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Philippine Institute for Development Studies

## Food Policy: Its Role in Price Stability and Food Security

*Cristina C. David*

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**Food Policy: Its Role in Price  
Stability and Food Security\***

Cristina C. David\*\*

Food price stability and food security issues have again become central policy concerns, as prices of rice, corn, sugar, chicken and other food commodities increased sharply in the latter part of 1995. The sharp increases in food prices fueled inflation, induced minimum wage increases, raised fears about the nation's food security, and threatened macroeconomic stability, as well as the political fortunes of the current administration. In response, the government is adopting measures that will likely waste scarce budgetary resources, be counter-productive over the long-term, and detract the country from the efficient path to agricultural modernization.

As the price of rice rose, the government blamed and harassed the private traders, who have been in the business of rice trading for decades through periods of low and high prices. The government announced a doubling of budgetary allocation for agriculture with no clear strategy for addressing the policy and institutional constraints, developing more effective programs of support services, and strengthening (and streamlining) the central and local government bureaucracy concerned with agriculture-related activities. Although no irrigation

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study has mentioned the timeliness bureaucracy as a major constraint, to efficient irrigation development, the Irrigation Crisis Act which waives the normal public bidding procedure in irrigation construction is being fast-tracked, exacerbating the problems of corruption and ill-designed irrigation projects. The Food Security Agenda proposed to expand the National Food Authority's activities, further deepening government direct market interventions.

The sharp increases in food prices since August of 1995 have raised concerns about the country's food security. And the popular belief that food security and price stability can be best achieved by having food self-sufficiency has again gained wide adherence. It should be emphasized at the outset that price stability per se is not directly, nor positively, related to degree of self-sufficiency or trade balance.<sup>17</sup> Moreover, sustainable food security (either through lower food prices and/or higher household incomes) can only be achieved through a globally competitive economy.

This paper argues that the sharp increases in prices of rice, corn, and sugar have been caused largely by policy failure, both the choice of policy instrument and management of that policy instrument. Crop production is inherently unstable because of the vagaries of nature--typhoons, drought, earthquakes, pest and diseases. And studies have already shown that buffer stock operation is a more costly instrument for stabilizing supply and prices than reliance on

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<sup>17</sup>Domestic price instability of exportable commodities is caused largely by fluctuations in world prices and exchange rates. While trade policy instruments can easily minimize the impact of ~~sharp~~ increases in world price or exchange rates, it is much more difficult to insulate domestic prices from sharp drops in world prices. Indeed, the government can more easily stabilize domestic prices of importable commodities, such as rice, corn, and sugar, through appropriate trade policy instruments, than coconut which is exported. And reducing seasonal and annual price fluctuations, of essentially non-traded food commodities such as eggplants, for example, through market interventions is limited.

international trade. However, to insulate the domestic market from extreme short-run world price fluctuations, some form of variable import levy or quantitative trade restrictions have been often used. In fact, rice, corn, and sugar have long been subject to quantitative trade restrictions. For rice, the government has monopoly control over international trade and engages in domestic market operations to defend farm support and/or ceiling prices. With the passage of the Magna Carta of Small Farmers in the early 1990s, quantitative trade controls were effectively imposed on all agricultural commodities. It also increased the bureaucratic process of setting allowable import levels as consultations with so-called farmers' groups were required.

What then was the immediate cause of the price increases?

#### Trends in prices

Fig. 1 shows the trends in the real price of rice, corn, and sugar in the domestic and world market. It is clear that world market conditions did not have much to do with the recent food price crisis. Despite the reported tightening of world grains market, the 1995 world prices of rice, corn, and sugar in real terms (deflated by US manufacturing unit value index) did not significantly differ from their averages in the 1990's. World rice price in real terms increased only by 2%, corn by 8%, and sugar by -6%. In contrast, domestic price of rice in real terms increased by 20%, corn by 28%, and sugar by 10% between 1994 and 1995.

Seasonal price fluctuation was also unusually high during 1995 for rice and sugar as reported in Table 1. In 1995, retail price of rice at its peak was 70% higher than its lowest price, compared to an average of only 12% between 1990 and 1994. For sugar, that percentage price difference in 1995 was 40% compared to an average of also 12% in the previous years.

For corn, that was also relatively high (23%) compared to the average but in 1992, it was even higher (50%).

### Nominal Protection Rates

In Fig. 2, the absolute levels of domestic and border prices in US\$ per ton from 1970 to 1995 are depicted. And the percentage difference between domestic and border prices or the nominal protection rates (NPR) are presented in Table 2. The trends in NPRs indicate a growing protectionism of these three major commodities. In 1995, the level of protection has become excessive, particularly for corn (150%) and sugar (10%).

Rice price policy has historically been pro-consumer as revealed by the low NPR's. In fact, except for 1995, the book of tariff rates have been much higher than implicit tariffs resulting from government trade monopoly. Even the 16% to 19% NPR between 1985 to 1994 simply offset the penalty imposed by the overvaluation of the exchange rate. However, NPR for rice more than tripled to an average of 65% for 1995, and as high as 100% in the latter part of the year.

Clearly, the government could have prevented the sharp increases in food prices by allowing more imports. Not only were imports too little, the timing of imports, exacerbated the seasonal price fluctuations as often the case. Table 3 indicates that imports of rice were too late. Whereas a major portion of imports should have been in the country by the beginning of the lean season in July, only 4% of total rice imports in 1995 have arrived towards the end of that month. Of the total rice imports between 1984 to 1993, an average of 45% arrived by July of those years.

## Import Patterns

There is a common belief that food security can only be achieved by being self-sufficient, at least in grains. Hence, the government is often reluctant to increase food imports not only due to political pressure from producers, but may also be to avoid fears of the public about the country's food security.

Were the 1995 food imports unusually high? Table 4 (Figs. 3, 4, and 5) shows the level of imports and its proportion to domestic production for rice and corn, since the 1970's. Not so well-known is the fact that rice and corn imports in 1995 were relatively low both in absolute terms and in relation to domestic production. Imports of rice were only 240,000 mt as compared to the high of almost 600,000 mt in 1993, 540,000 mt in 1985 and 450,000 mt way back in 1972. Indeed, rice imports as a proportion of domestic production was only 3% in 1995 compared to a high of 14% in 1972 and average of 10% in the prewar period, and 5 to 6% in the 1960's and 1970's. Imports of corn in 1995 amounted to only 135,000 mt representing 3% of domestic production. In contrast, corn imports were 528,000 mt (17%) of production in 1983 and 343,000 mt (7%) in 1990. Between 1991 and 1994, imports of corn were insignificant. Imports of sugar have also been, thus far, relative small about 3% domestic production in the few years that sugar imports were allowed.

## Production Performance

Although this paper argues that appropriate trade policies could have easily prevented the food price instability in 1995, attention must be given to the causes of the poor growth performance of the agricultural sector since the 1980's/ In previous studies, competitive advantage of agriculture was reported to have been declining as evidenced by the declining world

market shares of major agricultural exports and increasing domestic resource cost of rice production.

In Table 5 (and Figs 6, 7, and 8), the growth rates (and trends of) of production, area, and yield of rice, corn, and sugar also reveal disturbing trends, particularly for corn and sugar. Corn production was declining in absolute terms during the past 3 consecutive years, mainly because of substantial decreases on crop area. Sugar production has been on a long-term down trend since the 1970's as area planted to sugar declined and yields stagnated. Growth rate of rice production has been below population growth rate since the 1980s and its yield growth has also been declining since the Green Revolution period. Clearly, the growing price protection on these commodities have not reversed the declining performance of these crops.

#### Immediate Cause of Price Instability

The nature of the food price crisis in the mid-1970's was quite different, from that of 1995 because the root causes were beyond government control. World prices of food grains, sugar, coconut, and fertilizers increased two to three-fold. At the same time, domestic rice production dropped by nearly 20% because of tungro infestation as well as climatic factors.

In 1995, the food price crisis was largely induced by policy failure. Obviously, there was no intent on the part of the government to let food prices increase as much. Either it did not have the right information or analysis of the demand and supply situation, and/or it did not make the proper decision on import levels. Although the error in the level and timing of imports committed in 1995 was perhaps the most serious in the post-war history, such problems have often been experienced in the past. For example, Bouis (1983) study of the rice price from 1961 to 1974 concluded that:



"Abnormal seasonal price rises were not primarily caused by rice traders' monopolistic behavior, as often charged. Rather, fluctuations in seasonal prices were in large part the result of ineffective government management of its rice importing and buffer stock operations. In attempting to control the average price, government intervention resulted in more seasonal price variation than would have been the case in the absence of government intervention."

Moreover, a more recent study of Umali (1990) for the period 1974 to 1986 reported that:

"a) government price stabilization was reasonably successful in enforcing the rice ceiling price, but less successful in maintaining the paddy support price;

b) the degree of spatial price integration improved as government intervention declined;

c) regional markets were inter-temporally price efficient;

d) credit market segmentation (i.e., higher cost for small vs. large borrowers) forced farmers to rely on informal credit sources and the high cost of capital from this sector has made any marketing strategy other than harvest time sale of paddy unprofitable for farmers; and

e) the paddy trading and retail level markets were competitive, but the structure of milling industry and the government policy creating barriers to entry both worked against competition at the mill level."

### Concluding Remarks

It is ironic that government trade policy in 1995, in effect has become more protectionist, just as the government formally joined the World Trade Organization (WTO). Membership in the WTO involves the commitment to dismantle quantitative trade barriers and reduce the level of trade protection over time, except in the case of rice for the next 10 years. However, none of the commitments with respect to agriculture have been implemented. Moreover, the Department of Agriculture proposed the imposition of a 100% tariff on commodities where quantitative trade barriers will be lifted, such as corn, sugar, pork, chicken, etc. Up until 1994,

that rate is even higher than implicit tariff rates resulting from quantitative trade restrictions for most of those sensitive commodities.

The highly protectionist position regarding tariffs on sensitive agricultural commodities taken by the DA was presumably due to political pressures from producers' groups. Yet, the food price crisis of 1995 illustrated that such a highly protectionist stance for agriculture is not, in fact, politically tenable at the current level of economic development.<sup>2/</sup> Furthermore, the excessive protection on selected importable food commodities will raise degree of peso over valuation hurting many poor farmers growing exportable agricultural commodities. Such a policy is also anti-poor because the majority of the poor both in urban and rural areas are net buyers of food and depend on employment in livestock and food processing where corn and sugar are major inputs.

Assuming that the government will retain its monopoly on rice imports or use quantitative trade restrictions, the focus of efforts must be on improving forecasting of domestic rice production, consumption, and world market situation, as well as the decision process in rice importations. The current proposals on rice reserves and inventory requirements have not been based on rigorous analysis of benefits and costs. Moreover, stock data by commercial traders and households are very weak and they are inherently difficult to collect.

To minimize gross errors in timing and amount of rice importations and still recognize the volatility of the world market, quantitative trade controls may be retained but the right to import must be genuinely bidded out, without giving any advantage to any groups (cooperatives

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<sup>2/</sup>Only in developed countries can a highly protectionist food policy be sustained for a prolonged period of time.

or not). In this way, the government may supplement its market knowledge from official forecast by the bid price. When the bid price becomes too high, meaning the planned imports too low, import quantities may be revised upward.

In this way, the government does not get directly involved in the importations. And proceeds from the bid price of the right to import (effectively an import levy) can be budgeted for the strengthening of support services. With the current procedure, profits or rents from rice importation are dissipated by high administrative cost and graft and corruption.

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Table 1. Degree of seasonal retail price fluctuations of rice, corn, and sugar, 1990-95 (% difference between highest and lowest price).

	Rice <sup>a/</sup>	Corn	Sugar <sup>b/</sup>
1990	15	13	17
1991	4	3	3
1992	11	50	7
1993	26	14	9
1994	5	6	27
1995	70	23	40

<sup>a/</sup> Lowest price is typically early part of the year and highest is in September or October.

<sup>b/</sup> Lowest and highest price is typically January and December.

Table 2. Trends in nominal protection rates of rice, corn, and sugar, 1970-1995  
(%).<sup>a/</sup>

	Rice	Corn	Sugar	
			<u>b/</u>	<u>c/</u>
1970-74	4	20	-36	-13
1975-79	-13	29	-13	2
1980-84	-13	26	37	62
1985-89	16	67	155	200
1990-94	19	76	80	112
1995	65	150	104	141

<sup>a/</sup> Nominal protection rate is the percentage difference between domestic wholesale price and border price. The border price is estimated is the FOB world price plus 15% to cover insurance and freight.

<sup>b/</sup> Border price refers FOB world price plus 15% under the assumption that sugar is importable.

<sup>c/</sup> Border price is FOB world price assuming sugar is exportable.

Table 3. Cumulative distribution of rice imports from July to October, 1984 to 1995.

	July	Aug.	Sept.	Oct.	Total imports
	----- (cumulative % imports) -----				(000 mt)
1984	43	61	72	92	191
1985	48	64	74	86	540
1988	61	94	100	-	181
1989	28	50	100	-	220
1990	60	74	94	96	622
1993	31	40	74	100	210
1995	4	43	66	100	240

Table 4. Trends in imports, ratio of imports to production, and ratio of exports to production of rice, corn, and sugar, 1970-1995

	<u>Rice net imports</u>		<u>Corn imports</u>		<u>Sugar imports</u>		<u>Sugar exports</u>	
	000t	% of prod'n	000t	% of prod'n	000t	% of prod'n	000t	% of prod'n
1970	-2	-0.1	1	...	0	0	1225	65.0
1971	379	11.1	55	2.7	0	0	141	7.3
1972	451	13.6	160	7.5	0	0	1224	59.5
1973	308	8.8	7	...	0	0	1589	64.4
1974	165	4.6	16	0.6	0	0	950	42.9
1975	147	3.5	16	0.6	0	0	1074	36.8
1976	55	1.3	12	...	0	0	2149	80.1
1977	-15	-0.3	148	5.2	0	0	1590	66.1
1978	-47	-1.0	105	3.7	0	0	998	43.6
1979	-127	-2.5	35	1.2	0	0	1619	71.5
1980	-231	-4.6	250	8.2	0	0	1541	66.5
1981	-83	-1.6	253	7.7	0	0	1106	45.7
1982	0	-0	341	10.0	0	0	1214	49.3
1983	-40	-0.8	528	16.9	0	0	861	36.9
1984	190	3.7	182	5.6	0	0	877	51.0
1985	541	9.5	281	7.3	0	0	278	18.3
1986	0	0	...	...	0	0	156	11.7
1987	0	0	56	1.3	44	3.2	146	10.5
1988	151	2.7	25	0.6	59	3.7	181	11.4
1989	209	3.4	154	3.4	0	0	275	15.7
1990	593	9.8	343	7.1	0	0	312	18.1
1991	-10	-0.2	...	...	0	0	172	8.6
1992	-30	-0.5	...	...	0	0	265	12.9
1993	210	3.4	...	...	0	0	272	15.0
1994	0	0.0	...	...	53	32	150	9.1
1995	240	3.4	135	3.2	na	na	na	na

Table 5. Growth rates of production area, and yield of rice, corn and sugar, 1960-1995.

	1960-65	1965-80	1980-90	1990-95
Rice				
Production	2.1	4.6	2.2	2.1
Area	1.6	1.2	1.2	1.1
Yield	0.5	3.4	2.0	0.9
Corn				
Production	1.9	6.4	4.7	-0.9
Area	-0.6	4.3	1.8	-5.6
Yield	2.5	2.0	2.9	4.9
Sugar				
Production	-	-2.3*	-4.5	0.3
Area	-	-2.8	-4.4	2.6
Yield	-	-1.1	0.6	-2.3

\* Refers to 1973-1980.



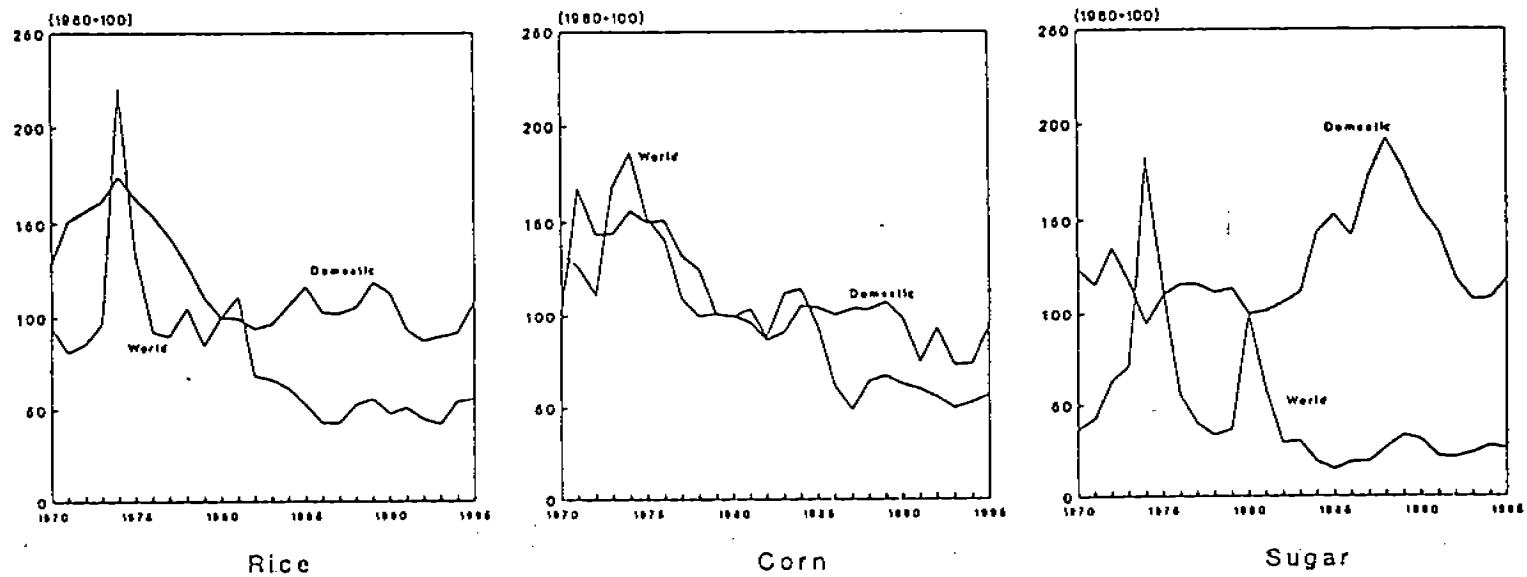


Fig 1. Trends in domestic and world prices of rice, corn;and sugar, in real terms, 1970-95.\*

\* Domestic price refers to wholesale price deflated by CPI for non-food.

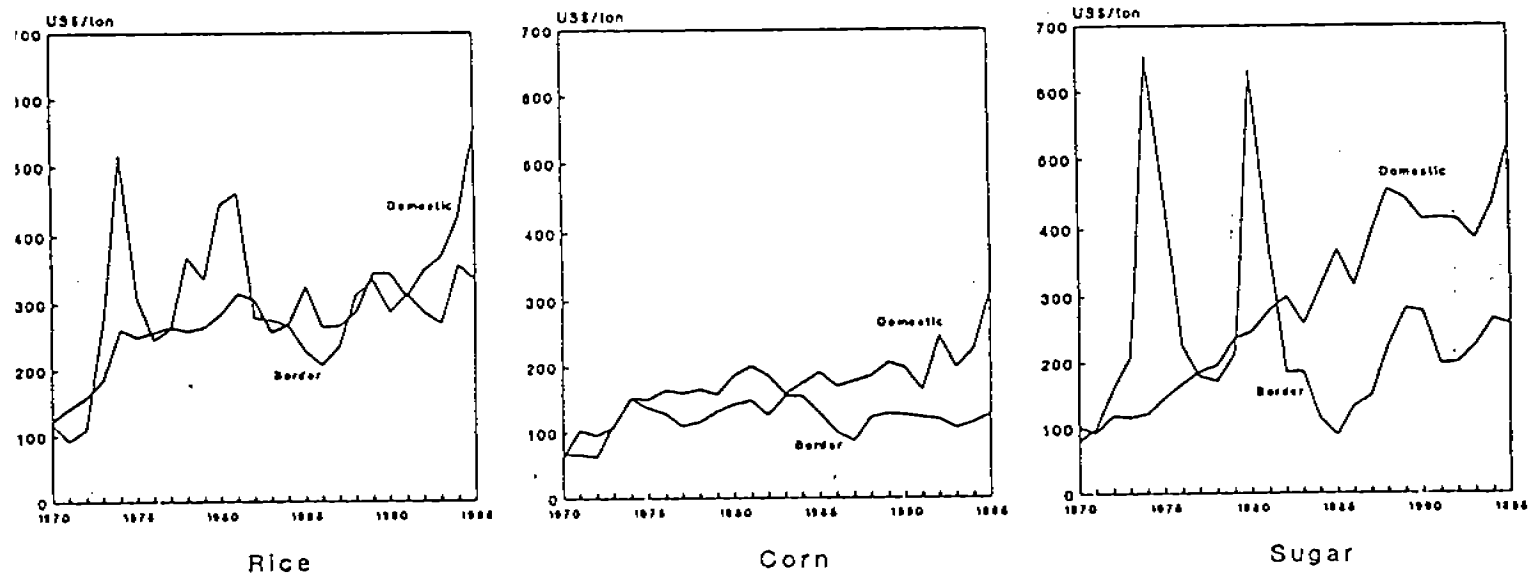
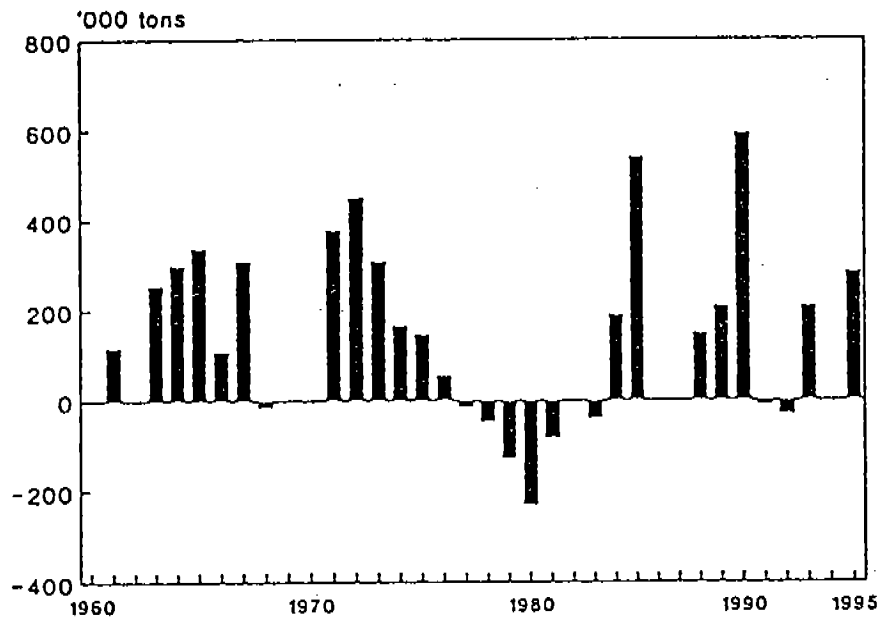


Fig 2. Trends in domestic and border prices (FOB+15%) of rice, corn, and sugar, 1970-95.\*

\* Domestic price refers to wholesale price.

(a)



(b)

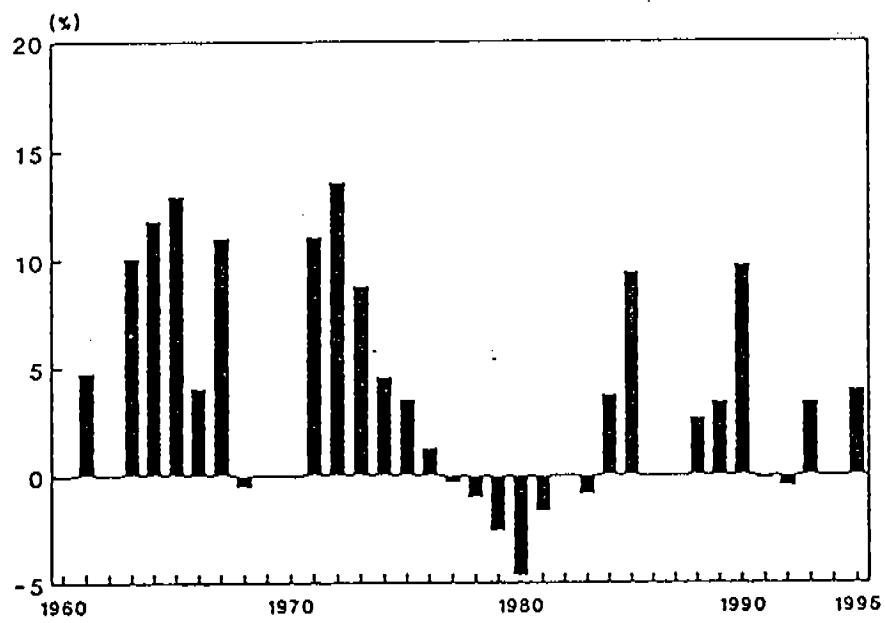


Fig 3. Annual rice imports (a) and its ratio to domestic production (b), 1960-1995.

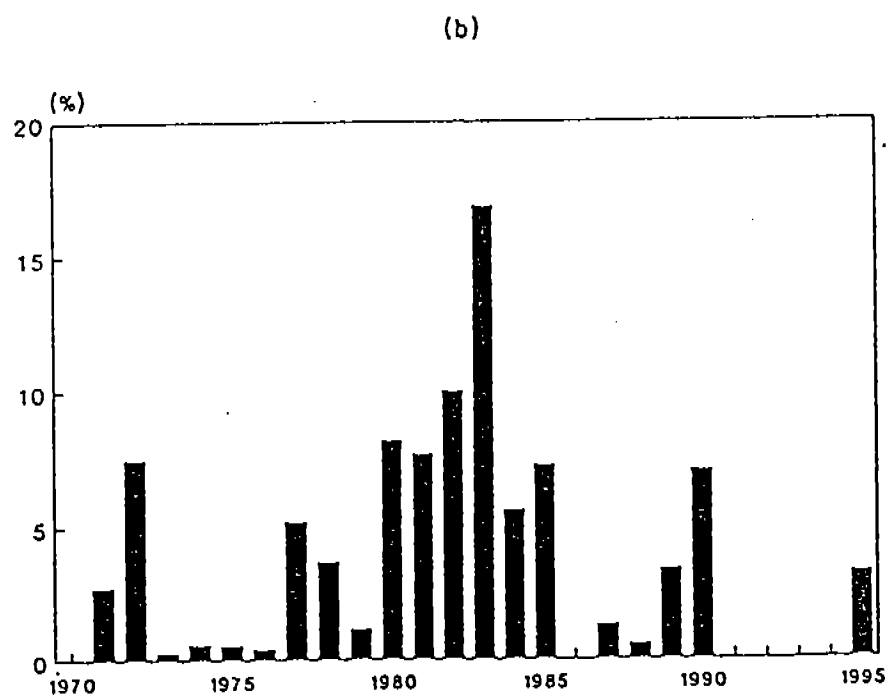
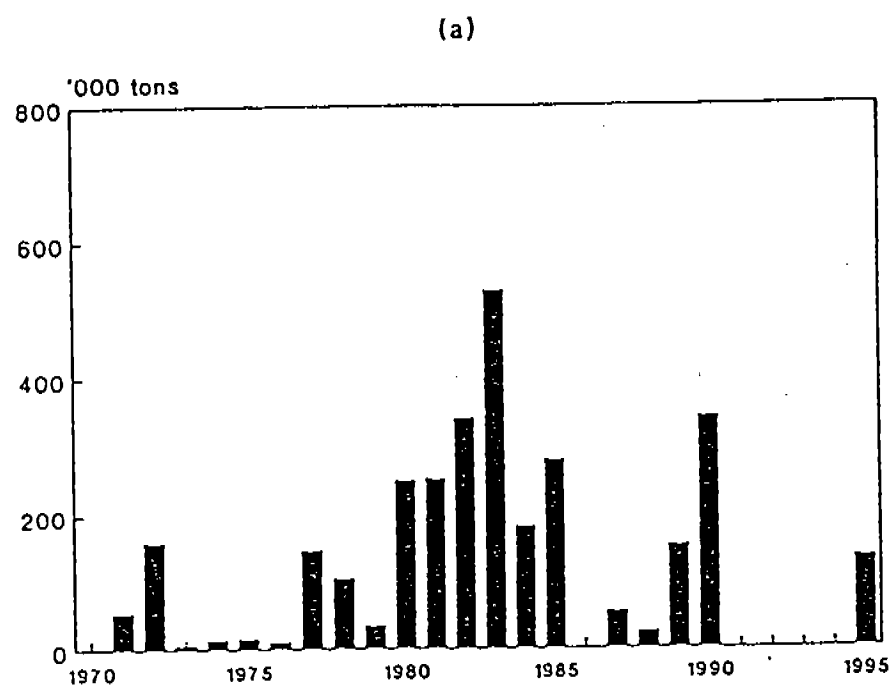
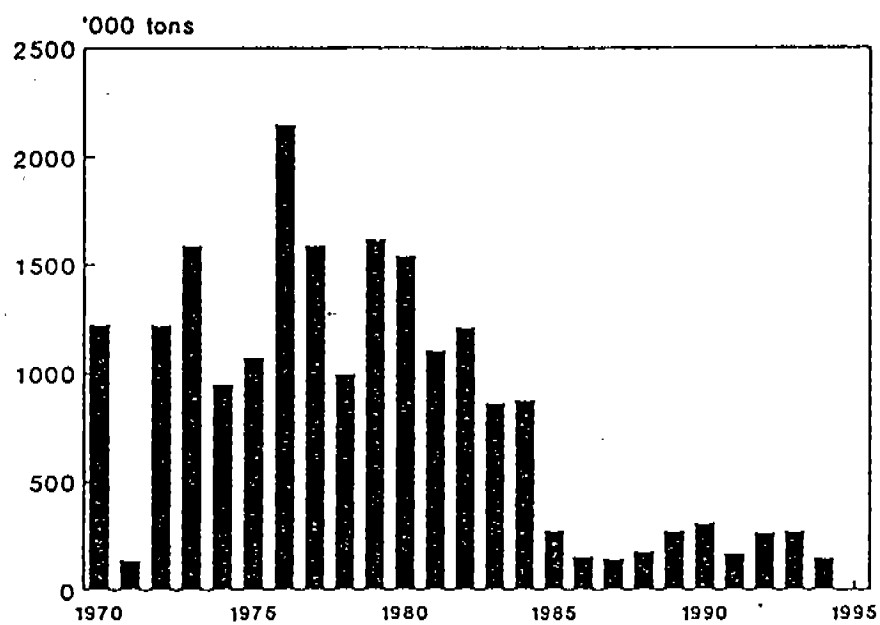


Fig 4. Annual corn imports (a) and its ratio to domestic production (b), 1970-1995.

(a)



(b)

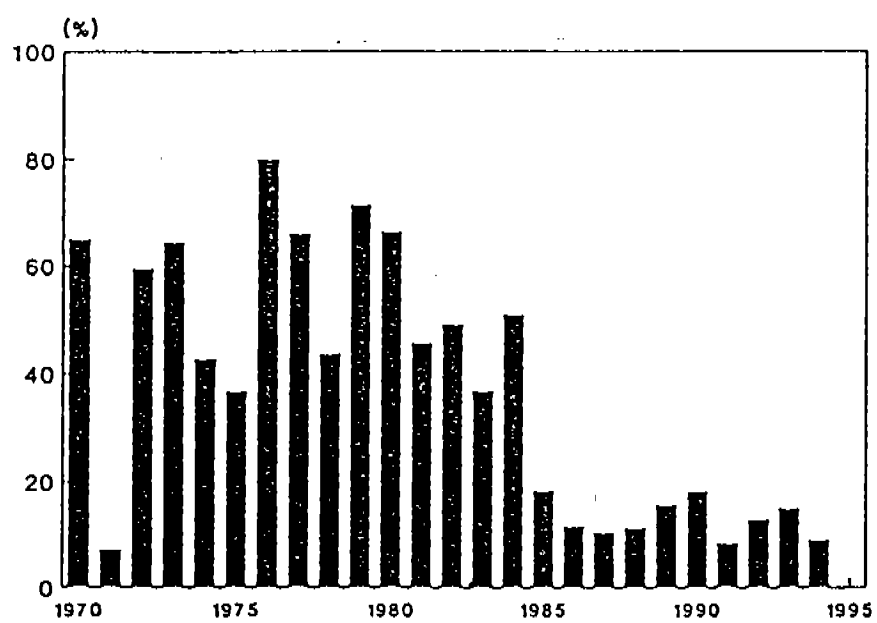


Fig 5. Annual sugar exports (a) and its ratio to domestic production (b), 1970-1995.

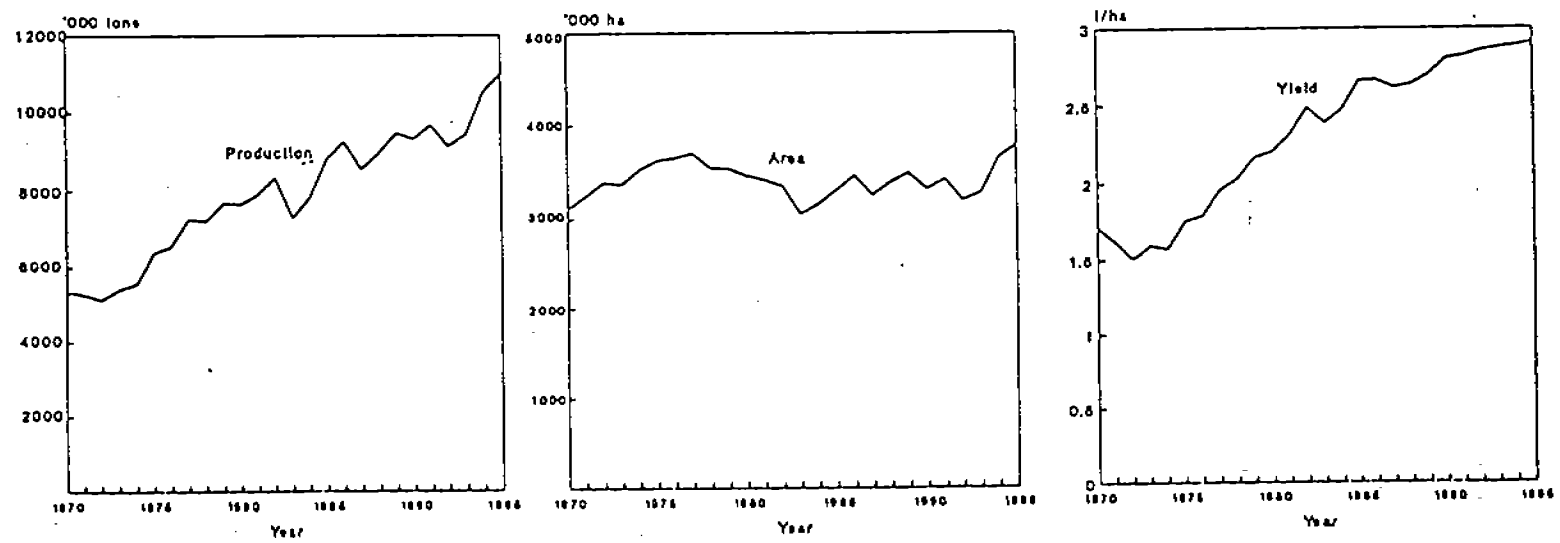


Fig. 6 Trends in rice production area and yield, 1970-95

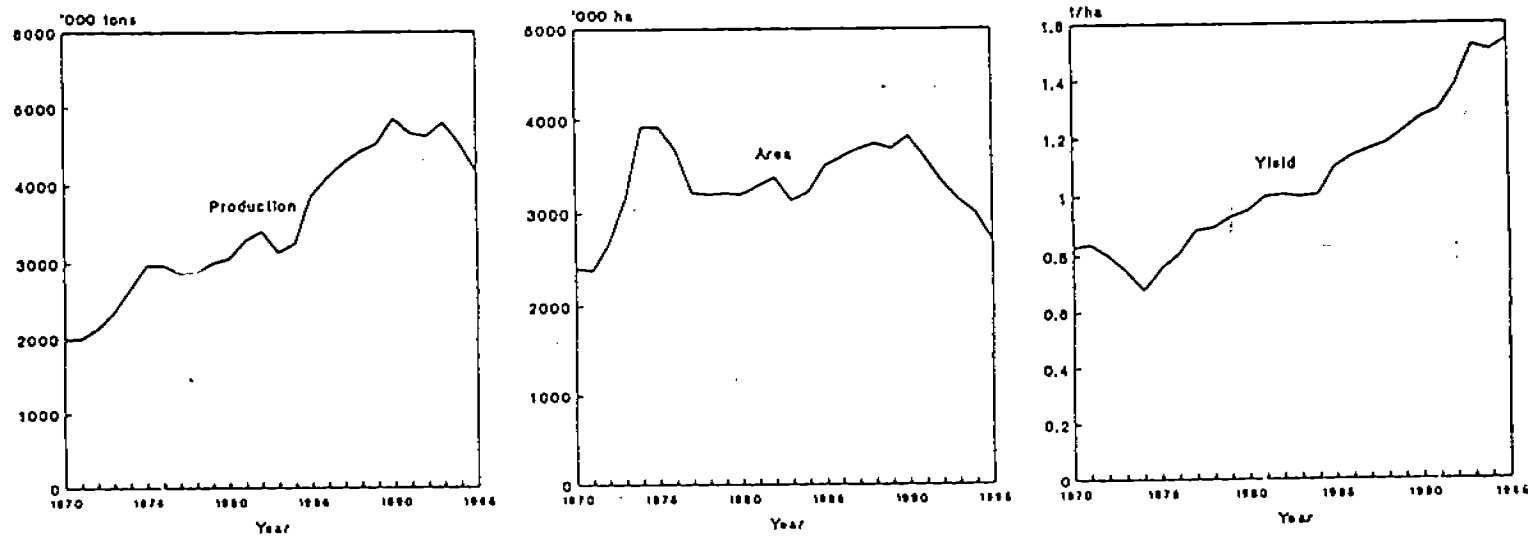


Fig. 7 Trends in corn production area and yield, 1970-95

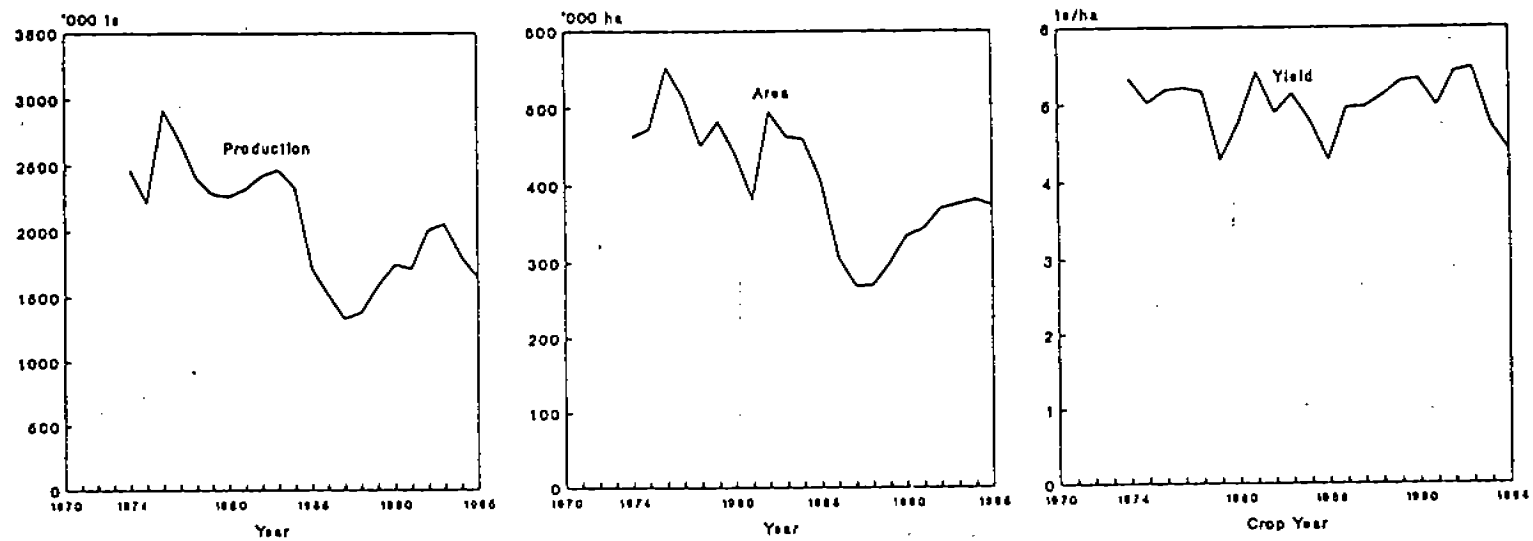


Fig. 8 Trends in sugar production area and yield, 1970-95