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CTAP staff rept 12-85

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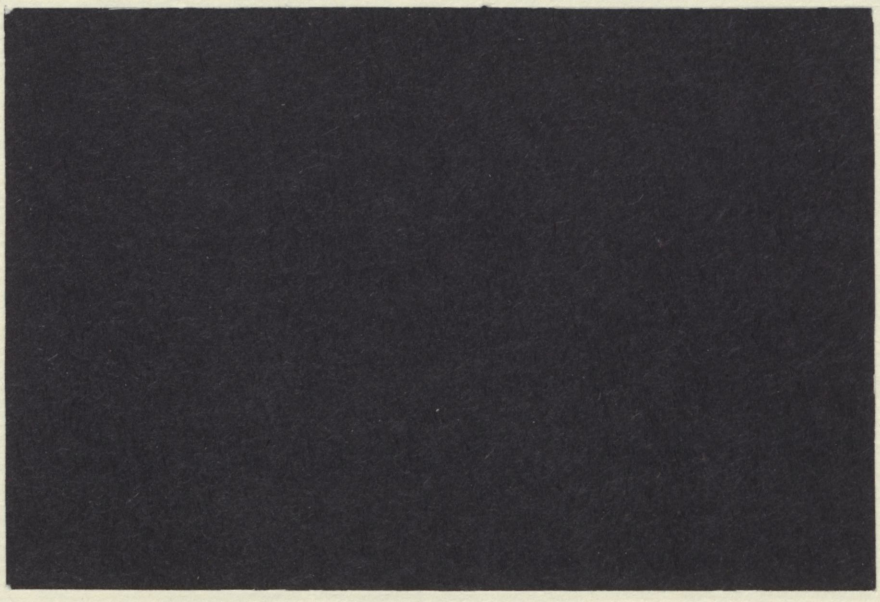
Policy Research Institute



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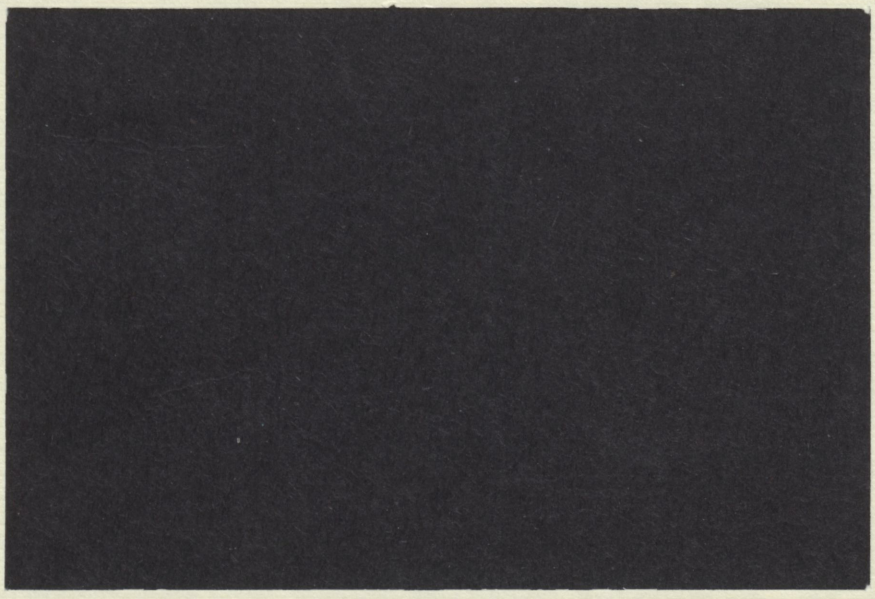

Some Evidence on Exchange Rates and the Competitiveness of U.S. Agriculture

Patrick Westhoff*

CTAP Staff Report #12-85

July 1985

Report prepared for the National Corn Growers Association

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Exchange rates between the dollar and foreign currencies are just one of many factors which affect the ability of U.S. agriculture to compete in the international market. While government policies, differences in natural resources and other factors are also important, the large increase in the value of the dollar in the 1980s has focused attention on the impact of exchange rates on U.S. agriculture.

This paper will illustrate some of the implications of a stronger dollar. Attention will be paid to recent movements in both exchange rates and agricultural exports. Particular emphasis will be placed on what a stronger dollar means to other countries which export feedgrains.

Throughout the analysis, an effort will be made to distinguish "nominal" and "real" effects. The basic distinction is that "nominal" prices and exchange rates are not adjusted for inflation, while "real" prices and exchange rates do adjust for inflation rates in this country and elsewhere.

The first part of this paper will provide an overview of exchange rates and U.S. agricultural exports. The second part will focus on countries which compete with the U.S. in world feedgrain trade--Argentina, Canada, Australia, Thailand, South Africa, and the European Community. Graphs will be used to present the information of primary interest, and appendix tables contain the data used to construct the graphs.

Exchange Rates and Exports

1. Nominal and Real Exchange Rates

The nominal exchange rate is defined as the units of foreign currency needed to buy one dollar. When exchange rates are weighted by each country's share of total U.S. trade, the result is the nominal trade-weighted exchange rate shown in Figure 1. The figure shows that, on average, it cost foreigners about 55 percent more in terms of their own currencies to buy one dollar in 1984 than it did in 1980. The dollar appreciated more against some currencies than against others, so different weighting schemes could change the calculated increase considerably.

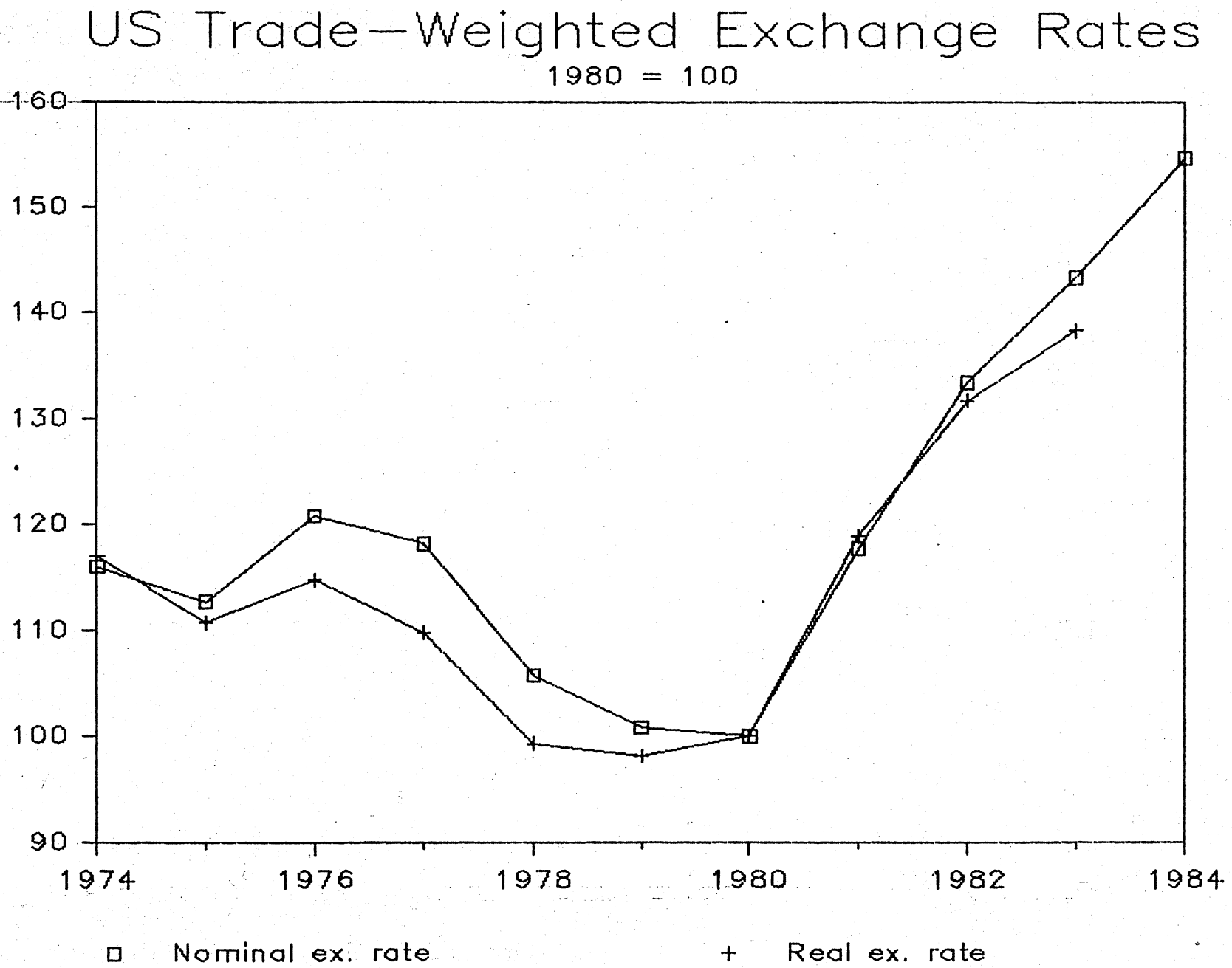
The real exchange rate is defined as the nominal exchange rate multiplied by the ratio of the U.S. price level to the foreign price level. This is a way of adjusting for relative rates of inflation, and is very important when examining countries where the inflation rate is much higher (or lower) than it is in the U.S.

An example may help to clarify this point: Suppose that the nominal exchange rate between the dollar and the British pound is exactly one pound per dollar. Suppose further that there is a zero percent inflation rate in the U.S. and a 20 percent inflation rate in the U.K. At the end of one year, a typical basket of goods in the U.K. would cost 20 percent more in terms of both pounds and dollars if the nominal exchange rate remained unchanged. The price of a typical basket of goods in the U.S. would not change,

however. A U.S. citizen would find that he could not buy as many British goods with one dollar as he could the year before. Thus, the dollar would have depreciated in real terms, even though the nominal exchange rate had not changed.

As seen in Figure 1, the real trade-weighted exchange rate generally moved in the same direction as the nominal rate. Even when one adjusts for changes in relative rates of inflation, the dollar appreciated in value against most major currencies in the early 1980s.

FIGURE 1


US Trade-Weighted Exchange Rates
1980 = 100
160
150
140
130
120
110
100
90
1974
1976
1978
1980
1982
1984
Nominal ex. rate
Real ex. rate

2. U.S. Agricultural Exports

The nominal dollar value of U.S. agricultural exports peaked in 1981, as shown in Figure 2. In terms of foreign currency, however, the nominal value of U.S. exports was 15 percent greater in 1984 than in 1981. If the nominal exchange rate had remained at its 1980 level throughout the period, the two lines in Figure 2 would be identical.

Figure 3 shows that the real dollar value of U.S. agricultural exports peaked in 1980, while the real value of U.S. exports in foreign currency increased considerably in 1981, and remained 7 percent higher in 1983 than in 1980. The real dollar value of U.S. exports is defined as nominal exports divided by the U.S. wholesale price index. The real foreign currency value of U.S. exports is defined as real dollar exports multiplied by the real exchange rate. Again, the two lines in Figure 3 would be identical if the real exchange rate had always been at its 1980 level.

Precisely what would have occurred if the dollar had not appreciated so much in the 1980s is not known. The dollar value of U.S. agricultural exports almost certainly would have increased, though. A weaker dollar would have made U.S. products seem less expensive abroad, likely resulting in some combination of greater export sales and higher dollar prices.

One way to provide a rough estimate of the effect of a stronger dollar is to assume that foreigners would have spent the same amount of their own currency on imports from

the U.S., regardless of the exchange rate. In economic terms, this is equivalent to assuming that the elasticity of U.S. export demand is equal to one. Given such an assumption one can calculate that the value of U.S. agricultural exports would have been 38 percent greater in 1983 than it actually was, had the real exchange rate in 1983 been at its 1980 level. A higher elasticity of export demand would imply a greater exchange rate effect; a smaller elasticity would imply a smaller effect.

FIGURE 2

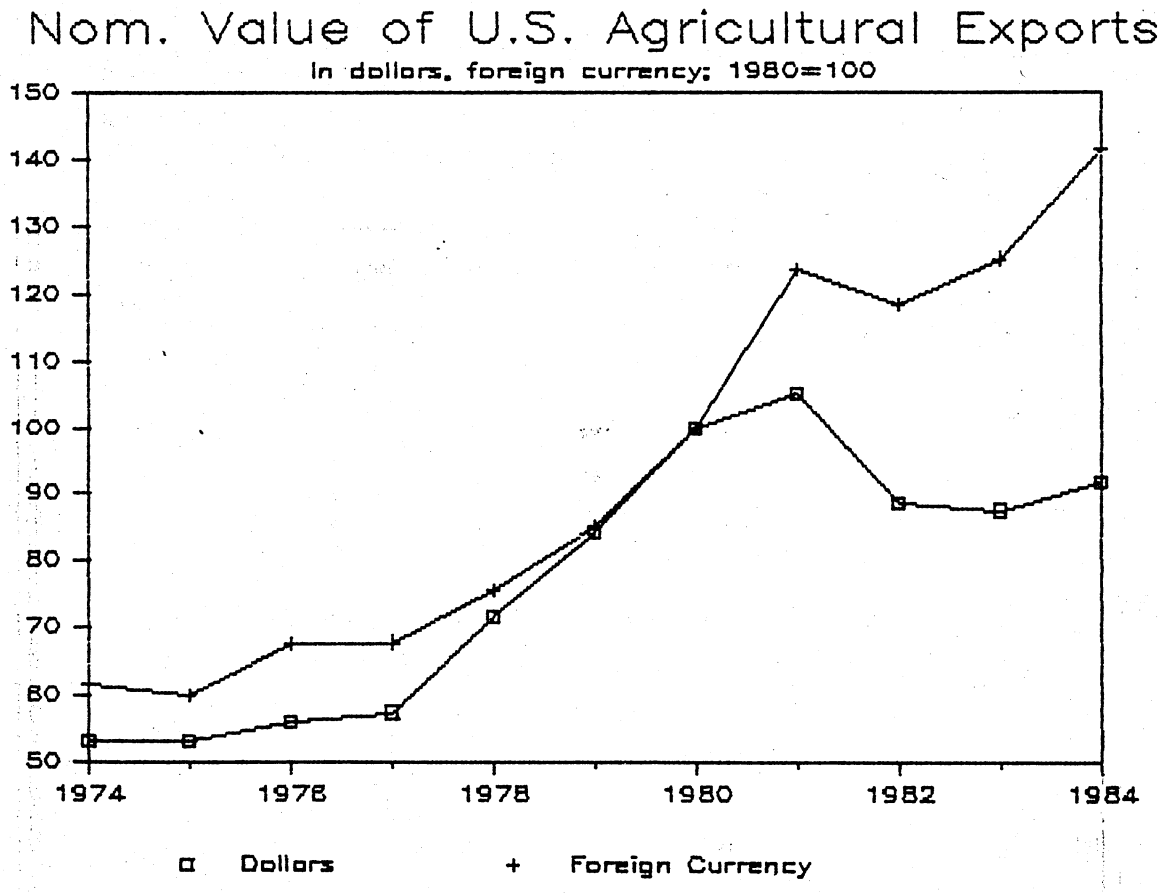
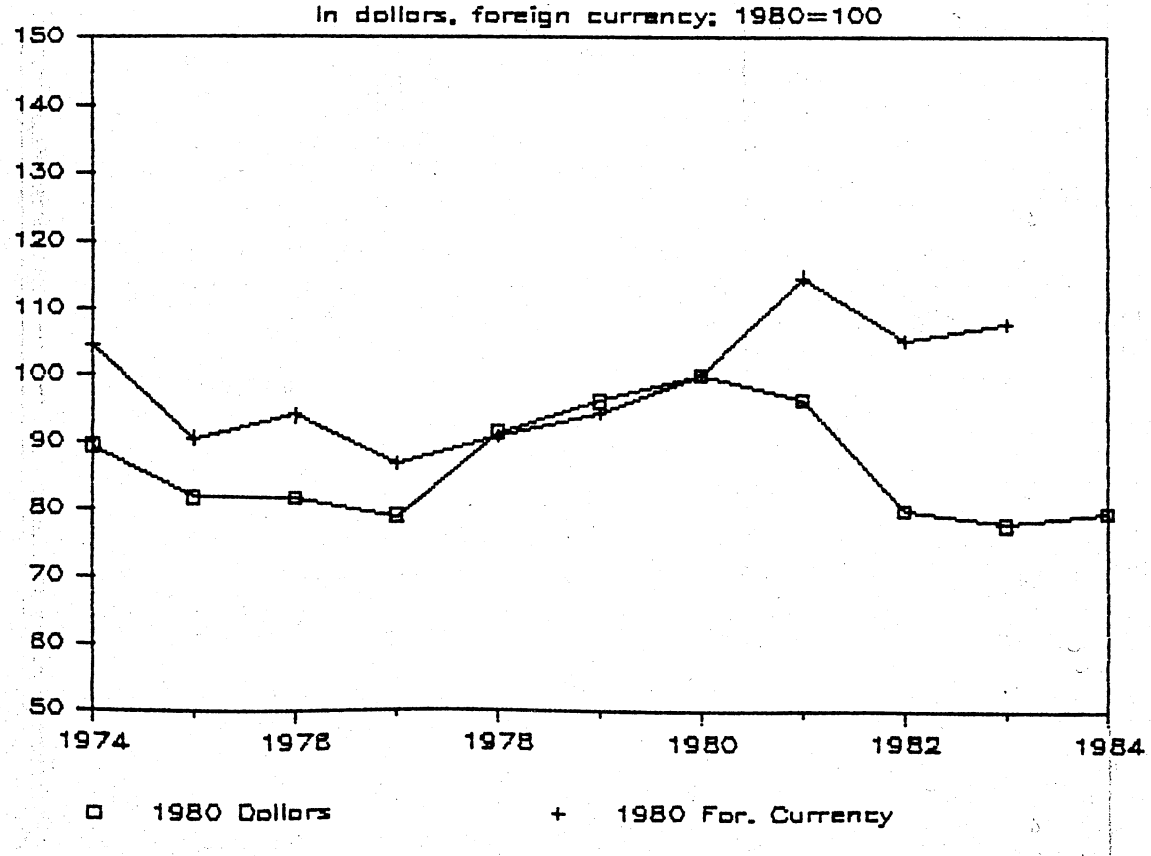


FIGURE 3



Exchange Rates and the Feedgrain Trade

1. Feedgrain Production and Trade

This part of the paper will examine world feedgrain trade in order to suggest the effect of exchange rates on one important component of U.S. agriculture. Figure 4 shows that U.S. feedgrain (corn, sorghum, barley and oats) exports peaked in marketing year 1979/80. The decline in exports in the early 1980s, combined with record production in 1981 and 1982, created the conditions which led to PIK in 1983. Production and exports are both expected to be less than their record levels in the current marketing year.

In the other major feedgrain exporting countries (Argentina, Canada, Australia, Thailand and South Africa), feedgrain production and exports both peaked in marketing year 1980/81, as seen in Figure 5. Since most of the increase in the value of the dollar has occurred since 1980, this may be somewhat surprising. It does not appear that a stronger dollar has stimulated production in other exporting countries, at least when they are considered as a group. Unlike the U.S. case, export levels in these countries more closely follow production variation.

Figure 6 shows how the feedgrain exports of each country have evolved over time. It can readily be seen that the exports of each country were very volatile, and that considering the countries as a group masks many important differences. Thus, the rest of this paper will look at the various exporting countries (and the European Community)

individually in order to better consider exchange rate effects.

FIGURE 4

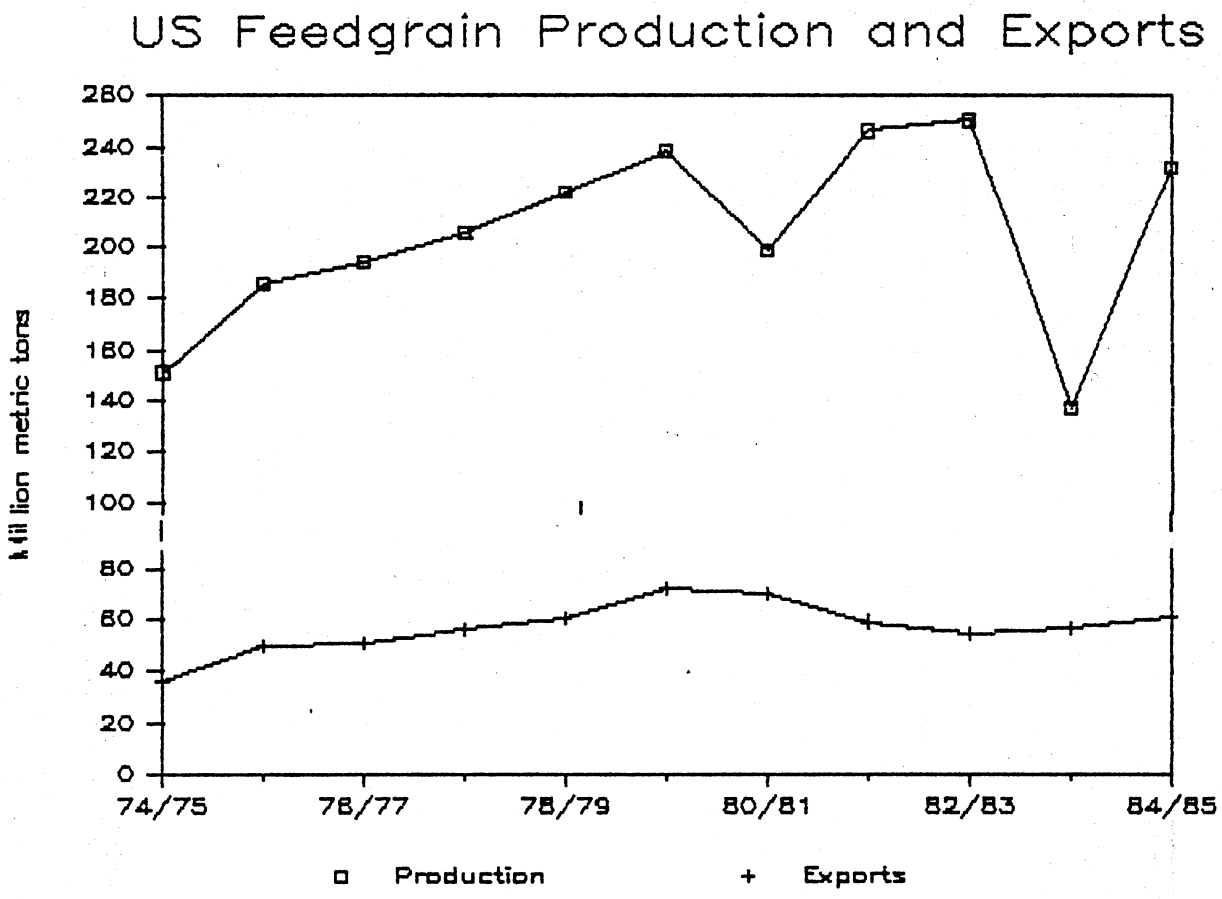


FIGURE 5

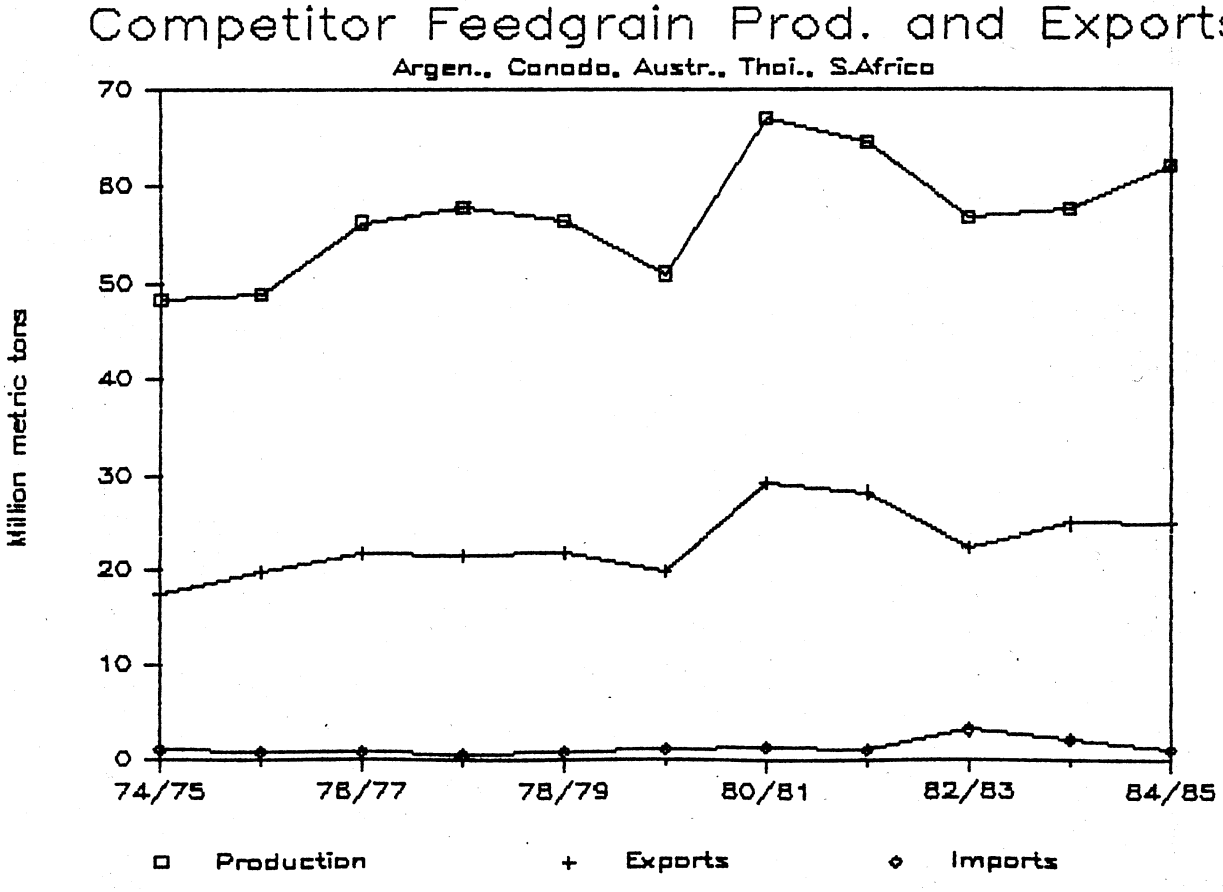
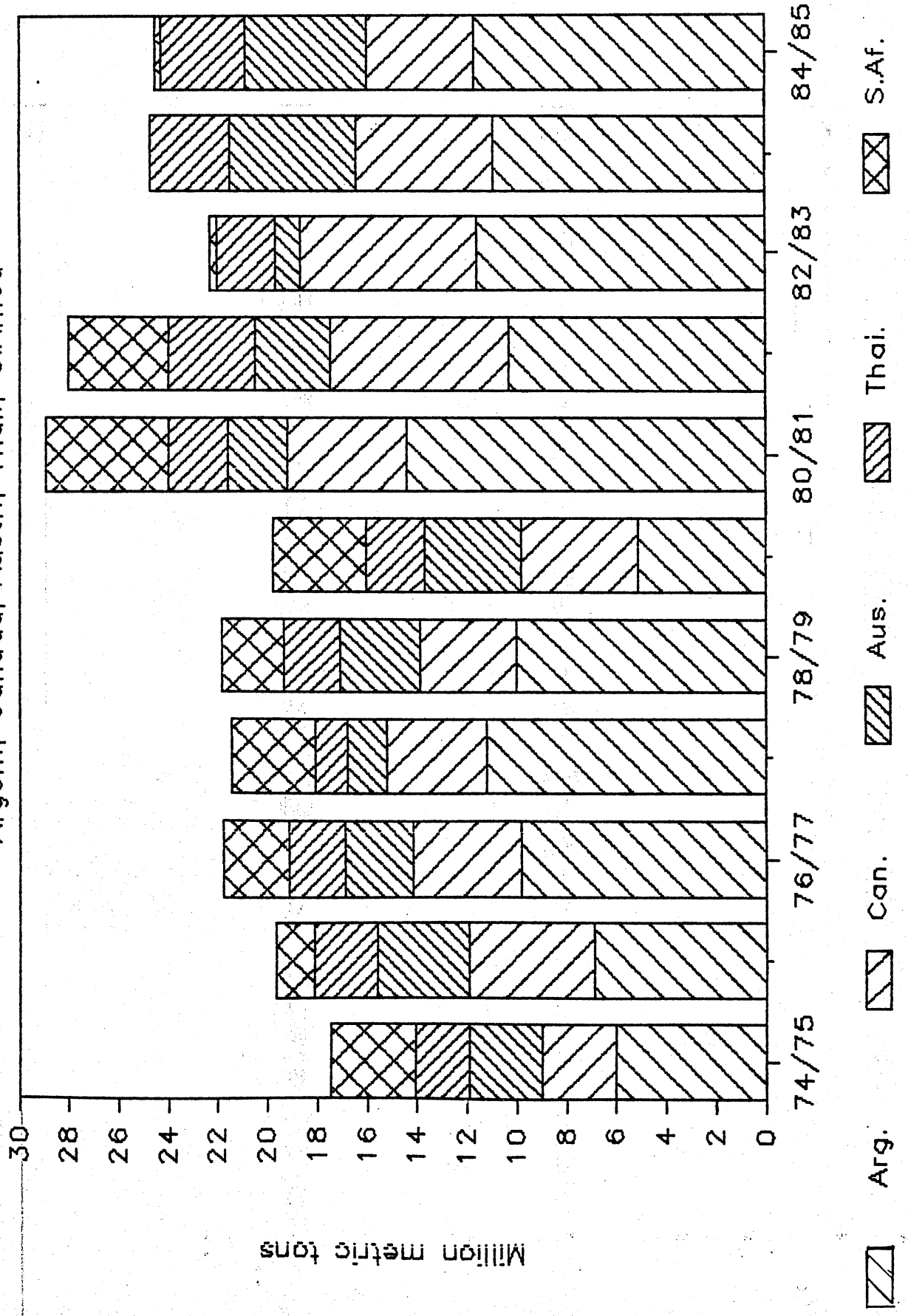


FIGURE 6


Competitor Feedgrain Exports
Argen., Canada, Austr., Thai., S.Africa
Million metric tons
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
74/75
76/77
78/79
80/81
82/83
84/85
Arg.
Can.
Aus.
Thai.
S.Af.

2. Argentina

Argentine feedgrain production and exports generally move together, as can be seen in Figure 7. The sharp decline in production and exports in 1979 was due to poor yields. Production and exports rebounded in 1980, and they have remained relatively stable since then.

Due to Argentina's astronomical rate of inflation, the peso was devalued regularly. Figure 8 shows that the nominal exchange rate quickly goes off the scale, and does not provide much useful information. The real exchange rate between the peso and the dollar has varied considerably during the last decade. The dollar declined in real value against the peso until marketing year 1979/80, but then almost doubled in value during the next two years.

Figures 9 and 10 illustrate the same information found in Figure 8. In Figure 9, the U.S. price of corn is multiplied by the nominal peso/dollar exchange rate that actually prevailed in each year, and by the exchange rate that prevailed in 1979/80. The former shows what the nominal peso price of corn in Argentina would have been in the absence of trade barriers (like Argentina's export taxes on feedgrains) and transportation costs. The latter shows what the nominal peso price would have been if the 1979/80 exchange rate had prevailed during the entire period and all other factors were held equal. Due to Argentina's high inflation rate, however, Figure 9 is not very meaningful--it

would have been impossible for the country to maintain the 1979/80 exchange rate.

Figure 10 is identical to Figure 9, except real prices and real exchange rates are used. If the 1979/80 real exchange rate had prevailed during the entire period and no trade barriers had existed, Argentine corn prices would have been much lower in the early 1980s. At the exchange rates which actually prevailed, real corn prices would have declined sharply in the late 1970s and increased rapidly in the early 1980s in the absence of trade barriers.

The assumption of no trade barriers is not a good assumption in the case of Argentina. Export taxes on feedgrains and other products have been both large and variable, ranging from 0 to 50 percent. As a result, converting U.S. prices to pesos may not reflect prices actually received by Argentine farmers. Also, the country's high inflation rate (currently approaching 1000 percent) makes any attempt to compare prices very hazardous. Thus, it is probably best not to attempt to draw conclusions about exchange rate effects from the Argentine case.

FIGURE 7

Argen. Feedgrain Production and Exports

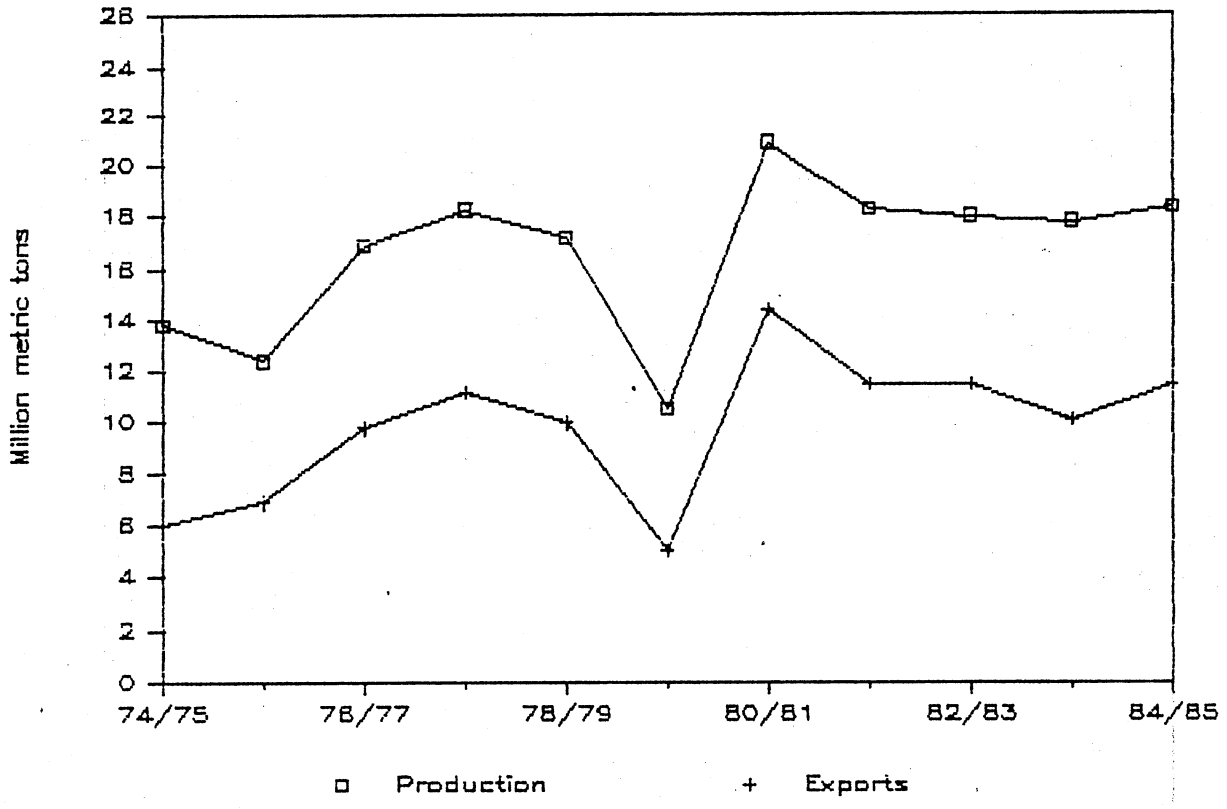


FIGURE 8

Argentine Peso/Dollar Exchange Rates

Nominal and real, 1979/80=100

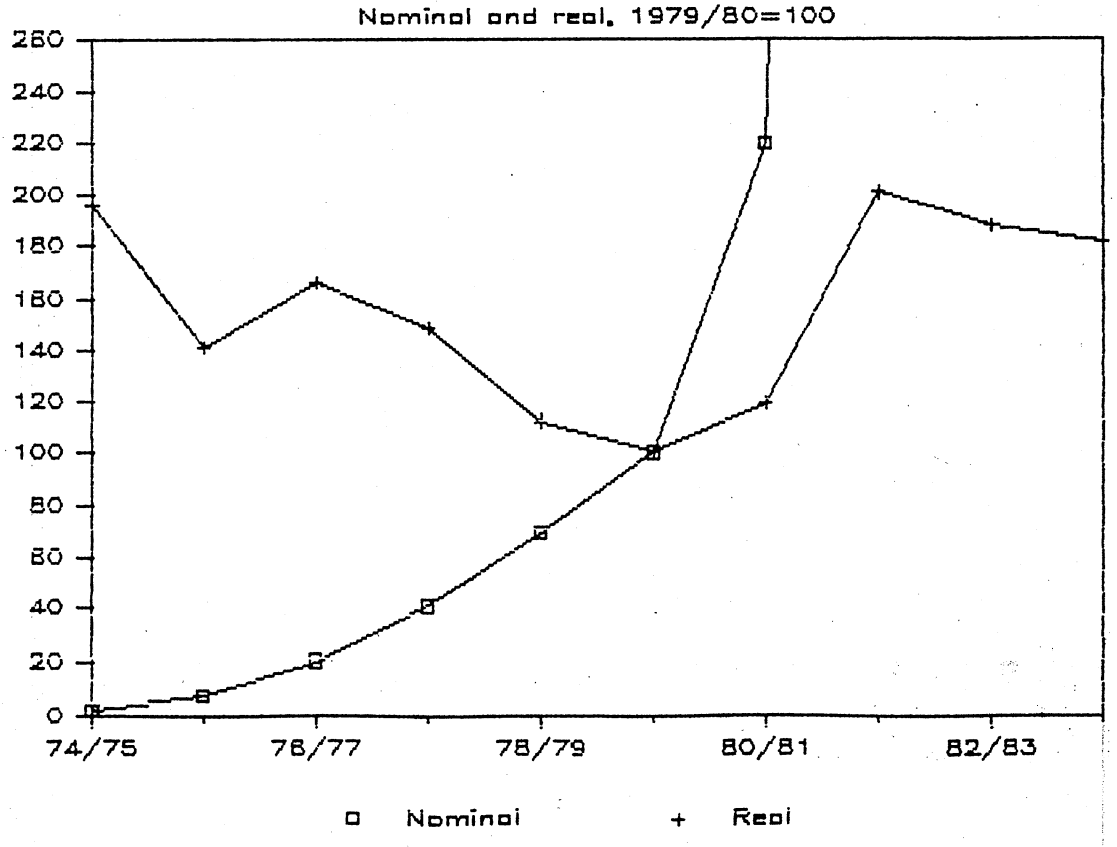


FIGURE 9

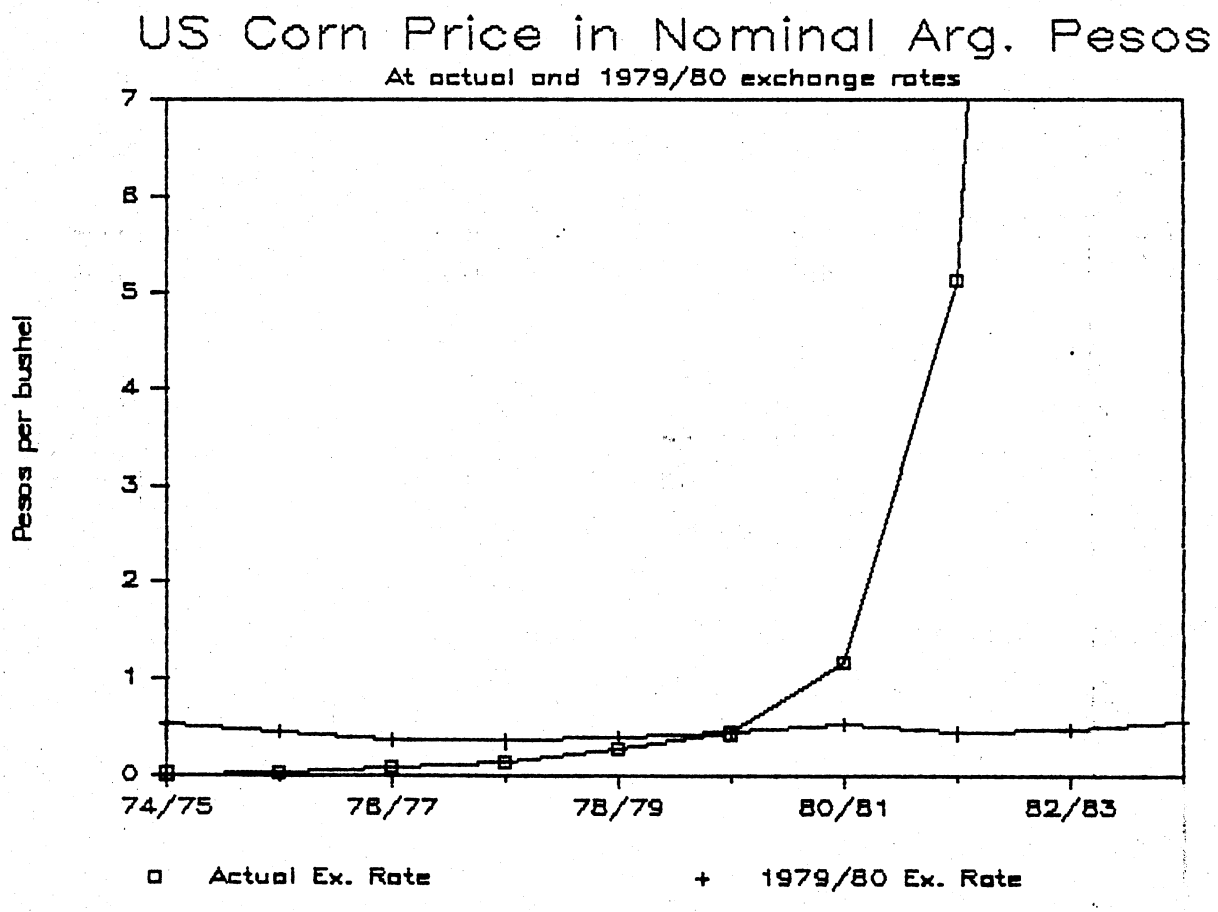
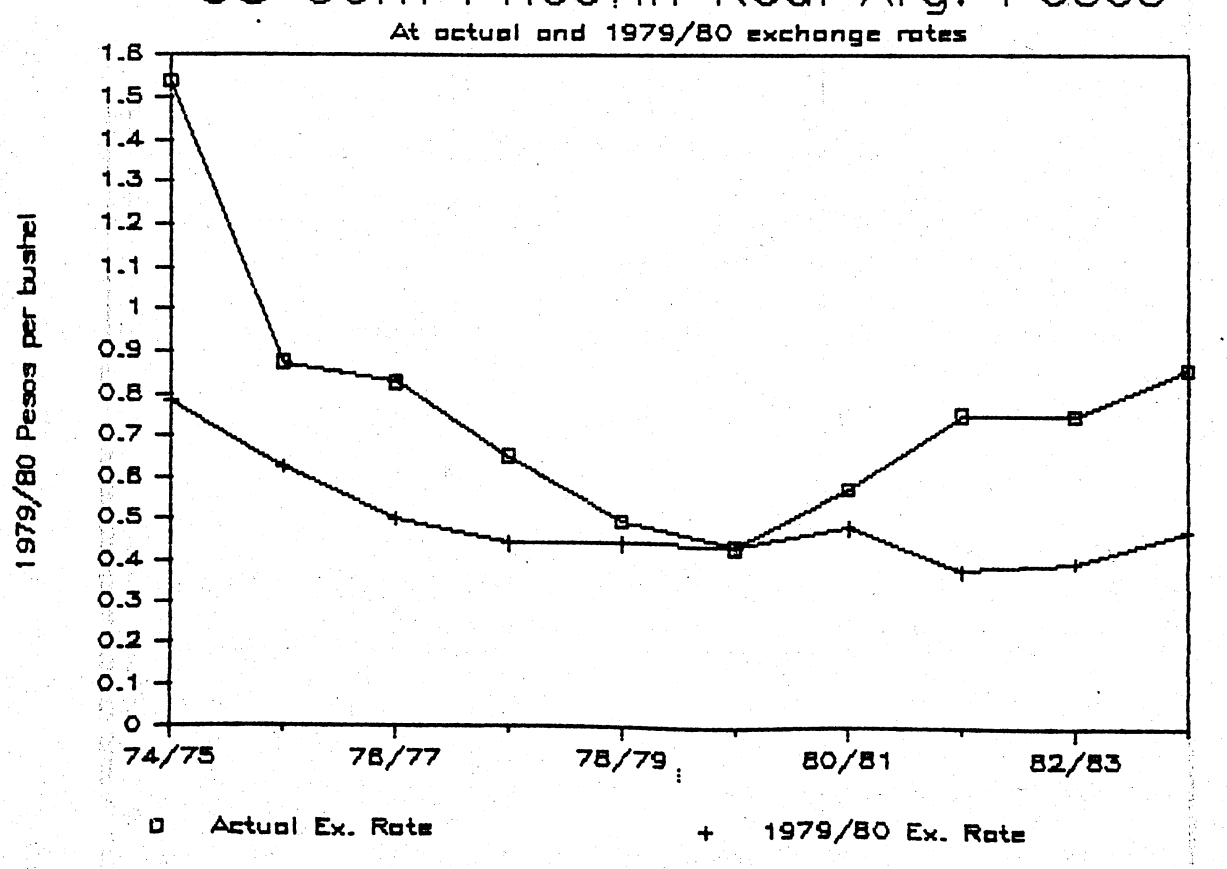


FIGURE 10



3. Canada

Figure 11 shows that Canadian feedgrain exports peaked in the 1981/82 marketing year, and that production peaked in the following year. The country also imports some feedgrains from the U.S., but those imports have generally declined since 1980/81.

The U.S. dollar has increased in nominal value against the Canadian dollar by 27 percent since 1974/75 and by 9 percent since 1979/80, as shown in Figure 12. In real terms, however, the U.S. dollar has weakened by 7 percent since 1979/80, due to Canada's higher rate of inflation. Canada is the only country in this study against whose currency the dollar has actually weakened, at least in real terms, since 1979/80.

As seen in Figures 13 and 14, the effect of the nominal and real exchange rates on Canadian barley prices are relatively modest, at least when compared to the Argentine case. Nominal Canadian barley prices would have been slightly lower in the early 1980s than they actually were had the Canadian dollar not depreciated in nominal terms. On the other hand, Canadian barley prices would have been slightly higher had the 1979/80 real exchange rate prevailed throughout the period.

The evidence presented does not allow any definitive conclusions on the impact of exchange rates on Canadian production and trade of barley and other feedgrains. Despite the nominal appreciation of the U.S. dollar, the

real Canadian dollar equivalent of the U.S. barley price was lower in 1982/83 than at any time in the previous decade. Yet, Canadian feedgrain production reached its peak in 1982. Clearly, much more than U.S. prices and exchange rates is involved in determining Canadian production and trade.

FIGURE 11

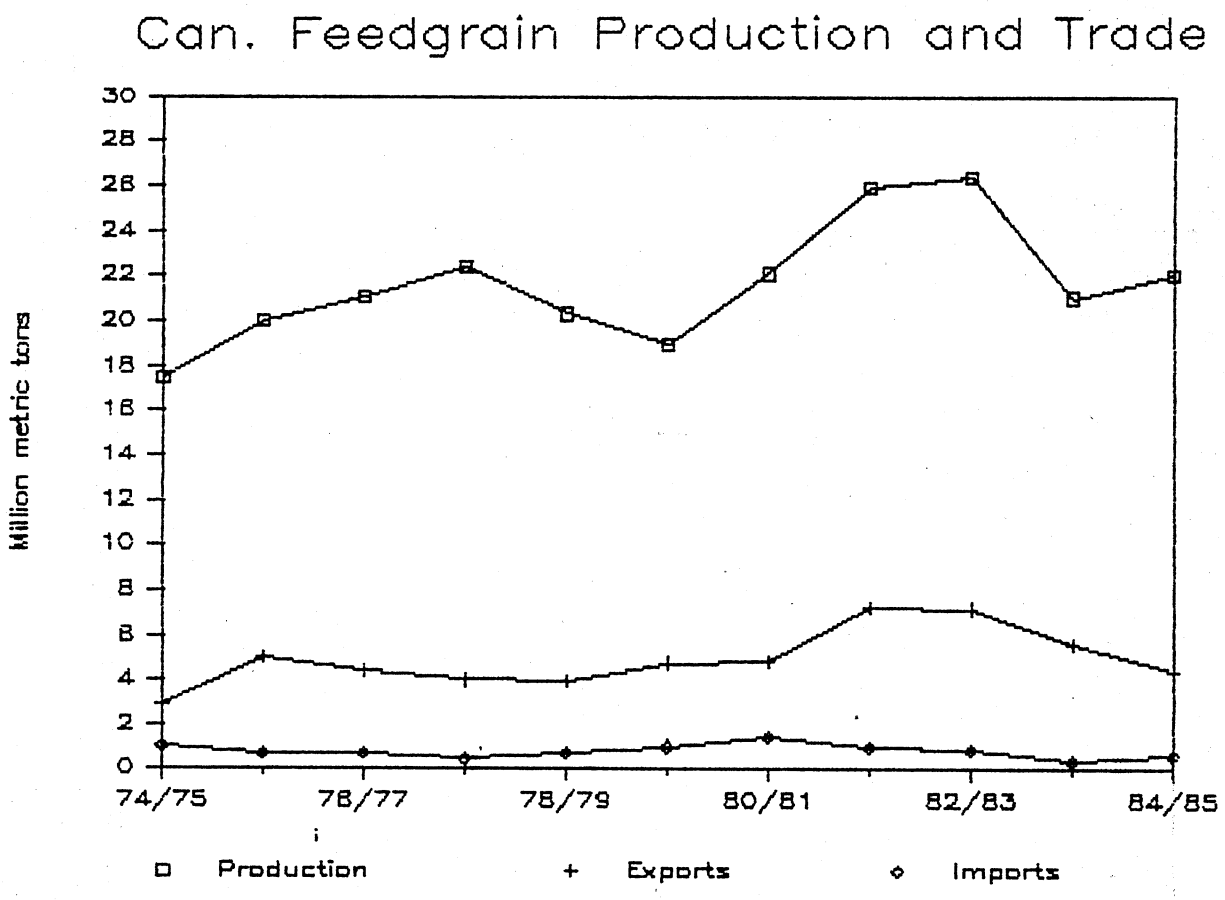


FIGURE 12

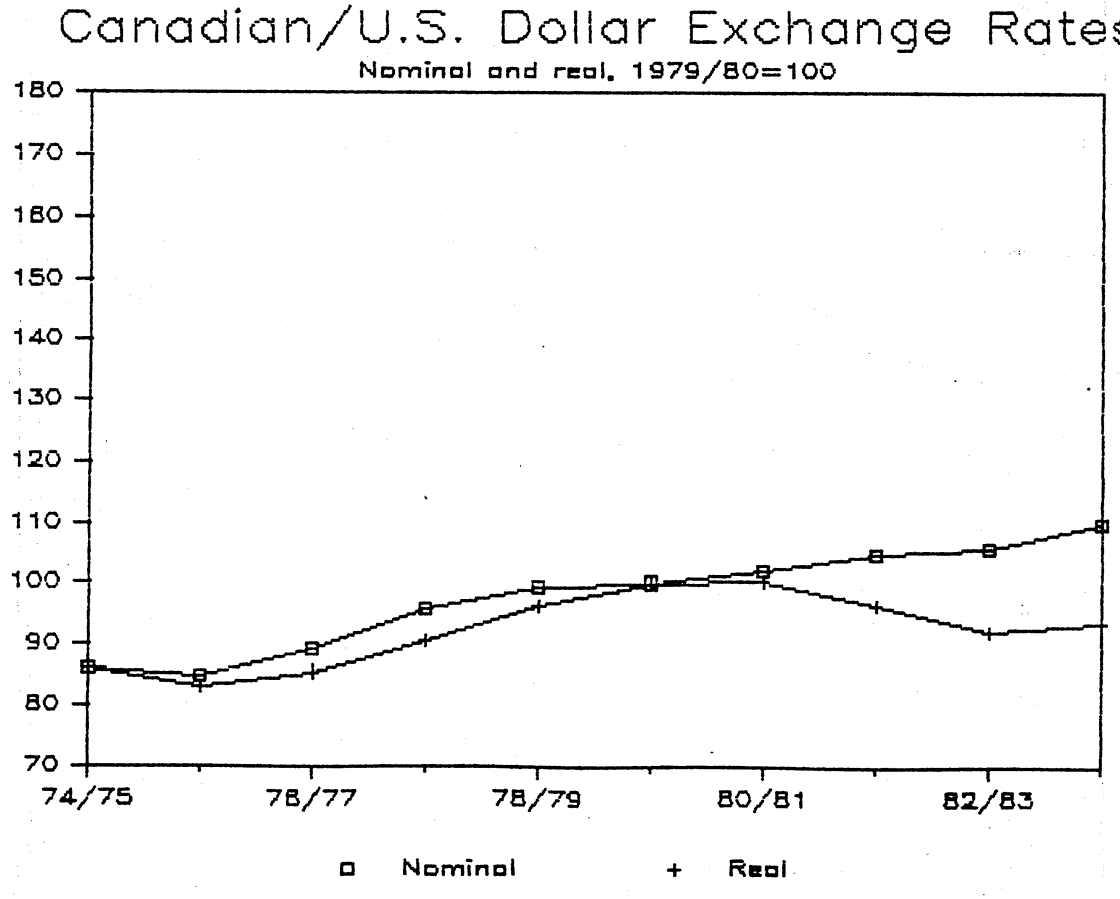


FIGURE 13

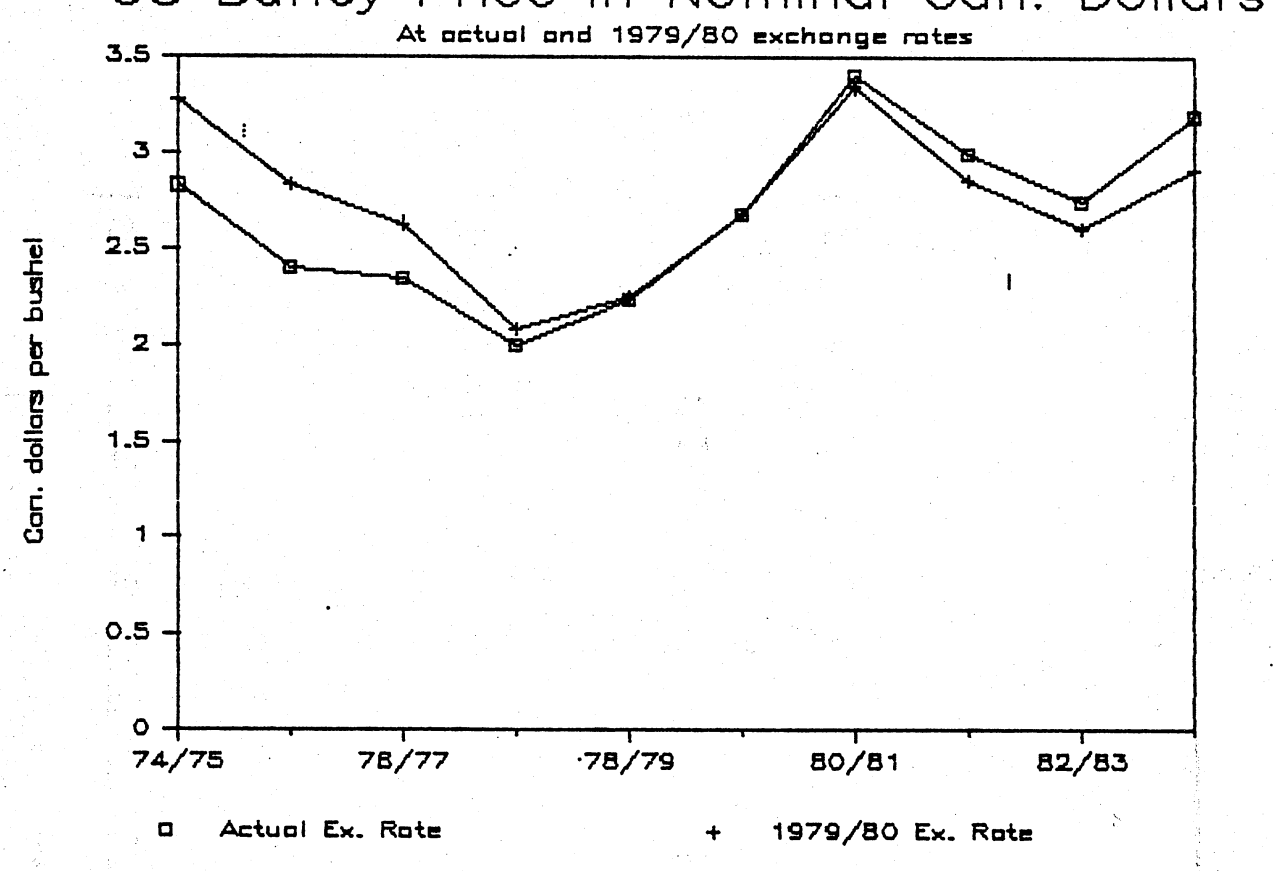
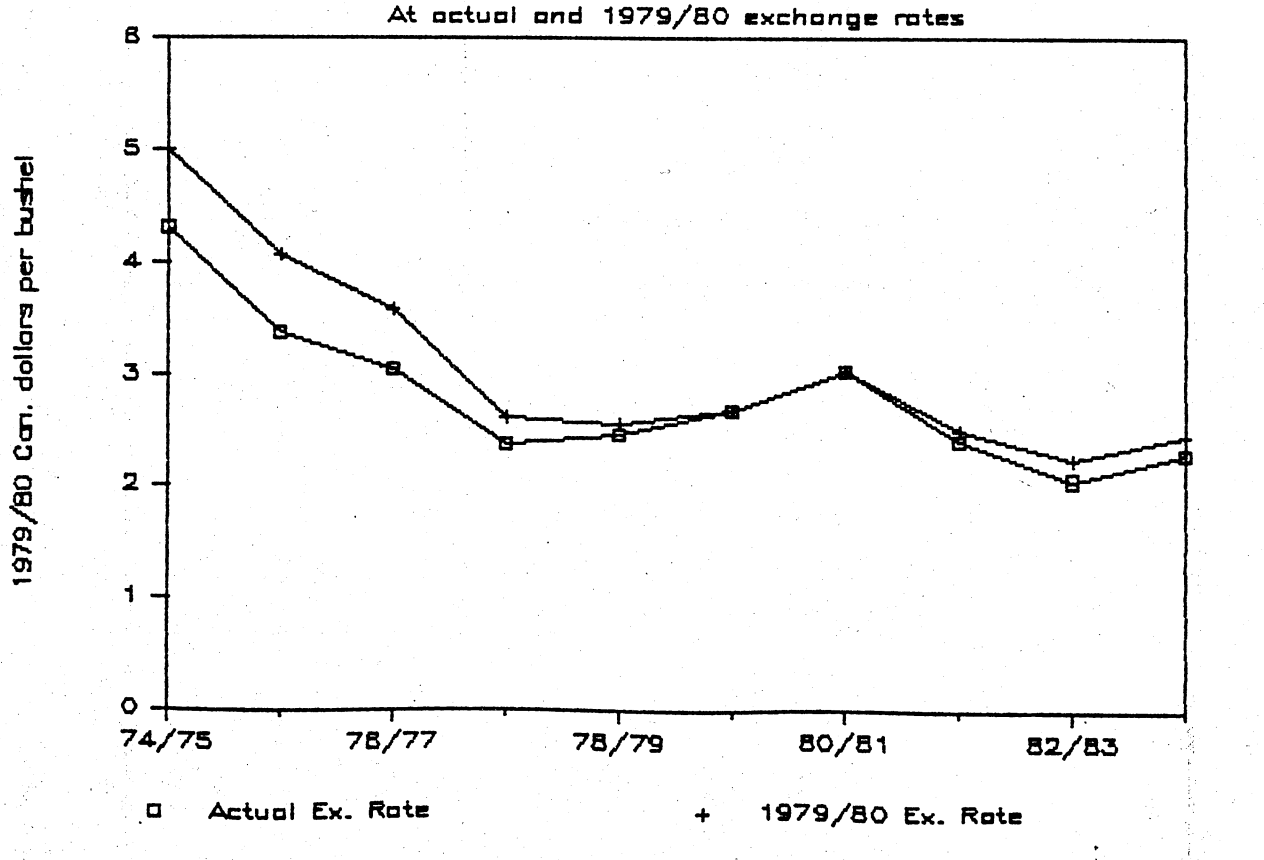


FIGURE 14



4. Australia

Australian feedgrain production and exports have been much more variable than Canadian production and exports, as shown in Figure 15. Low yields account for most of the years when production and exports were low, as area generally expanded.

Figure 16 shows that the U.S. dollar has appreciated against the Australian dollar by 28 percent in nominal terms and by 7 percent in real terms since 1979/80. As with Canada and Argentina, Australian inflation rates have generally been greater than U.S. inflation rates in the 1980s.

The nominal Australian dollar equivalent of U.S. barley prices peaked in 1983/84, while U.S. prices reached their peak in 1980/81, as shown in Figure 17. Had the 1979/80 nominal exchange rate prevailed thoughout the period, Australian barley prices would have been considerably lower in the early 1980s. On the other hand, Figure 18 shows that a constant real exchange rate would not have had much impact on Australian barley prices.

As in the case of Canada, the Australian case does not offer much definitive evidence about the impacts of exchange rates. It is true that Australian production and exports were greatest when the nominal exchange rate was at its highest value, but it is also true that real Australian prices were at their lowest levels when production peaked. Again, simple cause and effect are not immediately clear.

FIGURE 15

Austr. Feedgrain Production and Exports

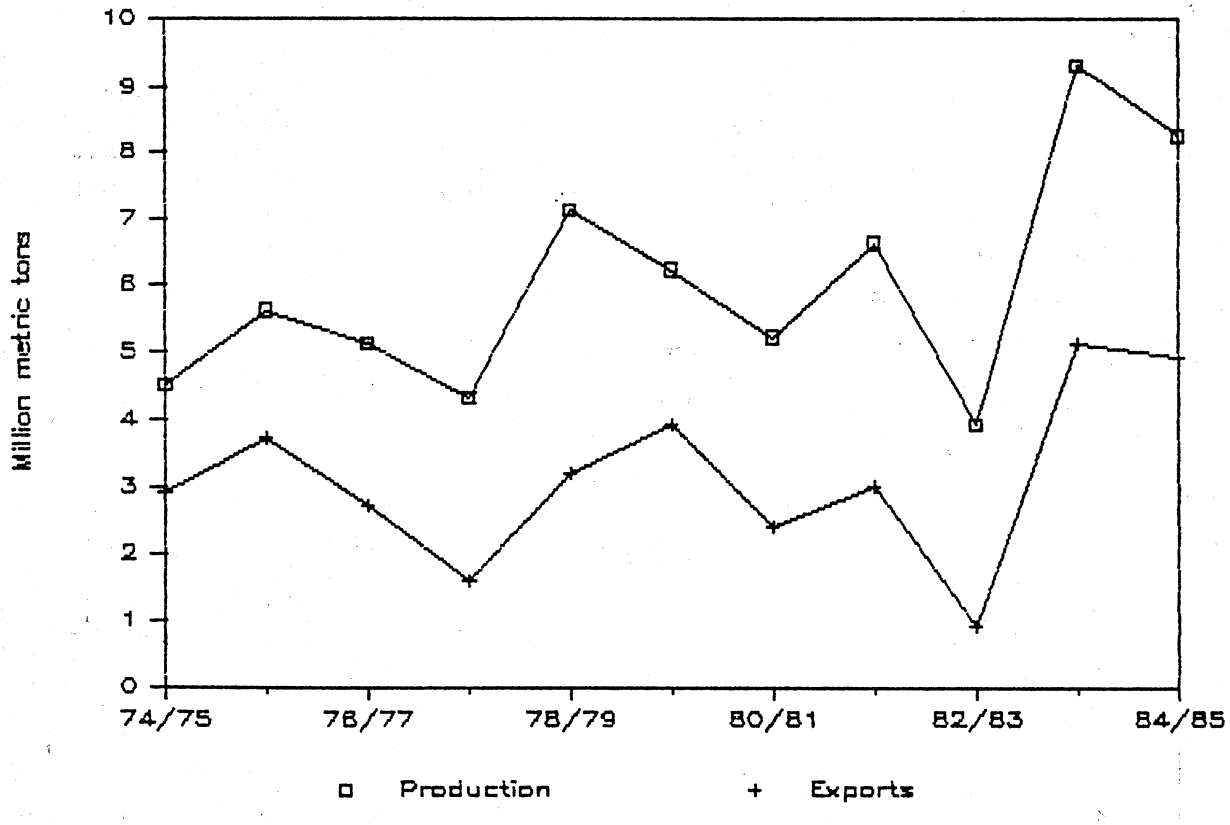


FIGURE 16

Australian/U.S. Dollar Exchange Rates

Nominal and real, 1979/80=100

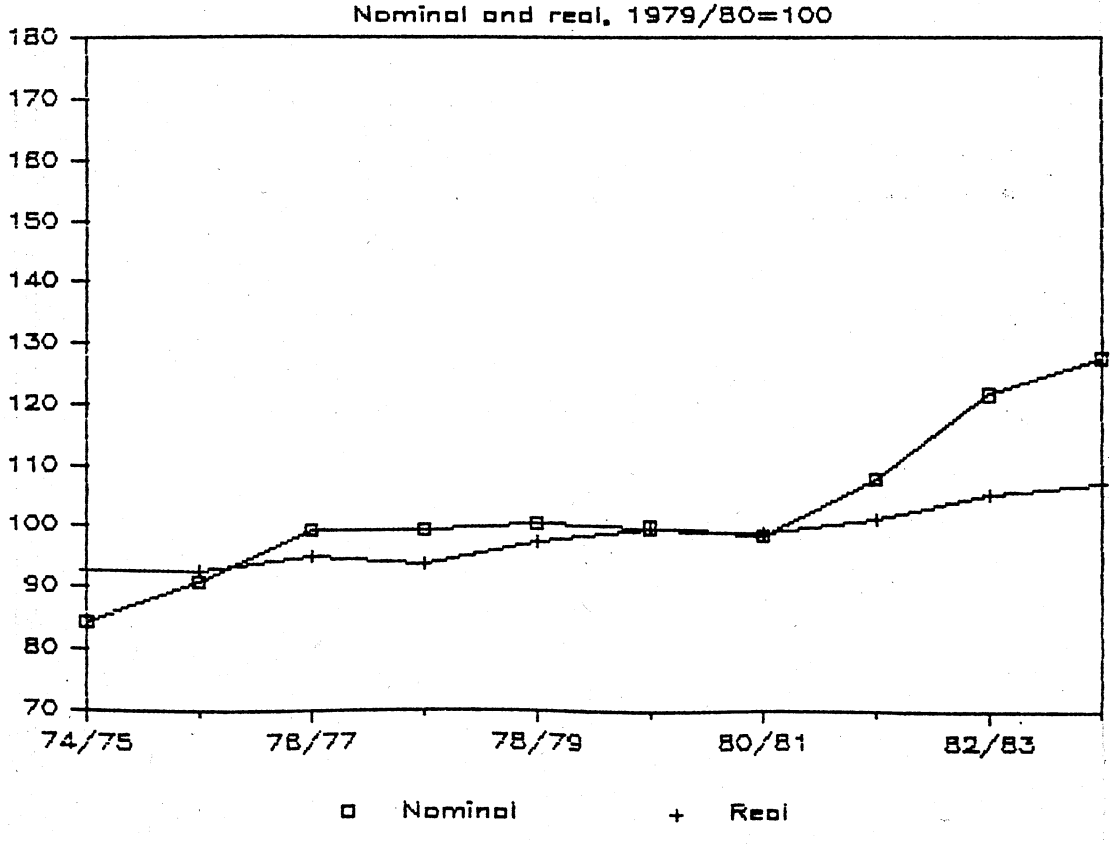


FIGURE 17

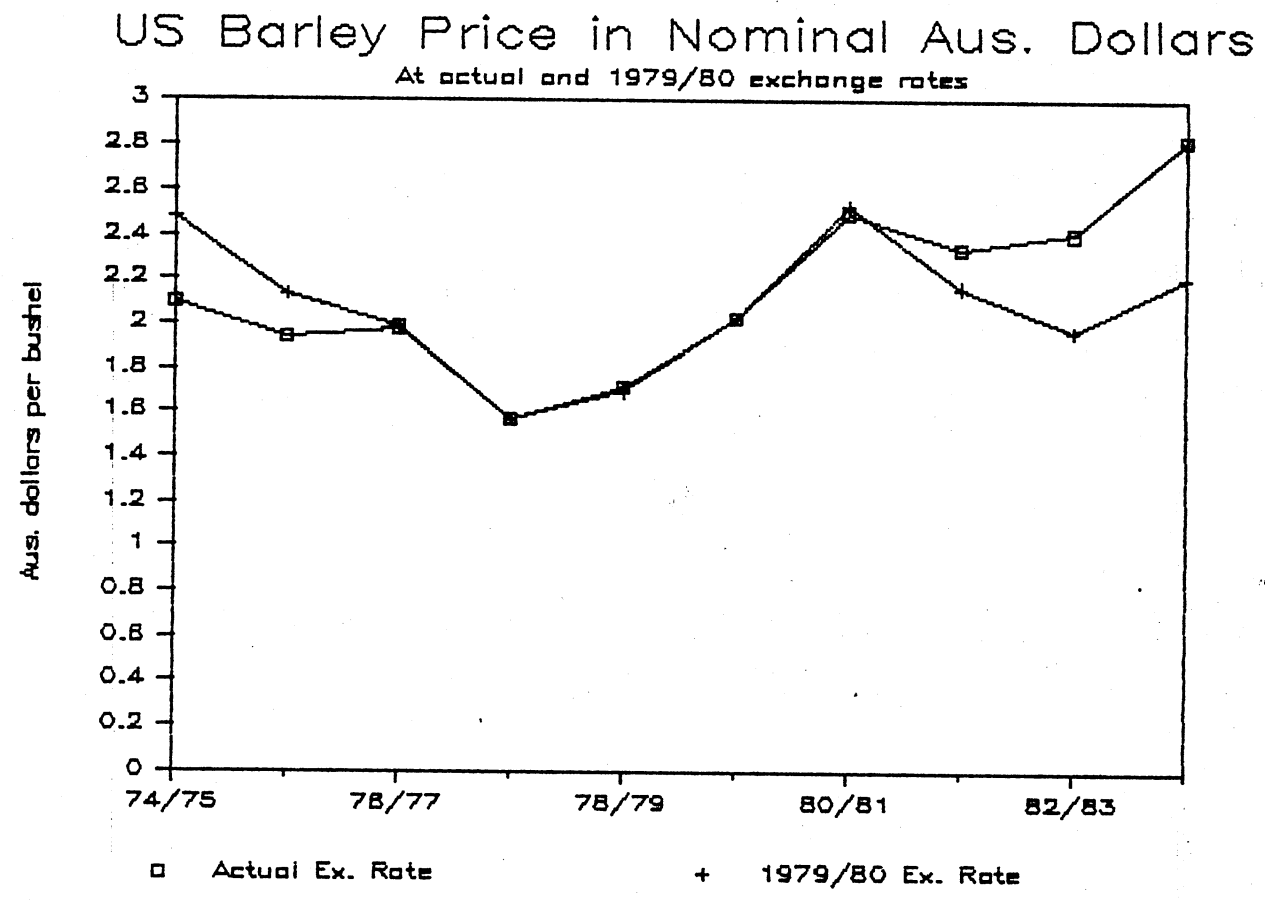
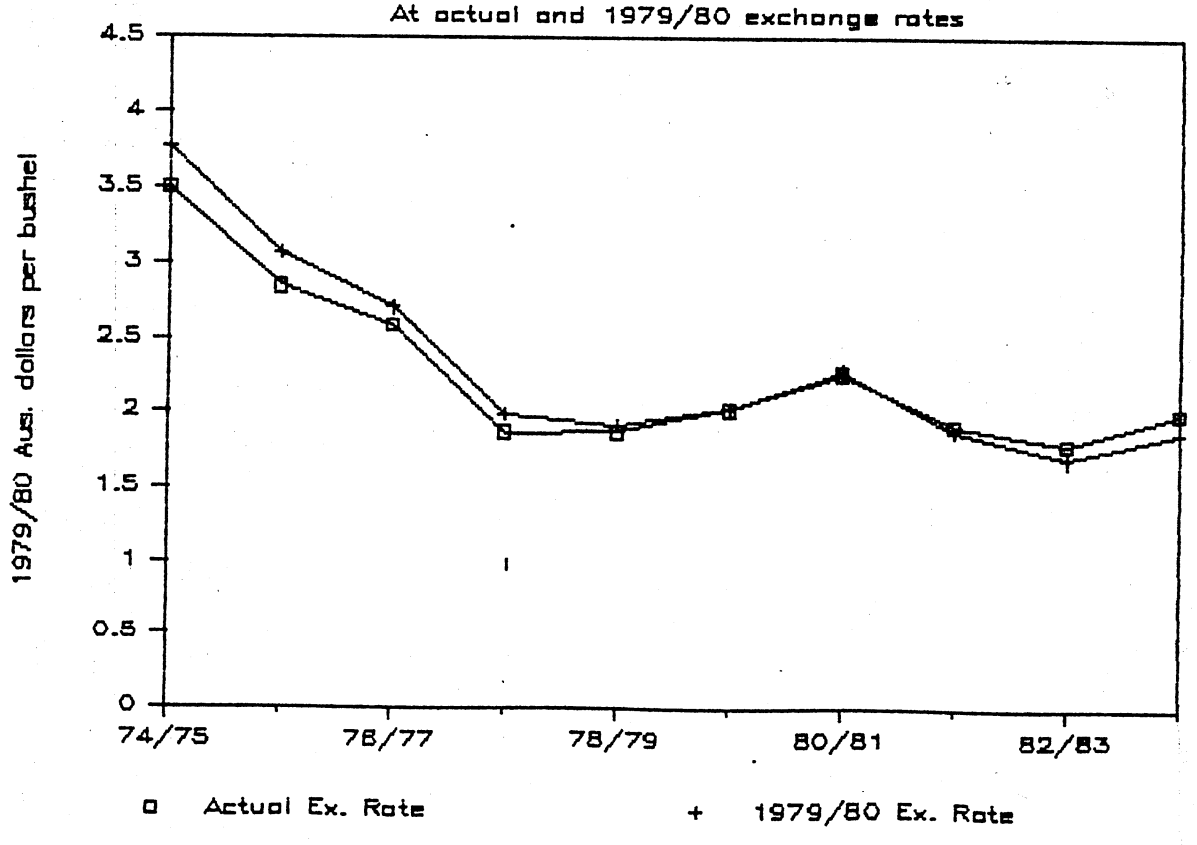


FIGURE 18



5. Thailand

Figure 19 shows that Thai feedgrain production and exports have also been variable, but have generally increased over time. Low yields were responsible for low production levels in both 1977 and 1982.

The nominal and real exchange rates between the dollar and the baht have been fairly constant over time, as seen in Figure 20. Nevertheless, the dollar has appreciated against the baht by 15 percent in nominal terms and 18 percent in real terms since 1979/80. Thai and U.S. inflation rates were very similar thoughout the 1974-1984 period.

Figures 21 and 22 show that Thai corn prices would have been modestly lower, in the absence of trade barriers, had the dollar not appreciated in the 1980s. The real baht equivalent of the U.S. corn price was greater in 1983/84 than in any year since 1975/76.

Since the baht/dollar exchange rate has been relatively constant over time, it is difficult to pick out any exchange rate effects. As in the case of Australia, however, there is a correlation between a stronger U.S. dollar and increased production. The degree to which the increase in production can be attributed to the effect of a stronger dollar is, however, uncertain.

FIGURE 19

Thai Feedgrain Production and Exports

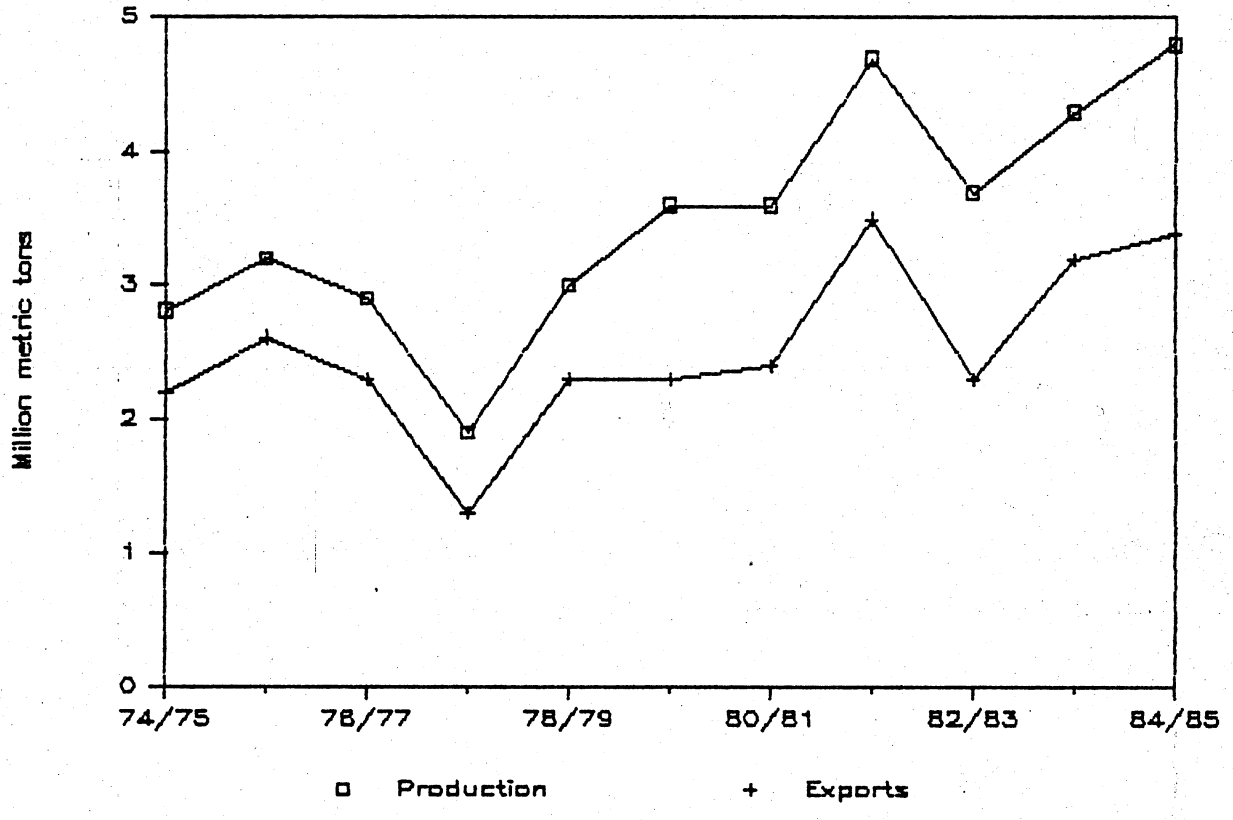


FIGURE 20

Thai Baht/Dollar Exchange Rates

Nominal and real, 1979/80=100

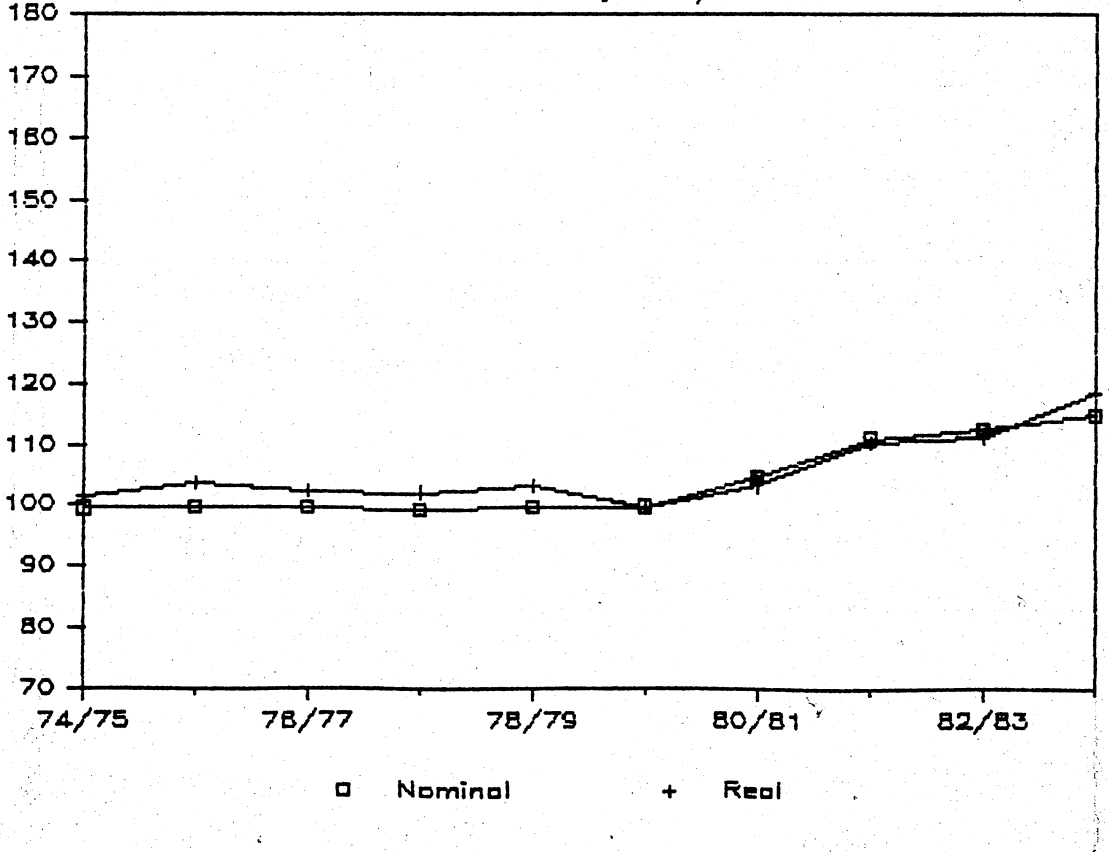


FIGURE 21

US Corn Price in Nominal Thai Baht

At actual and 1979/80 exchange rates

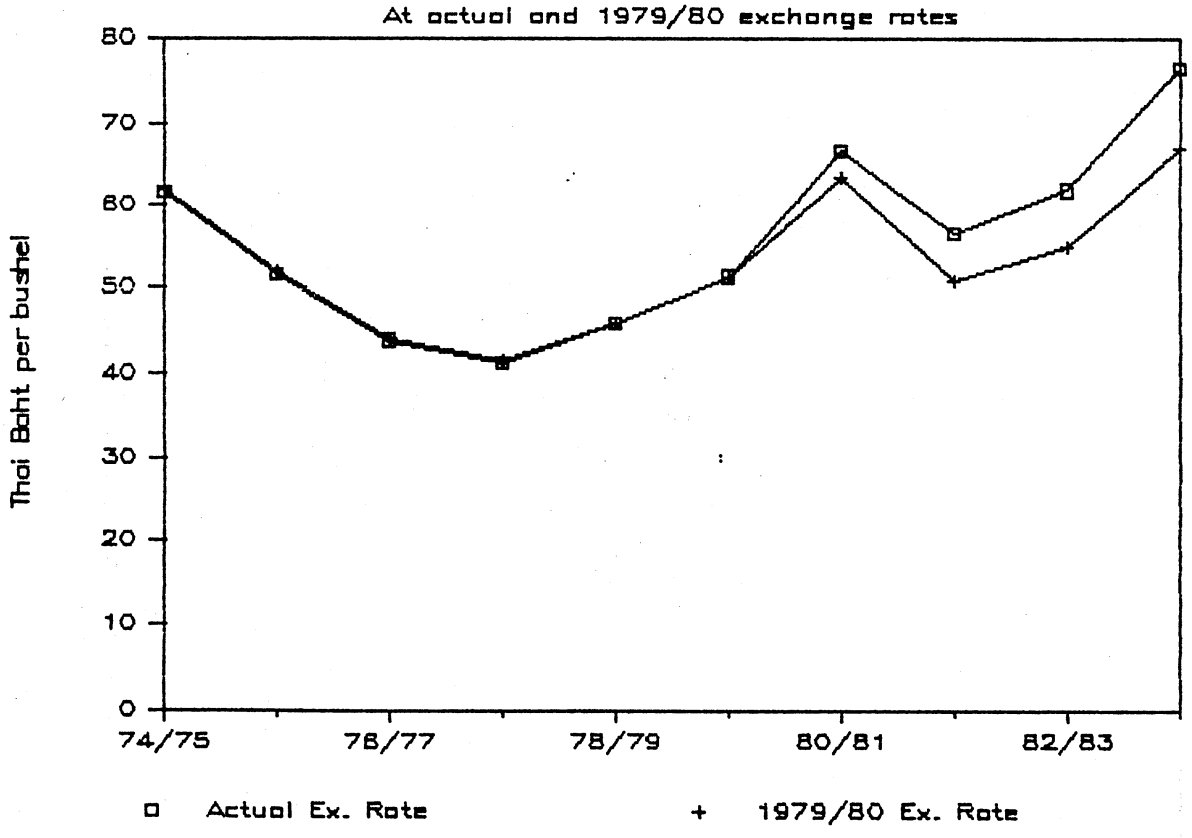
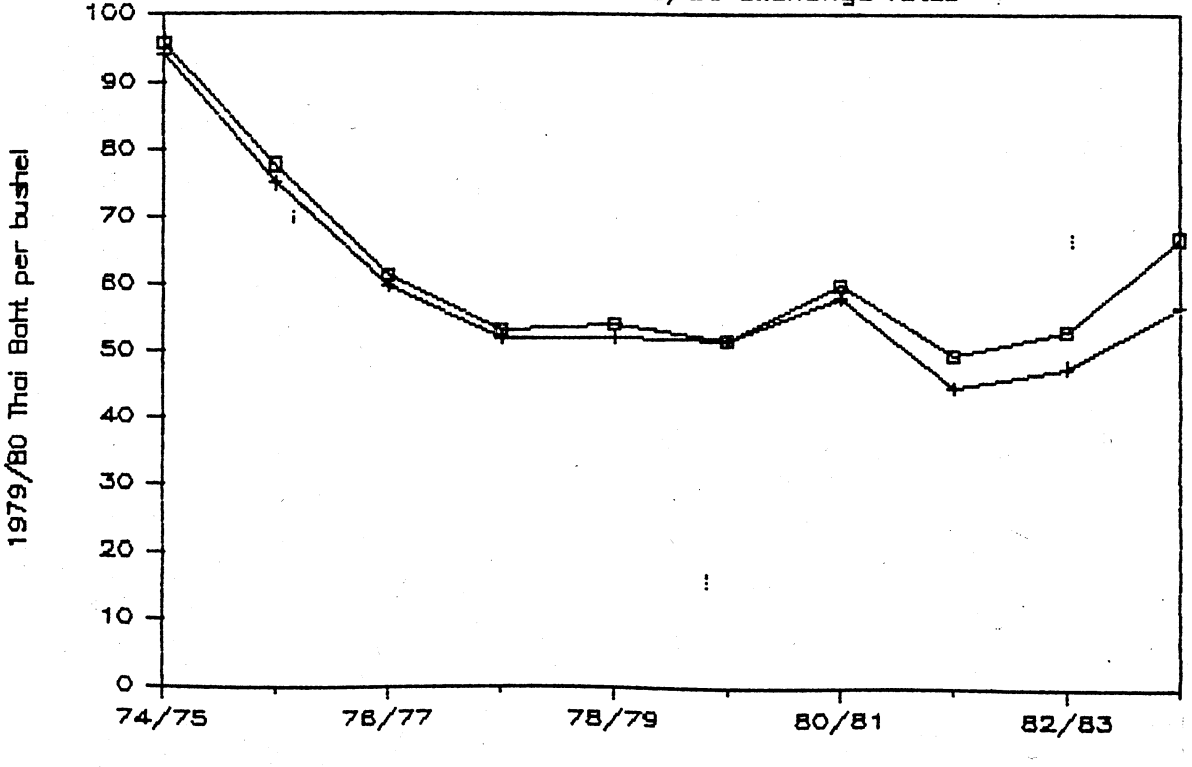


FIGURE 22

US Corn Price in Real Thai Baht

At actual and 1979/80 exchange rates



6. South Africa

As shown in Figure 23, South African feedgrain production peaked in 1980/81 before declining dramatically due to poor yields. Once an important feedgrain exporter, South Africa actually became a net feedgrain importer in the early 1980s.

The dollar has appreciated sharply against the rand since 1979/80, particularly in nominal terms. Figure 24 shows that the dollar has appreciated against the rand by 71 percent in nominal terms and 22 percent in real terms since 1979/80. South African inflation rates have been much higher than U.S. inflation rates, thus explaining the large difference between changes in the nominal and real exchange rates.

Figure 25 shows that the nominal rand equivalent of U.S. corn prices has increased rapidly since 1979/80. In real terms, however, the South African rand price of corn would have been only slightly greater in 1983/84 than in 1980/81 in the absence of trade barriers, as shown in Figure 26. If the dollar had not appreciated against the rand, South African corn prices would likely be considerably lower.

In the South African case, a stronger dollar has been associated with lower production and exports. However, the primary cause of the decline in South African feedgrain production clearly has been unfavorable weather. If and

when normal production conditions return, the effects of the strong dollar may begin to be felt.

FIGURE 23

S.Af. Feedgrain Production and Trade

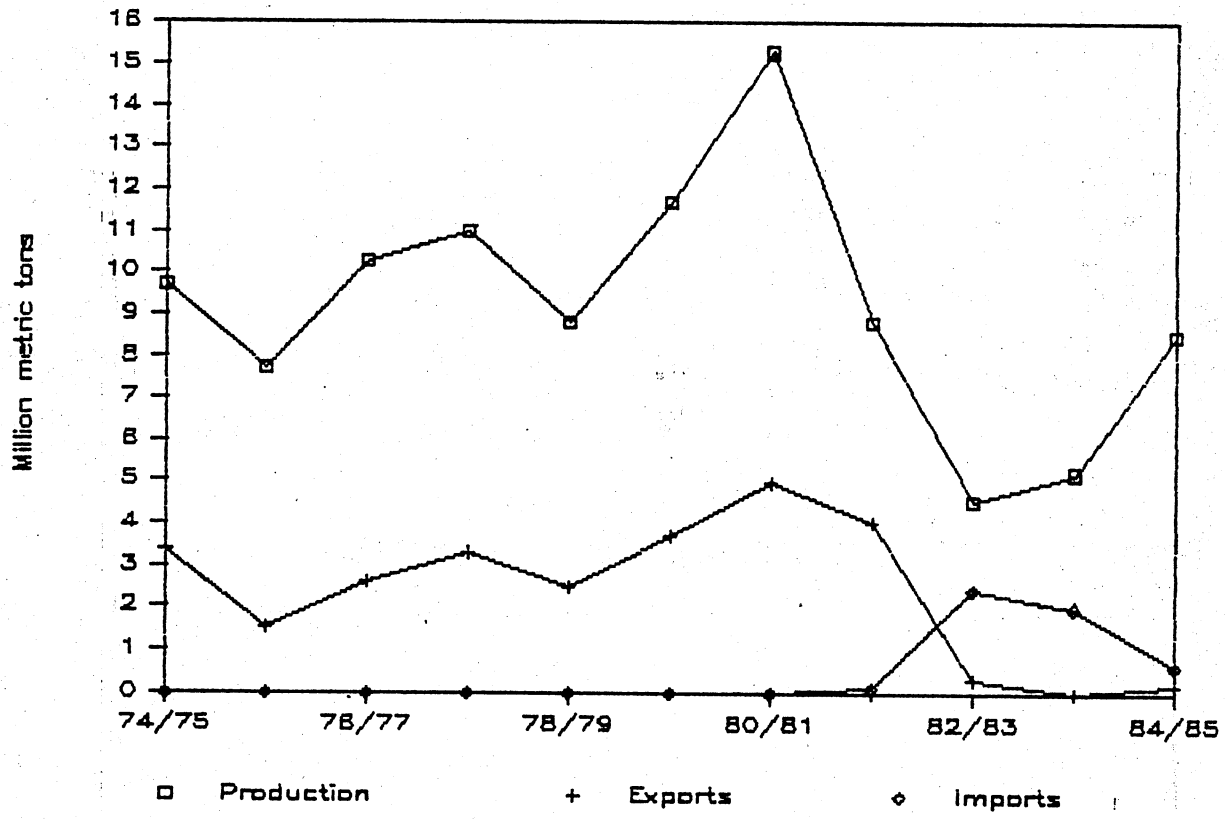


FIGURE 24

S.A. Rand/Dollar Exchange Rates

Nominal and real, 1979/80=100

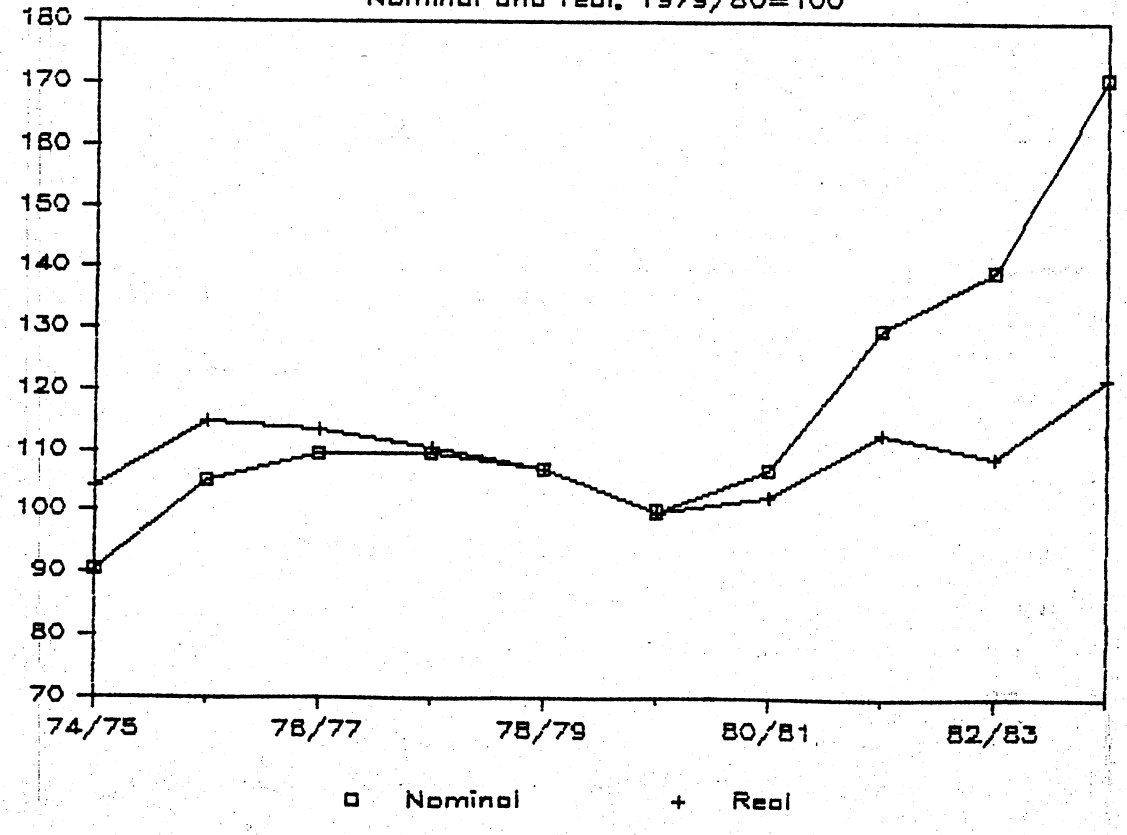


FIGURE 25

US Corn Price in Nominal S.A. Rand

At actual and 1979/80 exchange rates

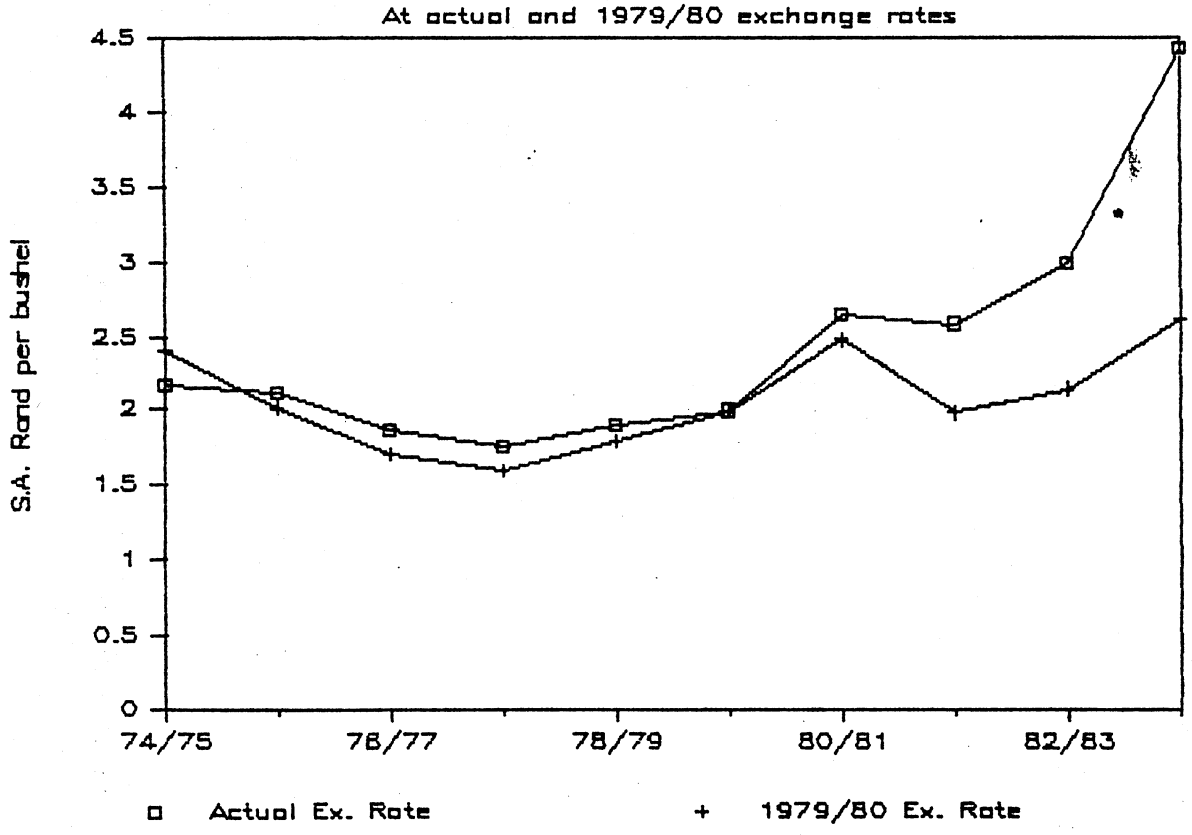
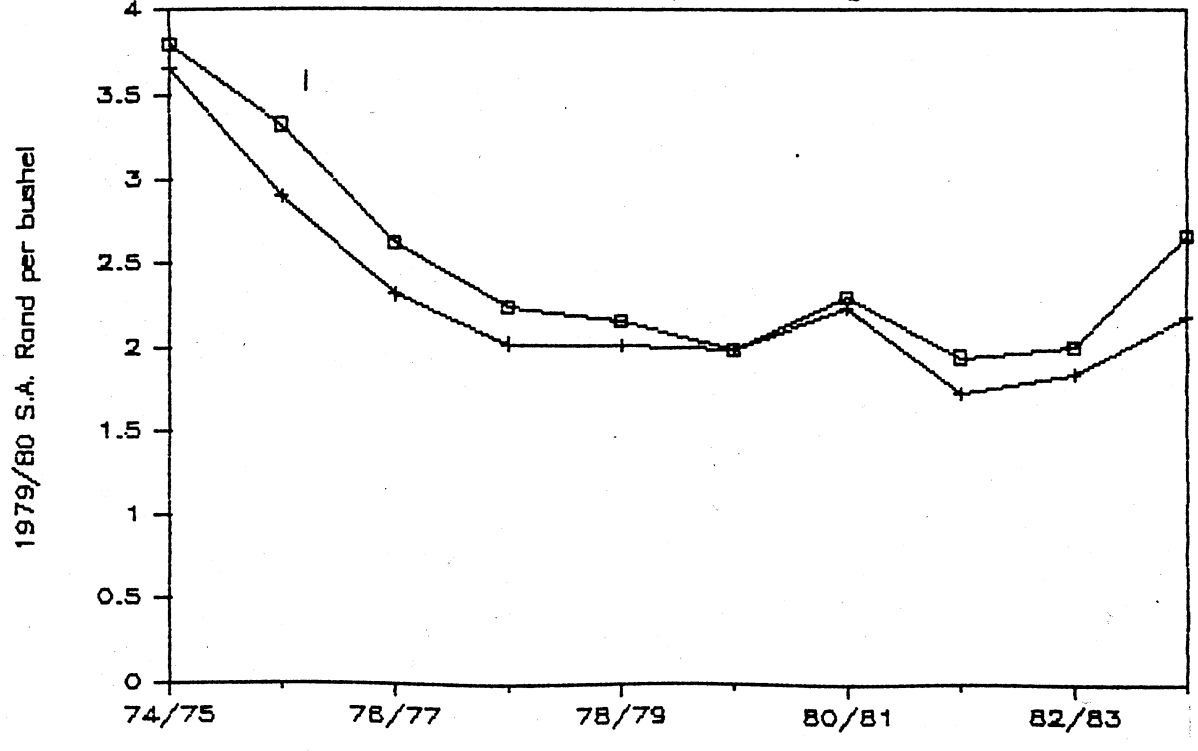


FIGURE 26

US Corn Price in Real S.A. Rand

At actual and 1979/80 exchange rates



7. The European Community

Figure 27 shows that the EC is expected to become a net feedgrain exporter for the first time in the current marketing year. Production has increased only modestly over time, but imports have fallen off considerably. Production differed significantly from trend only in two years when yields were low.

The dollar has increased sharply in value against the European Currency Unit since 1979/80, as shown in Figure 28. The dollar has appreciated by 65 percent in nominal terms and 40 percent in real terms. A similar picture holds when one looks specifically at the exchange rate between the dollar and the currencies of individual EC member countries.

Figures 29 and 30 show that the appreciation of the dollar has increased by a considerably amount the ECU equivalent of the U.S. corn price. However, the price insulating policies of the EC bring into question the importance of changes in the exchange rate. For purposes of comparison, the EC threshold price of corn is included in Figures 29 and 30 to show that the price at which corn can be imported into the EC is considerably above the US price, even at current exchange rates.

Due to price insulating policies, one might be tempted to argue that EC feedgrain production and trade is unaffected by exchange rate changes. Nevertheless, it is important to remember that exchange rate changes affect the opportunity cost involved in maintaining current policies,

and may affect substitution possibilities with soybeans and other products for which the EC market is not so isolated.

FIGURE 27

EC Feedgrain Production and Trade

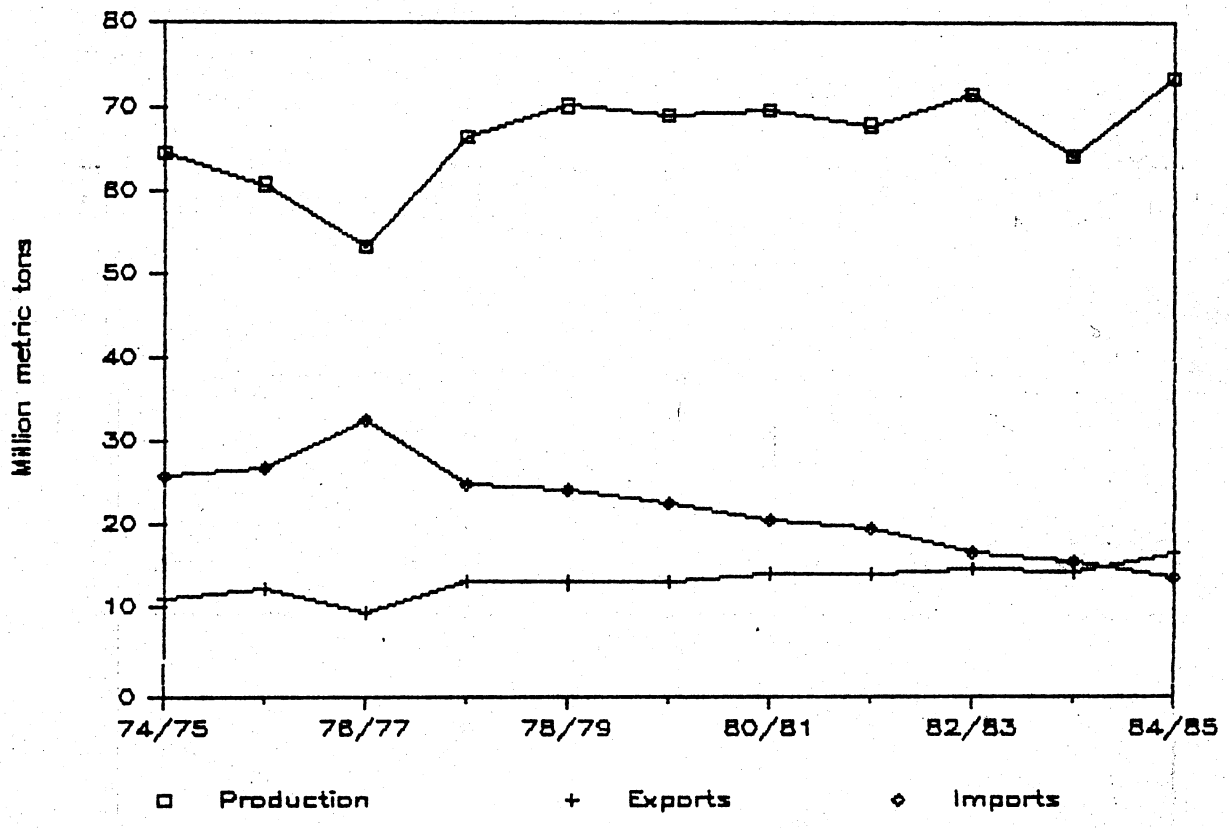


FIGURE 28

ECU/Dollar Exchange Rates

Nominal and real, 1979/80=100

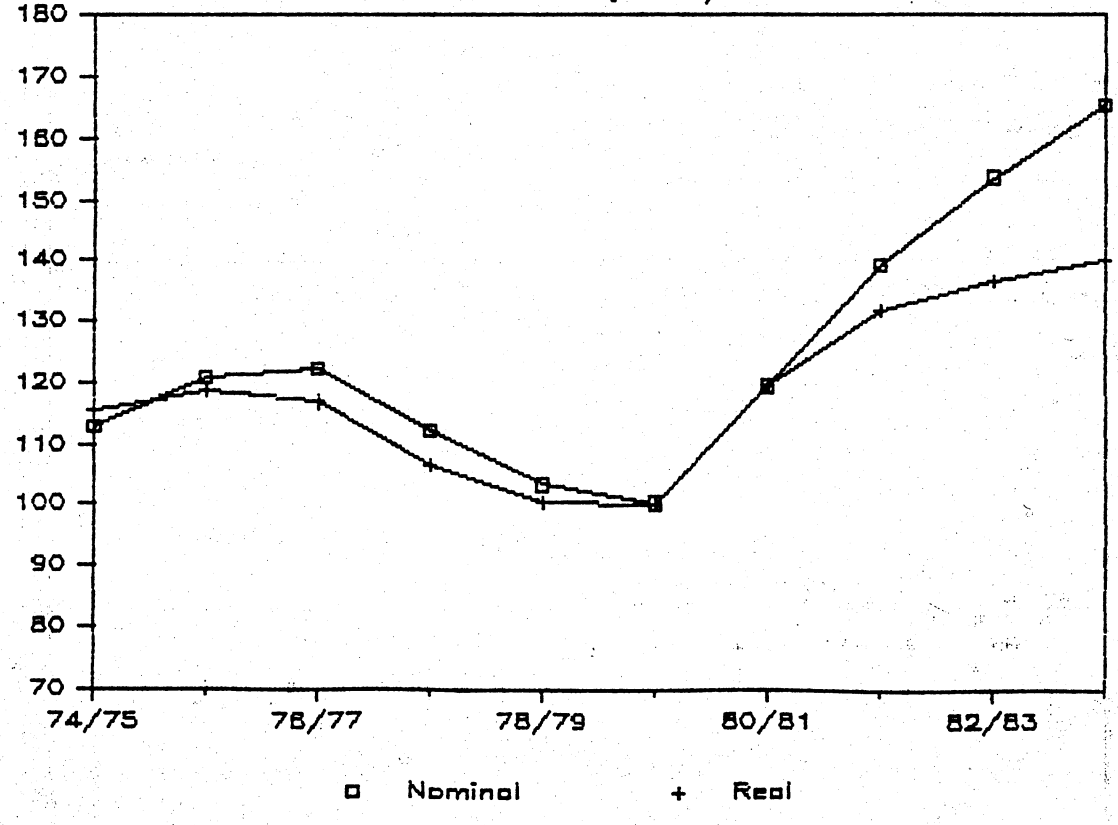


FIGURE 29

US and EC Corn Prices in Nominal ECUs

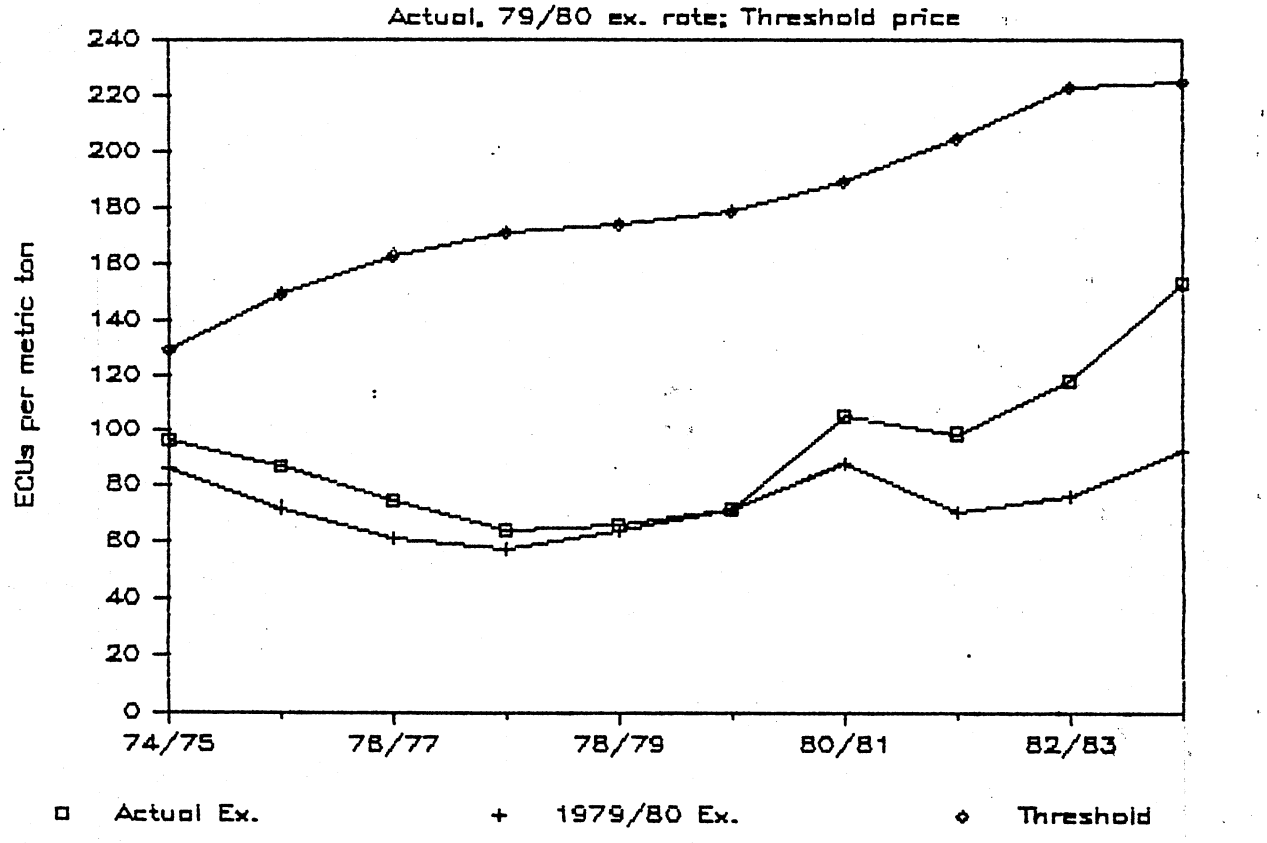
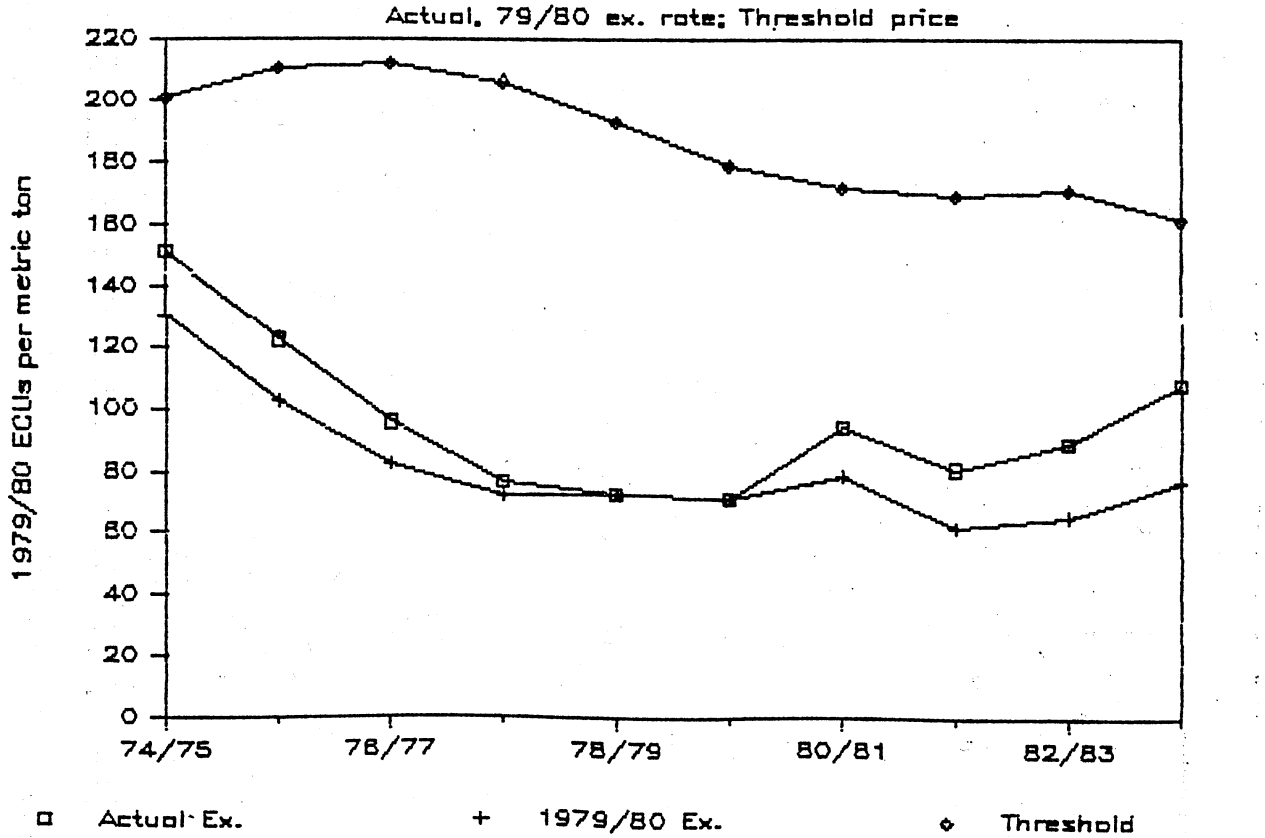


FIGURE 30

US and EC Corn Prices in Real ECUs



Conclusions

This paper does not purport to be an exhaustive analysis of the effect of exchange rates on the competitiveness of U.S. agriculture. The paper is not based on a detailed econometric model which might actually attempt to measure exchange rate effects. Instead, it merely provides some basic information about how exchange rates and agricultural trade patterns have changed in recent years.

The paper has shown that the dollar has indeed appreciated, in both nominal and real terms, against the currencies of several important competitors in agricultural trade. In the absence of trade barriers, this would imply that farmers in other exporting countries are receiving prices higher than those which would prevail if the dollar had not increased in value in recent years.

In spite of the stronger dollar, there is little evidence that the decline in U.S. exports is due primarily to increased competition from other exporting countries, at least in the case of feedgrains. It is possible that the stronger dollar has stimulated production and reduced demand in countries which import U.S. agricultural commodities. However, this analysis suggests that much more is involved in the export decline than exchange rates, support prices, or other factors which affect the foreign currency equivalent of U.S. prices.

APPENDIX

Table 1:
US Trade-Weighted
Exchange Rate
1980=100

	Nominal	Real
1974	116.0	117.0
1975	112.7	110.7
1976	120.8	114.7
1977	118.2	109.8
1978	105.7	99.3
1979	100.8	98.1
1980	100.0	100.0
1981	117.7	118.9
1982	133.4	131.7
1983	143.4	138.3
1984	154.7	

Source: Economic Report of the President, Feb. 1984, p. 331. 1984 nominal exchange rate estimate based on the MERM (Multilateral Exchange Rate Model) rate reported in International Financial Statistics, May 1985.

Table 2:

	Nominal US Ag. Exports, 1980=100		Real US Ag. Exports, 1980=100	
	Dollars	For. Cur.	Dollars	For. Cur.
1974	53.16	61.67	89.25	104.40
1975	53.16	59.91	81.69	90.46
1976	55.83	67.45	82.00	94.09
1977	57.28	67.70	79.29	87.05
1978	71.36	75.44	91.65	91.00
1979	84.22	84.90	96.09	94.28
1980	100.00	100.00	100.00	100.00
1981	105.10	123.74	96.29	114.45
1982	88.83	118.51	79.78	105.09
1983	87.62	125.62	77.71	107.49
1984	91.75	141.90	79.46	

Source: Computations based on Table 1 and Foreign Agricultural Trade of the United States.

Table 3: Feed Grains Production and Exports

	US		Argentina		Canada		
	Product.	Exports	Product.	Exports	Product.	Exports	Imports
74/75	150.9	35.9	13.8	6.0	17.5	3.0	1.1
75/76	185.4	50.0	12.4	6.9	20.0	5.0	0.7
76/77	194.4	50.6	16.9	9.8	21.1	4.4	0.7
77/78	205.7	56.3	18.3	11.2	22.4	4.0	0.4
78/79	222.1	60.2	17.2	10.0	20.3	3.9	0.7
79/80	238.7	71.4	10.6	5.1	18.9	4.7	1.0
80/81	198.4	69.5	21.0	14.4	22.1	4.8	1.4
81/82	246.6	58.4	18.4	10.3	26.0	7.2	0.9
82/83	250.7	54.0	18.1	11.6	26.5	7.1	0.8
83/84	136.7	55.8	17.9	10.9	21.0	5.5	0.3
84/85	232.5	60.0	18.5	11.7	22.0	4.3	0.6

	Australia		Thailand		South Africa		
	Product.	Exports	Product.	Exports	Product.	Exports	Imports
74/75	4.5	2.9	2.8	2.2	9.7	3.4	0.0
75/76	5.6	3.7	3.2	2.6	7.7	1.5	0.0
76/77	5.1	2.7	2.9	2.3	10.3	2.6	0.0
77/78	4.3	1.6	1.9	1.3	11.0	3.3	0.0
78/79	7.1	3.2	3.0	2.3	8.8	2.5	0.0
79/80	6.2	3.9	3.6	2.3	11.7	3.7	0.0
80/81	5.2	2.4	3.6	2.4	15.3	5.0	0.0
81/82	6.6	3.0	4.7	3.5	8.8	4.0	0.1
82/83	3.9	1.0	3.7	2.3	4.5	0.3	2.4
83/84	9.3	5.1	4.3	3.2	5.2	0.0	2.0
84/85	8.2	4.9	4.9	3.4	8.5	0.2	0.6

	EC-10			Other Exporters		
	Product.	Exports	Imports	Product.	Exports	Imports
74/75	64.4	11.1	25.7	48.2	17.5	1.1
75/76	60.8	12.4	26.7	48.9	19.7	0.7
76/77	53.2	9.5	32.6	56.3	21.8	0.7
77/78	66.5	13.3	25.0	57.9	21.5	0.4
78/79	70.1	13.2	24.3	56.5	21.9	0.7
79/80	69.1	13.3	22.6	51.0	19.8	1.0
80/81	69.7	14.3	20.8	67.2	29.0	1.4
81/82	67.8	14.4	19.8	64.5	28.0	1.0
82/83	71.6	15.0	16.8	56.7	22.3	3.2
83/84	64.1	14.7	15.8	57.7	24.7	2.3
84/85	73.4	17.0	14.2	62.0	24.5	1.2

Source: CTAP Feed Grains Data Book and Foreign Agriculture Circular FG-2-85. Quantities in millions of metric tons.

Table 4:

	US Farm Corn Price	US Farm Price in Nominal Arg. Pesos: Actual Nominal Ex. Rate	US Farm Price in Nominal Arg. Pesos: 1979/80 Nominal Ex. Rate	US Farm Price in Real Arg. Pesos: Actual Real Ex. Rate	US Farm Price in Real Arg. Pesos: 1979/80 Real Ex. Rate	Exchange rate 1979/80=100: Nominal	Exchange rate 1979/80=100: Real
74/75	3.02	0.01	0.52	1.54	0.78	1.7	196.4
75/76	2.54	0.03	0.43	0.88	0.62	6.7	140.6
76/77	2.15	0.07	0.37	0.83	0.50	20.0	165.6
77/78	2.02	0.14	0.34	0.65	0.44	40.9	148.0
78/79	2.25	0.27	0.38	0.49	0.44	69.5	112.5
79/80	2.52	0.43	0.43	0.43	0.43	100.0	100.0
80/81	3.11	1.17	0.53	0.57	0.48	220.3	119.0
81/82	2.50	5.14	0.43	0.75	0.37	1203.3	200.8
82/83	2.70	23.07	0.46	0.75	0.40	5005.7	187.5
83/84	3.27	174.52	0.56	0.86	0.47	31262.2	181.5

	US Farm Barley Price	US Farm Price in Nom. Can. Dollars: Actual Nominal Ex. Rate	US Farm Price in Nom. Can. Dollars: 1979/80 Nominal Ex. Rate	US Farm Price in Real Can. Dollars: Actual Real Ex. Rate	US Farm Price in Real Can. Dollars: 1979/80 Real Ex. Rate	Exchange rate 1979/80=100: Nominal	Exchange rate 1979/80=100: Real
74/75	2.81	2.83	3.29	4.31	5.00	86.10	86.23
75/76	2.42	2.40	2.83	3.38	4.07	84.95	83.00
76/77	2.25	2.35	2.63	3.06	3.58	89.25	85.52
77/78	1.78	2.00	2.08	2.39	2.64	95.86	90.67
78/79	1.92	2.23	2.25	2.46	2.55	99.48	96.17
79/80	2.29	2.68	2.68	2.68	2.68	100.00	100.00
80/81	2.86	3.41	3.35	3.05	3.03	101.85	100.37
81/82	2.45	3.00	2.87	2.41	2.51	104.72	96.20
82/83	2.23	2.75	2.61	2.07	2.25	105.38	91.83
83/84	2.50	3.20	2.92	2.30	2.47	109.37	92.98

	US Farm Barley Price	US Farm Price in Nom. Aus. Dollars: Actual Nominal Ex. Rate	US Farm Price in Nom. Aus. Dollars: 1979/80 Nominal Ex. Rate	US Farm Price in Real Aus. Dollars: Actual Real Ex. Rate	US Farm Price in Real Aus. Dollars: 1979/80 Real Ex. Rate	Exchange rate 1979/80=100: Nominal	Exchange rate 1979/80=100: Real
74/75	2.81	2.10	2.48	3.50	3.77	84.56	92.77
75/76	2.42	1.94	2.14	2.85	3.07	90.99	92.66
76/77	2.25	1.98	1.99	2.58	2.70	99.80	95.52
77/78	1.78	1.57	1.57	1.87	1.99	99.86	94.16
78/79	1.92	1.71	1.69	1.88	1.93	100.85	97.41
79/80	2.29	2.02	2.02	2.02	2.02	100.00	100.00
80/81	2.86	2.49	2.52	2.27	2.29	98.84	99.26
81/82	2.45	2.34	2.16	1.92	1.89	108.22	101.71
82/83	2.23	2.40	1.97	1.79	1.70	122.05	105.47
83/84	2.50	2.82	2.21	2.00	1.86	128.04	107.23

	US Farm Corn Price	US Farm Price in Nom. Thai Baht: Actual Nominal Ex. Rate	US Farm Price in Nom. Thai Baht: 1979/80 Nominal Ex. Rate	US Farm Price in Real Thai Baht: Actual Real Ex. Rate	US Farm Price in Real Thai Baht: 1979/80 Real Ex. Rate	Exchange rate 1979/80=100: Nominal	Exchange rate 1979/80=100: Real
74/75	3.02	61.54	61.79	95.66	94.03	99.59	101.73
75/76	2.54	51.80	51.97	77.56	74.81	99.67	103.68
76/77	2.15	43.86	43.99	61.42	59.88	99.70	102.59
77/78	2.02	41.11	41.33	53.53	52.39	99.46	102.17
78/79	2.25	45.90	46.04	54.16	52.37	99.69	103.43
79/80	2.52	51.56	51.56	51.56	51.56	100.00	100.00
80/81	3.11	66.82	63.64	59.77	57.71	105.00	103.56
81/82	2.50	56.76	51.15	49.34	44.74	110.96	110.26
82/83	2.70	62.10	55.25	53.03	47.63	112.40	111.32
83/84	3.27	76.78	66.91	66.78	56.49	114.75	118.21

	US Farm Corn Price	US Farm Price in Nom. S.A. Rand: Actual Nominal Ex. Rate	US Farm Price in Nom. S.A. Rand: 1979/80 Nominal Ex. Rate	US Farm Price in Real S.A. Rand: Actual Real Ex. Rate	US Farm Price in Real S.A. Rand: 1979/80 Real Ex. Rate	Exchange rate 1979/80=100: Nominal	Exchange rate 1979/80=100: Real
74/75	3.02	2.17	2.40	3.80	3.65	90.53	104.29
75/76	2.54	2.12	2.02	3.33	2.90	105.19	114.67
76/77	2.15	1.87	1.71	2.64	2.32	109.53	113.55
77/78	2.02	1.76	1.60	2.24	2.03	109.53	110.41
78/79	2.25	1.91	1.79	2.17	2.03	106.91	106.79
79/80	2.52	2.00	2.00	2.00	2.00	100.00	100.00
80/81	3.11	2.63	2.47	2.29	2.24	106.71	102.43
81/82	2.50	2.58	1.98	1.95	1.74	129.77	112.52
82/83	2.70	2.98	2.14	2.00	1.85	139.19	108.48
83/84	3.27	4.44	2.60	2.67	2.19	170.87	121.62

	US Farm Corn Price	US Farm Price in Nominal ECUs: Actual Nominal Ex. Rate	US Farm Price in Nominal ECUs: 1979/80 Nominal Ex. Rate	EC Threshold Price	US Farm Price in Real ECUs: Actual Real Ex. Rate	US Farm Price in Real ECUs: 1979/80 Real Ex. Rate	Real EC Threshold Price
74/75	3.02	96.80	85.74	128.88	150.81	130.47	200.79
75/76	2.54	87.24	72.11	149.19	123.30	103.80	210.86
76/77	2.15	74.57	61.04	163.34	96.99	83.08	212.44
77/78	2.02	64.24	57.35	171.68	77.38	72.69	206.80
78/79	2.25	65.86	63.88	174.40	72.97	72.66	193.24
79/80	2.52	71.55	71.55	178.90	71.55	71.55	178.90
80/81	3.11	105.39	88.30	189.50	95.60	80.07	171.90
81/82	2.50	98.99	70.98	205.00	81.91	62.08	169.62
82/83	2.70	117.75	76.66	223.27	90.35	66.09	171.32
83/84	3.27	153.33	92.84	224.94	109.88	78.38	161.20

ECU/Dollar
Exchange rate
19[illegible]00

	Nominal	Real
74/75	112.89	115.59
75/76	120.97	118.78
76/77	122.17	116.75
77/78	112.01	106.45
78/79	103.10	100.43
79/80	100.00	100.00
80/81	119.36	119.39
81/82	139.46	131.93
82/83	153.60	136.71
83/84	165.16	140.19

Sources: Exchange rates and price indices used to calculate real exchange rates are from International Financial Statistics. U.S. prices are season average farm prices reported by USDA.