

### **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.

.



H281

United States Department of Agriculture

Economic Research Service

Foreign Agricultural Economic Report Number 183





# **Dominican Republic**

# Factors Affecting Its Capacity to Import Food

H. Christine Bolling



DOMINICAN REPUBLIC: FACTORS AFFECTING ITS CAPACITY TO IMPORT FOOD. By H. Christine Bolling, International Economics Division, Economic Research Service, U.S. Department of Agriculture. FAER-183.

ABSTRACT The Dominican Republic's food imports from the United States (including soybeans, fats, and oils) could reach \$290 million by 1985, up substantially from \$167 million in 1980. The Dominican Republic's food import bill has increased more than twentyfold since 1960; soybeans, fats, and oils imports grew from \$2 million in 1970 to nearly \$55 million in 1980. Together, food, soybeans, fats, and oils imports from all sources should reach \$400 million by 1985. Substantial P.L.-480 aid from the United States had virtually no effect on commercial food imports. The United States accounted for 67 percent of the Dominican Republic's food imports in 1980, or 73 percent including P.L.-480 aid. Increased domestic production in the Dominican Republic will not likely displace future imports, due to the country's emphasis on growing crops it can successfully export.

Key words: Dominican Republic, food imports, income, prices, import policy, P.L.-480

ADDITIONAL COPIES Additional copies of this report may be ordered from:

National Technical Information Service Identification Section 5285 Port Royal Road Springfield, VA 22161

Ask for Dominican Republic: Factors Affecting Its Capacity to Import Food, and indicate whether you want paper copies or microfiche. Cost per paper copy is \$8.50; cost per microfiche copy is \$4.50 (prices subject to change). Enclose check or money order payable to NTIS. Or call (703) 487-4780.

ACKNOWLEDGMENTS The author acknowledges the following agricultural economists for their helpful comments on this research: Oswald Blaich, David Peacock, William Kost, Richard Nehring, Fausto Medina-Lopez, Luis Sanint, Myles Mielke, and Nydia Rivera-Suarez.

ii

SUMMARY	iv
INTRODUCTION	1
FOOD IMPORTS	1
FACTORS AFFECTING FOOD IMPORTS	4
FUTURE CAPACITY TO IMPORT FOOD	15
REFERENCES	17
APPENDIX A METHOD AND ESTIMATION PROCEDURES	19
APPENDIX B TABLES	21

¢,

The Dominican Republic's food imports from the United States (including soybeans, fats, and oils) could reach \$290 million by 1985, up substantially from \$167 million in 1980. This report looks at the country's food imports and factors affecting them. It finds that:

- The Dominican Republic's food import bill has increased more than twentyfold since 1960, reaching \$173 million in 1980. Soybeans, fats, and oils imports grew from \$2 million in 1970 to nearly \$55 million in 1980. Together, food, soybeans, and fats and oils imports from all sources should reach \$400 million by 1985.
- The United States accounted for 67 percent of the Dominican Republic's food imports in 1980 (73 percent when P.L.-480 aid is included). The U.S. share of the Dominican Republic's total import market should remain about 75 percent, with the United States the primary supplier of fresh and frozen meat, hams, hatching eggs, rice, wheat and flour, corn, deciduous fruits, potatoes, beans, canned fruits, and soybeans. Substantial P.L.-480 aid from the United States had virtually no effect on commercial food imports.
- Increased domestic production in the Dominican Republic will not likely displace future imports, due to the country's long tradition of growing crops it can successfully export.
- Per capita real gross domestic product (GDP) was a major factor affecting growth of demand. The economy experienced real annual growth of over 10 percent during the early seventies.
- Although real food import prices moved up and down throughout the last 20 years, they were lower in 1980 than in 1960. This was important since a 10-percent drop in the real price of food was found to raise imports by 8 percent.
- Through 1981, foreign exchange reserves had been maintained at about \$225 million, mostly because of foreign borrowings. Since then, the country's trade balance and reserves position have fallen, so that a 10-percent decrease in foreign reserves means a 3-percent decrease in food imports.

# **Dominican Republic**

## Factors Affecting Its Capacity to Import Food

H. Christine Bolling

INTRODUCTION

The Caribbean continues to be a growing market for U.S. agricultural products. A food-deficit area, the islands depend on imports for about half their food supply. Together, they are the second largest Latin American market for U.S. farm products after Mexico. Because of their proximity, they are also strategically important to the United States, as exemplified by the President's Caribbean Basin Initiative. <u>1</u>/

The Dominican Republic ranks with Trinidad-Tobago and Jamaica as the region's leading food importer. While imports account for only 20 percent of the food consumed in the Dominican Republic, the United States currently has a 67-percent share of these imports. U.S. food exports to that country including soybeans, fats, and oils, amounted to \$117 million in 1980. 2/

The maintenance and development of this important market requires an understanding of the factors that cause food imports and the U.S. share to change and grow. This study examines some of those factors (mainly population, income, and domestic food production) and determines how they influenced demand during the sixties and seventies. It also examines the country's external purchasing power as reflected by its changing foreign reserve position, food aid, and import prices. This analysis provides a framework for projecting the size of the market as influenced by the expected growth and development of each variable examined. Finally, it evaluates the extent, if any, to which U.S. P.L.-480 assistance may have displaced commercial food imports.

FOOD IMPORTS

The Dominican Republic has become a rapidly expanding market for food imports, particularly since 1972. In 1980, food imports

1/ The Caribbean Basin Initiative is an aid program to the Caribbean Region--the Caribbean Islands, Central America, Surinam, and Guyana--proposed by President Reagan in 1981. The President's initiative to these countries emphasizes investment aid and free trade by providing government aid and encouraging private investment in the region, as well as granting duty-free entry of their farm products into the United States.

2/ All currency is listed in U.S. dollars unless otherwise noted.

and soybeans, fats, and oils imports together were \$227 million, of which \$167 million came from the United States (table 1). 3/ Today, food imports account for about 20 percent of the country's food supply, and 12 percent of its total imports. 4/ The country imports wheat and flour, cereal preparations, dried milk, canned fish, malt, vegetable oils (except coconut oil), prepared soups, and soybean meal. Rice is imported to supplement domestic production.

Table 1--Dominican Republic: Value of food imports, soybeans, fats, and oils imports, and share of total imports

	*	Food	l imports 1/	:Soybeans, fat:	s, and oils imports
Year	:	Value	: Share of	: Value	: Share of
	•		: total imports	•	: total imports
0	:				
	•	1,000		1,000	•
	•	dollars	Percent	dollars	Percent
	•				
1960	:	8,529	10	304	0
1961		6,309	9	829	0
1962	•	18,856	15	1,480	1
1963	•	26,287	16	753	1
1964	•	38,971	20	6,998	1
1965	:	21,142	24	5,521	2
1966	•	33,413	21	2,344	1
1967	*	34,261	20	1,284	1
1968		45,264	21	1,127	1
1969	:	31,278	14	1,127	1
	•				
1970	•	32,974	11	1,800	1
1971	:	37,333	13	2,276	1
1972		24,716	9	2,626	1
1973	:	51,531	13	6,766	1
1974	•	NA	NA	NA	NA
1975	:	NA	NA	NA	NA
1976	:	NA	NA	NA	NA
1977	•	101,078	12	15,686	1
1978	:	90,028	11	33,708	2
1979	•	102,966	10	40,679	4
	•	-			
1980	:	172,551	12	54,365	4
	:	-			

NA = Not available.  $\frac{1}{Excludes}$  soybeans, fats, and oils. Source: (10).

<sup>3/</sup> Includes soybeans, fats, and oils with food items from Standard International Trade Codes (SITC) codes 0 and 1.

<sup>4/</sup> During 1964-66, 16 percent of the calories and 23 percent of the protein consumed were from imported sources; in 1972-74, the share was 19 percent of the calories and 17 percent of the protein imported; in 1975-77, 18 percent of the calories and 22 percent of the protein (4). Underscored numbers in parentheses refer to items in the references.

The value of food imports increased more than twentyfold during 1960-80, and the quantity of food imports (including soybeans and fats and oils) increased eightfold (tables 1 and 2). Much of the increase since the midseventies came from the newly imported pork, poultry, corn, polished rice, malt, soybean meal, fats and oils, all likely to be important during the eighties.

The level of food imports has been influenced by numerous political and economic events. During the Trujillo administration, imports, including those for food, were restricted as a matter of policy. After Trujillo's assassination in 1961, the Dominican Republic experienced political and economic turmoil with U.S. occupation in April 1965, establishment of a provisional government, and formation of a democratic government in mid-1966. Food imports rose during this troubled period and with only occasional setbacks continued to rise sharply to the present.

Import restrictions were not fully relaxed until 1973, when a much expanded range of products was allowed to be imported. The

	:	Total :	Total food	:		:	Per capita
Year	:	food :	imports	•	Popu-	:	food imports
	:	imports :	(excluding)	:	lation	:	(excluding)
	:	•	P.L480)	:		:	P.L480)
	:						
	:		Index	19	60=100		
	:						
1960	:	100	100		100		100
1961	:	91	92		103		89
1962	:	224	215		106		203
1963	:	396	254		109		233
1964	:	537	407		112		363
1965	:	270	235		115		204
1966	:	357	303		119		255
1967	:	323	229		122		188
1968	:	485	343		126		272
1969	:	407	257		130		198
	:						
1970	:	355	336		134		251
1971	:	331	300		138		217
1972	:	288	253		141		179
1973	:	488	429		146		294
1974	:	NA	NA		150		NA
1975	:	NA	NA		155		NA
1976	:	NA	NA		159		NA
1977	:	642	616		164		375
1978	:	536	540		168		321
1979	:	657	633		171		370
	:						
1980	:	928	864		174		496

Table 2--Dominican Republic: Index of quantity of food imports

Sources: (10, 14).

Government also made a concerted attempt to improve the quality of the national diet through imports, to develop a poultry industry based on imported chicks and feeds, and to construct soybean processing facilities and a new flour mill. These developments, along with the decimation of the swine herd in 1980 after an outbreak of African swine fever, contributed to an expanding and changing food import market.

The international oil crisis changed the composition of the country's total imports, and increased its trade deficit. Imports of petroleum and other fuels accounted for less than 10 percent of the total import bill prior to 1974; by 1980, that share had increased to 25 percent. The higher cost of petroleum imports and weak foreign demand for ferro-nickel, bauxite, and sugar, the country's major foreign exchange earners, contributed to a sharply declining balance of trade. The country's strong internal economic growth diverted attention from the troubling effects of the growing external debt. By 1978, international reserves had been drawn down to critical levels, causing the Government to impose import restrictions. In April 1978, President Guzman suspended imports of many processed food products including flour-based pastas, preserved vegetables, fish, seafood, fruit juices, spiced sauces, cacao and byproducts, butter, yogurt, and cream; these products, however, accounted for only a minor part of the total food import bill.

Industrial development changed the complexion of imports during the last 10 years. Imports of raw products like wheat, corn, chicks, and hatching eggs replaced high-value finished products like flour and poultry meats.

FACTORS AFFECTING FOOD IMPORTS Changes in real income, real food import prices, population, food supplies from domestic food production, food aid, and foreign reserves had important effects on food imports during the sixties and seventies. An empirical analysis was made to measure the impacts of each factor on food imports (see appendix tables). The results are expressed as percentage changes in food imports resulting from a 10-percent increment of change in each influencing factor when the effects of all other factors are assumed unchanged. The effects differed greatly.

> Real per capita income growth was the single most important economic determinant of food imports. As gross domestic product (GDP) grew through most of the seventies, each 10-percent increase in per capita real income resulted in roughly a 20-percent increase in food imports. Per capita GDP reached \$1,224 in 1980, having increased an average of 5 percent per annum since 1960 (table 3).

This rapid growth in nominal GDP resulted primarily from an eightfold increase in mining and a sixfold increase in construction during the last 20 years. Utilities, transport, and commerce also experienced significant growth. Agriculture, in contrast, grew more slowly (table 4). More than half of the GDP now originates in trade, finance, manufacturing, and agriculture. Much of the growth in current GDP has been eroded

	:		:		:	Per capita	:	Real
Year	:	Gross domes-	:	Popula-	:	gross domes-	:	per capita
	:	tic product	:	tion	•	tic product	:	gross domes-
	:		:		:		:	tic product
	:							
	:	Million						
	:	dollars		Millions		Dollars		1960 dollars
	:							
1960	:	723.9		3.04		238		238
1961	:	704.2		3.12		226		235
1962	:	· 887.2		3.21		276		263
1963	:	1,012.7		3.31		306		268
1964	:	1,104.2		3.41		324		279
1965	:	956.8		3.51		273		239
1966	:	1,059.5		3.62		293		257
1967	:	1,114.6		3.72		300		260
1968	:	1,162.2		3.83		303		261
1969	:	1,325.4		3.95		335		284
	:							
1970	:	1,485.5		4.06		366		302
1971	:	1,666.5		4.18		399		314
1972	:	1,987.4		4.30		462		339
1973	:	2,344.8		4.43		529		337
1974	:	2,931.2		4.56		642		361
1975	:	3,599.1		4.70		766		377
1976	:	3,951.5		4.84		816		371
1977	:	4,587.1		4.98		921		373
1978	:	4,728.4		5.12		923		361
1979	:	5,525.4		5.28		1,017		375
	:							
1980	:	6,649.0		5.43		1,224		377
	:							

## Table 3--Dominican Republic: Gross domestic product and population

Source: (6).

PERPLEDP

by inflation, and pressures on per capita real GDP have resulted from a rapid growth in population. Thus, per capita real income rose only an average of 2.1 percent per annum but still provided a substantial basis for the strong growth in the import demands.

Population, which totaled 3.0 million in 1960, grew to 5.4 million in 1980. This represents a 3-percent growth rate, one of the highest in the world, with a corresponding 3-percent-per-year growth in total food needs.

Food production for domestic use increased only 2.8 percent per annum since 1960. Most of these gains occurred during the seventies (table 5). Since this rate of growth was about the same as growth in population, the degree of dependence on imported food supplies did not change materially. There were, however, some notable successes in domestic food production. Rice output nearly tripled during this period and a sizable broiler industry was developed based largely on imported

Sector	: : 1960	1965	: 1970	: 1975	: : 1976	: 1977
	•					
	•	Million c	lollars at cu	urrent facto	or costs 1/	
Agriculture	: 193.1	253.0	345.2	772.8	769.1	931.2
Mining	: 13.5	13.0	22.7	107.8	133.5	133.6
Manufacturing	: 125.0	138.1	275.4	752.1	829.6	. 840.8
Construction	: 21.7	32.2	72.7	248.5	257.6	297.7
Electric, gas,	•					
Water	: 7.5	11.4	17.5	30.1	27.9	32.9
Transportation	•					
and commerce	: 33.2	49.9	114.8	217.8	238.4	282.4
Trade and finance	: 145.7	163.9	264.6	666.2	765.5	889.3
Public admini-	•					
stration	: 71.6	144.6	152.1	228.6	250.0	269.4
Other	: 112.3	150.7	220.5	575.3	663.6	789.3
GDP	: 723.6	956.8	1,485.5	3,599.2	3,935.2	4,466.6
	•	Millio	on dollars a	t 1970 fact	or costs	
	•					
Agriculture	: 280.0	260.5	345.2	399.9	431.1	433.7
Mining	: 15.2	15.2	22.7	127.1	146.1	142.8
Manufacturing	: 147.4	143.4	275.4	428.5	454.7	469.4
Conservation	: 24.2	33.2	72.7	152.6	155.1	183.5
Electric, gas,	•					
water	: 7.2	9.2	17.5	30.0	30.9	39.3
Transportation	•					
and commerce	: 50.3	72.4	114.8	182.7	190.8	210.4
Trade and finance	: 155.7	163.1	264.6	434.6	468.0	482.8
Public admini-	•					
stration	: 100.9	194.0	152.1	183.1	185.3	187.4
Other	: 124.2	139.0	220.5	355.8	374.2	394.9
GDP	: 905.1	1,030.0	1,485.5	2,288.9	2,436.2	2,544.2
	•					

Table 4--Dominican Republic: Gross domestic product by sector, current and real

1/ Current factor costs refers to input cost method of valuing GDP, as opposed to products value at their output price.

Source: (17).

hatching eggs, chicks, and feedstuffs (table 6). In total, about 80 percent of the country's food is from domestic production; thus, it depends less on imports than does many of its neighbors. The bulk of the food produced for domestic use consists of rice, cassava, mangoes, avocados, bananas, plantains, and milk, and does not compete seriously with imported foods. This fact is supported by analysis showing that on the average for the period, each 10-percent increase in domestic food production (excluding export crops) reduced food imports only by about 1 percent. GDP valued at factor costs--rather than at market prices of the finished goods--includes compensation of employees, operating surplus,

Year	•	Total	* * *	Per capita
	•		1960=100	
1960		100		100
1961	•	97		95
1962	•	99		94
1963		101		93
1964		106		94
1965		105		91
1966		112		94
1967	:	105		86
1968		112		89
1969		127		98
	0 0			
1970		136		102
1971		146		106
1972		153		108
1973		153		105
1974		162		108
1975		150		97
1976		169		106
1977	:	187		114
1978	•	206		122
1979	0 0	203		117
1980	•	207		116
1981	•	216		121

Table 5--Dominican Republic: Index of competitive agricultural production 1/

 $\frac{1}{\text{Adjusted to remove export commodities.}}$ Source: (13).

and provision for the consumption of fixed costs. This method provides a more accurate measure of sectional value added than market price valuation, since it takes the country's tax and subsidy system into account. The products raised primarily for domestic use tended to compete for resources (with a long tradition of export crops such as sugar, coffee, cocoa, and tobacco which make up more than 50 percent of the country's total exports) in which the Dominican Republic has a substantial comparative advantage.

The persistence of this advantage over production of imported items such as wheat, feed grains, and soybeans makes it unlikely that the Government would try to displace imports with increased domestic food production. It is furthermore unlikely that the Government would adopt a policy to increase domestic food production for import substitution at the expense of its primary exports.

PCAGPRO D

							_		_			
Use and commodity	:	1960	:	1965	:	1970	:	1975	:	1980	:	1981
, ,	:					-			:		Ť	
	:											
	:			1,0	00	0 meti	:i	c tons	5			
Domestic use:	:											
Rice, paddy	:	114		167		210		218		354		369
Corn	:	52		38		45		32		.40		49
Sorghum	:	0		0		14		17		25		35
Beans, dry	:	25		23		25		30		40		43
Pigeon peas	:	17		21		25		14		19		24
Potatoes	:	6		16		23		27		25		27
Cassava	:	153		152		170		170		140		180
Sweetpotatoes	:	87		77		87		80		81		85
Yams	:	25		26		29		32		16		18
Onions	:	2		3		10		8		13		14
	:											
Peanuts	:	62		45		75		50		48		50
Mangoes	:	159		140		153		163		175		180
Avocados	:	87		115		122		128		145		150
Bananas	:	380		270		275		318		310		320
Plantains	:	300		395		531		500		600		625
Pineapples	:	6		5		13		18		20		25
Beef	:	25		24		32		37		43		46
Pork	:	7		8		11		19		12		1
Poultry	:	3		6		17		36		95		99
Milk	:	245		240		283		320		350		360
	:											
Export use:	:											
Sugar (raw)	:	876		640		1,035		1,075		1,200	1	,253
Coffee	:	30		37		°40		53		54		47
Cocoa	:	36		29		37		33		30		34
Tobacco	:	27		19		23		22		49		45
	:											

Table 6--Dominican Republic: Food production for domestic and export use

Source: (13).

In terms of total agricultural land, however, it would take very little acreage from export crops to make up the 20-percent food deficit. In 1981, about 340,000 of the 750,000 hectares (ha) harvested were devoted to food crops for domestic use. An additional 85,000 ha would make the country self-sufficient in food. This would, however, be at the expense of a 15-percent reduction in the country's agricultural exports, leaving consumers without wheat products and forcing a substantial reduction in poultry and pork production which are produced largely from imported feeds.

Food policies are adopted through Government control of marketing of agricultural commodities. The major power is vested in INESPRE (Instituto Nacional de Estabilizacion de Precios). This organization regulates the marketing and pricing of such staples as rice, beans, corn, sugar, onions, garlic, chickpeas, plantains, bananas, peanut oil, and soybean oil by purchasing these items from producers at set support prices. INESPRE also licenses imports, and controls rice milling and retailing as well. In 1974, wheat imports came under the separate jurisdiction of the Government-owned flour mill.

Nominal import prices of major import commodities were stable until 1973, when they began to rise sharply (table 7). Real food import prices, represented by the food import price index of major import commodities deflated by the country's consumer price index, remained nearly level and then dropped in 1980. Each 10-percent change in real prices resulted in an average 7-percent change in food imports in the opposite direction.

Imports of rice, milk, coffee, wheat, flour, sardines, and herring are generally subsidized. This made some imported foods cheaper for consumers than world prices, and increased their consumption.

	:	Actual	:	Consumer	:	Real import
Year	:	import	:	prices	:	prices
	•	prices	:		:	
	:			1960=100	0	
	:					
1960	:	100		100		100
1961	•	88		96		92
1962	:	88		105		84
1963	:	89		114		78
1964	:	99		116		85
1965	:	106		114		93
1966	:	108		114		94
1967	:	118		116		102
1968	:	126		116		109
1969	:	126		117		108
	:					
1970	:	117		121		97
1971	:	132		127		104
1972	:	149		137		109
1973	:	170		157		108
1974	:	NA		178		NA
1975	:	NA		203		NA
1976	:	NA		220		NA
1977	:	255		247		103
1978	:	281		256		109
1979	:	308		279		110
	:					
1980	:	319		325		98
	:					

Table 7--Dominican Republic: Index of food import prices

Sources: (6, 10).

REALIMPR

Food aid amounted to more than half of total food imports in 1966, 1968, and 1972, and at other times was near 30 percent. Some of the aid came from international programs such as UNICEF but most came from individual countries including P.L.-480 from the United States (table 8).

P.L.-480 sales were especially large during 1967-72, when they peaked at nearly \$19 million. These sales fell somewhat until 1978, when they again began rising sharply, reaching \$21 million in 1980. U.S. assistance currently includes wheat flour, bulgar, rolled oats, corn, blended food supplements such as corn-soya-milk mixes, and vegetable oils. In earlier years, nonfat dried milk, wheat, and rice were also included (tables 9 and 10).

Food aid has not offset commercial imports to any appreciable extent. The analysis showed no significant correlation between them.

							_
	:	Value of	:	Per capita	:	Real value	
Year	:	total shipments	:	value of	:	of per capita	
	:		:	shipments	:	shipments	
	:						
	:	1,000 dollars		Dollars		1960 dollars	
	:						
1960	:	210		0.01		0.01	
1961	:	125		.04		.04	
1962	:	993		.31		.30	
1963	:	10,004		3.02		2.64	
1964	:	13,741		4.03		3.47	
1965	:	8,537		2.43		2.13	
1966	:	10,083		2.78		2.44	
1967	:	18,758		5.04		4.34	
1968	:	17,674		4.61		3.97	
1969	:	16,961		4.29		3.67	
	:						
1970	:	12,907		3.17		2.62	
1971	:	15,821		3.78		2.98	
1972	:	18,697		4.35		3.18	
1973	:	4,513		1.02		.65	
1974	:	4,152		.91		.51	
1975	:	5,775		1.22		.60	
1976	:	9,708		2.01		.91	
1977	:	9,240		1.85		.75	
1978	:	5,383		1.05		.41	
1979	:	19,700		3.73		1.33	
	:	·					
1980	:	20,023		3.68		1.13	
1981	:	21,059		3.77		1.08	
	:	-					

Table 8--Dominican Republic: Value of P.L.-480 food shipments

Source: (10).

PCREALAD

The foreign exchange position remained relatively strong during 1960-80, largely because massive infusions of foreign investment capital more than offset the unfavorable total trade balances (table 11).

Commodity	1962	1964	1966	: : 1968	: : 1970
		Met	ric tons	- <b>-</b>	•
:				-	
Milk, dried nonfat	: 251	6,443	7,329	3,688	4,990
Milk, evaporated		0	23	0	0
Butter		2,574	3	225	0
Choose		36	2	0	0
Tallow, inedible	. 0	571	246	2.370	65
Wheat	2.912	10.451	14.288	83,334	91.063
Wheat flour	2,606	4,282	7,508	1,737	3,785
Wheat, bulgar and		,		-	,
rolled	: 0	5,889	7,274	3,373	4,168
Rice	: 0	49,760	0	0	0
Corn	2,743	1,245	102	4,318	0
Blended food products:	; 0	0	0	682	3,417
Beans, dried	. 0	74	2,540	907	0
Cottonseed, peanut,	100	000	/ 570	25 250	2 / 0/
and soybean oil	109	806	4,570	25,259	3,404
3	•				
	·	:	:		:
	1972	1974	: 1976	: 1978	: 1980
:		•	:	:	•
:					
			Metric t	ons	
Milk, nonfat dried	5,500	0	914	0	1,011
Milk, evaporated	0	0	0	0	0
Butter	• 0	0	0	, 0	0
Milk fat, anhydrous	: 0	0	0	0	0
Cheese	0	0	0	0	0
Tallow, inedible	670	0	0	0	0
Wheat flows	104,943	1 010	1 1 2 2	300 200	38,291
Wheat flour	· / 202	2 868	2 902	1 782	1,242
rolled	4,075	2,000	2,702	1,702	1,015
Rice	: 0	0	0	0	2,899
Corn	: 15,011	0	0	14,820	76,879
Blended food	5,215	/,486	10,729	6,112	3,634
products Reapondried		0	0	0	0
Cottonseed peanut	. 0	0	0	0	0
and soybean oil	12,750	1,292	2,200	712	787

Table 9--Dominican Republic: Quantity of P.L.-480 imports

			the second s		
Commodity	1962	: : 1964 :	: 1966	: : 1968 :	: : 1970 :
	•		1,000 dolla	ars	
Milk popfat dried	: : 69	1.143	2,452	1.861	2.707
Milk, evaporated	: 0	_, 0	, 0	· 0	0
Butter	: 0	1,875	4	438	0
Milk fat, anhydrous	: 0	0	0	0	0
Cheese	: 0	26	3	0	0
Tallow, inedible	: 0	222	132	756	23
Wheat	: 185	968	936	5,255	5,344
Wheat flour	: 229	253	450	111	234
Wheat, bulgar and	:				
rolled	: 0	532	723	301	321
Rice	: 0	5,684	0	0	0
Corn	: 133	83	5	251	0
Blended food products	: 0	0	0	116	571
Beans, dried	: 0	13	437	139	0
Cottonseed, peanut,	:				
and soybean oil	: 101	280	1,746	6,150	1,218
Total	993	13,741	10,083	17,674	12,907
	:		:		:
	: 1972	: 1974	1976	: 1978 :	: 1980
	1972 	: 1974	: 1976 : 1,000 dolla:	: 1978 :	: 1980 :
Milk popfat dried	1972 	: 1974	: 1976 : 1,000 dolla: 1,145	1978 	: 1980 : 352
Milk, nonfat dried	1972 	: 1974 : 0 0	: 1976 : 1,000 dolla: 1,145 0	1978 1978 1978 0 0 0	: 1980 : ' 352 0
Milk, nonfat dried Milk, evaporated Butter	1972 	: 1974 : 0 0 0	: 1976 : <u>1,000 dolla</u> 1,145 0 0	1978 1978 rs 0 0 0 0 0	: 1980 : ' 352 0 0
Milk, nonfat dried Milk, evaporated Butter Milk fat, aphydrous	1972 	: 1974 : 0 0 0 0 0	: 1976 : <u>1,000 dolla</u> : 1,145 0 0 0	1978 1978 1978 0 0 0 0 0 0 0 0	: 1980 : ' 352 0 0 0
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese	1972 3,963 0 0 0 0	: 1974 : 0 0 0 0 0 0 0	1976 1,000 dolla 1,145 0 0 0 0	1978 1978 rs 0 0 0 0 0 0 0 0 0 0 0	: 1980 : ' 352 0 0 0 0 0
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible	1972 3,963 0 0 0 0 0 260	: 1974 : 0 0 0 0 0 0 0 0 0	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0	1978 1978 rs 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : ' 352 0 0 0 0 0 0
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat	1972 	: 1974 : 0 0 0 0 0 0 0 0 0 0 0	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0	rs 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 6,813
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour	1972 3,963 0 0 0 0 260 6,743 203	: 1974 : 0 0 0 0 0 0 0 0 0 273	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 275	1978 1978 0 0 0 0 0 0 0 0 0 0 0 79	: 1980 : 352 0 0 0 0 0 0 6,813 362
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat, bulgar and	1972 3,963 0 0 0 260 6,743 203	: 1974 : 0 0 0 0 0 0 0 0 0 273	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 275	1978 1978 rs 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 6,813 362
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat, bulgar and roll	1972 	: 1974 : 0 0 0 0 0 0 0 0 273 650	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 275 576	1978 1978 1978 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 6,813 362 460
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat, bulgar and roll Rice	1972 3,963 0 0 0 260 6,743 203 434 0	: 1974 : 0 0 0 0 0 0 0 0 273 650 0	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 275 576 0	1978 1978 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 6,813 362 460 1,026
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat, bulgar and roll Rice Corn	1972 3,963 0 0 0 0 260 6,743 203 434 0 794	: 1974 : 0 0 0 0 0 0 0 0 0 273 650 0 0	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 275 576 0 0	1978 1978 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat, bulgar and roll Rice Corn Blended food products	1972 3,963 0 0 0 260 6,743 203 434 0 794 926	: 1974 : 0 0 0 0 0 0 0 0 0 273 650 0 0 2,128	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1978 1978 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat flour Wheat, bulgar and roll Rice Corn Blended food products Beans, dried	1972 3,963 0 0 0 260 6,743 203 434 0 794 926 0	: 1974 : 0 0 0 0 0 0 0 0 0 0 273 650 0 0 2,128 0	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 275 576 0 0 3,906 0	1978 1978 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 6,813 362 460 1,026 9,614 1,262 0
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat flour Wheat, bulgar and roll Rice Corn Blended food products Beans, dried Cottonseed, peanut, and soybean oil	1972 3,963 0 0 0 260 6,743 203 434 0 794 926 0 4,020	: 1974 : 0 0 0 0 0 0 0 0 0 273 650 0 0 2,128 0 874	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1978 1978 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 0 6,813 362 460 1,026 9,614 1,262 0 719
Milk, nonfat dried Milk, evaporated Butter Milk fat, anhydrous Cheese Tallow, inedible Wheat Wheat flour Wheat flour Wheat, bulgar and roll Rice Corn Blended food products Beans, dried Cottonseed, peanut, and soybean oil	1972 3,963 0 0 0 260 6,743 203 434 0 794 926 0 4,020	: 1974 : 0 0 0 0 0 0 0 0 0 273 650 0 0 2,128 0 874	: 1976 : 1,000 dolla: 1,145 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1978 1978 0 0 0 0 0 0 0 0 0 0 0 0 0	: 1980 : 352 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Table 10Dominican Republic: Value of P.L480 1	10Dominican	Kepublic:	value or	P.L480	imports
---	-------------	-----------	----------	--------	---------

Source: (<u>14</u>).

	_									
	:	1070	:	/	:		:		:	
ltem	:	1972	:	1974	:	1976	:	1978	:	1979
	•	<u> </u>	•		•		•		•	
	:			Mi	111	on dol	la	rs		
Merchandise exports f.o.b. 1/	:	321.3		636.7		716.3		675.5		868.1
Merchandise imports (f.o.b.	:	-337.6		-672.9		-763.6		-870.3	-	1,093.9
Travel credit 2/	:	32.9		53.5		70.8		87.9		115.8
Travel debit 37	:	-37.4		-75.6		-84.0		-100.9		-112.1
Other investment income, debit 4/	:	-18.7		-37.0		-39.8		-43.4		135.1
	:									
Other goods and services, debit 5/	:	13.0		19.5		29.0		37.5		117.9
Other goods and services, credit	•	-10.2		-24.3		-33.0		-43.4		-55.9
Unrequited transfers 6/	:	30.6		35.0		46.6		109.4		142.2
including workers remittance credit	•	24.0		26.8		30.0		106.6		117.9
Capital, excluding reserves	:	85.1		316.5		173.5		371.5		506.4
inc. direct investment in	:									
Dominican Republic 7/	:	43.5		53.5		59.9		39.6		-13.4
Other long-term credit of resident	:									
official sector	:	28.8		61.8		76.0		144.9		120.6
Drawings on loans received 8/ *	•	50 0		81.2		115 8		188 7		322 5
Repayment on those loans 9/	•	-18 1		-19 4		-39.8		-/3 8		-201 8
Other long-term capital of	•	10.1		17.4		57.0		43.0		201.0
other sectors	•	10 1		45 9		32 6		-29 0		32 9
Including other loans	:	18 1		69 5		78 0		57 5		121 5
Repayment of those loans 10/	:	-8.0		-28.7		-52 0		-86.5		-88 6
Other short-term capital of resident	:	5.2		28.2		-4.2		53.0		209.3
orner bhore term capitar or rebrache	:	5.2		20.2				50.0		207.5
Official nature, incl. liabilities	:									
to banks abroad	:	1.6		-15.9		6.0		53.0		186.8
Other short-term capital of deposit	:							-		
money banks	:	9		30.4		7.6		17.8		-15.6
Other short-term capital of other	:									
sectors 11/	:	8.8		86.5		16.9		145.3		172.7
Change in reserves	:	-10.1		-2.7		14.1		29.3		-8.2
Use of IMF credit	:	4.1		0		25.0		47.6		124.3
	:									
Total reserves minus gold	:	55.3		87.1		123.5		154.0		238.6

#### Table 11--Dominican Republic: External accounts

1/ F.o.b. is free on board. 2/ Tourist expenditures in Dominican Republic. 3/ Dominican Republic's tourist expenditures outside Dominican Republic. 4/ Undefined. 5/ Income earned by Haitians working in Dominican Republic. 6/ From Dominican Republic workers employed in United States. 7/ Equity capital and reinvestment of earnings. 8/ Loans from commercial banks, IDB, IBRD, U.S. Government, and other unspecified lenders. 9/ Loans from IDB, U.S. commercial bankers, and U.S. Government. 10/ Liabilities of Central Bank of Dominican Republic. 11/ Mostly the private nonmonetary sector's holdings.

Source: (7). Note that this listing is not all inclusive and only shows trade and capital flows of interest.

Long-term loans from U.S. commercial banks, Inter-American Development Bank, International Bank for Reconstruction and Development (World Bank), the U.S. Government, a buildup of short-term loans from foreign banks, the private nonmonetary sector's holding of foreign exchange, and an increase in remittances from Dominican workers employed in the United States contributed substantially to the maintenance of high level reserves (table 12).

Except for 1975, when the world price of sugar rose dramatically, the Dominican Republic has had a negative trade balance. Recent weak international demand for sugar, the country's major export, accompanied by low prices for ferronickel, coffee, cocoa beans, tobacco, and bauxite, reduced export earnings sharply. This situation, coupled with the rising cost of oil imports, created a growing deficit in the trade balance. As long as inflows of investment capital continue, the country's foreign reserve position should remain

	:	Foreign	*	Per capita	: Per capita
Year	:	reserves	:	reserves	: real reserves
	:		:		:
	:			ø	
	:	Million			
	:	dollars		Dollars	1960 dollars
	:				
1960	:	15.4		5.06	5.06
1961		6.0		1.92	2.00
1962	:	16.7		5.20	4.95
1963	•	38.9		11.75	10.31
1964	:	38.4		11.26	9.71
1965	:	47.8		13.62	11.95
1966		40.6		11.22	9.84
1967	:	29.4		7.90	6.81
1968	:	32.6		8.51	7.34
1969	:	36.8		9.32	7.97
	:				
1970	:	29.1		7.17	5.93
1971	:	52.8		12.63	9.94
1972	:	55.3		12.86	9.39
1973	:	84.3		19.03	12.12
1974	:	87.1		19.10	10.73
1975	:	112.6		23.96	11.80
1976	:	123.5		25.51	11.59
1977	:	180.1		36.16	14.64
1978		154.0		30.08	11.70
1979		238.6		45.19	16.14
	:				
1980	:	201.8		37.16	11.43
1981	:	225.2		40.36	11.53

Table 12--Dominican Republic: Foreign reserves

Source: (6).

PEREALRES

strong, but the debt service burden already threatens the country's external purchasing power.

Foreign reserves were generally adequate during the period. Even so, a 10-percent change in foreign reserves was found to be associated with a similar 5-percent change in food imports. If reserves should reach critically low levels as in other countries (such as Jamaica), however, it is very likely that much greater cutbacks in imports should be expected.

FUTURE CAPACITY TO Despite recent setbacks in external purchasing power, the IMPORT FOOD Dominican Republic is expected to remain a significant market for U.S. farm products. Continued population and income growth will sustain continued growth in food demand. Since domestic agriculture will not likely meet this demand, the country will have to increase its food imports as well as agricultural raw materials to maintain its agribusiness. Continued growth of the economy depends heavily on agribusiness, mining, and manufacturing, the backbone of the economy and the country's growth industries; these should continue to thrive.

> Foreign exchange earnings are a key factor affecting food imports. With a continued favorable investment climate, the inflow of foreign capital and loans should help offset negative trade balances. Debt servicing could be a problem in the near future if export prices for sugar and mineral exports do not recover soon.

The Dominican Republic will continue to be a strong growth market for U.S. commodities in the next 3 to 4 years. Based on current views and trends, we estimate that by 1985:

- o Real GDP will grow at a rate of 5 percent per annum;
- o Foreign reserves will remain at about \$200 million;
- Domestic per capita food production will remain at its 1979 level;
- o Real import prices will remain at their 1979 level;
- Food aid from foreign countries will continue at about the 1980 level;
- o Inflation will be held to 10 percent per annum or less.
- o The official U.S. dollar-Dominican Republic peso exchange rate will remain fixed at the 1980 level of \$1 per peso.
  - o Population will continue to grow at 3 percent per annum.

If these assumptions materialize, the country should import an estimated \$400 million of food (including soybeans, fats, and oils) by 1985. This would be a 13-percent increase from the record level in 1980.

Assuming also that the United States continues its current market development strategy and P.L.-480 assistance, the U.S. share of that growing market should remain at about 75 percent. Thus by 1985, the value of U.S. exports to the Dominican Republic should reach \$290 million. 5/ The United States should continue as the primary supplier of fresh and frozen meat, hams, hatching eggs, rice, wheat and flour, corn, deciduous fruits, potatoes, beans, canned fruits, and soybeans and products as in recent years (table 13).

	:	Percentag	e of total	l commodity
Commodity	:	1960 :	1970	: 1980
	•			
	•		Percent	
	•			
Chicks	•	0	0	91
Meat, fresh and frozen	•	99	53	93
Hams	:	73	18	90
Milk, condensed	:	82	53	0
Milk, dried	:	0	0	8
Eggs, hatching	:	0	0	99
Butter	:	82	14	1
Cheese	:	14	21	32
Herring	:	1	3	5
Codfish	:	59	3	2
Rice	:	0	95	100
Wheat	:	45	100	98
Wheat flour	:	67	80	100
Corn	:	0	0	100
Semolina and rolled grain	:	6 -	72	45
Cereal base food preparation	:	50	50	54
Fruit, fresh (apples, grapes)	:	94	90	92
Onions and garlic	:	39	10	57
Potatoes, fresh	:	78	0	100
Beans, dried	:	30	99	100
Oils, edible	:	99	99	99
Fish, canned	:	16	25	14
Canned fruits	:	92	92	99
Vegetables, canned		27	23	15
Meat, canned	:	28	24	72
Soups		79	28	14
Sovbeans		0	100	100
Fats and oils		0	0	88
Total food	:	44	58	68
Total food including	:			
fate and oile	•	44	60	73
Tato and UIIS			00	

Table 13--Dominican Republic: U.S. share of selected food imports

Source: (10).

5/ The U.S. share of the Dominican Republic's food imports reached 73 percent in 1980, compared with 58 percent in 1970 and 44 percent in 1960.

#### REFERENCES

- Abbott, Phillip C. "Modeling International Grain Trade with Government Controlled Markets," <u>American Journal of</u> <u>Agricultural Economics</u>. Vol. 61, No. 1, February 1979.
- "Developing Countries and International Grain Trade." Unpublished Ph.D. diss., Massachusetts Institute of Technology, Cambridge, June 1976.
- Food and Agriculture Organization of the United Nations. Provisional Food Balance Sheets, 1972-74 average. Rome, 1977.
- 4. \_\_\_\_\_. Food Balance Sheets. Rome, 1971.
- 5. Garcia Garcia, Jorge. Exchange Rate, Commercial Policy and Agricultural Development: The Experience of Colombia from 1953 to 1978. International Food Policy Research Institute, Washington, D.C., forthcoming.
- International Monetary Fund. International Financial Statistics. Washington, D.C., 1980 Yearbook.
- 7. <u>Balance of Payments, Yearbooks</u>. Washington, D.C., 1978, 1979.
- 8. Leamer, Edward E. and Stern, Robert M. Quantitative International Economics. Boston: Allyn and Bason, 1970.
- 9. May, Jacques M. and McLellan, Donna L. <u>The Ecology of Malnutrition in the Caribbean, Studies in Medical</u> <u>Geography.</u> New York: Hafner Publishing Co., Vol. 12, 1973.
- 10. Secretariado Tecnico de la Presidencia, Oficina Nacional de Estadistica, Comercio Exterior de la Republica Dominicana. Santo Domingo, selected years.
- 11. Solemano, Georgio, and Lance, Taylor. Food Price Policies and Nutrition in Latin America. United Nations University, World Hunger Program, Food and Nutrition Bulletin, Supplement 3, Tokyo, 1980.
- 12. United Nations. <u>Monthly Bulletin of Statistics</u>. Rome, selected issues.
- 13. U.S. Department of Agriculture, Economic Research Service. Indices of Agricultural Production for the Western Hemisphere 1970 through 1979, excluding the United States and Cuba. SB-639 (supplemented by unpublished data).
- 14. U.S. Agricultural Exports under Public Law 480. ERS-Foreign 395 (supplemented by unpublished data).
- 15. Jamaica, Trinidad, and Tobago, Leeward Islands, Windward Islands, Barbados, and British Guyana: Projected Levels of Demand, Supply and Imports of Agricultural Products to 1975. ERS-Foreign 94, 1963.

- 16. World Bank. World Trade Tables. Baltimore: Johns Hopkins Press, 1979.
- 17. <u>World Tables</u>. Baltimore: Johns Hopkins Press, 1979.

.



APPENDIX A--METHOD AND ESTIMATION PROCEDURES Variables in the model to explain changes in the Dominican Republic's food imports included income, real food import prices, population, food supplies from domestic food production, food aid, and foreign reserves. These variables are suggested by the classical theory of demand.

Expected signs of these variables are:

- 1. The quantity index of food imports is expected to be inversely related to real import prices.
- 2. The quantity index of food imports is expected to be directly related to per capita real GDP.
- The quantity index of food imports is expected to be directly related to per capita real foreign reserves.
- 4. The quantity index of food imports may be inversely correlated to per capita real aid if granting of aid means that the country substitutes P.L.-480 purchases for food that would otherwise have been imported on a commercial basis.
- 5. The quantity index of food imports may be inversely related to per capita production if indeed imports and domestic production are substitute sources of food.

The model is a single equation and is specified in the following way:

where:

- PCQIIMP = f (PCGDP, PCAGPROD, PCREALES, PCREALAID, REALIMPPR).
- PCQIIMP = Per capita quantity index of food imports less P.L.-480 imports.
- PCREALGDP = Per capita GDP in constant 1960 Dominican Republic
  pesos.
- PCREALRES = Per capita foreign reserves in constant 1960 Dominican Republic pesos.
- PCAGPROD = Per capita domestic food production index.
- /PCREALAID = Per capita real value of P.L.-480 exports to Dominican Republic in 1960 Dominican Republic pesos.

Annual observations for 1960-80 are the data base of this model, and the ordinary least squares method of estimation was used. Data, however, are missing for 1974-76 when the Dominican Republic did not publish official trade statistics. Several of the indexes were calculated:

- <u>PCAGPROD</u> was obtained by adjusting the USDA agricultural production index by recalculating the index after sugar, coffee, cocoa bean, and tobacco exports were subtracted from production to represent the domestic food supply that originates from domestic agricultural production [see table 6 (13)].
- o <u>PCQIIMP</u> was calculated by using the quantities of imported commodities weighted by their 1965 import unit values (see tables 14 and 15.) The index was then converted to a 1960 base. Data were not available for 1974-76.
- o <u>REALIMPR</u> was calculated by using the import unit values of imported commodities weighted by their quantities of imports in 1965 (see tables 14 and 15). The index was then converted to a 1960 base. Data were not available for 1974-76.

Real food import prices, real income, and real reserves were highly significant in determining the demand for food imports.

PCQIIMP = -5.105 + 8.495 PCREALRES -2.187 REALIMPR (t = 2.882\*) (t = -1.926\*) + 133.738 PCREALGDP -6.899 PCREALAID -0.223 PCREALPROD (t = 2.981\*) (t = 0.807) (t = -0.095) + 95.845 D<sub>1</sub>(1964) + 96.302 D<sub>2</sub> (1968) -78.471 D<sub>3</sub>(1971-72) (t = 2.822\*) (t = 2.764\*) (t = 3.034\*) + 123.088 D<sub>4</sub>(1980) (t = 2.675\*)

F = 23.923;  $R^2 = 0.964$ ;  $R^2$ (corrected) = 0.924; Durbin-Watson = 2.385

The relative importance of each variable can also be expressed by its elasticity of imports with respect to each of the independent variables.

			_
Variable	:	Elasticity	
REALIMPPR		-0.815	
PCAGPROD		079	
PCREALAID		.054	
PCREALGDP		1.560	
RCREALRES		.309	
		0	

The fitted equation yields income and reserves and has all the expected signs for the coefficients. Real per capita income, which best describes purchasing power, was positively correlated to food imports; its elasticity with respect to food imports was 1.56. This is not unusually high, since food imports are a relatively small share of the total food supply. Moreover, this high elasticity reflects significant shifts to high-value products despite the growing domestic output of these products.

Per capita real foreign reserves were also positively related to food imports but have a low elasticity of 0.309. The import price variable was, as expected, inversely related for food imports with an elasticity of -0.815. Both these coefficients were statistically significant. Domestic food production was inversely related to food imports but the coefficient was not significantly different from zero. The index of commercial food imports was not significantly affected by changes in the amount of P.L.-480 imports.

Different time periods in which significantly different economic and political events occur are difficult to portray in a model. For the Dominican Republic, 1964, 1968, 1971-72, and 1980 were such years. In 1964, for example, the Dominican Republic was involved in a military conflict that seriously affected the economy; 1968, 1971, and 1972 were years in which import decisions were unusually influenced by war politics; 1980 had unusually high imports when importers felt threatened by import controls. These individual years were represented by "dummy" variables and all proved to be significantly correlated with food imports.

APPENDIX B--TABLES The following tables provide commodity details of the quantity and value of food imports by the Dominican Republic for select years through 1960-80 (app. tables 1 and 2).

Commodity	1960	: : 1965 :	: : 1970 :	: : 1973	: : 1978 :	: : 1979	: : 1980 :
				Metric	tons		
Livestock and live-							
stock products:	:						
Chicks, day old	: 0	0	0	42	. 62	138	190
Beef	: 10	5	30	61	42	70	57
Pork	: 0	0	0	0	7	778	5,459
Poultry improved	: 0	24	644	47	32	1,816	6,974
Poultry, other	. 0	2	24	0	0	0	0
Ham, canned	52	63	116	0	46	31	26
Ham, other	31	25	102	45	19	116	328
Dairy products:							
Milk for babies	: 0	0	0	0	1,087	961	882
Milk, evaporated	: 4	890	2,924	0	0	0	0
Milk, condensed	: 0	2,013	1,814	0	263	121	88
Milk, dried	: 120	2,575	6,940	2,969	6,324	6,948	8,995
Milk, other	: 0	0	0	0	513	771	0
Cheese, common	64	187	135	88	138	102	154
Cheese, fancy	: 0	44	50	0	154	127	194
Eggs, fresh	: 0	26	0	0	16	1	0
Eggs, hatching	0	0	1,057	1,682	373	1,206	1,427
Fishery products:							
Herring	: 1,541	1,380	1,438	4,823	2,573	2,516	2,245
Tuna, canned	: 15	2/4	433	0	93	122	1/4
Salted codfish	2,955	3,665	5,874	4,735	4,644	6,136	6,166
Mackerel	: 9	53	2,197	0	1,040	2,631	566
Salmon, canned	: 13	43	50	0	21	35	60
Sardines	: 268	1,114	1,543	5,950	2,763	3,010	8,069
Grain products:	:	_					
Corn	: 0	0	3,209	31,835	86,879	101,749	171,109
Wheat	: 25,849	35,376	40,450	63,253	156,036	141,819	157,611
Wheat, durum	: 0	0	0	0	6	0	20
Oats	: 708	951	4,142	2,470	1,273	1,609	2,391
Rice, polished	: 0	83	0	34,491	18,42/	491	33,043
Rice, other	: 0	0	0	0	0	0	7(0
Corn meal	: 0	1,544	2,982	0	1,165	1,079	/48
Wheat flour	: /,31/	10,415	1,817	3,960	1,915	1,229	226
Wheat flour, durum		1,814	01(	0	0	0	0
Oats, folled	. 0	0	910	0	1.67	250	0
Other flour	. 0	0	0	0	5 076	2.50	0
Other flour	. 0	0	0	0	3,070	0	0
Units semolina		2 099	676	9 232	204	0	0
Wheat semolina	· 1,190	2,000	070	0,552	0_0	0	0
Corn semolina	. 202	202	3/3	0	1 176	1 541	1 117
Malt	. 1 140	700	5 420	7 253	8,005	13 553	12 838
Malt extremt	• 270	8/17	1 387	368	1 161	653	776
Cereal base food	• 275	047	1,507	500	1,101	055	,,,,
nrenarations	. 49	187	141	3,903	1.561	2 326	6,117
Food for children		107	747	5,505	1,501	2,520	•,
cereal or milk	83	218	291	0	105	517	198
Other food for	: 05	210	271	v	105	517	170
children	: 0	0	0	0	1,316	1,161	245
Corn starch	. 0	õ	Ő	1,302	1.538	2.645	1,665
Corn gluten	: 0	0	0	0	0	1,243	347

Continued--

Appendix	table 1D	ominican	Republic:	Quantity of
foc	od imports,	by comm	odity (cont	inued)

Commodity	: : 1960 :	: : 1965 :	: : 1970	: 1973	: 1978	: : 1979	: : 1980 :
	•			Metric t	ons		
Emerida	:						
Apples	• • 301	602	781	658	1.683	1 322	1 698
Grapes	: 180	295	138	374	569	543	674
Raisins	: 0	0	0	0	174	152	245
				٥			
Vegetables:	:						
Garlic	: 0	0	0	592	683	169	335
Onions	: 996 . 015	1,578	67	0	0	461	90
Potatoes, fresn Potatoes, sood	· /35	60	1 175	0	383	3,000	0
Beans dried	· 455	2 1 7 4	5,706	9 366	3 241	6 702	5 373
Tomatoes, canned	: 1.711	1,911	1,635	0,500	J,241 0	0,702	0,075
Tomato sauce	: 55	145	434	0	1.048	623	3
Mayonnaise	: 20	31	172	296	425	368	532
Meat soup	: 14	162	276	2,292	2,919	3,717	3,971
Tomato soup	: 15	87	25	0	0	0	0
Vegetable soup	: 34	566	552	0	0	0	0
Foodat	•						
Poultry feed	• 656	1 872	9 074	0	0	13	0
Animal feed, other	: 89	2,254	5,094	3.072	ŏ	294	Ő
Soybean meal	: 0	0	0	777	28,274	31,421	37,752
	:						
Oilseeds:	:						
Soybeans	: 0	0	36,473	9,671	22,805	1,100	36,473
Fats and oils:	•						
Animal fats	: 0	0	1.242	0	3,976	8.879	11.803
Animal fats, other	: 0	54	0	8,661	6,766	4,127	2,781
Animal fats, in-	:						
edible	: 2,812	2,697	7,045	155	1,279	2,726	1,306
Soybean oil, crude	: 0	0	0	25,219	12,833	18,330	16,010
Cottonseed oil,	:				0 700		
crude	: 0	289	0	0	8,700	34,364	26,006
Soubean oil ro-	. 0	15,044	0	0	2,248	0	0
fined	•	0	0	445	78	796	6 392
Cottonseed oil	: 0	õ	541	0	220	0	3,000
Olive oil	247	129	388	0	418	449	484
Animal oils	: 0	0	0	0	2,112	2,290	2,387
	:						
Other food products:	:						
vegetable olls,		0	0	0	260	164	70/
Glucose	238	306	1 348	1 484	2 649	2 557	3 054
Wheat, puffed, and	2.50	500	1,040	1,404	2,049	100,2	5,054
corn flakes	. 0	0	0	1,446	570	801	413
Fruit preserves	: 0	0	0	1,711	2,046	2,756	2,860
	:			-	-		

Appendix capie	-	Dominit		ксрарі	LIC (	, var				mpores;	5	Count	Juli	- )
	:		:		:		:		:		:		:	
Commodity	:	1960	:	1965	:	1970	:	1973	:	1978	:	1979	:	1980
	:		:		:		:		:		:		:	
	:													
	:					1,00	)0 [	pesos						
	:													
Livestock and livesto	ck:													
products:	:													
Chicks, day old	:	0		0		0		316		• 626		987	1	,729
Beef	:	9		8		0		104		133		237		219
Pork	:	0		0		0		0		11		986	7	,747
Poultry improved	:	0		38		218		33		30	1	,954	7	,509
Poultry, other	:	0		4		0		0		0		0		0
Ham, canned	:	22		73		113		0		46		36		28
Ham, other	:	11		28		112		79		44		204		678
-	:													
Dairy products:	:													
Milk for babies	:	0		0		0		0		1,911	1	,926	2	2,273
Milk, evaporated	:	2		264		702		0		152		99		73
Milk, condensed	:	0		907		616		0		0		0		0
Milk, dried		74		1.374	4	.398		2,407		4,118		5,080	9	,119
Milk, other	:	0		, 0		0		Ó 0		353		515		708
Cheese, common	:	38		138		89		97		184		148		177
Cheese, fancy	:	0		34		37		0		163		149		235
Fag fresh		Ő		29		0		Ő		0		0		0
Eggs hatching	•	ů 0			1	063		1 968		548	2	083	2	2 613
Lggs, natching	•	v		Ŭ		.,005		1,,000		510	-	.,	-	.,010
Fishery products:														
Barring	•	169		36/		713		3 804		2 716		3 298		3 002
Turna carrad	•	105		150		372		3,004		2,710	-	250		484
Soltod codfich	•	516		1 606		972		3 732		7 824	11	250	1/	966
Salled Codlish	•	1		1,090	4	810		5,752		7,024	- 1	845	1-	434
Mackerei	•	10		21		610		0		26		66		111
Salmon, canned	i	10		10		49		2 526		2 1 / 0	,	00	-	7 / 00
Sardines	i i	60		460		/11		2, 520		2,140	4	.,		,4))
	:													
Grain products:	•	0		0		100		2 200		0 20%	1.	1 176	20	- <i>61</i> .0
Corn	:	1 1 2 7		2 202	-	100		2,000		3,304	2.	1 212	20	561
wneat	:	1,12/		2,392	4	4,00/		24,182		23,240	۷.	1,213	20	, , , , , , , , , , , , , , , , , , , ,
Wneat, durum	:	, ,		0		(())		1		205		400		600
Uats	:	4/		289		663		36/		305		400		005
Rice, polished	:	0		21		0		12,859		4,989		174	1:	,005
Rice, other	:	0		0		0		0		0		1/0		101
Corn meal	:	0		125		320		0		242		369		101
Wheat flour	:	183		910		156		624		495		297		66
Wheat flour durum	:	0		176		0		0		0		0		0

Continued--

Wheat flour, durum

Oats, rolled

Other flour

Oat semolina

Wheat semolina

Corn semolina

Oats, pearled

Malt extract

Cereal base food

Food for children,

cereal or milk base : Food for children,

preparations

Oat flour

Malt

other

Corn starch

Corn gluten

:

:

:

:

:

:

:

:

:

:

:

:

:

:

÷

:

:

1,727

1,767

2,444

1,401

.3,313

2,326

4,025

3,117

	Appendi	x tabl	le i	2 <b>Dom</b> :	ini	can Rep	pub	lic: V	/alı	ue of		
	foo	od imp	ort	s, by	com	modity	(c	ontinu	ed)			
									_			_
	•		:		:		:		:		:	
nodity		1060		1065		1070		1072		1070		1070

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Commodity	:	1960	: 1965	: 1970	: 1973	: 1978	: : 1979	: 1980
Fruit:    1,000 pesos      Apples    15    161    195    194    504    448    600      Grapes    10    102    0    138    0    130    108    167      Vegetables:    0    0    138    0    130    108    167      Vegetables:    0    0    139    342    598    179    386      Onions    12    155    9    0    0    103    26      Potatoes, fresh    20    64    0    0    0    0    0      Deans, dried    0    631    1,721    4,360    1,603    4,294    4,385      Tomatos auce    6    47    145    204    577    379    0      Mayonnaise    5    19    93    0    402    359    476      Meat soup    2    218    228    0    0    0    0      Soybean meal    0    0    307    6,757    6,976    7,979      Oilseeds:		:			•	•	•	:	•
Fruit: Apples : 15 161 195 194 504 448 600 Grapes : 10 102 0 184 159 219 317 Raisins : 0 0 0 138 0 130 108 167 Vegetables: Garlic : 0 0 0 139 342 598 179 386 Onions : 21 155 9 0 0 0103 26 Potatoes, fresh : 20 64 0 0 25 658 0 Potatoes, seed : 13 60 148 0 0 0 0 Beans, dried : 0 631 1,721 4,360 1,603 4,294 4,385 Tomato sauce : 6 47 145 204 577 379 0 Mayonnaise : 5 19 93 0 402 359 476 Meat soup : 36 198 498 2,619 5,024 7,469 8,840 Tomato soup : 36 198 498 2,619 5,024 7,469 8,840 Tomato soup : 5 30 10 0 0 0 Vegetable soup : 2 218 228 0 0 0 0 Vegetable soup : 2 218 228 0 0 0 0 Soybean meal : 0 0 697 1,892 5,772 298 10,221 Fats and oils: Fats and oils: Fats and oils: Fats and oils: Fats and oils: Fats and oils: Mainal fats, other : 0 10 938 1,439 3,831 2,562 1,337 Animal fats, in- 225 495 0 145 699 1,678 743 Soybean oil, crude : 0 4,846 0 0 2,006 0 Soybean oil, crude: 0 0 0 11,923 7,161 27,257 9,373 Cottonseed oil, crude: 0 4,846 0 0 2,006 0 Soybean oil, crude: 0 0 0 0 287 67 616 3,424 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 191 0 1,288 0 1,5478 Peanut 0il : 0 4,846 0 0 2,006 0 0 Soybean oil, cride: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil : 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 287 67 616 3,442 Cottonseed oil, crude: 0 0 0 0 0 287 67 616 3,442 Cottonseed oil : 0 0 0 0 0 288 0 0,288 237 262 Animal fats, in- Cottonseed oil : 0 0 0 0 0 285 680 797 606 Fruit reveryee: 0 0 0 0 0 728 1 300 192 2,616		:			1,00	00 pesos			
Fruit:    i    15    161    195    194    504    448    600      Crapes    :    10    102    0    184    159    219    317      Raisins    :    0    0    138    0    130    108    167      Vegetables:    :    .    0    139    342    598    179    386      Garlic    :    0    0    139    342    598    179    386      Onions    :    21    155    9    0    0    103    26      Potatoes, fresh    :    20    64    0	<b>D</b>	:							
Apples    :    13    161    193    194    304    448    600      Grapes    :    0    0    138    0    130    108    167      Raisins    :    0    0    138    0    130    108    167      Vegetables:    :    :    0    0    139    342    598    179    386      Onions    :    :    1155    9    0    0    103    26      Potatoes, seed    :    13    60    148    0    0    0    0      Beans, dried    :    0    631    1,721    4,360    1,603    4,294    4,385      Tomatos suce    :    5    19    93    0    402    359    476      Mayonnaise    :    5    10    0	Fruit:	•	15	1(1	105	10/	50/		(
Crapes    :    10    102    0    184    139    219    317      Raisins    :    0    0    138    0    108    167      Garlic    :    0    0    139    342    598    179    386      Onions    :    21    155    9    0    0    103    26      Potatoes, fresh    :    20    64    0    0    25    658    0      Potatoes, canned    :    30    649    504    0    0    0    0    0      Tomatoes, canned    :    30    649    504    0 </td <td>Apples</td> <td></td> <td>15</td> <td>101</td> <td>195</td> <td>194</td> <td>504</td> <td>448</td> <td>600</td>	Apples		15	101	195	194	504	448	600
Raisins    :    0    0    138    0    130    108    167      Vegetables:    :    :    .	Grapes	:	10	102	100	184	159	219	317
Vegetables:    .      Garlic    .    0    0    342    598    179    386      Onions    .    21    155    9    0    0    103    26      Potatoes, fresh    .    20    64    0    0    25    658    0      Potatoes, seed    .    13    60    148    0    0    0    0      Beans, dried    .    0    64    504    0    0    0    0    0      Mayonafse    .    5    19    93    0    402    359    476      Meat soup    .    2    18    28    0    0    0    0      Vegetable soup    .    2    18    28    0 <td>Kaisins</td> <td>:</td> <td>0</td> <td>0</td> <td>138</td> <td>0</td> <td>130</td> <td>108</td> <td>167</td>	Kaisins	:	0	0	138	0	130	108	167
Garlic    :    0    0    139    342    598    179    386      Onions    :    21    155    9    0    0    103    26      Potatoes, fresh    :    20    64    0    0    25    658    0      Potatoes, seed    :    13    60    148    0    0    0    0      Beans, dried    :    0    631    1,721    4,360    1,603    4,294    4,385      Tomatoes, canned    :    300    649    504    0    0    0    0      Tomato sauce    :    6    47    145    204    577    379    0      Meat soup    :    :    136    198    498    2,619    5,024    7,469    8,840      Tomato soup    :    :    0 <td>Vegetables.</td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Vegetables.	•							
Onions    : 21    155    9    0    0    103    26      Potatoes, fresh    : 20    64    0    0    25    658    0      Potatoes, seed    : 11    60    148    0    0    0    0      Beans, dried    : 0    631    1,721    4,360    1,603    4,294    4,385      Tomatoes, canned    : 300    649    504    0    0    0    0      Tomato sauce    : 6    47    145    204    577    379    0      Mayonnaise    : 5    19    93    0    402    359    476      Meat soup    : 36    198    498    2,619    5,024    7,469    8,840      Tomato soup    : 2    218    228    0    0    0    0      Vegetable soup    : 2    218    228    0	Garlic		0	0	139	342	598	179	386
Dotatoes, fresh    120    64    0    0    105    105      Potatoes, seed    13    60    148    0    0    0    0      Beans, dried    20    64    0    0    0    0    0      Beans, dried    300    649    504    0    0    0    0      Tomato sauce    6    47    145    204    577    379    0      Mayonnaise    5    19    93    0    402    359    476      Meat soup    36    198    498    2,619    5,024    7,469    8,840      Tomato soup    2    218    228    0    0    0    0      Vegetable soup    2    218    228    0    0    0    0      Soybean meal    0    0    0    332    734    832    0    0    0    0      Soybeans    0    0    167    0    4,157    5,107    6,737      Animal fats, in    225    495    0<	Onions		21	155	9	0	0	103	26
Potatoes, seed    :    13    60    148    0    0    0    0      Beans, dried    :    0    631    1,721    4,360    1,603    4,294    4,385      Tomatoes, canned    :    300    649    504    0    0    0      Tomato sauce    :    6    47    145    204    577    379    0      Mayonnaise    :    :    5    19    93    0    402    359    476      Meat soup    :    :    5    30    10    0    0    0    0      Vegetable soup    :    :    2    218    228    0    0    0    0    0      Soybean meal    :    0    0    0    307    6,757    6,976    7,979      Oilseeds:    :    :    .	Potatoes fresh	•	20	64	0	õ	25	658	20
Beans, dried    :    0    631    1,721    4,360    1,603    4,294    4,385      Tomatoes, canned    :    300    649    504    0    0    0    0      Tomatoes, canned    :    300    649    504    0    0    0    0    0      Mayonnaise    :    5    19    93    0    402    359    476      Meat soup    :    36    198    498    2,619    5,024    7,469    8,840      Tomato soup    :    :    0    0    0    0    0    0    0      Vegetable soup    :    2    218    228    0<	Potatoes, seed	:	13	60	148	Ő	0	0_0	Ő
Tomatoes, canned    : 300    : 649    : 504    0    0    0    0      Tomato sauce    : 6    47    145    204    : 577    : 379    0      Mayonnaise    : 5    19    93    0    402    : 359    476      Meat soup    : 36    198    498    2,619    : 5,024    7,469    8,840      Tomato soup    : 5    : 5    0    10    0    0    0    0      Vegetable soup    : 2    218    228    0    0    0    0      Soybean    : 2    : 734    832    0    0    0    0      Soybeans    : 0    0    : 6976    7,979    :    :    .    .      Oilseeds:    :    :    . <td< td=""><td>Beans dried</td><td>:</td><td>10</td><td>631</td><td>1 721</td><td>4 360</td><td>1 603</td><td>4 294</td><td>4 385</td></td<>	Beans dried	:	10	631	1 721	4 360	1 603	4 294	4 385
Tomato sauce    :    6    47    145    204    577    379    0      Mayonnaise    :    5    19    93    0    402    359    476      Meat soup    :    36    198    498    2,619    5,024    7,469    8,840      Tomato soup    :    5    30    0    0    0    0    0      Vegetable soup    :    2    218    228    0    0    0    0      Feeds:    :    :    .    .    .    .    .    .    .    .      Oilseeds:    :    :    .	Tomatoes, canned	•	300	649	504	-,500	1,005	-,254	, JUJ
Mayonaise    :    5    19    93    0    402    359    476      Meat soup    :    36    198    498    2,619    5,024    7,469    8,840      Tomato soup    :    5    30    10    0    0    0    0      Vegetable soup    :    2    218    228    0    0    0    0      Feeds:    :    -    -    332    734    832    0    0    0      Soybean meal    :    0    0    307    6,757    6,976    7,979      Oilseeds:    :    -    -    -    -    -    0 <t< td=""><td>Tomato sauce</td><td>•</td><td>6</td><td>47</td><td>145</td><td>204</td><td>577</td><td>379</td><td>õ</td></t<>	Tomato sauce	•	6	47	145	204	577	379	õ
Meat soup    :    36    198    498    2,619    5,024    7,469    8,840      Tomato soup    :    2    218    228    0    0    0    0      Vegetable soup    :    2    218    228    0    0    0    0    0      Feeds:    :    :    .    .    0    0    0    0    0      Soybean meal    :    0    0    332    734    832    0    0    0    0      Soybean meal    :    0	Mayonnaise	:	5	19	93	204	402	359	476
Tomato soup    :    5    30    10    0    0    0    0      Vegetable soup    :    2    218    228    0    0    0    0    0      Feeds:    :    :    . <td>Meat soup</td> <td>:</td> <td>36</td> <td>198</td> <td>498</td> <td>2 619</td> <td>5 024</td> <td>7 469</td> <td>8 840</td>	Meat soup	:	36	198	498	2 619	5 024	7 469	8 840
Vegetable soup    :    2    218    228    0    0    0    0      Feeds:    :    .<	Tomato soup	•	5	30	10	2,019	0,024	,,,,0)	0,040
Feeds:    1    1    10    120    0    0    0    0      Feeds:    1    0    332    734    832    0    0    0      Soybean meal    0    0    0    0    0    0    0    0    0      Oilseeds:    :    0    0    0    697    1,892    5,772    298    10,221      Fats and oils:    :    0    0    167    0    4,157    5,107    6,737      Animal fats, other    0    10    938    1,439    3,831    2,562    1,377      Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    :    :    :    :    :    :    :    :      Soybean oil, crude    0    0    0    11,923    7,161    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :<	Vegetable sour	:	2	218	228	õ	õ	õ	õ
Feeds:    :      Poultry feed    :    44    279    1,414    0    0    0    0      Animal feed, other    :    0    332    734    832    0    0    0    0      Soybean meal    :    0    0    0    307    6,757    6,976    7,979      Oilseeds:    :    .	vegetable soup		2	210	220	0	0	0	0
Poultry feed    :    44    279    1,414    0    0    0    0      Animal feed, other    :    0    332    734    832    0    0    0      Soybean meal    :    0    0    0    307    6,757    6,976    7,979      Oilseeds:    :    .    .    .    .    .    .    .      Fats and oils:    :    .    0    0    697    1,892    5,772    298    10,221      Animal fats    :    0    0    167    0    4,157    5,107    6,737      Animal fats, other    :    0    10    938    1,439    3,831    2,562    1,377      Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    0    0    0    1,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    0    0    1,923    7,161    27,257    9,373      Olive oil	Feeds:	:							
Animal feed, other    0    332    734    832    0    0    0      Soybean meal    :    0    0    0    307    6,757    6,976    7,979      Oilseeds:    :    .    0    0    697    1,892    5,772    298    10,221      Fats and oils:    :    .    .    .    .    .    .      Animal fats, other    :    0    0    167    0    4,157    5,107    6,737      Animal fats, other    :    0    10    938    1,439    3,831    2,562    1,377      Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    :    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    :    0    0    0    2,006    0    0      Soybean oil, refined :    :    0    0    191    0    1,288    0    1,563      Olive oil    :    :	Poultry feed	:	44	279	1,414	0	0	0	0
Soybean meal    :    0    0    0    307    6,757    6,976    7,979      Oilseeds:    :    .    .    0    0    697    1,892    5,772    298    10,221      Fats and oils:    :    .	Animal feed, other	:	0	332	734	832	Ő	Ō	- 0
Oilseeds:    :    0    0    697    1,892    5,772    298    10,221      Fats and oils:    :    . </td <td>Soybean meal</td> <td>:</td> <td>0</td> <td>0</td> <td>0</td> <td>307</td> <td>6.757</td> <td>6,976</td> <td>7,979</td>	Soybean meal	:	0	0	0	307	6.757	6,976	7,979
Oilseeds: : Soybeans : 0 0 697 1,892 5,772 298 10,221 Fats and oils: : Animal fats, other : 0 10 938 1,439 3,831 2,562 1,377 Animal fats, in- : 225 495 0 145 699 1,678 743 edible : Soybean oil, crude : 0 0 0 0 11,923 7,161 27,257 9,373 Cottonseed oil, crude: 0 80 0 0 5,821 0 15,478 Peanut oil : 0 4,846 0 0 2,006 0 0 Soybean oil, refined : 0 0 191 0 1,288 0 1,563 Olive oil : 79 90 283 0 228 237 262 Animal oils : 0 0 0 0 0 2,513 2,749 4,574 Other food products: : Vegetable oils, re- : 0 0 0 0 0 245 211 595 fined : Clucose : 10 43 133 719 611 651 812 Puffed wheat and : corn flakes : 0 0 0 0 728 1 330 1 924 2 261	5	:							,
Soybeans    :    0    0    697    1,892    5,772    298    10,221      Fats and oils:    :    . <td>Oilseeds:</td> <td>:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Oilseeds:	:							
Fats and oils:    :      Animal fats    :    0    0    167    0    4,157    5,107    6,737      Animal fats, other    :    0    10    938    1,439    3,831    2,562    1,377      Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    0    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    0    0    15,478    0    15,478      Peanut oil    :    0    4,846    0    2,006    0    0      Soybean oil, refined:    0    0    191    0    1,288    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      :    :    :	Soybeans	:	0	0	697	1,892	5,772	298	10,221
Fats and oils:    :      Animal fats    :    0    0    167    0    4,157    5,107    6,737      Animal fats, other    :    0    10    938    1,439    3,831    2,562    1,377      Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    0    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    0    0    15,478    0    0    5,821    0    15,478      Peanut oil    :    0    4,846    0    2,006    0		:							
Animal fats    :    0    0    167    0    4,157    5,107    6,737      Animal fats, other    :    0    10    938    1,439    3,831    2,562    1,377      Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    0    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    80    0    0    5,821    0    15,478      Peanut oil    :    0    4,846    0    0    2,006    0    0      Soybean oil, refined :    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      :    :    :    :    :    :    :    :    :    :    :    :    :    :    : <t< td=""><td>Fats and oils:</td><td>:</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Fats and oils:	:	-						
Animal fats, other    :    0    10    938    1,439    3,831    2,562    1,377      Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    0    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    80    0    0    5,821    0    15,478      Peanut oil    :    0    4,846    0    0    2,006    0    0      Soybean oil, refined :    0    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    245    211    595      fined    :    :    .    .    .    .    .    .    .      Other food products:    :    .    .    .    .    .    .    .    .    .    .    .    . <td>Animal fats</td> <td>:</td> <td>0</td> <td>0</td> <td>167</td> <td>0</td> <td>4,157</td> <td>5,107</td> <td>6,737</td>	Animal fats	:	0	0	167	0	4,157	5,107	6,737
Animal fats, in-    :    225    495    0    145    699    1,678    743      edible    :    :    0    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    80    0    0    5,821    0    15,478      Peanut oil    :    0    4,846    0    0    2,006    0    0      Soybean oil, refined :    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      :    .    .    .    .    .    .    .    .    .      Other food products:    :    .    .    .    .    .    .    .    .      Glucose    :    10    43    133    .    .    .    .    .    .      Puffed wheat and :    .	Animal fats, other	:	0	10	938	1,439	3,831	2,562	1,377
edible    :      Soybean oil, crude :    0    0    0    11,923    7,161    27,257    9,373      Cottonseed oil, crude:    0    80    0    0    5,821    0    15,478      Peanut oil    :    0    4,846    0    0    2,006    0    0      Soybean oil, refined :    0    0    0    287    67    616    3,442      Cottonseed oil    :    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      Cother food products:      Vegetable oils, re-    :    0    0    0    245    211    595      fined    :	Animal fats, in-	•	225	495	0	145	699	1,678	743
Soybean oil, crude:    0    0    0    11,923    7,161    27,237    9,373      Cottonseed oil, crude:    0    80    0    0    5,821    0    15,478      Peanut oil    :    0    4,846    0    0    2,006    0    0      Soybean oil, refined:    0    0    0    287    67    616    3,442      Cottonseed oil    :    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      :    :    0    0    0    0    245    211    595      fined    :    :    :    0    0    0    245    211    595      fined    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    :    : <td< td=""><td>edible</td><td>:</td><td>0</td><td>0</td><td>0</td><td>11 022</td><td>7 1 ( )</td><td>07 057</td><td>0 272</td></td<>	edible	:	0	0	0	11 022	7 1 ( )	07 057	0 272
Cottonseed oil, crude:    0    60    0    5,621    0    13,478      Peanut oil    :    0    4,846    0    2,006    0    0      Soybean oil, refined:    0    0    0    287    67    616    3,442      Cottonseed oil    :    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      :	Soybean oll, crude		0	0	0	11,923	7,101	27,257	9,373
reanut off    :    0    4,846    0    0    2,066    0    0      Soybean oil, refined :    0    0    0    287    67    616    3,442      Cottonseed oil    :    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      Other food products:    :    .    .    .    .    .    .    .    .      Other food products:    :    .<	Decrut of 1	e:	0	00 1 916	0	0	2,021	0	13,470
Soybean oil, refined:    0    0    0    287    67    616    3,442      Cottonseed oil    :    0    0    191    0    1,288    0    1,563      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      :    .    .    .    .    .    .    .    .    .      Other food products:    :    .    .    .    .    .    .    .    .    .      Other food products:    :    . </td <td>Peanut oll Combour oil motional</td> <td>-</td> <td>0</td> <td>4,840</td> <td>0</td> <td>297</td> <td>2,006</td> <td>616</td> <td>2 4 4 2</td>	Peanut oll Combour oil motional	-	0	4,840	0	297	2,006	616	2 4 4 2
Cottonseed off    :    0    0    191    0    1,266    0    1,363      Olive oil    :    79    90    283    0    228    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574      :    .    .    .    .    .    .    .    .      Other food products:    :    . <td>Soybean oll, refined</td> <td>•</td> <td>0</td> <td>0</td> <td>101</td> <td>287</td> <td>1 200</td> <td>010</td> <td>3,442</td>	Soybean oll, refined	•	0	0	101	287	1 200	010	3,442
Office office    1    79    90    283    0    226    237    262      Animal oils    :    0    0    0    0    2,513    2,749    4,574                Other food products:            Vegetable oils, re-    :    0    0    0    245    211    595      fined    :             Puffed wheat and :                Fruit preserves <t< td=""><td>Cottonseed oll</td><td>•</td><td>70</td><td>0</td><td>191</td><td>0</td><td>1,200</td><td>2.27</td><td>1,000</td></t<>	Cottonseed oll	•	70	0	191	0	1,200	2.27	1,000
Animal offs    :    0    0    0    0    2,513    2,749    4,374  <	Olive oli		/9	90	283	0	220	237	202
Other food products:    .      Vegetable oils, re-    0    0    0    245    211    595      fined    .	Animai olis		0	0	0	0	2,513	2,749	4,574
Vegetable oils, re-:    0    0    0    0    245    211    595      fined    :    .	Other food products:	•							
fined    :    0    0    0    0    245    211    595      fined    :    :    Glucose    :    10    43    133    719    611    651    812      Puffed wheat and    :    :    :    0    0    0    555    680    797    606      Fruit preserves    :    0    0    0    728    1    330    1    924    2    261	Vegetable oils ro	•	~	0	0	0	015		
Glucose    :    10    43    133    719    611    651    812      Puffed wheat and    : <td:< td="">    :    :</td:<>	fined	:	0	0	0	0	245	211	595
Puffed wheat and    Image: Construction of the second sec	Glucose	•	10	1,2	122	710	611	651	812
corn flakes    :    0    0    555    680    797    606      Fruit preserves    :    0    0    728    1    330    1    924    2    261	Puffed wheat and	•	10	40	100	/19	011	001	012
$\frac{11}{11} \frac{11}{11} 11$	corn flakes	•	0	0	0	555	680	707	606
	Fruit preserves	•	0	0	0	728	1 3 3 0	1 974	2 261
:	ruit preserves	:	Ū	v	Ŭ	720	1,000	1,724	2,201

## Related Reports Available

# Agriculture in Western Europe

Western Europe accounted for \$11.8 billion or 27 percent of U.S. agricultural exports in 1981. The European Community (EC), a grouping of 10 countries within Western Europe, is the largest customer for U.S. agricultural exports. The value of our farm commodities shipped to the EC totaled \$9.1 billion in 1981. Spain is our major market in Western Europe outside the EC, although other non-EC countries are important outlets. Sweden, for example, took \$187 million of U.S. ag products in 1981. With U.S. agricultural policy and exports so closely linked to events and trends in the European market, a number of research studies have been carried out to gain a fuller understanding of agricultural policies and future developments in Western Europe. Three reports available through GPO examine the effects of EC and Swedish agriculture on U.S. agricultural policy and exports:

Developments in the Common Agricultural Policy of the European Community examines the directions the EC's Common Agricultural Policy (CAP) may take in order to avert a budget crisis and reports the implications for trade with the U.S. and other countries. According to authors Timothy Josling and Scott Pearson, the ever-increasing farm subsidies prescribed by the CAP will seriously harm the EC's ability to meet other policy needs and will hinder enlargement of the Community to include Spain and Portugal. EC policymakers may have to either keep prices low directly or with producer taxes, or limit quantities covered by subsidies. June 1982. 88 pp. \$5.50.

The EC Market for U.S. Agricultural Exports: A Share Analysis assesses the market potential for all major U.S. ag exports to the EC. Author Harold McNitt finds that the United States will continue as a leading supplier to the EC of soybeans, sunflowerseed, corn and corn gluten feed, peanuts, citrus pulp, some animal products, and soybean meal during 1981-85. EC trade policies, however, sharply restrict imports of most fruits and vegetables, processed foods, and meats. March 1983. 92 pp. \$5.00.

Sweden's Agricultural Policy, one of the few English sources on contemporary Swedish agricultural policy, covers the major provisions of Sweden's 1982-84 farm program. "An accurate and concise presentation," says the Swedish Ambassador to the United States. Sweden's policy objectives are to reduce government subsidies for agricultural exports (a major aim of U.S. world trade policy), to cut back on consumer food subsidies and farmer compensation programs, and to make the levies on imports more responsive to market conditions. Chief U.S. exports to Sweden include fruits, vegetables, nuts, and tobacco, which are relatively unaffected by Swedish import levies, and grains. October 1982. 44 pp. \$4.25.

Write check payable to Superintendent of Documents	Name					
MAIL ORDER FORM TO: Superintendent of Documents	City, State, Zip					
Government Printing Office Washington, DC 20402	Please send me a copy of the following	j reports:				
For Office Use Only	( ) Developments in the Common A Community. \$5,50. SN: 001-0	gricultural Policy of the European 00-04271-8.				
Quantity Charges	() The EC Market for U.S. Agricult SN: 001-000-04326-9.	tural Exports: A Share Analysis, \$5.00.				
To be mailed Subscriptions	() Sweden's Agricultural Policy. \$4	4.25. SN: 001-000-04300-5.				
Postage	Enclosed is \$	Credit Card Order Only				
MMOB	Check	VISA Mastercard				
OPNR	Money order	Total charges \$				
DISCOUNT	Charge to my Deposit Account	Credit card No				
Refund	No	Expiration Date Month/Year				

### Japan To Increase Imports of U.S. Grains and Meats

"I am impressed with the quality and thoroughness of this work. It represents a real contribution to our understanding of Japanese agriculture." Fred Sanderson, Guest Scholar, Brookings

Institution.

Japan has long been one of the most important markets for U.S. agricultural exports, especially grains and oilseeds. A new report by USDA's Economic Research Service, Japan's Feed-Livestock Economy: Prospects for the 1980's, helps explain why that has been so and why future farm exports to Japan will probably rise even higher.

Each year, Japan purchases about 20 percent of total U.S. corn exports, 50 percent of U.S. sorghum exports, and more than 20 percent of U.S. soybean exports. By 1990, the United States may be able to increase its grain and soybean exports by a third and quintuple its beef exports, according to William Coyle, author of the report. In contrast, the Japanese market for imported dairy products, pork, and poultry will show little or no growth. The United States provides more than 65 percent of Japan's imports of coarse grains (corn, barley, sorghum), 95 percent of its soybean imports, and 71 percent of its soybean meal imports.



The report includes extensive tables and charts on Japanese consumption, production, and trade of beef, dairy, poultry, fish, and feed grains, including projections through 1990.

Japan's Feed-Livestock Economy: Prospects for the 1980's (William T. Coyle; \$5.00; 80 pages, stock no. 001-000-04316-1) can be purchased from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. GPO pays the postage. Make check or money order payable to Superintendent of Documents.

For faster service, call GPO's order desk, (202) 783-3238, and charge your purchase to your VISA, MasterCard, or GPO Deposit account. Bulk discounts are available.



United States Department of Agriculture

Washington, D.C. 20250

OFFICIAL BUSINESS Penalty for Private Use, \$300 POSTAGE AND FEES PAID U. S. DEPARTMENT OF AGRICULTURE AGR - 101



#### THIRD CLASS BULK RATE

Carmen Nohre, Chief Asia Room 350 GHI



ERS Abstracts newsletter is a free service listing reports issued by USDA's Economic Research Service which are for sale by the National Technical Information Service or the U.S. Government Printing Office. To receive this newsletter, send your name and address to:

> ERS Abstracts U.S. Department of Agriculture Room 4305-South Washington, D.C. 20250