

Studies in Agricultural
Capital and Technology

Economics and Sociology
Occasional Paper No. 27

FOREIGN ASSISTANCE FOR AGRICULTURAL
DEVELOPMENT IN BRAZIL
1950 to 1970

by

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During the past 20 years Brazil has experienced a good deal of change and growth in a major part of its agriculture. Until the mid-1960's output grew at an average rate of 4 to 5 percent per year [21, 29]. Evidence is mounting, however, that since then growth has accelerated, with 6 to 9 percent being suggested by the Ministry of Agriculture for 1969-1970. Few countries currently have agricultural growth rates as rapid as this. There is little doubt that major changes in Brazilian policies, plus substantial foreign assistance for agricultural development have played important roles in this acceleration.

The following discussion focuses on the programs making up 325 million dollars obligated in foreign assistance to Brazilian agriculture from 1950 to 1970.^{1/} An attempt is made to outline the programs pursued by the foreign aid agencies, to relate this assistance to Brazilian policy, and finally to suggest where foreign assistance has or has not

* This study was sponsored by the Agency For International Development. The views expressed are those of the author, however, and not statements of Agency policy.

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^{1/} It should be kept in mind that a good bit of these funds have been obligated, but not spent. As of mid-1970, AID had disbursed only one percent of a 1966, \$20 million fertilizer loan, and the Brazilians only recently signed an agricultural research loan for \$13.4 million authorized in 1968. As of mid-1970, the Inter-American Development Bank had moved less than \$40 million of the \$172 million approved for agriculture in Brazil. The World Bank has disbursed less than one million of its \$40 million 1967 livestock loan.

made a contribution to agricultural development. Brazil is an interesting case in this regard, and a study of its programs sheds light on what other countries can expect from foreign assistance for agriculture.

Brazil's Agricultural Development Strategy: 1950-1970

It is generally recognized that agriculture played a vital role in helping to create the substantial industrial base found in Brazil in the early 1950's. Exports of sugar, coffee, cotton, and other agricultural commodities provided most of the capital for this purpose [9]. Despite the historical importance of this sector, Brazilian economic strategy during the 1950's placed minor priority on agricultural development. Most attention was directed at further import substitution, industrialization, and inflation control. A number of the policies adopted to treat these three areas, however, had serious adverse effects on the economic incentives for the agricultural sector. The most important of these policies were food-price controls, value-added taxes on agricultural products and inputs, limitations on food exports, protection for a high-priced tractor industry, and import restrictions on other key agricultural inputs [24].

Only feeble attempts were made by the Brazilians to upgrade agricultural services during the 1950's. The attention given in this regard was mainly to improving marketing facilities and transportation systems. Agricultural production increased during this period largely as a result of the continued opening of new land. Aside from the buildup of large coffee surpluses and the regional distortions introduced by sugar pricing policy, Brazil did not seriously suffer from its agriculture policies until the early 1960's. Food price pressures, large food imports, stagnant agricultural exports, and a general slowdown in agricultural growth

culminated in the food crisis of 1962-1963. Part of the slowdown in agricultural growth was due to further softening of coffee prices and some bad weather. A number of Brazilians became convinced, however, that disincentive product and input prices, plus unavailability of some key inputs were important factors contributing to the poor performance of the agricultural sector. As a result, starting in the early 1960's Brazilian government policies showed a sharp change in attitude toward agriculture.

These policy changes have taken several different forms. The most important has undoubtedly been the huge increase in the amount of institutional credit made available to agriculture during the 1960's. From 1960 to 1968 the dollar value of this credit, expressed in year-end balances, increased from \$606 million to \$1,417 million [1]. Credit increased as a ratio of gross agricultural product from .18 to .34. Since interest rates on agricultural credit ranged from 9 to 18 percent per year and inflation 25 to 85 percent per year during the 1960's real interest rates were substantially negative. Although difficult to precisely calculate, it appears that an income transfer of \$100 to \$200 million per year moved from the public sector to the borrowers of agricultural credit in Brazil via these negative interest rates during the 1960's. Since only a minority of Brazilian farmers have access to institutional credit, and most of these are located in southern Brazil, credit policy has concentrated this income transfer.

Another major policy emphasis during the 1960's was activating a minimum-producer-price program especially in rice, corn, beans, and wheat. This not only provided some forward pricing advantages to the farmer, but it also -- at least in the case of wheat -- gave farmers

substantially higher price incentives. The increase in wheat production has been especially impressive. With the exception of livestock, sugar, and coffee, agricultural price ceilings and export restrictions have now been removed, and most Brazilian commodities are now price competitive in the world market.

Some success was also achieved in the coffee diversification program during this period, and with the additional help of bad weather and disease problems, the amount of coffee in storage has been substantially reduced. Adjustments favorable to agriculture have also been made in value-added taxes, and a sizeable investment made in carrying out a land ownership survey. Land reform, however, has been set aside and emphasis placed on colonization and opening new lands, especially in the Amazon.

In many respects Brazil now has a fairly adequate set of institutions servicing agriculture, a transportation system in rural areas which at least meets minimum requirements for development, and a good deal of capacity to plan agricultural development rather than simply react to individual crises. Brazil is rapidly changing from its traditional pattern of increasing agricultural production mainly through opening new land, and beginning to rely on more intensive use of land for this result.

U. S. Agricultural Development Assistance in Brazil

As shown in Table 1, over the 1950 to 1970 period U. S. Agencies lent or gave a total of \$103 million directly for agriculture in Brazil. This amounted to about one-fifth of U. S. Government project assistance (Table 2). In addition, an equivalent of almost \$60 million worth of local currencies generated by Public Law 480 Imports and Program Loans were also channelled to agricultural programs (Table 3). At least some of these local currencies were net additions to what would have otherwise

Table 1: U. S. Agency Dollar Financed Technical Assistance and Capital Assistance Projects for Agriculture in Brazil, 1953-1969*

<u>Project Title</u>	<u>Year**</u>	<u>Obligations</u>	<u>Expenditure</u>
		(\$1,000 U. S. Dollars)	
<u>Completed Technical Assistance Projects (Grants)</u>			
Technical Assistance Support Activity	1953		1,044
Regional Agriculture	1957		6
Workshop-Womens Rural Life	1958		9
Agriculture Economics & Cooperatives	1962		217
Agriculture Production & Marketing	1964		14
Agriculture Advisory Service	1964		601
Agriculture Service	1965		2,653
Agriculture Research & Extension N.E.	1965		83
Rural Extension Service Improvement	1965		235
Colony & Resettlement N.E.	1965		27
Water Research N.E.	1965		95
Fertilizer & Insecticide Demonstration	1965		210
Land & Water Resources Group	1965		2,132
Food Distribution	1966		52
	TOTAL	7,378	7,378
<u>Active Technical Assistance Projects (Grants)</u>			
Agricultural Education	1953	14,138	12,923
Frontier Homestead Program	1963	595	590
Tape Mapping	1963	1,709	1,704
Water Development & Irrigation	1963	133	130
Meteorological Data Collection	1963	49	49
Migration & Resettlement	1963	72	72
Well Testing Rehabilitation	1963	65	65
Sugar Zone Modernization	1963	863	458
Agricultural Research	1963	9,837	9,454
Improved Price Support	1963	1,328	1,302
Expansion & Improvement of Agriculture	1963	892	830
Establish Nationwide Market News	1963	247	210
Development of Agriculture Cooperatives	1963	1,637	1,621
Fish Production Processing & Marketing	1963	540	441
Natural Resources Planning & Engineering	1969	346	346
	TOTAL	32,451	30,195
<u>Capital Assistance Projects (Loans)</u>			
Resettlement Project	1959	22	22
Fertilizer Imports	1964	15,000	14,493
Food Production	1966	20,000	209
Fertilizer Plant & Distribution	1966	14,800	14,609
Agricultural Research	1970	11,930	***
Agricultural Research	1970	1,420	***
	TOTAL	63,172	29,333
	GRAND TOTAL	103,001	66,906

*As of June 30, 1969.

**If completed project, year of completion, others years of initiation.

***Loan not yet signed by Brazilians.

Source: Agency for International Development, Office of Controller, reports published under number W-253, various issues.

Table 2: Yearly Obligations and Expenditures for Projects in Brazil, Financed by U. S. Agencies, Total and for Agriculture, through Fiscal Year 1969

<u>Fiscal Year</u>	<u>Annual Obligations</u>			<u>Annual Expenditures</u>		
	<u>Total</u>	<u>Agriculture</u>	<u>Percent Agric.</u>	<u>Total</u>	<u>Agriculture</u>	<u>Percent Agric.</u>
	(\$1,000)					
Before & thru						
1961	53,348	9,822	18%	42,771	7,934	19%
1962	10,074	2,279	23%	10,364	1,624	16%
1963	23,494	10,224	44%	10,550	1,607	15%
1964*	71,661	8,062	11%	17,669	4,387	25%
1965	119,444	15,749	13%	30,383	10,104	33%
1966	80,219	2,989	4%	56,883	13,955	25%
1967	89,410	40,857	46%	81,374	8,381	10%
1968	74,386	12,437	17%	70,406	9,679	14%
1969	<u>12,435</u>	<u>3,704</u>	<u>30%</u>	<u>54,126</u>	<u>13,591</u>	<u>25%</u>
TOTAL	534,471	106,123**	20%	374,526	71,262**	19%

*First year in which loan data was included in projects.

**Includes same data prior to 1953 so total is somewhat larger than shown in Table 1.

Source: Agency for International Development, Office of Controller, reports published under the number W-253, various issues. This includes reports on both technical assistance and capital assistance.

Table 3: Use of U. S. Owned Local Currencies and Brazil Owned Counterpart Funds: Total Withdrawal, and Withdrawals for Agriculture, 1959-1969

<u>Year</u>	<u>Total Country Purpose Withdrawals</u>	<u>Withdrawals for Agriculture</u>
	(In \$1,000 equivalents)	
1959	23,447	1,506
1960	0	0
1961	2,906	0
1962	0	0
1963	507	0
1964	28,303	1,759
1965	102,683	20,040
1966	108,005	5,966
1967	113,235	6,118
1968	112,389	3,776
1969	<u>68,726</u>	<u>20,236</u>
TOTAL	506,201	59,401

Sources: Various Agency for International Development internal publications.

been used for agriculture.

Significant U. S. inputs into agriculture began with the founding in 1953 of the joint U. S. - Brazilian administrative entity Escritório Técnico de Agricultura (ETA): a Brazilian agency responsible for coordinating technical and financial assistance to agriculture. While U. S. funds moving through ETA were only 10 to 20 percent of the total, an American acted as co-director with a Brazilian of ETA's activities. ETA differed from most servicios set up during this period in other Latin American countries in that U. S. participation was only a small part of total. The Brazilians also had a good deal to say about content and direction of activities, and a number of the agricultural institutions in Brazil through which ETA worked were fairly well established before ETA was formed. That is, some extension activities were already underway, agricultural universities well established, agricultural credit system fairly widespread, and some agricultural research was already being done.

Individual projects were the basis of ETA's programs. Many of these were carried out with state governments, but some were conducted with federal organizations, semi-official or private agencies. Aside from some extension programs, each project was largely autonomous. Procedure wise, ETA received requests for technical assistance and then, on approval, provided some technicians, a little hardware if necessary, and a modest amount of expense money. By 1959, ETA had developed 56 projects spread throughout the major agricultural areas of Brazil, and employed almost 50 U. S. technicians to assist with the projects. [3]

About a third of the effort expended through ETA was directed at expanding agricultural extension capacity in Brazil; ETA helped establish all of the state extension services outside of Minas Gerais. The remainder of the projects treated a number of agricultural education and research topics, conservation issues, and crop and livestock production problems.

In retrospect these U. S. Point IV programs during the 1950's, in addition to giving extension a major boost, appear to have (1) helped to strengthen some Brazilian institutional capacity such as agricultural credit, research, cooperatives, and the state secretaries of agriculture; (2) helped to introduce or substantially improve through demonstration some important agricultural techniques such as artificial insemination, extension training programs, livestock rations, and soils research; and (3) helped to train a number of Brazilians who now hold key positions in institutions servicing agriculture. As shown in Table 4, during the 1950's over 600 Brazilians received training in agriculture through participant training programs, and by 1969 this figure had tripled. Almost 70 Brazilians served on ETA's staff and a number of others were employed as counterparts with U. S. technicians. For example, in mid-1970 the top three men in the Ministry of Agriculture in Brazil were alumni of ETA training programs.

The highwater mark of ETA's activities as far as U. S. participation was concerned was reached in 1959. The numbers of U. S. technicians began to decline from that point until the 1962-63 period. ETA, however, continued to sponsor additional projects and added a dozen or more between 1960 and late 1964.

Table 4: U. S. Agency Financed Participant Trainees from Brazil, Total and In Agriculture, 1950-1969*

<u>Year</u>	<u>Total</u>	<u>Agriculture</u>	
		<u>Number</u>	<u>% of Total</u>
1950-1957	1,264	410	32%
1958	326	86	26%
1959	311	123	40%
1960	292	63	22%
1961	294	50	17%
1962	230	51	22%
1963	281	97	34%
1964	375	46	12%
1965	586	137	23%
1966	578	169	29%
1967	896	220	25%
1968	791	207	26%
1969	<u>867</u>	<u>162</u>	<u>19%</u>
TOTAL	7,091	1,821	26%

*By Fiscal Year arrival country of training.

Sources: Agency for International Development, Office of International Training, "Report on Participant Training," (W-141) published annually. Agency for International Development, Statistics and Reports Division, "Operations Reports" (W-129) published annually.

During the period 1962-63, the Agency For International Development (AID) substantially changed the U. S. development strategy in Brazil. Program lending aimed at economic stabilization became the main aid instrument. In general, this resulted in much more work with national agencies rather than state organizations, e.g., the Central Bank, and the Ministry of Agriculture. Much more emphasis was also placed on influencing national policy through capital loans, and less emphasis placed on technical assistance projects. Allocation of counterpart funds generated by the program loans, individual project loans, and Public Law 480 became quite important. The major objectives of the new agricultural strategy which evolved were the following: (1) to expand and improve the activities of the federal government in research, planning, and administration of agricultural development, (2) to rapidly increase the production and marketing of agricultural commodities, and (3) to help develop a strong set of agricultural colleges which could support the above objectives.

Most of AID's agricultural activities from 1962 to 1970 can be grouped into five areas: rural credit, fertilizer supply and market development, general agricultural policy, agricultural research, and higher agricultural education.

Rural Credit

As already suggested, the Brazilian Government began about 1960 to place major emphasis on sharply expanding the amount of institutional credit available for agriculture. As a result, from 1960 to 1968 the real value of the institutional agricultural loan portfolio grew at an annual rate of 17 percent. At the same time overall credit in the

economy grew at a rate of only three percent per year [1]. Brazil clearly carried out a major structural change in its credit system during the 1960's in favor of agriculture. Major emphasis by AID on rural credit, starting in 1963-64, helped to accelerate this change. Funds channelled to the Central Bank by AID for agricultural credit came mostly in the form of counterpart funds from Program Loans and Fertilizer Loans, totaling the equivalent of \$45 million from 1964 to 1969 [27]. In addition, AID obligated almost one million dollars in technical assistance grants to support the agricultural credit system.

Fertilizer Policy

Expanding the marketing system for fertilizers during the 1960's received almost the same attention by AID as increasing rural credit. Two fertilizer import loans of \$15 million (1964), and \$20 million (1966) were major elements in this program.^{2/} In addition, a \$14.8 million loan and a \$18.1 million loan guarantee for construction of an integrated fertilizer production and distribution system in the São Paulo area were also part of this fertilizer program.

Over the period 1960 to 1968 the average annual rate of growth in fertilizer use in Brazil exceeded 11 percent [4]. There was, however, a good deal of year-to-year variation since most of the fertilizer was imported and government import policy took several sharp changes. From 1953 to 1961 fertilizer was imported duty free and at very favorable exchange rates. With this strong price subsidy, increases in consumption of fertilizer during this period averaged almost 15 percent per

^{2/} Very little of the 1966 loan has been disbursed as of mid-1970. This was mainly due to the requirement that 50 percent of the fertilizer shipments had to be on U. S. bottoms [8, pp. 29-33].

year. In 1961 the preferential exchange rate for fertilizer was eliminated and food price controls were implemented. The result was a substantial increase in the price of fertilizers in comparison with prices of most major agricultural crops [24, p. 231]. Little or no growth in total fertilizer use occurred until new policies were adopted in 1966.

In April, 1966, the Brazilian Government with AID's assistance created an agency (FUNFERTIL) which provided credit at subsidized interest rates for fertilizer purchases. Until late 1968 FUNFERTIL underwrote the full amount of the interest charges for fertilizer credit. This was then changed to a subsidy limited to interest charges up to 14 percent. In 1968, over three-fourths of the fertilizer and lime sold in Brazil was assisted by this agency [4, p. 7]. This highly subsidized credit for fertilizer purchases, plus adjustments upward of the relative prices of a number of agricultural commodities resulted in a very large increase in fertilizer consumed. Taking the subsidies into consideration, the ratio of fertilizer prices to crop prices declined from 166 in 1965 (1964 as 100) to 77 in 1968. As a result, the apparent consumption of chemical fertilizer more than doubled between 1966 and 1968 to nearly 600 thousand tons.

Over two-thirds of the fertilizer consumed in Brazil is used in the Central states, mainly São Paulo. In this area most of the commercial farmers now use chemical fertilizers. Almost all of the rest is used in the Southern states. As with rural credit, mainly the large farmers located in the commercialized Central and Southern parts of the country are benefiting from the subsidy programs associated with Brazil's fertilizer program.

There is little doubt, however, that as a result of past policy the market for fertilizer has been sufficiently expanded in Brazil to provide favorable economic possibilities for large-scale internal production. AID's loan guarantee for ULTRAFERTIL's plant in São Paulo was aimed at partially filling this possibility. The plant came on stream in mid-1970 and it is hoped that elemental nitrogen prices in São Paulo will be reduced as a result.

Higher Education

AID's assistance to higher agricultural education in Brazil has been largely made up by four contracts with U. S. universities to provide assistance to some of Brazil's leading agricultural colleges. About 20 million dollars has been spent or programmed by AID for these projects [18]. The first university contract dates back to the early 1950's when Purdue University became associated with the Rural University of Minas Gerais on a very modest scale. This program was broadened in 1958, and the contracts with The University of Wisconsin and The Ohio State University in Rio Grande do Sul and São Paulo inaugurated in 1963. In 1964 The University of Arizona began working in Ceará. An average of about 40 American technicians have been involved in these contracts.

The main objective of these contracts has been to help expand the capacities of Brazilian universities in order to train agricultural technicians required for more rapid development of the country's agricultural resources. In 1960 less than three percent of the students enrolled in higher education in Brazil were studying agricultural topics [22, p. 194]. With strong Brazilian emphasis also being placed on this area, rather dramatic results have been achieved in the past six years [18].

From 1962 to 1969, for example, undergraduate enrollment in the four Brazilian colleges assisted by AID almost tripled from 1,112 to 3,159. Graduate enrollment increased from 51 to 221 over the same period. Brazilian staff members with Masters degrees increased from 26 to 278, and those with Ph.D.'s from 1 to 67 in same period. With the growth in graduate training, graduate research, especially in the social sciences, is becoming important. Not only are the graduates providing the manpower to staff action agencies, but the research is also developing factual background for making better policy decisions.

General Agricultural Policy

Although difficult to assign numbers to, AID placed high priority on helping the Brazilians improve their agricultural development policy. This was rather personalized. It included "nationalization of the extension service, freeing most farm output prices, easing some rural taxes, liberalizing some export policy, adding-in more product price certainty, and reducing the costs of inputs, in the short run, through subsidized credit. All of these elements have become important in Brazilian policy.

Agricultural Research

In 1963 USAID contracted with the IRI Research Institute to provide technical assistance to a division of the Ministry of Agriculture, Escritório de Pesquisas e Experimentação (EPE) and the Associação Brasileira de Crédito e Assistência Rural (ABCAR) with the purpose of establishing a nationwide program in research and extension. Some 25 to 30 American technicians were employed under this contract. In addition, some attention was given to agricultural research through the four

USAID-financed agricultural university institution building contracts discussed earlier.

An agricultural research loan for over \$13 million proposed by USAID in 1968 and restructured in 1970 was an extension and expansion of these on-going grant programs. The main objective of the loan was to significantly crank-up agricultural research capacity in order to further stimulate intensification of Brazilian farming through fertilizer use, adoption of improved varieties of crops, weed and pest control and mechanical improvements.

Major considerations in this loan were (1) to increase EPE's capacity to plan and execute a national research program, (2) substantially expand EPE's cooperative research program with university research centers through additional research training, and (3) increase the input of professional research assistance and research equipment into research on key areas. Although approved by AID, this loan as of mid-1970 had not been signed by the Brazilians.

A Digression on the Northeast

As early as 1942 the U. S. Institute for Inter-American Affairs supported multimillion dollar programs in the Northeast in public health, minerals exploration, rubber growing, irrigation, and food production. These programs, however, were mainly oriented at helping to feed the thousands of U. S. personnel stationed in the Northeast. Aside from some improvements in public health and regional air transportation, U. S. programs during this period had little lasting effect on the Northeast.

Starting in 1953, several of ETA's technical assistance projects were located in the Northeast. These included extension and extension

training, agricultural credit, work with rubber and cacao, milk pasteurization, work with some plants and animal problems, home economics, and some cooperative activities. Less than five percent of the total U. S. aid effort, however, was directed to the Northeast. From 1949 through mid-1960, only 140 of the total 3,000 Brazilians trained under the Point IV fellowship program came from the Northeast. In the period 1962-63 there was an increase from several agricultural technicians to about 12 assigned to the AID contingent stationed in Recife. Plans were made for them to work closely with the regional development agency (SUDENE) in developing its activities rather than working on individual projects. These technicians, however, were never wired into SUDENE because of political issues, and by 1964, most of them had left the Northeast. During the next 6 years, aside from some benefits which filtered down from national programs, AID did little more than maintain a presence in agriculture in the Northeast.

World Bank Activities (IBRD)

By mid-1970 the IBRD had made only one loan directly for agriculture in Brazil -- only six percent of IBRD's total loans to Brazil. This was a \$40 million loan in 1967 for expanding credit for livestock production. Because of the requirements that positive real rates of interest be charged on credit granted from this loan, and detailed farm planning carried out, very little of the funds have been used to date. Almost all of the remainder of the Bank's loans have financed power *and* communication development, plus emphasis on transportation systems. A recent study (1970) of the agricultural sector in Brazil by the Bank may, nevertheless, indicate an expanded interest in this topic. Tentatively, the Bank is exploring several irrigation projects in the North-

east, some agricultural credit in the Northeast, and several settlement projects for possible financing. IBRD's tentative projects carry pretty much a large farm flavor.

Aside from helping to provide better transportation systems in rural areas, the Bank has not pursued any particular strategy vis-a-vis agriculture in Brazil.

The Inter-American Development Bank (IDB)

Through mid-1970 IDB had lent \$172 million to Brazil for 11 projects which mainly serviced agriculture (Table 5). This was about 12 percent of IDB's total loans to Brazil. Except for one project of about \$31 million, these loans were aimed at expanding the agricultural loan portfolios of various financial institutions in Brazil. IDB has also placed some emphasis on supporting regional development activities. Since IDB has not attempted to program its overall assistance, but plans largely on a project-by-project basis, it is probably fair to say that they have not followed a pre-conceived strategy for agriculture in Brazil. The general impact, however, has been to support Brazil's drive to substantially increase the amount of agricultural credit.

The Food and Agriculture Organization (FAO)

FAO has been involved in about a dozen agricultural technical assistance projects in Brazil since the late 1950's (Table 6). About \$10 million have been earmarked by the United Nations Development Programme for these projects. Several of these projects have treated fishery development, and two of them regional development in the São Francisco river basin. Some assistance has also gone to a forestry school, a food

research center, research on pesticides, agricultural diversification, wheat production, and general agricultural education and research. Training has been an important byproduct of these activities.

Table 5: Loans Made by the Inter-American Development Bank to Agriculture in Brazil, 1962-1970

<u>Purpose</u>	<u>Loan Date</u>	<u>Amount</u> <u>(\$1,000)</u>
Agricultural modernization	1962	\$ 4,500
Credit for small farmers	1962	6,400
Credit for small farmers	1963	2,000
Credit for small farmers	1964	2,700
Agricultural credit	1965	20,500
Credit for small agricultural industries	1967	15,000
Livestock credit	1969	26,000
Rural electrification	1969	30,800
Rural development	1970	29,000
Rural credit	1970	<u>35,000</u>
TOTAL		\$171,900

Source: Inter-American Development Bank (IDB), Tenth Annual Report (Washington, D. C., IDB, 1970).

Table 6: Food and Agriculture Organization Agricultural Development
Projects in Brazil, 1959-1969

<u>Project</u>	<u>Date Approved</u>	<u>Funds Earmarked</u>
São Francisco River Basin Survey I	1959	546,680
National Forestry School	1961	1,265,100
Tropical Food Research Center	1963	772,200
Fishery Research and Development	1965	391,200
São Francisco River Basin Survey II	1966	364,700
Pesticides Research	1967	1,074,700
Agricultural Diversification	1968	958,900
Agricultural Education and Research	1969	1,729,900
Wheat Production	1969	1,065,100
Fishery Development	1969	<u>1,203,200</u>
TOTAL		<u>9,871,680</u>

Source: United Nations Development Programme, "Status of Approved Projects in the Special Fund Component," DP/SF/Reports, Series A, No. 53, as of May 31, 1970, various pages.

Accomplishments and Limitations of Foreign
Assistance to Agriculture

Reviews of foreign assistance programs to Brazil as well as other aid recipient countries, suggest that it has generally been difficult to bring foreign resources to bear on agricultural problems. This is true because of (1) the low foreign exchange component typically included in rural projects, (2) the administrative and planning weakness of agricultural service institutions, and (3) the lack of information on the specific nature of rural problems.

Despite these limitations foreign assistance has been associated with some notable achievements in rural development in Brazil. IBRD and AID, for example, have helped make major changes in rural transportation systems. It appears to be relatively easy for foreign resources to have an impact here. IBRD, AID and IDB have also made important inputs into agricultural credit portfolios. Where an adequate rural banking system is in place foreign resources can rather easily help expand credit. AID and FAO have also helped train a substantial number of agricultural technicians. This in turn has strengthened many of the agricultural servicing institutions. AID has also had some success in assisting Brazil to approach agricultural development in a more systematic manner. This was especially true with respect to input and output pricing policy.

Aid programs have been much less successful in a number of other important areas. For example, foreign assistance has had little impact on the rural poverty question. The landless rural worker and the low income farmer have realized little benefit from 20 years of foreign assistance in Brazil. Institutional credit and the sizeable income subsidies associated with its use have gone to only a small part of the Brazilian farmers. Fertilizer subsidies and the benefits from farm

mechanization have gone mainly to the larger farmers. Rural poverty in the Northeast has been little influenced by substantial foreign assistance which has flowed mainly into Southern Brazil. Land reform, originally suggested by the Alliance for Progress as the major means of addressing rural poverty, has been largely bypassed by aid agencies in Brazil. No viable substitute has been developed.

Foreign assistance has also had very little impact on increasing Brazil's agricultural research capacity. Only about 5 percent of the Budget of the Ministry of Agriculture is directed to research, and AID and FAO assistance to this area has been very fragmented. Aid agencies have not been able to come up with the sustained level of effort needed to create a substantial agricultural research program.

In addition, aid agencies have not been very active in encouraging a more rational approach to rural credit pricing policy. Likewise they have paid little attention to helping Brazil design policies to mobilize part of the increase in rural incomes to finance part of the rural development efforts. It appears that more of this should be done.

In the next 10 years it is likely that foreign assistance to Brazilian agriculture will substantially decrease. There now appears to be little justification for concessional foreign assistance to Brazil's rapidly changing commercial farm sector which is largely located in the South. Viable programs which can direct resources toward rural poverty especially in the Northeast must be developed by Brazilians before foreign assistance can be of much assistance in this area.

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