 4-percent GDP growth rate in 1982, half the rate of 1981 but only slightly below the average of 5.4 percent for the past 4 years. A sharp fall in export earnings for agricultural products, mostly because of low prices for rice, tempered growth in the agricultural and manufacturing sectors. Burma harvested another record rice crop, and most other crops showed production increases.

Preliminary estimates indicate that because of weak commodity markets, total exports plummeted 19 percent to \$402 million in 1982. To compensate for the export slump, the International Monetary Fund granted Burma a \$30-million loan in December 1982. Total imports of principal reported commodities decreased 4 percent to \$386 million. Foreign exchange reserves amounted to only \$89 million in December 1982, compared with \$268 million 2 years earlier. The latest level is roughly equal to 2 months' imports.

## Price Stability Continues

Price movements in Burma continued the remarkably stable pattern of most of the last decade, as indicated by the moderate growth in the CPI. In 1982, largely because of a bumper rice harvest, the inflation rate was only 3.6 percent.

Burma: Retail Price Indices of Selected Commodities, 1973-82



Abundant domestic supplies led to actual price decreases of several noncontrolled food commodities in 1982. Pork prices decreased 11 percent. Sugarcane and some vegetable prices also dropped. Even peanut oil supplies increased sufficiently to satisfy strong domestic demand and limit price increases to 2 percent. Rising vegetable oil prices, which were especially troublesome in the seventies, led to policy efforts to improve production. The U.S. Agency for International Development (USAID) participated in the efforts.

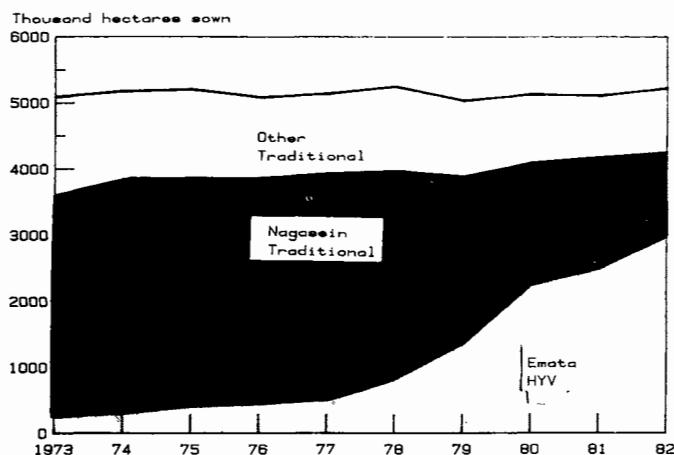
Large stocks, weak export demand, and a large crop contributed to a marginal decline in 1982 domestic rice prices. However, Government controls on the price and distribution of rice and other commodities have spawned a vast black market in consumer goods that even extends into neighboring Thailand. Hence, while the Government has undoubtedly achieved a degree of price stability since 1973, it is not quite as impressive as the reported price information indicates.

## Green Revolution in Rice Continues

Burma produced its third consecutive bumper rice crop in 1982--a record 8.8 million tons, nearly 3 percent over the previous year. The Government has succeeded since the mid 1970's in achieving rapid and sustained increases in rice yields and production as part of its crop improvement program. The rice program consists of targeting major rice-growing townships for improved management, use of more fertilizer, credit, and other inputs. The program began in 1975/76, in only one township encompassing 162 hectares. By 1982, it had been expanded to include 82 townships, about half of all rice-growing townships.

During the 7 years, Burma's rice production has increased more than 50 percent. The area under HYV's (long-grained Emata varieties) expanded to more than 50

Burma: Rice Area by Variety 1973-82



percent of total rice area from only 6 percent 7 years ago, while yields rose from 1.15 to 1.79 tons per hectare. Meanwhile, area under local varieties and in particular area planted to the traditional medium-grained variety, Ngasein, declined. About half of the increase in yields may be credited to increased fertilizer use. Fertilizer use increased from 54,000 tons in 1975/76 to an estimated 240,000 in 1981/82, with most of the increase going to rice.

An adverse effect of the rice program is that it takes resources from nontargeted rice-growing townships and from townships that grow other crops, such as peanuts and cotton. Because fertilizer and trained extension workers are limited, the rice program leveled off in 1982/83 at about half of the rice area.

Table 7.—Burma: production of selected agricultural commodities

Commodity	1981	1982	1983 fore.	Share of total prod. <sup>1</sup>
	1,000 tons			
Rice (milled)	8,600	8,820	9,000	53.5
Peanuts	439	558	600	12.2
Pulses	460	480	500	4.8
Sesame	157	167	200	6.0
Vegetables	1,050	1,100	1,100	5.5
Total				82.0

<sup>1</sup> See explanatory note following the table of contents.

Sources: Government of Burma, FAS, ERS estimates.

The 1982/83 oilseed crop reached 868,000 tons, up 5 percent from last year. The Burmese Government is currently emphasizing drought-resistant oilseeds, such as sunflower and sesame, which are expected to have a quick payoff.

## Plunging Prices Offset Volume Jumps in Exports

Agricultural exports, including forest products, decreased 19 percent to \$330 million in 1982. A 29-percent decrease in rice export earnings, to \$162 million,

led the decline. Other export items showing decreases included pulses (-4 percent), corn (-25 percent), oilcakes (-2 percent), fish products (-8 percent), and rubber (-11 percent). Low prices offset volume increases in all cases except pulses, where volume exported declined 19 percent.

Despite foreign exchange constraints, some agriculture-related imports increased, including agricultural chemicals (12 percent) and milk products (26 percent). By contrast, fertilizer imports dropped 24 percent to \$43 million, and vegetable oil imports plunged 52 percent to \$5 million because of the large domestic crop.

Rice exports during 1982 are estimated at 745,000 tons, up from 707,000 in 1981. Sri Lanka, Madagascar, Bangladesh, and Indonesia were leading markets. Rice stocks at the end of 1982 were estimated at about 1.5 million tons.

U.S. agricultural exports (primarily poultry breeding stock and blended food products) totaled \$214,000 in 1982, more than five times the 1981 level. U.S. agricultural imports (mostly dried beans) were a modest \$14,000, matching the previous year's level.

### **U.S. Role in Agricultural Development To Increase**

The military coup that installed Burmese leader U Ne Win 2 decades ago set an isolationist/socialist course that prohibited Western foreign economic dealings and

influences until the late seventies. The Government continues to be adamant about not allowing private foreign investment or giving local capitalists leeway. But the turn to the West for multilateral aid and technical assistance in the late seventies and the eighties is expected to continue. Burma has recently invited the United States, along with Japan and other "Western" countries, to play a substantial role in transferring agricultural technology to Burma. An example of U.S. participation is USAID's current assistance in improving oilseed production.

### **Prospects Uncertain for 1983 Rice Exports**

In 1983, Burma is forecast to have a rice export availability in excess of 1 million tons. But unless Burma takes an aggressive export posture in the first half of 1983, exports during the year may fall to 700,000 tons or less; a number of markets for low quality Burmese rice (primarily Sri Lanka and Africa) can be expected to reduce their purchases. This, combined with uneven quality and delays in vessel loadings similar to problems in 1982, will likely cause Burma to lose sales to Pakistan, Thailand, and Taiwan. Burmese officials are aware of the need to improve marketing facilities, but it may take 3 to 5 years before changes are made. On the bright side, Burmese rice exports may command a somewhat higher price in 1983, because of rising demand in Indonesia, traditionally Burma's largest market. [Richard F. Nehring, 202/447-8230]

## **INDONESIA**

### **Growth Cramped by Lower Export Revenues**

Indonesia's 1982 economic growth fell sharply to 3.0 percent, down from 7.6 percent in 1981, as continued sluggish world trade reduced export revenues by \$2.3 billion. Agriculture, which accounts for a third of real GDP, grew only 1 percent, down from 6 percent in 1981. Growth in wholesale and retail trade (16 percent of real GDP) and manufacturing (15 percent of GDP) slowed, while mining and petroleum output actually declined. Construction remained a major growth area. With 70 percent of Government revenues and 80 percent of export earnings derived from petroleum and natural gas, the \$3-billion shortfall in anticipated gross oil and gas export revenues was detrimental throughout the economy.

Foreign exchange reserves (\$6.3 billion at the end of fiscal 1981, which ended March 31, 1982) were drawn down about \$3.0 billion in Indonesian fiscal 1982. The current account deficit may have reached \$6.2 billion, up from \$2.4 billion in fiscal 1981. Total outstanding Government and Government-guaranteed foreign debt is estimated at about \$18.5 billion. The debt-service ratio may have approached 25 percent in fiscal 1982, not high by international standards but increasing at a rate that caused policymakers much concern.

Inflation increased to about 10 percent in 1982 from 7 percent in 1981. The increase mainly reflected higher prices resulting from reduced fuel and food subsidies, and increased demand for the drought-reduced supplies of virtually all crops produced during the dry season.

The rapidly deteriorating external economy and forecasts of declining real or nominal prices for petroleum and natural gas have resulted in difficult political deci-

sions. Budgeted fiscal 1982 expenditures included sharp reductions in food and fuel subsidies to pay for nearly a third of increased development spending. In November 1982, prices of fertilizer and pesticides were raised for the first time since 1977, with potential Government savings of \$120 million and \$3.2 million for pesticides. Fuel subsidies were again sharply reduced in January 1983; prices rose 57 percent. Food subsidies were totally eliminated on April 1, 1983.

### **Major Goals Include Higher Agricultural Output and Exports**

Food and nutrition policy currently is directed towards three objectives: to maintain an ever-increasing food supply, available at prices acceptable to low-income Indonesians but high enough to encourage increased production; to promote diversification in food consumption patterns, reducing the dependence on rice; and to reduce nutritional deficiency diseases.

The strategy for regulating the rice economy includes: (1) direct Government intervention in the market, (2) regulation of trade, (3) price ceilings to consumers and floors to producers, (4) reliance on imported rice to maintain per capita consumption at desired levels, and (5) special programs to increase domestic production.

The Government continues to stimulate rice production by providing inputs at subsidized prices while gradually increasing the floor price. The Government's extension program has had marked success with such efforts as INSUS (Special Intensification), through which it attempts to adapt programs to local conditions.

BULOG, the Government's national logistics agency, maintains reserve stocks of rice and other commodities, which are used to stabilize retail prices. BULOG is the sole importer of rice, wheat, sugar, corn, soybeans, and soybean meal.

Though food for domestic consumption remains the Government's top agricultural priority, the need to increase non-oil export earnings, given the weak demand for petroleum, has resulted in a greater focus on the traditional export crops, which in recent years have accounted for only 11 to 15 percent of total export value. A Government plan (viewed by some as much too optimistic) calls for large investments over the next decade to expand the area of rubber, oil palm, sugar, coconut, and cocoa from the current 6 million hectares to 8.2 million by 1990, and to rehabilitate about a third of the area presently under these crops. Indonesia's trade objectives are to increase traditional exports through competitive pricing, to increase export values through further processing, and to improve quality to meet international standards. The Government is linking its effort to expand export crop production with its ongoing transmigration program, designed to move about 2.5 million people from overcrowded Java to the outer islands.

### Production System Is Highly Diversified

Indonesia's tropical agriculture is based on a distinctly seasonal climate with two monsoons annually: a dry or east monsoon from July through September and a wet or west monsoon from December through March. April through June, and October-November are transition periods between the two seasons. The most fertile alluvial soils extend across Java to parts of other major Indonesian islands, including Sumatra, Nusa Tenggara, and Sulawesi. Rivers descending Java's volcanic slopes supply irrigation water for terraces in the valleys and for rich alluvial plains to the north. Although Java comprises only 7 percent of Indonesia's land area, more than 60 percent of Indonesia's 155 million population is concentrated there, ranking Java among the world's most densely populated areas.

Of Indonesia's total land area of 192 million hectares, an estimated 33 million is potentially arable. The agricultural sector consists of two main groups: about 14 million smallholders, who cultivate some 14 million hectares in food crops for domestic use and sometimes rubber, coffee, pepper, and tobacco for export; and about 2,000 large estates, comprising more than 810,000 hec-

tares and producing perennial crops such as rubber, oil palm, coffee, and tea, mainly on islands other than Java.

Agricultural performance in 1982 was determined by the severe drought from May to December, which kept production of most major food and export crops from reaching anticipated levels, and by weak external demand that resulted in sharply lower export volumes and unit values for most major export commodities. The value of agricultural exports declined about 19 percent, while the value of agricultural imports was down 10 percent.

Total 1982 agricultural production was 1 percent above 1981, as increased production of rice, sugarcane, coconut, and palm oil offset declines by major secondary food crops (corn, soybeans, peanuts, sweet potatoes, and cassava).

### Rice Dominates Staple Food Use

Food crops account for about two-thirds of total agricultural output. Overall grain production increased to 27.0 million tons, also 1 percent above 1981, with rice accounting for 86 percent of the total and corn the remainder.

Despite drought from May until mid-December, rice production in 1982 reached a record 23.2 million tons, because of increased fertilizer use; continued spread of early-maturing, high-yielding varieties resistant to the brown plant hopper; and the absence of serious pest and disease damage. Where early-maturing wet-season rice crops were harvested, second rice crops were often planted early enough to attain successful growth and ripening before the onset of drought. The huge wet-season harvest required record domestic rice purchases by BULOG. BULOG stocks reached a record 2.9 million tons following the April-June rice harvest, leading to a decline in 1982 imports to 332,000 tons, the lowest since 1966 and far less than the 1977-80 average of 1.9 million tons. Large BULOG rice distributions late in the year, intended to soften rice price gains, helped reduce year-ending stocks to 1.7 million tons.

Wheat, although not grown in Indonesia, is an important supplement to rice and secondary food crops in the food stabilization program. However, consumption growth slowed after elimination of the flour subsidy in late 1981. Per capita use increased 4.7 percent in 1982 to 10.0 kilograms (7.2 percent of per capita rice use), with the United States supplying 900,000 of the 1.48 million tons imported. Canada and France are seeking to increase their recent small market shares because Australia, the traditional U.S. competitor, is short of exportable supplies.

Corn, cassava, and sweetpotatoes are important in the diets of low-income groups, although rice is preferred if it is available and affordable. The increasing demand for corn in poultry and livestock feeds raised the feed proportion of total corn use to 20 percent in 1982. Imports increased to 198,000 tons as drought sharply reduced production.

Soybeans and peanuts are usually grown in rotation with other staple crops, especially rice, but production increasingly lags behind demand, despite production incentives. Food use of soybeans and peanuts is growing rapidly, with the United States supplying virtually all imported soybeans. Soybeans are a cheaper source of protein than meat and poultry. Indonesia, without domestic soybean crushing facilities, is importing growing volumes of soybean meal, mainly from Brazil, to sup-

**Table 8.—Indonesia: production of selected agricultural commodities**

Commodity	1981	1982	1983	Share of total prod. <sup>1</sup>
	1,000 tons			
Rice (milled)	22,288	23,191	22,500	43.6
Cassava	13,673	12,980	13,000	8.9
Sugarcane	17,560	21,000	19,000	8.4
Rubber	937	900	925	7.4
Coconut (copra equiv.)	1,635	1,725	1,785	7.1
Palm oil	752	798	900	5.5
Coffee	352	335	337	3.5
Total				84.4

<sup>1</sup>See explanatory note following the table of contents.

Sources: Government of Indonesia; FAS; ERS estimates.

ply the rapidly growing but still relatively small feed industry. The use of scientifically compounded feed, still in its infancy, began with poultry and swine.

### **Poultry and Pork Output Increasing**

Eggs and poultry meat are the most widely consumed sources of animal protein, although per capita consumption remains low. Poultry production continues to increase despite Government regulations that keep production units small, in effect preventing the development of an efficient, integrated poultry industry. Beef is very expensive and consumed primarily by upper-income groups. Pork production is also increasing. Although the Government has long attempted to increase domestic milk production, a high percentage of Indonesia's milk is imported as powder from Australia and New Zealand and reconstituted for consumption by higher-income Indonesians. Indonesians rely heavily on fish and shellfish as a source of animal protein.

### **Cash Crop Export Earnings Sharply Lower**

Indonesia ranks second to Malaysia as a producer and exporter of rubber. Almost all production, which totaled 900,000 tons in 1982, was exported. Production was down 4 percent from 1981, and lower prices caused exports to fall nearly 30 percent to \$600 million. Nevertheless, rubber retained its position as Indonesia's largest agricultural earner of foreign exchange, accounting for 26 percent of total agricultural export receipts. Rubber export earnings were \$835 million in 1981 and \$1.2 billion in 1980.

Coffee ranked third in commodity export earnings after rubber and wood (logs, sawn timber). Coffee export value was \$340 million, slightly below 1981's \$348 million and well below 1980's record \$658 million. Average export price was slightly higher during 1982, but domestic coffee prices were weaker. Although domestic coffee prices have slumped, domestic stocks increased 30 percent in 1981/82 (April-March) and 4 percent in 1982/83.

Palm oil, a source of soap, margarine, and cooking oil, steadily grows more important in Indonesia because it increasingly supplements coconut oil. Production of palm oil increased 6 percent in 1982 as additional oil palm area planted in the late 1970's added to production. The Government's interest in expanding palm oil production continues strong. Following Malaysia's lead in 1982, Indonesia released Cameroon weevils in late March 1983 to enhance pollination and boost oil production.

### **Agricultural Trade Surplus with U.S. Down**

In 1982, agricultural exports accounted for about 12 percent of an estimated \$20.0 billion in exports. Agricultural imports were 7 percent of the estimated \$21.0 bil-

lion in merchandise imports. The value of U.S. agricultural exports to Indonesia was \$443 million, 10 percent above 1981. Major commodity shares were: wheat, 35 percent; cotton, 23 percent; soybeans, 22 percent; unmanufactured tobacco, 8 percent; and soybean meal, 4 percent. Wheat, cotton, and soybeans have the greatest potential for further increases.

Europe, the United States, and Japan are major markets for Indonesian agricultural exports. U.S. agricultural imports from Indonesia totaled \$482 million, 26 percent below 1981. Major commodities and their shares were: rubber and allied gums, 58 percent; coffee, 27 percent; spices, 6 percent; and tea, 4 percent. The U.S. agricultural trade deficit with Indonesia in 1982 was \$39 million, 85 percent less than in 1981.

### **Economic Prospects Highly Uncertain**

Indonesia's economy, given its heavy export orientation with major dependence on crude petroleum, will continue to reflect the health of the general world economy. Strong downward pressures, despite current OPEC efforts to stabilize prices, could drive oil prices lower in 1983. Saudi Arabia, the largest oil exporter, has indicated willingness to compete on the basis of price, if the seemingly fragile OPEC production and pricing arrangement fails.

The increasing likelihood of sharply lower oil export revenues prompted the Government to implement strong policies to reduce a fiscal 1983 current account deficit expected to exceed \$10 billion, and a budget shortfall of at least \$2 billion. Indonesia had financed the fiscal 1982 deficit of \$6.2 billion by borrowings and a sharp drawdown of foreign exchange reserves. However, for fiscal 1983 a policy mix embodying increased foreign borrowings, supplier credits, foreign investment, and wider import restrictions was supplemented by a 39-percent devaluation of the rupiah against the U.S. dollar, plus cutbacks in planned routine and development spending.

Without a vigorous world economic recovery to increase exports, Indonesia's real GDP growth may remain below 5 percent in 1983. Overall 1983 agricultural output could decline slightly. The erratic wet-season monsoon may not provide adequate irrigation water supplies to grow a normal rice crop for the dry season harvest. Rice imports could reach 2.0 million tons, after near self-sufficiency since 1979. Inflation will likely increase 15-20 percent or more, due to higher food and fuel prices (because food subsidies have been eliminated and fuel subsidies sharply reduced) and more costly imported goods (because of the rupiah devaluation). [J. Albert Evans, 202/447-8229]

## **MALAYSIA**

### **Weak Export Demand Slows Economic Growth**

Continued slack demand in major export markets slowed 1982 real GDP growth to 4 percent, down from 7 percent in 1981 and well below the 8-percent average of the 1970's. Inflation declined to 6.5 percent from 9.6 percent in 1981. Malaysia's 1982 economic performance was remarkable considering the country's heavy depen-

dence on foreign trade. Exports total nearly half of GDP and imports about half of consumption.

In recent years, the manufacturing base has expanded rapidly. In 1982, the industrial sector contributed about a fifth to GDP and exports, and provided employment for over one-sixth of the work force. The Fourth Malaysia Development Plan (1981-85) places an increasing emphasis on heavy industry.

In 1982, the country incurred a substantial trade deficit (\$700 million) and a record current account deficit (\$3.8 billion), as foreign exchange reserves decreased 8 percent to under \$4 billion. The external sector weakened, largely because of a 1.7-percent decline in merchandise exports, as a result of major declines in volume and value of important export commodities such as rubber and tin. Meanwhile, merchandise imports increased by 6.0 percent, mainly because of the strong demand for machinery, communications, and transport equipment to meet development needs. Malaysia's 1982 budget deficit of over \$4.5 billion was mainly financed by expanding the public debt by one-third, with substantial borrowings both at home and abroad. The deficit occurred despite implementation of an emergency austerity program, reducing the budget by 30 percent in some agencies.

Despite its historical dependence on exports of tin and rubber, Malaysia's two leading exports are now petroleum and manufactured goods. Taxes on petroleum account for one-eighth of Government revenues. Known petroleum reserves, officially estimated at 2.8 billion barrels, should last about 30 years at current production rates, and exploration continues. Malaysia will remain a net petroleum exporter at least through the next decade, and it is moving rapidly to exploit large natural gas deposits. The new \$1.5-billion Bintulu liquid natural gas plant in East Malaysia, currently exporting to Japan exclusively, is expected to eventually earn \$1.2 billion per year for Malaysia.

### Rubber, Palms, and Rice Top Agriculture

Although agriculture's relative importance has declined, the sector currently accounts for 24 percent of GDP, provides employment for two-fifths of the work force, and contributes over 40 percent of export earnings.

Over the last decade, the expansion of oil palm area and resultant palm oil production (up nearly fourfold to 3.5 million tons) have been the most dynamic feature of Malaysian agriculture. Malaysian agriculture has a strong advantage in tropical tree crops, which explains the dominance of rubber, oil palm, and coconut palm. Altogether, an estimated 3.7 million hectares have been brought under cultivation in Malaysia; of this, about 2.4 million are devoted to rubber and oil palms. The only other major crop is rice, with an area of about 700,000 hectares. Cocoa area, mainly in the East Malaysian state of Sabah, has quadrupled to 165,000 hectares since 1977. Other crops, each occupying less than 40,000 hectares, include pineapples, cassava, sugarcane, tobacco, coffee, and peanuts.

### Higher Output, Reduced Poverty Sought

Agriculture's dualistic character (consisting of large estates and the more numerous smallholdings) has failed to significantly reduce the high incidence of poverty. Policies and programs, including subsidies and credit, are geared to assisting farmers (including rubber, rice, and coconut smallholders) in less developed areas through improving farm productivity. Programs also aim to create employment opportunities, largely through integrated agricultural development, such as new land development schemes.

Both producer and consumer prices of rice and other major staples are controlled by the Government, which is also trying to improve profitability of the ailing sugar industry by restricting imports. Concurrently, the long

**Table 9.—Malaysia: production of selected agricultural commodities**

Commodity	1981	1982	1983	Share of total prod. <sup>1</sup>
	1,000 tons			
Rubber	1,530	1,450	1,530	27.5
Palm oil	2,824	3,507	3,600	26.1
Meat, eggs, milk	386	407	425	16.0
Rice (milled)	1,312	1,190	1,290	13.2
Bananas, pineapples	615	635	640	6.1
Palm kernels	590	910	970	3.9
Total				92.8

<sup>1</sup>See explanatory note following the table of contents.

Sources: Government of Malaysia; FAS; ERS estimates.

term and strong commitment of the Government to oil palm (currently 59 percent of world production) and rubber (currently 38 percent of world production) requires pricing, marketing, and licensing policies that continually adjust to market conditions.

### Agricultural Output Up; Exports Weaken

Agricultural sector output increased 6 percent during 1982, mainly because of increased production of palm oil (up 24 percent), palm kernels (up 54 percent), and cocoa beans (up 20 percent). Output of rubber, rice, and pepper were reduced. Very low commodity prices buffeted Malaysia's export-oriented agricultural economy as prices of all major crops except rice and sugar (net import items) fell to the lowest level in several years.

Palm oil output surged primarily because of the introduction of Cameroon weevils to assist in pollination, an increase in the area of newly matured oil palm (much of which is currently producing at the maximum rate), and better overall weather. Palm oil export earnings of about \$1.1 billion from 11 percent greater volume nearly matched the 1981 total. In contrast, receipts from rubber exports declined about 43 percent to near \$2.5 billion.

Malaysia produced 1.2 million tons of rice (about three-fourths of domestic use), down 8.5 percent from 1981 because of tungro virus outbreaks, drought, and poor weed control. Total harvested area has declined slightly in recent years, mainly in nonirrigated regions where rainfall is usually adequate for only one good rice crop.

Broiler meat production, an estimated 120,000 tons in 1982, has grown at a 5-percent rate in recent years. Malaysia is virtually self-sufficient in egg production, with volume estimated at about 130,000 tons. Malaysian pork producers have developed an efficient and low-overhead swine industry from imported breeding stock. Less than two-thirds of Malaysia's beef supply is produced domestically, with the remainder supplied mainly by Australia. New Zealand and the United States supply most of the hotel and restaurant trade. Malaysia produces only 20 percent of the milk used in dairy products and meets needs by importing powdered milk, anhydrous butterfat, and finished products, largely from Australia, New Zealand, and the European Community.

### Agricultural Trade Surplus with U.S. Down

U.S. agricultural exports to Malaysia increased 31 percent to \$144 million in 1982. Exports of soybeans (\$37.7

million and mainly used for livestock feeds), unmanufactured tobacco (\$36.1 million), wheat (\$20.8 million), and fruits and preparations (\$13.3 million) accounted for 75 percent of the total. U.S. agricultural imports from Malaysia totaled \$276 million, 17.3 percent less than in 1981, with rubber, palm oil, and palm kernel oil accounting for 88 percent of the total. Malaysia's agricultural trade surplus with the United States declined 41 percent from 1981.

### Dampened Economic Growth Likely in 1983

With the Government austerity program continuing and export demand not expected to improve significantly

before midyear, economic growth in 1983 will probably be in the 3-5 percent range. However, unlike the situation in 1981 and 1982, major non-oil commodity export volumes and prices will likely trend higher while import growth slows, resulting in improvement in 1983 trade and current account balances and foreign exchange reserves.

The effects of prospective lower petroleum export prices on near term economic growth are difficult to assess given the current market volatility. However, further reductions would certainly dampen 1983 economic performance while clouding Malaysia's longer term outlook. [J. Albert Evans, 202/447-8229]

## PHILIPPINES

### Lowest Economic Growth in 2 Decades

In light of high global interest rates, the rising balance-of-payments deficit was a major concern in the Philippines during 1982. The payments gap doubled because of weak demand (hence prices) for exportable goods—especially coconut products, minerals, lumber, and fruit products—and because the peso devaluation raised import prices. To further aggravate the situation, rising interest rates made servicing the country's \$16.9-billion debt dangerously near the self-imposed debt-service ratio limit of 20 percent. This, coupled with deterioration of nearly 12 percent in the peso-U.S. dollar exchange rate, presented a liquidity problem for the Philippines. To stimulate healthier economic growth, the Government began implementing several general policies, such as deregulating interest rates, reducing Philippine dependence on imported energy, and liberalizing import tariffs. Import liberalization measures include reducing tariffs and reclassifying items so that payment may occur without Central Bank approval. The global recession was reflected in the rates of real GNP growth and inflation, which slowed to 2.6 percent and 8.5 percent, respectively. The GNP rate is the lowest in 2 decades.

The Government announced its 5-year plan for 1983-87, pledging to sustain economic growth, distribute income equitably, and reduce unemployment and

underemployment. An ambitious industrialization strategy focused toward export markets is basically a policy shift from industry protection to promoting industries having a comparative advantage. The plan calls for a 6.5-percent annual growth rate for GNP (the 1983 target has been lowered to 4.0 percent), an annual inflation rate of 9.0 percent, and a gradual reduction in oil imports by 1987. If plans to utilize more coal and geothermal energy materialize, oil imports are expected to fall 37 percent and supply only 44 percent of total energy requirements by 1987. Agricultural growth (including fishery and forestry) is expected to average 5 percent annually, with emphasis on gains in corn production. Significant agricultural objectives are: (1) to improve and stabilize farmers' income through better marketing, higher productivity, and a well planned land tenure system; (2) to enhance landless and rural workers' welfare by assuring them better access to agricultural resources or more gainful off-farm employment; (3) to assess and implement optimal land use policy; (4) to stimulate food production, especially among nutritionally deprived population groups; and (5) to support export promotion and import substitution.

### Agricultural Growth Leads Economy

Agriculture, the predominant sector in the Philippine economy, registered the largest real growth rate of all sectors, despite declining international commodity prices and generally low farm prices. The vacillating weather patterns common to the Philippines proved beneficial to

Farm Trade Surplus Brightens Overall Trade Deficit

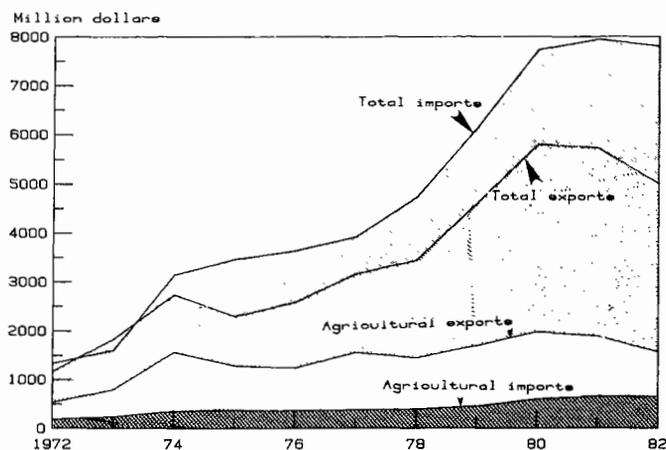


Table 10.—Philippines: production of selected agricultural commodities

Commodity	1981	1982	1983	Share of total prod. <sup>1</sup>
	1,000 tons			
Rice (milled)	5,270	5,385	5,444	27.8
Copra	2,256	2,130	2,200	16.5
Sugarcane	23,034	25,037	22,500	13.5
Corn	3,426	3,076	3,300	9.7
Pork	450	451	472	9.1
Pineapple	891	889	890	3.1
Bananas	1,300	1,261	1,260	2.7
Total				82.4

<sup>1</sup> See explanatory note following the table of contents.

Sources: Government of the Philippines; FAS; ERS estimates.

certain areas during 1982, but prolonged dryness, particularly in the central islands and Mindanao, is likely to stifle overall agricultural output during 1983.

Production gains for 1982 included rice (up 2 percent to 5.4 million tons), sugar (up 3 percent to 2.6 million tons), tobacco (up 11 percent to 81,900 tons), and livestock and poultry (up 7 percent). The 1982 copra crop, however, fell 5 percent (to 2.1 million tons) and corn dropped 10 percent (to 3.1 million tons), with the pineapple and banana industries remaining essentially unchanged.

During the latter half of 1982, about 60 percent of the rice and 80 percent of the corn crop were harvested, with over 60 percent of total rice production coming from irrigated areas. Rice production rose to nearly 5.4 million tons, as yields improved 5 percent to 1.62 tons per hectare and area harvested declined by more than 100,000 hectares. Rice prices dropped substantially during the third quarter of 1982 as the National Food Authority ran out of procurement funds after buying less than 10 percent of the crop. Over 350,000 tons of exportable surplus rice is reported. However, shortages in drought-stricken areas and the low world price for rice (roughly 30 percent below the domestic wholesale price) will likely curtail rice exports to 50,000-100,000 tons.

Good moisture, expanded cultivated area, and increased fertilizer use raised the average corn yield above 1 ton per hectare for the first time, but yield was still below the Government target. Total corn production fell 10 percent to 3.1 million tons, thus satisfying only 85 percent of feed grain requirements. The Government corn production program, Maisagana, which aims for self-sufficiency by 1985, has had problems in obtaining farmer and bank participation. The banks are reluctant to extend credit to the farmers because of prior loan defaults, and farmers are wary because the hybrid varieties have not produced the promised high yields.

The increase in wheat imports (up 5 percent to 935,000 tons), which are supplied solely by the United States, is attributed to rising demand from the host of new fast food outlets and to low wheat prices.

### Coconut Industry Still in Flux

Copra production during 1982 was below par because of typhoon damage during late 1981, with the impact on production occurring 8 to 12 months later. The Philippine coconut industry continues to be in flux, with six executive orders, one presidential directive, and a memorandum issued from August 27 to September 15, 1982. Major developments were:

- Abolishment of the Philippine coconut export levy, following the downtrend of coconut prices. Average 1982 export prices fell 17 percent from 1981.
- Banning of new dessicating plants, as the number of plants grew from seven in 1979 to 15 in 1980. Competition for markets led to price wars and declining prices.
- Founding of a farmer-owned firm to pursue industry development programs.
- Exportation of coconut oil by some mills was effectively restricted. Ostensibly, the 9.2 percent downslide of coconut oil production (to 1.1 million tons) prompted the restriction so that the Government coco-diesel program would be assured of ample coconut oil. The program aims to reduce the

country's dependence on imported fuel by mixing coconut oil (3 percent) with diesel fuel (97 percent).

- Banning of copra exports to provide coconut oil millers sufficient supplies, increase the country's earnings by processing more copra into coconut oil, and generate employment at the mills. Recently, importers have found it cheaper to import and mill copra themselves than to import the tariffed coconut oil.

Financial difficulties stalled the opening of the Batangas soybean crushing facility during 1982. Imports of soybean meal swelled from 244,000 to 360,000 tons, with the United States supplying roughly 35 percent. Brazil captures most of the market because of lower prices.

### Sugar Production Up

Centrifugal sugar production rose 3 percent to 2.58 million tons because of higher yielding cane varieties and additional planting on old sugar lands. Although the sugar content per ton of cane is high, the dry weather has reduced the juice content. Official exports, which usually account for about 56 percent of production, were down 12 percent to 1.1 million tons. Even with a pronounced increase in domestic consumption (up 6 percent to 1.2 million tons), the lack of a corresponding increase in the industry's stock supplies suggests that, for the second year, smuggling may have occurred. To maximize the country's sugar earnings, Government policy favors increased productivity of current sugar area, rather than area expansion. Until 1984, 50 percent of the country's sugar exports will bring 23 cents per pound because of the long term contract sales made by the sole sugar trading firm, National Sugar Trading Corporation.

Poultry and livestock growth appeared sluggish during 1982, with hog production steady at 451,000 tons, beef and veal up 2 percent to 184,000 tons, and poultry up 3 percent to 180,000 tons with the exception of poultry, Backyard operations characterize the Philippine livestock sector. Less than 20 percent of pork and beef and 2 percent of carabao production are commercially run. By contrast, over the last five years rapid expansion in the poultry sector has resulted in nearly 80 percent of production coming from commercial farms.

Imports of beef and veal increased 59 percent to 9,000 tons during 1982. Adequate feed supplies since 1981 and higher retail prices have resulted in rising hog and poultry inventories and higher production expectations for 1983. Per capita meat consumption is estimated at 3.55 kilograms for poultry, 8.9 kilograms for pork, and 3.8 kilograms for beef and veal.

The cotton production program in the Philippines is being hindered by farmers' reluctance to switch from the more profitable tobacco cultivation in Luzon and by feed grain competition in Mindanao and the central islands. The United States is the leading cotton supplier to the Philippine market, providing 81 percent of import needs.

Total supply of unmanufactured tobacco last year was 7 percent above 1981, with a production increase of 11 percent. Given abundant supplies, imports of U.S. tobacco, which is blended with local leaf, are forecast to move downward in 1983. On the other hand, demand for U.S. cigarettes is likely to escalate, because Filipinos prefer U.S. tobacco.

Heavy rains prevented timely harvesting at one of the three major Philippine pineapple plantations during the last 2 years, and further strides to increase production

were limited by stagnating cultivated area. During 1981 and 1982, a worldwide glut of pineapple products occurred, boosting Philippine stocks. Ninety-five percent of fresh pineapple exports go to Japan and over fifty percent of canned pineapple, pineapple juice, and pineapple concentrate are shipped to the United States.

The Philippine diet is rice-based, yet diversified with fruits, meat, and roots. Fish is the primary protein source, but pork, poultry, and eggs are commonly consumed. The Philippines is a net exporter of food, but the country also imports significant amounts, primarily processed foods. The Philippines exports coconuts, sugar, and fish and imports grain (wheat and corn), beans, oilseeds, and some animal products. These imports account for roughly 10 percent of the total import bill.

### Stable Prices Expected

The Government controls prices on several basic consumer items such as rice, corn, milk, sugar, chicken, eggs, canned fish, cooking oil, and pork. Implemented by the Price Stabilization Council, 1982 prices are: \$.34 per kilogram for rice, \$.23 per kilogram for corn grits, \$.92-\$2.50 per kilogram for various pork cuts, \$1.92 per kilogram for chicken; \$.30-\$1.43 per can for various brands of milk, \$2.60 per gallon for cooking oil; \$.45 per kilogram for refined sugar, and \$.34 per kilogram for brown sugar. Over the last several years, rice prices have remained the most stable among food commodities.

### Blended Credit Helps Philippine-U.S. Trade Relations

Two U.S. agricultural programs were initiated in the Philippines during 1982. One was the U.S. sugar quota program and the other was the CCC blended credit package. The Philippines has the third largest U.S. sugar quota allocation (13.5 percent of total U.S. imports), which translates into 342,900 tons during 1982/83. During 1983, the Philippines will be eligible to export sugar to the United States duty-free.

During November 1982, the Philippines became a recipient of U.S. blended credit, a program offering credit guarantees for the sale of 100,000 tons of wheat, 50,000 tons of corn, and 50,000 tons of soybean meal over and above fiscal 1982 sales. During fiscal 1982, sales totaled 896,400 tons of wheat, 160,000 tons of yellow corn, and 69,700 tons of soybean meal. The Philippines had not received CCC credit since 1980, and has nearly exhausted its fiscal 1983 wheat and corn allocations under blended credit.

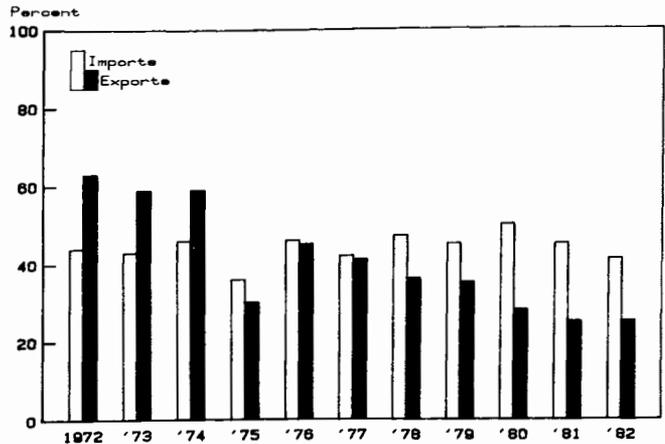
### Fiscal Austerity Marks 1983; Farm Output Uncertain

Below-normal rainfall during late 1982 and early 1983 in the central and southern Philippine islands will likely

### Economic Growth Slows

Singapore's per capita GNP—about \$5,380—is by far the highest in Southeast Asia. Inflation declined sharply in 1982 to about half of 1981's 8.2 percent. Reduced growth in exports was mainly responsible for cutting

U. S. Share of Philippine Farm Market



affect the secondary rice and corn crops and the 1984 copra crop. The small-scale fruit and vegetable producers are being affected currently, unlike commercial operations that have irrigation systems. The 1983/84 sugar crop is likely to wane by 10 percent from the 2.58 million-ton harvest of 1982/83. Normal rainfall will be needed by April-May to prevent damage to the 1983-84 sugar crop.

The Philippine textile industry has been operating at near-capacity since December, encouraging expectations for increased cotton import demand. Earlier in 1982, the textile industry had languished at roughly 45 percent of capacity because of the abundance of cheaper foreign products in the domestic market and uncertain foreign demand. The relatively favorable Philippine textile agreement with the United States will on average raise garment quotas by 22 percent over the 1982-86 period.

U.S. agricultural exports to the Philippines are likely to near \$320 million again during 1983. The United States will remain the major cotton supplier to the Philippines. However, Pakistan is becoming increasingly price-competitive. U.S. wheat exports to the Philippines will remain uncontested in 1983; feed grain exports should grow more dramatically because of reduced domestic and Thai supplies. Lower priced Brazilian soy-meal is likely to prevail in the soybean meal market.

With improvement in the world economy and effective financial reform and management, the Philippines is likely to see some recovery by late 1983. Declining revenues from its traditional exports are being offset by gains in the exports of nontraditional products, such as garments and electronic parts. Although agriculture's prominence in the Philippines will continue, the industrial sector is being strongly encouraged in the 1983-87 plan in order to reduce the Philippines' reliance on the volatile commodity market. [Leslie E. Ross, 202/447-8231]

## SINGAPORE

1982 real GDP growth to 6.3 percent, well below the lofty 9-10 percent of recent years but still a strong performance in the midst of world recession. The major growth stimulus came from construction, chiefly due to the Government's ambitious housing program. The business and financial services sector also recorded relatively

strong growth, but export-oriented manufacturing was hard-hit by slack demand.

The weak external economy widened Singapore's traditional trade and current account deficits. The current account deficit expanded to an estimated \$4.4 billion from \$1.7 billion in 1981. But, as in earlier years, this deficit was more than offset by large surpluses in the investment capital and services accounts. On January 1, 1983, Singapore's foreign exchange reserves totaled a record \$7.6 billion, compared with \$7.4 billion on January 1, 1982, and \$6.5 billion at the beginning of 1981.

### Trade Vital to Economy

Because of its lack of natural resources and its high and increasing level of industrialization, Singapore depends on imports, with raw materials and semi-manufactured products accounting for about 75 percent of all retained imports. Of the transshipped goods, more than 70 percent are sent to nearby markets such as Indonesia and Malaysia, with the remainder destined for more distant markets such as the Middle East, where Singapore presently is incurring high trade deficits. Singapore's major imports in 1982 were crude petroleum for refining, intermediate inputs for the electronics industry, equipment and machinery for the manufacturing sector, and iron and steel for the construction industry. Domestic exports consisted largely of refined petroleum products, consumer and industrial electronics products, oil rigs, and clothing. Singapore's leading trade partners continue to be Malaysia, Japan (the major supplier of goods), and the United States.

Singapore is a major world trading center for natural rubber, palm oil, pepper, coffee, cereal crops, and other regionally produced commodities. However, the nation must import about 80 percent of food consumed by its population of 2.5 million. U.S. agricultural products face a highly competitive and diversified market in Singapore, basically a duty-free port without trade restrictions. Total U.S. shipments to Singapore amounted to \$157 million in 1982, down 15 percent from 1981. Leading items were poultry and poultry products (\$36.0 million), barley (\$19.1 million), fresh fruits (\$10.7 million), fresh and processed vegetables (\$8.2 million), cotton (\$6.2 million), tobacco (\$5.5 million), and nuts and preparations (\$1.9 million). U.S. agricultural imports

from Singapore (mostly transshipments) totaled \$59 million, with the major commodities being crude rubber and allied gums (\$25.0 million), coffee (\$14.4 million), and cocoa butter and beans (\$6.8 million).

### Slower Growth Expected Through 1984

Singapore's current economic strategy concentrates on increasing domestic demand and investment to compensate for the export demand weakness, continuing to retrain the work force, and restructuring the economy for future growth. Real wages are still rising and unemployment is still less than 1 percent. The trend towards industrial upgrading will intensify to allow for greater exports of value-added products to developed country markets, especially the United States, Japan, and the European Community.

Before the current world recession, the Government had anticipated 8 to 10 percent in annual real economic growth during the 1980's. However, if general world demand and trade remain depressed, Singapore may experience real growth of less than 6 percent through 1984, possibly 4 percent or lower in 1983.

A recent negative development which will have a significant effect on the Singapore economy is the decision by Shell Eastern Petroleum, Ltd., to stop operating half of its refining facilities in Singapore. This will reduce the country's operating refinery capacity by 20 percent. Moreover, some of the remaining refinery capacity is for processing petroleum for nations like Indonesia, Thailand, and Malaysia, which will soon begin refining their own crude petroleum. And, in the Middle East, more efficient refineries are being built which will also provide competition for Singapore. In 1982, Singapore's petroleum exports totaled about \$7 billion, or 31 percent of total export value. Some Government and industry officials foresee Singapore's inactive refinery capacity reaching 40-50 percent by 1984, or close to the break-even point. As a partial offset to anticipated lower revenue from refinery operations, the Government in late 1983 will begin construction of a \$2.4 billion rapid mass transit system, which is expected to keep construction activity booming until late in the eighties. Also, development outlays for industrial and commercial infrastructure are being increased substantially. [J. Albert Evans, 202/447-8229]

## THAILAND

### Economic Growth Continues

Thailand's economy grew by 4.2 percent in real terms in 1982, and GNP per person rose to \$743. Although prices for most agricultural goods fell, export volumes were at record levels, and the total value of Thai exports remained close to that of 1981. Imports fell significantly. Agricultural production was virtually unchanged, although weather was not as favorable as in the previous 2 years. Agricultural trade continued to move more freely than in previous years, following the reduction of export taxes and regulations in 1981. Thailand succeeded again in broadening both the variety of countries to which it sold and the range of agricultural commodities exported.

Thailand's economic growth in 1982 was low by past standards, but high in relation to the rest of the world. Both the manufacturing and the agricultural sectors did

poorly compared with 1981, when real GNP growth was 7 percent. Demand from the rural majority of the population flagged in the wake of scattered drought and declining farm prices. With export demand also flat because of worldwide economic stagnation, aggregate demand growth was sharply reduced. High interest rates and uncertain economic prospects led to a sharp decline in domestic and foreign investment in new plants and enterprises. Falling food prices and widespread excess capacity in the economy reduced the overall rate of price increases to about 6 percent—half that of 1981 and a quarter of the 1980 rate. Interest rates fell late in 1982 and in early 1983.

Imports fell—by \$2 billion—for a number of reasons. Capital goods imports dropped because of the decline in investment, and agricultural inputs were less in demand because of low prices for domestic agricultural products. The rate of growth in the oil import bill dropped, as Thai

gas fields came on stream and world oil prices fell. Exports fell by \$700 million, with the drop split about evenly between agricultural and nonagricultural exports. Falling commodity prices accounted for the decline—volumes generally increased. The trade balance deficit declined by almost 50 percent. The balance of payments maintained a \$143-million surplus. International reserves declined somewhat during the year.

### Agricultural Production Matches Record

The diverse nature of Thailand's output makes it difficult to summarize the events of 1982. The year began with the harvest of record 1981/82 sugarcane, cassava, and rice crops. The cassava crop reportedly rose because of higher yields on a smaller harvested area, while the sugarcane harvested area was of record size because of high cane prices at planting time in 1981. The 1981/82 rice crop also reached records in area and production. Although cane and rice prices proved to be very disappointing, the sheer volume of the harvests kept Thailand's exports up and kept farm income from dropping too severely.

**Table 11.—Thailand: production of selected agricultural commodities**

Commodity	1981	1982	1983	Share of total prod. <sup>1</sup>
	1,000 tons			
Rice	12,375	11,385	12,210	39.4
Cassava	16,821	14,775	15,000	21.2
Sugarcane	18,600	30,264	23,140	9.1
Rubber	502	570	580	8.7
Corn	4,100	3,300	4,000	7.2
Tobacco	75	86	92	3.6
Total				89.2

<sup>1</sup>See explanatory note following the table of contents.

Sources: Government of Thailand; FAS; ERS estimates.

### Delayed Monsoon Caused Problems for Grains

The onset of the 1982 wet season was sporadic. The failure of rains to reach some areas, or to continue in other areas, meant that the corn crop, normally planted from April on, suffered damage. Dryness persisted over large areas in the northern, north central, and northeastern regions until August, when adequate rains finally set in all over the country. Rains continued through October, the normal end of the wet season, but could not undo all the harm caused by the late onset.

High preseason prices led farmers to plant a record area, but the poor rains wrought havoc with the corn crops. Output fell one-fifth below the 1981 level. Sorghum survived the dryness better, and a record crop contributed 390,000 tons to the coarse grain harvest of 3.7 million tons. Coarse grains in Thailand again were cultivated without any fertilizer or irrigation. The use of better quality seeds, however, increased.

The main 1982/83 rice crop, normally planted from May on, had to be delayed in many areas. When planting could go ahead, the remaining season was sometimes too short for optimal yields. Milling quality suffered over much of the country, while yield loss was greatest in the glutinous rice areas of the northeast.

The cotton harvest dropped by 37 percent as farmers switched to other crops in 1982 because of dissatisfaction with returns. The soybean, sesame seed, and peanut crops all dropped somewhat from 1981 levels, evidently suffering yield damage because of inadequate moisture. The area and production of black matpe beans, an important pulse for export, dropped because of low preseason prices. The pineapple area dropped 16 percent in response to low 1981 prices, and the 1982 harvest, at 1.44 million tons, was 21 percent below 1981.

Other crops' output rose. Mungbeans, tobacco, onions, garlic, and chili exceeded year-earlier levels. Tobacco production was a record, with burley, flue-cured, and Turkish types continuing to supplant native tobacco. Tree and other perennial crops did well. Rubber yields were high, partly reflecting the continuing replanting of groves with better quality stock. Coconut production, like rubber, rose to a new high. Both palm oil and coffee production grew again in 1982. These crops, which have Government backing, could become significant in southern Thailand in the future. At present, output of each is 20,000-25,000 tons.

Farm prices in general fell during 1982. Although representative farm price data are not available, the slumping wholesale prices and unusual protest demonstrations by rice farmers in late 1982 were ample indication that worldwide agricultural price declines were transmitted to Thai farmers. Farm income, however, benefited from the record size of the 1981/82 harvests, so that increased volume partly compensated for lower prices.

Lower crop prices led to reduced input use in 1982. Crop prices fell for precisely those crops on which some fertilizer is used—rice, rubber, sugarcane, and cotton. Fertilizer prices dropped, but not enough to maintain 1981 levels of use. Pesticide use has failed to show strong growth in the last few years, mostly because of rapidly rising prices for imported pesticides. A major outbreak of disease in farm fish ponds late in 1982 was blamed on a pesticide, and this may slow growth in pesticide use. On the other hand, new foreign investment in pesticide manufacture took place in 1982. Foreign agribusiness interest in both the pesticide and seed markets in Thailand remains lively.

Livestock production is very hard to assess because data are poor or nonexistent. Poultry production, largely commercialized, increased in 1982. Because there were no runups or declines in pork, beef, and buffalo meat prices, it is likely that supplies remained at or above 1981 levels. Restrictions on privately-owned slaughterhouses continued to inhibit large-scale pork and beef production. A new regulation allowing private abattoirs required an unrealistically high share of the output to be exported, and is unlikely to change the situation. Feed use was encouraged by lower feedstuff prices, although the price reductions were not uniformly reflected for all feeds. The short corn crop caused several price surges, as domestic feeders competed with exporters for supplies. The large outturn of 100-percent unbroken rice meant that broken rice quantity did not increase in proportion to the total rice supply. Broken rice for feeding grew more expensive during the year. Rice bran and soy-meal prices did decrease, and prices for broiler and layer rations in December 1982 were about 7 percent below a year earlier. Feed use of corn (1 million-1.5 million tons) and broken rice (500,000 tons) did not increase. Use of other feedstuffs probably grew.

## Consumption Unchanged

Demand for food received little stimulus from income growth in 1982. Farm incomes declined slightly and incomes in urban areas (under 30 percent of the population) grew at a slower rate than in the past. Declining world prices for rice and other foods helped stabilize Thai retail prices, however, and there was no notable weakening of overall food demand. Wheat flour consumption failed to show any growth, perhaps because of the lack of quick income growth. Rice consumption per person remained about the same as in earlier years. The Government's subsidized distribution of low grades of rice to needy citizens became more difficult since funds from the rice export taxes, which had formerly underwritten this subsidy, were used for farm price supports in 1982.

Livestock product consumption remained difficult to assess because of deficient data. Estimates of pork consumption per person range from 6 to over 12 kilograms, with the higher figure more plausible. Consumption of poultry meat is estimated at 8-10 kilograms per person. Beef and buffalo meat consumption together may have been 5 kilograms. Egg consumption probably exceeded 4 kilograms per person, with a substantial portion coming from ducks.

Wholesale and retail prices for pork and beef held steady during the year. Broiler and egg prices showed some decline, probably because of reduced feed costs. Fish prices remained high relative to meat. The marine fish catch fell from 1981 levels; trash fish for fish meal may have accounted for the decrease, but food fish supply apparently did not grow. Consumption of inland fish declined late in 1982 in the aftermath of a disease outbreak that frightened consumers.

## Agricultural Policy Changes

Government policy in 1982 continued to favor relatively free markets for farm commodities, although in practice many market distortions remained. Rice price policy in 1981 sought to secure farmers some of the benefits of rising world prices. In 1982, the problem for policy was to keep farmgate prices high in the face of falling world prices. In each year, the Government tried to purchase rice from both farmers (at a support price) and millers in order to reduce available supplies and strengthen prices. However, because the Government lacks sufficient storage capacity and can ill afford to finance long term stocks, the Government purchase schemes suffered large losses and failed to isolate rice stocks from the market for long enough periods, or in sufficient quantity to support market prices. Farmer demonstrations at the beginning of the 1982/83 harvest caused the Government to raise its "support" price. While Government actions are unlikely to change the prevailing market price, whatever the official targeted "support" price, they are likely to increase the deficit that the Government incurs in its rice transactions. This deficit is covered by the premium assessed on rice exports. The premium, sharply reduced in 1981 and early 1982, has since been held steady (about 12 percent of export value in early 1983). In effect, it acts as a tax on rice farmers. Although there are several reasons for taxing rice, the incongruity of taxing rice while simultaneously spending in order to raise rice prices was conspicuous.

The roller coaster ride that world sugar prices took in 1980-82 induced strong responses in Thailand. The Government's insistence on keeping wholesale and retail

prices fixed throughout the period caused hoarding and shortages in 1981, when world prices were higher, and losses to millers in 1982, when world prices were lower. Thailand's policy of helping guarantee farmers' cane sales prices well in advance of harvest led at different times to serious losses by farmers, millers, and the Government itself. The Government ban on further investment in sugar mills, designed to keep Thai production of the volatile commodity from rising, was in practice undermined by the 1981/82 guaranteed price that encouraged planting by the prospect of good returns.

The bumper 30-million-ton cane crop of 1981/82 suddenly confronted Thailand with a massive surplus disposal problem. Farmers, millers, and Government acknowledged that reform was necessary in 1982. The Government managed to get an additional export quota of 400,000 tons from the International Sugar Organization (in addition to its normal 1.17-million-ton quota) and to borrow 200,000 tons from the 1983 quota.

About one-third of the private milling capacity was put up for sale by its owners by early 1983. The rest of the Thai sugar milling industry, stung by depressed world conditions, agreed to cooperate with the Government and the planters in a new export corporation. The new corporation would try to arrange advance sales of 600,000 tons of raw sugar per year in the export market. Additional export sales would be made by the two corporations that have previously sold Thai exports. Under the new scheme, planters and millers would divide profits 70/30, with cane prices set to cover production costs before the profit sharing. The new arrangements may stabilize the industry and encourage more realistic cane prices and better accommodation to world trends by involving planters in trade through the corporation.

Besides maintaining controls on wholesale and retail sugar, Government policies also set ceiling prices for vegetable cooking oil and milk. The Government continued to license production and distribution of its own "Zin Thai" line of low-cost packaged foods. The export of rice bran was, as before, banned. This ban effectively lowers domestic rice bran meal and oil prices.

## Trade Declines Slightly

Thailand, like other grain-exporting nations, was heavily affected by falling commodity prices in 1982. Agricultural trade increased in volume in 1982. Thus, despite reduced prices for several commodities and a lower rate of exchange of the baht with the dollar since mid-1981, the dollar value of farm exports declined only 2 percent, to \$3.9 billion (see table). Thailand entered a number of barter agreements in 1982. Among them were exchanges of corn for fertilizer (with the U.S.S.R) and of tapioca chips for fertilizer (with South Korea).

Notable features of the rice trade in 1982 included large purchases by African nations (1.5 million tons, up 93 percent). Average 1982 export unit values were about \$281 per ton, well below the \$398 average for 1981, and together with concerted Government and private sales efforts they helped achieve a new record export level of 3.6 million tons. Rising prices and a smaller surplus are expected to reduce exports in 1983 to 3.5 million tons.

Cassava product exports also achieved a new record, even though a new agreement with the EC was supposed to limit trade. The agreed level of 5 million tons of tapioca products was reached by August, and the EC subsequently allowed another 500,000 tons as a one-time additional quota. Thai data indicate that 1982 exports of tapioca pellets and chips (7.1 million tons) were large

**Table 12.—Agricultural exports of Thailand, 1981 and 1982<sup>1</sup>**

	Volume		Value	
	1981	1982	1981	1982
	1,000 tons		Million dollars	
Rice (milled)	3,026	3,620	1,206	1,017
Cassava products	6,263	7,558	751	858
Sugar (raw equiv.)	1,119	1,973	438	557
Natural rubber	472	499	496	378
Corn	2,547	2,994	377	362
Tobacco	37	38	80	111
Pineapple products	173	156	101	90
Mung & black matpe beans	172	188	77	80
Poultry, fresh, chilled, or frozen	37	41	55	55
Sorghum	221	263	41	54
Molasses	443	904	32	38
Fruit, fresh, dried, or frozen	60	71	25	29
Orchids	5	6	19	13
Other	NA	NA	258	247
Total	NA	NA	3,954	3,888

NA = Not applicable.

<sup>1</sup>Estimates and preliminary data. Exchange rates used: 21.87 baht/dollar in 1981 and 23 baht/dollar in 1982.

Sources: 1981-Foreign Trade Statistics of Thailand; 1982-ERS estimates.

enough to fill the 1982 EC quota as well as the first-quarter 1983 quota. Total exports of pellets and chips in 1983 are forecast at 5.2 million tons, in quarterly shares of 1.6, 1.47, .95, and 1.25 million. That would leave a 5.3-million-ton quota for 1984. Although 1982/83 harvests are down somewhat, there remains a danger that export availability will substantially exceed 5.3 million tons and even the 5.5-million-ton upper limit that the EC has imposed for 1983. Given the favorable 1982 and 1983 producer prices, cassava planting has probably increased and export supplies for 1984 may be at record levels. Pellet prices increased during 1982 and ended the year at over \$100 per ton (wholesale). Average 1982 wholesale prices (in baht) were about 10 percent higher than in 1981. Capacity to produce harder pellets, preferred in Europe, continues to increase.

### Corn Demand High in ASEAN

Corn prices strengthened until the July/August harvest, and then dropped to \$112 per ton in August from \$151 in June (wholesale). They strengthened again from November 1982 to April 1983, in spite of considerably lower U.S. prices. In terms of baht, corn prices were only 1-2 percent lower in 1982 than in 1981. In dollar terms, the decline was almost 7 percent, but still smaller than expected. The strength of domestic and export feed demand was sufficient to keep the market tight through most of the 1982/83 year. The rise in corn exports

**Table 13.—Major Thai exports to ASEAN, 1981 and 1982**

	Rice		Corn		Fish meal	
	1981	1982	1981	1982	1981	1982
	1,000 tons					
Indonesia	200	181	0	215	29	19
Philippines	0	0	49	126	6	2
Malaysia	237	388	448	557	19	20
Singapore	158	174	365	486	38	28
Total	595	743	862	1,384	92	69

Sources: 1981-Foreign Trade Statistics of Thailand; 1982-ERS estimates.

(almost entirely for feed use) to ASEAN countries, especially Indonesia, was striking in 1982 (see table). Thai export availability in 1983/84 is expected to rise to 2.5 million-2.8 million tons.

With the price of soymeal low, feed mixers both in Thailand and other ASEAN countries turned to it in place of Thai fish meal. Fish meal production and exports declined in Thailand, while soymeal imports grew by over 50,000 tons, mostly from Brazil, China, and India. Only 4,000 tons came from the United States.

### Agricultural Imports Drop

Among other imports, wheat declined in volume for the second year in a row. Wheat use in very low in Thailand, and the decline in imports was surprising. Vegetable oil imports faced Government restriction and fell. Cotton use for the domestic textile market and border trading was in a slump in 1982, and domestic cotton production was high. Imports declined. But cotton use in garments for export to the United States and elsewhere soared. Continued growth in garment exports and a reduced Thai crop should expand cotton imports in 1983. Formerly an exporter of kenaf, Thailand has now become an importer of the similar fiber, jute.

### Outlook for 1983

#### Agricultural Exports Promising

Greater expected production of 1983/84 rice, pineapple, and several other crops should increase export availability. Sugar exports in 1983 of about 1.5 million tons will again be larger than the sugar agreement quota, but much smaller than 1982's record level. Exports in 1984 may be further reduced because of prolonged dryness in cane areas.

The lower quality of milled rice from the 1982/83 harvests will keep 1983 supplies for the African markets about as high as in 1982; large sales to Senegal and Nigeria are expected to lead this trade. Reduced supplies of high-quality rice will put some upward price pressure on sales to ASEAN and the Middle East. Total 1983 export volume may fall to 3.5 million tons. Greater coarse grain supplies should increase exports to ASEAN, the Middle East, the USSR, and the People's Republic of China, with the 1983/84 total at about 2.9 million tons. [John Dyck, 202/447-8229]

## CENTRALLY PLANNED SOUTHEAST ASIA

Currently, the estimate of 1982 rice output for Vietnam, Kampuchea, and Laos totals 10.7 million tons, compared with 9.8 million for 1981. Production gains were particularly strong in Vietnam (up 10 percent) and Kampuchea (up 17 percent). Laos' 1982 rice output is estimated down 5 percent at 715,000 tons. As a result of increased production, net rice imports by the three countries are expected to decline 100,000 tons in 1983, continuing the downward trend of recent years. Vietnam is expected to export 100,000 tons of high-quality rice in 1983, while importing 100,000 tons of low-quality rice as a result of an agreement with a French trading firm. The exports are expected to go to African destinations (normally Madagascar, Mozambique, Angola, and Senegal) and the imports to come from Thailand and Burma.

## VIETNAM

### Economic Performance Mediocre

Vietnam's economic performance in 1982, despite a record grain crop, was weak. Foreign Minister Nguyen Co Thach described the economy as "very bad but not worse." Industrial output in recent years has fallen below Government targets. The outlook for the agricultural sector is brighter, although production will probably come short of meeting the country's food needs.

Despite drought and flood damage to subsistence agriculture in some areas during the summer and fall of 1982, bumper crops have reportedly been harvested in most of Vietnam. The increases in rice production are attributed to improved yields stemming from more intensive cultivation and improved growing techniques. The introduction of a system of payments which allows commune members to sell their surplus output on the free market is thought to have provided greater incentive to boost production.

Initial data released by Vietnam's General Statistics Department show 1982 food grain output of more than 11.5 million tons, slightly above the targets and about 1.0 million tons over 1981. This marks the second consecutive year that bumper harvests were achieved in all three yearly rice crops. The 1982 rice harvest totaled 8.9 million tons—10 percent over 1981.

**Table 14.—Vietnam, Kampuchea, and Laos: rice supply and distribution, 1975-1982<sup>1</sup>**

Country/Year	Prod.	Import <sup>2</sup>	Export <sup>2</sup>	Apparent consumption
				1,000 tons
<b>Vietnam</b>				
1975/76	6,850	805	2	7,653
1976/77	7,849	265	6	8,108
1977/78	7,075	150	5	7,220
1978/79	6,526	250	—	6,776
1979/80	6,993	135	—	7,128
1980/81	7,591	140	5	7,726
1981/82	8,170	130	15	8,285
1982/83	8,957	100	100	8,957
<b>Kampuchea</b>				
1975/76	900	—	—	900
1976/77	1,080	—	20	1,060
1977/78	1,080	—	19	1,061
1978/79	900	200	—	1,100
1979/80	323	317	—	640
1980/81	985	125	—	1,058
1981/82	912	60	—	974
1982/83	1,071	50	—	1,146
<b>Laos</b>				
1975/76	575	120	—	695
1976/77	558	100	—	658
1977/78	553	94	—	647
1978/79	517	70	—	587
1979/80	564	53	—	617
1980/81	684	10	—	734
1981/82	750	35	—	760
1982/83	715	50	—	750
<b>Total</b>				
1975/76	8,325	925	2	9,248
1976/77	9,487	365	26	9,826
1977/78	8,708	244	24	8,928
1978/79	7,943	520	—	8,463
1979/80	7,880	505	—	8,385
1980/81	9,260	315	5	9,518
1981/82	9,832	200	15	10,019
1982/83	10,743	185	100	10,853

<sup>1</sup>Stock data unavailable. <sup>2</sup>Trade data on calendar year basis (for example, 1975/76 = calendar 1976).

Sources: FAO; Foreign Agricultural Service.

**Table 15.—Vietnam: production of selected agricultural commodities**

Commodity	1981	1982	1983	Share of total prod. <sup>1</sup>
				fore.
	1,000 tons			Percent
Rice (milled)	8,170	8,957	8,775	57.7
Cassava	3,400	3,450	3,500	14.2
Sweet potatoes	2,400	2,450	2,500	11.4
Corn	520	475	500	3.3
Sugarcane	3,900	3,950	3,960	3.3
<b>Total</b>				<b>89.9</b>

<sup>1</sup>Based on price weights for other Southeast Asian countries.

Sources: FAO; Foreign Agricultural Service; ERS estimates.

Large imports continue to be a major problem. However, food imports as a percentage of total food consumption requirements dropped from 53 percent in 1980 to 17 in 1981 and are believed to have declined further in 1982. Foreign exchange reserves are not known, but the country's foreign debt is about \$3.5 billion. Debt rescheduling is being sought as Vietnam appears to drift into deeper dependence on the Soviet Union.

Vietnam's plan targets 1983 grain output at 12 million tons, 5 percent more than last year. The plan report stated that such an output would be sufficient to free the country from dependence on imports from its Communist allies, especially the Soviet Union. But such a

target may be overambitious considering the strong increase in the 1982 harvest. Assuming more normal weather during 1983, grain production could easily decline. The current 5-year plan (1981-85) suggests that by 1985 food grain production could reach 14-15 million tons.

## LAOS AND KAMPUCHEA

### Kampuchea and Laos Continue To Import Rice

Information on Kampuchea and Laos is sketchy, but each country is expected to import about 50,000 tons of rice in 1983. Donor countries continue to supply food aid

on the Thai-Kampuchea border, but plans are uncertain about assistance to the interior. It is uncertain whether Kampuchea still requires external aid after the near-record rice crop harvested in 1982. (William F. Hall, 202/447-8229)

## U.S. FARM EXPORTS TO SOUTHEAST ASIA: REVIEW AND PROSPECTS

### Southeast Asia To Buy \$1.2 Billion Of U.S. Farm Products In Fiscal 1983

During fiscal 1982, Southeast Asia continued to enjoy not only an agricultural trade surplus but an overall trade surplus with the United States. The \$344-million agricultural trade surplus narrowed from 1981 by one-half, while the nonagricultural surplus was down by 32 percent. The farm trade gap narrowed primarily because prices of the major commodities exported to the United States—sugar, rubber, and oilseed products—dropped considerably from fiscal 1981. Except for tobacco, prices were also somewhat lower for major U.S. farm goods exported to Southeast Asia—wheat, feed grains, soybeans, and cotton. Southeast Asia's commodities cost the United States \$1.5 billion, 17 percent below fiscal 1981, while U.S. farm products to Southeast Asia rose slightly to over \$1.2 billion.

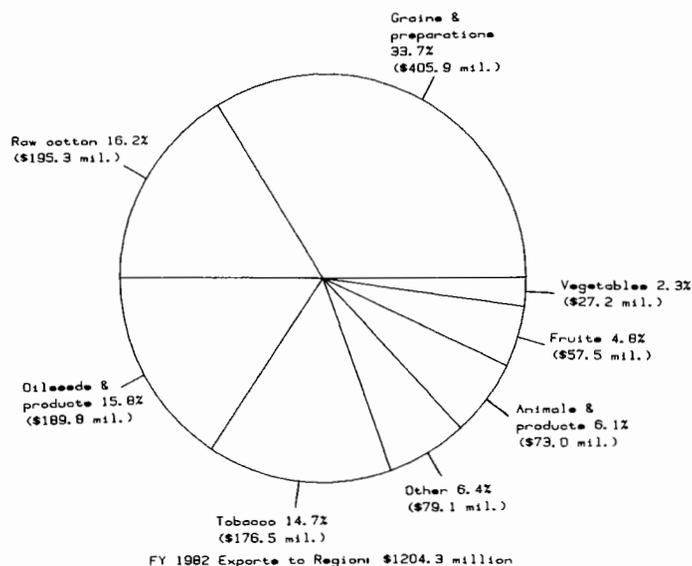
Indonesia, Malaysia, the Philippines, Singapore, and Thailand purchase about 99 percent of the U.S. farm goods shipped to this region. Products sold to Burma in 1982 were valued at only \$214,000 and there was no U.S.

trade with Vietnam, Kampuchea, and Laos. U.S. exports to the region are almost exclusively commercial. In fiscal 1982 only \$36 million or less than 1 percent were provided concessionally.

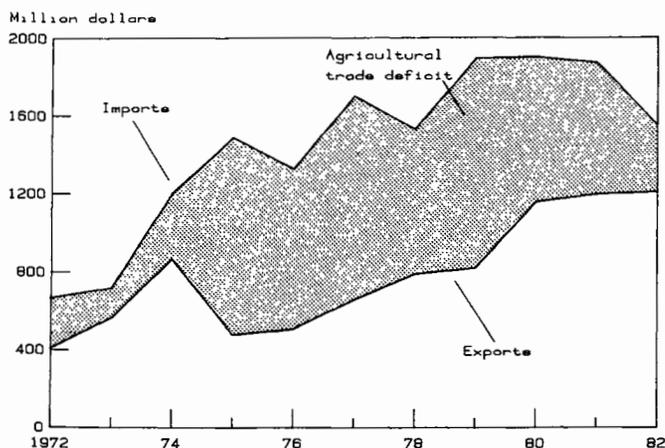
During fiscal 1983, U.S. farm exports to Southeast Asia are expected to improve moderately to about \$1.24 billion because of drought-related crop shortfalls in: (a) the Indonesian rice crop, (b) the Philippine corn crop, particularly yellow feed corn, and (c) exportable Australian wheat and Thai corn.

In addition, growth in U.S. soybean exports is expected because regional needs have surpassed local supplies. Thus, greater volumes of U.S. farm goods are likely to offset the declining commodity prices expected during fiscal 1983.

### COMPOSITION OF U.S. FARM EXPORTS TO SOUTHEAST ASIA



### U.S. Farm Trade Deficit Narrows



**Table A.—U.S. agricultural exports by major categories to Southeast Asia, by quantity and value, fiscal 1981-83<sup>1</sup>**

Country and year	Poultry meats		Inedible tallow		Nonfat dry milk		Other animal products and live animals	Wheat and products		Rice, milled		Feedgrains	
	Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars
Burma													
1981	0	0	0	0	0	0	2	0	0	0	0	0	0
1982	0	0	0	0	38	23	137	0	0	0	0	0	0
1983	0	0	0	0	50	30	150	0	0	0	0	0	0
Indonesia													
1981	69	142	0	0	3,240	1,487	4,317	714,427	128,564	103,685	50,861	190	34
1982	135	207	0	0	460	366	5,055	891,052	145,716	13,210	3,684	10,568	1,450
1983	200	220	0	0	4,000	1,800	3,980	950,000	151,204	50,000	15,000	20,000	2,400
Malaysia													
1981	321	420	0	0	0	0	1,218	150,211	27,141	0	0	23	16
1982	533	755	6	12	0	0	1,591	127,181	20,633	0	0	123	75
1983	800	880	10	20	0	0	2,100	185,000	21,600	0	0	50,000	5,500
Philippines													
1981	20	45	7,157	3,426	7,969	3,516	7,077	858,496	168,544	0	0	224,803	36,830
1982	19	22	6,976	2,978	5,599	2,507	9,371	896,430	155,504	0	0	160,040	20,130
1983	21	25	7,200	2,966	4,500	2,385	10,624	950,000	157,700	0	0	195,000	20,475
Singapore													
1981	23,405	28,716	159	271	321	138	7,028	109,898	19,886	3,574	1,552	164,152	29,479
1982	31,816	36,243	135	225	3	2	9,746	19,940	3,889	1,444	611	203,281	26,401
1983	40,000	44,000	100	45	0	0	12,455	50,000	7,750	2,000	800	200,000	22,000
Thailand													
1981	87	139	8	6	0	0	3,113	142,389	29,525	88	40	353	59
1982	19	41	0	0	0	0	3,737	73,987	13,036	40	19	0	0
1983	0	0	0	0	0	0	5,000	100,000	17,700	0	0	0	0
Total													
1981	23,902	29,462	7,324	3,703	11,530	5,141	22,755	1,975,421	373,660	107,347	52,453	389,521	66,418
1982	32,522	37,268	7,117	3,215	6,100	2,898	29,637	2,008,590	338,778	14,694	4,314	374,012	48,056
1983	41,021	45,125	7,310	3,031	8,500	4,215	34,309	2,235,000	355,954	52,000	15,800	465,000	50,375

See footnote at end of table.

Continued

### Grains Lead U.S. Sales

Of the grains, wheat shipments dominate U.S. exports to Southeast Asia. During the last 5 years, wheat exports have nearly doubled to reach 2.0 million tons in fiscal 1982. Nearly 90 percent of this wheat is shipped to Indonesia and the Philippines. In fiscal 1982, the United States supplied the entire Philippine market, about 50 percent of the Indonesian market, and nearly 75 percent of the much smaller Thai market. During fiscal 1983, growing bakery needs and drought-reduced Australian supplies are likely to result in a larger U.S. share of the Southeast Asian market.

### Recovery of U.S. Feed Grains Expected

During fiscal 1982, 374,000 tons of U.S. feed grains reached Southeast Asian ports, 4 percent below fiscal 1981. Despite the slight drop in fiscal 1982, this market has grown tenfold in 5 years, as demand from the livestock sector has outpaced local production. Barley shipments to Singapore and corn to the Philippines are the main items, but growth in the other countries is expected during fiscal 1983. Malaysia may buy about 50,000 tons of corn and Indonesia will likely double its purchases to 20,000 tons of corn. The United States competes with Thailand and South Africa in this market; each experienced drought during 1982. Prolonged dry conditions

since late 1982 have stunted the Philippine secondary corn crop, usually about 20-25 percent of total production, requiring larger-than-expected feed grain imports—much of which the United States stands to gain.

### Large Indonesian Rice Imports Renewed

After 2 above-average years of Indonesian rice production, and the subsequent decline of rice imports, Indonesia is expected to import 2 million tons during 1983. To replenish food stocks and keep prices stable, Indonesia has requested that rice be provided under the P.L. 480 food aid program, although Burma and Thailand are simultaneously negotiating for commercial rice sales. U.S. sales to Indonesia, the major U.S. rice market in Southeast Asia, had fallen from 245,000 tons in fiscal 1980 to 15,000 in fiscal 1982.

### Recession Curbs Cotton Demand

Although cotton shipments to the region grew 17 percent to 132,800 tons in fiscal 1982, earnings actually dropped nearly 7 percent from a year earlier to \$195 million. The major buyers were Indonesia (68,000 tons) and Thailand (36,000 tons), with increased sales to Singapore and Malaysia. Weaker domestic textile demand in Malaysia, Thailand, Indonesia, and the Philippines, fused with the protectionist stance of major textile importers, has stifled demand for cotton in the region.

**Table A.—U.S. agricultural exports by major categories to Southeast Asia, by quantity and value, fiscal 1981-83<sup>1</sup>—continued**

Country and year	Fruits, nuts and preparations	Vegetables and preparations	Soybeans		Oilcake and meal		Tobacco		Raw cotton		Other	Total
	1,000 dollars	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	Metric tons	1,000 dollars	1,000 dollars	1,000 dollars
<b>Burma</b>												
1981	4	29	0	0	0	0	0	0	0	0	5	40
1982	0	48	0	0	0	0	0	0	0	0	6	214
1983	5	50	0	0	0	0	0	0	0	0	5	240
<b>Indonesia</b>												
1981	9,119	1,940	251,771	74,760	96	9	2,471	14,018	46,338	88,943	7,965	382,159
1982	12,431	2,930	364,825	95,154	81,607	18,391	5,345	33,460	67,982	104,646	8,571	432,061
1983	15,500	5,000	400,000	92,000	10,000	2,000	5,000	29,250	60,000	87,000	5,710	411,064
<b>Malaysia</b>												
1981	10,635	2,764	58,799	18,458	0	0	3,449	23,915	5,901	10,565	11,330	106,444
1982	12,961	2,982	139,494	36,140	0	0	3,917	31,243	11,529	16,150	11,575	134,117
1983	15,800	3,300	180,000	41,400	0	0	5,000	40,000	9,000	13,050	13,770	157,420
<b>Philippines</b>												
1981	3,271	2,557	32,503	9,576	0	0	5,435	32,908	14,475	22,676	47,258	337,684
1982	4,607	7,264	31,285	8,056	69,676	14,631	5,536	39,751	13,278	18,211	37,109	320,141
1983	4,600	7,500	25,000	5,750	100,000	20,500	5,700	42,123	13,000	17,485	25,975	318,108
<b>Singapore</b>												
1981	30,730	13,691	0	0	0	0	888	3,592	1,529	2,870	31,946	169,899
1982	31,703	12,972	0	0	11	3	1,027	4,662	3,974	5,779	30,429	162,665
1983	33,500	15,000	0	0	0	0	1,200	5,400	4,000	5,800	37,860	184,610
<b>Thailand</b>												
1981	2,595	1,942	0	0	9,606	2,366	8,354	41,783	45,134	84,057	19,199	184,824
1982	3,547	995	0	0	3,853	883	12,560	67,431	36,029	50,555	14,882	155,126
1983	2,800	1,000	0	0	0	0	10,000	55,000	45,000	65,300	17,750	164,550
<b>Total</b>												
1981	56,354	22,905	343,073	102,794	9,702	2,375	20,597	116,216	113,377	209,111	117,703	1,181,050
1982	65,249	27,191	535,604	139,350	155,147	33,908	28,385	176,547	132,792	195,341	102,572	1,204,324
1983	72,205	31,850	605,000	139,150	110,000	22,500	26,900	171,773	131,000	188,635	101,070	1,235,992

<sup>1</sup>Fiscal 1983 is ERS forecast.

Sources: Bureau of the Census, U.S. Department of Commerce and ERS estimates.

Further reductions of U.S. cotton exports are anticipated in fiscal 1983 in most of the region's markets. However, a reversal of declining Philippine imports is likely. Since December 1982, several Philippine plants have been operating at near-capacity, although utilization averaged only 45 percent for the year as a whole. Price competition from Pakistan, though, may limit U.S. sales in the Philippine market.

### Oilseed Market Growing

A 56-percent jump in 1982 soybean exports raised U.S. shipments to 535,600 tons and \$139 million, or 12 percent of total U.S. export earnings from Southeast Asia. Indonesia is the major importer, taking 68 percent of U.S. soybeans in Southeast Asia, yet it does not have a crushing facility. Instead, the beans are consumed by the predominantly vegetarian Muslim population as a major source of protein, in foods such as tofu and tempe. Indonesia does import soybean meal for its small livestock sector, but these imports are to upgrade the country's dairy herds, thereby expanding domestic milk production. Another 26 percent of U.S. soybeans to ASEAN went to Malaysia during fiscal 1982, to be crushed for feed by Malaysia's two crushing facilities. Competition from cheaper Chinese soybean meal is curtailing larger soybean imports. The Philippine soybean market

is driven by livestock demand for meal, but the less expensive Brazilian meal usually supplies over three-quarters of the market, with the United States supplying the remainder. The modern Philippine crushing facility is beset with financial difficulties, but the insignificant domestic soybean production will provide the United States with a large market once operations are underway.

### Tobacco Shipments To Decline in Fiscal 1983

Tobacco ranked fourth in U.S. farm export earnings to Southeast Asia, indicating the popularity of blending it with local leaf in cigarette manufacture. Total sales reached 28,000 tons during fiscal 1982, 38 percent above a year earlier, earning \$176.5 million. Two factors likely to curtail U.S. exports to roughly 27,000 tons in fiscal 1983 are increased Indonesian import regulations and enlarged Thai supplies.

### U.S. Exports of Animals and Animal Products Fulfills Regional Demand

In the last 5 years, U.S. exports of animal and animal products to the region have nearly doubled, to \$73 mil-

lion in fiscal 1982. Poultry products (primarily chicken parts) to Singapore account for about half these shipments. Several factors have influenced U.S. export growth in this city-state: high growth rates, high income elasticity of demand for quality poultry meat, aggressive U.S. promotion, and a lack of indigenous capacity. Future export growth, however, may be restrained by competition from Thailand.

The live animal trade, of which 76 percent was breeding chicks, earned \$7.4 million in fiscal 1982 and shows no indication of abating in fiscal 1983. The markets range from around 250,000 million chicks sold to Singapore to 387,000 million sold to the Philippines.

## **ASEAN<sup>1</sup> LIVESTOCK ECONOMY TO EXPAND RAPIDLY IN THE 1980's**

The rapid growth in most of the key livestock sectors in ASEAN during the last 5 years has set the stage for further gains in the rest of the 1980's. The implication for U.S. trade is for greater market opportunities for soybean meal, coarse grains, breeding stock, and poultry products. Thailand will emerge as an increasing U.S. competitor in Asian poultry markets and it is likely to maintain and perhaps increase its share in mixed feed markets. Thailand is also expected to remain a dominant factor in ASEAN corn markets.

ASEAN forms an economy with a 1982 GNP of \$208 billion and a population of 271 million: an economy nearly as large as Brazil's and population about as large as that of the USSR. International trade is important to all ASEAN countries. Except for Singapore, the economies of ASEAN are generally characterized by abundant natural resources, especially Indonesia, the Philippines, and Thailand. Rice accounts for 20 to 40 percent of the value of agricultural production in each country. However, there is great diversity among countries. While per capita income averaged \$767 in 1982, the range was from over \$5,000 in Singapore, one of the newly industrialized countries of Asia, to just over \$600 in Indonesia, the predominant economy of the ASEAN region. The contrast in population is particularly striking—Indonesia had 155 million people in 1982, while Singapore had 2.5 million.

Expanding exports, successful agricultural development initiatives, and favorable investment climates will likely bring strong economic growth to the ASEAN region in the 1980's. Promising growth prospects will lead to expanded demand for livestock products and the emergence of small but dynamic livestock sectors in all the countries. ASEAN will assume a greater role in international trade in feeds and meat and other livestock products.

### **Demand for Livestock Products and Fish**

Consumption of meat and livestock products in ASEAN nations is relatively small by Western standards. Diets

<sup>1</sup>The Association of Southeast Asian Nations is comprised of Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

### **U.S.-ASEAN Trade Unaffected By Tariff Preferences**

The member countries of ASEAN—Indonesia, Malaysia, Philippines, Singapore, and Thailand—exchange tariff preferences that amount to about 5-10 percent of value on more than 10,000 items. Presently, tariff reductions of 20-25 percent are extended on goods whose trade value does not exceed \$2.5 million. These preferences, however, are not expected to hamper U.S. trade because the ASEAN countries are dependent on imports for three of the major commodities which the United States supplies, namely wheat, soybeans, and cotton. Insufficient production of quality tobacco and rice in the region will keep the United States an important residual supplier for these farm products. [Leslie E. Ross, 202/447-8231]

still tend to emphasize cereals, especially rice, plus roots, tubers, and fish. Per capita meat consumption in 1981 averaged 10.8 kilograms, with a low of 4.4 kilograms in Indonesia and a high of 67.9 kilograms in Singapore (table A). By comparison, per capita meat consumption topped 100 kilograms in several Western countries, including the United States. A roughly reverse pattern of high cereal consumption in ASEAN and relatively low cereal consumption in the West is also shown in table A.

Consumption of meat and livestock products in the larger nations of ASEAN—Indonesia, the Philippines and Thailand—is also small relative to neighboring Japan and Taiwan, reflecting lower income and a lower stage of development in the livestock sector. For example, in 1981 per capita milk consumption in Thailand was 12.0 kilograms, only about one-third the level in Japan.

By contrast, the region's rich fishery resources have translated into high intake of fish. Per capita ASEAN fish consumption in 1980 ranged from a high of 53.4 kilograms in Malaysia to a low of 13.1 kilograms in Indonesia. Fish consumption levels tend to be lower in the West and roughly similar to the ASEAN weighted average in East Asian countries.

The consumption pattern for meat and livestock products in ASEAN is determined by the prices of livestock commodities and substitutes, real income, tastes and preferences, and urbanization.

### **Modest Price Increases of Livestock Products Encourage Consumption**

Because a diet of rice and fish and complements predominates in all the ASEAN countries, price movements of rice and fish tend to show similar patterns across countries. Between 1966 and 1980—especially in the early 1970's—the price of rice tended to move up more slowly than the price of beef and some dairy products (Indonesia is an exception). Rice prices corresponded closely to movements in the general price index, as would be expected because of the importance of rice in the diet. Further, the prices of poultry and of pork in Singapore and Malaysia, and pork in the Philippines, tended to register increases at roughly the rate of growth of the general price index, implying only limited supply constraints and an encouragement to consumption.

**Table A.—Annual per capita disappearance of cereals, roots and tubers, livestock products, and fish in ASEAN and selected other countries, 1977-82**

Country	Cereals	Rice	Roots and tubers <sup>6</sup>	Meat	Beef and other ruminants	Pork	Poultry	Eggs	Fish	Milk
<i>Kilograms</i>										
Indonesia <sup>1</sup>	170.3	139.6	66.1	4.4	2.4	0.6	1.3	1.2	13.1	3.8
Malaysia <sup>1</sup>	154.2	111.6	16.8	18.1	2.3	4.9	10.9	8.5	53.4	44.7
Philippines <sup>1</sup>	138.2	88.2	54.2	17.1	3.8	8.9	4.4	4.4	30.7	16.7
Singapore <sup>1</sup>	156.4	56.5	16.1	67.9	5.8	30.0	32.1	9.9	24.2	67.5
Thailand <sup>1</sup>	153.5	146.3	11.9	<sup>5</sup> 18.5	4.6	<sup>5</sup> 6.3	7.7	4.6	36.0	12.0
Hong Kong <sup>2</sup>	96.2	71.4	7.9	64.1	6.8	32.5	24.8	12.0	35.0	20.7
South Korea <sup>2</sup>	202.6	140.3	9.5	11.0	3.3	5.4	2.3	4.9	35.0	13.2
Taiwan <sup>2</sup>	137.8	104.3	7.0	40.1	1.5	25.4	13.3	7.9	37.9	28.8
Japan <sup>2</sup>	111.9	77.8	17.4	22.4	5.1	9.6	7.7	14.7	34.8	33.9
West Germany <sup>3</sup>	66.5	1.5	79.8	84.9	25.8	47.7	8.9	17.1	6.1	97.6
United States <sup>4</sup>	68.2	3.4	40.3	109.6	47.8	33.4	27.7	15.7	7.7	103.6

<sup>1</sup>Food Balance Sheet 1980 and ERS Country Files, 1980-81. <sup>2</sup>ERS Country Files, 1981. <sup>3</sup>FAO Food Balance Sheet, 1977. <sup>4</sup>Food, Consumption, Price and Expenditures, ERS Statistical Bulletin 694, 1981. <sup>5</sup>Preliminary. <sup>6</sup>Processed roots and tubers not corrected to food equivalent.

The price of fish tended to show moderate growth between 1966 and 1975, but exploded—with the exception of Indonesia—in the late 1970's, reflecting increasingly tight supply but generally stable demand. Per capita consumption of fish generally stagnated or fell throughout ASEAN in the late 1970's.

Agricultural pricing and trade policy, focusing primarily on food grains, were important in directly and indirectly influencing retail price movements in the 1970's. In Indonesia, a retail price ceiling on rice and distributions of rice to Government employees at controlled prices served to moderate the rise of the price of rice. On the other hand, import duties and quotas on dairy products, combined with supply constraints, have caused a marked increase in the price of milk powder in the late 1970's. Indonesia's food policy is aimed at ensuring adequate production of rice by providing remunerative prices to producers through guaranteed floor prices and stable prices to consumers. These policies tend to hold down retail rice prices and appear to have had a moderating influence on the retail price of livestock products.

The Philippines and Malaysia also placed retail controls on the price of rice and pursued food policies which maintained ample supplies of low cost rice to consumers. As a consequence, a price pattern quite similar to that of Indonesia occurred in the 1970's as well as the 1960's.

Thailand, the only ASEAN country with an exportable surplus of rice, regulates rice export levels to maintain low rice prices to consumers. Thailand does not have retail price controls on rice, but the price of pork was controlled at the retail level until 1981, causing prices to grow at a slower rate in the 1970's than the price of beef and fish. The price of beef was also controlled at the retail level in Thailand, although control was ineffective because of severe supply constraints.

#### **Per Capita Income Growth Boosts Demand for Livestock Products**

Real income in ASEAN has grown over the past decade. In general, the demand for livestock products in ASEAN is income-elastic. Real per capita income has

surged upward in Indonesia, Malaysia, and Singapore in the past 10 years. Though income growth was less rapid in the Philippines and Thailand, income in urban areas showed considerable growth. However, in Indonesia and the Philippines, substantial weakening of local currencies vis-a-vis the United States dollar meant that ability to purchase internationally traded livestock products was constrained. Nevertheless, income growth in ASEAN has translated into greater demand for livestock products.

The proportion of family income spent on food in ASEAN—except for Singapore—is generally high because incomes are low. In 1978, expenditures on food as a percent of household income were only 10.4 percent in Singapore but were 62.9 percent in Indonesia. In Malaysia, food expenditures as a percent of household income amounted to 46.8 percent (1982); in the Philippines, 57.0 percent (1980); and in Thailand, 51.6 percent (1979).

#### **Urbanization Increases Exposure To Western Influences**

Migration to urban areas increases consumer exposure to Western influences and the Western dietary pattern of livestock consumption. Urban population growth rates are substantially higher than the growth of the total population, and they therefore positively influence the demand for livestock and livestock products. Preferred livestock products moving into urban markets exhibited relatively rapid increases in price during the 1970's. Marked increases in beef prices in Indonesia and Singapore are examples.

#### **Tastes and Preferences Differ Widely in ASEAN**

Wide cultural and religious differences exist among the countries of ASEAN. Nonetheless, a typical diet includes large amounts of rice and fish, with the predominance of cereals ranging from 69 percent of daily caloric intake in Thailand to 49 percent in Singapore. The Muslim religion in Indonesia and Malaysia constrains pork consumption.

A comparison of consumption patterns in ASEAN with those in East Asian countries having higher incomes but similar eating habits, and also with Western countries' consumption patterns, is useful in predicting future dietary developments in ASEAN. Higher incomes and high rice prices in East Asia and generally low income elasticity of demand for rice in the 1970's translated into somewhat lower cereal consumption in Japan and Taiwan, but no decline at all in South Korea. During the same period, fish consumption either held steady or increased as a percentage of daily caloric intake in East Asia. The implication for ASEAN nations is that, in the absence of supply constraints, rice and fish will likely retain their strong role in consumers' diets, even as per capita incomes increase.

East Asian consumers made room in their diets for more meat and animal products principally by reducing cereal consumption somewhat (in Japan and Taiwan), by reducing root and tuber consumption (in Japan, South Korea, and Taiwan), and also by increasing daily caloric intake (particularly in South Korea). From East Asian consumption patterns of the 1970's, one would conclude that growing incomes in ASEAN in the 1980's will lead to marginal decreases in cereal consumption, selected decreases in fish consumption, and reduced root and tuber consumption (especially in Indonesia and the Philippines). Consumption of livestock products likely will rise and so will daily caloric intake.

A comparison of the dietary patterns in ASEAN with those in the United States and West Germany suggests that the potential levels of daily caloric intake of meat and animal products are substantially higher than present levels in ASEAN and the levels expected by 1990. Consequently, as incomes increase in ASEAN, dietary changes will continue to occur for the next several decades.

### **Supply of Livestock and Fish Products**

Total meat output in ASEAN reached an estimated 2.9 million tons in 1982, about double a decade earlier and nearly equal to the production of Japan. Though meat production is constrained by a relatively low level of technology and a lack of indigenous capacity to produce feed grains (except for Thailand) and oilseeds, about 98 percent of total meat consumption is satisfied locally. The hog, poultry, and cattle industries are most important, followed by dairy.

The livestock sectors of ASEAN are small compared with total output, with the primary livestock sectors contributing less than 5 percent of GNP. Also, the ASEAN livestock economy, though growing rapidly, is tiny by world standards, with aggregate meat production accounting for only 2 percent of the world total in 1982. The annual fish catch in ASEAN, by contrast, comprises 8 percent of the world's total.

In ASEAN, corn is the primary feed ingredient in swine and poultry rations, followed by rice bran and soybean meal. Beef cattle are primarily fed roughage. Most dairy cattle also are fed only a little grain or supplement, mainly consuming roughage.

The supply of livestock products is determined to a large extent by the price of livestock products, the prices of feed inputs, and technology.

### **Favorable Output/Input Price Ratios Encourage Production**

In commercialized poultry and swine operations, feed accounts for roughly 65-70 percent of the cost of production. Hence, producer incentives to increase supplies of livestock products may be assessed by examining ratios of feed/price, particularly for corn.

With only modest increases in the price of corn, poultry/corn and hog/corn ratios improved slightly in ASEAN from 1975 to 1982. In Indonesia, for example, the poultry/corn ratio improved from 16.7 in 1975 to 18.3 in 1982. Similar improvement in poultry and hog feed ratios occurred in the Philippines during this period. In Malaysia and Singapore, which depend primarily on imported corn, hog/corn ratios increased markedly over the period. Retail price controls on pork products contributed to little or no growth in hog/corn ratios during the period in Thailand. Infusions of cost-reducing technology, however, offset price controls and stimulated gains in poultry and pork production.

Poultry/corn ratios in ASEAN tend to be higher than those in the United States. The opposite situation holds for hog/corn ratios. Incentives in ASEAN appear particularly attractive for poultry producers in commercialized operations experiencing relatively high feed conversion ratios, but less favorable for pork producers. In general, incentives for pork production appear to be adequate, particularly where producers have adopted new technology.

### **Modern and Traditional Production Methods Exist Side by Side**

Livestock production in ASEAN is characterized by modern production methods existing side-by-side with traditional methods based on low-cost labor and limited concentrate supplies. During 1982 in Thailand, for example, more than 70 percent of broilers were raised on commercial, highly integrated operations. By contrast, Thai hog production is mainly a backyard operation by small-scale rice farmers. These operations account for more than 70 percent of total pork production.

New cost-reducing technology is primarily centered around improving feed efficiency within the poultry and swine industries. The multinational companies of the United States and Western Europe have played a key role in this effort, transferring improved nutrition, genetics, and disease control methods to ASEAN. Several local firms have also played important roles.

### **Government Policies Influence Supply**

Government policy influences supply by impacting on livestock prices, cost of inputs, and technology transfers. Some Government policies appear to provide disincentives to production. Duties on soybean meal imports into Malaysia are an example of Government policy raising the price of inputs to producers. A Government policy in Indonesia is to restrict the size of laying and broiler operations, hence limiting the ability of poultry producers to exploit economies of size offered by the available technology. The Thai poultry industry, by contrast, has been able to exploit economies of size without Government influence.

## Livestock Growth Prospects Favorable

Favorable economic growth prospects in the 1980's form the basis for the likely expansion of the region's livestock economies. Higher per capita urban incomes, starting from a low level, will translate into greater demand for meat and livestock products. During the 1970's, real GNP growth ranged from 6.3 percent in the Philippines, the region's second largest economy, to 8.5 percent in Singapore (table B). Economic growth is expected to remain strong in the region during the 1980's.

**Table B.—Historical and projected annual growth rates of real GNP in ASEAN and selected East Asian nations**

Country	Actual 1970-1980	Projected 1980-1990
Indonesia	7.6	5.0
Malaysia	7.8	6.6
Philippines	6.3	4.5
Singapore	8.5	7.2
Thailand	7.2	6.0
Hong Kong	9.3	6.0
South Korea	9.5	6.5
Taiwan	7.5	5.5
Japan	5.0	4.5

Though the region was buffeted by falling commodity prices, high interest rates, protectionist trade policies, and an economic recession in the West in the early 1980's, several factors are likely to buttress the area's return to high economic growth in the rest of the decade. First, opportunities for improving performance in labor-intensive export markets such as textiles and electronics will likely develop for most of ASEAN, where wage rates are relatively low. By contrast, wage hikes and inflation are gradually eroding the competitiveness of East Asian nations.

Second, private and long term capital transfers to ASEAN from the West will likely provide the financing to move the region into the manufacture of higher value-added products. Increasing capital inflow, will be a continuation of recent trends which led to a 1981 level over three times greater than that of a decade earlier. ASEAN countries' inflation ranged from 3.7 to 9.7 percent in 1982 (see Table 1). Low and stable inflation rates imply relatively low risk premiums on borrowed capital and contribute to improving the investment climate. Western confidence in the economies of ASEAN is likely to remain strong in the 1980's, with some reservations about the Philippines, where structural problems are reflected in a relatively unstable currency and a debt-service ratio of 20 percent in 1982.

Though agriculture will undoubtedly decline as a share of GNP in ASEAN, reasonably successful agricultural

**Table C.—Fish: historical and projected production consumption and trade, by individual ASEAN countries**

	Production		Consumption			Net imports 1,000 tons
	Marine and inland	Aqua- culture	Pro- duction	Total	Per capita	
	Percent		1,000 tons		Kilograms	
<b>Indonesia</b>						
1969-71	95	5	1,239	1,229	10.4	-10
1978-80	90	10	1,754	1,700	12.0	-54
1985	89	11	2,290	2,200	13.6	-90
1990	88	12	2,727	2,611	14.8	-116
<b>Malaysia</b>						
1969-71	99	1	376	337	30.9	-39
1978-80	99	1	708	707	52.5	-1
1985	99	1	1,035	1,035	66.9	-1
1990	99	1	1,182	1,182	69.9	-
<b>Philippines</b>						
1969-71	92	7	984	1,033	27.9	49
1978-80	91	8	1,509	1,464	31.1	-45
1985	90	9	1,779	1,652	30.2	-127
1990	89	10	2,001	1,802	30.2	-199
<b>Singapore</b>						
1969-71	100	—	14	76	36.7	62
1978-80	100	—	16	60	25.4	44
1985	100	—	16	55	21.5	39
1990	100	—	16	50	18.6	34
<b>Thailand</b>						
1969-71	100	—	1,431	1,414	39.0	-17
1978-80	96	4	1,868	1,771	38.9	-97
1985	95	5	1,917	1,791	34.2	-126
1990	94	6	2,091	1,891	32.6	-200
<b>ASEAN</b>						
1969-71			4,044	4,090	20.1	-55
1978-80			5,855	5,702	22.8	-153
1985			7,037	6,678	23.3	-305
1990			8,017	7,536	24.2	-481

Source: FAO Yearbook of Fisheries Statistics.

development programs are being implemented in most countries. Indonesia and the Philippines, in particular, were successful in the 1970's in boosting rice yields and production by subsidizing inputs and encouraging the dissemination of HYV's. Thailand also marked substantial production increases in the 1970's in rice and other crops, primarily in response to export demand. Hence, growth in the agricultural economies in ASEAN generally is expected to match the 4.0-5.5 percent performance of the 1970's.

The projections that follow are based mainly on trend rates of growth in production and consumption for the various livestock products from 1966 to 1980-1982. Net imports were derived as a residual. The analysis also incorporates, where appropriate, the expected effect of the demand and supply assumptions implied in the previous sections. All estimates of feedstuff production are based on normal weather.

ASEAN meat production is projected to increase at an annual rate of 5.6 percent in the 1980's, reaching 4.2 million tons by 1990. The most rapid increases will occur in the broiler, layer, dairy, and pork sectors. Boosted by Western technology, annual rates of increase of 5-9 percent are expected. By contrast, production in the fish and ruminant sectors will be limited to annual growth rates of 3-4 percent, close to the expected annual population growth rate of 2.0 percent. Constraints to higher produc-

tion in these sectors include wide variations in feeding efficiency, high startup costs, and overexploitation of the resource base.

### Growth in Marine Fish Catches To Fall

ASEAN fish production is projected to increase at a rate of 3.7 percent in the 1980's, down by a third from the growth of the 1970's (table C). Deep-sea production will grow more slowly because many species, such as tuna, are already overexploited. This slowdown in growth will be only partially offset by improved efficiency from inland fisheries and aquaculture.

Strong consumption growth in Indonesia, where incomes are low, and Malaysia, where fish are especially important in the diet, is expected to support annual growth in fish consumption for all of ASEAN at 3.2 percent in the 1980's. However, slower increases are expected in the Philippines and Thailand because of a decline in marine catches, and in Singapore because fish have become relatively expensive compared with livestock products. A growing gap between production and demand for the preferred marine species will lead to higher fish prices and likely bolster demand for livestock products throughout the region. Annual per capita consumption for all fish is expected to reach about 24 kilogram by 1990, only marginally higher than the 1978-80 level.

**Table D.—Poultry<sup>1</sup>: historical and projected annual production, consumption, and trade, by individual ASEAN countries**

Country	Livestock population		Pro-duction	Consumption		Net imports
	Chickens	Ducks		Total	Per capita	
	Million head		1,000 tons	Kilograms	1,000 tons	
Indonesia						
1969-71	72.5	8.4	40	40	.3	—
1980-82	134.1	21.0	195	195	1.3	—
1985			279	279	1.7	—
1990			400	400	2.3	—
Malaysia						
1969-71	27.6	.2	33	34	3.1	1
1980-82	50.7	.2	142	147	10.9	5
1985			198	206	13.3	8
1990			268	281	16.6	13
Philippines						
1969-71	58.7	2.3	101	101	2.7	—
1980-82	52.8	5.0	<sup>2</sup> 202	202	4.1	—
1985			260	260	5.0	—
1990			392	392	6.6	—
Singapore						
1969-71	12.0	1.5	18	22	10.8	4
1980-82	15.6	2.5	53	72	30.2	19
1985			55	100	39.1	45
1990			60	110	40.4	50
Thailand						
1969-71	33.6	12.3	65	65	1.8	—
1980-82	60.5	11.2	<sup>2</sup> 382	362	7.7	-20
1985			515	462	8.8	-53
1990			666	593	10.1	-73
ASEAN						
1969-71	201.4	24.6	257	262	1.3	5
1980-82	313.8	39.9	974	978	3.7	4
1985			1,307	1,307	4.6	-6
1990			1,786	1,776	5.7	-10

<sup>1</sup>Includes all poultry meat products. <sup>2</sup>Preliminary.

Source: FAO Production and Trade Yearbooks and ERS Country Files.

Small increases in exportable supplies from Thailand and the Philippines and continued loss of self-sufficiency in Indonesia and Singapore will highlight ASEAN's fish trade in the 1980's. Net fish exports, primarily fish meal and processed fish, are projected to grow from an average of 153,000 tons during 1972-80 to close to 500,000 tons by 1990. The Philippines, in particular, is expected to boost exports of processed fish. Exportable surpluses will be eliminated in Malaysia.

### Strong Performance Likely In Poultry Meat Sector

Led by a rapidly expanding commercial sector in Thailand, ASEAN poultry production is projected to increase at an annual rate of 10.4 percent in the 1980's (table D). This strong performance will, however, be less than half the rate of growth of the 1970's, when the ASEAN commercial poultry sector was in its infancy. Including layers, the sector accounts for an estimated 60 percent of commercial feed consumption in ASEAN.

Growth of broiler production in Thailand, now the 11th largest broiler producer in the world, is likely to be boosted by further cost-reducing technology from the West. The broiler industry and the integrated feed industry in Thailand are dominated by highly concentrated opera-

tions, accounting for more than 70 percent of production. Generally favorable conditions for producing poultry exist in Indonesia and will lead to annual production increases of more than 10 percent in the 1980's, though production is constrained by feed shortages and wide variations in efficiency. Almost 10 percent of production is now attributed to commercial farms. Philippine producers, encouraged by favorable broiler/feed price ratios, should boost output at an annual rate of close to 10 percent. Production in Malaysia depends on imported feed, but highly efficient operations there are also projected to increase production more than 10 percent a year in the 1980's. Production in Singapore will, by contrast, be hampered by space and pollution problems.

Per capita consumption of poultry may grow 50 percent to 5.7 kilograms by 1990, with substantial increases in all countries. Consumer demand for poultry will be spurred throughout the region by modest increases in poultry prices, coupled with more rapid increases in the prices of substitutes, especially beef and fish, and by westernization of diets in urban areas. These positive demand factors will offset the generally lower preference for poultry and its previous unavailability compared with substitutes.

Potentially sharp increases in exportable supplies from Thailand, a doubling of poultry imports in Singapore, and

**Table E.—Pork: historical and projected annual production, consumption, and trade, by individual ASEAN countries**

Country	Livestock population	Production	Consumption		Net imports
			Total	Per capita	
	1,000 head	1,000 tons		Kilograms	1,000 tons
Indonesia					
1969-71	3,143	35	35	.3	—
1979-81	3,306	90	91	.6	1
1985		127	128	.8	1
1990		173	176	1.0	3
Malaysia					
1969-71	1,053	51	55	5.1	4
1979-81	1,711	68	71	5.1	3
1985		79	78	5.0	-1
1990		92	92	5.4	—
Philippines					
1969-71	6,618	304	304	8.2	0
1979-81	7,529	411	412	8.6	+1
1985		491	491	9.0	0
1990		531	531	9.1	0
Singapore					
1969-71	995	25	30	14.6	5
1979-81	1,203	58	66	27.1	8
1985		70	81	31.6	11
1990		84	99	36.4	15
Thailand					
1969-71	4,484	210	210	5.8	—
1979-81	7,467	295	295	6.2	—
1985		417	417	7.9	—
1990		513	513	9.3	—
ASEAN					
1969-71	16,293	625	634	3.1	9
1979-81	21,216	922	935	3.6	13
1985		1,184	1,195	4.2	11
1990		1,393	1,411	4.4	18

<sup>1</sup>Preliminary.

Source: FAO Production and Trade Yearbooks and ERS Country Files.

smaller growth in Malaysia's poultry imports will highlight ASEAN's poultry trade in the 1980's. Thai poultry exports, primarily to Japan, could reach close to 100,000 tons by 1990, clearly marking Thailand as a force in the growing poultry markets in Asia. Indonesia and the Philippines will remain self-sufficient in poultry production.

### Commercialization of Pork Sector To Boost Production

ASEAN's production of pork, in which the region is virtually self-sufficient, is projected to reach 1.4 million tons by 1990 (table E). Production growth of nearly 6 percent per year in the 1980's will be slightly faster than that in the 1970's, mainly influenced by stepped-up commercialization of the hog sector in Thailand. Production will also increase at a brisk pace in the smaller hog sectors of Indonesia, Malaysia, and Singapore. Pork production in the Philippines is not likely to show rapid advances until management practices improve and domestic coarse grain supplies become more readily available.

Annual per capita consumption of pork will reach 4.4 kilograms by 1990, ranging from 36.4 kilograms in Singapore, where pork is the preferred meat, to 1.0 kilograms in Indonesia, where 80 to 90 percent of the population does not eat pork because of religious beliefs. Pork will remain the most important meat in the diet in the Philippines and Singapore.

While ASEAN pork production will grow smartly in the 1980's, it will likely fall far short of the 10-percent growth achieved by high-income East Asian economies in the 1970's. Nonetheless, the ASEAN pork sector will boost import demand for corn, soybeans, and soybean meal, accounting for an estimated 20-30 percent of feed consumption.

### Improving Egg Production Focused in Indonesia

ASEAN egg production is expected to increase at close to 5.0 percent per year in the 1980's, more than double the population growth rate (table F). The egg sector, in contrast to the broiler, is not encouraged by strong export markets. Rates of return on layer operations tend to be lower and startup and marketing costs higher than for broiler operations.

Conditions for improving egg production appear most favorable in Indonesia, with hybrid layers improving annual output by 2 to 3 times the capacity of indigenous chickens. Indonesian egg production is projected to increase at an annual rate of 8.6 percent during the 1980's, offsetting the slow growth in Singapore, which is experiencing supply constraints, and Thailand, where the broiler industry offers higher rates of return.

Annual per capita egg consumption in ASEAN, dominated by the low level in Indonesia, will reach only 3.5 kilograms in 1990. Eggs as a percent of daily caloric intake will range from 0.5 percent in Indonesia to 1.3 percent in Malaysia and Singapore, comparable to present levels in South Korea and Taiwan but far below present levels in Japan.

Regional net exports of eggs are expected to remain small during the 1980's. However, Thai penetration of the Hong Kong egg market is likely to reach 7,000 tons by 1990.

**Table F.—Eggs: historical and projected annual production, consumption, and trade, by individual ASEAN countries**

Country	Pro- duction	Consumption		Net imports
		Total	Per capita	
		1,000 tons	Kilograms	1,000 tons
Indonesia				
1969-71	62	62	.5	—
1979-81	175	175	1.2	—
1985	240	240	1.5	—
1990	309	309	1.3	—
Malaysia				
1969-71	37	37	3.4	—
1979-81	120	121	8.4	1
1985	141	142	9.2	1
1990	162	163	9.6	1
Philippines				
1969-71	117	117	3.2	—
1979-81	212	212	4.3	—
1985	265	265	4.8	—
1990	339	339	5.7	—
Singapore				
1969-71	19	19	9.3	—
1979-81	27	28	11.3	1
1985	28	28	11.1	—
1990	30	30	11.1	—
Thailand				
1969-71	111	111	3.1	—
1979-81	220	219	4.7	-1
1985	242	240	4.6	-2
1990	268	261	4.6	-7
ASEAN				
1969-71	346	346	1.7	—
1979-81	754	755	2.9	1
1985	916	915	3.2	-1
1990	1,108	1,102	3.5	-6

Source: FAO Production and Trade Yearbooks and ERS Country files.

### Ruminant Production Hindered

Plagued by population pressures and inadequate forage supplies, ASEAN beef production is projected to grow by only 3.6 percent per year in the 1980's (table G). Beef producers account for an estimated 10 percent of feed consumption in ASEAN. Traditionally, beef production has consisted of the slaughter, at 10-12 years of age, of cattle and buffalo used primarily as draft animals. Cow herd numbers in ASEAN showed virtually no growth in the 1970's, and declined on a per capita basis. Herd improvement has been minimal. While significant economic returns on beef cattle production exist, higher startup costs and a longer payback period than for competing livestock enterprises have doomed most commercial operations. Moreover, beef cattle development, in contrast to pork and poultry, directly competes with food grain production for land for forage, grazing and feeding space. Finally, achieving the scale of operation required for beef production, in terms of financing, is inconsistent with government policies emphasizing smallholder livestock operations, especially in Malaysia and Indonesia. Where larger commercial operations have been established in the Philippines and Thailand, success has been limited by low efficiency, high marketing costs, and inadequate forage supplies.

**Table G.—Ruminants: historical and projected annual production, consumption, and trade, by individual ASEAN countries**

Country	Livestock population		Pro- duction	Consumption		Net imports
	Cattle	Buffalo		Total	Per capita	
	1,000 head		1,000 tons		Kilograms	1,000 tons
Indonesia						
1969-71	6,274	2,915	242	242	2.1	—
1978-80	6,349	2,427	353	353	2.4	—
1985			392	392	2.4	—
1990			430	430	2.4	—
Malaysia						
1969-71	334	330	18	22	2.0	4
1978-80	525	287	18	31	2.3	13
1985			18	39	2.5	21
1990			18	49	2.9	31
Philippines						
1969-71	1,701	4,452	95	97	2.7	2
1978-80	1,879	2,818	150	159	3.3	9
1985			223	228	4.2	5
1990			270	274	4.6	4
Singapore						
1969-71	8	4	6	13	6.3	7
1978-80	9	3	2	13	5.6	11
1985			2	16	6.3	14
1990			2	18	6.6	16
Thailand						
1969-71	4,807	6,265	156	156	4.3	—
1978-80	4,933	5,967	220	218	4.7	-2
1985			239	236	4.5	-3
1990			261	256	4.4	-5
ASEAN						
1969-71	13,124	13,966	517	530	2.6	13
1978-80	13,695	11,502	743	774	3.0	31
1985			874	911	3.2	37
1990			981	1,027	3.3	46

Source: FAO Production and Trade Yearbooks and ERS Country Files.

Rising incomes and a preference for beef in urban areas are expected to boost annual per capita consumption of beef to 3.3 kilograms in ASEAN by 1990. Expected consumption levels will range from 6.6 kilograms per capita in Singapore to 2.9 in Malaysia and 2.4 in Indonesia.

With consumption growth outstripping production in Malaysia and Singapore, ASEAN net beef imports are expected to reach 46,000 tons in 1990. Commercial operations in Thailand, licensed exclusively for export, are projected to ship 5,000 tons by 1990.

### Dairy Imports Will Boost Consumption

Dairy consumption (fluid milk equivalent) in ASEAN is projected to increase at an annual rate of 5.4 percent in the 1980's, reaching 4.3 million tons by 1990 (table H). The most rapid growth will take place in Indonesia, the Philippines, and Thailand. Slower growth is likely in Malaysia, while consumption in Singapore will decline.

Domestic milk production will account for only 6.5 percent of consumption in 1990, down slightly from 1978-80. The Governments of Indonesia, the Philippines, and Thailand are promoting domestic dairy production, but with little success and at high cost. Constraints on production include low levels of efficiency (despite the introduction of successful breed crosses between Holstein and

native cattle), high marketing costs, and lack of high-quality feeds. Use of milk is not prevalent among adults in ASEAN and has reached a relatively high level in only Malaysia and Singapore. Milk is primarily imported in the form of nonfat dry milk and mixed with local production.

### Feedstuffs Demand to Outstrip Indigenous Production

ASEAN consumption of feed grains is projected to increase 5.8 percent a year to 15.4 million tons by 1990 (table I). The most rapid growth will take place in Malaysia, where virtually all feed grains must be imported. Growth in feed demand in Singapore is expected to slow because of pollution and space constraints on livestock expansion. A failure to markedly improve corn yields in Indonesia and the Philippines will cause corn supply to fall nearly 1.8 million tons short of demand by 1990. Feed consumption in Thailand will grow at an annual rate of over 10 percent as demand for livestock feed will continue strong.

Corn production in Indonesia is characterized by low profitability and yields. Corn production could be increased if producer incentives were improved, corn production encouraged off Java, and varieties improved. Production is, however, projected to grow at an annual

**Table H.—Milk<sup>1</sup>: historical and projected annual production, consumption, and trade, by individual ASEAN countries**

Country	Livestock population	Pro-duction	Consumption			Country	Livestock population	Pro-duction	Consumption		
			Total	Per capita	Net imports				Total	Per capita	Net imports
	1,000 head	1,000 tons	1,000 Kilograms	tons		1,000 head	1,000 tons	1,000 Kilograms	tons		
Indonesia					Singapore						
1969-71	59	41	205	1.7	1969-71	1	1	150	72.5	149	
1978-80	116	78	495	3.4	1978-80	1	1	177	73.7	176	
1985		112	755	4.7	1985		1	152	59.4	151	
1990		144	995	5.6	1990		1	137	50.4	136	
Malaysia					Thailand						
1969-71	43	32	315	28.8	1969-71	3	8	267	7.3	259	
1978-80	32	33	595	43.1	1978-80	25	24	518	11.0	494	
1985		36	733	47.4	1985		39	754	14.4	715	
1990		39	854	50.5	1990		50	962	16.6	912	
Philippines					ASEAN						
1969-71					1969-71	136	110	1,678	8.2	1,568	
1978-80	30	28	741	20.0	1978-80	217	166	2,786	10.8	2,620	
1985	43	30	1,001	20.7	1985		223	3,463	12.1	3,240	
1990		35	1,069	19.5	1990		274	4,298	13.7	4,024	
		40	1,350	22.6							

<sup>1</sup>Fluid milk equivalent.

Source: FAO Production and Trade Yearbooks and ERS Country Files.

**Table I.—Coarse grains: current and projected production, consumption, and trade, by individual ASEAN countries**

	Area harvested	Yield	Pro-duction	Imports	Exports	Consump-tion	Feed	Non feed
	1,000 Ha	Kg/Ha				1,000 tons		
Supply and distribution, 1982								
Indonesia	2,600	1.46	3,800	200	—	4,000	800	3,200
Malaysia	14	1.43	20	885	—	905	881	24
Philippines	3,063	1.00	3,076	420	—	3,600	1,800	1,800
Singapore	0	0	0	540	130	410	310	100
Thailand	2,025	1.82	3,690	—	2,440	1,610	1,550	60
ASEAN	7,702	1.37	10,586	2,045	2,570	10,525	5,341	5,184
Supply and distribution projection, 1990								
Indonesia	3,060	1.47	4,500	695	—	5,195	1,465	3,730
Malaysia	14	2.14	30	1,600	—	1,630	1,630	—
Philippines	3,804	1.09	4,135	1,080	—	5,218	3,395	1,823
Singapore	—	—	—	700	168	530	440	90
Thailand	2,265	2.24	5,082	—	2,212	2,870	2,770	100
ASEAN	9,143	1.50	13,747	3,375	2,380	15,443	9,700	5,743

Source: FAO Production and Trade Yearbooks and ERS Country Files.

**Table J.—Protein meals: current and projected production, consumption, and trade, by individual ASEAN countries**

	Domestic production <sup>1</sup>					Net imports					Total consumption
	Total production	Soybean meal	Copra	Fish meal	Other	Total	Soybean meal	Soymeal equivalent	Fish meal	Other	
	1,000 tons					1,000 tons					1,000 tons
<b>Supply and distribution, 1982</b>											
Indonesia	576	0	389	1	186	265	200	0	20	45	841
Malaysia	408	0	83	25	300	46	65	146	35	-200	454
Philippines	585	5	577	—	3	426	360	34	20	12	1,011
Singapore	12	0	6	6	—	206	134	15	50	7	218
Thailand	326	63	23	150	90	60	200	0	-90	-50	386
ASEAN	1,907	68	1,078	182	579	1,003	959	195	35	-186	2,910
<b>Supply and distribution projection, 1990</b>											
Indonesia	826	0	560	1	265	460	400	—	30	30	1,286
Malaysia	595	—	90	25	480	-15	0	360	50	-425	580
Philippines	925	10	895	—	20	435	180	210	30	15	1,360
Singapore	16	—	10	6	—	283	130	71	63	19	299
Thailand	380	70	30	150	130	280	450	15	-110	-75	660
ASEAN	2,742	80	1,585	182	895	1,443	1,260	656	-63	-426	4,185

<sup>1</sup>From indigenous sources.

Source: FAO Production and Trade Yearbooks and ERS Files.

rate of only 2.3 percent in the 1980's, reflecting the difficulty of reorienting agricultural policy from food grains to expanding the livestock sector with an integrated feed grain base. In Indonesia, feed use of corn is expected to grow at an annual rate of 10.4 percent in the 1980's, reaching nearly 1.5 million tons by 1990. Per capita human consumption of corn is projected to remain at a relatively high 21.1 kilograms in 1990, making a total requirement of 5.2 million tons. Expected domestic supplies of 4.5 million tons will leave an import demand for corn of 700,000 tons.

During the 1970's policymakers in the Philippines developed pricing policies to encourage farm and off-farm investment in improving corn production and distribution. Low yields and high fixed costs of production, however, tended to make corn production unprofitable. Significant potential for expanding production exists, but it will require improved production incentives involving credit and extension services. Philippine feed use of corn is expected to grow at an annual rate of 11.1 percent in the 1980's and, in the absence of foreign exchange constraints, translates into more than a doubling of imports to 1.1 million tons by 1990. Human consumption is expected to decline slightly to 30.6 kilograms per capita by 1990.

Thailand is fortunate among Asian countries in that it can expand coarse grain production significantly by pushing into previously uncultivated areas. By utilizing this land reserve, and by improving yields, Thailand is projected to increase production at an annual rate of nearly 5 percent in the 1980's. Feed use, however, is projected to grow at twice that rate, reaching 2.8 million tons by 1990. Hence, Thailand's exportable surplus of coarse grains will decline marginally in the 1980's.

ASEAN consumption of protein meals is projected to increase 5.5 percent a year to 4.2 million tons by 1990.

The most rapid growth will take place in Thailand and Indonesia (table J).

Growth in protein meal production is projected to increase 5.5 percent a year in the 1980's, with strong growth in palm kernel meal production for exceeding marginal growth in fish meal. ASEAN, in general, has little capacity to produce soybeans, which are used primarily for meal for swine and poultry rations.

ASEAN self-sufficiency in protein meals is expected to remain at about 66 percent in 1990. However, deficits in quality meal production will increase, leading to greater dependence on trade. While soybean meal imports are projected to grow only 3.9 percent a year in the 1980's, soybean processing plants installed in the 1970's and early 1980's will translate into about a threefold increase in expected soybean imports.

The shortages of feedstuffs for ruminant production in ASEAN is expected to intensify in the 1980's. Nevertheless, several governments have programs to rebuild cattle and buffalo herds. Relatively rapid human population growth of 2.1 percent per year will continue to increase the demand for food grains, cutting into the area for raising fodder and forage crops and reducing supplies of vegetable materials and byproducts available for animal feed.

ASEAN consumption of broken rice and rice bran for feed (mostly for poultry and swine) is estimated close to 3.5 million tons for 1982, and it is projected to increase about 5 percent a year to 4.9 million tons by 1990. The most rapid growth will take place in Thailand, which will continue to produce large surpluses of rice during the decade. Rice for feed will also remain important in Indonesia and the Philippines. Malaysia and Singapore will increase imports of rice bran for feed.

## U.S. Trade Opportunities To Grow

The preceding projections suggest that national policies in ASEAN will continue to encourage commercial as well as backyard livestock operations, leading to rising feed demand during the 1980's. A growing gap between local capacity to supply feedstuffs and demand for feeding livestock herds will in general lead to faster growth in imports of concentrates and protein supplements. As a result, in the 1980's ASEAN will likely continue to improve as a market for U.S. corn, soybeans, and soybean meal. A small increase in imports of beef, pork, and poultry will occur in Malaysia and Singapore. However, U.S. exports of meat products to these nations will face increasing competition from Thai poultry exports. Unless the U.S. mounts a marketing offensive, ASEAN will likely continue to import the majority of its dairy products and dairy breeding stock from Europe, Australia, and New Zealand. U.S. opportunities for increasing sales of breeding stock of poultry, swine, and beef cattle will, however, be buttressed by the popularity of U.S. breeding technology already in place in ASEAN.

ASEAN self-sufficiency in feedstuffs, especially of quality protein meals and coarse grains, is projected to

decline during the 1980's. Yield constraints and rapid growth in production of livestock products, particularly in the Philippines, will provide the United States with a growing but relatively small market. A marginal decline in total Thai coarse grain exports in the 1980's will likely open up smaller markets in Malaysia and Indonesia, though Thailand will likely maintain large corn market shares in ASEAN. Total U.S. coarse grain exports to ASEAN are projected to reach about 1.5 million tons by 1990, more than seven times the 1982 level.

ASEAN imports of oilseed meals are projected to increase to 1.4 million tons, but growing production, even leading to growing exportable surpluses of palm kernel meal and copra cake, will dampen growth in demand for imports from outside the region. U.S. exports of soybeans and soybean meal to ASEAN will also have to compete with Brazilian oilseed products. Nonetheless, U.S. soybean exports ASEAN, primarily to Malaysia and the Philippines, are projected to reach nearly 300,000 tons by 1990, triple the 1982 level. U.S. soybean meal exports, primarily to the Philippines and Thailand, are projected to amount to 150,000 tons by 1990, five times the 1982 level. [Richard F. Nehring, 202/447-8230]

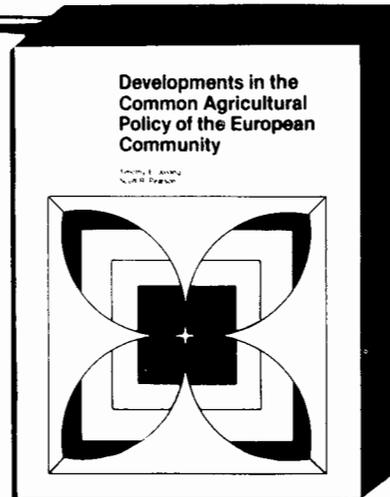
## Reduced Ag Subsidies in EC Good News for U.S.

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The report examines how the CAP



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## Agriculture in China...

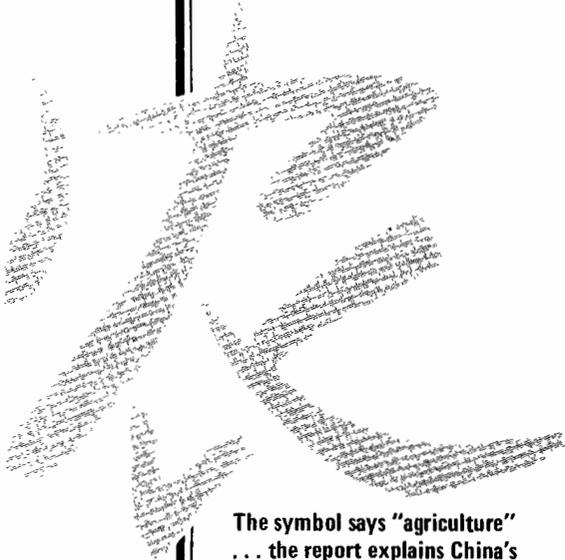
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