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## **AGRICULTURAL POLICY ANALYSIS PROJECT, PHASE II**

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**EL SALVADOR:**

## **AN ASSESSMENT OF THE IMPACT OF RECENT POLICY CHANGES ON AGRICULTURE**

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## **ABSTRACT**

**This study identifies the policy changes enacted since June 1989 which have affected the agricultural sector, quantifies their impact where possible, and identifies the remaining policies and distortions that constrain the performance of Salvadoran agriculture.**

**The variables studied include value added, production, prices, credit allocation to agriculture, investments in agriculture, labor use, agricultural trade, and sources of growth.**

**The report has an executive summary, introduction, policy reforms since June 1989, impact on agriculture, policy constraints and distortions, and a chapter summarizing the major conclusions and recommendations.**

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## ACRONYMS

<b>ANDA</b>	<b>Administración Nacional del Agua (National Water Administration).</b>
<b>ANTER</b>	<b>Administración Nacional de Telecomunicaciones (National Administration of Telecommunications).</b>
<b>ARENA</b>	<b>Alianza Republicana Nacionalista (National Republican Alliance).</b>
<b>BCR</b>	<b>Banco Central de Reserva (Central Bank of Reserve).</b>
<b>BFA</b>	<b>Banco de Fomento Agropecuario (Agricultural Development Bank).</b>
<b>BOP</b>	<b>Balance of Payments.</b>
<b>CACM</b>	<b>Central American Common Market.</b>
<b>CBR</b>	<b>Central Bank of Reserve.</b>
<b>CEL</b>	<b>Comisión Ejecutiva Hidroeléctrica del Río Lempa (Executive Hydroelectric Commission of the Lempa River).</b>
<b>CENTA</b>	<b>Centro de Tecnología Agrícola (Agricultural Technology Center).</b>
<b>CENTREX</b>	<b>Centro de Trámites de Exportación (Center for Export Expediency).</b>
<b>CPI</b>	<b>Consumer Price Index.</b>
<b>DIVAGRO</b>	<b>Programa de Diversificación Agrícola (Agricultural Diversification Program).</b>
<b>DVA</b>	<b>Domestic value added.</b>
<b>FEDECREDITO</b>	<b>Federación de Cajas de Crédito (Federation of Credit Units).</b>
<b>FTZ</b>	<b>Free Trade Zone.</b>
<b>FUSADES</b>	<b>Fundación Salvadoreña Para el Desarrollo Económico y Social (Salvadoran Foundation for Social and Economic Development).</b>
<b>ICO</b>	<b>International Coffee Organization.</b>
<b>IDB</b>	<b>Interamerican Development Bank.</b>
<b>INAZUCAR</b>	<b>Instituto Nacional del Azúcar (National Sugar Institute).</b>

<b>INCAFE</b>	<b>Instituto Nacional Del Café (National Coffee Institute).</b>
<b>IRA</b>	<b>Instituto Regulador de Abastecimiento (Grain Marketing Institute).</b>
<b>ISIC</b>	<b>Instituto Salvadoreño de Investigación de Café (Salvadoran Coffee Research Institute).</b>
<b>MAG</b>	<b>Ministerio de Agricultura y Ganadería (Agriculture and Livestock Ministry).</b>
<b>MIPLAN</b>	<b>Ministerio de Planificación (Planning Ministry).</b>
<b>PROCAFE</b>	<b>Fundación Salvadoreña para Investigaciones del Café (Salvadoran Foundation for Coffee Research).</b>
<b>REER</b>	<b>Real Effective Exchange Rate.</b>
<b>RER</b>	<b>Real Exchange Rate.</b>
<b>UAP</b>	<b>Unidad de Análisis de Políticas Agropecuaria (Agricultural Policy Analysis Unit).</b>
<b>USAID</b>	<b>United States Agency for International Development.</b>

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## **EXECUTIVE SUMMARY**

The inauguration of the Cristiani administration in June 1989 brought the promise of significant economic reform for El Salvador. The Salvadoran economy had been deteriorating since about 1979 and the Cristiani Government was elected on a platform that included significant economic changes. This study identifies the policy changes enacted since June 1989 which have affected the agricultural sector, quantifies their impact when possible, and identifies the remaining policies and distortions that constrain the performance of Salvadoran agriculture.

The variables studied include value added, production, prices, credit allocation to agriculture, investments in agriculture, labor use, agricultural trade, and sources of growth.

Some of the more recent reforms have had no impact on the agricultural sector as yet, although they are expected to in the future. The relatively short period (two years) since the policy reforms began makes it difficult to separate the effects of natural phenomena from those of the policy reforms. For example, in mid-1991, El Salvador experienced a severe drought that harmed the agricultural and energy sectors, but this effect could not be isolated. Over the long term, the policy reforms will contribute to a reallocation of resources and to the improvement of economic efficiency as production units respond to a more competitive environment.

The major conclusions of the study are as follows:

- Macroeconomic policy has been well conducted. Real growth in GDP is slow but higher than it has been in many years. The rate of inflation has been reduced. The main problem remaining is the fiscal deficit, and the efficiency of tax administration is the key to increasing tax revenue and closing the fiscal gap.
- Export performance has been good except for coffee exports. Overall, exports were down in 1991, but non-coffee export revenues were up. Agricultural exports other than coffee to both Central America and to other areas are growing satisfactorily.
- Imports are also growing rapidly. The pattern of import growth is consistent with the kinds of reforms that have occurred in the structure of protection. The fastest growing categories of imports are intermediate and capital goods, and agricultural inputs are one of the fastest growing import categories.
- The exchange rate appreciated in real terms over the past year by as much as 14 percent. However, some appreciation at this stage in the exchange rate liberalization process is typical and real devaluation is inevitable, given relative international inflation rates and freedom from exchange controls. Finally, nominal devaluation began to occur in early October 1991. No direct action should be taken regarding the exchange rate or the exchange rate system.

- Interest rate reform is the major factor causing the exchange rate to appreciate. The formula for interest rate reform guarantees positive real rates rather than market rates. Further, positive real rates are set for too long. Interest rate reform should be accelerated.
- Inflation has slowed from around 30 percent per year in 1989 to about 12-14 percent. Food price changes have not hurt the poor, relative to the prices of other goods. Indeed, the pre-June 1989 trend of relative food price changes that adversely affected the poor seems to have stopped.
- The drought in El Salvador has had no noticeable effect on food prices. The rate of increase in food prices has been no greater than that of other goods. Food price increases in September were reportedly less than for other commodities.
- Tariff reform compressed tariffs to within a range of 5-30 percent. The target range of 5-20 percent for tariff reform is too wide. A single tariff rate of about 15 percent (depending on revenue expected) would be best. Exemptions from tariffs have been eliminated for many imports but important exceptions remain. Tariff exemptions for autonomous public enterprises, the public sector, cooperatives, PL-480 commodities, and a few minor categories of imports should be eliminated.
- Export promotion is weak. Several steps have been taken to promote exports, but they are not comprehensive and have been poorly administered (with the exception of CENTREX, which functions well).
- Agricultural credit delivery is in disarray. The system through which agricultural credit had been channeled depends on subsidized interest rates, directed credit lines, and access to central bank financing. Many, if not all, institutions channeling credit to agriculture are technically bankrupt (with the exception of BFA, whose foreign debt was recently assumed by the BCR). Agricultural credit as it has been administered is incompatible with reforms now underway in the country's banking system. A full assessment of agricultural credit needs and a redesign of delivery systems is called for.
- Banking reform is scheduled to run its course by about April 1993. The precise details of the financial system that will evolve are not fully known. Any prolongation of banking system reform and privatization will reduce El Salvador's ability to channel resources to agriculture and other productive enterprises.
- Informal credit is probably meeting the credit needs of many small entrepreneurs, including farmers. No attempt should be made to interfere with informal credit markets.

- **Effective rates of protection in agriculture have probably been reduced somewhat by changes in the tariff structure on agricultural goods and imported agricultural inputs. Nevertheless, effective protection remains positive at about 20 percent for most commodities. Real exchange rate changes have partially offset the reduction in effective protection caused by tariff changes.**
- **Effective rates of protection in agriculture overall may still discourage production of some important crops such as corn. This problem is probably caused by a combination of administrative trade restrictions, differential duties on grains which are close substitutes for each other, or failure to have all substitute grains governed by the price band. Also damaging are duty-free imports of PL-480 grain which either compete directly with national production or are close substitutes for domestic grains.**
- **Agricultural output has responded positively to the policy reforms. Agricultural value added was up 7.4 percent in 1990, mainly due to growth in coffee, basic grains, and sugarcane production. Average production of the last two crop years was higher than the preceding two years for all major crops, except corn. Milk and egg production also increased in 1990.**
- **Real producer prices behaved differently for each major product. Corn and sugarcane were the only two crops whose real prices increased in 1989/90 in relation to 1988/89, but these gains were lost in 1990/91. Real prices for other crops declined in 1989/90 and increased in 1990/91 to their price levels of 1988/89. The price of coffee has decreased due mainly to international price declines. Beef prices increased in 1990, while milk and chicken meat prices stayed about the same as in 1989. Egg prices declined.**
- **Agricultural investments, which were declining until 1988, started rising in 1989, and increased by 23 percent in 1990.**
- **Labor demand has increased in agriculture. Rural employment has expanded by an estimated 7.7 million person-days since June 1989.**
- **The main source of growth in agricultural output has been productivity gains rather than area expansion. Production gains have been due mainly to yield increases, which will be the main source of future growth. El Salvador has insufficient land area for significant crop expansion.**

**The following recommendations are based on the analysis conducted in the study, observations of the authors, and results of other studies:**

- **Tariffs on imports should be reformed to fall within a narrower range than currently planned.**

- All exemptions from tariffs should be eliminated.
- The implementation of alternative tax systems should be accelerated to reduce the government deficit. This will allow a faster phasing out of the current export tax on coffee.
- The demand for agricultural credit should be the object of a major study.
- Privatization of the banking system should proceed without delay.
- An export commission similar to one considered in 1991 should be established.
- Interest rate reforms should be accelerated.
- Price bands should be set for all commodities that are close substitutes for each other.
- Sugarcane prices should be determined by sugar content instead of by weight.
- Price controls on the remaining controlled commodities should be removed.
- Standards on weights, measures, and quality should be established.
- The present price information system should be improved.
- The INAZUCAR mills should be privatized, as well as the input sales activities of BFA and IRA's facilities. Management of water districts should be transferred to water users.
- Water prices should reflect the cost of managing and maintaining the water systems, as well as capital replacement on equipment and the resources required to manage and improve the watershed.
- Research and extension activities should be supported.
- A reformed seed law should be drafted and approved.
- The base year of the national accounts should be updated.
- The statistical reporting system should be improved.
- The CPI base year should be updated from 1978.

# 1. INTRODUCTION

The inauguration of the Cristiani administration in June 1989 brought the promise of significant economic reform for El Salvador. The economy had been steadily deteriorating since about 1979, and the Cristiani Government was elected on a platform that included significant economic change. This section summarizes recent economic performance in El Salvador. Summary performance data are presented along with brief mention of major policy changes. Section 2 describes policy reforms and Section 3 discusses their impacts on agriculture. Section 4 discusses remaining policy constraints and section 5 summarizes the findings and presents recommendations.

## 1.1 Background

The outbreak of civil violence in 1979 broke a prolonged period of economic progress in El Salvador. In the 1960-78 period, real economic growth averaged 5.4 percent, prices were stable, and exports expanded. In 1979, a number of factors converged that would have created economic difficulties in any event, but armed conflict exacerbated them. Coffee prices fell sharply, and rising oil prices and interest rates caused problems for most countries including El Salvador. Meanwhile, the Central American Common Market (CACM), where El Salvador had successfully exported non-traditional products, seriously deteriorated. Between 1978 and 1982, real GDP fell by about 23 percent and then stagnated for the remainder of the decade.

Economic management was poor during the crisis. Efforts to revive economic growth failed. Attempts were made to close a large fiscal gap by cutting public investment and social expenditures. Military expenditures, combined with low and declining tax revenues kept the fiscal gap large, and resort to central bank financing spurred inflation, which peaked at over 30 percent in 1986. As inflation surged, the real exchange rate for the colon, which was nominally fixed to the U.S. dollar, appreciated. A nominal devaluation of the colon in 1986 did little to arrest the real appreciation, as monetary policy was particularly expansionary in the 1985-87 period. Real appreciation helped induce a large balance of payments gap, which the Government attempted to close with a plethora of import prohibitions, licenses, and surtaxes. None of these prevented a balance of payments problem, but all added to the confusion and inefficiency of El Salvador's foreign transactions. By the late 1980s, El Salvador's competitive position in international markets was very poor. Exports, which had averaged about 30 percent of GDP during the 1970s, fell to less than 10 percent of GDP by 1989.

Institutional changes in the early 1980s were adverse to economic growth and investment, particularly private investment. In 1980 the banking system was nationalized, and throughout the 1980s, nominal interest rates were kept so low that real rates were negative. Credit was allocated administratively rather than through the market and political criteria apparently overrode economic considerations in credit allocations. By the end of the 1980s, the nationalized banks were insolvent. The electricity companies were also nationalized, and the issue of compensation to former owners was never fully resolved.

Anti-private enterprise changes beset the agricultural sector. Proper incentives for investment and production in agriculture were removed. A land reform program begun in the early 1980s was poorly conceived and implemented. Export marketing was nationalized for sugar and coffee. Domestic commodities were subjected to price controls and market manipulation by public marketing monopolies. Meanwhile, adverse exchange rates were applied to El Salvador's most important crops, particularly coffee, with predictable results. Shortages of foreign exchange, adverse foreign exchange surrender rules, inconsistent and uncertain administration of an array of import controls, and other problems greatly raised the cost and risk of doing business in El Salvador.

Capital flows to El Salvador, which had been positive, generally became negative after 1978, especially in the 1979-82 period when large amounts of capital were withdrawn from the country. Several factors partially offset the deterioration in investment capital. First, many Salvadorans emigrated. As many as 1 million of them now live abroad, sending remittances which average about 4 percent of GDP. Second, official grants, particularly from the U.S., averaged about 5 percent of GDP in the mid and late 1980s. As a result, El Salvador was able to finance its external disequilibrium without resorting to the borrowing that has plagued other Latin American countries. El Salvador's external debt is less than 40 percent of GDP. Had it not been for external grants and remittances from Salvadorans abroad, the country would have entered the 1990s with an extremely high debt and/or an economy much more deteriorated than is now the case.

In summary, the climate for economic growth in El Salvador was poor in the 1980s. The economy was very poorly managed. The institutional environment governing private business activity seemed to grow progressively worse through the decade. Nationalizations and other public economic intervention destroyed incentives while raising risk. The civil war added a source of concern for businessmen, and the policies that were pursued in the 1980s plunged the country into an economic crisis.

## 1.2 Recent Economic Performance

El Salvador's economic situation has notably reversed since June 1989. Growth in real GDP hit 3.4 percent in 1990, the highest rate since 1978. Agriculture, the leading growth sector, averaging 7.4 percent growth in 1990, benefitted from the removal of price controls and a return to market-determined exchange rates. Other important sectors also grew. Transportation was up 5.9 percent; public utilities, 6.3 percent;<sup>1</sup> and manufacturing, 3 percent. Meanwhile, better management of fiscal policy reduced the fiscal deficit of the consolidated central government from 3.3 percent of GDP in 1989 to 1.1 percent in 1990, reducing the rate of inflation along

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<sup>1</sup> Public utilities' prices increased significantly in 1990. Most of these prices had been held down for political reasons, and El Salvador's utilities were not earning enough to prevent a deterioration of their capital stock. Of particular concern was the electrical utility, CEL, which has suffered from a poor rate structure and from sabotage. Electrical rates were raised by about 30-45 percent in 1990. Water, sewer, and phone service prices were raised as well.

with it. The rate of increase in the consumer price index (CPI) slowed from 23.5 percent at the end of 1989 to 19.3 percent at the end of 1990, falling to 12.7 percent in June 1991.

Economic management improved significantly during the past two years. Each year the Government sets ambitious but realistic goals. Table 1.1 shows some goals of the macroeconomic plan and compares them with performance. Most important is the goal of real growth in GDP which was set in the range of 2 percent to 2.5 percent for 1990, but which turned out to be 3.4 percent. The goal set for 1991, 3.1 percent, has now been revised upward to 3.5 percent, since most indicators imply that economic activity is growing at least as fast as it was in 1990.<sup>1</sup> Other areas where performance goals were met or exceeded in 1990 were the accumulation of international reserves in the banking system and the reduction of the public sector deficit, in part by exceeding the tax revenue targets.

Table 1.1. also shows some difficulties. Money supply expansion exceeded the target in 1990 and appears to be doing the same in 1991. The target for money supply growth in 1991 has recently been raised in apparent reaction to an inability to meet the original targets. Public sector deficit targets for 1991 apparently continue to be difficult to meet. Targets have been revised to make them less restrictive. For example, the global deficit target (including donations) has been reduced from -0.9 percent of GDP to -1.6 percent. In short, on the important dimensions of growth and inflation, targets are being met or exceeded, despite a continuing struggle with fiscal deficits.

In the external sector, the current account deficit in the balance of payments fell from 3.2 percent of GDP in 1989 to 2.5 percent in 1990, despite adverse movements in the prices of coffee and petroleum and a drop in support from USAID. As shown in Table 1.2, exports were up (in dollars) in 1990 by over 10 percent, led by exports of non-traditional goods to areas outside the CACM, which expanded by over 25 percent. Much of this improvement can be attributed to nominal devaluations of the colon, operating through free markets, which led to a real devaluation of about 16 percent by late 1990.

Table 1.3 shows the current account of the balance of payments along with projections for 1991 and 1992. Projections are for a relative narrowing of the gap between exports and imports. As shown in the table, exports are programmed to increase by about 10 percent in 1991 and 12 percent in 1992. Imports are projected to grow at only 4.4 percent and 5.5 percent. As a result, the current account deficit is expected to decline to about 1 percent of GDP by 1992. In recent years, the current account deficit peaked in 1989 at 3.2 percent of GDP. Exports are expected to expand but to remain small as a proportion of GDP when compared to earlier years. As recently as 1986, exports occupied over 19 percent of GDP and exceeded 30 percent in 1980.

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<sup>1</sup> The BCR published an index of real economic activity which shows an advance of 7.4 percent in the first half of 1991. This compares with a 6 percent increase in the index during the same period of 1990. Thus, it is likely that economic growth in 1991 will at least match that of 1990. However, the current drought in El Salvador could not have had much influence on the production index through June 1991. Thus, while growth seems good for the first half of the year, 1991 could still fall short of 1990.

**TABLE 1.1**  
**GOALS OF THE MONETARY AND FINANCIAL PROGRAM, EL SALVADOR,**  
**1990 AND 1991.**  
(millions of U.S. dollars)

Description	Achieved 1989	Goals 1990	Achieved 1990	Original Goals 1990	Revised Goals 1991
<b>PRODUCTION AND PRICES</b>		<b>PERCENT CHANGE</b>			
1. Real Gross Domestic Product	1.1	2.0-2.5	3.4	3.1	3.5
2. Inflation December-December	23.5	12.0-15.0	19.3	10-14	13.0
<b>BALANCE OF PAYMENTS</b>		<b>PERCENT OF GDP</b>			
1. Current Accounts Balance	-3.2	-2.3	-2.5	-1.4	-1.6
2. Increment of International Net Reserves	<b>MILLION US\$</b>				
a. Central Bank of Reserve	36.6	40.0	117.1	70.0	70.0
b. Commercial Banks	-11.8	-.-	38.3	15.0	15.0
c. Banking System	24.8	40.0	115.4	85.0	85.0
<b>MONETARY SECTOR</b>		<b>PERCENT CHANGE</b>			
1. Liabilities with the Private Sector Payment Means (M2)	11.7	19.9	27.9	14.2	20.7
2. Credit and Investments of the Banking System (Net)	16.4	8.1	7.7	7.8	16.4
a. Non-Financial Public Sector (net)	53.8	-2.7	0.2	-4.6	4.3
b. Private Sector	9.6	12.4	10.7	16.9	20.9
<b>PUBLIC SECTOR</b>		<b>PERCENT OF GDP</b>			
1. Non-Financial Public Sector					
a. Current Saving	-1.6	-0.3	-0.3	-2.0	2.0
b. Global Deficit	-4.2	-0.9	-0.8	-0.9	-1.6
2. Central Government					
a. Current Saving	-2.3	-1.2	-1.3	0.5	-.-
b. Global Deficit	-3.3	-1.3	-1.5	-0.9	-1.6
c. Fiscal Burden	7.6	7.8	8.1	9.3	9.3

Source: Banco Central de Reservas.

**TABLE 1.2**  
**EL SALVADOR: MERCHANDISE EXPORTS BY PRINCIPAL GROUPS**  
(millions of U.S. current dollars) (f.o.b.)

Description	Year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>TOTAL EXPORTS</b>	1,075.3	798.0	699.6	758.1	726.4	695.1	754.9	590.9	608.8	497.6	575.6
<b>Traditional Exports</b>	726.0	537.1	481.9	550.2	505.2	525.7	593.6	386.4	393.5	252.9	290.3
Coffee	615.2	452.6	402.6	443.0	450.0	463.7	546.8	351.5	358.0	228.6	259.0
Cotton	84.6	53.6	45.2	55.4	9.1	29.0	4.5	2.3	0.3	0.8	0.8
Sugar	13.4	14.9	15.9	40.1	25.9	23.2	25.3	12.1	19.2	13.5	18.5
Shrimp	12.8	16.0	18.2	11.7	20.2	9.8	17.0	20.5	16.0	10.0	12.0
<b>Nontraditional Exports</b>	349.3	260.9	217.7	207.9	221.2	169.4	161.3	204.5	215.3	244.7	285.3
To CACM	295.3	206.5	174.2	164.9	157.2	95.7	91.0	119.6	139.8	160.6	175.0
To other markets	53.5	54.4	43.5	43.0	64.0	73.7	70.3	84.9	75.5	84.1	110.3

/1 preliminary

**Source:** for 1980–1981, El Salvador, Recent Economic Developments 1984, FMI.  
for 1982–1984, El Salvador, Recent Economic Developments 1986, FMI.  
for 1985–1990, 1990 Monetary Program by Central Reserve Bank of El Salvador (2th.review)

As compiled by AID/El Salvador, 1990 as compiled by BCR

TABLE 1.3  
CURRENT ACCOUNT OF THE BALANCE OF PAYMENTS, EL SALVADOR, 1980 TO 1990,  
PROJECTIONS TO 1992  
(millions U.S. current dollars)

Description	Actual					Pre. 1990	Proj. 1991	Proj. 1992
	1980	1986	1987	1988	1989			
Trade Balance	113.20	(180.0)	(403.2)	(398.1)	(663.8)	(682.2)	(678.8)	(675.6)
Merchandise Exports (FOB)	1,075.30	754.90	590.90	608.80	497.50	580.20	639.50	714.50
o/w coffee	615.20	546.80	351.50	358.00	228.60	259.00	255.10	294.40
non-traditional 1/	347.90	161.30	204.50	215.30	244.70	285.30	327.50	363.50
Merchandise Imports (CIF)	962.10	934.90	994.10	1,006.90	1,161.30	1,262.40	1,318.30	1,390.10
Net Non-Factor Services	(47.8)	29.90	92.00	63.00	82.10	101.10	109.70	
Net Factor Income	(83.8)	(117.0)	(123.0)	(121.0)	(121.3)	(124.1)	(120.9)	4.80 2/
o/w interest	(64.5)	(83.0)	(92.0)	(80.0)	(65.8)	(65.2)	(71.9)	
Private Transfers	17.40	161.00	195.00	221.00	236.80	345.40	402.90	394.50
Curr.Acc.Bal. (before off. grants)	(1.0)	(107.0)	(239.2)	(235.1)	(466.2)	(359.8)	(287.1)	(276.3)
Official Grants	31.50	224.00	378.00	288.00	282.40	223.20	223.50	217.00
Curr.Acc.Bal. (after off. grants)	30.60	117.00	138.80	52.90	(183.8)	(136.6)	(63.6)	(59.3)
Memo:	(As % of current GDP)							
Merchandise Exports (FOB)	30.10	19.10	12.70	11.10	8.70	10.60	11.60	11.50
Interest Payments	(1.8)	(2.1)	(1.8)	(1.5)	(1.1)	(1.2)	(1.3)	n.a.
Private Transfers	0.50	4.10	4.20	4.00	4.10	6.30	7.30	6.30
Official Grants	0.90	5.70	8.10	5.30	4.90	4.10	4.00	3.50
Curr.Acc.Bal. (after off. grants)	0.90	3.00	3.00	1.00	(3.2)	(2.5)	(1.2)	(1.0)

1/ Traditional exports consist of coffee, cotton, sugar and shrimp.

2/ Net Services

Sources: BCR, Programa Monetario y Financiero, 1991-92

In the overall balance of payments, net reserves increased by \$117 million in 1990, exceeding the reserve targets set by the IMF as part of its standby arrangement with El Salvador.<sup>1</sup> At the end of August 1991, net international reserves were up \$62 million for the year. The reserve build-up reflects increased inflows of remittances and private capital. El Salvador's external debt is small by Latin American standards, amounting to 38 percent of GDP in 1990, up from 32 percent in 1989. This increase reflects the rescheduling of arrears and current payments as of September 1990 when El Salvador reached a Paris Club agreement with its creditors. Debt service amounts to only about 3 percent of GDP and about 30 percent of export earnings.

With the major exception of coffee, exports are expanding again in 1991. Table 1.4 shows data on exports for the first six months of the year in 1989, 1990, and 1991. Total exports declined in 1991 (by about 2.4 percent) in comparison with the same period in 1990. However, the apparent decline in exports is due entirely to coffee exports, which are down by 17.8 percent compared to a year ago. Non-coffee exports have risen by 13.9 percent. Exports destined to regional markets (i.e. to the CACM) are up by over 12 percent and non-coffee exports to other world markets expanded by almost 16 percent. The latter are led by sugar and shrimp exports, which are up over a year ago by 34 percent and 80 percent, respectively. The decline in coffee exports is due to a combination of lower prices and volume.

Table 1.4

El Salvador's Exports, as of June, 1989 to 1991  
(\$ millions)

DESCRIPTION	1989	1990	1991
COFFEE	196.6	173.4	142.5
NON-COFFEE, NON-CACM	48.4	79.5	92.0
Cotton	1.0	1.3	0.5
Sugar	6.8	18.3	24.6
Shrimp	5.7	5.5	9.9
Others	35.0	54.4	57.0
CACM	79.5	83.8	94.1
<b>TOTAL EXPORTS</b>	<b>325.4</b>	<b>336.8</b>	<b>328.6</b>

SOURCE: BCR, Indicadores Economicos de Corto Plazo, Junio de 1991

<sup>1</sup> The target was for an increase in net international reserves of \$70 million in 1990. Figures in this paragraph come from conversations held at the BCR.

Imports were up by 8.7 percent in 1990, led by imports of consumer goods (up 35 percent). Imports of capital goods declined by 16 percent. The changes in the composition of imports is about what one would expect given trade policy reforms. Import duties were compressed from a range of 0 to over 300 percent, to a new range of 5 to 30 percent, and duty exemptions were eliminated. Consumer goods tended to be the items on which the higher duties were charged and there were generally no duty exemptions for consumer goods.<sup>1</sup> Thus, barriers to the importation of consumer goods were generally reduced and imports expanded. The opposite situation applied to capital goods. They were often exempt from duties or carried very low rates. Eliminating exemptions and raising the floor rate surely discouraged the importation of some capital goods.

Imports are up again in the first half of 1991. Table 1.5 shows them growing at an annual rate of 19.8 percent, but capital goods and intermediate goods are now the leading imports. The rates of growth for imports of capital and intermediate goods were 25.3 and 21.6 percent in the first half of 1991. One of the fastest growing intermediate goods categories is that of agricultural inputs, which grew rapidly in 1990 and again in 1991. Meanwhile, growth in imports of consumer goods was 11.3 percent. Again, these changes are to be expected as the tariff reductions released the pent-up demand for consumer goods and the new investment and production incentives take hold. Indeed, these relative shifts toward imports of intermediate and capital goods are positive indicators for domestic production and for future economic growth.

Table 1.5

Imports by Type, El Salvador,  
As of June 1989 to 1991 (\$ millions)

DESCRIPTION	1989	1990	1991	% growth 89-90	% growth 90-91
Consumer Goods	133.3	146.6	164.3	10.7	11.3
Intermediate Goods	258.1	298.6	363.1	15.7	21.6
Agricultural	17.4	32.1	42.2	84.5	31.5
Capital Goods	145.0	124.3	155.8	-14.3	25.3
<b>TOTAL</b>	<b>536.4</b>	<b>570.5</b>	<b>683.2</b>	<b>6.4</b>	<b>19.8</b>

SOURCE: BCR, *Indicadores Economicos de Corto Plazo*, Junio de 1991

<sup>1</sup> An addition before mid-1989 many consumer goods were subject to import prohibitions, most of which also have been eliminated.

El Salvador has moved to improve the institutional framework within which its macro-economy functions. External payments arrears were eliminated and a Paris Club rescheduling agreement was reached with creditors in September 1990. The country reached a standby agreement with the IMF in August 1990 and is now negotiating another. El Salvador became a GATT signatory in December 1990. A multisectoral loan agreement was reached with the IDB in December 1990, and a structural adjustment loan (SAL) was approved by the World Bank in February 1991. Each of these steps is consistent with the Government's intentions to open the economy to international competition and regularize its relationships with important international organizations.

In the domestic economy, current public expenditures fell by 0.8 percent and capital expenditures fell by 1.7 percent in 1990. While these results are an important part of the Government's efforts to control inflation, the drop in public investment raises concerns in an economy where gross investment is already very low (about 4 percent of GDP).<sup>1</sup> Tax revenue rose from 7.6 percent of GDP in 1989 to 7.8 percent in 1990, reflecting better tax administration. Tax revenues had been declining since 1986 (when they were 13.1 percent of GDP)<sup>2</sup>, so this represents a reversal of a troubling trend. Nevertheless, El Salvador's tax take is still one of the lowest in Latin America.

Total investment in El Salvador fell from 16.2 percent of GDP in 1989 to about 12 percent in 1990, and is expected to recover somewhat to 13.4 percent of GDP in 1991. Since public expenditures were down and tax revenues up, public savings increased from -1.6 percent of GDP in 1989 to -0.3 percent in 1990. Meanwhile private savings dropped from 9.7 percent to 5.7 percent of GDP and foreign savings dropped from 8.1 percent to 6.6 percent. The composition of investment changed a bit between 1989 and 1990. Inventory accumulation amounting to about 2.9 percent of GDP in 1989, probably in response to uncertainties about the new Government's program, was not repeated in 1990. Therefore, fixed investment fell by a smaller amount than total investment (i.e. from 13.3 percent to 11.8 percent of GDP between 1989 and 1990). These proportions are both low compared to similar countries.

El Salvador should be encouraged by its economic performance since June 1989. Signs of renewed economic growth have appeared. Public budgets seem better controlled and monetary policy has slowed inflation. Fears that a devaluation of the colon would set off an inflationary spiral appear to be unfounded. While the Salvadoran economy is by no means booming, the economic turnaround seems significant and broad-based. Perhaps most important, the Cristiani Government appears competent in its economic management. It has moved decisively with

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<sup>1</sup> Throughout the 1980s, as fiscal revenue declined, expenditure reductions had to be made largely through public investment. Public sector investment averaged about 11 percent of GDP in the early 1980s, falling to a low 2.3 percent of GDP in 1988. The World Bank has identified this factor as representing a significant sacrifice of future growth.

<sup>2</sup> Tax revenues were extraordinarily high in 1986 because of very high coffee prices. Coffee taxes were high, but they are also based in part on the extent to which the coffee price exceeds a predetermined level (i.e. \$45 per quintal). Since 1989, the coffee tax rate has been cut and the coffee price has fallen.

**favorable results. In a crisis (e.g. the period following the guerilla offensive of November 1989), economic managers performed well to minimize adverse affects on the economy and government programs. However, important problems remain which are highlighted in Section 4, which discusses constraints on growth.**

## **2. POLICY REFORMS SINCE JUNE 1989**

The comprehensive policy reforms of the Cristiani administration are summarized in this chapter. The discussion focuses on the overall macroeconomic environment, then shifts to the agricultural sector.

### **2.1 Macroeconomic Policy Reforms**

The reader unfamiliar with El Salvador may be impressed with the ambitious macroeconomic reforms implemented since June 1989, which provide almost a textbook case of comprehensive reform based on a free market model. This chapter discusses major elements of the reform package under the following headings: the external sector, exchange rates, trade, fiscal policy, and monetary and banking policies.

#### **2.1.1 The External Sector**

Prior to mid-1989, El Salvador's trade and payment regimes were fairly typical of those associated with import-substitution industrialization. El Salvador's tariffs were determined by the common external tariff (CET) of the Central American Common Market (CACM). Relatively high tariffs were applied to final, mostly consumer goods, while low or no tariffs were levied against imported inputs. The high effective protection implied by the tariff regime also promoted overvaluation of the exchange rate. In addition to the distortions in trade and payments normally associated with import-substitution policies, economic management was poor and responded poorly to the economic instability provoked by years of political conflict. The poor management allowed a plethora of ad hoc controls to evolve restricting international trade. Quotas, licensing requirements, prior deposits, prohibitions, and other restrictions created a chaotic atmosphere for El Salvador's trade. Poor fiscal and monetary management, along with payment restrictions led to a severely overvalued exchange rate. Descriptions of these conditions and their policy remedies can be found in prior reports by Loehr (1988), Loehr, Protasi, and Vogel (1989), Loehr and Norton (1989), Norton and Lievano (1989), and Norton (1989).

The Cristiani administration came to power partly on a platform of liberalizing the trade and exchange regimes. Exchange rates were to be converted from a fixed official rate of ₡5 per dollar to a rate determined in ever-freer markets. Trade was to be liberalized by reducing the level and dispersion of tariffs, eliminating exemptions from tariffs, and ending all additional quantitative restrictions. The next two sections discuss the progress that has been made on these reforms.

#### **2.1.2 Exchange Rate Reforms**

The exchange rate for the colon, fixed at ₡5 per dollar before June 1989, stands at about ₡8 per dollar in the free market that exists now. So far, the nominal devaluation has been about

37 percent.<sup>1</sup> The mechanisms for determining exchange rates are basically three:

- Prior to June, 1989, most foreign exchange transactions occurred at rates set artificially by the BCR. Now, all transactions occur at market-determined rates. Furthermore, the uses of foreign exchange are not restricted. Capital as well as current transactions are almost fully liberalized.
- Institutional support for a freely determined exchange rate was broadened. Prior to June 1989, commercial banks were prohibited from owning dollars. Now commercial banks can own dollars and act as intermediaries in foreign exchange markets. Any individual has the right to buy, sell, and own dollars. Furthermore, exchange houses (*casas de cambio*) have been legalized. Currently there are over 60 of them, along with the country's five commercial banks. Establishing a legal *casa de cambio* is relatively easy, and BCR studies indicate that the market for foreign exchange is competitive.
- The BCR has withdrawn as a major direct player in foreign exchange markets. Rather than officially determined exchange rates and complicated rules for access to foreign exchange, the main tool for intervention is now monetary policy, though the BCR may intervene by buying and selling dollars at market rates to influence movements in the exchange rate.

Important exceptions to the general rules include the following:

- Exporters of coffee are required to surrender their foreign exchange earnings at the BCR. This procedure could act as a tax on exporters, but in this case has little effect. The exchange rate at which coffee exporters surrender their hard currency is determined as the average rate existing in the open market for the week preceding the transaction. Since the open market is composed of banks and *casas de cambio*, and there is a slight premium on dollars in the latter, coffee exporters may be slightly penalized on what they would receive if they were allowed to sell their exchange to *casas de cambio*.
- Exporters of products other than coffee must sell their proceeds to the commercial banks. Rates are determined by what the market will bear. The exchange rates offered by the commercial banks tend to overvalue the colon relative to that of the *casas de cambio*, but the difference is small, typically only about 0.5 percent. Insignificant differences of this type indicate that the two markets (i.e. the banks and the *casas*) are well integrated in practice and that no great advantage would be gained by forcing

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<sup>1</sup> The devaluation is measured as the percentage by which the international price of the colon has declined.

export proceeds into the non-bank market.<sup>1</sup>

Since June 1989, the policy shifts mentioned above have brought about a devaluation of the colon in real terms. Table 2.1 shows calculations of real effective exchange rate (REER) indices since 1974, including calculations for June 1991, and an estimate for October 1991.<sup>2</sup> The indices are designed so that an increase represents devaluation in real terms. The trade-weighted REER increased from .55 in June 1989 to .75 at year-end 1989, indicating a real devaluation of about 27 percent. However, during 1990, and especially since about October 1990, the colon has been appreciating in real terms. By June 1991, the REER stood at .62, representing a real appreciation of 13 percent over the preceding six months. As of October 1991, the index stood at about .60, indicating an appreciation in 1991 of about 14 percent. Overall, real depreciation since June 1989 has been about 8 percent.

On a bilateral basis, the colon has appreciated recently against the currencies of El Salvador's major trade partners. Table 2.2 shows bilateral real exchange rates for six trade partners. The main index of interest is with the dollar, where there has been a real appreciation of about 23 percent since the end of 1989. The appreciation against the yen and the mark has been slightly greater, but that is a function of movements of the

**Table 2.1 Real Effective Exchange Rates for El Salvador, 1974 to October 1991**

1980 = 1.00	
Year	Rate
1974	1.289
1975	1.185
1976	1.188
1977	1.148
1978	1.094
1979	1.063
1980	1.000
1981	0.946
1982	0.937
1983	0.822
1984	0.820
1985	0.798
1986	0.805
1987	0.684
1988	0.580
June 1989	0.554
1989	0.752
1990	0.705
June 1991	0.621
October 1991	0.600

Source: Estimates.

<sup>1</sup> All commercial banks own *casas de cambio* as subsidiaries. Importers may buy foreign exchange anywhere, but it is the banks that are needed to facilitate import transactions. If a bank tried to reduce the exchange rate paid to exporters, exporters would quickly go to other banks. A bank in this condition would not have dollars of its own to sell to importers, and their importing clients would have to go to *casas de cambio*. Such a bank could not be active in international finance. Furthermore, if all banks acted to keep down the rate paid to exporters, they would lose non-exporters as customers. The supply of dollars in banks would decline, and importers would have to buy in *casas de cambio*. A spread would develop between the exchange rates in the banks and in the *casas de cambio*. Currently four conditions seem to support an efficient foreign exchange market:

- There is a large number of actors. (i.e. over 60 *casas de cambio* and five banks);
- Commercial banks own *casas de cambio*;
- Importers can buy foreign exchange anywhere; and
- There is no apparent collusion among commercial banks to set the exchange rates offered to exporters.

Clearly, this last condition is the most fragile, especially in a publicly-owned banking system.

<sup>2</sup> The methodology is the same as that applied in Loehr (1988). The estimate for October is based on the assumption that only price changes relative to the U.S. are relevant. It has been assumed that inflation in the U.S. is about 4 percent (the relevant price index, that for producer goods, is actually increasing more slowly than that) and about 17 percent in El Salvador. Variations on these assumptions would not greatly affect the approximations.

dollar in the same direction against these currencies.

Table 2.2 Bilateral Real Exchange Rate Indices for El Salvador, 1974 to June 1991.

1980 = 1.00

Year	Country					
	US	Japan	Germany	Costa Rica	Honduras	Guatemala
1974	1.282	1.085	1.396	1.260	1.260	1.173
1975	1.185	0.922	1.117	1.240	1.149	1.112
1976	1.159	0.945	1.201	1.193	1.125	1.159
1977	1.097	1.044	1.248	1.112	1.082	1.158
1978	1.050	1.109	1.283	1.036	1.023	1.103
1979	1.033	0.845	1.235	0.986	0.998	1.080
1980	1.000	1.000	1.000	1.000	1.000	1.000
1981	0.949	0.812	0.817	0.283	0.949	0.984
1982	0.921	0.738	0.780	0.459	0.987	0.937
1983	0.759	0.663	0.627	0.512	0.969	0.894
1984	0.852	0.605	0.548	0.513	1.000	0.778
1985	0.882	0.776	0.745	0.543	1.074	0.589
1986	0.849	0.878	0.918	0.553	1.116	0.609
1987	0.697	0.875	0.880	0.440	0.979	0.548
1988	0.609	0.713	0.664	0.391	0.951	0.470
1989	0.837	0.801	0.900	0.494	1.336	0.477
1990	0.766	0.758	0.907	0.416	0.540	0.447
June 91	0.677	0.654	0.683	0.416	0.713	0.453

Source: Estimates

Of interest to regional trade are movements vis-a-vis the currencies of Guatemala and Costa Rica, two of El Salvador's most important trade partners. Appreciation has been only slightly less against Costa Rica's colon than against the dollar because of Costa Rica's policy of allowing its currency to reflect relative price changes between it and the U.S. Real appreciation against the Guatemala's quetzal has been very slight. The colon has moved irregularly against Honduras' lempira, but that is due to the large nominal devaluation of the lempira in 1990. During 1991, the colon depreciated against the lempira, since the Honduran authorities have again attempted to peg the value of their currency, while still failing to control inflation. Movements against the lempira are of little relevance for El Salvador since the two countries trade little.

## Observations on Exchange Rate Policy.

- Relaxation of the rules governing exchange rate transactions and the institutional arrangements designed to accommodate them have worked well. Banks and *casas de cambio* are sufficiently integrated in the foreign exchange market to allow exchange rates to reflect market forces. There are no signs of collusion or market domination in foreign exchange markets.
- The BCR's withdrawal from direct intervention in foreign exchange markets is key to the success of the system. The BCR's proper role is to manage the monetary aggregates to support smooth adjustment to changing economic conditions, which it seems to have done since June 1989.<sup>1</sup>
- Some may criticize the BCR for failing to continue devaluing the colon over the past year. Large inflows of remittances have increased the supply of dollars, preventing the colon from devaluing. Some would argue that the BCR should have accumulated reserves to neutralize the impact of remittances on exchange rates, allowing the colon to proceed along a course of slow but constant devaluation. Indeed, the BCR has accumulated reserves during this period in amounts well exceeding targets set as part of its standby agreement with the IMF.<sup>2</sup> It appears that the BCR has struck a middle ground, accumulating enough reserves to help prevent nominal appreciation of the colon, but not enough to cause monetary or political problems.
- The real appreciation of the colon appears to be associated with interest rate policy and privatization of the banking system. Deposit rates are set at 15 percent minimum<sup>3</sup>

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<sup>1</sup> Throughout the period, fiscal pressures have been great, but the BCR has managed to reduce inflation from close to 30 percent to about half of that. Indeed, monetary management in the aftermath of the guerrilla offensive in late 1989 illustrates that the BCR performs well in an emergency. In the post-offensive period in early 1990, market exchange rates were devaluing more rapidly than could be expected from purely economic changes. The BCR promptly moved to adjust liquidity to bring the colon back onto a reasonably smooth path of devaluation. (For more details, see IMF, August 8, 1990, p. 9-11 and p. 55.) Most similar countries are less able to maintain monetary stability given similar political turmoil.

<sup>2</sup> During 1990, net international reserves increased by about \$117 million, exceeding the target of \$70 million. Again in 1991, reserve targets, still set at \$70 million for the year, are likely to be exceeded since \$62 million had been accumulated by the end of August. However, the BCR is somewhat constrained. Reserve accumulation has monetary consequences which require active open market operations to be neutralized. Reserve accumulation makes monetary targets even more difficult to meet. Also, there may be a political constraint. Too much reserve accumulation may cause aid from foreign donors (particularly USAID) to appear unnecessary. It may also be politically difficult to accumulate reserves at a time when investment is extraordinarily low and social needs great.

<sup>3</sup> This limit is for a reference rate for deposits of 180 days. The rule that determined the interest rate floor was that as of July 1991, the minimum reference interest rate would be set at inflation over the past six months plus 1 percent. Lending rates would be 5 percent higher than the deposit rate. The next stage in interest rate reform, scheduled for July 1992, will set the deposit rate at inflation over the past year, plus 3 percent, allowing a spread of 6 percent above that on lending. After January 1993, interest rates will have no limits.

and lending rates at 20 percent maximum. Given the gap between deposit rates in the U.S. and El Salvador and the widespread expectation of nominal exchange rate stability, depositors are depositing dollars from abroad in El Salvador.<sup>1</sup> The situation calls for accelerated reform of interest rates to remove all restraints on rate determination, a step which has been scheduled for January 1993.

- Though the exchange rate has devalued in real terms since June 1989, real devaluation has been small and the real exchange rate has never arrived at nominal rates that are equivalent in purchasing power to those of 1980 or even 1986. The nominal exchange rates that would reproduce the purchasing power of 1980 and 1986 are about 13 and 11 colones per dollar, respectively. The exchange rate that would reproduce the purchasing power of one year ago (i.e. October 1990) is about 9.2 colones per dollar.
- The "equilibrium" exchange rate concept should be very carefully used in the context of 1991. Four extraordinary factors affect the exchange rate in 1991:
  - Liquidity is very tight.
  - Inflows from A.I.D. are large.
  - Remittances are large.
  - Nominal interest rates are inflexible and real rates are forced to be positive.
- If one considers these conditions to be permanent, then the current exchange rate is probably near its "equilibrium" level. If any of these conditions is reversed, then the nominal exchange rate must devalue further to reach an equilibrium. In 1980 none of these conditions existed. In 1986, A.I.D. flows were large, but liquidity was high and remittances small. Thus, given today's conditions, the "equilibrium" nominal exchange rate may be somewhat less than that indicated by REER calculations alone.<sup>2</sup> Indeed, the freedom of exchange markets indicates that the current exchange rate is the equilibrium rate. From a policy perspective, it is not a matter of seeking the equilibrium rate. Rather, the task is to adjust current circumstances to reach a long-run equilibrium that does not hinder El Salvador's international competitiveness.

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<sup>1</sup> Since banks must pay at least 15 percent for deposits and are restricted to lending at a maximum of 20 percent, they have very little room to negotiate a loan with borrowers. For all practical purposes, lending rates are constrained to about 18-20 percent. If borrowers too have expectations of nominal exchange rate stability, they would prefer to borrow dollars abroad (at about 11-12 percent) rather than to borrow colones locally. Thus, both borrowers and lenders have incentives to bring dollars into El Salvador. Compounding this is the problem of an about-to-be-privatized banking system. Bank officials are protecting bank assets until they are sold, and they are not likely to be aggressive lenders.

<sup>2</sup> Two important factors must be kept in mind when evaluating movements in which equilibrium lays for the colon. First, A.I.D. flows have been reduced and will probably fall farther. For the January-September 1989 period, ESF-BOP assistance was \$113.5 million. For the same period in 1990, it was only \$49 million. This movement alone would tend to raise the equilibrium rate above what it would be had A.I.D. flows been maintained. Second, due to the new freedom in exchange markets, remittances from Salvadorans living abroad have increased, which increases the supply of foreign exchange and causes a lower equilibrium.

- For progress on the exchange regime, financial sector development is the highest priority. The exchange rate cannot be fully liberalized until Salvadorans can engage in a full range of capital transactions at freely determined interest rates. This cannot occur until capital markets are broadened and made competitive and interest rate constraints are removed. Until there are major reforms in the financial sector, little further progress is possible in exchange rate liberalization.
- The current arrangement where commercial banks and *casas de cambio* compete in foreign exchange dealing seems adequately competitive. No major institutional changes appear necessary except insofar as they guarantee financial viability of both *casas de cambio* and banks and protect the existing level of competition. Thus, areas of important reform are bank supervision and privatization.
- The exchange rate should soon begin to devalue of its own accord. No direct policy intervention is called for. The reasons for this are first that the exchange rate movement in El Salvador is typical of patterns in other Latin American countries after exchange market liberalization: a devaluation at the outset, a period of appreciation caused by capital repatriation, and finally, real devaluation. Second, given the inflation differential between El Salvador and other countries, particularly the U.S. (about 12 percent), the exchange rate should begin to devalue due to the pressures of normal transactions. Third, exchange rate movement has begun. From October 1990 to October 1991, the nominal exchange rate was either stable (at about ₡8/\$) or appreciating. Since October 1, 1991, the nominal exchange rate has devalued to about ₡8.08. This pace of devaluation should be expected to persist for some time.

### 2.1.3 Trade Reforms

Prior to mid-1989, El Salvador's tariff system reflected that of the CACM. Nominal tariffs ranged from zero to over 300 percent, but many exemptions were granted. As of mid-1989, about 40 to 50 percent of legal Salvadoran imports were exempt from normal duties. Illegal imports, while not measurable, were thought to be considerable. Non-tariff barriers (NTBs) were rife and were changed often. Lists of items subject to import prohibitions were revised frequently. Most imports were subject to licensing and foreign exchange allocations. Imports were also subject to prior deposits, which at times were as high as 125 percent, and commercial banks were limited in the terms that they could offer for letters of credit. Exports, particularly traditional exports, were taxed and subject to foreign exchange surrender rules which were the equivalent of taxes. In short, El Salvador's trade regime was characterized by high effective protection of import substitution industries, arbitrary prohibitions, and foreign exchange allocation rules, export disincentives, heavy bureaucracy, and uncertainty.

The Cristiani administration implemented the following major reforms:

- Elimination of all exemptions and exonerations from import duties. By mid-1991,

most exemptions had been eliminated<sup>1</sup> and procedures on duty collection tightened to prevent evasion.

- Elimination of all prohibitions and licensing requirements for imports. By mid-1991, few import restrictions of this type remained.<sup>2</sup>
- Import duties were to be reduced and made more homogeneous. In September 1989, the range of import duties was narrowed to 5-50 percent. In April 1990, the range was reduced further to 5-35 percent<sup>3</sup> and in June 1991, the top rate was cut to 30 percent. Furthermore, the number of tariff categories was reduced from 25 to six. During 1991, the authorities had planned to raise the tariff floor to a minimum of 7 percent, but this was revised to leave it at the current 5 percent. The next change in the tariff schedule will occur in June 1992 when the ceiling is lowered to 25 percent. By June 1993, the target is to apply duties ranging from 5 percent to 20 percent on all imports. This is a revision from earlier plans to raise the tariff floor to 10 percent.
- Export taxes were eliminated on shrimp and sugar.
- The most important export tax reduction was on coffee where the tax rate was dropped from about 20 percent to about 12.5 percent. Furthermore, a bill reforming the coffee export tax was before the legislature (as of October 3, 1991) to reduce the coffee export tax further.<sup>4</sup> If the bill is successful, coffee export taxes will be very low by 1993.

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<sup>1</sup> Some important import duty exemptions still exist. Most important are those for public sector imports, autonomous public enterprises, and cooperatives. Less important exemptions apply to universities, religious organizations, cultural organizations, and civil aviation.

<sup>2</sup> Licenses are still required for corn, beans, milk, rice, sorghum, seeds of main agricultural crops, jute and sacks, sugar, cement and petroleum products. Prohibitions on imports no longer exist officially, but failure to offer import permits effectively prohibits imports of cement, petroleum products, seeds, jute and sacks.

<sup>3</sup> There are some exceptions. Vehicles and home appliances still have duties as high as 50 percent. Sorghum is subject to 1 percent and other basic grains (yellow corn and rice) are subject to a variable duty determined by a price band which is explained in the section on agricultural commodities. Sorghum should come under the price band mechanism in the near future.

<sup>4</sup> The coffee tax is not a simple ad valorem tax. Before 1989, the tax was \$6.75 per quintal plus 30 percent on the price per qq above \$45/qq. The new formula puts the tax at 30 percent on the price exceeding \$45/qq. Thus, depending on the price, the ad valorem equivalent of the tax can vary. The new proposal is for the tax to be 30 percent on any price above \$55 per qq for the 1991/92 crop; 25 percent on prices above \$60 per qq during the 1992/93 crop year and 25 percent on prices above \$65 per qq thereafter. To illustrate the effect of the tax change, before 1989, if the price were \$80 per qq, the tax would have been \$17.25 or 21.6 percent. The tax would now be \$10.50, or 13.1 percent. Under the new proposal, by 1993, the tax will be reduced to \$3.75 or 4.7 percent.

- For exporters of non-traditional products to areas outside the CACM, a rebate of 8 percent of the f.o.b. export value compensates for taxes and import duties paid on inputs. This change went into effect in March 1990.<sup>1</sup>
- Export documentation has been centralized in a one-stop procedure in the BCR at CENTREX. Export documentation is normally only for registration and monitoring since most goods do not require export permits. Documents can now be acquired in under two hours, rather than the weeks that it sometimes took previously.

It is probably too soon to fully assess the impact of the changes in the trade regime. The logic of the changes would surely reduce the effective rate of protection for import substitution activities and provide increased incentives to exporters. Combined with changes in the exchange rate regime, one would expect these incentives to have improved.

#### Observations on Trade Policy.

- The reform targets of the Cristiani Government conform to conventional economic thinking.
- Progress on reforms has been significant. Importers and bankers comment that very few barriers now restrict El Salvador's trade.
- Import controls remaining are not within the BCR's purview. Control is dispersed among other ministries which administer what amount to import licenses. For example, the Ministry of Agriculture grants permission to import some agricultural products and the Public Health Department approves food imports. Some of these restrictions are probably in place for legitimate reasons. For example, live animals, meat, and agricultural chemicals are items that are normally regulated for health and safety reasons.<sup>2</sup>
- An important step was taken with the elimination of the marketing activities of quasi-public marketing boards, such as INAZUCAR, INCAFE, and IRA.
- Most disincentives to exporting have been replaced by positive incentives. Particularly useful should be CENTREX for the clearing of export documentation.

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<sup>1</sup> However, interviews with those who qualify for this drawback and those who administer it reveal that there have been prolonged delays in review and payment caused mainly by a shortage of revenue from which payment can be made, failure of applicants to be current on other tax payments, and delays for review in the *Corte de Cuentas*.

<sup>2</sup> Some import restrictions intended to ensure health and safety are in fact barriers to trade. For example, restrictions on seed corn imports are intended to meet quality standards. However, some standards are not necessary and others are excessive. The result is that it is almost impossible to import seed corn into El Salvador, which protects a domestic monopoly in the production and sale of local seed corn. Another example is in the cotton industry where producers are required to belong to the cotton cooperative (COPAL) before they can gain access to inputs to cotton production.

- Coffee exports are still heavily taxed, which is a disincentive for coffee exporters. On the other hand, incentives for coffee exports have been improved by allowing exporters to exchange their earnings at a reasonable exchange rate, by removing INCAFE as sole marketing agent, and by cutting the coffee tax from about 20 percent to about 12.5 percent. Due to the importance of the coffee tax as a revenue source, the best one can hope to accomplish is to reduce it as new revenues become available, while eliminating other disincentives. This seems to be occurring.
- Nominal tariffs still cover a range of 5 percent to 30 percent. Old tariffs were incorporated into the new range by raising the floor rate and reducing the ceiling rate. However, this still implies high effective protection because imported inputs always carried the lower rates (or were duty-free) and final goods were protected at the higher rates. This characteristic persists. The way that tariffs were adjusted also explains the pattern of import expansion in 1990 and 1991. In 1990 there was a surge in imports, most of which were consumer goods. Consumer goods had the highest tariffs before reform and therefore were the target of tariff cuts. Investment goods and inputs carried low tariffs or were exempt from duty before the reforms, and therefore experienced tariff increases (to 5 percent). These imports fell in 1990. In 1991, the rate of increase in consumer goods slowed considerably (to about 10 percent) and the rate of increase in capital goods and inputs accelerated in response to new production incentives.
- Non-tariff import restrictions remain on important items. Many of these are administered by entities outside the Ministry of Economy. Some of these restrictions may be in place to ensure public health and safety, but others are not. These restrictions should be examined and their legitimacy determined on the basis of public health and safety. Negotiations should be conducted with relevant entities to remove unnecessary restrictions.

#### **2.1.4 Fiscal Policy**

Fiscal performance in El Salvador has been poor and has deteriorated throughout the 1980s. The overall deficit of the consolidated non-financial public sector grew from about 3 percent of GDP in 1985 to about 6 percent of GDP in 1989. This deterioration reflects a continued slide in tax revenues, which averaged about 12 percent of GDP in 1985, to 7.6 percent in 1989. El Salvador's rate of tax collection is one of the lowest in Latin America.

The country's tax system relies heavily on complex administrative procedures; enforcement is weak. Indirect taxes accounted for about 70 percent of revenue, while economically more neutral direct taxes yielded the remainder. Duties on traded goods have been an important part of indirect tax revenue, exposing El Salvador to fluctuations in the

international prices of taxed commodities (particularly coffee).<sup>1</sup> The stamp tax has been the most important single source of revenue, accounting for about 30 percent of tax revenue. The stamp tax is a levy on the gross value of sales, and as such creates a cascading effect as items are sold and resold. It has been estimated that the cascading effect of the stamp tax implies an effective tax rate averaging around 17 percent. However, prior to 1989, several stamp tax rates and exemptions existed, so the incidence of the tax varied widely across commodities. The stamp tax encourages vertical integration to avoid repeated taxation, discriminates against subcontracting, and may favor imported intermediate inputs over domestic ones. Also, since it is difficult to calculate how much tax has been paid on any given commodity, it is difficult to design reasonable drawback schemes for exports.

Direct taxation, which provided about 30 percent of tax revenue in 1989, was cumbersome. For example, the personal income tax had 25 different tax brackets with rates ranging from 7.4 percent to 60 percent; the business income tax had five brackets, with rates from 15 percent to 35 percent. In both cases tax rules were very complicated and enforcement was difficult.

Upon taking office in June 1989, the current Government set about reforming the tax system. These were among the main steps taken:

- Unification of the stamp tax at 5 percent for all transactions and elimination of exemptions.
- Reduction of the business and personal income tax rates.
- Elimination of low-yielding excise taxes.
- Elimination of export taxes on sugar and shrimp.
- Modification and reduction of the export tax on coffee.
- Modification and reduction of import duties as discussed under trade reforms.
- Plans to replace the stamp tax with a value added tax (VAT) by mid-1992.

As a result of these changes, tax revenues increased in 1990 to about 8.3 percent of GDP, from 7.6 percent in 1989. These results were somewhat below expectations, and indications are that tax administration is at fault.

The Government has embarked on a program to strengthen the country's weak tax administration and enforcement, which includes these steps:

- Removal of loopholes while raising penalties for evasion and charging interest on arrears.
- Change in audit procedures to more promptly identify problem accounts and to eliminate excessive auditing of a few accounts.

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<sup>1</sup> The coffee tax raised 21.5 percent and 24 percent of tax revenue in 1985 and 1987 respectively. In 1986, when coffee prices rose dramatically, the coffee tax accounted for over 46 percent of total revenue. In 1989, a poor year for coffee prices, only 7 percent of tax revenue came from coffee.

- Design of a withholding procedure for business taxes and banks, which receive withheld taxes, forcing them to remit them promptly to the Government.
- Training of personnel.

Unfortunately, the single largest barrier to significantly improving taxation in El Salvador relates to personnel. Labor unions, which oppose the Government, have become very active in the Ministerio de Hacienda (Finance Ministry). Work stoppages occur frequently; administrative procedures and directives are not followed and attempts to change tax laws and procedures often meet paralyzing opposition. Only with great difficulty can workers be disciplined, let alone fired. Indeed, administrative difficulties of this type in the Ministerio de Hacienda are probably the single most important factor determining the country's continuing fiscal problems. Expenditure control has been rather successful, especially given the country's pressing needs. However, attempts to enforce major changes in tax design have yielded very modest and disappointing results.<sup>1</sup>

### 2.1.5 Monetary and Banking Policy

The State took over commercial banks and savings and loan associations after nationalizations in 1980. By 1989, after a decade of public intervention, all banks in the country were insolvent according to normal solvency criteria. Over the period, the Government had forced banks to lend at negative interest rates to a large number of special interest groups, including the Government itself. Loans in arrears constituted a large part of each bank's portfolio and much of their portfolios was considered a loss. After gaining power in 1989, the current Government began the process of re-privatizing the banks involving these steps:

- Closing particularly weak banks and merging their assets with those of other banks. There are currently five commercial banks. Since 1989, three have been consolidated with others, and one has been liquidated.
- Recapitalizing the banks, by transferring non-performing assets to the Government in exchange for government bonds.
- Retaining an incentive for banks to recuperate assets associated with non-performing assets. While the Government owns the non-performing portfolio, the banks which originally lent the money involved will receive 10 percent of any moneys recovered.
- Selling commercial banks to the private sector.

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<sup>1</sup> State-owned autonomous enterprises, particularly the electricity company CEL, had been a major source of the fiscal deficit. CEL's deficit in 1988 amounted to about 1 percent of GDP. Since 1989, rates have been raised to cover current expenses and the budgetary drain has stopped. However, no consistent pricing principle, such as marginal cost pricing, has been applied to public enterprises. Therefore, while rates have eliminated large deficits, they do not ensure efficient resource allocation within the affected sectors either.

- Repeating these steps for the S&Ls and the mortgage bank. Seven institutions were S&Ls but recent legal changes have converted all into more broadly-based *financieras* (finance companies).

Currently, the Government has carried out the first three steps and is in the process of selling the banks. Two banks are being offered to the public and the plan is to sell all five within a two-year period. However, these sales have some problems:

- Employees of each bank have a first option to buy shares in each bank for a 120-day period. This prolongs the sales procedure and the period within which incentives for the banks are unclear.<sup>1</sup>
- Any single purchaser of shares in a bank is limited to 5 percent of the total. While it is likely that ways around this limit will be found, it is not likely that enough of such small proportions could be sold to result in the sale of all banks. Indeed, if the 5 percent rule were strictly enforced, the banks would probably never be privatized.
- There is great uncertainty about what would happen should the privatization fail. The law states that any single bank must be privatized within 18 months of first being offered for sale. It also specifies that the privatization of the commercial banks must be completed within two years of the time the law was approved (i.e. April 1991). Not specified is what happens if the banks cannot be privatized. Important unanswered questions are what happens to banks that are only partially privatized. Are their shares then subject to open bid? If the public sector still owns banks at the end of two years, will they be liquidated?
- At the end of two years, new banks can be formed. However, if the 5 percent rule still applies, it is not likely that new banks will arise, because it would effectively eliminate foreign investments in Salvador's banks.

Important changes have occurred in the law governing the central bank (BCR). The central Government is obliged to cover central bank losses associated with its role in conducting monetary policy, but the BCR's ability to finance fiscal deficits is strictly limited. Further, the BCR has been made much more autonomous by eliminating the Junta Monetaria (monetary council), which had been politicized and had pushed the BCR into inflationary monetary maneuvers. Now the BCR is effectively prohibited from offering subsidized credit and directed credit programs. Any future subsidies must be covered by direct transfers from the central Government.

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<sup>1</sup> Shares of the first bank to be privatized have been on offer to the employees since August 1991, but not one share had been purchased as of October 1991.

## **2.2 Agricultural Policy Reforms**

Since June 1989, the GOES has implemented several policy reforms in the agricultural sector in agricultural marketing, land tenure, institutional reforms, and agricultural finance, which are discussed in this section.

### **2.2.1 Agricultural Marketing**

From 1980 to June 1989, marketing of major agricultural products was dominated by state-controlled monopolies including INCAFE (coffee), INAZUCAR (sugar), COPAL (cotton), and IRA (basic grains). This centralized marketing was highly inefficient; it led to corruption and late payments to producers at prices below free-market levels. In addition, most agricultural products had price controls.

Since June 1989, the following marketing reforms have been undertaken:

- INCAFE monopoly on coffee marketing was eliminated, allowing private exporters to compete. The Salvadoran Coffee Council (SCC) was established to implement coffee policy and monitor coffee marketing. The SCC monitors coffee export contracts and certifies the quality of each shipment, permitting competition in purchasing coffee from producers and processing the beans for exports. Exporters are able to position Salvadoran coffee in the best markets and transfer these gains to the producer. Producers also receive their payment on time.
- INAZUCAR is no longer the single sugar exporter, although the National Commission on Sugar Sector Development still sets export quotas, domestic sale regulations and price controls. This commission distributes quotas and sets sugarcane prices.
- COPAL is no longer a monopoly for cotton marketing.
- IRA employees were dismissed, and the Government plans to sell its assets. This eliminated IRA as marketer of basic grains, and liberalized grain marketing.
- A price band mechanism (variable levies) was established for yellow corn and rice imports (see Unidad de Análisis de Políticas, Agosto 1991, for more details). The GOES has the intention to establish a price band for sorghum imports.
- Price controls on most agricultural products were eliminated (See 4.2.1 for a list of remaining commodities with price controls).

### **2.2.2 Land Tenure**

Lack of land security is one constraint to investments in agriculture. The GOES has taken steps to improve the situation including enactment of two new laws that affect land tenure and

land markets in El Salvador:

- Decree No. 713 of February 20, 1991: Law to Finance the Small Rural Landholding (*Ley Para el Financiamiento de la Pequeña Propiedad Rural*) creates a land bank to finance voluntary land transactions for small producers.
- Decree No. 747 of April 12, 1991: Law on the Special Regime on Ownership of Land Within the Agrarian Reform (*Ley del Régimen Especial del Dominio de la Tierra Comprendida en la Reforma Agraria*) offers agrarian reform participants grouped into cooperatives an alternative way to manage their parcels. They can choose to continue as a collective farm; divide the farm into parcels, each managed independently; or do a mixture of both in which case they receive a land title and the option to purchase the land.

### 2.2.3 Institutional Reforms

In addition to the institutional reforms mentioned under agricultural marketing, the GOES initiated the following:

- ISIC was abolished, and a new private organization (PROCAFE) was formed to undertake research on coffee and provide direct technical assistance to producers.
- As a first step toward privatization, the management of the National Agricultural School (*Escuela Nacional de Agricultura--ENA*) was transferred to the *Fundación Empresarial para el Desarrollo Educativo--FEPADE* (Entrepreneurial Foundation for Educational Development).

### 2.2.4 Agricultural Finance Sector

The banks are plagued with arrears in their agricultural portfolio, which limits their willingness to lend to the agricultural sector, especially to agrarian reform cooperatives. The GOES has taken several measures to alleviate this situation, including the following:

- The BCR refinanced a total of ¢550 million owed by the agrarian reform cooperatives (Phase I), which allowed them to become creditworthy again.
- A guarantee fund was created to provide collateral for agricultural loans. The bank pays 2 percent and the borrower another 2 percent. The fund guarantees up to 70 percent of the loan amount. As of September 30, 1991, the fund had provided collateral worth ¢46 million in 1,193 loans, totaling ¢82 million in credit.<sup>1</sup>

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<sup>1</sup> This is according to a report of the Fund.

### **3. IMPACT ON AGRICULTURE**

The goal of the policy reforms adopted since June 1989 was to create a free market environment that would stimulate investment in productive areas, improve economic efficiency in resource allocation, increase competitive behavior in local industry, and stimulate equitable, sustainable economic growth.

This section discusses whether the macroeconomic and sectoral policies followed since June 1989 have had an impact on agriculture. Where there has been an impact, an attempt is made to identify its source. Some macroeconomic policy reforms directly affect individual activities. Other macroeconomic changes affect the overall environment within which economic activity occurs. Further, when macroeconomic policy reforms are adopted in a package, as in El Salvador, they have a combined impact on the economic environment. Thus, it would be difficult to say, for example, that "macro-policy change X has had specific impact Y on activity Z." Instead, activity Z must be examined to see if it might have been influenced by the package of reforms.

The recent reforms might not yet have affected the agricultural sector but are expected to do so in the future. Because the policy reforms were implemented only two years ago, effects resulting from natural phenomena cannot be distinguished from those resulting from policy reforms. Over the long run, the policy reforms will contribute to a reallocation of resources and to greater economic efficiency as production units respond to a more competitive environment.

The general methodology is as follows:

- Identify important dimensions of the agricultural economy. Those emphasized here are value added, production, pricing, credit, investment, labor, and trade.
- Examine key variables describing each chosen dimension of agricultural economic activity. Variables such as prices and production are key.
- With regard to key variables, ask whether anything has changed since June 1989. If no changes are observable, the case cannot be made that the policy changes have affected that variable.
- When changes in key variables have been found, determine why. Can the change be associated logically with one of (or a combination of) the macroeconomic and sectoral policy reforms?
- When changes can reasonably be associated with policy reforms, the nature of that relationship is described.

### 3.1 Value Added

Agricultural value added provides a measure of the contribution of agriculture to gross domestic product. When deflated, agricultural value added becomes an indicator of output volume.

Agricultural value added at constant 1962 prices declined since 1985 from 742 million colones to 727 million colones in 1988. In 1990 agricultural value added increased to 785 million colones, equivalent to a growth of 7 percent (Table 3.1). This recuperation in agricultural output could be associated with the policy reforms adopted since June 1989 and farmers' expectations for further reforms.

The most important contributors to agricultural value added are coffee (29 percent), basic grains (19 percent), poultry (18 percent), livestock (15 percent), and sugarcane (3 percent). These activities account for 85 percent of total agricultural value added (Figure 3.1). As these are the most significant activities in the sector, the analysis concentrates on them. Changes in the remaining activities have a minimal impact on the economy.

One product stands out in each major group contributing to agricultural value added. Coffee continues to be the most important contributor, followed by corn, eggs, and milk. These four products account for 63 percent of total agricultural value added.

Coffee, followed by basic grains, sugarcane, and livestock (Table 3.2) contributed the most to the 7.4 percent growth rate in agricultural value added in 1990. Coffee contributed 72 percent to the growth in 1990; while basic grains contributed 14 percent; sugarcane, 10 percent; and livestock, 9 percent. Growth in the livestock sector was due to milk.

On the negative side, the major reductions have been in fisheries and cotton. The reduction in fisheries was due mainly to shrimp. Most shrimp production comes from fishing, and the number of fishing boat licenses has been reduced due to over-fishing. In the future, shrimp production should increase as the new shrimp farms reach full production. As for cotton, the crop has steadily declined with the gradual deterioration of the industry.

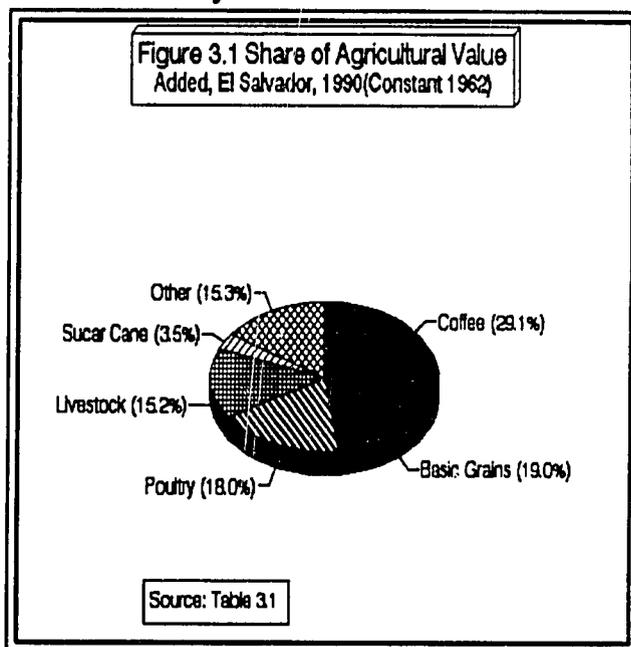


Table 3.1 Value Added of The Agricultural Sector, El Salvador, 1985 to 1990  
Constant Prices of 1962

Description	(Thousand 1962 Colones)						Difference 90-89
	1985	1986	1987	1988	1989	1990	
<b>CROPS</b>	480,534	445,789	453,820	435,416	429,900	480,700	50,800
<b>MAJOR EXP. CROP</b>	288,713	259,759	271,531	220,900	219,000	261,500	42,500
Coffee	230,967	214,591	229,739	186,817	189,300	228,600	39,300
Cotton	28,226	14,008	12,753	10,706	7,600	5,600	(2,000)
Sugar Cane	29,520	31,160	29,089	23,377	22,100	27,300	5,200
<b>BASIC GRAINS</b>	122,733	115,393	113,193	146,045	141,600	149,000	7,400
Corn	77,130	68,075	90,097	92,838	91,700	93,900	2,200
Beans	12,664	18,382	9,041	21,103	16,500	21,500	5,000
Rice	18,404	14,195	11,235	15,300	17,000	15,400	(1,600)
Sorghum	14,535	14,741	2,820	13,804	16,400	18,200	1,800
<b>OTHER CROPS</b>	69,088	70,637	69,046	68,471	69,300	70,200	900
Panela	828	804	820	820	800	800	0
Tobacco	7,786	7,178	6,366	6,674	5,900	5,700	(200)
Cottonseed	4,071	2,309	2,003	1,660	1,200	900	(300)
Henequen	5,718	5,632	6,132	5,173	5,900	6,000	100
Kenaf	585	714	925	945	1,300	1,500	200
<b>MINOR CROPS</b>	50,100	54,000	52,800	53,199	54,200	55,300	1,100
Sesame				3,998	3,985	4,018	33
Balsam				460	460	460	0
Olive Nuts				483	483	472	(11)
Coconut Meal				632	632	632	0
Fruits and Vegetables				47,625	48,640	49,718	1,078
<b>LIVESTOCK</b>	96,089	100,600	106,700	110,446	114,800	119,600	4,800
Beef				22,497	24,205	24,742	537
Pork				9,541	8,629	8,926	297
Milk				78,408	81,966	85,932	3,966
<b>FORESTRY</b>	28,700	29,100	29,100	28,800	29,100	29,400	300
<b>FISHERIES</b>	14,970	17,010	15,700	16,251	14,000	11,600	(2,400)
Shrimp				14,922	12,353	10,000	(2,353)
Fish				1,329	1,647	1,600	(47)
<b>BEE PRODUCTS</b>	3,123	3,400	3,400	3,280	3,000	3,100	100
<b>POULTRY</b>	119,433	123,800	126,000	133,552	140,300	141,100	800
Meat				50,789	53,369	50,167	(3,202)
Eggs				82,763	86,931	90,933	4,002
<b>TOTAL</b>	<b>742,849</b>	<b>719,699</b>	<b>734,720</b>	<b>727,745</b>	<b>731,100</b>	<b>785,500</b>	<b>54,400</b>

Source: Central Bank of Reserve.

**Table 3.2 Percent Change in Agricultural Value Added From  
Previous Year, El Salvador, 1986 to 1990.**

Description	Year					Share of Growth
	1986	1987	1988	1989	1990	
<b>CROPS</b>	-7.2%	1.8%	-4.1%	-1.3%	11.8%	93.4%
<b>MAJOR EXPORT CROPS</b>	-10.0%	4.6%	-18.7%	-0.9%	19.4%	78.1%
Coffee	-7.1%	7.1%	-18.7%	1.3%	20.8%	72.2%
Cotton	-50.4%	-9.0%	-16.1%	-29.0%	-26.3%	-3.7%
Sugar Cane	5.6%	-6.6%	-19.6%	-5.5%	23.5%	9.6%
<b>BASIC GRAINS</b>	-6.0%	-1.9%	29.0%	-3.0%	5.2%	13.6%
Corn	-11.7%	32.3%	3.0%	-1.2%	2.4%	4.0%
Beans	45.2%	-50.8%	133.4%	-21.8%	30.3%	9.2%
Rice	-22.9%	-20.9%	36.2%	11.1%	-9.4%	-2.9%
Sorghum	1.4%	-80.9%	389.5%	18.8%	11.0%	3.3%
<b>OTHER CROPS</b>	2.2%	-2.3%	-0.8%	1.2%	1.3%	1.7%
Panela	-2.9%	2.0%	0.0%	-2.4%	0.0%	0.0%
Tobacco	-7.8%	-11.3%	4.8%	-11.6%	-3.4%	-0.4%
Cottonseed	-43.3%	-13.3%	-17.1%	-27.7%	-25.0%	-0.6%
Henequen	-1.5%	8.9%	-15.6%	14.1%	1.7%	0.2%
Kenaf	22.1%	29.6%	2.2%	37.6%	15.4%	0.4%
<b>MINOR CROPS</b>	7.8%	-2.2%	0.8%	1.9%	2.0%	2.0%
Sesame				-0.3%	0.8%	0.1%
Balsam				0.0%	0.0%	0.0%
Olive Nuts				0.0%	-2.3%	-0.0%
Coconut Meal				0.0%	0.0%	0.0%
Fruits and Vegetables				2.1%	2.2%	2.0%
<b>LIVESTOCK</b>	4.7%	6.1%	3.5%	3.9%	4.2%	8.8%
Beef				7.6%	2.2%	1.0%
Pork				-9.6%	3.4%	0.5%
Milk				4.5%	4.8%	7.3%
<b>FORESTRY</b>	1.4%	0.0%	-1.0%	1.0%	1.0%	0.6%
<b>FISHERIES</b>	13.6%	-7.7%	3.5%	-13.9%	-17.1%	-4.4%
Shrimp				-17.2%	-19.0%	-4.3%
Fish				24.0%	-2.9%	-0.1%
<b>BEE PRODUCTS</b>	8.9%	0.0%	-3.5%	-8.5%	3.3%	0.2%
<b>POULTRY</b>	3.7%	1.8%	6.0%	5.1%	0.6%	1.5%
Meat				5.1%	-6.0%	-5.9%
Eggs				5.0%	4.6%	7.4%
<b>TOTAL</b>	-3.1%	2.1%	-0.9%	0.5%	7.4%	100.0%

Source: Table 3.1

In summary, the agricultural sector has contributed to the growth of the economy. Agricultural value added has increased significantly in response to the policy reforms. The following section analyzes the production impact on each major commodity and identifies the relationship to policy reforms, when possible.

### 3.2 Production Impacts

As noted in the previous section, the major contributors to the economy are coffee, basic grains, poultry, livestock, and sugarcane, which accounted for 85 percent of agricultural value added in 1990.

The agricultural year in El Salvador runs from August to July for all crops except coffee for which it runs from October to September. Thus, two complete agricultural years have passed since the Cristiani Government took office in June 1989. These years can be compared to the performance of agricultural output prior to June 1989. Table 3.3 compares production, area, and yields for the major agricultural products for the last four agricultural years.

Agricultural output is subject to uncontrollable variables, such as weather. Thus, it is preferable to have two years to compare. In comparing average production of the two previous years with the two most recent years, all crops show substantial production gains, except for white corn, which had no change. Increases in production of other crops ranged from 19 percent (beans) to 73 percent (sorghum).

In most cases the source of growth was productivity, as yields increased significantly. Yield increases ranged from 22 percent (beans) to 72 percent (sorghum) for crops with no change in area planted. For rice and sugarcane, the source of growth was mainly area expansion, even though their yields also had some improvements. Area in sugarcane and rice expanded by 26 and 17 percent, respectively, while yields for the two crops increased by 7 and 8 percent.

Coffee had the lowest production level of recent history in 1988/89. It came back to around 3.6 million quintals, but the country has the potential to produce more. This increase was due mainly to productivity gains. However, both yield and area planted are below the 1982/83 level. Production was over four million quintals in an area of 260,000 manzanas with yields of 15.52 qq/mz.

Corn on the other hand, reached its highest level of production ever (Figure 3.2). Record production occurred on record area harvested, but recent yields are below the historic high average yield of 33 qq/mz achieved in 1984/85. Even 33 qq/mz is a low yield that can be increased.

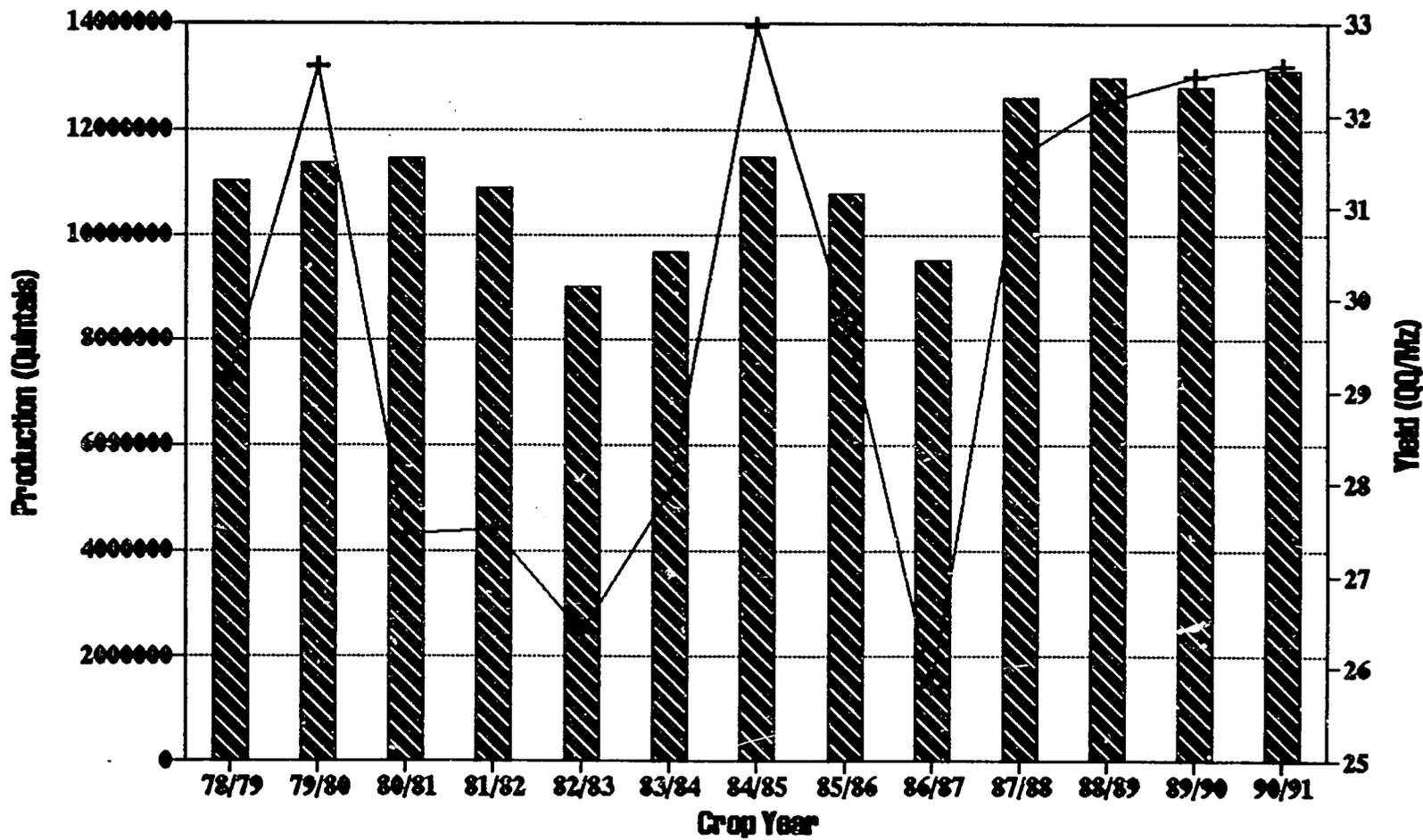
Beans are at their record high in yields, but area planted was reduced (Figure 3.3). The largest area planted was 96,000 manzanas in 1988/89.

Table 3.3 Production, Area Harvested and Yield for Major Agricultural Crops, El Salvador, 1981/82 to 1990/91.

Crop	Crop Year						87/88 (1)	88/89 (2)	89/90 (3)	90/91 (4)	Mean (1)&(2) (5)	Mean (3)&(4) (6)	Percent Change		
	81/82	82/83	83/84	84/85	85/86	86/87							(6)/(5) (7)	(3)/(2) (8)	(4)/(3) (9)
	<b>PRODUCTION (Thousand QQ), SUGAR CANE (S.T.)</b>														
Coffee	3,361	4,030	3,860	3,595	2,849	3,140	3,250	2,034	3,570	3,520	2,642	3,545	34.2%	75.5%	-1.4%
White Corn	10,868	9,000	9,633	11,461	10,769	9,500	12,576	12,956	12,794	13,100	12,766	12,947	1.4%	-1.2%	2.4%
Beans	832	830	918	1,056	751	1,094	531	1,240	969	1,145	886	1,057	19.4%	-21.9%	18.2%
Sorghum	2,950	2,700	2,277	3,054	2,883	3,207	564	3,333	3,250	3,492	1,948	3,371	73.0%	-2.5%	7.4%
Paddy Rice	1,090	770	940	1,377	1,498	1,020	915	1,246	1,385	1,341	1,080	1,363	26.2%	11.2%	-3.2%
Sugar Cane	2,118	2,711	3,119	3,213	3,429	3,185	2,527	2,290	2,930	3,583	2,409	3,256	35.2%	27.9%	22.3%
<b>AREA HARVESTED (Thousand Manzanas)</b>															
Coffee	260.0	259.7	253.7	248.2	243.7	234.2	240.7	245.7	250.0	255.0	243.2	252.5	3.8%	1.8%	2.0%
White Corn	395.0	341.0	345.0	347.7	362.1	368.1	398.5	402.8	394.7	402.6	400.7	398.7	-0.5%	-2.0%	2.0%
Beans	71.0	79.4	80.5	82.5	83.3	87.1	89.3	96.1	91.6	89.5	92.7	90.6	-2.3%	-4.7%	-2.3%
Sorghum	165.0	170.0	158.0	166.0	163.4	171.5	178.7	174.2	170.9	184.7	176.5	177.8	0.8%	-1.9%	8.1%
Paddy Rice	19.8	16.0	18.0	21.9	24.7	17.2	16.7	19.7	22.2	20.4	18.2	21.3	17.0%	12.7%	-8.1%
Sugar Cane	39.2	45.0	48.6	52.0	55.2	58.7	48.3	41.3	51.8	61.5	44.8	56.7	26.5%	25.4%	18.7%
<b>YIELD (QQ/mz), SUGAR CANE (S.T./Mz.)</b>															
Coffee	12.93	15.52	15.21	14.48	11.69	13.41	13.50	8.28	14.28	13.80	10.86	14.04	29.2%	72.5%	-3.3%
White Corn	27.51	26.39	27.92	32.96	29.74	25.81	31.56	32.17	32.42	32.54	31.86	32.48	1.9%	0.8%	0.4%
Beans	11.72	10.45	11.41	12.80	9.02	12.56	5.95	12.90	10.58	12.80	9.55	11.67	22.2%	-18.0%	21.0%
Sorghum	17.88	15.88	14.41	18.40	17.64	18.70	3.16	19.13	19.02	18.91	11.04	18.96	71.7%	-0.6%	-0.6%
Paddy Rice	55.04	48.13	52.22	62.87	60.63	59.33	54.76	63.24	62.40	65.74	59.35	64.00	7.8%	-1.3%	5.4%
Sugar Cane	54.02	60.25	64.18	61.78	62.12	54.25	52.32	55.46	56.56	58.26	53.76	57.48	6.9%	2.0%	3.0%

Source: MAG, General Directorate of Agricultural Economics.

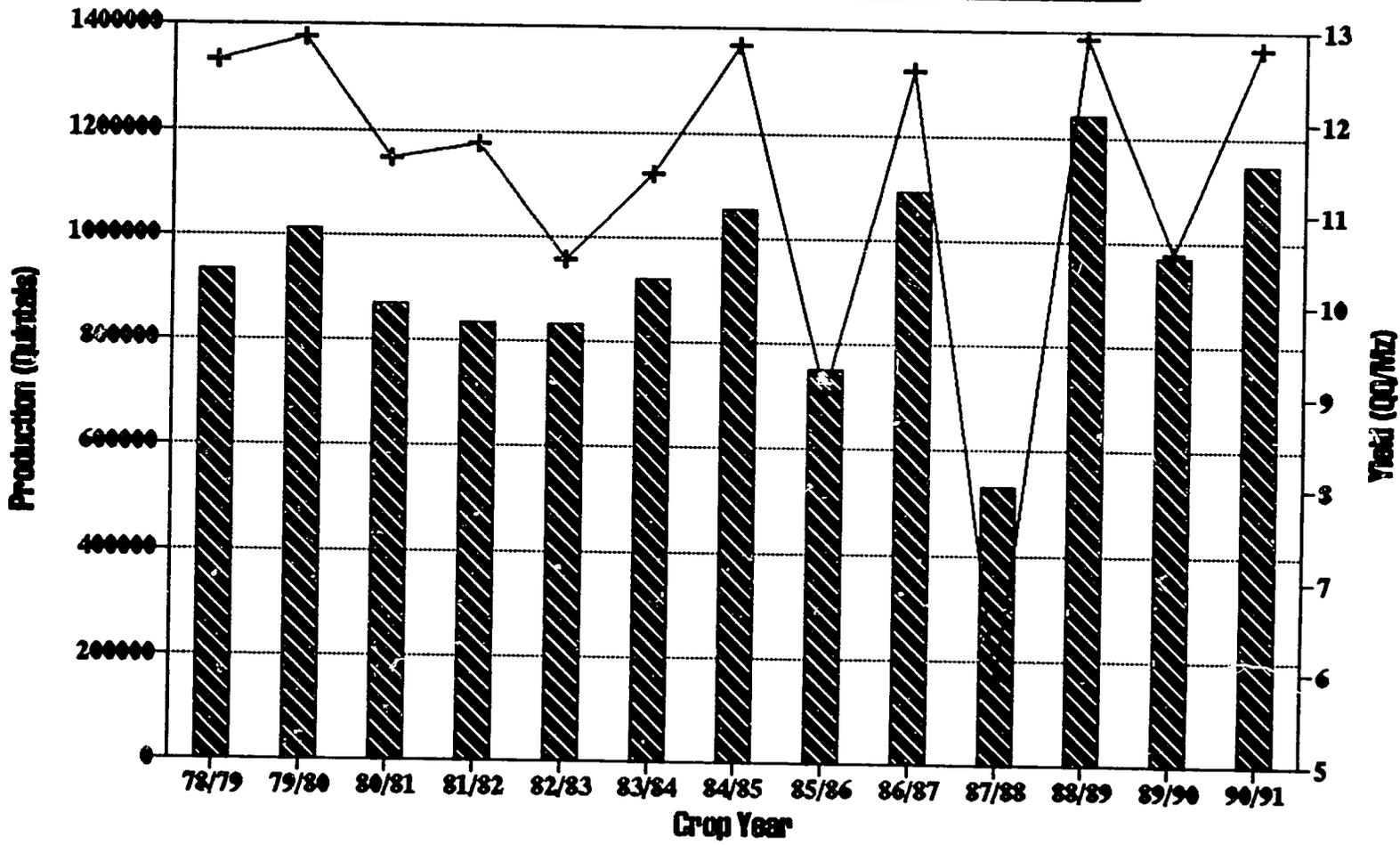
**Figure 3.2 Corn: Production and Yield, El Salvador, 1978/79 to 1990/91**



Source: Table 3.3

Production —+— Yield

**Figure 3.3 Beans: Production and Yield, El Salvador, 1978/79 to 1990/91**



Source: Table 3.3

▨ Production + Yield

**Sorghum** production is at a record high, as are area and yields (Figure 3.4). However, yields can still increase considerably if improved varieties of red sorghum for feed are introduced. These varieties are drought resistant and can have yields above 60 qq/mz.

**Rice** yields are at historic highs. However, this is not accompanied by record production due to a reduction in area planted (Figure 3.5). Area planted in 1990/91 was 20,000 manzanas, while the historic high was 25,000 manzanas in 1985/86.

**Sugarcane** production is at an historic high due to area expansion. Yields are 58 S.T./mz, which is below the 64 S.T. obtained in 1983/84. The most critical aspect of sugarcane is sugar content, rather than tonnage per manzana. Sugar content is very low in El Salvador. Yields are around 166 lbs/S.T., while they should be over 200. Farmers plant varieties with high biomass production, and apply high levels of nitrogen. The key issue in the sugar industry is to concentrate on sugar production, not sugarcane volume. The industry needs to start substituting varieties and modifying management practices to increase the amount of sugar per manzana.

In general, agricultural production has been maintained or increased during 1990/91 over the 1989/90 harvest. The highest growth rates are in sugarcane and beans. The source of growth for beans was yield, and for sugarcane, area expansion. The 1991/92 harvest was expected to increase for all crops. However, the recent drought has affected corn, sorghum, and rice production significantly, so their production will drop from last year's level. The effects on coffee and sugarcane production had not been estimated as of October 1991.

For poultry and livestock only one year of data is available after June 1989 to compare performance. The statistics for these activities are reported annually. Egg production increased almost 5 percent in 1990 and chicken meat production did not change. Milk production increased by 11 percent in 1990, after no change in 1989. Beef production declined by 3 percent after a 12 percent increase in 1989, a healthy sign because the size of the herd increased by 3.7 percent, which indicates investments in the sector (Table 3.4).<sup>1</sup>

Farmgate nominal prices for major agricultural products have increased since June 1989. However, deflated farmgate prices<sup>2</sup> have had mixed results. Table 3.5 summarizes average prices for major agricultural products in nominal and deflated prices. Besides the simple average prices, a second exercise weights basic grain monthly prices by monthly production levels.<sup>3</sup>

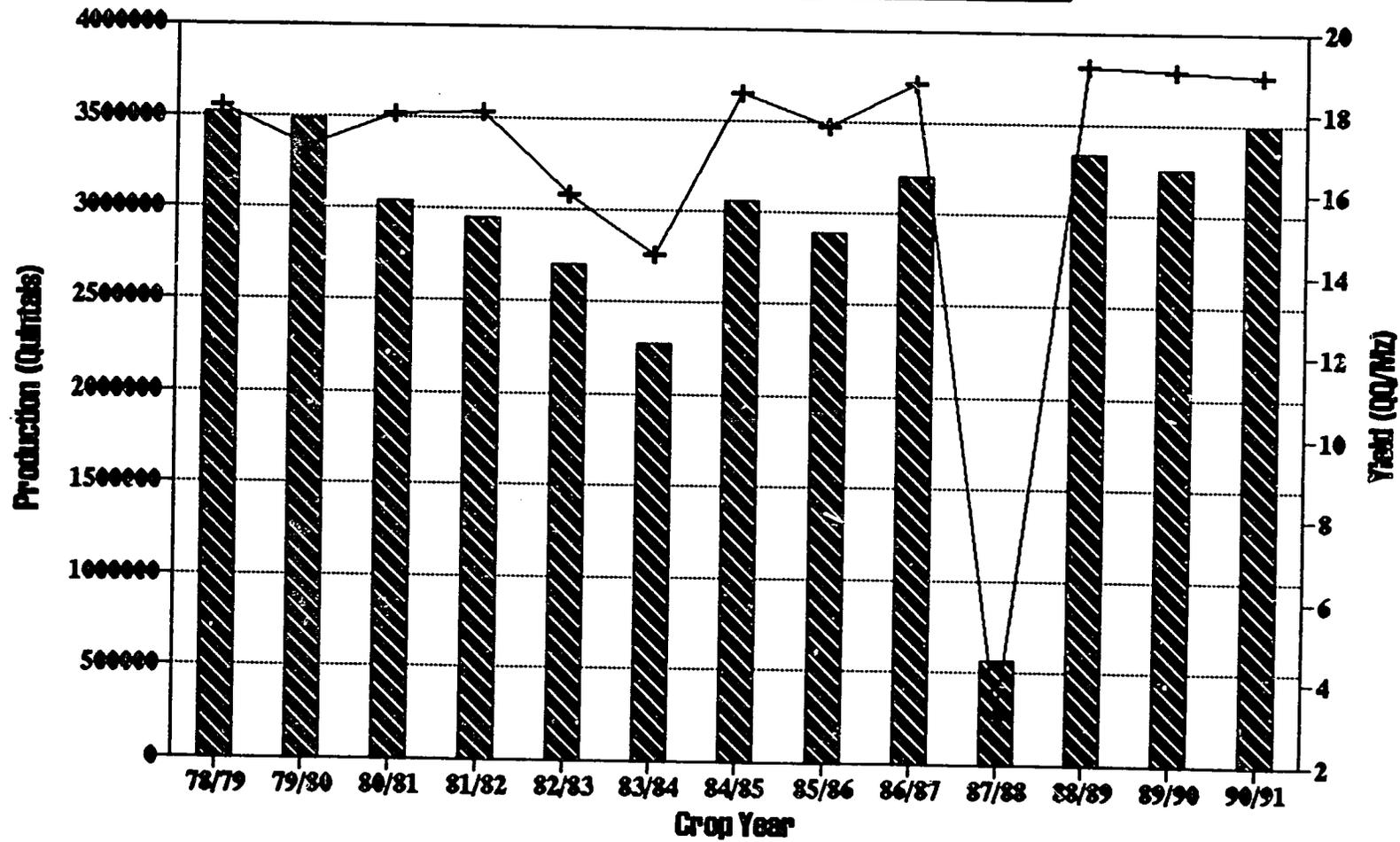
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<sup>1</sup> Statistics on poultry and livestock are consistently underestimated, because they include only production from commercial farms. The production of non-commercial farms is significant, but no estimates are available.

<sup>2</sup> Prices were deflated by the 1978 CPI.

<sup>3</sup> Data for this exercise are presented in Appendix A.

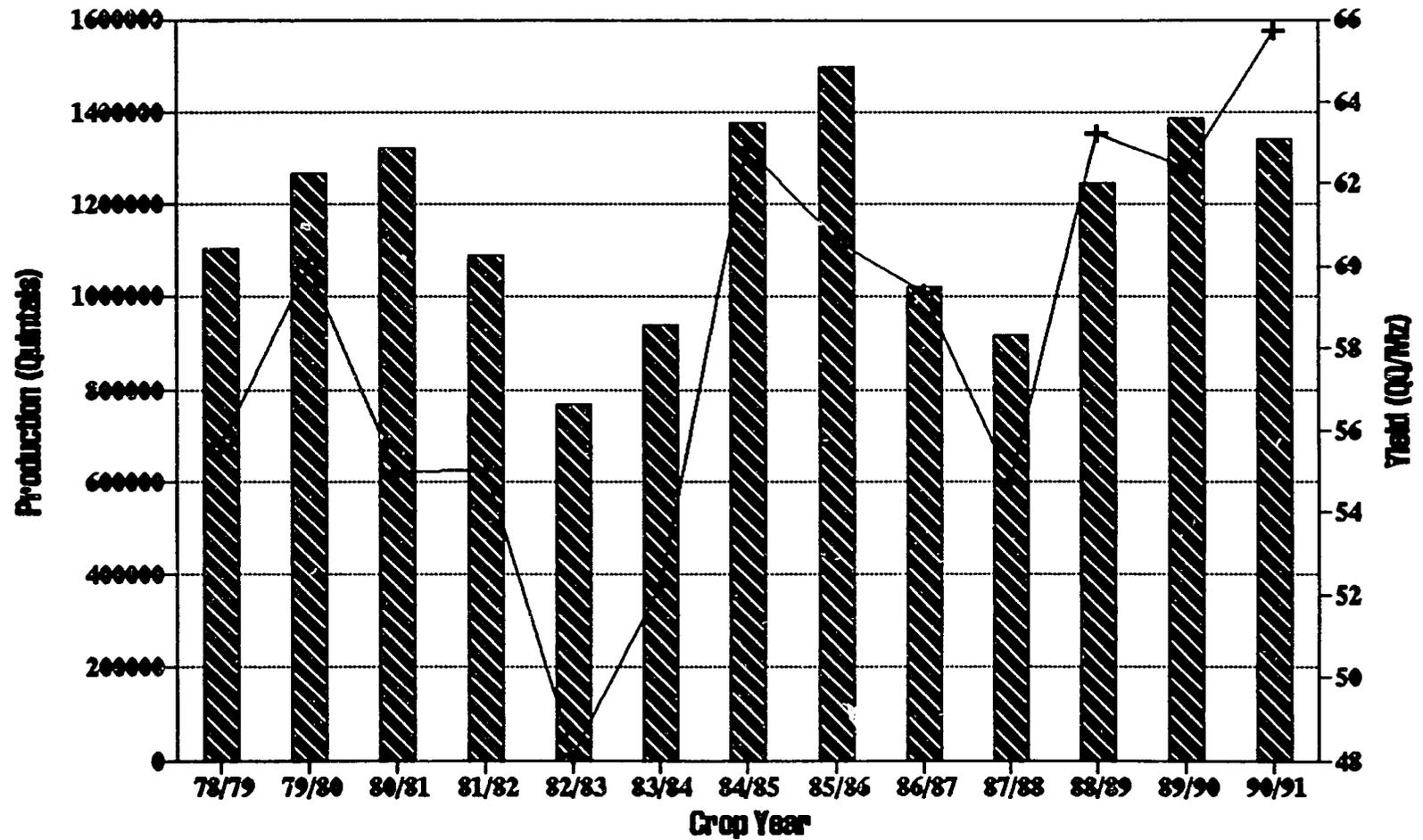
**Figure 3.4 Sorghum: Production and Yield, El Salvador, 1978/79 to 1990/91**



Source: Table 3.3

▨ Production + Yield

**Figure 3.5 Rice, Production and Yield, El Salvador, 1978/79 to 1990/91**



Source: Table 3.3

▨ Production + Yield

Table 3.4

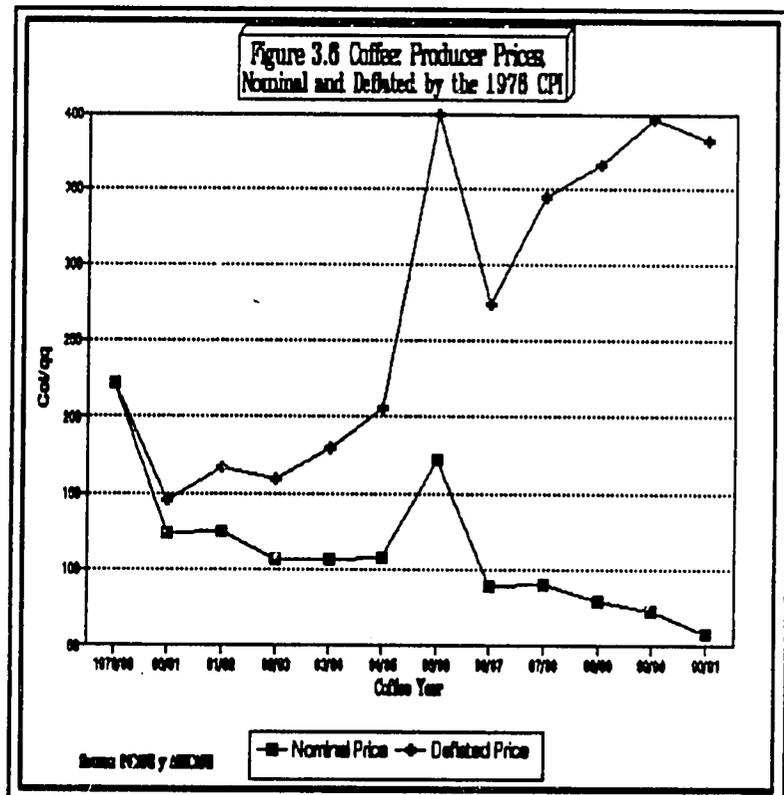
## Production of Poultry and Livestock, El Salvador, 1981 to 1990.

Product	Year										Percent Change	
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	(2)/(1)	(3)/(2)
								(1)	(2)	(3)	(4)	(5)
<b>POULTRY</b>												
Eggs (Million Units)	596.4	617.0	533.8	654.6	695.4	650.0	625.8	670.0	650.0	680.1	-3.0%	4.6%
Meat (Million Lbs.)	34.8	41.7	46.9	52.4	62.5	67.5	65.6	66.5	71.0	71.4	6.8%	0.6%
<b>LIVESTOCK</b>												
Milk (Million Lts.)	240.9	239.8	217.2	233.5	240.1	269.7	270.0	286.2	284.6	316.3	-0.6%	11.1%
Beef (Million Lbs.)	53.8	54.2	53.4	53.7	51.1	41.1	45.9	54.3	61.1	59.1	12.5%	-3.3%
Cattle (Thousand Heads)	1,106	954	937	929	980	1,050	1,088	1,144	1,176	1,220	2.8%	3.7%

Source: MAG, General Directorate of Agricultural Economics.

The only two crops in which producer prices improved from 1988/89 to 1989/90 were corn and sugarcane. These gains were lost in the 1990/91 harvest, falling below the 1988/89 prices. Rice, beans, and sorghum experienced significant price gains in crop year 1990/91, when compared to 1989/90 (Table 3.5).

Nominal coffee producer prices increased, but deflated prices declined (Figure 3.6). Coffee marketing was liberalized, and the export tax reduced. The market now dictates the exchange rate for coffee exports. However, the post reform period coincided with the suspension of the ICO



**Table 3.5 Producer Prices for Major Agricultural Products, El Salvador,  
1987/88 to 1990/91**

Crop	Unit	Crop Year				Percent Change		
		87/88	88/89	89/90	90/91	88/89	89/90	90/91
<b>SIMPLE AVERAGES</b>								
<b>NOMINAL PRICES</b>								
Coffee	Col/QQ	344.45	365.56	396.14	382.65	6.1%	8.4%	-3.4%
White Corn	Col/QQ	37.11	44.93	59.49	64.09	21.1%	32.4%	7.7%
Beans	Col/QQ	207.26	176.91	195.03	269.02	-14.6%	10.2%	37.9%
Sorghum	Col/QQ	38.85	41.26	47.41	53.82	6.2%	14.9%	13.5%
Paddy Rice	Col/QQ	69.52	48.58	49.45	93.53	-30.1%	1.8%	89.1%
Sugar Cane	Col/S.T.	75.00	80.00	98.00	115.00	6.7%	22.5%	17.3%
<b>DEFLATED PRICES BY THE 1978 CPI</b>								
Coffee	Col/QQ	89.87	79.65	72.75	57.15	-11.4%	-8.7%	-21.4%
White Corn	Col/QQ	7.97	8.26	8.78	8.09	3.6%	6.3%	-7.9%
Beans	Col/QQ	43.30	32.72	28.83	34.02	-24.4%	-11.9%	18.0%
Sorghum	Col/QQ	8.34	7.66	7.05	6.82	-8.2%	-8.0%	-3.3%
Paddy Rice	Col/QQ	14.28	9.03	7.32	11.74	-36.8%	-18.9%	60.4%
Sugar Cane	Col/S.T.	19.57	17.43	18.00	17.18	-10.9%	3.3%	-4.6%
<b>WEIGHTED AVERAGES</b>								
<b>NOMINAL PRICES</b>								
White Corn	Col/QQ	33.61	39.03	48.57	55.22	16.1%	24.4%	13.7%
Beans	Col/QQ	148.47	160.95	180.17	235.01	8.4%	11.9%	30.4%
Sorghum	Col/QQ	36.90	35.82	43.68	52.99	-2.9%	21.9%	21.3%
Paddy Rice	Col/QQ		53.37	46.40	72.43		-13.1%	56.1%
<b>DEFLATED PRICES BY THE 1978 CPI</b>								
White Corn	Col/QQ	7.68	7.52	7.75	7.30	-2.1%	3.1%	-5.8%
Beans	Col/QQ	32.74	30.58	28.09	30.52	-6.6%	-8.1%	8.7%
Sorghum	Col/QQ	8.19	6.77	6.63	6.76	-17.3%	-2.1%	2.0%
Paddy Rice	Col/QQ		10.26	7.29	9.47		-28.9%	29.9%

Source: MAG, General Directorate of Agricultural Economic, and  
Appendix Tables A-6 to A-13.

quota regime in July 1989. International prices have declined steadily since then. Further, coffee was the last commodity to enjoy a market-determined exchange rate. Coffee exports received a lower exchange rate than that for non-traditional exports.

Several factors contributed to the prices for basic grains. The first harvest after June 1989 came in the fall for most crops and in January 1990 for sorghum. The few policy reforms adopted were very recent, and did not have their full effect. For the second harvest in the fall of 1990 and January 1991, real prices reached previous levels as a result of the reform measures. However, several factors constrain basic grain prices, mainly export controls. To the producer, the most important prices are the ones during harvest. With the restriction on exports, there is no mechanism to expand the market and make it competitive. The market is restricted within El Salvador, and too few agents compete to buy and store the grains.

The price of white corn during harvest drops to the yellow corn and sorghum price levels. Unfortunately, this premium corn is fed to animals when it could be exported at a much higher price.

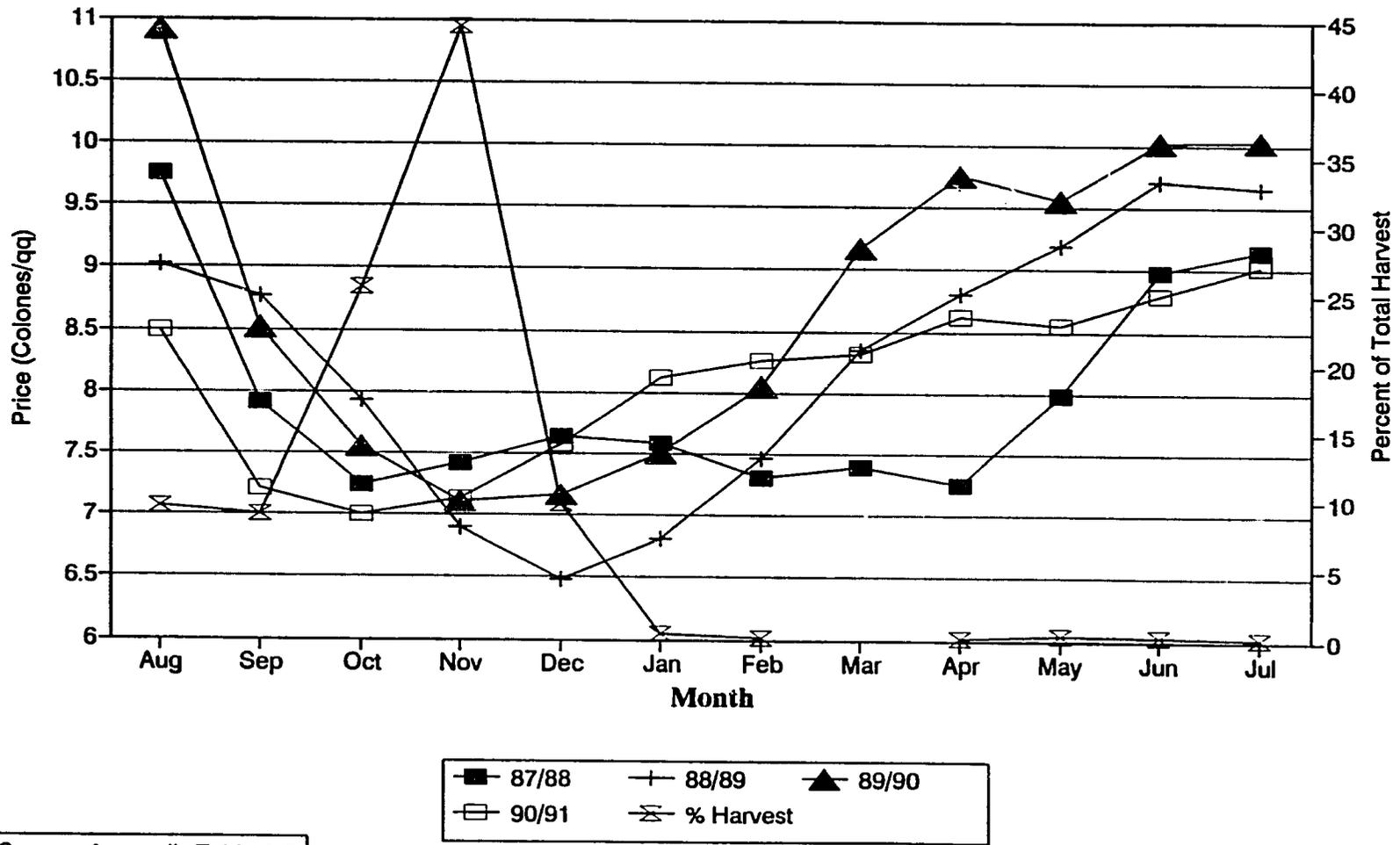
Corn deflated producer prices have stayed about the same due to the seasonality of production. Figure 3.7 plots deflated prices of the last four harvests against the harvest cycle. When most of the corn is harvested in November, producer prices have stayed about the same. This is not true for the rest of the year. The price band for corn has been in operation for two years now, but only imports are open; exports are restricted. As the harvest period approaches, producer prices drop as the excess production is not exported and the local marketers and farmers do not compete enough to drive the price up and reduce the price differential between the harvest season and the rest of the year.

The export controls are difficult to overcome. Many grains are imported under PL-480, which does not allow exports. The Government has refused to liberalize corn and bean exports, fearing a shortage.

Corn prices have also been influenced by prices of close substitutes that are not under a price band mechanism or have a very low import duty. White corn and white sorghum are produced for human consumption, but they are also feed grains. As feed grains they are substitutes for yellow corn, red sorghum, and corn gluten. Feed mixers substitute these feed grains according to price movements, with the objective of minimizing costs subject to nutritional constraints. Thus, all the substitutes should be considered in the management of the price band mechanism.

White corn and rice can be substituted by wheat. Wheat has only a 5 percent tariff, and as most wheat imports are through PL-480, they enter the country duty free. This policy should be revised to impose a 20 percent tariff on wheat imports.

**Figure 3.7 Corn: Producer Prices,  
Deflated by 1978 CPI, 87/88 to 90/91**



Source: Appendix Table A-2

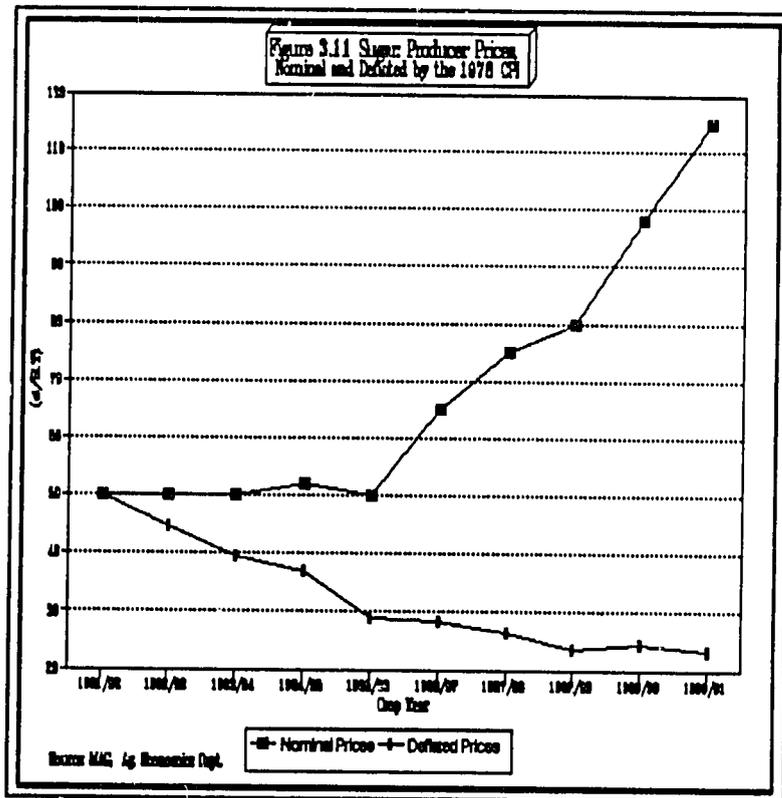
Beans have had similar relative behavior as corn during November, the main harvest month. During this month, prices have been about the same for the last four harvests (Figure 3.8). However, for the rest of the year, prices for the 1990/91 crop have been higher. Bean exports are also restricted, which keeps a lid on prices at harvesttime. Beans could be grown commercially for export to the United States and other Central American countries where the market for them is good. New improved varieties could be developed to increase productivity and reduce production costs.

Sorghum prices for the 1989/90 and 1990/91 crop years have been better than prices for 1988/89 during January, the main harvest month, but not for December, when a major part of the crop is harvested (Figure 3.9). However, prices have been inferior to the prices of the 1987/88 crop for all months. The 1987/88 crop was exceptionally low due to a severe drought. A price band mechanism is planned for the next crop year, which should improve producer prices for both sorghum and corn.

Rice prices have been better during every month for the 1990/91 crop (Figure 3.10). The main reason was the price band mechanism and an increase in international prices.

Sugarcane international prices have been going down, and the U.S. quota has been reduced. As sugar production increases, larger proportions have gone to the low price world sugar market (Figure 3.11).

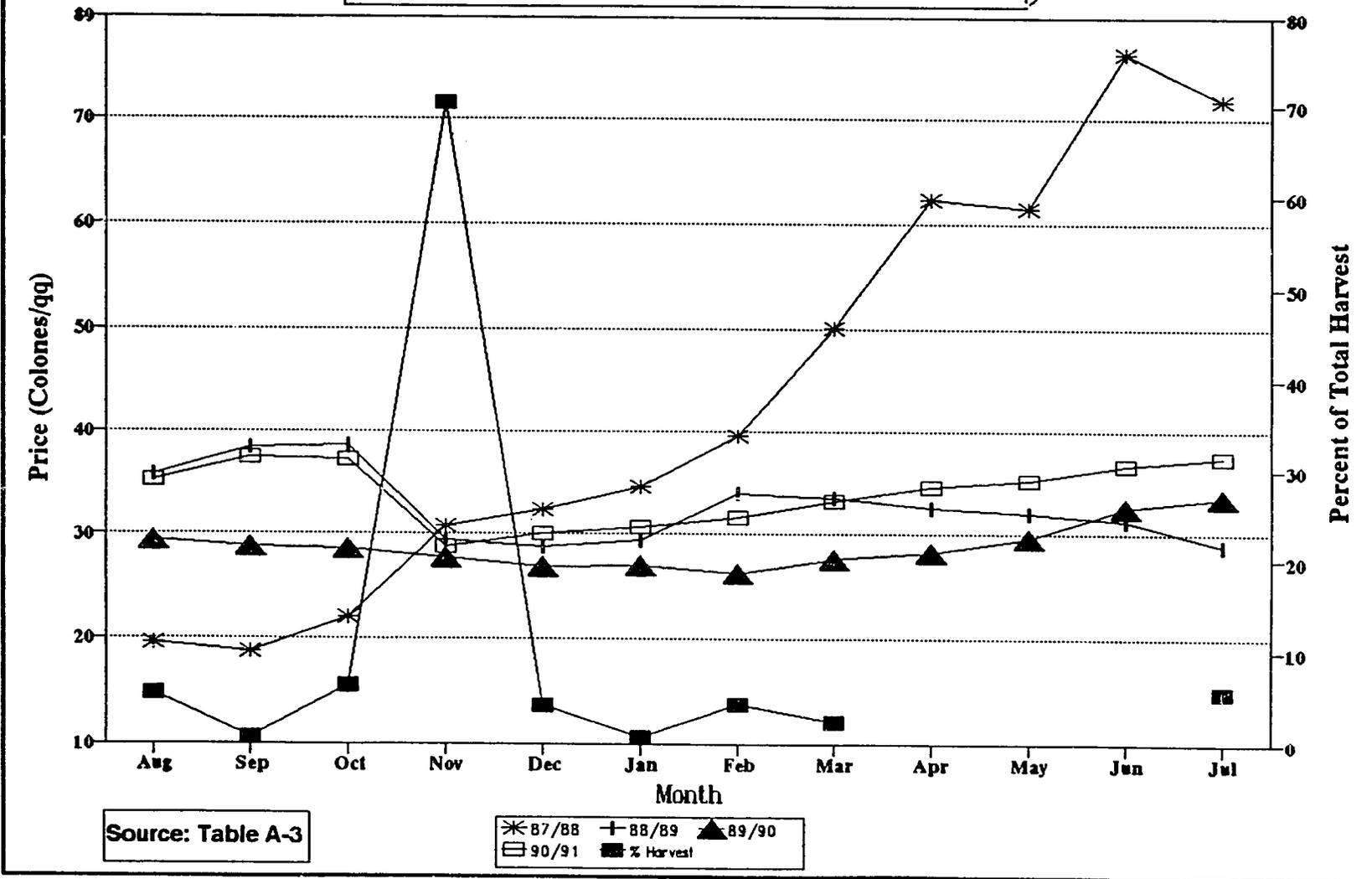
Deflated prices of eggs are down, while prices for chicken meat are about the same. The price of beef increased by 16 percent, and milk stayed about the same (Table 3.6).



### 3.3 Food Prices

Significant progress has been made in slowing inflation. Growth in the CPI peaked at an annual rate of almost 30 percent in April 1989, dropped to 19.3 percent by the end of 1990 and slid to an annual rate of 12.7 percent in June 1991. Over the past several years, food prices have

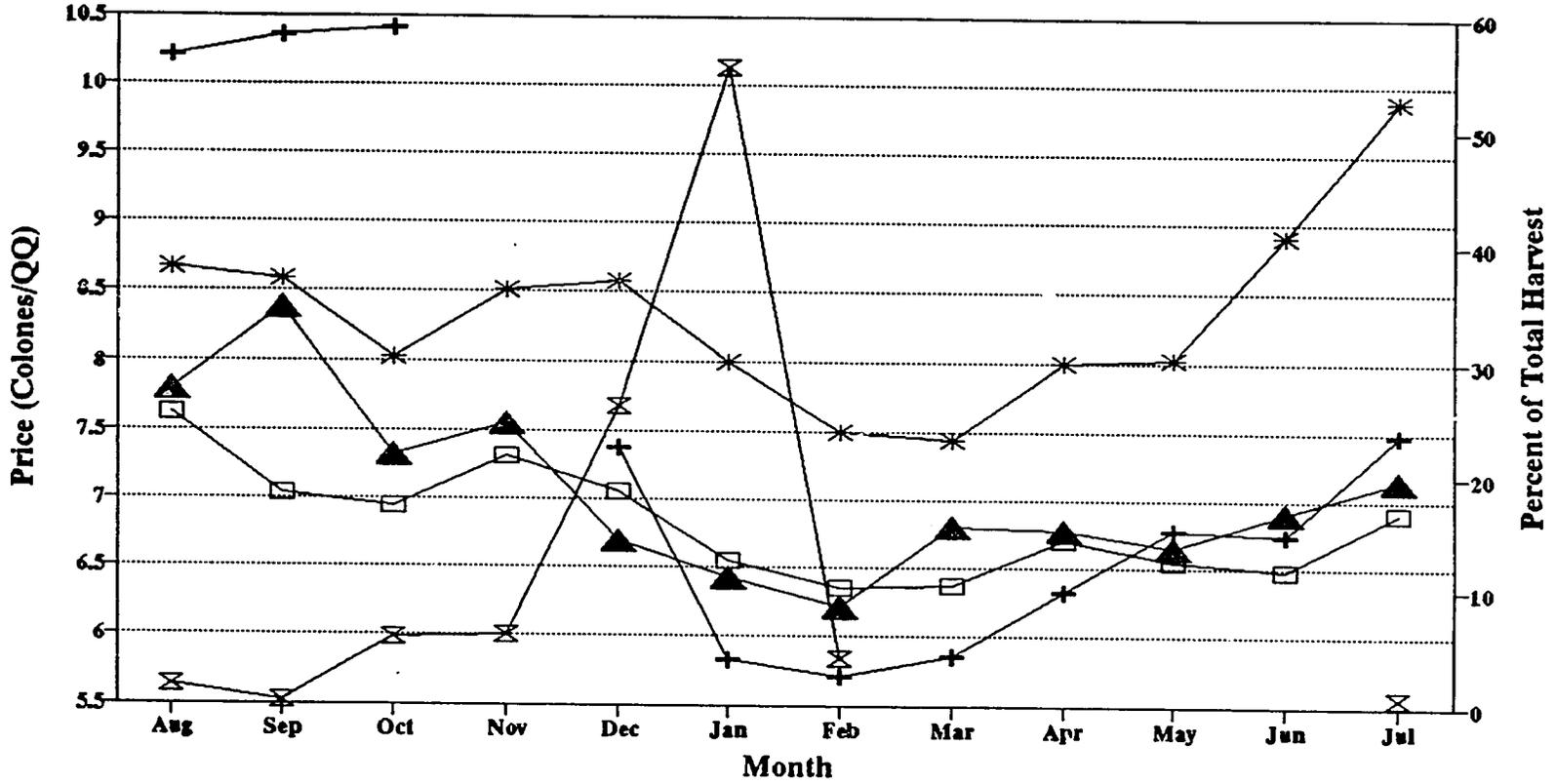
**Figure 3.8 Beans: Producer Prices**  
 Deflated by 1978 CPI, 87/88 to 90/91



Source: Table A-3

\* 87/88 + 88/89 ▲ 89/90  
 □ 90/91 ■ % Harvest

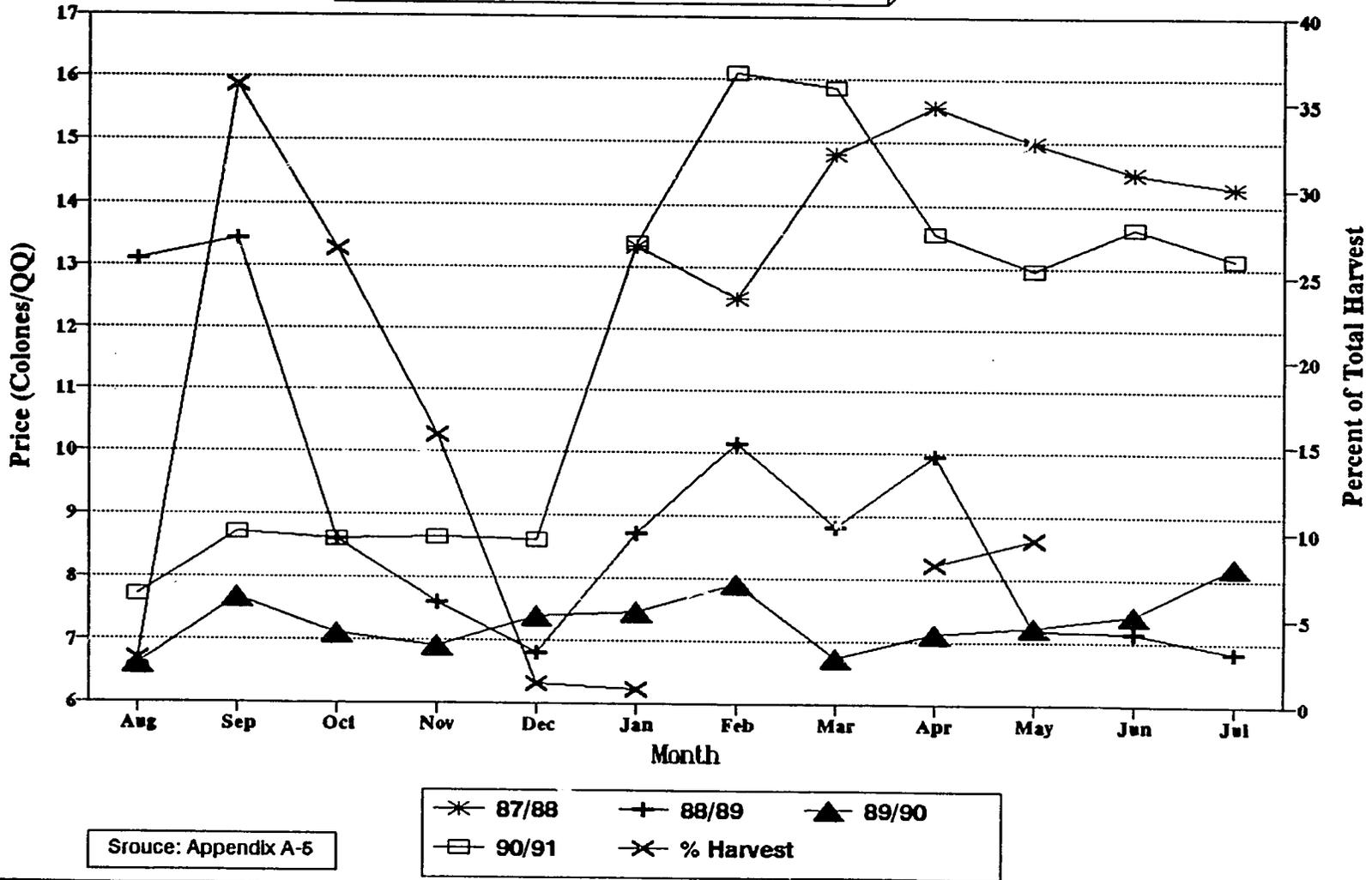
Figure 3.9 Sorghum: Producer Prices  
 Deflated by 1978 CPI, 87/88 to 90/91



Source: Appendix A-4

\* 87/88    + 88/89    ▲ 89/90  
 □ 90/91    ✕ % Harvest

Figure 3.10 Rice: Producer Prices  
 Deflated by 1978 CPI, 87/88 to 90/91



increased faster than the other items in the index,<sup>1</sup> and food makes up half the weight within the index. So far in 1991, food prices are increasing by 19.7 percent (July 1990 to July 1991) and the overall index is increasing at 14.9 percent over the same period. It is interesting to determine whether food prices are continuing to exert an upward "pull" on the CPI or whether food is becoming like any other good in the consumption basket.

Table 3.6  
Poultry and Livestock Prices, El Salvador, 1987 to 1990

Product	Unit	Year				Percent Change		
		1987	1988	1989	1990	88/87	89/88	90/89
<b>NOMINAL PRICES</b>								
<b>POULTRY</b>								
Eggs (Consumer)	Col/100	30.75	32.90	42.04	42.02	7.0%	27.8%	0.0%
Meat (Consumers)	Col/Lb	3.76	4.13	4.70	5.82	9.8%	13.8%	23.8%
<b>LIVESTOCK</b>								
Beff (On Hoof)	Col/lb	2.27	2.06	2.28	3.24	-9.3%	10.7%	42.1%
Milk (Consumer)	Col/Bottle	1.37	1.56	2.03	2.50	13.9%	30.1%	23.2%
CPI (Dec. 1978)		416.6	498.9	591.9	727.8			
<b>DEFLATED PRICES BY CPI</b>								
<b>POULTRY</b>								
Eggs (Consumer)	Col/100	7.38	6.59	7.10	5.77	-10.7%	7.7%	-18.7%
Meat (Consumers)	Col/Lb	0.90	0.83	0.79	0.80	-8.3%	-4.1%	0.7%
<b>LIVESTOCK</b>								
Beff (On Hoof)	Col/lb	0.54	0.41	0.39	0.45	-24.2%	-6.7%	15.6%
Milk (Consumer)	Col/Bottle	0.33	0.31	0.34	0.34	-4.9%	9.7%	0.2%

Source: MAG, General Directorate of Agricultural Economics.

Table 3.7 compares the relationship between food price increases and price increases for other items in the CPI. The table shows the ratio of the price index change for food alone, to the change in the overall CPI. A number like 1.14 for January 1991 means that food prices rose 14 percent faster than the overall CPI. All numbers in the table exceed one, indicating that for the period shown, food prices always exert upward "pull" on the CPI. However, in general, the

<sup>1</sup> The index was last recalibrated in 1978 so its composition probably does not represent what it should now be. A project to recalibrate the CPI is underway.

extent to which food price increases pull up the CPI has been diminishing. The price index ratios were higher in 1988 and 1989 than they were in 1990 and 1991.

Table 3.7

Relative Price Indices, El Salvador, 1988 to 1991  
Food Price Index/ CPI

MONTH:	1988	1989	1990	1991
January	1.10	1.75	1.22	1.14
March	1.24	1.58	1.23	1.13
May	1.46	1.54	1.13	1.24
July	1.59	1.48	1.24	1.32

SOURCE: BCR, Informe Indices de Precios al Consumidor, Julio/91

The food price index referred to in the preceding paragraph may not adequately represent the relative food prices facing the Salvadoran poor. The food component of the CPI contains many items probably not consumed much by the poor, such as meat (several kinds), fish, prepared foods, beverages, bread, and several other items. Indeed, only about 26 percent of the food price component of the overall CPI is made up of basic grains, which poor people consume in much larger proportions. The question of whether any shifts in relative prices have been biased against the poor can be answered partly by examining whether prices of items they consume heavily have moved adversely relative to prices of other items. Table 3.8 addresses this question.

Table 3.8 divides the CPI into two parts. The first represents the behavior of the prices of basic food, defined as corn and corn flour, rice and beans. The second represents prices of all other items in the CPI. The resulting index was recalculated with a base month of June 1989, corresponding to the inauguration of the Cristiani administration. Data are shown starting with January of 1988. If basic food prices had moved adversely to the poor, then the price index for basic food would have increased faster than that for other items. Several observations can be made:

- Over the entire period the price index for basic foods has increased faster than that for other goods, rising by 135 percent since 1988 (from .65 to 1.53) while that for other foods rose by only 30 percent (from .80 to 1.45).
- Most of the differential increase in basic food prices occurred between January 1988 and June 1989. Indeed, all of the systematic run-up in relative basic food prices occurred between January and July 1988. Since then, the rates at which both indices have moved have not differed appreciably.

- Since June 1989, basic foods prices have not increased faster than other prices. The righthand column of Table 3.8 shows the ratio of the basic food price index to that for other items. If basic food prices tended to rise systematically faster than other prices, the ratio in the righthand column would tend to drift ever higher, above one. Rather, it drifts around one.
- Since June 1989, there has been no pattern of changes in the seasonality of price increases for basic foods relative to other items. The righthand column ratio for June each year is about the same as it is for other Junes and for other months. Before June 1989, basic food prices not only had a relative upward drift, but relative food price movements had much more pronounced seasonality.

The conclusion from the data in Table 3.8 is that policies employed since 1989 have not been biased against the poor, insofar as they have affected food prices. Indeed, tendencies prior to June 1989 did seem to reflect relatively rapid price increases for basic foods. Furthermore, despite the drought in El Salvador, there is no evidence that food prices have been adversely affected. The most recent reports are that overall inflation has been reduced to 12-14 percent, and that food price increases are lagging behind the overall index. (See Prensa Grafica, October 14, 1991.) If anything, the movements in food prices that had been adverse to the poor prior to 1989 now seem

Table 3.8  
Price Comparisons: Food and Other Goods, El Salvador,  
1988 to August 1991

Year/ Month	Index June 89 = 1.0		Ratio Food/ Other
	Basic Foods	Other Goods	
1988, Jan	0.65	0.80	0.82
feb	0.69	0.80	0.86
mar	0.76	0.82	0.93
apr	0.83	0.83	1.00
may	0.90	0.84	1.07
jun	0.99	0.85	1.17
jul	1.06	0.87	1.22
aug	0.91	0.86	1.06
sept	0.90	0.86	1.05
oct	0.88	0.89	1.00
nov	0.83	0.90	0.93
dec	0.83	0.91	0.91
1989, jan	0.84	0.92	0.92
feb	0.88	0.93	0.95
mar	0.92	0.94	0.97
apr	0.95	0.94	1.00
may	0.96	0.96	1.00
jun	1.00	1.00	1.00
jul	1.01	1.02	0.99
aug	1.05	1.04	1.01
sept	1.05	1.04	1.01
oct	1.03	1.07	0.96
nov	1.03	1.09	0.95
dec	0.99	1.14	0.87
1990, Jan	1.05	1.16	0.91
feb	1.09	1.18	0.92
mar	1.17	1.20	0.97
apr	1.23	1.23	1.00
may	1.22	1.24	0.99
jun	1.29	1.26	1.03
jul	1.31	1.26	1.04
aug	1.32	1.24	1.07
sept	1.33	1.25	1.07
oct	1.33	1.27	1.04
nov	1.32	1.30	1.01
dec	1.31	1.33	0.98
1991, Jan	1.33	1.36	0.98
feb	1.36	1.36	1.00
mar	1.39	1.38	1.01
apr	1.43	1.38	1.03
may	1.42	1.41	1.01
jun	1.41	1.42	0.99
jul	1.47	1.45	1.01
aug	1.53	1.45	1.06

Source: Estimates

Note: Basic foods are corn, corn flour, rice and beans.

to have stopped.<sup>1</sup>

### 3.4 Credit Allocations to Agriculture

Agricultural credit in El Salvador has flowed from a number of sources of which these are the most important:

- Commercial banks
- Banco Hipotecario
- Banco de Fomento Agropecuario (BFA)
- FEDECREDITO
- INCAFE
- INAZUCAR

Unfortunately, generating data on the amounts of credit that have flowed into the agricultural sector is not a simple matter. Following are the main problems:

- In all cases the loan balances reported by each source include a large number of loans which are in arrears and are being rolled over. Thus, balances at any given time do not represent the amount of credit extended to agriculture in the immediately preceding period. Indeed, balances may represent loans that were made many years before and rolled over several times.
- INCAFE and INAZUCAR offer the worst portfolios. Neither institution has offered much new credit since the early 1980s. In both cases loan balances almost exclusively represent non-performing loans that had been continually rolled over for many years. Neither institution now functions as a credit source.
- FEDECREDITO is mainly a second-tier institution lending through rural credit unions (Cajas de Credito Rurales or CCR), although some loans are made directly to CCR members. Over 50 percent of FEDECREDITO's portfolio is overdue and World Bank analysts have described its net worth of €32 million (as of 9/91) as "grossly overstated." The same report states that "FEDECREDITO's financial statements do

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<sup>1</sup> MIPLAN has produced a study examining what they refer to as the *canasta básica* (basic basket), which is designed as a diet containing 2,160 calories and 46 grams of protein per day per person. (See MIPLAN, "La Canasta básica de Alimentos, 1919-1989," February 1990). Rural and urban areas have different diets, although both offer the same food content. The study examines the affordability of the diet for the poor, where the poor are assumed to be earning the minimum wage. The study concludes that minimum wage earners in rural areas have not been able to afford the recommended canasta básica since about 1981. However, a follow-up study ("Estudio: Los Precios de la Canasta Básica, Familia Rural," no author, no date, but located in Mike Wise's office) points out that the diet contained in the canasta básica is artificial, not based on what people actually eat, and the rural minimum wage can vary widely from what was assumed in the MIPLAN study. The author does not venture a general opinion about the affordability of food in rural areas. Both papers confirm that the basic foods that have been examined here occupy an important place in a canasta básica, however it is defined.

not accurately reflect its true financial condition and cannot be trusted as published" (World Bank, 1991).

- The commercial banks and the Banco Hipotecario have data which try to separate loans that have had to be rolled over from those that are current. Nevertheless, it is likely that the loan balances reported contain some non-performing or other loans that are badly in arrears.
- The BFA data on balances are likely to contain many loans that are continually rolled over. Nevertheless, some attempt is made to separate loans that are current from those that are overdue.

Given the large numbers of non-performing loans in the portfolios of all institutions, one cannot simply note the loan balances outstanding of all institutions as representing the amount of credit extended to agriculture. Loans that have been rolled over represent loans that were made at some time in the past, and the same loan may appear repeatedly as an outstanding balance without implying any new credit.

Table 3.9 shows credit to agriculture, represented by the year-end balances of commercial banks, Banco Hipotecario, and BFA. In all cases the table shows the balances for loans that have not been identified as refinanced and in the case of the BFA, it shows those identified as current. Table 3.9 does not show any loans outstanding from INCAFE, INAZUCAR, or FEDECREDITO. These institutions do not separate current loans from those that have been refinanced. Much of each loan portfolio is underperforming and loans are being rolled over automatically. The two institutions (INAZUCAR and FEDECREDITO) have offered no significant new financing in several years.

In Table 3.9 nominal loan balances are converted to real loan balances in 1962 colones (deflating them by the implicit GDP deflator). Also shown is agriculture's contribution to GDP in nominal and real terms. In real terms, loans to agriculture peaked in 1982 and have declined slowly since.

The problems mentioned above would make it a major task to determine more precisely than Table 3.9 does the past and present credit flow to agriculture. Furthermore, it would be even more difficult to separate levels of credit by specific subsector. The reasons for this include the following:

- BFA data on current loan balances present only agricultural versus non-agricultural loans. BFA data by sector is not broken into current and overdue loans.
- When BFA breaks down loans by sector, the sector definitions are sometimes different from what they are at the BCR.
- The BFA breakdown by sector reports on loans contracted, not loan balances. Loans

**Table 3.9**  
**Credit to Agriculture, El Salvador, 1980 to 1990**  
(Million Colones)

Year	Credit to Agriculture (d)				Agricultural GDP	Real Agricultural GDP in 1962 Colones
	Commercial and Mortgage Banks (a)	BFA (b)	Total	Total in Real 1962 Colones		
1980	468	290(c)	758	280	2,480	841
1981	521	354(c)	875	305	2,106	787
1982	639	334(c)	973	309	2,075	751
1983	593	311(c)	904	256	2,161	727
1984	577	364	941	237	2,320	751
1985	681	399	1080	226	2,611	743
1986	800	527	1327	202	3,969	720
1987	890	491	1381	185	3,198	735
1988	908	495	1403	161	3,801	728
1989	1,174	678	1852	183	3,767	731
1990	912	617	1529	122	4,599	785

Sources: (a) BCR, Revista Trimestral, Julio/Sept 1990, Oct/Dic 1990, Ago/Sept 1986, Enero/Marzo 1988.

(b) BFA, Memoria (Varios anos) and information from Gerencia de Creditos.

(c) Checchi y Co. (1985)

(d) Saldos al fin del ano

(e) estimate.

contracted exaggerates the amount of credit needed in any given sector because loans of short duration may be contracted several times in the course of a year for the same purpose.

- FEDECREDITO loans are not broken down in the same way as those reported by the

BCR or BFA. FEDECREDITO loans are usually to cooperatives, which then allocate the credit to different crops. Since money is fungible, it is not possible to determine what is being financed by a loan to a co-op.

- Credit reported by INAZUCAR would have to be examined closely to determine whether the amounts represented current credit or rollovers.

To itemize credit to agriculture would not add to this analysis, because without the information for past years, no relationship between credit and agricultural growth could be estimated. Since information on the demand for credit<sup>1</sup> is not known, determining its supply is not useful. Finally, the current reform of the formal financial system in El Salvador (as described in Section 2.1.5) is incompatible with the way agricultural credit has been offered in the past. Furthermore, many features of the formal financial system that will emerge are not yet known.

The prospects for increased credit for agriculture from the formal financial sector are not promising. The new central bank law and the philosophy guiding reforms in the banking system determine that the BCR is no longer a source of financing for any sources of credit; any subsidies will be transparent; there will no longer be directed credit programs and the market will determine the terms of credit.<sup>2</sup>

The approach being taken to financial reform is incompatible with the way agricultural credit has been determined in the past, where credit has been directed and subsidies have been hidden behind low interest rates and high default rates. Commercial banks, now in the process of privatization, are unlikely to risk their newfound solvency on loans to agriculture, except to

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<sup>1</sup> The demand for credit cannot be determined by asking whether enough credit is available. People almost always say credit is inadequate, even when lines of credit are open and unused. Frequently they mean that there is insufficient subsidized credit. To determine the need for credit, examine all reasonable investments that may be made. Then calculate rates of return for those investments, allowing for risk. If risk-adjusted rates of return for some potential investments are significantly higher than market rates of interest for similarly risky investments, and those investments are not being made for lack of capital, then there is unmet demand for credit. No analysis of this kind has been made for agriculture in El Salvador.

<sup>2</sup> Uncertainty about how banking system reform will be resolved is heightened by inconsistency between what the reforms are supposed to be and actions taken during the reforms. For example, a memorandum from MIPLAN to Mike Wise, dated September 30, 1991, and its attachment, delivers the policy matrix associated with the second tranche of El Salvador's SAL with the World Bank. Among the "commitments" for the second tranche are the unification of all rediscount rates offered by the BCR at the reference interest rate used to control commercial bank rates. The document states that the relevant interest rate will be 19 percent. A second commitment is that no new lines of special credits will be established through the BCR using domestic resources.

On October 8, 1991, an announcement appeared in San Salvador's newspapers about a new rediscount line at the BCR. The line will be to rediscount agricultural credits extended during the 1991/92 crop year to make up for potential losses due to the drought. Terms of repayment will be over four years at an interest rate of 6 percent. This program totally conflicts with the philosophy guiding the financial sector reform and violates the commitments made under the SAL.

well-established clients. The BFA is not likely to step into the breach opened by the lack of activity of the commercial banks. Over 45 percent of the BFA's portfolio is non-performing or low-performing. Nathan (1989) indicates that only about one-third of BFA's portfolio is in satisfactory condition. BFA's net worth was put at about \$29 million in June 1991, but it is probably much less than that due to inadequate loan loss reserves. BFA was recapitalized as of July 1991, when the GOES assumed the institution's foreign debt. Nevertheless, given BFA's poor performance, the new capitalization must be considered temporary. Finally, the BCR is no longer the BFA's main source of financing.

A recent study (Cuevas, et. al, 1991) indicates that the informal financial sector is probably serving financial needs not served by the formal financial sector. Furthermore, the informal financial sector is probably serving many of the credit needs of rural areas and small enterprises. The study, based on a survey of 2,000 credit users and suppliers, points out that during the 1980s, as the amount of real loanable resources available in the formal sector declined, GDP did not decline. This implies that enterprises are obtaining resources from other sources, such as self-finance or the informal sector. Table 3.9 also shows that as real loanable resources for agriculture fell during the 1980s, agricultural output did not fall, a finding consistent with the Cuevas conclusion. The study concludes that resources flow from the formal financial sector through the informal sector to small and rural enterprises. It also argues that the formal and informal sectors are well integrated. In both sectors, interest rates<sup>1</sup> and other terms are similar. Only on issues of collateral do the formal and informal sectors differ significantly, but that is because the informal financial sector generally does not require collateral, while the formal sector does. Thus, while an examination of formal credit to agriculture reveals a decline in real lending with no apparent effect on output, it is possible the informal financial sector is supplying the credit needs of small farmers.<sup>2</sup>

The provision of agricultural credit by El Salvador's formal financial sector is clearly in disarray. There is now no reliable source of formal credit specifically for agriculture. Furthermore, there is no evidence that directing formal credit to agriculture had any positive impact. Nevertheless, agriculture has unique credit needs, and the agricultural sector can cost more to serve than other sectors. The informal sector is probably serving some agricultural credit demand. Meanwhile, given the nature of the country's current financial reforms, the delivery system for formal credit to the agricultural sector urgently needs redesign. Priority should be given to conducting a comprehensive review of available credit, credit needs, and the impact expected from reinvigorating credit provision.

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<sup>1</sup> An important aspect of informal sector interest rates was not examined in this study. The report points out that low-interest or no interest supplier credits are often extended. Suppliers offering such credits may charge an implicit interest rate in the form of a higher price for the goods that the suppliers' credits cover. These implicit interest rates were not examined.

<sup>2</sup> The Cuevas study did not directly examine credit to agriculture. It did distinguish between large and small enterprises and between rural and urban locations. It is probably safe to assume that credit that is available to small, rural enterprises is also available to small farmers.

### 3.5 Investments in Agriculture

The policy reforms have created a good environment for investment in agriculture. Total investments in agriculture, as measured by the BCR,<sup>1</sup> and deflated by the GDP deflator, declined until 1988, but the trend has reversed since then with growth of about 10 percent in 1989 and 23 percent in 1990 (Table 3.10 and Figure 3.12). The same trend is observed in a comparison of investments to GDP. The ratio of agricultural investments to GDP in constant 1962 prices grew from 0.19 percent in 1988, to 0.21 percent in 1989, to 0.25 percent in 1990.

Table 3.10

Investments in The Agricultural Sector, El Salvador, 1985 to 1990

Year	Investments			Percent Change	GDP 1962 Colones Million	Invest. GDP Ratio %
	Current Colones Million	GDP Deflator	1962 Colones Million			
1985	60.7	478.7	12.7		2,993.6	0.42%
1986	81.2	656.0	12.4	-2.4%	3,012.5	0.41%
1987	85.3	748.0	11.4	-7.9%	3,093.5	0.37%
1988	52.6	870.5	6.0	-47.0%	3,148.8	0.19%
1989	67.3	1,014.5	6.6	9.8%	3,177.0	0.21%
1990	101.9	1,249.8	8.2	22.9%	3,285.0	0.25%

Source: Central Bank of Reserve, 1991. "Revista Trimestral Enero - Febrero - Marzo 1991. San Salvador, p. 96.

Corroborating this trend are the investments in coffee. In the UCAPROBEX cooperatives, from 1987 to mid-1991 they have renovated, repopulated, and planted new area in over 5,700 manzanas. In 1990, they invested in 1,943 manzanas under a project financed by A.I.D., which was the largest amount for any year. They have done more with their own funds.

Members of the coffee cooperatives associated with UCAFES have had considerable

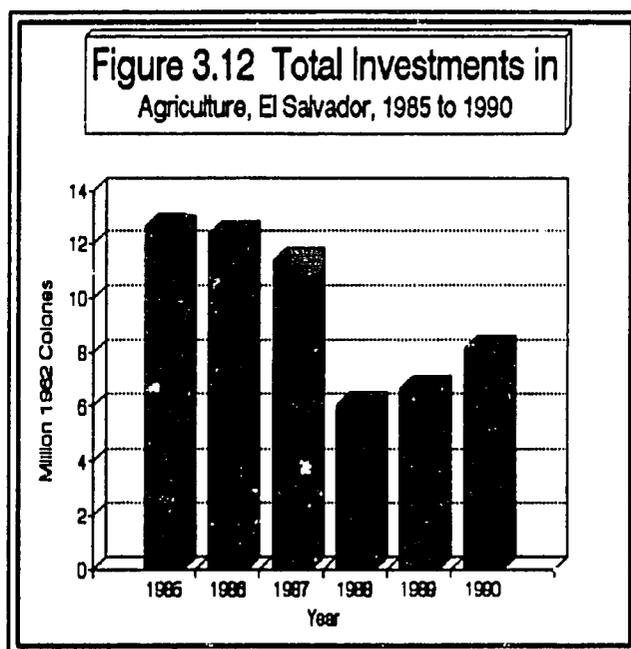
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<sup>1</sup> The CBR defines investments in agriculture as machinery and equipment used in agriculture.

investment activities. They have renovated a total of 1,700 manzanas, and planted 6,500 manzanas of new area in coffee. The years with the highest activity levels have been 1990 and 1991. This also has been through a USAID-funded project. Independent coffee growers have also invested in renovation and area expansion. Unfortunately, the exact information is not available. The Salvadoran Coffee Council does not maintain statistics on producers, and ISIC is in the process of becoming PROCAFE.

Noticeable investments are being made in cultivated shrimp production, which is a capital-intensive activity, requiring high investment per hectare. There are 167 has. of shrimp farming in construction or operation. Two new investors are conducting the final studies to operate an additional 160 has. Jorge Ramos of FUSADES indicated that more investors are interested, but they fear the guerrillas. A total of 7,000 has. are potentially available for shrimp farming, but the best areas are in the conflict zones.

The political situation thus constrains investments in capital-intensive agricultural projects. If the present economic policy environment is maintained, El Salvador should experience a strong flow of investments as the country reaches a peace settlement.



### 3.6 Labor Use

With the increase in agricultural activity, demand for labor increases due to the high labor intensity of Salvadoran agriculture. The estimate of growth in labor was done only for major crops that are significant to total output: coffee, basic grains, and sugarcane. No estimates were made for poultry and livestock, which are capital-intensive activities.

The estimates were based on production and area differences between the two-year period preceding June 1989, and the two-year period following it, as estimated in Table 3.3. Separate estimates were made for area growth and production growth. Unit labor use is fairly standard for harvest and is directly proportional to total harvest. However, pre-harvest labor use is a function of area. Incremental demand for total labor was estimated by adding the two sources of labor use: pre-harvest and harvest. The total growth in labor demand is estimated at 7.7 million person-days (Table 3.11).

Table 3.11

Increment in Labor Demand Due to Area and Production Growth, Mean (87/88-88/89) Versus Mean (89/90-90/91).

Crop	Growth		Unit Labor Use		Total Labor Use		
	Area	Production	Per Mz.	Harvest	Pre-Harv.	Harvest	Total
	Ths. Mz.	Ths. QQ	PD/Mz.	PD/QQ	Thousand Person Days		
Coffee	9.30	903.00	114	4.56	1,060	4,118	5,178
White Corn	(2.00)	181.20	39.5	0.66	(79)	120	41
Beans	(2.15)	171.65	43.5	1.73	(94)	297	203
Sorghum	1.35	1,422.30	28	0.75	38	1,067	1,105
Paddy Rice	3.10	282.93	66	0.41	205	116	321
Sugar Cane	11.85	847.55	35	0.55	415	466	881
TOTAL					1,545	6,183	7,728

Note: Production units for sugar cane are in short tons.

Source: Table 3.3 and MAG, General Directorate of Agricultural Economics, June 1991. "Costos Producción Granos Básicos, Productos Tradicionales de Exportación, Hortalizas y Otros Productos." San Salvador.

### 3.7 Agricultural Trade

This section covers several aspects of agricultural trade. First, the trade itself is described, with a focus on recent trends. Then changes that have occurred in the protection of agriculture are reported. Finally, despite some fundamental data difficulties, the impact of recent changes on the effective protection of agriculture are discussed.

#### 3.7.1 Recent Trade in Agricultural Goods

Traditional exports, particularly coffee but also cotton, sugar, and shrimp, have long dominated El Salvador's exports. About half of El Salvador's exports are coffee. Unfortunately, sharply declining prices following the suspension of quotas by the International Coffee Agreement in 1989 have had an adverse effect on El Salvador's coffee exports, which fell sharply in 1989 with the fall in prices but recovered slightly in 1990, due to increased yields. For the first six months of 1991, coffee exports are down about 18 percent to an annual level of approximately \$200 million.

Sugar and shrimp exports picked up well in 1990, but both are below their level of the

mid-1980s. Both were at relatively low levels in 1989, compared to former years, so one could not build the case that there had been a break with the past in 1990. For the five years preceding 1990, sugar exports averaged \$18.7 million; in 1990 they were \$18.5 million. Shrimp exports averaged \$14.7 million before 1990 and only \$12 million in 1990. However, compared to other exports, shrimp has varied greatly over the years. During the first half of 1991, both shrimp and sugar exports were up compared to the same period in 1989 and 1990. Note in Table 3.12 that while sugar exports for the first half of 1990 were \$18.3 million, they were up to \$24.6 million for the same period this year, already exceeding the total for 1990 by about one-third. Shrimp exports for the first half of 1989 and 1990 were about the same, standing at \$5.7 million and \$5.5 million, respectively. For the same period in 1990, shrimp exports were estimated at \$9.9 million, about an 80 percent increase over the same period for the past two years. These changes are encouraging and seem to portend a turnaround for the sugar and shrimp industries.

Table 3.12

Traditional Exports for First Half of Year 1989-90  
(\$ millions)

Product	1989	1990	1991
Coffee	196.6	173.4	142.5
Sugar	6.8	18.3	24.6
Shrimp	5.7	5.5	9.9
Cotton	1.0	1.3	0.5
TOTAL	210.1	198.5	177.5

SOURCE: BCR, Indicadores Economicos de Corto Plazo, Junio de 1991

Agricultural exports other than those of traditional goods are doing relatively well, although they remain only a small part of all non-traditional exports (about 15 percent). Table 3.13 presents non-traditional exports, distinguishing between animal-related products (meat, live animals), plant-related products (e.g. grains) and processed foods.<sup>1</sup> The most striking feature of Table 3.13 is the robust growth of non-traditional, but agricultural-related exports, especially processed foods and plant-related products. Processed foods are up over 80 percent from the 1987 level, but the increase does not seem to be related to the change in policies in 1989. The growth, which began before 1989, continues. Plant-related exports declined to 1989 and then

<sup>1</sup> These distinctions were not made in data before 1987.

increased very sharply in 1990; the timing of this change does correspond to the policy changes.<sup>2</sup> Animal-related exports seem to have stagnated.

Table 3.13  
Non-traditional Exports, El Salvador, 1987-1990  
(\$millions)

Product	1987	1988	1989	1990
Animal-related	6.0	5.2	6.4	6.3
Plant-related	14.8	13.9	12.6	21.6
Processed foods	9.2	13.9	14.7	17.1
Others	174.5	182.3	211.0	240.0
<b>TOTAL</b>	<b>204.5</b>	<b>215.3</b>	<b>244.7</b>	<b>285.3</b>

SOURCE: BCR, Informe Trimestral, various issues.

Agricultural, non-traditional exports have continued to do well in 1991, as shown on Table 3.14 for the first six months of 1991. The table also separates non-traditional exports into trade with the Central American regional market and trade with other areas. Exports of these items have continued to expand, and for the first time an increase in animal-related exports is noticeable (though the base is still small). These agricultural exports are up by over 100 percent to the CACM and over 26 percent to areas outside the region, compared to the same period in 1990. There are regional differences. Exports of these goods to Central America are largely processed foods, which are up by 122 percent compared to the comparable period in 1990. Exports to areas outside Central America are mostly unprocessed grains (much of that sesame), which have risen by 19.5 percent over last year. The export performance for non-traditional agricultural items clearly outpaces that for other non-traditional exports, which were up slightly to the CACM, but had dropped by 9 percent to other markets.

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<sup>2</sup> Sesame exports are a major contributor to growth in plant-related exports. Only \$4 million in 1988, they topped \$11 million in 1990.

Table 3.14

Non-Traditional Exports, El Salvador, January-June 1990, 1991  
(\$ thousands)

Description	Jan-June 1990	Jan-June 1991	% change
Outside Central America	57.2	58.2	1.8
Agricultural goods	17.5	22.1	26.4
Animal-related	1.4	2.9	112.0
Plant-related	13.8	16.5	19.5
Processed Foods	2.3	2.7	17.0
Others	39.7	36.1	-9.0
Within Central America	83.7	94.1	12.3
Agricultural Goods	5.8	12.1	109.0
Animal-related	.8	1.3	74.0
Plant-related	.4	.6	42.0
Processed foods	4.6	10.2	122.0
Other	79.0	81.9	5.0
<b>TOTAL NON-TRADITIONAL</b>	<b>141.0</b>	<b>152.3</b>	<b>8.0</b>

SOURCE: BCR Informe de Comercio Exterior, Enero-Junio/91

### 3.7.2 Tariff Changes and Agricultural Commodities

Tariff changes for agricultural products have followed approximately the same pattern as tariff changes for other items. Tariffs above a ceiling have been lowered to the ceiling; tariffs below a floor have been raised to the floor. Since June 1989, the ceiling has been lowered to 30 percent and the floor raised to 5 percent. As can be seen in Table 3.15, agricultural commodities now fall within this range. Before June 1989, the tariff range was from 0 percent to 80 percent, but with many commodities falling in the 40-60 percent range. Now most commodities fall in the 20-30 percent range.

Table 3.15  
 Import Tariffs on Agricultural Products, El Salvador (Sept. 1991)

Product	Tariff (%)	Trade Controls	Tariff Prior to June 1989
Yellow corn	20	price band	30
White corn	20	permit: X, M	30
Sorghum	20	PL 480	20
Rice	20	price band	30
Wheat	5	PL 480	0
Wheat flour	10	PL 480	30
Soybean cake	20	PL 480	30
Beans	5	permit: X, M	30
Vegetable oils	25-30	PL 480	5
Animal Fats and oils	25-30	PL 480	40
Poultry	25		30
Milk	5-25	permit: M	5-35
Prepared meats	25		30
Fresh and frozen vegetables	25		30-60
Fruit	30		30-60
Fruit and vegetables preserved in vinegar or acid	30		60
Fruit and vegetables preserved without vinegar or acid	20		60
Sugar	30	permit: X	45
Glucose	5		10
Cacao	20-25		15-30
Chocolate	30		70
Pastas and breads	30		60
Breakfast cereals	20		60
Vinegar	25		60
Tobacco	30		50-80

Sources: SIECA, ARANCEL CENTROAMERICANO DE IMPORTACIONES, (Marzo de 1988); Resolución núm. 155, Ministerios de Economía y Hacienda, (Junio de 1991).

Prior to June 1989 virtually all the commodities shown in Table 3.15 were subject to import and export licensing and/or prohibitions. Indeed, trade in these commodities was chaotic. The lists of commodities subject to control were changed often and it was difficult to discover the status of any single good. Furthermore, trade in many goods subject to licensing was in fact prohibited. Noted in the table are the types of controls now used, if any. Few commodities are

now subject to controls. Only a few still require licenses. The main kinds of controls are prohibitions associated with PL-480.

Of special interest are the commodities subject to a variable tariff, determined by a *price band*. The price band concept is designed to give farmers reasonably clear signals as to what prices for their crops will be, without removing market forces. To determine any given price band, one observes the weekly international commodity price (represented by the fob price at a major U.S. port) over the preceding year. The 15 highest and 15 lowest prices are disregarded; the remaining prices establish an international price range. That price is adjusted for insurance, freight and intermediation margins to arrive at a range of prices in the Salvadoran market. A price band is established as this range of prices plus normal tariffs. The price band is announced prior to the planting season and fixed for the next year. If the international price rises above the originally determined price range then the Salvadoran price rises above the price band. In that case, the tariff is progressively dropped. When the internal price falls below the band the tariff is progressively increased. Operation of the price band provides some insurance to farmers that price fluctuations will be dampened. Currently, only rice and yellow corn are subject to a price band. Sorghum is scheduled for a band in the next crop season and white corn is being considered for a band.

Changes in tariffs for imported agricultural inputs are consistent with the general thrust of tariff changes on agricultural goods. Of primary interest are agricultural chemicals. Pesticides and herbicides had been protected with tariffs ranging from 5-20 percent, depending on the degree of processing. Simple chemicals that could be mixed to make fertilizers (or the other agricultural chemical inputs) carried 1 percent duty, whereas the finished products carried higher duties, usually 20 percent. The reforms have set a uniform duty of 20 percent on all agricultural chemicals, whether they are finished products or their components. Since most tariffs for agricultural goods are also set at 20 percent, the tariff structure is now generally neutral regarding resource allocation within agriculture.

### 3.7.3 Effective Protection in Agriculture

This section reports on some of the likely changes in protection for agricultural production that have occurred as a result of tariff changes and other macroeconomic policy reforms. The concept of *effective protection* is a complicated one and its calculation is fraught with difficulties. Therefore, details of effective protection analysis for El Salvador are relegated to Appendix B. Readers familiar with the concept, or needing only conclusions, may skip the appendix without loss of continuity. In the appendix, approximations of effective protection are estimated for corn and rice production. Unfortunately, measures of effective protection are extremely demanding in their data needs and these demands cannot be met very well in El Salvador. Nevertheless, some conclusions about effective protection are probably justified:

- Changes in the tariff structure have decreased effective protection for agriculture, but they still provide effective protection of about 20 percent.

- Real devaluation of the exchange rate since 1989 has been insufficient to offset the reduced effective protection offered by tariff changes. However, real devaluation, which is soon expected, should correct this problem.
- There does not appear to be a marketing and distribution problem affecting the effective protection felt at the farm level. The privatization of distribution and marketing seems to be working adequately.
- Low and perhaps even negative protection for corn production is probably caused by something that artificially depresses the price to farmers. Failure to allow corn exports when corn prices are particularly low could be a factor.
- Tariff rates on commodities which can substitute for each other should be the same. If not, then the commodity carrying the lower duty will be substituted for the commodity paying the higher duty, depressing the price of the latter. The effective rate of protection (ERP) for the commodity paying the higher duty will be depressed and the ERP for the commodity paying the lower duty will not be raised.
- A corollary of the preceding point is that if two commodities are close substitutes and one is subject to the price band, then both should be subject to the price band. For example, since corn is subject to a price band, sorghum should be too.
- The duty-free importation of PL-480 commodities will depress the prices of commodities for which they are either direct or close substitutes. The duty-free importation of PL-480 wheat probably contributes significantly to the low ERP for El Salvador's corn producers.

### 3.8 Sources of Future Growth

The main potential for growth in Salvadoran agriculture is productivity gains. There is some potential for area expansion in what used to be cotton fields. However, El Salvador has the highest population density in Central America and has little room for expansion.

All crops currently produced in El Salvador have low yields. Most farmers are illiterate and operate on a small scale. They have little knowledge of how to manage more sophisticated crops with a higher cash value.

Water use and pricing policies should play an important role in improving productivity. The Government has a plan to transfer the irrigation districts to the users, but sizable investments are needed to make the irrigation systems more efficient. A critical policy in water use is the price charged for water. The price should not only cover marginal cost, but capital replacement as well, including the cost of managing the watershed. A policy of "right" water prices, however, should be charged not only to irrigation users, but to other users as well, including electricity and direct human consumption.

**In a setting of limited arable land, and soil degradation and loss, productivity gains should be the key objective of Salvadoran agricultural policy. With the right environment, production will shift to higher cash crops away from basic grains. The objective should change from supplying local food needs to increasing the contribution of agriculture to economic development.**

## 4. POLICY CONSTRAINTS AND DISTORTIONS

The comprehensive reforms pursued by the Cristiani administration have greatly improved the climate for economic growth in El Salvador. Problems that are prevalent elsewhere in Latin America have been eliminated in El Salvador in the past two and a half years. These include exchange controls and limited access to foreign exchange, non-market exchange rates, import licensing, import quotas, high import duties, price controls, high inflation, and constraints on remittances. Although considerable progress has been made in a relatively short period, some problems remain.

### 4.1 Persistent Macroeconomic Problems

The most pressing economic problems--low levels of investment, national savings, and taxation--are interrelated. Despite reforms that have improved the efficiency of the investment process, the levels of investment have not risen. The low level of public investment is a particular concern, especially given the deterioration in the country's physical infrastructure. To finance new investment in a non-inflationary way, more savings are needed. Public savings have increased recently, although they are still slightly negative. Furthermore, the increase was accomplished mainly by reducing expenditures, despite unmet needs in important social sectors such as housing, health, and education. The key to increasing public savings and spending in these areas is to increase tax revenues, which are currently low. Tax reform is essential. To increase private savings, proper incentives are needed. Macroeconomic stability, along with financial reforms and liberalized interest rates are needed. Specific economic problems are described below.

#### 4.1.1 Exchange Rates

The free exchange rate has appreciated in real terms over the past year, which inhibits exports and export-oriented investments and encourages imports. The appreciation of the exchange rate is caused by large inflows of dollars which seem to be related to interest rate rigidities and exchange rate expectations. Two observations are relevant. First, a formula has been devised by which to liberalize interest rates.<sup>1</sup> Interest rate policy establishes that real interest rates will be positive. It does not establish that interest rates will be market determined until full liberalization in January 1993.

Second, the prevailing current expectation is that exchange rates will be stable in the near term. This, combined with interest rates rigidity, induces an inflow of dollars from depositors and borrowers (see 2.2.2). Thus, the supply of dollars expands and the colon increases in value. Real appreciation of the colon over the past year has been about 14 percent, bringing it back to

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<sup>1</sup> The formula has been determined by negotiation with the World Bank and is part of the conditionality established under the SAL.

approximately the purchasing power that it had at the beginning of 1989.

This problem is compounded by the soon-to-be-privatized banks. Thus, not only are borrowers unenthusiastic about borrowing, but bankers are not motivated to lend.

The solution to this problem is twofold:

- First, limits on minimum interest rates should be removed. Indeed, the Government now has plans to fully liberalize interest rates by the beginning of 1993. This step should be accelerated. If lower limits were removed on deposit rates, rates would fall since banks already have excess liquidity. As deposit rates fell, fewer dollars would be brought into the country, and as the supply of dollars fell, the price of dollars in colones would rise. Some devaluation would begin. As devaluation began, expectations would change to anticipate further devaluation. Borrowers would then be more willing to borrow from the local banking system. Once the deposit rate fell, a larger spread would open between deposit and lending rates, which would give local bankers greater room to negotiate loan terms consistent with their taste for risk.
- Second, the Government should move swiftly to privatize the commercial banks. Officials of private banks would not have the same incentives as the current custodians of the public banks. Private bankers would have an incentive to respond more aggressively to the opportunities opened by the widened spread between deposit and lending rates.

#### 4.1.2 Trade

Import Tariffs. The present Government has made considerable progress toward a more unified tariff system. For tariff purposes, imports now fall into six categories, with a tariffs range of 5-30 percent. However, effective rates of protection are probably still high for some goods and there is probably a greater range in effective protection than in nominal protection. Higher tariffs are still charged on final consumer goods, particularly manufactured or processed goods, and lower tariffs fall on inputs or goods with minimal processing. Thus, effective protection is probably still high on manufactured goods.<sup>1</sup>

Originally, the trade reform plan for El Salvador was to eliminate all exemptions from tariffs and to seek a tariff range of 10-20 percent. This would have lowered effective protection considerably. However, plans have been changed to arrive at an eventual tariff range of 5-20 percent, which will perpetuate a higher level of effective protection. Furthermore, while most tariff exemptions have been eliminated, important ones still exist. Most importantly, exemptions still apply to public sector imports and autonomous public enterprises. Clearly, two steps should

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<sup>1</sup> Estimates of effective protection on manufactured goods were made in Loehr (1991). Those conclusions still generally apply.

be taken:

- First, the target range for tariffs should be narrowed to about what was originally planned (i.e. 10 to 20 percent). If possible, tariffs should be unified at a single rate (e.g. 15 percent), as was done in countries like Mexico and Chile.<sup>1</sup>
- Second, all exemptions from import duties should be eliminated, including those now enjoyed by the public sector and its enterprises.

Effective protection on many important agricultural products is probably negative. Negative protection occurs when inputs to production carry higher tariffs than outputs. Tariffs on the agricultural products listed below are at or close to the lower level (5 percent).

- Powdered milk
- Wheat
- Wheat flour
- Corn flour
- Corn gluten
- Sorghum
- Beans

Meanwhile, some imported inputs to agricultural production carry higher protection. Inputs include fertilizer, pesticide, and other agricultural chemicals. Thus, there is probably a bias against some agricultural production due to negative effective protection. If tariffs were unified, this bias would be eliminated.

Trade Restrictions. Trade regulations still apply in some situations, including the following:

- Import permits for sorghum, wheat, corn, rice, beans, milk, and the fibers used to make sacks (henequen, jute, and so forth)
- Sugar quotas
- Export restrictions on white corn, rice, and beans. (Exporters must request an authorization from the General Directorate of Agricultural Economics at the MAG. The experience has been that they almost always deny the permit, because a shortage may occur during the year.)
- Coffee export tax.

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<sup>1</sup> The main effect of a single rate is to eliminate biases in resource allocation, but it has a secondary benefit in the simplicity lent to customs administration. If there is only one tariff rate with no exemptions, then customs officials need to record only the entry of goods. If there are exemptions and different rates then officials must also decide whether goods are exempt and if they are not they must decide what rate category is applicable. The latter activities are probably a source of error in tax collection and graft.

Lack of a consistent policy promoting exports. The stated objective of the Government is to promote nontraditional exports to markets outside Central America. An important step was to install a "one-stop" export documentation process (CENTREX) at the BCR. However, many policy components are either not working or have overlooked important parts of the export promotion process. Observations on some aspects of the export promotion environment include the following:

- A drawback scheme has been instituted to rebate 8 percent of the fob value of exports of nontraditional products to exporters. However, the system is not working well. In 1990, when the program began, no budgetary allocation was available for the drawback. Approvals for payment were purposely slowed down to delay payments until 1991. Also, exporters qualifying for the rebate, are not approved unless they can demonstrate that they are current on all taxes.<sup>1</sup> Thus, payment of the rebate is tied to tax administration, rather than to export promotion. Finally, payment of the drawback must be approved by the *Corte de Cuentas*<sup>2</sup> before payment is made. The result of these problems has been that few rebates have been paid, delays in payment have been long, and few exporters have confidence that they will be able to collect the 8 percent, even if they should qualify.
- To qualify for the drawback, exporters must present proof that they have earned hard currency. Normally, export documentation provided by CENTREX constitutes this evidence. However, the BCR has determined that sales to FTZs or *recintos fiscales* (fiscal zones) do not earn hard currency and therefore are not qualifying exports. This ignores the fact that all production from an FTZ or *recinto fiscal* is exported and suppliers to FTZs and *recintos fiscales* from the local economy are in fact exporting their production, even if the export is indirect. This interpretation<sup>3</sup> not only goes against the spirit of the drawback law, but probably particularly injures small enterprises which may be entering export production by supplying FTZs and *recintos fiscales*.
- Exporters are required to sell their foreign exchange earnings to the commercial banking system, but they can own deposits in foreign exchange. This is one of the last vestiges of exchange control, but it can increase the cost of exporting. An exporter

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<sup>1</sup> The law creating the 8 percent drawback does not specify that those eligible must be current on taxes. The application of this rule was an internal judgement made in the Finance Ministry. To some exporters this appears to be an arbitrary way of managing the drawback system.

<sup>2</sup> The *Corte de Cuentas* is similar to the U.S. Government Accounting Office. The main difference is that the *Corte de Cuentas* exercises both prior control and ex post control over all transactions involving central government resources. Since the 8 percent drawback is paid out of general revenues, its payment comes under prior control of the *Corte de Cuentas*.

<sup>3</sup> Again, this is an interpretation of the law which could give exporters the impression of arbitrary enforcement.

who wants to build his deposits of hard currency must first sell his earnings to a commercial bank, then buy back the amount that he wishes to add to his holdings. This cost may be small, but it is unnecessary.

- One could question whether the Government should emphasize non-traditional exports to areas outside Central America when traditional exports are so important to foreign exchange earnings. A total of 73 percent of all exports are traditional products and only 16 percent are non-traditional products exported outside Central America. Thus, it would require about a 45 percent increase in non-traditional exports to areas outside Central America to be equivalent in foreign exchange to a 10 percent increase in traditional exports. The latter growth figure may be sustainable over the medium term; the former growth figure probably is not.

A recent attempt to form an export commission to attend to export needs seems to have failed. The idea behind the commission was to create an organization to promote exports countrywide and to intervene for exporters in their relationships with the public sector. Commissioners would be from both the public and the private sectors. The original concept was for the commission to be an independent entity answerable to the President. Unfortunately, the formation of the commission has succumbed to political manipulation. The Minister of Economy fought to place the commission in his ministry and the President apparently agrees. The private sector wanted the commission to be an independent body, maintaining that some of its difficulties originate in the Economics Ministry.<sup>1</sup> As a result, the private sector no longer supports the commission and the idea seems to be moribund.

#### 4.1.3 Fiscal Problems

Problems with the fiscal deficit continue. The original plan for 1991 specified a deficit for the consolidated central government of 0.9 percent of GDP after donations. In the July 1991 revision to the plan, this deficit target was increased to 1.6 percent of GDP. Without donations, the consolidated deficit target of 2.5 percent of GDP increased to 2.6 percent.<sup>2</sup>

Solutions to the fiscal deficit fall mainly on the tax system. Central government expenditures<sup>3</sup> have been tightly controlled. Expenditure cuts have fallen heavily on public

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<sup>1</sup> See comments in Section 4.1.5 on decision making.

<sup>2</sup> Recall that the target changes were made in early July. By the end of the first half of the year, both A.I.D. and the World Bank were supposed to have made disbursements on their ESF and SAL programs respectively. These disbursements were delayed until the second semester, although the changes in the targets seem to reflect an assumption that there would be a problem with disbursement, since target adjustments were larger with than without donations. Revisions in targets in mid-1991 include a reduction in expected donations from abroad by €329 million (\$41.1 M).

<sup>3</sup> The source for statements in this section is the BCR, "Programa Monetario Y Financiero, 1991-1992," (Julio de 1991), various pages.

investment. The original plan for 1991 called for public investment of 3.1 percent of GDP, and July revisions have cut that to only 2.3 percent. Targets for public savings were reduced from ₡245M to zero. Most public expenditure is for wages and salaries (about 50 percent) which are very inflexible, so cuts must come predominantly from other sources. Meanwhile, tax revenues have not expanded much despite efforts to streamline taxes and procedures.

During 1991, to mid-year, collections of income taxes are proceeding as planned, but collections of the stamp tax, import duties and coffee taxes are down<sup>1</sup>. Revisions of tax collection estimates are that these three taxes will yield ₡293 M less than planned, (about 6.7 percent of the tax yield that was planned). Revised tax revenue projections now rely upon "medidas a definir" (measures to be determined) for ₡170 M (about 4 percent) to meet overall targets.

Many projects are now ongoing to improve tax administration. With USAID support, a major three-year project is about to begin which will affect all aspects of tax administration. The program has in mind training, computerization, revised audit procedures and other means to improve administration. However, labor problems within the Ministerio de Hacienda (Finance Ministry) have obstructed similar programs in the past. Unions, opposed to the government, obstruct tax administration and present a major obstacle to any reform. Without a solution to these labor difficulties, little can be expected in terms of enhanced tax collection through improved administration.

#### 4.1.4 Financial Sector Problems

Privatization of the banking system is of great importance. Interest decontrol (point 4.1.1 above) combined with accelerated privatization will favor credit expansion to the private sector. In addition, as described in Section 3.4, credit to agriculture is in disarray, and it is unlikely that credit available to the sector can be regularized until privatization has run its course. The following steps are called for:

- The current schedule for privatizing the banking system should be rigorously adhered to. No extensions should occur.
- Plans should be made immediately for a course of action in the event that privatization cannot occur as planned.
- The rule setting 5 percent of shares as the maximum that can be held by any individual should be abandoned. If that is politically unfeasible, then the 5 percent rule

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<sup>1</sup> The target for collection of import duties is down by ₡149M (about 19 percent) below what was originally planned. This is probably due to a slowing in the rate of growth in imports of consumer items, which carry higher import duties (around 35 percent) and a surge of growth in imports of capital and intermediate goods which carry lower duties. The coffee tax target has been reduced by ₡56M (17 percent) due to lower than expected coffee prices. The stamp tax, which is the single most important tax, is now targeted to yield ₡88 M less (5.5 percent) than was originally planned.

should be suspended once the privatization process has gone on for two years.

- Interest rate liberalization should be accelerated. At a minimum, controls on deposit rates should be eliminated.

#### 4.1.5 Economic Policy Decisionmaking

The "rules of the game" for economic transactions in El Salvador are not always clear. While most of the arbitrariness of the 1980's has been eliminated, and most policies seem clear (e.g. on exchange rate determination or most import transactions), there are still occasions where ad hoc policy changes insert unnecessary uncertainty and risk into economic decisions. It should be the objective of policy makers to set policies that are not subject to the influence of special interests and that, once established, are not changed except in response to fundamental shifts in economic behavior. It is important that economic actors receive clear signals as to what the rules of the game are and to develop the confidence that the rules will not change during the game.

Observations on arbitrariness in policy application are themselves rather ad hoc. If in the course of a study like this one, an occasional arbitrary policy change were encountered not much could be made of it. However, when one learns of these time and again it becomes a source of concern. The Ministries of Economy and Finance often seem to be the sources of what appear to be arbitrary decisions. The recent controversy with the price band mechanism for yellow corn is an example of an arbitrary decision being made. Within the price band a tariff of 20 percent was to be charged on imports of yellow corn. The charge was to be set at the beginning of the crop cycle, in keeping with the philosophy of the price band to provide some price stability to farmers. While the issue of the price band was reported to have been discussed in the government's Economic Committee, the Ministers of Economy and Finance must make the ultimate decision. Whether or not the price band will be changed is less an issue than is the rumor that it might be changed in the middle of the crop year. Once the price band was announced in March 1991, changes in it before March 1992, should not even be up for discussion.

Other uncertainties continue to exist because decisions are subject to arbitrary judgements in several places in government. Licenses and permits to import and export several agricultural items (including inputs) hinge on decisions located in the Ministry of Agriculture. The Ministry of Economy makes decisions on such things as the granting of the 8 percent drawback on qualifying exports, prices for publicly provided services (eg. electricity and telephone service), establishment of free trade zones and others. One cannot fault decisions that are made for logical, legitimate reasons. Unfortunately, many decisions are still made without overriding guiding principles and appear arbitrary to economic actors. Surely this phenomenon raises perceived risk and dampens investment and production.

## 4.2 Agricultural Policy Reforms

Besides the persistent macroeconomic problems described above, there are some agricultural policy reforms needed to maintain and stimulate sustainable growth in the agricultural sector without reducing the production capacity of El Salvador's natural resources. Some of the policy reforms discussed in section 4.1 could be classified as agricultural policies, but it was decided to leave them under the macroeconomic context. Thus, they are not repeated in this section. The coffee export tax and export restrictions on corn and beans are examples.

The needed agricultural policy reforms have been classified into agricultural marketing, institutional reforms, agricultural credit, research and extension, and inputs supply.

### 4.2.1 Agricultural Marketing

There are several factors affecting the efficiency of agricultural markets. These are price controls in some commodities, lack of weight, measures and quality standards, and an information system that needs improvements (Ramos, 1991).

The Government has made much progress in liberalizing price controls in agricultural products. However, there still remain a few products with price controls. These are wheat flour, sugar, sugarcane, molasses, coffee, cotton seed, margarine, and shortening (34 g. size). The commodities with the greatest impact on local production are wheat flour, sugar, sugarcane, molasses and coffee. A discussion on these follows.

Importers pay a five percent tariff on wheat imports and ten percent on wheat flour. However, almost all of the wheat imports enter the country duty free through PL-480. This gives 10 percent direct protection to flour mills. There are only two flour mills in the country, and the Government fears oligopolistic behavior if the price is not controlled.

Wheat and wheat flour are substitutes for corn and rice. Bread is a direct substitute for corn tortillas. If the import duty is equalized for wheat and wheat flour, and a free market is allowed, there is no economic justification for controlling the price of wheat flour. In addition, the tariff on wheat and wheat flour should be the same as the tariff for corn and rice (20 percent), to let them compete in equal grounds, and protect local farmers from subsidies received by farmers in industrialized nations. A strong effort should be made to eliminate the tariff exemption from the FL-480 program.

As discussed in 2.2.1, sugar prices are controlled to provide a better price to producers, who apparently have political clout. The price of the local market is set above the world market, but below the U.S. market.

Some preliminary findings of another team conducting a study on the sugar industry reveal that the present structure of the sugar industry is unstable due to the market distribution

system and the sugarcane pricing policies.<sup>1</sup> The price of ₡115/S.T. paid to producers with a yield of 168.25 lbs./S.T. is equivalent to 0.68 colones per lb. of sugar, equal to US\$0.085/lb. World sugar prices are about US\$0.09/lb., which suggests a loss, when processing costs are added.

At the time this report was finished the sugar study had not been completed. This industry is complex, and the authors feel hesitant to make policy considerations without further knowledge. However, the preliminary findings suggest the need for some policy reforms and actions, including the design of a sugarcane pricing system that establishes the relationship between sugar prices and sugar content in the cane. This system should also consider marginal costs of sugar delivered to the world market.

The price control on molasses is to favor the livestock sector. However, non of the livestock products are controlled, and the price of this input should not be controlled either.

Processed coffee prices are fixed to provide a low price to low income consumers who buy this price controlled granules called coffee. This just provides a justification for coffee roasters to sell a very low quality product, whose price should be determined by the market. There is no justification to maintain a control on this product. However, locally consumed coffee is a small proportion of output that does not meet quality standards for exports; thus, producers don't complain. Apparently international donors don't complain either, and the GOES maintains the price control.

Standard weights, measures and quality are essential for the operation of an efficient market, where all the actors know exactly what the price is revealing, without having to speculate on conversion factors and product quality. El Salvador lacks a unified system of standards. Thus, the necessary studies should be initiated to make operational a system of standards for the marketing of major agricultural products. This system can be extended to other products in the future. This will require extensive training of the farmers, extension agents and marketing intermediaries.

The present price information system reports prices of several food products, at different stages of the commercialization channel. There is more information for some than others. This information needs to be expanded to include stocks, distribution volumes, input costs, cost of other factors of production, a larger number of products and qualities, and more sources of origin and final destiny of commercial flows. The frequency and timeliness of information gathering and dissemination should be increased as well.

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<sup>1</sup>USAID/El Salvador is funding a study on the sugar industry. The team members are John Young, Jork Sellschopp and Bill Motes.

#### 4.2.2 Institutional Reforms

This Government has initiated many institutional reforms and others need to be implemented. These include:

- Privatize the INAZUCAR sugar mills. Efficiency could be improved, and the risk of Government subsidies reduced. Sale proceeds would help reduce the Government deficit.
- Develop a plan to eliminate the input sales activities by BFA. This bank should concentrate its efforts on credit. The bank should be restructure to make it more autonomous and to improve its portfolio management and loan selection procedures.
- Continue with the privatization plan of IRA's facilities. The Government is moving in this direction.
- Transfer water districts' management to water users. An extensive training program should be lounged on irrigation management. Technicians at DIVAGRO have identified lack of knowledge in irrigation and drainage management as one of the constraints to developing export crops.

Besides these recommendations, there is a crying need to improve MAG. It needs a careful reorganization (many have been made in the past), but most of all, it needs an adequate budget. MAG's budget has been declining in real terms, while the demand for services has been increasing.

One additional institutional problem is statistical in nature. The base year for the national accounts is 1962. This is too old, and distorts estimation procedures of total agricultural output, when measuring the contribution of the agricultural sector to GDP. When the agricultural value added is estimated in 1962 colones, what the BCR does is to take the present production level and apply 1962 prices. This way, total agricultural value added in 1962 colones represents a measure of volume output. However, relative prices of commodities have changed significantly in 29 years, and there are new products that were not produced then. With this technical problem, the growth of the economy, measured in 1962 colones would probably be very different if a new base year were chosen.

Another problem with the national accounts is that the information system has not evolved to take into account significant production of the informal sector or of new products. The biggest problems exist in the poultry and livestock sectors. The statistics do not consider production in informal farms or homes. In the case of poultry this production is highly significant. The General Directorate of Agricultural Economics at the MAG should consider to include in the surveys, not only the stock of animals, but the production of eggs, chicken meat, milk, and meats from other animals that are not registered in slaughter houses.

When measuring prices, the CPI of December 1978 is already too old. The basket of goods and services has changed in this period, mainly due to the influence of Salvadorans living abroad, who continuously bring in small appliances and other goods not consumed before. The survey has already been conducted, and the results should be available fairly soon. This will improve the results of price analysis significantly.

Cost of production data published by the General Directorate of Agricultural Economics have problems. The team did not have time to examine the data gathering and estimation procedures, but a simple analysis showed producers having higher costs than production value, and that is unlikely. Cost of production statistics and analysis need revision.

#### 4.2.3 Agricultural Credit

The Government is taking steps in the right direction to privatize the banking system in El Salvador as discussed above. This move will increase efficiency in the financial system, allocating resources to the most productive sectors, and reducing the management margins of financial intermediaries. In the meantime there isn't an efficient market because the banks are government owned, and managers are just custodians until the banks are sold.

In the absence of a competitive financial market, agricultural credit should be closely monitored to determine constraints as they surface. The major concern is credit delivery to small isolated farmers. Small farmers know little about finance and banking, and commercial bankers know little about small farmers, and bankers are usually not interested in this market. Farmers need assistance in financial management as they need assistance in production technology.

This technical assistance to small farmers must be budgeted, to be included it in the regular extension activities. The specific method will depend on the extension methodology adopted. Extension agents could be taught farm financial management, or there could be a second type of extension agent called a credit agent, as it is done in some countries.

One additional measure suggested by Norton (July 1990) and shared by the authors is to develop a program for certificates of deposit that would enable farmers to receive credit for grain storage. This would provide an alternative for farmers to store grain and avoid selling at extremely low prices during harvest.

#### 4.2.4 Research and Extension

Low productivity is a key constraint to improving the performance of the agricultural sector in El Salvador. Nearly 50 percent of farmers in El Salvador have no formal education, over 80 percent are functionally illiterate, and only 6.5 percent received technical assistance in 1988 (McReynolds et al., 1989, p. i). Some of the farmers are grouped into cooperatives, but many operate their farms independently. These characteristics of Salvadoran farmers place a

heavy demand on extension services. CENTA and ISIC were leading research institutions prior to 1980, and have been declining since then.

It is essential to invest in research and extension institutions to generate and disseminate the technology needed to improve productivity and compete in the world market. Following are some of the recommended measures:

- Assist PROCAFE in adapting technology that increases productivity to Salvadoran conditions and disseminating it to producers.
- Study alternatives for improving CENTA. Farmers need technical assistance to improve productivity. Technology is changing rapidly, and farmers need to be up-to-date on improved production and marketing technology to be able to compete in an open, unprotected economic environment, receiving imports from subsidized farmers in developed countries. Studies are needed to determine the most efficient way to improve technical assistance to small farmers.
- The DIVAGRO research program should continue to receive support in adapting technologies for production of non-traditional agricultural products.

#### 4.2.5 Inputs Supply

Modern agriculture requires appropriate quantities of good quality inputs to assure the planned output, according to the production technology utilized. While all the inputs are important, seed is the one that elicits the greatest response (a shift in the production function). Cornelius Hugo, et al. (1991) just completed a study on the seed industry in which they examine the policy and non-policy constraints to the seed industry. Their major policy recommendation was to modify the present seed law to make it more of a facilitating tool that defines the specific area in which the government will exercise its authority. For more detail on other issues in the seed industry, refer to Hugo's study.

Unfortunately, no studies are available on other inputs. Since the production and marketing of each input is a task in and of itself, no policy recommendations can be made on other inputs.

#### 4.3 Infrastructure Investment

Many studies have documented the need to invest in infrastructure. The agricultural sector cannot compete with external sources without adequate infrastructure. Investment in infrastructure increases productivity, reduces cost, and improves marketing efficiency. The greatest needs are in irrigation and drainage, research facilities, and rural roads.

#### **4.4 Compensatory Policy**

Compensatory policies are designed to reduce the disproportionate burden imposed on lower income groups by the structural adjustment measures and other policy reforms. Following are the measures included in the Government plan:

- Provide complementary nutrition to deprived school-age children.
- Provide baby formula for babies in low-income families.
- Provide food stamps for the lowest income population.
- Revise the income complementary programs managed by the Fondo de Inversión Social (Social Investment Fund).

## **5. CONCLUSIONS AND RECOMMENDATIONS**

This section summarizes conclusions and recommendations. No attempt is made to repeat what was explained in the main parts of the study. Rather, when conclusions are noted, the section(s) from which they flow are noted.

### **5.1 Conclusions**

#### **5.1.1 Macroeconomic Policy**

Macroeconomic policy has been well conducted. Real growth in GDP is slow but higher than it has been in many years. Inflation has been reduced. The main problem remaining is the fiscal deficit, and the efficiency of tax administration is the key to increasing tax revenue and closing the fiscal gap. The AID-supported MOST project (Modernización del Sistema Tributario) is very important to continued fiscal progress. (Sections 1 and 4.1.3)

#### **5.1.2 Export Performance**

Export performance has been good except for coffee exports. Overall, exports are down in 1991, but non-coffee export revenues are up (Section 1). Agricultural exports other than coffee to both the Central American region and other areas are growing satisfactorily (Section 3.7).

#### **5.1.3 Imports**

Imports are also growing rapidly. However, the pattern of import growth is consistent with the kinds of reforms that have occurred in the structure of protection. The fastest growing categories of imports are intermediate and capital goods (Section 1). Imported agricultural inputs are one of the fastest growing import categories.

#### **5.1.4 The Exchange Rate**

The exchange rate has appreciated in real terms over the past year by as much as 14 percent (Sections 2.1.2 and 4.1.1). However, some appreciation at this stage in the exchange rate liberalization process is typical and real devaluation is inevitable given relative international inflation rates and freedom from exchange controls. Finally, nominal devaluation began in early October, 1991. Nothing should be "done" directly about the exchange rate or the exchange rate system.

#### **5.1.5 Interest Rate Reform**

Interest rate reform is the major cause of the exchange rate appreciation (Section 4.1.1). The formula for interest rate reform guarantees positive real rates rather than market rates.

Furthermore, the time periods set for positive real rates are too long. Interest rate reform should be accelerated.

#### 5.1.6 Inflation

Inflation has slowed from around 30 percent per year in 1989 to about 12-14 percent (Section 1). Food price changes have not moved adversely for the poor relative to the prices of other goods (Section 3.3). Indeed, food prices were moving adversely to the interests of the poor, relative to the prices of other goods, prior to June 1989, but this trend seems to have stopped.

#### 5.1.7 The Drought

The drought currently affecting El Salvador has had no noticeable effect on food prices. Food prices increased faster than prices of other goods. Indeed, food price increases in September 1991 were reportedly less for food than for other commodities (Section 3.3).

#### 5.1.8 Tariff Reform

Tariff reform has compressed tariffs to within a range of 5-30 percent. The target for eventual tariff reform is to create a range of 5-20 percent (Sections 2.1.3 and 4.1.2). This range is too wide, however. A single tariff rate of about 15 percent (depending on revenue expected) is preferable. The target range of 10-20 percent originally proposed may be reinstated. Exemptions from tariffs have been eliminated for many imports but important exceptions remain. Tariff exemptions still exist for autonomous public enterprises, the public sector, cooperatives, PL-480 commodities, and a few minor categories of imports. These exemptions should be eliminated.

#### 5.1.9 Export Promotion

Export promotion is weak (Sections 2.1.3 and 4.1.2). Several steps have been taken to promote exports, but they were not comprehensive and have been poorly administered (with the exception of CENTREX, which functions well).

#### 5.1.10 Agricultural credit

Agricultural credit delivery is in disarray (Section 3.4). The system through which agricultural credit had been channeled has depended on subsidized interest rates, directed credit lines, and access to central bank financing. Many, if not all the institutions channeling credit to agriculture are technically bankrupt (with the exception of BFA, which has recently had its foreign debt assumed by the BCR). There is no general indication that directed agricultural credit in El Salvador has had any impact on agricultural output. Agricultural credit as it has been administered in El Salvador is incompatible with reforms in the country's banking system, that are now underway. A full assessment of agricultural credit needs and a redesign of delivery

systems is called for.

#### 5.1.11 Banking reform

Banking reform is scheduled to run its course by about April 1993. Many aspects of the financial system that will evolve are now unknown. Any prolonging of banking system reform and privatization will prolong the difficulty for El Salvador to channel resources to agriculture and any other productive enterprises.

#### 5.1.12 Informal credit

Informal credit is probably meeting the credit needs of many small entrepreneurs, including farmers (Section 3.4). No attempt should be made to interfere with informal credit markets.

#### 5.1.13 Effective Rates of Protection

Effective rates of protection in agriculture have probably been reduced somewhat by changes in the tariff structure on agricultural goods and imported agricultural inputs. Nevertheless effective protection remains positive at about 20 percent for most commodities. Real exchange rate changes have partially offset the reduction in effective protection caused by tariff changes, but that offset has been only partial (Section 3.7.3 and Appendix B).

#### 5.1.14 Effective Rates of Protection in Agriculture Overall

Effective rates of protection in agriculture may still be adverse to production of some important crops such as corn. The reasons do not lie with tariffs and exchange rates. Rather, this problem is probably caused by a combination of administrative trade restrictions, differential duties on grains which are close substitutes for one another, and failure to have all substitute grains governed by the "price band". Also damaging are duty-free imports of PL-480 grain which either compete directly with national production or which are close substitutes for domestic grains (Section 3.7.3).

#### 5.1.15 Agricultural Output

Agricultural output has responded positively to the policy reforms. Agricultural value added was up 7.4 percent in 1990, mainly due to growth in coffee, basic grains, and sugarcane production (Section 3.1). Average production of the last two crop years was higher than the preceding two years for all major crops, except corn. Milk and egg production also increased in 1990 (Section 3.2).

#### 5.1.16 Real Producer Prices

Real producer prices behaved differently for each major product. Corn and sugarcane

were the only two crops that had higher real prices in crop year 1989/90, but these gains were lost in 1990/91. The other crops had lower prices in 1989/90, and their prices increased in 1990/91, but stayed about the same as the price levels of 1988/89. The price of coffee has decreased mainly due to international price declines. Beef prices are up, while milk and chicken meat prices are about the same, and egg prices are down (Section 3.2).

#### **5.1.17 Agricultural Investments**

Agricultural investments started to increase in 1989 and rose by 23 percent in 1990, although they had been declining previously (Section 3.5).

#### **5.1.18 Labor Demand**

Labor demand has increased in agriculture. It is estimated that rural employment has increased by about 7.7 million person-days since June 1989.

#### **5.1.19 Productivity**

The main source of growth in agricultural output has been productivity. Production gains have been due mainly to yield increases, rather than area expansion (Section 3.2). Productivity will also be the main source of future growth. El Salvador has little room for crop expansion (Section 3.8).

### **5.2 Recommendations**

The recommendations respond to the request on the scope of work that asks the contractor to "make recommendations to USAID regarding consistent steps for implementing further policy changes to alleviate identified constraints to sustainable agricultural sector growth." Thus, some recommendations are based on the analysis presented in previous sections, while others are based on constraints identified by observation, experience, or other studies. The major recommendations follow.

#### **5.2.1 Reform Tariffs on Imports**

Tariffs on imports should be reformed to fall within a narrower range than currently planned. Tariffs unified at a single rate such as 15 percent would be preferable. The range of 10-20 percent which was originally proposed for El Salvador would be acceptable. In the transition period, tariffs on agricultural products should be as high as possible to put local producers at the level of subsidized farmers in industrialized nations. Examples are wheat, wheat flour, soybeans, and other products.

#### **5.2.2 Eliminate Exemptions from Tariffs**

All tariff exemptions should be eliminated, including those to the public sector,

autonomous public enterprises, cooperatives, and those for the importation of commodities under PL-480.

### **5.2.3 Accelerate Implementation of Alternative Tax Systems**

Implementation of alternative tax systems should be accelerated to reduce the government deficit. This will allow a faster phase-out of the export tax on coffee, the only commodity with an export tax in El Salvador.

### **5.2.4 Study Demand for Agricultural Credit**

The demand for agricultural credit should be the object of a major study that assesses the nature of the demand and offers recommendations for a delivery system that is compatible with the privatized financial system now being installed.

### **5.2.5 Accelerate Privatization of the Banking System**

Privatization of the banking system should proceed without delay. Obstacles such as the "5 percent rule", should be eliminated and contingency plans developed describing what will be done to prevent delay. A delivery system for agricultural credit cannot be resolved as long as the banking system is in transition between public and private ownership.

### **5.2.6 Establish Export Commission**

An export commission similar to one considered earlier in 1991 should be established. Membership should include private and public sector representatives. It should be independent of any specific ministry and answerable to the president of the republic. Its purpose should be to promote a comprehensive export promotion policy and a unified approach to the administration of export promotion.

### **5.2.7 Accelerate Interest Rate Reforms**

The current plan is to free interest rates by January 1993. This step could be taken immediately.

### **5.2.8 Set Price Bands**

Price bands should be set for all commodities which are close substitutes for one another. A price band should be established for sorghum prior to the next crop cycle. Once price bands are announced, no changes should be made in the limits set by the band, nor in the rules governing its application. When domestic prices tend to move outside the band, imports or exports should be automatically allowed (subject to the preannounced tariff) without question.

### **5.2.9 Reform Sugarcane Pricing**

Sugarcane prices should be determined according to sugar content and not by weight as they are now.

### **5.2.10 Remove Price Controls**

Price controls should be removed for the remaining controlled commodities . Other self adjusting mechanisms should be adopted to let the market determine the equilibrium price. This would improve resource reallocation over the long run. Products still controlled include wheat flour, sugar, sugarcane, molasses, coffee, cotton seed, margarine, and shortening.

### **5.2.11 Establish Standards on Weights, Measures, and Quality**

Standards on weights, measures, and quality should be established to improve marketing of major agricultural products. A law and mechanisms are needed to establish such standards.

### **5.2.12 Improve Price Information System**

The price information system needs to include stocks, distribution volume, input costs, cost of other factor of production, and more products and qualities. In addition, information gathering and dissemination should be more timely.

### **5.2.13 Privatize Certain Government Facilities**

The INAZUCAR mills as well as the input sales activities of BFA, and IRA's facilities all need to be privatized. Management of water districts should be transferred to water users.

### **5.2.14 Reform Water Pricing**

Water prices should reflect the cost of managing and maintaining the water systems, as well as capital replacement on equipment and the resources required to manage and improve the watershed.

### **5.2.15 Support Research and Extension Activities**

Research and extension activities should be supported through assistance to PROCAFE, CENTA and DIVAGRO.

### **5.2.16 Reform the Seed Law**

Seed legislation should be drafted and approved to make the law more of a facilitating tool, that defines the specific area in which the government exercises authority. Seed imports should be liberalized to allow competition from outside markets.

#### **5.2.17 Update Base Year of National Accounts**

The base year for national accounts, which is still 1962, needs updating.

#### **5.2.18 Improve Statistical Reporting System**

The statistical reporting system needs to be improved to include poultry and livestock production from non-commercial growers. This would reflect the true contribution of the agricultural sector to the economy. The cost of production data needs improvements.

#### **5.2.19 Update CPI Base Year**

The CPI base year needs updating from 1978.

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**APPENDIX A**

**STATISTICAL TABLES**

Appendix Table A-1  
 Value Added of the Agricultural Sector at Current Prices, El Salvador, 1985 to 1990.  
 (Thousand Colones)

	Year					
	1985	1986	1987	1988	1989	1990
<b>AGRICULTURE</b>	1,992,472	3,238,938	2,401,447	2,782,423	2,522,016	3,991,722
<b>MAJOR EXPORT PRODUCTS</b>	1,508,035	2,688,295	1,838,101	1,809,105	1,514,579	1,877,705
Coffee	1,242,748	2,527,996	1,627,897	1,615,811	1,334,515	1,641,354
Cotton	112,726	38,879	48,018	54,429	24,423	27,805
Sugar Cane	152,561	121,420	162,186	138,865	155,641	208,546
<b>BASIC GRAINS</b>	301,334	356,581	338,453	713,657	708,172	950,256
Corn	186,358	226,062	331,326	366,544	477,175	527,762
Beans	28,521	48,109	(6,391)	194,188	95,382	225,034
Rice	38,372	32,390	28,779	63,635	46,667	50,270
Sorghum	48,083	50,020	(15,261)	89,290	88,948	147,190
Other Ag. Products	183,103	194,062	224,893	259,661	299,275	363,761
Panela	5,588	8,596	6,602	6,610	7,662	8,417
Tobacco	26,810	27,275	31,011	44,438	52,951	54,240
Cotton Seed	16,570	14,694	16,787	14,384	11,262	8,915
Henequen	12,996	17,776	28,130	23,017	29,159	30,780
Kenaf	1,300	1,978	3,863	3,587	4,871	5,912
Others (1)	119,839	123,743	138,500	167,625	193,370	255,497
<b>LIVESTOCK</b>	357,274	424,592	423,425	543,749	698,656	822,028
<b>FORESTRY</b>	43,000	55,900	61,500	65,700	69,000	76,744
<b>FISHERIES</b>	69,505	89,687	86,206	151,166	153,268	204,745
<b>BEE PRODUCTS</b>	12,648	15,447	15,910	19,927	20,782	23,106
<b>POULTRY</b>	135,685	144,365	209,887	237,878	303,231	280,619

Source: Banco Central de Reserva.

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Appendix Table A-2  
 Corn – Nominal Producer Prices, CPI, and Estimated Deflated Prices  
 Base: IPC: 1978 Index: January 1963 (¢/qq)

Month	Producer Nominal Prices		CPI		Real Price		Real Prices Index	
	1987	1988	1987	1988	1987	1988	1987	1988
January	33.74	34.47	381.55	454.37	8.84	7.59	0.76	0.65
February	34.38	33.69	384.18	460.59	8.95	7.31	0.77	0.63
March	35.96	35.01	395.49	473.10	9.09	7.40	0.78	0.64
April	36.96	35.30	408.68	486.45	9.04	7.26	0.78	0.63
May	37.81	39.63	413.02	496.15	9.15	7.99	0.79	0.69
June	39.65	45.54	418.50	507.08	9.47	8.98	0.82	0.78
July	41.54	47.94	421.77	523.95	9.85	9.15	0.85	0.79
August	41.31	45.70	423.28	506.08	9.76	9.03	0.84	0.78
September	33.91	44.69	428.03	509.20	7.92	8.78	0.68	0.76
October	31.56	41.21	435.37	519.77	7.25	7.93	0.63	0.68
November	32.79	36.02	441.87	521.56	7.42	6.91	0.64	0.60
December	34.14	34.26	446.96	528.53	7.64	6.48	0.66	0.56
	1989	1990	1989	1990	1989	1990	1989	1990
January	36.20	50.20	531.70	668.16	6.81	7.51	0.59	0.65
February	40.45	55.00	542.10	682.82	7.46	8.05	0.64	0.70
March	46.00	64.40	550.50	701.97	8.36	9.17	0.72	0.79
April	48.70	70.00	553.05	717.45	8.81	9.76	0.76	0.84
May	51.60	69.10	561.45	723.21	9.19	9.55	0.79	0.82
June	56.81	74.00	585.26	738.30	9.71	10.02	0.84	0.87
July	57.50	74.43	595.82	741.90	9.65	10.03	0.83	0.87
August	66.05	62.00	605.21	730.30	10.91	8.49	0.94	0.73
September	51.95	53.15	610.26	736.92	8.51	7.21	0.73	0.62
October	47.15	52.45	623.75	748.96	7.56	7.00	0.65	0.60
November	44.90	54.50	631.35	764.28	7.11	7.13	0.61	0.62
December	46.75	59.00	652.55	778.76	7.16	7.58	0.62	0.65
	1991	1992	1991	1992	1991	1992	1991	1992
January	64.42		793.48		8.12		0.70	
February	65.73		795.86		8.26		0.71	
March	67.20		807.41		8.32		0.72	
April	69.90		811.57		8.61		0.74	
May	70.56		825.61		8.55		0.74	
June	73.24		832.42		8.80		0.76	
July	76.92		852.40		9.02		0.78	
August	83.57							
September (*)	76.28							

(\*) Preliminares

Source: UAP.

Appendix Table A-3  
 Beans – Nominal Producer Prices, CPI, and Estimated Deflated Prices  
 Base: IPC: 1978 Index: January 1983 (¢/qq)

Month	Producer Nominal Prices		CPI		Real Price		Real Prices Index	
	1987	1988	1987	1988	1987	1988	1987	1988
January	95.80	157.04	381.55	454.37	25.11	34.56	0.80	1.10
February	93.46	181.93	384.18	460.59	24.33	39.50	0.77	1.25
March	95.55	236.75	395.49	473.10	24.16	50.04	0.77	1.59
April	93.94	302.78	408.68	486.45	22.99	62.24	0.73	1.98
May	91.66	305.44	413.02	496.15	22.19	61.56	0.70	1.96
June	95.22	387.26	418.50	507.08	22.75	76.37	0.72	2.43
July	83.65	375.95	421.77	523.95	19.83	71.75	0.63	2.28
August	82.90	180.94	423.28	506.03	19.59	35.75	0.62	1.14
September	80.20	195.70	428.03	509.20	18.74	38.43	0.60	1.22
October	95.70	200.64	435.37	519.77	21.98	38.60	0.70	1.23
November	135.96	152.94	441.87	521.56	30.77	29.32	0.98	0.93
December	145.19	151.92	446.96	528.53	32.48	28.74	1.03	0.91
	1989	1990	1989	1990	1989	1990	1989	1990
January	156.20	180.15	531.70	668.16	29.38	26.96	0.93	0.86
February	184.15	179.10	542.10	682.82	33.97	26.23	1.08	0.83
March	184.90	193.80	550.50	701.97	33.59	27.61	1.07	0.88
April	180.15	202.35	553.05	717.45	32.57	28.20	1.03	0.90
May	180.00	214.00	561.45	723.21	32.06	29.59	1.02	0.94
June	183.15	240.00	585.26	738.30	31.29	32.51	0.99	1.03
July	172.21	249.00	595.82	741.90	28.90	33.56	0.92	1.07
August	177.98	257.00	605.21	730.30	29.41	35.19	0.93	1.12
September	175.75	279.40	610.26	744.80	28.80	37.51	0.91	1.19
October	178.30	279.35	623.75	748.96	28.59	37.30	0.91	1.18
November	174.95	220.00	631.35	764.28	27.71	28.79	0.88	0.91
December	175.00	233.75	652.55	778.76	26.82	30.02	0.85	0.95
	1991	1992	1991	1992	1991	1992	1991	1992
January	243.82		795.86		30.64		0.97	
February	251.30		793.48		31.67		1.01	
March	267.70		807.41		33.16		1.05	
April	280.60		811.57		34.57		1.10	
May	290.35		825.61		35.17		1.12	
June	305.40		832.42		36.69		1.17	
July	319.55		852.40		37.49		1.19	
August	314.11							
September (*)	299.94							

(\*) Preliminaries

Source: UAP.

Appendix Table A-4  
Sorghum – Nominal Producer Prices, CPI, and Estimated Deflated Prices  
Base: IPC: 1978 Index: January 1983 (¢/qq)

Month	Producer Nominal Prices		CPI		Real Price		Real Prices Index	
	1987	1988	1987	1988	1987	1988	1987	1988
January	27.47	36.33	381.55	454.37	7.20	8.00	0.80	0.89
February	28.68	34.54	384.18	460.59	7.47	7.50	0.83	0.83
March	29.81	35.19	395.49	473.10	7.54	7.44	0.84	0.83
April	30.58	38.88	408.68	486.45	7.48	7.99	0.83	0.89
May	31.07	39.83	413.02	496.15	7.52	8.03	0.84	0.89
June	33.95	45.21	418.50	507.08	8.11	8.92	0.90	0.99
July	37.24	51.79	421.77	523.95	8.83	9.88	0.98	1.10
August	36.70	51.67	423.28	506.08	8.67	10.21	0.96	1.14
September	36.77	52.76	428.03	509.20	8.59	10.36	0.96	1.15
October	34.97	54.12	435.37	519.77	8.03	10.41	0.89	1.16
November	37.61	s.d.	441.87	521.56	8.51	s.d.	0.95	0.00
December	38.34	38.96	445.96	528.53	8.58	7.37	0.95	0.82
	1989	1990	1989	1990	1989	1990	1989	1990
January	31.00	42.90	531.70	668.16	5.83	6.42	0.65	0.71
February	30.90	42.40	542.10	682.82	5.70	6.21	0.63	0.69
March	32.20	47.70	550.50	701.97	5.85	6.80	0.65	0.76
April	35.00	48.65	553.05	717.45	6.33	6.78	0.70	0.75
May	38.05	48.05	561.45	723.21	6.78	6.64	0.75	0.74
June	39.40	50.90	585.26	738.30	6.73	6.89	0.75	0.77
July	44.51	53.00	595.82	741.90	7.47	7.14	0.83	0.79
August	47.17	55.65	605.21	730.30	7.79	7.62	0.87	0.85
September	51.15	52.35	610.26	744.80	8.38	7.03	0.93	0.78
October	45.67	52.00	623.75	748.96	7.32	6.94	0.81	0.77
November	47.65	55.90	631.35	764.28	7.55	7.31	0.84	0.81
December	43.62	54.90	652.55	778.76	6.68	7.05	0.74	0.78
	1991	1992	1991	1992	1991	1992	1991	1992
January	51.90		793.48		6.54		0.73	
February	50.50		795.86		6.35		0.71	
March	51.45		807.41		6.37		0.71	
April	54.40		811.57		6.70		0.75	
May	54.02		825.61		6.54		0.73	
June	53.93		832.42		6.48		0.72	
July	58.85		852.40		6.90		0.77	
August	65.16							
September (*)	69.72							

(\*) Preliminary  
Source: UAP.

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Appendix Table A-5  
Rice - Nominal Producer Prices, CPI, and Estimated Deflated Prices  
Base: IPC: 1978 Index: January 1983 (¢/qq)

Month	Producer Nominal Prices		CPI		Real Price		Real Prices Index	
	1987	1988	1987	1988	1987	1988	1987	1988
January	37.33	60.62	381.55	454.37	9.78	13.34	0.56	0.77
February	35.00	57.57	384.18	460.59	9.11	12.50	0.53	0.72
March	39.10	70.08	395.49	473.10	9.89	14.81	0.57	0.86
April	40.12	75.66	408.68	486.45	9.82	15.55	0.57	0.90
May	42.12	74.35	413.02	496.15	10.20	14.99	0.59	0.87
June	52.00	73.58	418.50	507.08	12.43	14.51	0.72	0.84
July	s.d.	74.79	421.77	523.95	0.00	14.27	0.00	0.82
August	s.d.	66.29	423.28	506.08	0.00	13.10	0.00	0.76
September	s.d.	68.48	428.03	509.20	0.00	13.45	0.00	0.78
October	s.d.	44.73	435.37	519.77	0.00	8.61	0.00	0.50
November	s.d.	39.74	441.87	521.56	0.00	7.62	0.00	0.44
December	s.d.	35.91	446.96	528.53	0.00	6.79	0.00	0.39
	1989	1990	1989	1990	1989	1990	1989	1990
January								
February	46.30	49.90	531.70	668.16	8.71	7.47	0.50	0.43
March	55.00	54.00	542.10	682.82	10.15	7.91	0.59	0.46
April	48.50	47.30	550.50	701.97	8.81	6.74	0.51	0.39
May	55.10	51.04	553.05	717.45	9.96	7.11	0.58	0.41
June	40.30	52.30	561.45	723.21	7.18	7.23	0.41	0.42
July	41.85	54.80	585.26	738.30	7.15	7.42	0.41	0.43
August	40.80	60.98	595.82	741.90	6.85	8.22	0.40	0.47
September	40.00	56.30	605.21	730.30	6.61	7.71	0.38	0.45
October	46.85	64.05	610.26	736.92	7.68	8.69	0.44	0.50
November	44.35	64.40	623.75	748.96	7.11	8.60	0.41	0.50
December	43.55	66.00	631.35	764.28	6.90	8.64	0.40	0.50
DICIEMBRE	48.30	67.00	652.55	778.76	7.40	8.60	0.43	0.50
	1991	1992	1991	1992	1991	1992	1991	1992
January	106.20		793.48		13.38		0.77	
February	128.00		795.86		16.08		0.93	
March	128.00		807.41		15.85		0.92	
April	110.00		811.57		13.55		0.78	
May	106.85		825.61		12.94		0.75	
June	113.55		832.42		13.64		0.79	
July	112.04		852.40		13.14		0.76	
August								
September (*)	108.32							

(\*) Preliminares

Source: UAP.

Appendix Table A-6  
 Corn – Nominal Producer Prices, El Salvador, Crop Years 87/88 to 90/91.  
 Simple and Weighted Averages  
 (Colones/qq)

Month	Crop Year			
	87/88	88/89	89/90	90/91
August	41.31	45.70	66.05	62.00
September	33.91	44.69	51.95	53.15
October	31.56	41.21	47.15	52.45
November	32.79	36.02	44.90	54.50
December	34.14	34.26	46.75	59.00
January	34.47	36.20	50.20	64.42
February	33.69	40.45	55.00	65.73
March	35.01	46.00	64.40	67.20
April	35.30	48.70	70.00	69.90
May	39.63	51.60	69.10	70.56
June	45.54	56.81	74.00	73.24
July	47.94	57.50	74.43	76.92
Average	37.11	44.93	59.49	64.09
Percent Change		21.1%	32.4%	7.7%

WEIGHTED PRICES

August	3.97	4.39	6.34	5.95
September	3.05	4.02	4.68	4.78
October	8.08	10.55	12.07	13.43
November	14.62	16.06	20.03	24.31
December	3.33	3.34	4.56	5.76
January	0.17	0.18	0.25	0.32
February	0.06	0.08	0.10	0.12
March	0.00	0.00	0.00	0.00
April	0.04	0.05	0.07	0.07
May	0.12	0.15	0.21	0.21
June	0.09	0.11	0.15	0.15
July	0.08	0.09	0.12	0.12
Average	33.61	39.03	48.57	55.22
Percent Change		16.1%	24.4%	13.7%

Source: Appendix Table A-2.

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Appendix Table A-7  
 Beans – Nominal Producer Prices, El Salvador, Crop Years  
 87/88 to 90/91, Simple and Weighted Averages.  
 (Colones/qq)

Month	Crop Year			
	87/88	88/89	89/90	90/91
August	82.90	180.94	177.98	257.00
September	80.20	195.70	175.75	279.40
October	95.70	200.64	178.30	279.35
November	135.96	152.94	174.95	220.00
December	145.19	151.92	175.00	233.75
January	157.04	156.20	180.15	243.82
February	181.93	184.15	179.10	251.30
March	236.75	184.90	193.80	267.70
April	302.78	180.15	202.35	280.60
May	305.44	180.00	214.00	290.35
June	387.26	183.15	240.00	305.40
July	375.96	172.21	249.00	319.55
Average	207.26	176.91	195.03	269.02
Percent Change		-14.6%	10.2%	37.9%

WEIGHTED PRICES				
August	4.56	9.95	9.79	14.14
September	0.57	1.39	1.25	1.98
October	6.08	12.74	11.32	17.74
November	95.85	107.82	123.34	155.10
December	5.94	6.21	7.16	9.56
January	0.97	0.97	1.12	1.51
February	7.70	7.79	7.58	10.63
March	5.56	4.35	4.55	6.29
April	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00
June	0.00	0.00	0.00	0.00
July	21.24	9.73	14.07	18.05
Average	148.47	160.95	180.17	235.01
Percent Change		8.4%	11.9%	30.4%

Source: Appendix Table A-3

**Appendix Table A--8**  
**Sorghum -- Nominal Producer Prices, El Salvador, Crop Years**  
**87/88 to 90/91. Simple and Weighted Averages**

Month	(Colones/qq)			
	Crop Year			
	87/88	88/89	89/90	90/91
August	36.70	51.67	47.17	55.65
September	36.77	52.76	51.15	52.35
October	34.97	54.12	45.67	52.00
November	37.61	46.54	47.65	55.90
December	38.34	38.96	43.62	54.90
January	36.33	31.00	42.90	51.90
February	34.54	30.90	42.40	50.50
March	35.19	32.20	47.70	51.45
April	38.88	35.00	48.65	54.40
May	39.83	39.05	48.05	54.02
June	45.21	39.40	50.90	53.93
July	51.79	44.51	53.00	58.85
Average	38.85	41.26	47.41	53.82
Percent Change		6.2%	14.9%	13.5%

WEIGHTED PRICES				
August	0.58	0.81	0.74	0.87
September	0.09	0.13	0.13	0.13
October	2.01	3.11	2.63	2.99
November	2.27	2.81	2.87	3.37
December	10.02	10.18	11.40	14.35
January	20.16	17.21	23.81	28.80
February	1.39	1.25	1.71	2.04
March	0.00	0.00	0.00	0.00
April	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00
June	0.00	0.00	0.00	0.00
July	0.38	0.33	0.39	0.44
Average	36.90	35.82	43.68	52.99
Percent Change		-2.9%	21.9%	21.3%

Source: Appendix Table A--4

Appendix Table A-9  
Rice – Nominal Producer Prices, El Salvador, Crop Years  
87/88 to 90/91. Simple and Weighted Averages  
(Colones/qq)

Month	Crop Year			
	87/88	88/89	89/90	90/91
August		66.29	40.00	56.30
September		68.48	46.85	64.05
October		44.73	44.35	64.40
November		39.74	43.55	66.00
December		35.91	48.30	67.00
January	60.62	46.30	49.90	106.20
February	57.57	55.00	54.00	128.00
March	70.08	48.50	47.30	128.00
April	75.66	55.10	51.04	110.00
May	74.35	40.30	52.30	106.85
June	73.58	41.85	54.80	113.55
July	74.79	40.80	60.98	112.04
Average	69.52	48.58	49.45	93.53
Percent Change		-30.1%	1.8%	89.2%

WEIGHTED PRICES

August		1.67	1.01	1.42
September		24.60	16.83	23.01
October		11.83	11.73	17.03
November		6.18	6.77	10.26
December		0.40	0.54	0.74
January	0.48	0.37	0.40	0.85
February	0.00	0.00	0.00	0.00
March	0.00	0.00	0.00	0.00
April	6.15	4.48	4.15	8.94
May	7.08	3.84	4.98	10.17
June	0.00	0.00	0.00	0.00
July	0.00	0.00	0.00	0.00
Average		53.37	46.40	72.43
Percent Change			-13.0%	56.1%

Source: Appendix Table A-5.

Appendix Table A-10  
 Corn – Producer Prices Deflated by the 1978 CPI,  
 El Salvador, Crop Years 87/88 to 90/91. Simple  
 and Weighted Averages  
 (1978 Colones/qq)

Month	Crop Year			
	87/88	88/89	89/90	90/91
August	9.76	9.03	10.91	8.49
September	7.92	8.78	8.51	7.21
October	7.25	7.93	7.56	7.00
November	7.42	6.91	7.11	7.13
December	7.64	6.48	7.16	7.58
January	7.59	6.81	7.51	8.12
February	7.31	7.46	8.05	8.26
March	7.40	8.36	9.17	8.32
April	7.26	8.81	9.76	8.61
May	7.99	9.19	9.55	8.55
June	8.98	9.71	10.02	8.80
July	9.15	9.65	10.03	9.02
Average	7.97	8.26	8.78	8.09
Percent Change		3.6%	6.3%	-7.9%

WEIGHTED PRICES				
August	0.94	0.87	1.05	0.82
September	0.71	0.79	0.77	0.65
October	1.86	2.03	1.94	1.79
November	3.31	3.08	3.17	3.18
December	0.75	0.63	0.70	0.74
January	0.04	0.03	0.04	0.04
February	0.01	0.01	0.02	0.02
March	0.00	0.00	0.00	0.00
April	0.01	0.01	0.01	0.01
May	0.02	0.03	0.03	0.03
June	0.02	0.02	0.02	0.02
July	0.01	0.02	0.02	0.01
Average	7.68	7.52	7.75	7.30
Percent Change		-2.1%	3.0%	-5.8%

Source: Appendix Table A-2.

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Appendix Table A-11  
 Beans – Producer Prices Deflated by the 1978 CPI,  
 El Salvador, Crop Years 87/88 to 90/91. Simple  
 and Weighted Averages  
 (1978 Colones/qq)

Month	Crop Year			
	87/88	88/89	89/90	90/91
August	19.59	35.75	29.41	35.19
September	18.74	38.43	28.80	37.51
October	21.98	38.60	28.59	37.30
November	30.77	29.32	27.71	28.79
December	32.48	28.74	26.82	30.02
January	34.56	29.38	26.96	30.64
February	39.50	33.97	26.23	31.67
March	50.04	33.59	27.61	33.16
April	62.24	32.57	28.20	34.57
May	61.56	32.06	29.59	35.17
June	76.37	31.29	32.51	36.69
July	71.75	28.90	33.56	37.49
Average	43.30	32.72	28.83	34.02
Percent Change		-24.4%	-11.9%	18.0%

WEIGHTED PRICES				
August	1.08	1.97	1.62	1.94
September	0.13	0.27	0.20	0.27
October	1.40	2.45	1.82	2.37
November	21.69	20.67	19.54	20.29
December	1.33	1.18	1.10	1.23
January	0.21	0.18	0.17	0.19
February	1.67	1.44	1.11	1.34
March	1.18	0.79	0.65	0.78
April	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00
June	0.00	0.00	0.00	0.00
July	4.05	1.63	1.90	2.12
Average	32.74	30.58	28.09	30.52
Percent Change		-6.6%	-8.1%	8.6%

Source: Appendix Table A-3

Appendix Table A-12  
 Sorghum – Producer Prices Deflated by the 1978  
 CPI, El Salvador, Crop Years 87/88 to 90/91.  
 Simple and Weighted Averages.  
 (1978 Colones/qq)

Month	Crop Year			
	87/88	88/89	89/90	90/91
August	8.67	10.21	7.79	7.62
September	8.59	10.36	8.38	7.03
October	8.03	10.41	7.32	6.94
November	8.51	8.89	7.55	7.31
December	8.58	7.37	6.68	7.05
January	8.00	5.83	6.42	6.54
February	7.50	5.70	6.21	6.35
March	7.44	5.85	6.80	6.37
April	7.99	6.33	6.78	6.70
May	8.03	6.78	6.64	6.54
June	8.92	6.73	6.89	6.48
July	9.88	7.47	7.14	6.90
Average	8.34	7.66	7.05	6.82
Percent Change		-8.2%	-8.0%	-3.3%

WEIGHTED PRICES				
August	0.14	0.16	0.12	0.12
September	0.02	0.03	0.02	0.02
October	0.46	0.60	0.42	0.40
November	0.51	0.54	0.46	0.44
December	2.24	1.93	1.75	1.84
January	4.44	3.24	3.56	3.63
February	0.30	0.23	0.25	0.26
March	0.00	0.00	0.00	0.00
April	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00
June	0.00	0.00	0.00	0.00
July	0.07	0.06	0.05	0.05
Average	8.19	6.77	6.63	6.76
Percent Change		-17.3%	-2.0%	1.9%

Source: Appendix Table A-4

Appendix Table A-13  
 Rice – Producer Prices Deflated by the 1978 CPI,  
 El Salvador, Crop Years 87/88 to 90/91. Simple  
 and Weighted Averages.  
 (1978 Colones/qq)

Month	Crop Year			
	87/88	88/89	89/90	90/91
August		13.10	6.61	7.71
September		13.45	7.68	8.69
October		8.61	7.11	8.60
November		7.62	6.90	8.64
December		6.79	7.40	8.60
January	13.34	8.71	7.47	13.33
February	12.50	10.15	7.91	16.08
March	14.81	8.81	6.74	15.85
April	15.55	9.96	7.11	13.55
May	14.99	7.18	7.23	12.94
June	14.51	7.15	7.42	13.64
July	14.27	6.85	8.22	13.14
Average	14.28	9.03	7.32	11.74
Percent Change		-36.8%	-19.0%	60.4%

WEIGHTED PRICES

August		0.33	0.17	0.19
September		4.83	2.76	3.12
October		2.28	1.88	2.27
November		1.18	1.07	1.34
December		0.08	0.08	0.10
January	0.11	0.07	0.06	0.11
February	0.00	0.00	0.00	0.00
March	0.00	0.00	0.00	0.00
April	1.26	0.81	0.58	1.10
May	1.43	0.68	0.69	1.23
June	0.00	0.00	0.00	0.00
July	0.00	0.00	0.00	0.00
Average		10.26	7.29	9.47
Percent Change			-29.0%	30.0%

Source: Appendix Table A-5.

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#### Effective Protection in Agriculture

The concept of effective protection is designed to distinguish between protection based on the price of finished commodities and that placed on the production process. The important distinction is between nominal protection (the extent to which domestic prices differ from pure market determined prices) and effective protection, which is defined as the extent to which domestic value added differs from value added when measured in market determined prices. Since pure market-determined prices are rarely observable in developing countries, they are measured by proxy, by using international or world prices to represent prices determined in free markets. The nominal rate of protection (NRP), expressed as a percent, is defined as follows:

$$\text{NRP} = \frac{\text{DP} - \text{IP}}{\text{IP}} * 100$$

where: DP = Domestic Price  
IP = International Price

The effective rate of protection (ERP), expressed as a percent, is defined as follows:

$$\text{ERP} = \frac{\text{DVA} - \text{IVA}}{\text{IVA}} * 100$$

where: DVA = Domestic value added  
IVA = Value added at international prices

The distinction between the two concepts is important because most production involves the incorporation of some imported inputs, along with some local production activity, into a final product. When protection is provided to final products, it raises the price of intermediate inputs contained in them. Since protection is normally intended to encourage productive activity, one should measure the price advantage that protection gives to the activity, not to the final produce. Failure to account for the incorporation of imported inputs distorts the view of how productive activity is affected. An example clarifies the distinction.

Table B-1 assumes that some internationally tradeable good is available in international markets at \$100. Let's call it *corn*. Corn could be imported or a country could import some of the inputs to corn (call them *fertilizers*) and produce corn domestically. It is assumed in the example that the fertilizers could be imported at a cost of \$20. Fertilizers are readily available to either domestic or international producers. Thus, the international value added (IVA) of the corn production process is \$80. Assume for the moment that when corn or fertilizers are

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imported, duties are charged on them. Assume that the nominal rates of protection are 30 percent on corn and 15 percent on fertilizers. These are represented in column 3 of Table 3.16. The effect of the duties on both corn and fertilizers are shown on domestic prices in the righthand column. Domestic producers face a corn price of \$130 and pay \$23 for their fertilizers. Their value added in corn production is therefore \$107. Furthermore:

$$\text{ERP} = \frac{107 - 80}{80} * 100 = 33.7 \text{ percent}$$

The ERP exceeds the NRP because the nominal protection on the final product exceeds the nominal protection on inputs. For every \$1.00 of fertilizer imported, the producer pays \$1.15, but he sells the fertilizer (now incorporated in corn) for \$1.30, even though he is not a producer of fertilizer. Thus, the effective protection on producing corn is higher (in this case) than the nominal protection on corn per se.

Table B-1  
Example # 1 of Effective Protection

Description	International	Tariff	Domestic
Price of final good	100	.30	130
Inputs	20	.15	23
Value Added	80		107

If duty rates were changed, then the ERP would also change. Table B-2 shows the same example, but with a change in duties to 20 percent on both corn and fertilizer. IVA is still \$80, but the changes in tariffs have caused a change in DVA to \$96. Therefore:

$$\text{ERP} = \frac{96 - 80}{80} * 100 = 20.0 \text{ percent}$$

Note that  $\text{ERP} = \text{NRP}$ , which is always the case when nominal tariff rates are the same on both inputs and outputs. Also, the ERP has fallen from the first example. This is because the NRP on corn has been reduced and the NRP on fertilizers has been increased. If just the tariff on corn had been reduced to 20 percent, leaving the tariff on fertilizers at 15 percent, the ERP on corn would have been 21.25 percent.

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Table B-2  
Example # 2 of Effective Protection

Description	International	Tariff	Domestic
Price of final good	100	.20	120
Inputs	20	.20	24
Value Added	80		96

Several general observations about effective rates of protection can be made on the basis of these examples.

- When NRP on inputs are less than NRP on outputs, ERP on output exceeds NRP on output.
- The difference between effective and nominal protection depends only on the proportion of inputs to outputs. The smaller the proportion of imported inputs, relative to the value of final output, the less the divergence between ERP and NRP for any given tariff structure. In example #1, if corn were produced without any imported components, then ERP would be the same as NRP (30 percent).

The two preceding examples were given as if exchange rates make no difference. Indeed, they do not as yet. Table B-3 converts the example #1 at an exchange rate of ₡5/\$. International prices in colones is just the international price in dollars, multiplied by the exchange rate. The effective rate of protection is the same as it was in example #1, although this time it is measured in colones.

$$\text{ERP} = \frac{535 - 400}{400} * 100 = 33.7 \text{ percent}$$

Table B-3  
Example #3 of Effective Protection

Description	Int'l	Ex. Rate ₡/\$	Int'l in ₡	Tariffs	Domestic in ₡
Prices	100	5	500	.30	650
Inputs	20	5	100	.15	115
Value added			400		535

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While the exchange rate assumption makes no difference in the ERP, an important observation should be made. Domestic value added is ₡535. A domestic producer who can spend up to ₡535 on domestic resources to produce corn (in this example) can successfully compete with imported corn, given the structure of protection. If domestic resources exceeding ₡535 are needed to produce corn, then the country would be better off importing it.

Now assume that there is a real devaluation, which is one where the relative purchasing power of the domestic currency, in this example, the colon, is altered. A real devaluation decreases the currency's command over international resources without changing its command over domestic resources. For example, if there were a real devaluation of the hypothetical colon, from ₡5/\$ to ₡6/\$, then, by definition, the colon commands 20 percent less in international markets while commanding the same resources domestically. Example #4 in Table B-4, shows what would happen.

Table B-4  
Example #4 of Effective Protection

Description	Int'l	Ex. Rate ₡/\$	Int'l in ₡	Tariffs	Domestic in ₡
Prices	100	6	600	.30	780
Inputs	20	6	120	.15	138
Value added			480		642

The reader can confirm that the ERP is the same as it was before, 33.7 percent. The important change is the number of colones that a producer may now spend on domestic resources to produce corn. Since DVA is now ₡642, anyone who can spend up to that amount to produce corn can compete with imported corn. Recall that before the "real devaluation," one required no more than ₡535 spent on domestic resources to be competitive; now one is allowed up to ₡642. After real devaluation, some producers who were uncompetitive at ₡5/\$, may now be competitive because the new exchange rate allows more domestic resources to be spent on corn production while remaining competitive. In economic jargon, the real devaluation has shifted the terms of trade in favor of tradeable (corn) and against non-tradeable (domestic resources). Several observations are in order:

- Only a real devaluation has the effect described. If the exchange rate had devalued and the prices of domestic resources had risen by the same amount, nothing would have changed.

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- The assumption of one exchange rate or another has no effect on the ERP as long as the same exchange rate applies to all goods. Exchange controls that apply different exchange rates to inputs than to outputs change the ERP.

The above discussion has been conducted as if the only factors affecting effective protection are differential rates of tariffs. However, the principles illustrated are general ones. Anything altering the translation of international prices into domestic ones, as tariffs do in the above examples, will alter effective protection rates. Several important cases come to mind. First, any taxes that affect inputs differently than outputs will affect ERP. These taxes may apply to imported or domestic resources. Second, price controls affect the domestic value added that any given cost structure permits. In example #4, the competitive corn producer was allowed up to C642 to remain competitive. If price controls put a cap on corn prices at less than C642, then producers would be allowed less value added and their ERP would fall. Third, if "corn" is an export good, then export prohibitions lower the prices at which producers must sell, reducing their value added and therefore their ERP. Fourth, policies that cause internationally traded goods to be sold in the domestic market at below their full international value compress the range of domestic value added available to domestic producers. PL-480 sales and other forms of dumping have this effect. Fifth, any of the above-mentioned factors that affect any good within a set of close substitutes also affects the substitute goods.<sup>1</sup> Finally, ERP may be positive or negative.

Now shift to the specific case of El Salvador where changes have been made in a number of policies that could affect the ERP. Tariffs have changed and there has been a real devaluation since June 1989. Also, exchange controls, most import and export licensing, price controls and state marketing interventions have been eliminated. Together, these must surely have had an effect, but some measures will offset others, and to separate each effect is difficult. However, some changes can be deduced from the theoretical properties of effective protection described above. The data limitations in this exercise are extreme and so much of what can be said must be deduced indirectly. In what follows the effect of changes in the tariff structure and the exchange rate will be examined specifically. The conclusion will be reached that the changes in the tariff structure and exchange rate since June 1989 have had little effect on agriculture. Furthermore, the tariff structure implies modest and positive ERP for much of agriculture. If empirical studies show other than this, the cause must be other factors that may alter ERP.

The choice of the name "corn" for the hypothetical good in the above examples was not happenstance. MAG estimates show that about 20 percent of the inputs to corn production at the farm level, are imported.<sup>2</sup> At the farm level these inputs are mainly fertilizer and other

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<sup>1</sup> Affecting the price of wheat or wheat flour will affect the ERP for corn and corn flour, affecting rice will affect corn and beans, and so forth.

<sup>2</sup> MAG, DGEA, "Proyección Costos de Producción de Granos Básicos, 1991/92.

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agricultural chemicals. Approximately the same proportion applies to bean, sorghum, and rice production. Only the proportion, not the absolute amount, of imported inputs determines the effective protection. Before import duties were liberalized, corn, rice, and beans were all protected with a 30 percent import duty, and sorghum with a 20 percent duty. Since June 1991, all have been protected with a 20 percent duty except for beans which now carry a 5 percent duty.<sup>1</sup> The agricultural chemicals which make up most of the imported inputs had carried duties ranging from 5-20 percent. These have all been unified at 20 percent. Thus, Examples 1 and 2 above are reasonable representatives of corn and rice. Tariffs have been reduced from 30 percent to 20 percent on final products and tariffs on imported inputs have been raised from about 15 percent to 20 percent. The exchange rate had been at ₡5/\$ prior to June 1989, and a real devaluation of about 8 percent has occurred since. An 8 percent real devaluation, given the prices of mid-1989, would have yielded an exchange rate of about ₡5.4/\$.<sup>2</sup>

The effect of the change in tariff structure alone would be as shown between Examples 1 and 2. The effective rate of protection inherent in the tariff structure alone was about 33.7 percent before the tariff reforms and fell to about 20 percent thereafter. Other studies have shown the ERP to be substantially different from this figure (see Norton and Llort, 1990) and for agricultural commodities the ERP has been reported as negative. This observation implies that factors other than the tariff structure were strongly affecting the ERP. At the old exchange rate of ₡5/\$, domestic value added in corn production would have been ₡535 for each \$100 worth of corn produced before the tariff changes and ₡480 after.<sup>3</sup> Thus, the amount of domestic resources allowed for competitive corn production fell by ₡55, or about 10 percent, due to changes in the tariff structure alone. If we then convert Example #2 to colones at ₡5.4/\$, representing the real devaluation that has occurred, the amount of domestic resources allowable to remain competitive rises from ₡480 to ₡518, an 8 percent increase. The net effect of the combination of tariff and real exchange rate changes alone is that the domestic resource costs which a producer can incur and still remain competitive in corn production have fallen from ₡535 to ₡518 for each \$100 worth of corn produced. This is a drop of about 3 percent. In sum, corn producers are probably slightly worse off than they were before, but these calculations are very approximate. Corn producers have probably not been significantly affected by the combined effect of tariff and exchange rate changes.

The figures stated here approximate the effect of the tariff and exchange rate changes on corn, rice, and sorghum. For beans, while the proportion of imported inputs is about the same

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<sup>1</sup> The fact that corn and rice are affected by the price band; that PL-480 limits many grains, and that beans are subject to licensing does not affect the argument. The objective is to deal separately with the effect of tariffs alone.

<sup>2</sup> The example could have been couched in terms of 1991 colones and it would not have made any difference.

<sup>3</sup> Example 1, the pre-1989 case, was converted to colones in Example 3 where domestic value added was ₡535. Conversion of Example 2, representing the current tariff structure, would result in domestic value added of ₡480.

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as for other crops, the tariff changes have been different. The tariff on beans has been reduced from 30 percent to 5 percent. Calculations like the above would show that for beans, the ERP fell from about 33.5 percent, as it had been for the other crops, to about 1.5 percent. In terms of domestic resource costs of production, bean producers would be about 18 percent worse off than they were originally.

Nominal and effective rates of protection estimates for corn and rice appear in Table B-5. The data sources for the calculations and the calculations themselves appear at the end of this appendix. Two nominal rates of protection are shown, one for grain at the wholesale level (at the *transportista*) and the other at the farm level. Effective rates of protection are shown only at the farm level. The rates of protection are shown for two time periods. One is as of April 1991, and the other is for an average over the period, October 1990 to April 1991. The averaging process is designed to smooth out some of the fluctuations in grain prices, particularly at the local level.

Table B-5  
Nominal and Effective Protection for Corn and Rice (%)

Description	NRP April 1991	ERP April 1991	NRP Oct 1990- Apr 1991	ERP Oct 1990- Apr 1991
CORN				
Wholesale	3	n.e.	-3	n.e.
Farmer	-4	-10	-3	-9
RICE				
Wholesale	31	n.e.	22	n.e.
Farmer	93	156	61	102

n.e. = no estimate

SOURCE: See worksheets in the appendix to this section.

Effective protection in corn production appears to be slightly negative and changes little from April 1991 to the average of the preceding months. Why the rates of protection are negative is not clear, since the structure of tariffs should provide about 20 percent protection, both nominal and effective. Since both the farmer and the wholesaler receive less protection than one would expect and since their levels of protection receive differ little, it is probably not the distribution and marketing system that is causing the problem. Rather, one would suspect some general policy depressing the price of corn across the board, such as failure to allow corn exports.

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Protection in rice production appears to be very high at the farm level but about what one would expect at the wholesale level. Again, based on the structure of tariffs, one would expect nominal and effective rates of protection to be about 20 percent. At the wholesale level, for the averaged data, that is about what one observes (i.e. it is calculated to be 22 percent). Even the 31 percent nominal protection observed at the wholesale level in April is consistent with events. The domestic price of rice almost doubled in real terms between 1990 and 1991, with the big increase beginning in January 1991. One would expect that with a lag, rice imports would expand. Until they do, rates of protection will appear higher than normal, since prices will be higher. Rates of protection at the farmer level appear very high, with effective rates over 100 percent. Part of this high protection must be considered temporary since rice prices are extraordinarily high. As in the case of corn, there appears to be no reason to suspect a problem with the distribution and marketing system. Wholesalers receive about the level of protection that one would expect. Furthermore, the high prices for rice are accruing to the farmers, rather than to the intermediaries, which is precisely what one would want when prices are high and production increases called for.

How much confidence should we place in these calculations of effective protection? Unfortunately, not much. The data upon which they are based are probably poor. The main reason why no calculations were done for bean production was that the prices reported at the farm level were higher than those reported at the wholesale level, a logical impossibility. Unfortunately, the source that reported the bean prices (MAG) is also the source of the prices that were used for corn and rice. Other documents offer estimates of effective protection, but their data are either suspect or simply wrong.<sup>1</sup> Calculations of ERP require rather demanding data on the proportions of imported components in production and the international prices of those components. Documents available vary widely in what they report the proportions of imported components to be.<sup>2</sup> An examination of the data files used at the UAPA to estimate ERP indicated that much, if not most data needed to produce ERP calculations are unavailable.

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<sup>1</sup> See MAG, UAP Informe Trimestral de Coyuntura, October 1990. The international prices offered for agricultural chemicals do not reflect the tariffs charged on those chemicals. The tariffs implied by the data, for any given chemical are often many times what one would expect (e.g. 100 percent instead of 15 percent). Furthermore, the implied tariffs vary widely across years (1988-90), even though the tariff schedules changed little for these chemicals. In some cases imported chemicals were shown to cost less in El Salvador than on international markets. Finally, the prices assumed for grains do not correspond to actual prices in the time periods analyzed.

<sup>2</sup> For example, the MAG documents Informe Trimestral de Coyuntura, October 1990 and "Proyección Costos de Producción de Granos Básicos 1991/92," put the imported component of production costs for rice at between 8 percent and 29 percent of total costs. The figures for corn are 20 percent to 30 percent.

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### Calculations of Effective Rates of Protection for Corn and Rice

The worksheets that follow are constructed to make an approximate estimate of nominal and effective rates of protection for hybrid corn production and for rice. In both cases two observations were made. The first is for the month of April, 1991. The second is for a six month period, from October 1990, to April, 1991. Each worksheet is divided into 13 steps. The following states what was done at each step.

1. Cost to Transportista:  
From MAG, Informe de Coyuntura April, 1991
2. International price:  
From USDA, Foreign Trade of the U.S., May/June 1991.  
Tariff:  
In the cases of both corn and rice the current tariff is 20% of fob.  
Insurance and freight:  
Provided by MAG, UAPA, but confirmed by BCR information on grain shipments to El Salvador from US Gulf ports.  
Local costs:  
Provided by MAG, UAPA
3. Cost of imported grain exclusive of tariff: calculated
4. Price paid to farmer:  
From MAG, DGEA "Proyección: Costos de Producción de Granos Básicos 1991/92," (August, 1991)
5. Difference farmer and transportista: calculated
6. World price equivalent at farm gate:  
Calculated as the difference between the cost of imported grain exclusive of tariff (#3) and #5.
7. Estimates of imported components used on farms:  
From MAG source cited in #4. Of imported components used on farm there is some domestic content for distribution and so forth. The domestic component was assumed to be 25% as was approximately the case in Norton and Llort (1990)
8. Farmer value-added: calculated

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9. Imported inputs at world prices:  
75% of the imported component found in #7, reduced by the effect of the tariff (20%)
10. Value-added at world prices:  
World price at farm gate minus seed minus #9 and minus the domestic component of imported inputs (ie. 25% of imported inputs)
11. NRP at transportista:  
 $(\#1 - \#3) / \#3$
12. NRP at farm level:  
 $(\#4 - \#6) / \#6$
13. ERP at farm level:  
 $(\#8 - \#10) / \#10$

Worksheet: Effective protection on hybrid corn production as of April, 1991

1. Cost to Transportista = ¢ 75/qq
2. International price \$109.38/MT  
Tariff 21.88  
Insurance and freight 25.10  
Local costs 46.72  
Total \$203.08/MT or ¢ 81.23/qq
3. Cost of imported corn exclusive of tariff = ¢72.48/qq
4. Price paid to farmer = ¢ 60.90/ qq
5. Difference farmer and transportista = ¢75 - ¢60.90 = ¢9.10
6. World price equivalent at farm gate = ¢72.48 - ¢9.10 = ¢63.38
7. MAG estimates of non-seed imported inputs = ¢18.04; seed = 1.75; domestic component of non-seed imported inputs = 25%
8. Farmer value-added = ¢ 60.90 - 18.04 - 1.75 = ¢ 41.11
9. Imported inputs at world prices =  $.75(\text{¢}18.04)/1.2 = \text{¢}11.27$

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10. Value-added at world prices =  $63.38 - 11.27 - 4.51 - 1.75 = \text{¢}45.85$
11. NRP at transportista  $(75 - 72.46)/72.46 = .035$  or 3.5%
12. NRP at farm level =  $(60.90 - 63.38)/63.38 = -.04$  or -4%
13. ERP at farm level =  $(41.11 - 45.85)/45.85 = -.10$  or -10%

Worksheet: Effective protection on hybrid corn production on average over the period October, 1990 to April, 1991

1. Cost to Transportista =  $\text{¢} 70.14/\text{qq}$
2. International price                      \$108.11/MT  
Tariff    21.62  
Insurance and freight                      25.10  
Local costs                                      46.72  
Total    \$201.55/MT or  $\text{¢} 80.62/\text{qq}$
3. Cost of imported corn exclusive of tariff =  $\text{¢}71.97/\text{qq}$
4. Price paid to farmer =  $\text{¢} 60.60/ \text{qq}$
5. Difference farmer and transportista =  $\text{¢}70.14 - \text{¢}60.60 = \text{¢}9.54$
6. World price equivalent at farm gate =  $\text{¢}71.97 - \text{¢}9.54 = \text{¢}62.43$
7. MAG estimates of non-seed imported inputs =  $\text{¢}18.04$ ; seed = 1.75; domestic component of non-seed imported inputs = 25%
8. Farmer value-added =  $\text{¢} 60.60 - 18.04 - 1.75 = \text{¢} 40.81$
9. Imported inputs at world prices =  $.75(\text{¢}18.04)/1.2 = \text{¢}11.27$
10. Value-added at world prices =  $62.43 - 11.27 - 4.51 - 1.75 = \text{¢}44.90$
11. NRP at transportista  $(70.14 - 71.97)/71.97 = -.026$  or -2.6%
12. NRP at farm level =  $(60.60 - 62.43)/62.43 = -.03$  or -3%
13. ERP at farm level =  $(40.81 - 44.90)/44.90 = -.09$  or -9%

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Worksheet: Effective protection on rice production as of April, 1991

1. Cost to Transportista = ¢ 227/qq
2. International price                      \$338/MT  
Tariff    68  
Insurance and freight                      25.50  
Local costs                                      70.16  
Total    \$501.66/MT or ¢ 200.66/qq
3. Cost of imported corn exclusive of tariff = ¢173.46/qq
4. Price paid to farmer = ¢ 110/ qq
5. Difference farmer and transportista = ¢227 - ¢10 = ¢117
6. World price equivalent at farm gate = ¢174 - ¢117 = ¢57
7. MAG estimates of non-seed imported inputs = ¢19.70; seed = 6.36; domestic component of non-seed imported inputs = 25%
8. Farmer value-added = ¢ 110 - 19.70 - 6.36 = ¢ 83.94
9. Imported inputs at world prices =  $.75(\text{¢}19.70)/1.2 = \text{¢}12.31$
10. Value-added at world prices =  $57 - 12.31 - 6.36 - 4.93 = \text{¢}33.40$
11. NRP at transportista  $(227 - 173)/173 = .31$  or 31%
12. NRP at farm level =  $(110 - 57)/57 = .93$  or 93%
13. ERP at farm level =  $(83.94 - 33.40)/33.40 = 1.56$  or 156%

Worksheet: Effective protection on rice production on average over the period October, 1990 to April, 1991

1. Cost to Transportista = ¢ 193/qq

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- |                        |                            |
|------------------------|----------------------------|
| 2. International price | \$300/MT                   |
| Tariff                 | 60                         |
| Insurance and freight  | 25.10                      |
| Local costs            | <u>70.16</u>               |
| Total                  | \$455.26/MT or ₱ 182.26/qq |
3. Cost of imported rice exclusive of tariff = ₱158.26/qq
  4. Price paid to farmer = ₱ 92/ qq
  5. Difference farmer and transportista = ₱193 - ₱92 = ₱101
  6. World price equivalent at farm gate = ₱158.26 - ₱101 = ₱57.26
  7. MAG estimates of non-seed imported inputs = ₱19.7; seed = 6.36; domestic component of non-seed imported inputs = 25%
  8. Farmer value-added = ₱ 92 - 19.70 - 6.36 = ₱ 65.94
  9. Imported inputs at world prices =  $.75(₱19.70)/1.2 = ₱12.31$
  10. Value-added at world prices =  $56.26 - 12.31 - 6.36 - 4.93 = ₱32.66$
  11. NRP at transportista  $(193 - 158)/158 = .22$  or 22%
  12. NRP at farm level =  $(92 - 57.26)/57.26 = .61$  or 61%
  13. ERP at farm level =  $(65.94 - 32.66)/32.66 = 1.02$  or 102%

## **APPENDIX C**

### **SCOPE OF WORK**

The contractor is responsible for conducting the following tasks, except as where otherwise noted or excepted by USAID/RDO:

- A. Based on current policies, existing reviews and other studies which document El Salvador's past, present and future policy agenda, the contractor will identify policy changes enacted since June 1989 which have impacted, positively or negatively, on the agricultural sector.
- B. The contractor will quantify, to the extent possible, the impact on agriculture of the macroeconomic and sector policies identified above. The relevant variables include, but are not limited to, production impacts, changes in the crop mix, relative prices received and paid by farmers, credit allocations to agriculture and interest rate impacts, rural capital formation, labor market trends, agricultural trade, changes in the sector's value added, etc.
- C. The contractor will assist USAID to identify remaining policies and distortions which constrain the performance of Salvadoran agriculture or impact adversely upon the natural resource base.
- D. The contractor will make recommendations to USAID regarding consistent steps for implementing further policy changes to alleviate identified constraints to sustainable agricultural sector growth.

## APPENDIX D

### LIST OF PERSONS INTERVIEWED

#### ASOCIACION NACIONAL DE LA EMPRESA PRIVADA

- Lic. Juan Hector Vidal, Director Ejecutivo.

#### ASOCIACION DE PRODUCTORES DE LECHE (PROLECHE)

- Joaquín Alegría.

#### BANCO CENTRAL DE RESERVA

- J. Roberto Orellana, Presidente.
- Mauricio Antonio Gallardo, Vicepresidente.
- Jose Carlos Bonilla, Segundo Vice Presidente.
- Dimas Ramirez Alemán, Jefe del Departamento de Cambios.
- M. Rebeca Flor, Jefa Centro de Trámites de Exportación.
- Ligia M. Aráuz de Rozas.
- Manuel Lopez Aquino
- Pedro Negrón, Asesor.

#### CENTRO DE INVESTIGACIONES TECNOLOGICAS Y CIENTIFICAS (CENITEC)

- Lic. Alexander Segovia, Director de Investigaciones Económicas y Sociales.

#### CONSEJO SALVADOREÑO DEL CAFE

- Lic. Eduardo Espipia, Gerente Estudios Económicos y Estadísticas Cafetaleras

#### FUNDACION SALVADOREÑA PARA EL DESARROLLO ECONOMICO Y SOCIAL (FUSADES)

- Ricardo Hill A., Presidente.
- Agustin Martinez, Director Programa de Diversificación Agrícola.
- Alvaro Ernesto Guatemala, Director Programa de Promoción a la Pequeña y Microempresa.
- Orlando Altamirano, Director Programa de Promoción de Inversiones y Desarrollo de Exportaciones.
- Lic. Jaime Acosta, Departamento de Estudios Macroeconómicos y Social
- Ing. Jorge Ramos, Gerente de Acuicultura, Programa de Diversificación Agrícola (DIVAGRO)
- Edwin Hernandez, DIVAGRO
- Roberto Arbizú, Encargado de Cucurbitáceas, DIVAGRO

#### INSTITUTO INTERAMERICANO DE COOPERACION PARA LA AGRICULTURA (IICA)

- José Lois
- Victor Revilla Calvo.

**MINISTERIO DE AGRICULTURA Y GANADERIA (MAG)**

- Jaime Mauricio Salazar Diaz, Vice Ministro.

**MAG - OFICINA DE PLANIFICACION AGRICOLA (ODEPA)**

- Mercedes LLort.

**MAG - UNIDAD DE ANALISIS DE POLITICAS AGROPECUARIAS (UAP)**

- Roberto Cañas, Analista.
- Enrique Córdoba, Director UAP.
- Ricardo Guevara.
- Edwin Aragón.
- Edgar Palencia.
- Jose Alfonso Arévalo

**MAG - DIRECCION GENERAL DE ECONOMIA AGROPECUARIA**

- Angel Vaquero.
- Francisco Banegas.
- Ramón Gutierrez.
- Manuel Vasques Ramos.
- Ernesto Serpas.

**MINISTERIO DE ECONOMIA - COMERCIO INTERNO**

- Beatriz de Ochoa.

**MINISTERIO DE PLANIFICACION Y COORDINACION DEL DESARROLLO ECONOMICO Y SOCIAL (MIPLAN)**

- José Roberto Salguero, Jefe de la Division de Incentivos Fiscales.

**MIPLAN - GRUPO ASESORO ECONOMIC Y SOCIAL (GAES)**

- Lic. Vilma de Calderón.
- Yolanda Mayora.

**SECRETARIA TECNICA DE FINANCIAMIENTO EXTERNO (SETEFE)**

- Eriberto Solano
- Julio Montes.

**USAID/EL SALVADOR**

- Dr. Ken Ellis, ANR
- Mike Wise, ANR
- Randy Peterson, EPA
- Lic. Jose Francisco Molina, EPA
- Ana Luz de Mena, ANR
- Maria Latino, ANR