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**OPERATION OF THE  
PL 480 PROGRAM IN  
BRAZIL**

DEVELOPMENT AND TRADE ANALYSIS DIVISION • ECONOMIC RESEARCH SERVICE  
U.S. DEPARTMENT OF AGRICULTURE



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## SUMMARY

Wheat and flour accounted for 90 percent of PL 480 exports to Brazil from July 1, 1955, through June 30, 1962. These commodities, which were provided under Title I sales and Title III barter, accounted for over one-fourth of Brazil's average per capita consumption of wheat and flour over this period. From July 1, 1945, through December 1961, agricultural commodity assistance under PL 480 comprised one-fourth of all U. S. assistance to Brazil.

Powdered milk is being made available, through Title II grants to the Brazilian Government, to 3 million school children and 885,000 pregnant and nursing mothers, infants, and children of preschool age. In addition, under the Title III donations program, nonprofit agencies are providing powdered milk, beans, corn, salad oil, and other commodities to 3.0 million people including 0.7 million school children.

The availability of these U. S. agricultural commodities on concessional terms does not appear to have had adverse effects on agricultural production in Brazil. In the case of wheat, the most important PL 480 commodity, domestic support prices in recent years have ranged from 20 to 60 percent above U. S. export prices.

The recently authorized donation of commodities under Title II, to provide food to families being settled on undeveloped land, may help to increase future agricultural output. In addition, U. S. financial assistance has been proposed for the purpose of taking land out of coffee production and planting it to food and forage crops.

The United States has replaced Argentina as Brazil's largest wheat supplier since the PL 480 program was started. However, this development had no adverse effect on Argentina's wheat exports, as that country has been able to export all of its surplus wheat during the PL 480 period to European and other Latin American countries. Uruguay, another traditional supplier, has in recent years been unable to export wheat to Brazil due to crop failures. Brazil no longer imports wheat from Canada, the third traditional supplier, but in view of Brazil's poor external financial position it is doubtful that, in the absence of the PL 480 program, enough wheat could be purchased for hard currency either from Canada, Australia or the United States without some outside financial assistance.

Brazil's total wheat imports from friendly suppliers other than the United States remained at about the same level during the PL 480 period as during the previous 4 years.

Brazil's growing population and increasing real income per capita indicate a continuing increase in the demand for wheat. The income elasticity of demand for wheat in Brazil at +1.1 is higher than that for most other countries. The Government recognized the strong demand for wheat during 1962, when it increased the national consumption quota from 2.4 to 3.0 million metric tons. The quota has since been reduced to 2.7 million metric tons, a reduction made possible by a law requiring the substitution of cornmeal and manioc flour for 10 percent and

5 percent, respectively, of the flour used for baking bread. An increase in corn production encouraged the Government to require the substitution of cornmeal for wheat flour.

Declining domestic wheat production, prospects for continued shortage of foreign exchange earnings, pressures to use any future increase in earnings for repaying foreign indebtedness, and increasing financial requirements of future economic development will tend to increase reliance on concessional imports of wheat and thus the importance of the PL 480 program to Brazil. Brazil is expected to continue to request commodities, especially wheat and flour, under concessional terms from the United States in the foreseeable future.

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## OPERATION OF THE PL 480 PROGRAM IN BRAZIL

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### INTRODUCTION

Brazil, with a land area 90 percent as great as that of the United States, has less than half as many people. Brazil's population in 1962 was 73 million. This is 22 persons per square mile compared with 50 per square mile in the United States (24). 1/ Population is growing at a rate of 3.1 percent per year, which is about the average for Latin America.

Among Brazil's major economic problems is the inflation resulting from deficit financing and credit expansion, an inflation which became so sharp during 1962 that the cost of living almost doubled (appendix table 15). Nevertheless, average real per capita incomes are rising and the country is growing. Gross domestic product per capita has been increasing at the rate of about 3 percent per year. During 1962 the per capita increase was 4 percent and the overall increase was 7 percent (23).

Although a very large proportion of the labor force is engaged in agriculture, this proportion has been declining rapidly. It was 67 percent in 1940, 58 percent in 1950, and 51 percent in 1959 (12). Recent indexes of per capita agricultural production show increases of 2 to 3 percent annually. While this rate of increase is considerably higher than that of a decade or more ago, it is still below the rate of growth in population.

The United States provided \$1 billion of net economic and technical assistance to Brazil from July 1, 1945, through December 31, 1961. One-fourth of this assistance was provided under PL 480. This report is a part of a series of studies being undertaken by the U. S. Department of Agriculture to determine the effect of PL 480 and its relationship to other U. S. assistance programs. It appraises the relative importance of the various PL 480 programs in Brazil, and the relationships of PL 480 assistance to total U. S. economic assistance to that country. Particular emphasis is given to evaluation of commodity assistance received under Title I and appraisal of the effects of these imports on consumption, agricultural production, trade, and future markets for U. S. agricultural commodities.

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1/ Underscored numbers in parentheses refer to Literature Cited, p. 26.

## PUBLIC LAW 480 PROGRAM

Public Law 480, which was passed by the 2nd Session of the 83rd Congress on July 10, 1954, and subsequently amended, provides for the overseas shipment of surplus U. S. agricultural commodities under four titles: Title I, Sales for Foreign Currency; Title II, Famine Relief and Other Assistance; Title III, Barter and Donations; and Title IV, Long Term Supply Contracts.

Title I provides for the sale of agricultural commodities to friendly nations for the foreign currency equivalent of the export market value in dollars, plus cost of ocean transportation. These currencies are deposited in a financial institution within the recipient country to the account of the U.S. Government. With minor exceptions, the United States agrees not to convert these currencies into other currencies but instead to use them within the recipient country for embassy and other expenses, to lend them to the recipient government or to private enterprises operating within the country, or to grant them to the recipient government.

Title II provides for grants of CCC-owned commodities to friendly nations or to friendly but needy populations without regard to the friendliness of their government. These commodities are used for famine or other urgent or extraordinary relief requirements and for economic development projects.

Title III authorizes two programs. As described in the Seventeenth Semiannual Food for Peace report, "Section 302 amended and broadened the authority contained in section 416 of the Agricultural Act of 1949 for donations of surplus food for domestic distribution to eligible recipients and outlets, and for distribution to needy persons overseas through nonprofit American voluntary relief agencies and intergovernmental organizations; section 303 provides for the barter of CCC commodities for strategic and other materials, goods, and equipment (9)".

Title IV was added to PL 480 by the 86th Congress in September 1959 for the purpose of assisting "the economic development of friendly nations by providing long-term credit for purchases of surplus agricultural commodities..." There have been no Title IV agreements with Brazil.

### SCOPE OF PL 480 PROGRAM IN BRAZIL

Title I accounts for over four-fifths of the export market value of the commodities exported to Brazil under PL 480. Commodities were also exported under Title II and both the barter and donation provisions of Title III. Title I agreements for commodities valued at \$481.4 million including cost of ocean transportation had been signed with Brazil as of September 30, 1963. Brazil had deposited as of December 31, 1962, cruzeiros valued at \$317.2 million for commodities already shipped. About half of these cruzeiros had been disbursed by that date, 77 percent for loans to the Brazilian Government.

#### Title I

Brazil was the 22nd country to take advantage of sales of U. S. farm products under Title I of PL 480. As of December 31, 1962, Brazil was the eighth largest signatory of agreements under Title I (9).



Brazil has always been a wheat deficit country. Wheat accounted for 85 percent of the export market value of the commodities supplied under the initial Title I agreement with Brazil. By the end of September 1963, four other agreements had been signed and amended, bringing the export market value of the commodities under these agreements to \$426.7 million. Ocean transportation added another \$54.7 million (table 1). These commodities represented total Commodity Credit Corporation costs of \$739.9 million.

Table 1.--Value and cost of commodities covered by PL 480 Title I agreements with Brazil as modified by purchase authorization transactions through September 1963

Date of agreement	: Export : : market : : value :	: Ocean : : transport :	: Total : : agreements : : value :	: Total : : CCC : : cost :
:-----Million dollars-----:				
Nov. 16, 1955-----	35.7	5.0	40.7	73.4
Dec. 31, 1956, amended Dec. 29, 1960--	154.9	19.4	174.3	263.2
May 4, 1961-----	62.0	8.0	70.0	116.0
March 15, 1962, amended Oct. 4, 1962--	91.4	10.6	102.0	158.1
Sept. 11, 1963-----	82.7	11.7	94.4	129.2
Total agreements-----	426.7	54.7	481.4	739.9

Source: Program Operations Division, Foreign Agricultural Service, U. S. Department of Agriculture.

Wheat and flour accounted for 97 percent of the export market value of these Title I commodities. Feed grains, tobacco, dairy products, and fats and oils accounted for the remaining 3 percent (table 2).

Table 2.--Commodity composition of sales under PL 480 Title I agreements with Brazil as modified by purchase authorization transactions through September 1963

Commodity	: Quantity :	: Export : : market : : value :
	: Million : : bushels :	: Million : : dollars :
Wheat and flour-----	245.9	417.6
Feed grains-----	1.8	2.4
	: Million : : pounds :	
Tobacco-----	.3	.7
Dairy products-----	3.5	1.9
Fats and oils-----	23.7	4.1
Total-----	---	426.7

Source: Same as table 1.

The market value of all commodities exported to Brazil under PL 480 during the fiscal years 1955-62 was approximately \$323,000, of which Title I accounted for 83 percent (table 3).

### Titles II and III

A Title II grant program was first authorized for Brazil in fiscal 1962. This program was instituted to meet serious food shortages occurring in north-east Brazil as a result of drought and resulting crop failures throughout this region. Value of exports under this program in 1962 was \$4.8 million, only 2 percent of all PL 480 exports from 1955 through 1962. Exports under Title III donations were begun in fiscal year 1955, and accounted for 6 percent of the value of all exports of PL 480 commodities through fiscal 1962. Title III barter accounted for the remaining 9 percent of the value of PL 480 exports during this period (table 3).

Table 3.--Export market value of U. S. agricultural exports to Brazil, PL 480 and other, fiscal years 1955-62

(Preliminary--partly estimated)							
Year :	PL 480				Total	:Excluding :	
ending :	Title I :	Title II:	Title III		PL 480	: Govt. :	: Total
June 30:	:	:Donations:	: Barter :				
:-----Thousand dollars-----:							
1955----	---	---	1,664	---	1,664	20,261	21,925
1956----	27,467	---	2,657	---	30,124	10,149	40,273
1957----	24,245	---	2,288	547	27,080	4,891	31,971
1958----	10,437	---	1,489	3	11,929	15,143	27,072
1959----	27,346	---	1,906	1,690	30,942	6,050	36,992
1960----	50,928	---	1,317	7,230	59,475	5,386	64,861
1961----	53,358	---	1,774	6,455	61,587	8,170	69,757
1962----	72,574	4,846	6,182	16,460	100,062	6,480	106,542
Total:	266,355	4,846	19,277	32,385	322,863	76,530	399,393

1/ These were commercial sales as far as can be determined. They included wheat purchased with short-term credit as follows: \$10.6 million extended by Export-Import Bank during fiscal 1955; \$3.5 million extended by CCC during fiscal 1961; and \$0.6 million extended by CCC during fiscal 1962.

### Use of Brazilian Currency

Most of the \$480.8 million (in cruzeiros) to be received for commodities shipped to Brazil under the five Title I agreements was programed for loans to the Brazilian Government, with smaller amounts for U. S. uses, grants for economic development, and common defense (table 4).

Table 4.--Programed uses of foreign currencies under PL 480 Title I agreements through September 1963, and actual uses of currencies disbursed as of December 31, 1962

Use and specified subsection of PL 480	Programed uses 1/		Actual uses 3/	
	Amount 2/	Percentage	Amount 4/	Percentage
	Mil.dol.	Pct.	Mil.dol.	Pct.
Common defense, 104(c)---	2.0	1	<u>5/</u>	<u>6/</u>
Grants for economic de- velopment 104(e)-----	53.3	11	6.1	4
Loans to private enter- prise, 104(e)-----	0.0	0	---	---
Loans to Brazil, 104(g)--	341.8	71	114.7	77
For U. S. uses <u>7/</u> -----	83.7	17	28.4	19
Total-----	480.8	100	149.2	100

1/ From Program Operations Division, Foreign Agricultural Service, U. S. Department of Agriculture.

2/ Dollar equivalents at the deposit rate of exchange. Total differs from total in table 1 because of difference in rounding and because table 1 gives figures as modified by the purchase authorization transactions.

3/ Unpublished data, U. S. Treasury Department.

4/ Dollar equivalents at the time of disbursement.

5/ \$59,000.

6/ Less than 0.5 percent.

7/ U. S. uses include all the subsections (a-s) which are not specified above. Uses under subsection 104(c) are also sometimes classified as U. S. uses.

As of December 31, 1962, Brazil had deposited to the account of the United States cruzeiros valued at \$317.2 million. 2/ Of this amount, cruzeiros valued at \$149.2 million had been disbursed. Seventy-seven percent or \$114.7 million was disbursed for loans to the Brazilian Government, and \$28.4 million or 19 percent for U. S. uses. Disbursements for grants amounted to only 4 percent.

Local currencies generated through Title I sales can provide a non-inflationary means of financing economic development. However, a country in which credit expansion is allowed to become excessive may prefer to finance economic development through credit creation without an offsetting receipt of real goods rather than through the Title I program. This is because the Title I program, which provides real goods to offset any increase in the money supply, requires U. S. approval for expenditure of the local currency proceeds. In such a country, the value of local currency received by the United States for commodities shipped under agreements which do not require maintenance of value would constantly be eroded by inflation.

2/ Unpublished data, U. S. Department of the Treasury.

None of the five agreements with Brazil required maintenance of value of the local currency. Credit expansion, Government deficits, and wage increases in Brazil have been so great that the cost of living increased by 35 percent in 1960, 38 percent in 1961, and around 91 percent in 1962.

If Brazil's present development plan is successful, however, and inflation is reduced to 10 percent annually by 1965, cruzeiros generated through Title I sales may play an important part in the domestic financing of Brazilian economic development.

#### EXTERNAL ASSISTANCE RECEIVED BY BRAZIL FROM ALL SOURCES

Brazil has received external assistance from a number of sources. The most important of these is the United States. Most U. S. assistance was provided through Export-Import Bank loans and loan guarantees and Public Law 480 shipments. Assistance was also received from five international organizations and from the Sino-Soviet Bloc. Private foreign investment, another source of economic assistance, has slowed during recent years.

#### Total U.S. Public Assistance to Brazil and the Relative Importance of PL 480

The United States provided \$1 billion of net economic and technical assistance to Brazil from July 1, 1945, through December 31, 1961. In addition to economic and technical assistance, the United States also provided \$180 million of military grants (appendix table 16).

One-fourth of the billion dollars of total net economic and technical assistance was provided under PL 480 and most of the remaining three-fourths was provided as loans and loan guarantees made by the Export-Import Bank. The \$256 million assistance provided under PL 480 through December 1961 consisted of \$239 million in commodity assistance under Title I, \$2 million in Title II commodity grants, and \$15 million in commodity grants under Title III (appendix table 16).

Commodities are donated outright under Titles II and III. However, under Title I, commodities are sold to the receiving government in exchange for local currency which, except under special circumstances, is not convertible into other currencies. This currency is then loaned or granted to the recipient government, loaned to private enterprise, or spent for U. S. uses. The figure of \$239 million for Title I assistance to Brazil is derived as follows: U. S. agricultural commodities valued at \$263 million were shipped to Brazil, and the Brazilian Government deposited cruzeiros valued at this amount to the account of the U. S. Government. The United States then used \$23 million for its own uses and loaned \$115 million to the Brazilian Government. This left on hand undisbursed cruzeiros which were valued at \$125 million at the time they were deposited. However, by December 1961 inflation had reduced the value of these cruzeiros by \$63 million, leaving \$62 million. The loss due to the depreciation in the value of these cruzeiros represents a permanent grant to Brazil, as that country had received the commodities and had not given up any real resources in return. This loss includes \$25 million in cruzeiros which had been set aside for U. S. uses (appendix table 16).

Assistance by International Organizations

International organizations provided \$331.6 million of assistance to Brazil in fiscal years 1946-62. Eighty-one percent of this came from the International Bank for Reconstruction and Development (World Bank), 13 percent from the Inter-American Development Bank, and the remainder from the International Finance Corporation, United Nations Technical Assistance, and the United Nations Special Fund (table 5).

Table 5.--Assistance to Brazil from international organizations, total 1947-50, annual 1951-62 1/

Year ending June 30	IBRD <u>1/</u>	IFC <u>2/</u>	IDB <u>3/</u>	UNTA <u>4/</u>	UNSF <u>5/</u>	Total
:-----Millions of dollars-----:						
1947-50-----:	90.0	---	---	---	---	90.0
1951-----:	15.0	---	---	---	---	15.0
1952-----:	12.5	---	---	0.1	---	12.6
1953-----:	3.0	---	---	0.5	---	3.5
1954-----:	48.6	---	---	0.9	---	49.5
1955-----:	---	---	---	0.4	---	0.4
1956-----:	---	---	---	0.4	---	0.4
1957-----:	---	1.0	---	1.0	---	2.0
1958-----:	13.4	3.9	---	0.7	---	18.0
1959-----:	84.6	5.2	---	0.8	---	90.6
1960-----:	---	---	---	0.6	1.0	1.6
1961-----:	---	---	15.2	0.6	1.3	17.4
1962-----:	---	---	28.8	0.5	1.3	30.6
Total-----:	267.1	10.1	64.3	6.5	3.6	331.6

1/ International Bank for Reconstruction and Development.

2/ International Finance Corporation.

3/ Inter-American Development Bank.

4/ United Nations technical assistance.

5/ United Nations Special Fund.

Source: U. S. Agency for International Development.

Most of the loans extended by the World Bank were made for electric power development. Others were for railway rehabilitation and highway maintenance and improvement.

The Inter-American Development Bank approved, on August 11, 1962, a \$15 million loan for the expansion of electric power output in the economically depressed northeastern region of Brazil. 3/

3/ New York Times, August 12, 1962.

## Sino-Soviet Bloc Aid

The Sino-Soviet Bloc provided \$4.0 million in economic assistance during the period 1955 through 1961. It is reported that \$1 million of this was provided during the first 6 months of 1961, \$1.5 million during 1959, and the remaining \$1.5 million during 1955-57.

## Private Investment

New foreign direct investments, which cover total private capital inflow, are estimated at about \$80 million for 1962 compared with \$147 million for 1961 and \$138 million for 1960. Estimated capital flight for 1961 and 1962 more than offset the foreign capital inflow during these 2 years.

It is estimated that U. S. private investment in Brazil is currently about \$2.5 billion. None of this is guaranteed by the Agency for International Development as there is no guarantee program in Brazil.

## EFFECT OF PL 480 COMMODITIES ON CONSUMPTION

Wheat and flour accounted for 90 percent of the value of Titles I, II, and III commodities shipped to Brazil under PL 480 (estimated from table 3 and appendix table 17). Nonfat dry milk, beans, bulgur, corn, cornmeal, flour, salad oil, butter, cheese, and rice accounted for the remaining 10 percent.

## Wheat Imports Under Title I and Title III Barter

With the exception of wheat, Brazil produces enough food to provide an average diet which exceeds the recommended adequate nutritional standard of 2,500 calories, including 60 grams of protein and 42 grams of fat, per person per day (29, p.25). This average, however, covers up the heavy nutritional deficit in the northeast section of the country.

Consumption of wheat during 1958 accounted for 265 of the 2,818 calories consumed daily on an average per capita basis. This placed Brazil fourth among the six largest Latin American countries in terms of wheat consumption per capita and second in terms of total food consumption per capita (table 6).

Wheat and flour accounted for 96 percent of the value of Brazil's Title I imports and 100 percent of the value of Title III barter imports during the fiscal 1956-62 period. 4/ This represented 28 percent of the total new wheat supply (production plus imports) during this period (appendix table 18). At the 1958 level of 265 calories daily per person, this would be 74 calories per day per person. 5/

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4/ Estimate obtained by evaluating the wheat and flour exports in appendix table 17 at \$62 per metric ton and comparing with agricultural exports in table 3.

5/ This was additional wheat consumption, since wheat provided under PL 480 was in addition to traditional wheat imports from all countries. See discussion on trade (p.16).

Table 6.--Wheat consumption compared with total food consumption, six largest Latin American countries, 1/ consumption year 1958 2/

Country	W h e a t					:Total food :consumption : calories : per : day
	: Total : gross	: Extraction : rate	: Total	: Net		
				: Per : year	: Per : day	
: 1,000 : Met.tons	: Percent	: 1,000 : met.tons	: Kilograms	: Calories	: Calories	
Argentina--:	3,138	72	2,259	111.6	1,115	3,360
Brazil-----:	2,228	75	1,671	26.8	265	2,818
Chile-----:	1,063	77	819	112.5	1,125	2,610
Colombia---:	234	80	187	13.8	140	2,225
Mexico-----:	782	80	626	19.4	195	2,725
Peru-----:	452	75	339	33.2	330	2,040

1/ Largest in terms of population.

2/ For most crops, the year beginning late 1957; for fruit, livestock products, and fish, the calendar year 1958. The wheat consumption year for Mexico began early in 1957.

Source: FAS-M-104 (22).

In spite of the availability of PL 480 wheat, a recent Government decree requires the substitution of cornmeal and manioc flour for 10 percent and 5 percent, respectively, of the flour used in baking bread. Without the PL 480 wheat, the country probably would have encouraged greater substitution of cornmeal and manioc flour for wheat flour. While manioc flour from the root crop mandioca (yuca or cassava) is a major constituent of the diet in northeast Brazil as well as other parts of South America and much of Africa, it is a poor substitute for wheat flour since it contains almost no protein.

#### Title II Commodities

A maternal and child feeding program for Brazil under Title II was put into operation during 1962. Under this program, 40,000 tons of nonfat dry milk, valued by CCC at \$21.7 million including ocean transportation, will be provided over a 2-year period. Half of the dry milk will be used to provide one glass of milk daily to 3 million school children. The other half will be distributed to 885,000 pregnant and nursing mothers, infants, and children of preschool age.

Title II programs for disaster relief and economic development were also authorized in 1962. These programs involved commodities valued by CCC at \$6.0 million including ocean transportation. The commodities consist of bread grains, coarse grains, fats and oils, dry beans, and dry milk (8).

To aid in Brazil's economic development program, the United States has agreed to provide 2,000 tons of corn for livestock and poultry nutrition research in the State of Sao Paulo and 530 tons of grain sorghums for a similar

project in Minas Gerais. As of December 1962, only 1,000 tons of corn had been shipped under these programs.

### Title III Donations

As of December 31, 1962, 3 million people in Brazil were receiving food under the Title III donations program. Family feeding accounted for 1 million, the maternal and child feeding program for 0.9 million, and the school feeding program for 0.7 million. Other programs provided food for institutions, refugees, summer camps, and health centers. These programs were administered by Catholic Relief Service, the Church World Service, Lutheran World Relief, and UNICEF.

Nonfat dry milk accounted for 75 percent of the value of Title III donations received during fiscal 1955-62. Other commodities were beans, bulgur, corn, cornmeal, flour, salad oil, butter, cheese, and rice.

### Deflationary Effect on Consumer Food Prices

In most countries the commodities supplied under PL 480 have had an important stabilizing effect on domestic food prices by preventing excessive price increases that would otherwise have resulted from food shortages. In Brazil, however, inflationary forces resulting from deficit financing and excessive credit expansion have been so strong as to more than offset the deflationary effect of PL 480 imports. The food price index during the period 1953-62 rose almost as fast as the general price level. Thus, while PL 480 commodity imports probably had some effect in retarding inflationary increases in the price of food, the major effect was in helping the Brazilian Government meet serious food needs rather than in contributing to price stability.

Factors other than the availability of food in relation to need contribute to the level of Brazilian food prices. Most important of these are Government subsidies and price controls. After the elimination of the subsidy on imported wheat early in 1963, bread and flour prices in Rio de Janeiro and Sao Paulo increased over 80 percent. This was just about equal to the overall increase in the cost of living of 91 percent during 1962.

### Food Situation in 1962

The Brazilian Government encountered serious difficulties in maintaining adequate food supplies at reasonable prices in the larger cities during 1962. The problem in Rio de Janeiro became so serious in July that a food riot occurred, leaving 10 people dead and scores wounded.

This situation led the Government to take a number of corrective measures. These included: (1) The emergency movement to the cities of wheat, beans, and other commodities from principal producing areas; (2) increased imports including additional wheat imports from the United States; (3) establishment of a Superintendency of National Supplies to increase the supply of food; (4) an increase in the annual wheat consumption quota from 2.4 to 3.0 million metric tons; and (5) an adjustment in the Government price support and control mechanism (5, 23).



## EFFECT OF PL 480 IMPORTS ON AGRICULTURAL PRODUCTION

Some economic development specialists fear that agricultural commodities donated under assistance programs may have an adverse effect on the development of agriculture in the receiving countries. This fear stems from the possibility that commodities made available on concessional terms may materially depress farm prices, and that the availability of PL 480 commodities may lead to Government policies that would reduce incentives for increasing production.

The major PL 480 commodities imported by Brazil were wheat and flour, which accounted for about 90 percent of the value of PL 480 imports during fiscal 1955-62. 6/ Dry milk was the second most important commodity. The effect of these imports on domestic production is evaluated from the standpoint of the specific commodities and of other commodities for which they may be substituted.

### Wheat

Brazilian wheat production, which has never been sufficient to satisfy domestic needs, has been declining since 1956/57. 7/ 8/ PL 480 imports, which started in 1955/56 at 433,000 metric tons, reached a high of 1,400,000 metric tons during 1961/62. These imports averaged 662,000 metric tons annually during the period covered by PL 480 shipments as compared with average domestic production of 523,000 metric tons (fig. 1 and appendix table 18).

Despite the availability of wheat under PL 480 during this period, the Brazilian Government maintained support prices for wheat which were roughly around 20 to 60 percent higher than the U. S. support prices (table 7 and appendix table 18). These comparisons cannot be made more precise because Brazil's multiple exchange rate system makes it difficult to express values of one currency in terms of the other.

During recent years, Brazil has increased the support price for wheat quite rapidly, but the increases have frequently been absorbed by increases in the cost of living. For example, one of the measures which the Government took to meet the shortages of food in the larger cities during 1962 was to increase the support price for the 1962 wheat crop to 2,620 cruzeiros per 60 kilograms as compared with a price of 1,560 cruzeiros for the 1961 crop. This 68-percent increase in the return to the producer was completely absorbed by a 91 percent increase in the cost of living. The same thing had happened during 1961, when a 42-percent increase in support price was almost absorbed by a 38-percent increase in the cost of living. The price for the 1960 crop year, however, was 100 percent higher than that for the 1959 crop year while the cost of living was only 35 percent higher (table 7).

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6/ By evaluating the wheat and flour exports in appendix table 17 at \$62 per metric ton and comparing with agricultural exports in table 3.

7/ Francis Bethlen, "Effects of Brazilian Economic Development and Price Policies on Brazilian Wheat Imports," unpublished Ph.D. Thesis, Purdue University, Jan. 1962.

8/ Year ending June 30.

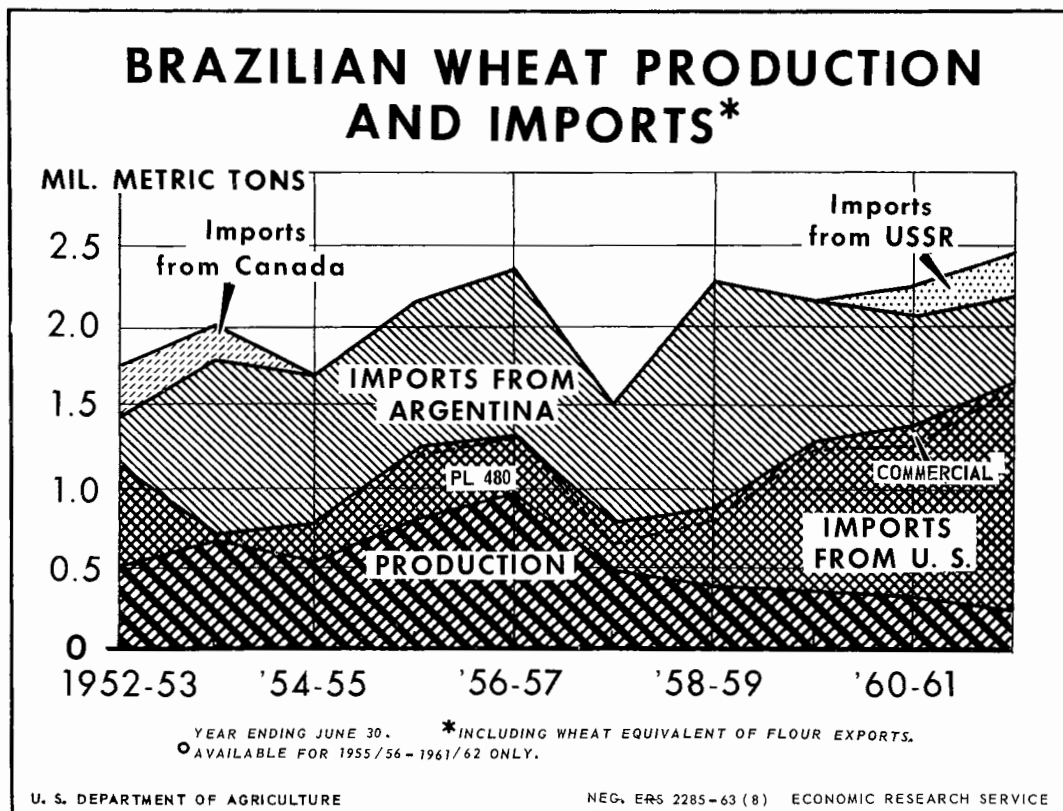


Figure 1

Although support price increases have usually been offset by cost of living increases, the level of prices received by Brazilian wheat producers appears to have been high relative to those received by U. S. producers.

Why, then, has Brazil been unable to meet more of its own wheat needs? The following possible reasons have been given by those who are familiar with wheat production potentials in Brazil: (1) Land of only moderate suitability for wheat production with consequent high costs in relation to price, and low returns relative to other crops which may be produced, (2) lack of storage and transportation, and a marketing system which makes supplies and deliveries uncertain, (3) preference of domestic millers to buy wheat from sources which can guarantee delivery of desired qualities on schedule 9/, (4) failure to increase soil fertility through the use of sufficient quantities of fertilizer, and (5) unfavorable climate for wheat production because of relatively high temperatures and too much rain.

### Nonfat Dry Milk

Imports of dry milk under the Title III donations program supposedly do not enter normal marketing channels. In other words, dry milk supplied under Titles II and III is intended to be in addition to and not a substitute for milk that would have otherwise been available to the recipients. It is estimated, however, that about 20 percent of this milk does not reach those for whom it was intended.

9/ Bethlen (see footnote 7, p.11), and FAS-M-60 (25).

Table 7.--Comparison of Brazilian and U. S. support prices for wheat, 1954-62

Year	Brazil			United States		
	Support price Cruzeiros per 60 kg. <u>1/</u>	Increase over previous year	Cost of living, increase over previous year <u>2/</u>	Estimate of support price in cruzeiros converted to dollars per bushel <u>3/</u>	Support price per bushel <u>4/</u>	Average export market value per bushel <u>5/</u>
	<u>Cruzeiros</u>	<u>Percent</u>	<u>Percent</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
1954----	320	--	--	2.84	2.24	1.79
1955----	420	31	20	2.64	2.08	1.70
1956----	440	5	22	3.22	2.00	1.73
1957----	500	14	19	2.69	2.00	1.75
1958----	550	10	15	2.84	1.82	1.72
1959----	550	0	37	2.49	1.81	1.69
1960----	1,100	100	35	2.17	1.78	1.71
1961----	1,560	42	38	2.22	1.79	1.78
1962----	2,620	68	91	3.66	2.00	n.a.

1/ Source for 1954 and 1959-62: Grain Division, FAS; Source for 1955-58: Bethlen, "Effects of Brazilian Economic Development and Price Policies on Brazilian Wheat Imports," Purdue Univ. thesis, Jan. 1962.

2/ International Financial Statistics (21).

3/ Source: Grain Division, FAS, except for 1962. For 1962, dollar value was found by converting the cruzeiro price at 327 cruzeiros per dollar.

4/ Source: Grain Division, FAS.

5/ Foreign Agricultural Trade of the U. S. (2). These are the export market values of the crop produced during the year specified and marketed during the latter half of that year and the first half of the following year.

Milk production has increased by more than one-half since the early fifties, and total food production has increased by about 40 percent (table 8). The more rapid increase in the former indicates that imports of dry milk under PL 480 had little or no adverse effect on domestic milk production (5).

#### Other Commodities

Although imports of wheat and nonfat dry milk did not appear to adversely affect domestic production of these commodities, it is possible that they had some effect on commodities which are substitutable for wheat and milk. However, the scant evidence available indicates that this was probably not the case.

Food production in Brazil has in recent years increased more rapidly than in Latin America as a whole (table 9). Brazilian agricultural production per capita averaged 12 percent higher from 1960/61 through 1961/62 than from 1952/53 through 1954/55. This increase was the result of increases for all major

Table 8.--Production of selected agricultural commodities, Brazil, average 1952/53 through 1954/55 and annual 1956/57 through 1962/63

Crop year ending June 30	Corn	Rice	Beans	Yucca	Cacao	Coffee	Cotton	Beef	Milk	Index of total food production
-----1,000 metric tons-----										
Average 1952/53-1954/55	6,485	3,392	1,361	13,581	127	1,139	339	1,175	3,349	100
1956/57	7,620	4,076	1,465	15,316	167	1,080	283	1,275	4,240	115
1957/58	7,366	3,829	1,582	15,443	172	1,500	294	1,319	4,405	120
1958/59	7,747	4,101	1,454	14,834	174	1,860	305	1,473	4,534	126
1959/60	8,554	4,915	1,549	16,060	180	2,640	370	1,434	4,736	134
1960/61	8,500	5,313	1,676	17,772	150	1,800	425	1,354	4,976	140
1961/62 <u>1/</u>	8,800	5,300	1,744	18,301	150	2,160	539	1,395	5,303	143
1962/63 <u>2/</u>	---	---	1,800	19,000	159	1,620	566	1,390	5,300	---
-----Percent-----										
Percentage change 1952/53-1954/55 to 1960/61-1961/62 <u>3/</u>	33	56	26	33	18	74	42	17	53	42

1/ Preliminary.

2/ Forecast.

3/ Increases for other major commodities were as follows: pork 142 percent; tobacco 20 percent; sugar (centrifugal) 66 percent; wool (for 1960/61 only) 8 percent. Wool production was not available for 1961/62.

Source: Indices of Agricultural Production for the 20 Latin American Countries (28) and The 1963 World Agricultural Situation (5).

food commodities except wheat (table 8 and appendix table 18). The increase for all of Latin America during the same period was only 2 percent. This is another indication that imports of food under PL 480 had no adverse effect on domestic agricultural production.

#### Use of Food for Resettlement Projects

PL 480 agricultural commodities used to promote resettlement projects may contribute to increasing Brazilian agricultural output. Flour, cornmeal, non-fat dry milk, vegetable oil, and bulgur at a CCC cost of \$380,000 have been programed under Title II to provide food for a nominal charge to families settling undeveloped land under a resettlement program sponsored by the Cooperativa de Colonizacao Agricola Pindorama and approved by the Superintendency for the Development of the Northeast (SUDENE). This is the U. S. contribution

for the first 2 years of a plan for settlement, at Pindorama in the Northeast, of 400 families now and 200 additional families during each of the next 5 years (9).

Table 9.--Indexes of food production per capita and total agricultural production per capita, Brazil and Latin America, 1957/58 through 1962/63

Average 1952/53 and 1954/55 = 100				
Year ending June 30	Brazil		Latin America	
	Total agriculture	Food	Total agriculture	Food
1957/58-----	105	106	105	104
1958/59-----	109	108	106	106
1959/60-----	118	111	104	103
1960/61-----	113	112	104	102
1961/62-----	116	111	104	101
1962/63 <u>1</u> /-----	--	--	101	98

1/ Forecast.

Source: The 1963 World Agricultural Situation (5).

#### U. S. Financial Assistance to Increase Food and Forage Production

The Brazilian Government has proposed that U. S. financial assistance be provided for a program now underway to take excess coffee trees out of production and plant the land made available in food and forage crops. Under this plan, which calls for the eventual destruction of 2 billion coffee trees, about half of Brazil's total, producers are loaned 15 cruzeiros for each tree taken out of production. If the producer lives up to his agreement and puts the land to new use, the Government will not require repayment of the loan. Thus far, producers have signed up for the destruction of 354 million coffee trees.

#### Resume

As indicated in the foregoing discussion, it appears that PL 480 imports have not adversely affected domestic production of wheat and milk, the main commodities imported, and that they probably have not adversely affected production of substitutable foods. Overall food production has increased during the period covered by the program, with milk production increasing more rapidly than the average of all foods. The Brazilian Government has maintained relatively high support prices for wheat, and the lag in wheat production seems to be due, at least partly, to a lack of advantage of wheat over other domestic crops rather than to the PL 480 imports.

In fact, Title II commodities may serve to increase future agricultural output by providing assistance to families being settled on undeveloped land. In addition, U. S. financial assistance proposed by Brazil for taking coffee trees out of production and planting food and forage crops would, if approved, serve to increase the output of these crops.

BRAZILIAN TRADE AND THE EFFECTS OF PL 480

Brazil's export earnings declined almost steadily from 1951 through 1960, increased somewhat during 1961, and declined again during the first three quarters of 1962 (table 10). Export earnings from coffee, which represented nearly two-thirds of the total value of Brazilian exports during this period, were primarily responsible for this downward trend. The volume of coffee exports remained rather stable during this period, but the price index, calculated in U. S. dollars, averaged 79 for 1959-61 compared with 136 for 1953-55 (21).

Table 10.--Exports of coffee, cotton, and cocoa in relation to total exports, Brazil, 1951-61

Calendar year	Total exports	Coffee	Cotton	Cocoa	Sum of coffee, cotton, cocoa	Coffee as a percentage of total	Coffee, cotton, cocoa as a percentage of total
	Mil.dol.	Mil.dol.	Mil.dol.	Mil.dol.	Mil.dol.	Pct.	Pct.
1951----	1,757	1,051	207	69	1,327	60	76
1952----	1,409	1,038	34	41	1,113	74	79
1953----	1,539	1,088	102	75	1,265	71	82
1954----	1,562	948	223	135	1,306	61	84
1955----	1,423	844	131	91	1,066	59	75
1956----	1,482	1,030	86	67	1,183	70	80
1957----	1,392	846	44	70	960	61	69
1958----	1,243	688	25	89	802	55	65
1959----	1,282	733	32	59	824	57	64
1960----	1,269	713	46	69	828	56	65
1961----	1,402	710	110	46	866	51	62
Average							
1951-61	1,433	881	95	74	1,049	61	73

Source: International Financial Statistics, Mar. 1962 and Feb. 1962 (21).

Coffee, cotton, and cocoa together accounted for nearly three-fourths of Brazil's total export earnings from 1951 through 1961. Agricultural commodities as a whole accounted for 92 percent of the value of exports and 18 percent of the value of imports from 1951 through 1960 (table 11).

Trade with the United States

The United States is Brazil's best customer, and also the most important source of Brazilian imports (table 12). Over 90 percent of Brazilian exports to the United States are agricultural commodities (table 13). Coffee accounted for 81 percent of the value of total exports to the United States in 1959/60 and 1960/61 and cocoa and cocoa beans, the second most important commodity export to the United States, for 6 percent (2).

Table 11.--Agricultural trade compared with total trade, Brazil, 1951-60

## E X P O R T S

Calendar year	Food and feed	Other agricultural products	Forest products	Total agricultural exports (1)+(2)+(3)	Nonagricultural products	Total exports	Agricultural exports as percentage of total (6)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Mil.dol.	Mil.dol.	Mil.dol.	Mil.dol.	Mil.dol.	Mil.dol.	Percent
1951 <u>1</u> /-	1,244.1	333.9	58.2	1,636.2	100.2	1,736.4	94.2
1952 <u>1</u> /-	1,166.6	124.4	37.0	1,328.0	80.8	1,408.8	94.3
1953 <u>2</u> /-	1,244.7	196.5	42.4	1,483.6	55.6	1,539.2	96.4
1954 <u>2</u> /-	1,165.4	305.1	42.8	1,513.3	48.5	1,561.8	96.9
1955 <u>2</u> /-	1,080.8	213.2	64.3	1,358.3	65.0	1,423.3	95.4
1956 <u>3</u> /-	1,188.6	174.4	37.5	1,400.5	81.5	1,482.0	94.5
1957 <u>3</u> /	1,050.6	146.8	69.6	1,267.0	124.6	1,391.6	91.0
1958 <u>3</u> /-	951.0	104.5	55.6	1,111.1	131.9	1,243.0	89.4
1959-----	n.a.	n.a.	n.a.	4/1,073.4	5/209.	6/1,282.	83.7
1960-----	n.a.	n.a.	n.a.	4/1,060.9	5/208.	6/1,269.	83.6
Average:							
1951-60:	---	---	---	1,323.2	110	1,434	92

## I M P O R T S

1951 <u>1</u> /-	249.9	44.2	49.4	343.5	1,643.3	1,986.8	17.3
1952 <u>1</u> /-	260.2	49.2	36.5	345.9	1,663.6	2,009.5	17.2
1953 <u>2</u> /-	288.8	8.1	16.4	313.3	1,005.2	1,318.5	23.8
1954 <u>2</u> /-	252.9	22.0	0.2	275.1	1,355.9	1,631.0	16.9
1955 <u>2</u> /-	257.1	18.8	23.0	298.9	1,007.9	1,306.8	22.9
1956 <u>3</u> /-	192.3	15.5	23.8	231.6	1,001.8	1,233.4	18.8
1957 <u>3</u> /-	195.3	16.3	25.7	237.3	1,251.5	1,488.8	15.9
1958 <u>3</u> /-	160.4	16.5	17.2	194.1	1,158.8	1,352.9	14.3
1959-----	n.a.	n.a.	n.a.	4/263.6	5/1,110.	6/1,374.	19.2
1960-----	n.a.	n.a.	n.a.	4/269.2	5/1,193.	6/1,462.	18.4
Average-:							
1951-60:	---	---	---	277.2	1,239	1,516	18

1/ Trade Yearbook, 1954, pp. 4-5 (6).

2/ Trade Yearbook, 1957, pp. 6-7 (6).

3/ Trade Yearbook, 1959, pp. 6-7 (6).

4/ Ministerio da Faaenda--Servico de Estatistica Economica E Financeira, Foreign Trade of Brazil, 1959/60. Sum of SITC classifications.

5/ Column (6) minus column (4).

6/ International Financial Statistics, March 1962 (21).

n.a.-Not available from the same source as the data above.

Table 12.--Foreign trade by continent and major country, Brazil 1958-1960

## E X P O R T S

Item	1958	1959	1960	Order of importance 1958-60
	Thousand dollars	Thousand dollars	Thousand dollars	
<u>Continent:</u>				
Africa-----	20,766	16,344	12,067	---
North America-----	569,077	533,145	592,897	---
South America-----	145,578	76,506	88,102	---
Asia-----	54,352	50,089	47,819	---
Europe-----	452,241	504,089	524,756	---
Oceania-----	971	1,172	3,131	
Total-----	1,242,985	1,281,969	1,268,772	---
<u>Major country:</u>				
United States-----	534,402	592,141	563,659	1
West Germany-----	78,569	86,067	89,941	2
Argentina-----	107,006	42,880	56,392	3
United Kingdom-----	53,554	72,528	64,574	4
Surinam-----	19,254	19,045	10,698	---
Venezuela-----	2,135	1,205	1,265	---

## I M P O R T S

<u>Continent:</u>				
Africa-----	5,125	3,834	7,573	---
North America-----	584,151	549,766	534,636	---
South America-----	243,198	227,335	224,080	---
Asia-----	81,677	93,277	106,910	---
Europe-----	438,529	500,254	588,908	---
Oceania-----	201	7	31	---
Total-----	1,352,381	1,374,473	1,462,138	---
<u>Major country:</u>				
United States-----	482,692	461,287	443,124	1
West Germany-----	504	140,595	135,859	4
Argentina-----	88,089	104,537	94,868	3
United Kingdom-----	43,852	37,498	51,186	6
Surinam-----	66,504	56,200	59,705	5
Venezuela-----	137,808	110,503	114,498	2

Source: Anuario Estatístico Do Brazil, 1961, pp. 222-23 (1).



About 10 percent of the value of Brazil's imports from the United States is accounted for by agricultural products (2). Wheat and flour made up four-fifths of the value of these agricultural imports during the period 1954/55 through 1961/62. 10/

Brazil is the most important supplier of U. S. agricultural imports (3). It is the largest supplier of coffee and the third largest supplier of cocoa and cocoa beans (2). Brazil is the third largest Latin American importer of agricultural commodities from the United States (2).

Table 13.--Trade in agricultural products compared with total trade, Brazil and United States, 1945-49

Calendar year	U. S. exports to Brazil			U. S. imports from Brazil		
	Total	Agricultural	percent of total	Total	Agricultural	percent of total
Average:	<u>Mil.dol.</u>	<u>Mil.dol.</u>	<u>Percent</u>	<u>Mil.dol.</u>	<u>Mil.dol.</u>	<u>Percent</u>
1945-49-----	417.6	42.4	10	444.1	409.8	92
1950-54-----	470.5	39.2	8	775.0	738.8	95
1955-----	240.1	13.3	6	629.5	593.3	94
1956-----	292.2	42.3	14	745.5	696.6	93
1957-----	280.6	40.7	14	686.6	615.1	90
1958-----	527.7	40.1	8	558.4	496.3	89
1959-----	401.5	46.4	12	611.2	552.6	90
Average:						
1945-59-----	425.5	39.4	9	621.8	579.8	93

Source: For 1945-58, FAS-M-57 (12, pp. 5-6); for 1959, ERS-Foreign-10 (3).

Exports under PL 480 accounted for three-quarters of total U. S. agricultural exports to Brazil during the period 1954/55 through 1960/61 (table 3). These PL 480 imports were equivalent to 2.9 percent of Brazil's total imports during this period. 11/ However, the PL 480 imports, which required no foreign exchange earnings, were more than sufficient to finance Brazil's relatively small foreign trade deficit over the entire period (table 14).

#### Effect of PL 480 on Trade Patterns

Public Law 480 provides that reasonable precautions will be taken to assure that Title I sales will not unduly disrupt "normal patterns of commercial trade with friendly countries." Wheat was the only commodity that moved to Brazil in sufficient volume under PL 480 to conceivably have displaced imports from normal commercial suppliers.

10/ Obtained by evaluating the grain exports in appendix table 17 at \$62 per metric ton and comparing with agricultural exports in table 3.

11/ Comparison of Brazil's calendar year imports under PL 480 (table 14) with Brazil's calendar year total agricultural imports (table 11).

Table 14.--Exports, imports, trade balance, and PL 480 imports, Brazil, 1955-1961

Calendar year	Exports	Imports	Trade balance, surplus (+) deficit (-)	PL 480 imports
-----Million dollars-----				
1955	1,423	1,306	+117	4
1956	1,482	1,234	+248	37
1957	1,392	1,488	-96	28
1958	1,243	1,353	-100	30
1959	1,282	1,374	-92	44
1960	1,269	1,462	-193	33
1961	1,403	1,460	-57	104
Average, 1955-61	1,356	1,382	-26	40

Source: PL 480 data from Economic Research Service; other data from International Monetary Fund (21).

Declining domestic production of wheat since 1957, along with increased demand stemming from increases in population, in purchasing power, and in real income, have called for an increase in Brazil's wheat imports. During the period 1957-62, imports were increased by about enough to make up for the decrease in domestic production. During this period, Brazil imported about four times as much wheat as she produced. All of the increase over previous years was supplied by the United States under PL 480 (fig. 1 and appendix table 18).

Brazil's total wheat imports averaged 1,511,000 metric tons annually during the 4 years prior to the beginning of PL 480 wheat shipments. Of this, 422,000 metric tons (28 percent) were from the United States and 1,088,000 metric tons from other countries. During the 7 years of PL 480 wheat shipments, total imports averaged 1,808,000 metric tons annually, of which 725,000 metric tons (40 percent) were from the United States and 1,083,000 metric tons from other countries. Thus, while the United States increased its share of a larger Brazilian wheat market during the PL 480 period, the quantity of wheat imported from other countries remained approximately unchanged. However, since some of this wheat was imported from the USSR beginning in 1959/60, imports from other friendly countries declined slightly.

What were these friendly countries and was the decline due to PL 480 wheat imports?

The United States after 1958/59 replaced Argentina as Brazil's most important source of wheat (appendix table 18). However, this had no adverse effect on Argentina's exports as it came about during a period of declining production in Argentina (appendix table 19).

Argentina and Brazil signed an agreement in July 1957 under which Brazil agreed to purchase 1 million tons of wheat annually during years when Argentina's exportable surplus exceeded 3 million tons. During years when the exportable

surplus fell below 3 million tons, Argentina agreed to maintain exports to Brazil as close as possible to 1 million tons and to ship at least 30 percent of her exportable surplus to Brazil (25).

Based on consumption in the year 1957/58 and not considering stocks carried over, 12/ Argentina's exportable surplus exceeded 3 million metric tons during only one of the 4 years that this agreement was in effect. During this year, 1958/59, 1.4 million metric tons were exported to Brazil. During the other 3 years, as agreed, Argentina exported to Brazil more than 30 percent of her exportable surplus (appendix tables 18 and 19). A new agreement was signed in 1961 providing that Brazil must pay for Argentine wheat in hard currencies, whereas the old agreement provided for payment in goods.

During the entire period of PL 480 shipments to Brazil, Argentina appears to have been able to export all of her excess of wheat production above domestic needs. During these 7 years Argentina's wheat production exceeded exports by an average of 3,254,000 metric tons annually (appendix table 19). If consumption during these 7 years was at about the 1958 level of 3,138,000 metric tons (22), this was just about sufficient to satisfy domestic needs for consumption plus seed.

Other wheat exporters whose trade might have been affected by PL 480 shipments to Brazil are Uruguay and Canada. However, Uruguay's production has been declining during recent years, and she was forced to import wheat during 1960 (4).

Brazil imported wheat from Uruguay during 36 of the 39 years from 1919 to 1958. She imported wheat from Canada during 28 of these years and from the United States and Argentina every year over this period. Average annual imports were as follows (25):

	<u>1,000 metric tons</u>
Argentina-----	758
United States-----	185
Uruguay-----	48
Canada-----	21
Other-----	<u>15</u>
Total-----	1,027

Canada, though a supplier of relatively small quantities, is Brazil's fourth traditional source of wheat. During the years 1920 through 1954, Canada, shipped only half as much wheat to Brazil as did Uruguay. After 1954, she shipped none. It is possible that Brazil might have been forced to use scarce foreign exchange earnings to import wheat from Canada or other suppliers if wheat had not been available under PL 480. But this almost certainly would have resulted in an adverse effect on Brazil's balance of payment position and economic development program.

12/ It appears that carryover would be very small since production minus exports is just about sufficient to cover domestic consumption during the years 1952-62.

## Resume

During the 7 years that the United States shipped wheat and flour to Brazil under PL 480 (1955/56 - 1961/62), Brazilian imports from other friendly countries averaged 1,014,800 metric tons annually, compared with 1,088,500 metric tons during the previous 4 years. During the seven PL 480 years, the United States provided 40 percent of Brazil's total wheat imports. During the previous 4 years, it provided 28 percent. Thus, while the United States increased its share of a larger Brazilian wheat market, the increased wheat imports from the United States were largely in addition to and not in place of imports from traditional suppliers.

### DEVELOPMENT OF THE BRAZILIAN ECONOMY AND ITS EFFECT ON FUTURE U. S. AGRICULTURAL EXPORTS

Total U. S. postwar economic and technical assistance to Brazil as of June 30, 1962, had amounted to \$15 per person living in Brazil in 1962. Assistance under PL 480 constituted about one-fourth of the total. To determine how much the PL 480 assistance contributed to Brazil's increasing per capita real income during recent years would require an intensive analysis. However, the timing of this aid, particularly of the shipments of Title I wheat, was such that its contribution appears to have been almost as important as if it had been provided in the form of a dollar loan.

In the future, Brazil's most pressing food needs appear to be for wheat, Brazil's most important deficit food crop, and for nonfat dry milk and other commodities suitable for school lunch and similar welfare programs. The need is particularly acute in the northeast region of the country, where 22 million of Brazil's 73 million people live and where 7 babies out of 10 die in their first year. 13/

### Economic Development and the School Lunch Program

One of Brazil's major problems is its illiteracy rate. It is estimated that half of the adult population cannot read. This is a hindrance to economic development, since people who cannot read cannot fully take advantage of improvements in production techniques. The Brazilian Government recognized this problem when it designed its economic development program and devoted one phase to reducing the illiteracy rate.

The school feeding programs under Titles II and III of PL 480 are undoubtedly making a positive contribution in this direction. It is estimated that only 15 percent of eligible school children reach the fourth grade, and the school feeding program is expected to contribute to keeping children in school longer. Three million school children are receiving milk under the Title II program and 0.7 million are receiving commodities under the Title III program. The Title II program was put into operation during 1962. The Title III donations program has been in effect since 1955.

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13/ U. S. News and World Report, Washington, D. C., August 12, 1963.

## Economic Development and Future Demand for Wheat

The upward trend in per capita real income along with the increase in population means that demand for food will continue to increase. Wheat, the principal deficit crop, is likely to represent the most important import need. In his 1962 study, Bethlen calculated the income elasticity of demand for wheat in Brazil to be +1.1.<sup>14/</sup> This is highly significant in regard to future demand for bread. The demand for wheat in Brazil, as contrasted to the industrial countries where the income elasticity of demand for wheat is extremely low, deserves special emphasis as it relates to the country's absorptive capacity for increased consumption of white bread.

The Brazilian Government recognized the strong consumer demand for bread during 1962 when it increased the national consumption quota from 2.4 to 3.0 million metric tons. Without question the availability of U. S. wheat on concessional terms under PL 480 Title I made this increased allotment possible.

Brazilian production of wheat has been declining, the traditional supply from Uruguay has ceased, and prospects for increasing imports from Argentina do not appear favorable. Argentina's inability or unwillingness to maintain its traditional share of the Brazilian wheat market by making deliveries under the "swing type" trade agreements that existed between the two countries in the 1950's accentuates Brazil's procurement problem.

Thus, Brazil is expected to need more wheat at a time when both production and available supplies from traditional foreign suppliers are declining. While future production increases are planned, experience indicates that success in achieving any great expansion in production is doubtful, especially in view of recent poor farmer response to relatively favorable support prices for wheat. It appears that Brazil does not have a comparative advantage in wheat and will be able to supply only part of domestic needs, and that dependence on sources of wheat outside Latin America will continue. Alternative choices for meeting this problem are (1) to reduce hard currency purchases of capital goods in order to buy wheat, (2) to increase export earnings to be able to increase commercial purchases in world markets, (3) to continue to import wheat under assistance programs such as PL 480 or under the World Food Program, or (4) to negotiate bilateral trading agreements with wheat exporting countries such as Canada, France, Argentina, Australia, or the Soviet Union. If increased demand for wheat cannot be met through one or a combination of the four methods listed above, the country will be forced (5) to encourage greater substitution of corn meal or manioc flour for wheat flour.

### Reduce Hard Currency Purchases of Capital Goods to Buy Wheat

The disruptive effect on the domestic economy of buying wheat at the expense of hard currency purchases of capital goods, particularly the retarding effects on economic development, would probably be so serious that the Government might be expected to curtail wheat imports instead.

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<sup>14/</sup> See footnote 7, p. 11.

## Increase Foreign Exchange Earnings

While the trend since 1954 has been for export earnings to decline rather than to increase, the outlook for 1963 is for some increase in exports resulting primarily from devaluation of the cruzeiro, which strengthened the competitive position of Brazilian coffee and other commodities in world markets (5). Therefore, earnings from coffee, cocoa, sugar, corn, and other commodities are expected to improve. Little change is expected in earnings from cotton. 15/ It is possible that the current favorable outlook for increased earnings may be temporary as the trend since 1954 has been for export earnings to decline rather than increase.

Much depends on the success of the coffee stabilization agreement, which was signed in 1962 by representatives of 54 countries. This agreement is in effect on a provisional basis until it is ratified by 20 exporting countries accounting for 80 percent of total world exports and 10 importing countries accounting for 80 percent of world imports. 16/ Brazil's quota under this agreement is 18 million bags out of a total world quota of 45.5 million bags. This quota was described by Brazil's delegate as "just and fair". 17/

Much also depends on the success of Brazil's proposed 3-year development plan. The major objectives of this plan are to reduce inflation to 10 percent by 1965, to attract foreign investment, to maintain a 6-percent growth rate, and to teach 34 million illiterates to read. If this program is successful, it should reduce the flight of capital, stimulate domestic investment, and increase the efficiency of domestic production of exportable commodities.

In the long run, there is reason for optimism about the economic development of Brazil, since this is a country with great natural resources in relation to population.

## Import Wheat Under External Assistance Programs

It is very likely that, even though future exchange earnings are increased, Brazil will continue to rely heavily on meeting expanding wheat requirements through the PL 480 program. Increase in exchange earnings will be needed for capital goods imports, to repay foreign indebtedness (estimated at \$400 million annually), 18/ and to replenish almost exhausted gold and foreign exchange reserves. Therefore, the availability of PL 480 wheat over the next few years will make it possible for the country to proceed with projected development plans and at the same time to meet the rising consumer demand for bread. The wheat made available from the United States under concessional programs may well contribute to increased commercial demand in the long run--especially if the country develops economically as planned.

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15/ London Financial Times, February 7, 1963.

16/ Washington Post, March 2, 1963, and Afro-American Institute, African Report, October 1962.

17/ London Financial Times, February 7, 1963.

18/ London Financial Times, February 7, 1963. Foreign indebtedness payments of \$400 million annually represent about one-third of foreign exchange earnings. A ratio of one-tenth is usually considered a maximum.

## Negotiate or Expand Bilateral Trading Agreements

As an obvious means of maximizing the use of limited foreign exchange earnings, countries often resort to "swing type" bilateral trading agreements, which are a flexible form of barter involving several commodities. This was the method for procuring wheat from Argentina under the 1957 agreement. However, wheat is no longer available from Argentina under the former "swing type" trade agreements between the two countries, and Brazil has recently been showing a desire to negotiate bilateral trading arrangements with Soviet Bloc countries. In December 1962, a new cabinet-level trade committee, "Goleste", was established to coordinate Brazil's increasing trade with the Soviet Bloc. The difficulty of Eastern European countries in meeting their own increasing needs for wheat raises the question of just how much Brazil can afford to rely on the "Bloc" countries as a long-range source of supply.

Wheat imports from the USSR, the world's largest wheat producer, increased from 10,700 metric tons during fiscal 1960 to 282,900 metric tons during fiscal 1962 (appendix table 18). Further imports during the last six months of 1962 brought the total for calendar year 1962 to 379,000 metric tons.

Brazil and the USSR signed a new trade agreement on April 20, 1963, before results of the 1963 Russian wheat harvest were fully assessed. This agreement provides for the shipment of 500,000 metric tons of Russian wheat to Brazil during 1963, 600,000 metric tons during 1964, and 700,000 metric tons during 1965. The USSR will also supply petroleum and machines and equipment to Brazil. Brazil will supply coffee, cotton, rice, oranges, hides and skins, and other products to the USSR.

Brazil, which is the world's largest coffee producer, supplies the entire Soviet coffee market, which is substantial though small in comparison with the U. S. market. The USSR took 563,000 bags of coffee in 1962 while the United States bought 8,488,000 bags. 19/

### Conclusions

Brazil's most important food needs appear to be for wheat, the country's important deficit food crop, and for nonfat dry milk and other commodities for welfare programs to relieve the serious food shortage situation in the north-east region of the country.

Expansion of the school lunch program could be expected to contribute to the literacy phase of Brazil's economic development plan. This would call for an increase in Brazilian imports of nonfat dry milk and other commodities suitable for school lunches.

Brazil appears to lack a comparative advantage in wheat production over other domestic production. The following factors point to a continuation of the need for U. S. wheat under concessional terms: (1) Declining domestic

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19/ New York Times, April 8, 1963.

wheat production, (2) increasing demand for bread, (3) termination of the availability of wheat from Argentina under bilateral trading agreements, (4) declining foreign exchange earnings, and (5) the need for an increase in foreign exchange reserves for repaying foreign debts, replenishing exhausted reserves, and financing future development. The availability of wheat under Title I is not expected to interfere with normal commercial purchases from other friendly countries.

In spite of the availability of PL 480 wheat, Brazil has chosen to meet a part of her increasing need for bread through (1) encouraging the substitution of cornmeal for wheat and blending of manioc flour with wheat flour, and (2) negotiating bilateral trading agreements with the USSR. In the absence of PL 480 wheat imports, the country would be forced to rely on even greater use of these alternatives, or to curtail capital imports vitally needed for development.

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## APPENDIX

Table 15.--Cost of living index and gross internal production per capita, Brazil, 1947-62

Calendar year	Cost of living index		Gross internal production per capita 2/	
	Index (1958 = 100) 1/	Increase over previous year	Total (at constant prices)	Increase over previous year 3/
		Percent	Cruzeiros	Percent
1947-----	---	---	3,800	---
1948-----	---	---	4,200	10.5
1949-----	---	---	4,300	2.4
1950-----	---	---	4,400	2.3
1951-----	---	---	4,400	0.0
1952-----	---	---	4,600	4.6
1953-----	42	---	4,600	0.0
1954-----	50	19	4,800	4.3
1955-----	60	20	4,900	2.1
1956-----	73	22	4,900	0.0
1957-----	87	19	5,100	4.1
1958-----	100	15	5,300	3.9
1959-----	137	37	5,500	3.8
1960-----	185	35	5,700	3.6
1961-----	256	38	n.a.	---
1962-----	488	91	n.a.	---

1/ International Financial Statistics (21).

2/ Revista Brasileira de Economia (17).

3/ The U. N. Economic Commission for Latin America found that the average annual increase in Brazil's per capita gross domestic product from 1948-57 was 2.7 percent, according to U. S. Latin American Relations, Compilation of Studies Prepared for the Committee on Foreign Relations (16).

Table 16.--U. S. military and economic assistance to Brazil, July 1, 1945, through December 31, 1961

Item	A m o u n t		
	Gross	Returns	Net
MILITARY GRANTS			
Gross <u>1/</u> -----	233		
Reverse grants and returns-----		-53	
Net-----			180
ECONOMIC AND TECHNICAL ASSISTANCE			
Grants:			
Mutual Security Act:			
Brazilian currency through sale of agricultural products <u>2/</u> -----	0		
Other-----	46		
Brazilian currency under Title I, PL 480-----	0*		
Famine and other extraordinary relief, Title II, PL 480 <u>2/</u> -----		2*	
Agricultural commodities through private agencies, Title III, PL 480-----		15*	
Lend Lease <u>2/</u> -----	4		
Technical assistance <u>2/</u> -----	6		
"American Aid" <u>3/</u> -----	3		
Other <u>2/</u> <u>4/</u> -----	<u>1</u>		
Total-----	77		
Reverse grants and returns-----		-0	-
Net-----			77
Loans and credits:			
"American Aid" country program loans <u>3/</u> -----	50		
Financing of military sales-----	3		
Sales of overseas surpluses-----	10		
Merchant ship sales-----	12		
Export-Import Bank loans and guarantees-----	1,125		
Defense mobilization development-----	16		
Brazilian currency loans to Brazilian government under Title I, PL 480 <u>5/</u> -----	<u>115*</u>		
Total <u>6/</u> -----	1,331		
Repayments of principal-----		-532	
Net-----			799
OTHER ASSISTANCE <u>7/</u>			
Under Title I of PL 480-----	125*		
Commodity Credit Corporation charter-----	<u>4</u>		
Total-----	129		129
TOTALS			
Total gross postwar economic and military assistance-----	1,770		
Repayments-----		-585	
Total net postwar economic and military assistance-----			1,185
Net military assistance-----			<u>-180</u>
Total net postwar economic and technical assistance-----			1,005
Total assistance under PL 480 <u>8/</u> -----	257*		
Repayments <u>5/</u> -----		-1	
Net-----			256

See following page for footnotes.

Table 16 footnotes

\*PL 480 assistance.

1/ \$59,000 of Title I funds was used for common defense under 104(c). This was for mapping and would therefore appear to be a country use. From 17th Semiannual Report on PL 480 (9) and unpublished data of the U. S. Department of the Treasury.

2/ As of June 30, 1961.

3/ Includes operations under the Foreign Assistance Act of 1961 (Public Law 87-195), the Mutual Security Act of 1954 (Public Law 83-665) as amended, and predecessor acts (from April 3, 1948), and under other acts continuing operations (1) instituted as part of the Mutual Security Program, or (2) closely allied in administration with these foreign assistance operations, such as the credit to India under Public Law 82-48. The "American Aid" figure for grants of \$3 million is for the period July 1, 1961, through December 31, 1961.

4/ "Other" includes the following items which were too small to appear in the table when rounded to millions of dollars: Interamerican and related highways \$13,000; transportation of agricultural commodities \$199,000; Reconstruction Finance Corporation \$329,000.

5/ \$0.8 mil. had been repaid and reserved for U. S. uses as of Dec. 31, 1961. (From unpublished data of the U. S. Department of the Treasury).

6/ The following items were too small to appear in the table when rounded to millions of dollars: Strategic materials production \$78,000; Reconstruction Finance Corporation \$33,000.

7/ Represents the net accumulation of foreign currency claims, which is the difference between the value of farm products shipped in exchange for Brazilian currency less the U. S. Government's disbursement of the currency. Such claims are, in effect, a short-term loan of the exchange value of the farm products. \$129 million represents the dollar value of the cruzeiros at the time of deposit. This is the value of the real resources added to the Brazilian economy. Due to depreciation of the cruzeiro, the value is now only \$62 million. This is the value of the financial resources which would be added to the Brazilian economy if these cruzeiros were now disbursed. The difference of \$63 million in cruzeiros represents a permanent grant to the Brazilian government.

8/ Does not include barter transactions. This figure differs from the sum of Title I, Title II, and Title III donations of \$207 million shown for 1955/61 in table 3, because of the difference in the time period (this figure includes ocean transportation while those in table 3 do not), and because the shipments figures in table 3 include commodities which are sold for local currency later used for U. S. uses. These U. S. uses are not included in the assistance figures presented in this table.

Source: Foreign Grants and Credits (26, 27).

Table 17.--United States grain exports to Brazil, 1954/55 through 1960/61 1/

Year ending June 30	Government programs						Outside:	
	Title I	Title II	Title III, barter	Sec. 402 <u>2/</u>	Sec. 416 <u>3/</u>	Total programs	Government	Total
-----1,000 metric tons-----								
Wheat and flour: <u>5/</u>								
1954/55	---	---	---	---	---	---	---	---
1955/56	432.7	---	---	---	---	432.7	49.9	482.6
1956/57	368.8	---	9.6	---	0.6	379.0	---	379.0
1957/58	155.6	---	---	---	---	155.6	144.3	299.9
1958/59	395.7	---	26.9	---	---	422.6	52.9	475.5
1959/60	808.1	---	85.5	---	1.2	894.8	43.0	937.8
1960/61 <u>6/</u>	844.1	---	101.2	---	4.4	949.7	120.1	1,069.8
1961/62 <u>6/</u>	1,135.4	---	256.4	---	8.4	1,400.2	31.8	1,432.0
Total	4,140.4	---	479.6	---	14.6	4,634.6	442.0	5,076.6
Coarse grains: <u>7/</u>								
1954/55	---	---	---	---	---	---	2.3	2.3
1955/56	9.4	---	---	---	---	9.4	12.2	21.6
1956/57	---	---	---	---	0.5	0.5	5.4	5.9
1957/58	---	---	---	---	---	---	2.5	2.5
1958/59	---	---	---	---	1.1	1.1	1.9	3.0
1959/60	---	---	---	---	1.6	1.6	1.2	2.8
1960/61 <u>6/</u>	---	---	---	---	3.8	3.8	0.9	4.7
1961/62 <u>6/</u>	---	5.0	---	---	11.5	16.5	6.9	23.4
Total	9.4	5.0	---	---	18.5	32.9	33.3	66.2

1/ Six metric tons of rice were shipped to Brazil during 1954/55. No other rice was shipped.

2/ Section 402, Public Law 665 (Mutual Security Act). These exports are paid for with the currency of the recipient country under varying terms and conditions. However, in contrast to currencies accruing under Title I of PL 480, these currencies are almost entirely restricted to AID (Mutual Security) economic development and technical assistance uses.

3/ Section 416 of the Agricultural Act of 1949 and Title III, PL 480. These exports are made up of donations to the needy of foreign countries through private U. S. relief and charity agencies. Commodities donated, excluding processed products, come primarily from Commodity Credit Corporation stocks.

4/ Total exports less the total of shipments made under Government programs. This is the quantity exported for "cash," or "dollars." Dollar sales are made without need for assistance other than the payment-in-kind program, which is designed to bridge the gap, if any, between domestic and world prices. Coarse grains received payment-in-kind subsidies during most of the 1960-61 period. Wheat and flour exports received such payments throughout the year. However, there were instances of limited wheat export sales made at domestic prices.

5/ Includes flour not wholly of U. S. wheat, durum wheat flour and semolina, and macaroni and macaroni products.

6/ Preliminary, subject to revision.

7/ Includes corn, oats, barley, grain sorghum, and the by-products: cornmeal, corn grits and hominy, cornstarch, oatmeal (package and bulk), pearl barley, and malt.

Source: 1954/55 through 1959/60, FAS-M-115 (18); 1960/61, FAS-M-127 (19); 1961/62, FAS-M-142 (20).

Table 18.--Wheat production compared with imports of wheat and flour by country of origin, Brazil, 1951/52-1961/62

Crop year ending June 30	Production 1/	Imports of wheat and flour by country of origin							All countries	Sum of production and imports	
		United States 2/ Title I: PL 480	Total Commer- cial sales	Argentina 3/	Canada 3/	USSR 3/	Other 3/ 4/	count-			
-----1,000 metric tons-----											
1951/52-----	n.a.	---	---	---	3/846.7	409.5	106.6	---	77.4	1,440.2	n.a.
1952/53-----	550	---	---	---	3/594.2	296.4	312.6	---	148.3	1,351.5	1,902
1953/54-----	680	---	---	---	3/5.6	1,156.3	209.5	---	304.4	1,675.8	2,356
1954/55-----	544	---	---	---	3/242.8	917.3	---	---	415.4	1,575.5	2,120
Av. 1951/52-1954/55--	5/591	---	---	---	422.3	694.9	157.2	---	236.4	1,510.8	2,102
1955/56-----	776	432.7	432.7	49.9	482.6	933.3	---	---	305.7	1,721.6	2,498
1956/57-----	980	368.8	379.0	---	379.0	1,039.9	---	---	279.0	1,697.9	2,678
1957/58-----	500	155.6	155.6	144.3	299.9	732.9	---	---	6.8	1,039.6	1,540
1958/59-----	408	395.7	422.6	52.9	475.5	1,432.9	---	---	155.0	2,063.4	2,471
1959/60-----	6/370	808.1	894.8	43.0	937.8	910.5	---	10.7	60.9	1,919.9	2,290
1960/61-----	6/354	844.1	949.7	120.1	1,069.8	684.4	---	186.2	10.2	1,950.6	2,305
1961/62-----	6/272	1,135.4	1,400.2	31.8	1,432.0	551.3	---	7/282.9	---	2,266.2	2,538
Av. 1955/56-1961/62--	523	591.5	662.1	63.1	725.2	897.9	---	68.5	116.8	1,808.5	2,331

1/ 1952/53-1955/56, Econ. Res. Serv.; 1956/57-1961/62, Indices of Agricultural Production for the 20 Latin American Countries (28).

2/ FAS-M-115 (18); FAS-M-127 (19); FAS-M-142 (20).

3/ 1951/52-1955/56, FAS-M-22 (10); 1956/57, FAS-M-53 (11); 1957/58, FAS-M-53 (13); 1958/59 and 1959/60, FAS-M-53 (14); 1960/61, Foreign Crops and Markets (15); 1961/62, Grain Division, Foreign Ag. Service, U. S. Department of Agriculture.

4/ The following quantities could be identified by country of origin: 1959/60, 51,500 metric tons from France (the only wheat and flour shipments from France during the period)--FAS-M-53 (14); from Uruguay during calendar years 1951-58, shipments of 66,000 metric tons, 151,000 metric tons, 32,000 metric tons, 263,000 metric tons, 254,000 metric tons, 296,000 metric tons, 106,000 metric tons, and 90,000 metric tons, respectively--FAS-M-60 (25).

5/ Average of 1952/53 - 1954/55.

6/ Subject to revision.

7/ Heavy shipments during November 1962 brought calendar year 1962 shipments to 340,000 metric tons.

n.a.--Not available.

Table 19.--Argentine wheat production and exports of wheat and flour by area of destination, 1951/52 - 1961/62 1/

Year ending June 30	Production 3/	Exports by area of destination <u>2/</u>						Production minus exports
		South America	Europe	Africa	Asia	Other	Total	
-----1,000 metric tons-----								
1951/52----	2,100	537.0	102.2	33.3	143.4	---	815.9	1,284
1952/53----	7,634	326.0	228.3	---	242.6	---	796.9	6,837
1953/54----	6,200	1,542.1	1,203.9	26.5	232.0	---	3,004.5	3,196
1954/55----	7,690	1,382.8	2,029.6	8.3	173.2	---	3,593.9	4,096
1955/56----	5,250	1,245.2	1,821.5	21.6	43.5	---	3,131.8	2,118
1956/57----	7,100	1,316.8	1,325.3	---	---	27.5	2,669.6	4,430
1957/58----	5,811	1,077.2	980.9	38.2	---	17.2	2,113.5	3,697
1958/59----	6,668	1,585.5	1,118.8	48.4	7.9	36.6	2,797.2	3,871
1959/60----	5,851	1,198.2	881.5	---	29.5	.2	2,109.2	3,742
1960/61----	4,080	1,100.7	751.4	10.4	46.2	---	1,908.7	2,171
1961/62----	5,100	792.8	1,430.3	40.1	89.0	1.0	2,353.2	2,747

1/ In terms of wheat equivalent.

2/ 1951/52-1955/56, FAS-M-22 (10); 1956/57, FAS-M-53 (11); 1957/58, FAS-M-53 (13); 1958/59 and 1959/60, FAS-M-53 (14); 1960/61, Foreign Crops and Markets (15), Mar. 1962; 1961/62, Grain Division, Foreign Agriculture Service, U. S. Department of Agriculture.

3/ 1951/52-1955/56, Western Hemisphere Branch, Economic Research Service; 1956/57-1961/62, Indices of Agricultural Production for the 20 Latin American Countries (28).