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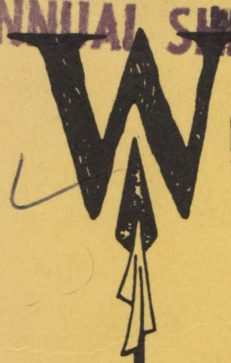
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**Agricultural Assistance
to
Developing Nations**

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Introduction

Farmers and ranchers are asking the following question with increasing frequency: Is agricultural development assistance to "third world" nations in the best interest of American agriculture? Said more succinctly, are we "shooting ourselves in the foot" by providing assistance to nations whose agriculture becomes competitive with ours upon development?

Answers to the question, as they are reported in numerous publications, are mixed. Kenneth Bader, Chief Executive officer of the American Soybean Association, has said: "U.S. farmers are concerned and vocal over this seeming rush to export the production technology that once made them the world's most efficient producers.....we should insist that efforts be made to create demand for the product within the country so that the commodity does not end up competing with the United States in the export market" (Bader, 1987).

Gary Vocke, writing about development assistance, economic growth and trade, expressed a different judgment about the effect of agricultural assistance: "By increasing the productivity of the land, new agricultural technology can initiate broad based economic development leading to industrialization and rising per capita incomes. Rising per capita incomes create food demand that eventually outpaces growth in agricultural production..... (Vocke, 1987).

Directors of State Departments of Agriculture have responded to criticisms of agricultural assistance by resolving: "The National Association of State Departments of Agriculture..... opposes the use of any Federal money to subsidize foreign agricultural competition.....NASDA also opposes the destruction of the American Farm System by.....any agency which offers low-interest rates to foreign agricultural entities" (NASDA, 1986).

Orville, Freeman, President of the Agricultural Council of America, advised his membership: American farmers should be the first to advocate aid to developing countries, particularly agricultural technical assistance, to expand their economies and improve incomes. Only in that way can a poor country move into the economic mainstream and become a growth customer for U.S. farm products" (Freeman, 1984).

It is apparent that there is disagreement among leaders within the agricultural industry relative to the consequences of technical and economic assistance to developing nations. And it is likely that there are bases for the differing points of view. So it is worthwhile for us to find the facts of the matter--to ascertain the observed responses to agricultural assistance and to make them evident.

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World Agricultural Trade

Until the decade of the 1970's, neither world agricultural trade nor the U.S. share were significant proportions of global supplies and uses. In the 50's, many of the developed nations were involved with recovery of economies from the distress of World War II. Western European nations were busy with the creation of economic unions; those of the Soviet block were developing their political/economic relations and struggling with economic recovery. The U.S. adjusted to peacetime levels of activity in the early 50's, with attention to agriculture in the form of production limitations. The markets for agricultural products were chiefly domestic, with only \$3.5 to \$4.5 billion of exports (See Table 1).

Table 1. World Agricultural Exports and U.S. Share; Averages 1951-70 and Annual 1971-81

	Agriculture ^a		
	World	United States	U.S. Share
	Billion dollars		Percent
1951-55	26.80	3.41	12.7
1956-60	31.62	4.59	14.5
1961-65	38.65	6.04	15.6
1966-70	47.23	6.90	14.6
1971	58.43	8.24	14.1
1972	70.55	9.97	14.1
1973	103.08	18.84	17.9
1974	126.77	23.10	18.2
1975	129.65	22.83	17.6
1976	141.11	24.17	17.1
1977	161.16	24.97	15.5
1978	183.93	31.24	17.0
1979	218.31	37.21	17.0
1980	251.34	44.08	17.5
1981	248.21	46.11	28.6

^a Includes values of agricultural inputs, e.g. fertilizer, seed, etc.

Source: Kenneth Price, The Dilemmas of Choice, 1986.

In this decade the "under-developed" nations continued their struggle with survival--some making attempts to limit population growth, a few promoting expansion of agricultural sectors in an effort to improve food supplies. Assistance was limited largely to gifts of grain via the PL 480 program of the U.S. and other, modest programs of the developed nations.

In the 60's there was some improvement in world agricultural exports, from about \$35 billion to \$50 billion, with virtually no change in the U.S. share. The PL 480 program continued to be important in the assistance given to underdeveloped nations, but programs of technical assistance grew in importance. Emphasis shifted to development of agricultural sectors and expansion of general economies of several political entities, which we began to describe as the "developing" nations. For a few of these nations growth was sufficient that they began to be noticeable participants in world trade--as both importers and exporters.

The decade of the 70's produced significant changes in world agricultural trade and a positive change in the U.S. share. World agricultural exports increased from \$58 billion in 1971 to \$251 billion in 1980, the peak value for exports from all nations (See Table 1). Exports from the United States increased from \$8 billion in 1971 to \$44 billion in 1980; U.S. share grew from 14.1 percent to 17.5 percent, with the share highest in 1974.

Hathaway has noted in an unpublished paper that in the 70's, expansion of world agricultural exports was prompted by essentially three factors (Hathaway). The first was growth in the world's economy--led by the economic expansions in Japan and northern Europe. Important also was positive economic change in the high-growth, developing nations such as Korea, Taiwan and Brazil. The second factor was the population boom in the developing world, a consequence of both high birth rates and extended life spans as medical science affected human survival. Failure to achieve development in agriculture led to a requirement for import of food. Availability of credit permitted imports to fill the "food-gap". The third factor was the failure of agriculture in the centrally-planned economies to produce enough food to satisfy increasing demands for food, especially meats. By 1980 these countries were importing 80 million tons of grains and oilseeds annually. It is obvious that the decade of the 70's was significant to agriculture throughout the world--for both the developed and the developing countries.

The 1980's

In the decade of the 80's one of the factors identified by Hathaway as significant to expanded world trade in agricultural products "turned around". That factor was economic activity. In a reaction to the expansionary period of the 70's, which produced high rates of inflation and large and rapid capital movements, developed nations changed monetary policies. Actions were taken which reduced money supplies and raised interest rates. The consequence was a reduction of available credit and increased costs of existing debt (Miller, 1986).

Impacts of these changes in monetary policy were felt especially in the developing nations--those nations which were achieving growth and becoming important in international agricultural trade. Significant to their development had been foreign capital, i.e. credit, available at relatively low rates of interest. Suddenly, in 1981-82, that critical flow of capital was greatly reduced and the costs of existing debt rapidly increased. The certain result was a slowing of growth, i.e. a reduced level of economic activity (See Table 2). Their involvement in trade was affected by a diversion of foreign exchange from imports to increased interest payments to international creditors.

Table 2. World and Regional Economic Growth, the Mid-1980's:

Calendar Year	1984	1985	1986	1987	1988
	Percent change				
World	4.1	3.0	2.8	2.6	3.0
United States	6.6	3.0	2.9	2.9	3.6
World less U.S.	3.2	3.0	2.7	2.5	2.7
Developed countries	4.5	3.1	2.6	2.4	2.8
Less U.S.	3.4	3.3	2.4	2.2	2.3
EC-12	2.3	2.4	2.4	2.1	2.2
Japan	5.1	4.7	2.5	2.5	2.7
Developing countries	3.1	2.5	2.6	2.1	3.7
Oil exporters	1.3	-0.1	-2.1	0.2	3.0
Non-oil exporters	4.4	4.2	5.8	3.5	4.1
Latin America	3.3	3.6	3.7	1.4	2.7
Africa & Middle East	1.1	0.1	-1.2	0.1	3.3
Asia	5.4	4.0	5.8	5.5	5.3
Centrally planned countries	3.7	2.9	3.9	3.6	3.4

Source: World Agriculture, Situation & Outlook Report, 1987.

Among the developed nations the changes in monetary policies had variable effects. Inflation rates were generally reduced, as was the intent; interest rates increased; and economic activity was reduced--but not to an equal extent among nations. A comparatively strong dollar developed in the United States. It attracted capital to debt and equity investments, and it stimulated economic activity (in both the public and private sectors) beyond that of some other developed nations. Unfortunately the strong dollar influenced our involvement in international trade, such that imports increased and exports decreased in value. The trade balance became and remains negative. Reduced purchasing power of foreign currencies was an important reason for a changed balance of imports and exports of agricultural commodities. As is evident in Table 3 exports declined rapidly after 1981, while imports increased, but at a slower rate. The trade balance has only recently begun to turn around, with a weakening dollar and more competitive prices.

Table 3. Value of U.S. Foreign Trade and Trade Balance (Agricultural, Nonagricultural), October-September 1980-87)^a

Year	Agricultural	Nonagricultural	Total	Agricultural Proportion of Total
	--Million Dollars--			Percent
U.S. Exports:				
1980	40,481	169,846	210,327	19
1981	43,780	185,423	229,203	19
1982	39,097	176,308	215,405	18
1983	34,769	159,373	194,142	18
1984	38,027	170,014	208,041	18
1985	31,201	179,236	210,437	15
1986	26,309	176,628	202,937	13
1987	27,859	202,331	230,190	12
U.S. Imports:				
1980	17,276	223,590	240,866	7
1981	17,218	237,469	254,687	7
1982	15,485	233,349	248,834	6
1983	16,373	230,527	246,900	7
1984	18,916	297,736	316,652	6
1985	19,740	313,722	333,462	6
1986	20,875	342,855	363,730	6
1987	20,643	367,381	388,024	5
Trade Balance:				
1980	23,205	-53,744	-30,539	--
1981	26,562	-52,046	-25,484	--
1982	23,612	-57,041	-33,429	--
1983	18,396	-71,154	-52,758	--
1984	19,111	-127,722	-108,611	--
1985	11,461	-134,486	-123,025	--
1986	5,434	-166,227	-160,793	--
1987	7,216	-165,050	-157,834	--

Source: Foreign Agricultural Trade of the United States, 1987 Supplement.

U.S. Agricultural Exports

With this background it is instructive to look at the experience of the United States as a principal participant in world agricultural trade. Both the destinations and the components of exports are of interest, as they are relevant to the question of assistance. It is also worthwhile to consider the relationship of exports to imports of agricultural commodities, for sustained trading relationships require a two-way exchange between trading partners.

It has been noted previously that exports (trade) in agricultural commodities were relatively unimportant in the decades of the 50's and 60's. It was in the early 70's that sales in the international markets really accelerated (see Table 1). And of course it was in the 70's that farmers in the U.S., sensing market opportunities, made the investments in technology that enabled them to be competitive in expanding markets. They were able to increase their shares of world exports.

Table 4 contains the reported values of agricultural commodity exports through the most recent decade and a half (values for cotton, tobacco and some minor commodities are excluded). It is apparent that oilseeds, feed grains, wheat, animals and related products have been the principal exports. The significance of each commodity group has varied through the 15-year period, but average values of exports for the years of the 80's show these commodities to rank in the following order of importance: (1) wheat (2) oilseeds (3) feed grains (4) animals and products (5) fruits, nuts and vegetables and (6) rice.

Table 4. Value of Selected U.S. Commodity Exports, Fiscal Years 1972-86

Year ¹	Animals and prods.	Wheat and prods.	Feed grains and prods.	Rice	Oilseeds and prods.	Fruits, nuts and vegetables	Total ²
Million dollars							
1972	1,062	1,149	1,326	334	2,137	758	8,242
1973	1,438	3,284	3,017	439	3,663	893	14,984
1974	1,826	4,652	4,480	839	5,552	1,212	21,559
1975	1,666	5,292	4,904	941	4,753	1,374	21,817
1976	2,207	4,787	6,010	607	4,692	1,532	22,742
1977	2,646	3,054	5,391	704	6,388	1,724	23,974
1978	2,828	4,139	5,751	873	7,440	1,913	27,289
1979	3,643	4,862	6,709	884	8,555	2,247	31,979
1980	3,771	6,633	9,169	1,170	9,811	3,041	40,481
1981	4,107	8,052	10,497	1,537	9,305	3,558	43,780
1982	4,075	7,675	7,051	1,149	9,545	3,412	39,097
1983	3,748	6,223	6,582	874	8,721	2,871	34,769
1984	4,218	6,783	8,217	897	8,602	2,816	38,027
1985	4,075	4,526	6,884	677	6,195	2,832	31,201
1986	4,367	3,546	3,819	648	6,266	2,915	26,324

¹ Year ending September 30.

² In addition to products listed, includes cotton, tobacco, feeds and fodders, seeds and refined sugar.

Source: National Food Review, 1987.

That the sum of the average values of wheat, feed grains and animals and products exported are 48 percent of the average total value of major agricultural exports in the 1980-86 period is significant, as these are important agricultural products in the western states. Significance of exports of these commodities by state is variable. The important point is that the markets for wheat, feed grains and animal products are international, and western producers contribute importantly to them. Without the foreign outlets, possibilities for production and disposition of these commodities would be much constrained. Resource use would be considerably affected; production would be limited to domestic markets; and prices would likely be lower.

Indicators of destination of U.S. agricultural exports are in Figures 1 and 2. Notable in Figure 1 are the changes in shares of exports going to nations and regions as they are reported for the periods 1976-77 and 1985-86. As we examine the figure we should recall that within the ten years which separate the two time periods, U.S. exports grew by 80 percent (to 1981) then declined by 40 percent (to 1986) to a level which was little greater than the value of exports in 1976-77. Then we should recognize the changes in shares evident in the figure. Through the 10 years, exports to Western Europe declined sharply in importance. In the same time, exports to Japan and countries/regions which were developing grew in importance. More specifically, areas of significant growth in U.S. exports were Latin America, Southeast and East Asia, and Japan. Moderate growth in exports was experienced in Africa; exports to Eastern Europe declined somewhat.

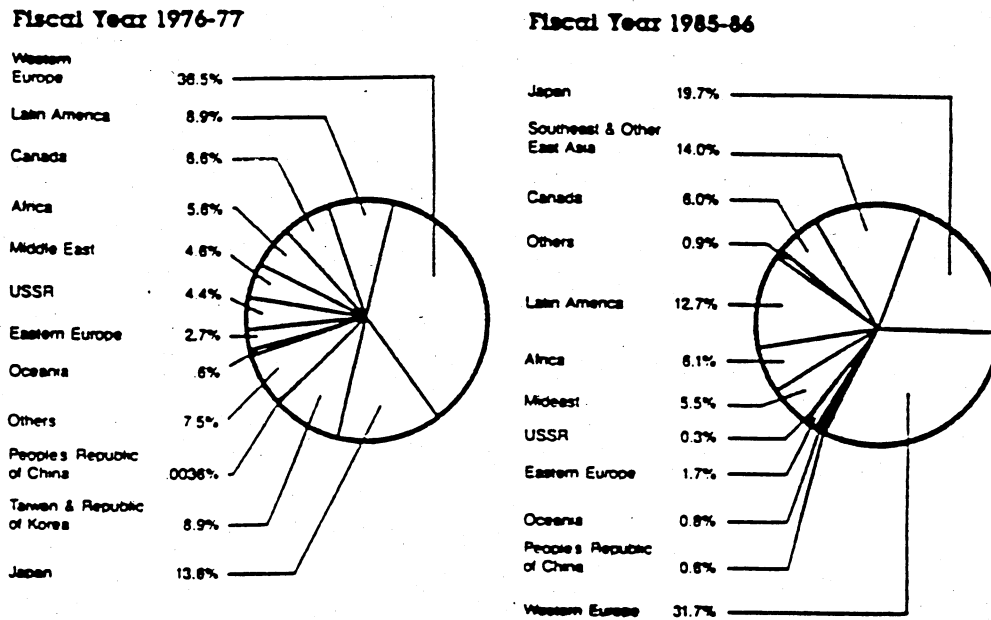
A different summary of shares of exports is pictured in Figure 2 and reported in Table 5. Shown are exports to developed, less developed, and (in the table) centrally planned countries. It is evident that growth in terms of shares has been experienced within the less developed countries. As agricultural production has developed within the European Community, exports to that region (which includes developed countries) have declined. Exports to China, Russia and other centrally planned economies have been variable and have depended greatly on their own levels of production. Added attention will be given to the exports to developing nations at a later place in this paper. It is sufficient to note here that they have been important to expansion of our export markets for major agricultural commodities.

Table 5. Share of U.S. Agricultural Exports by Major Development Category, Selected Fiscal Years, 1970-86

Year	Developed Market Economies	Less Developed Countries	Centrally Planned Countries
	- percent -		
1970	66	29	5
1975	57	37	6
1980	52	34	14
1986	53	41	6

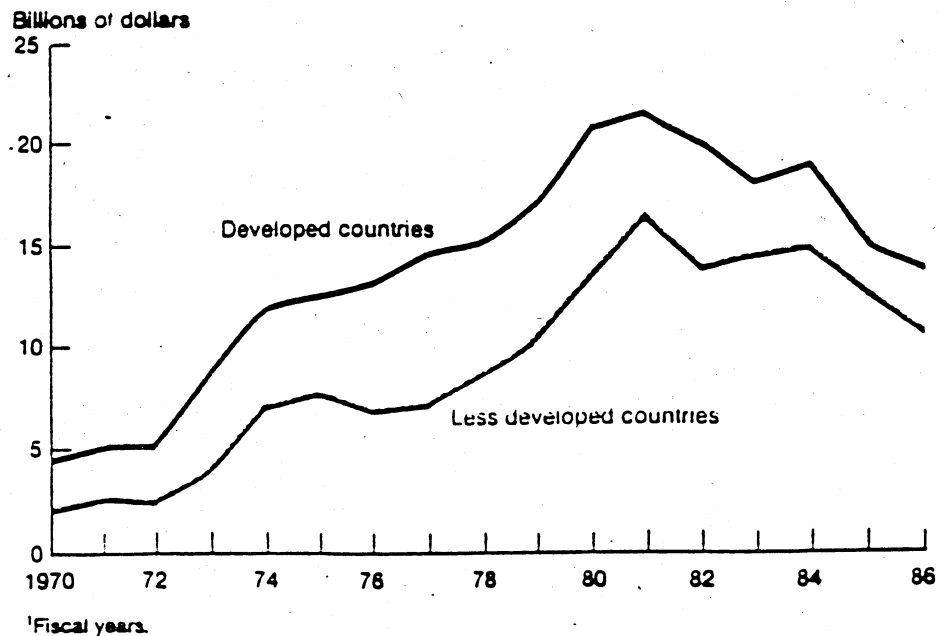
Source: Foreign Agricultural Trade of the United States, Selected Years.

Figure 1. U.S. Agricultural Export Percentage Shares to Selected Destinations, 1976-77 and Projected 1985-86 Fiscal Years



Source: World Food Trade and U.S. Agriculture, 1987.

Figure 2. U.S. Agricultural Exports to Developed and Less Developed Countries¹



Source: National Food Review, 1987.

The relationship of U.S. imports of agricultural products to corresponding exports is in Table 6, and identity and values of imports is in Table 7. As noted earlier there has been significant increase in the value of exports of agricultural commodities. The increase from 1970 to the peak year of 1984 was 446 percent. The decline in 1985 and 1986 changes the relationship to 278 percent of 1970 exports. It is obvious that one must be careful in the choice of data for the expression of change.

Table 6. Value of U.S. Agricultural Exports and Imports, by Fiscal Year

	<u>1960</u>	<u>1970</u>	<u>1984</u>	<u>1986</u>
	Million Dollars			
U.S. Agricultural Exports	4,628	6,958	38,010	26,324
U.S. Agricultural Imports	4,010	5,686	18,910	20,875

Source: Assistance to Developing Country Agriculture and U.S. Agricultural Exports, 1987.

Imports are a somewhat different story. Imports of agricultural commodities grew from \$4.0 billion in 1960 to \$20.8 billion in 1986 with little variation in the rate of growth. The "strong" dollar in the 80's caused some acceleration in the rate of change, as prices of imported products became more favorable. Since 1986, the dollar has "weakened" relative to other, major currencies and imports have stabilized and declined.

The identity of imported commodities is of interest to us. Commodities and values are noted in Table 7. It is apparent that several of the important imports are not commodities which are or can be produced in the U.S. (e.g. bananas, coffee, cocoa, and some vegetable oils). Other imports are more or less competitive with commodities produced here (e.g. fruits, nuts, vegetables, sugar, wines, etc.). When such produce as fruits and vegetables are grown, harvested and imported at times when our's are not available, they are not competitive, rather they are complementary to our products.

Those commodities which have been most important in terms of values of imports are coffee, meats and products, and fruits, nuts and vegetables. Wines and malt beverages were imported increasingly when their prices were competitive in the 80's (the era of the "strong" dollar). Sugar imports are regulated and are sensitive to policy determinations. Vegetable oils not produced in the U.S. have been imported in increasing quantities.

Table 7. Value of Selected U.S. Commodity Imports, Fiscal Years 1972-86

Year ¹	Bananas	Coffee (green)	Cocoa and products	Meats and products ²	Fruits, nuts and vegetables	Sugar	Wine and malt bev.	Veg. oils and waxes	Total ³
1972	183	1,035	221	1,125	615	813	207	167	5,936
1973	189	1,511	300	1,451	771	862	317	191	7,737
1974	201	1,624	438	1,607	821	1,669	341	440	10,031
1975	216	1,413	435	1,085	763	2,348	336	549	9,435
1976	264	2,234	595	1,435	877	1,248	432	466	10,492
1977	310	3,974	877	1,289	1,202	916	545	545	13,357
1978	336	3,466	1,265	1,597	1,439	881	710	458	13,886
1979	378	3,644	1,287	2,476	1,663	852	912	607	16,186
1980	407	4,166	968	2,277	1,653	1,619	1,035	560	17,276
1981	501	2,800	953	2,222	1,966	2,170	1,131	522	17,218
1982	553	2,620	707	2,024	2,225	1,177	1,218	425	15,485
1983	554	2,652	825	2,092	2,418	974	1,317	399	16,373
1984	627	3,091	1,056	1,931	2,953	1,144	1,510	683	18,916
1985	713	3,048	1,285	2,214	3,481	912	1,550	670	19,740
1986	700	4,151	1,164	2,248	2,493	654	1,782	555	20,875

Million dollars

¹Year ending September 30. ²Excludes poultry. ³Includes products not listed.

Source: National Food Review, 1987.

As was the case with exports, we are interested in imports of agricultural commodities from developed and developing nations. The data in Table 8 indicate some growth in imports from the developing nations in the 70's, with a corresponding reduction in imports from developed countries. This was the time period (previously noted) when the developing nations were achieving economic development. They were increasingly active in worldwide trade, and were competing successfully for a larger share of the U.S. market for agricultural imports.

Table 8. Share of U.S. Agricultural Imports, by Major Development Category, Selected Years, 1974-86

Year	Developed Countries	Less-developed Countries	Centrally-Planned Countries
	- Percent -		
1974	30	68	2
1977	26	71	3
1980	33	65	2
1983	39	58	3
1986	39	58	3

Source: Foreign Agricultural Trade of the United States, Selected Years.

But with the worldwide recession of the early 80's, from which many developing countries have not recovered, productive capability and export competitiveness declined. Developing countries lost shares of the U.S. market, and as a group have not experienced recent recovery of shares.

The kind and extent of assistance to be extended by the U.S. and other developed nations to the economically depressed, less-developed nations has been a subject of debate. The U.S. is anxious for recovery of developmental activity in the "third world", for we profitted from the increased involvement of developing nations in international markets in the 70's. With other developed nations we have extended economic assistance in the form of debt relief measures and limited, additional credit. But we have not yet adopted a policy of favored status in our purchases of agricultural and other products from foreign suppliers. Perhaps the near future will see some special efforts to help disadvantaged, less-developed nations get back on the track of economic growth.

Issues and Policies: Technical and Economic Assistance

Edward Schuh, in a paper presented at the annual meeting of the U.S. Feed Grains Council, encouraged the support of agricultural assistance to developing nations by noting the issues, which he summarized in four propositions (Schuh, 1986).

"First, future foreign markets for U.S. agriculture will be in the developing nations, not in other industrialized countries or in the centrally planned countries." Even with liberalized trade, i.e. significant reduction of trade barriers, markets for U.S. agricultural commodities will be little increased in Japan, the European Community and other developed nations. Their populations are only slowly growing; per capita incomes are high; and their people are well fed. Modest increases in sales are possible, but significant growth in exports are likely only with a new trading relationship with Japan.

"Second, the developing countries will constitute a growing market for U.S. producers only if they experience significant economic development." Schuh notes that growing populations are not enough, by themselves, to create effective demand for food. Also necessary are increasing per capita incomes, large proportions of which are spent on food. The research shows that people in developing nations put considerable emphasis on dietary improvements, substituting meat and cereal grains for rice and other staples which have been life-supporting but not especially appetizing. Often it has been necessary for the developing nations to import food--not only that which is not locally produced but that quantity of food and feed grains necessary to offset a growing deficiency in these products. A not-unusual phenomenon is food consumption increasing at a faster rate than is food production in the developing nations. Thus there has been, and will be, the opportunity for expanded U.S. exports.

"Third, developing their agriculture is the key to economic growth in the developing countries." Much of the population within developing nations are employed in, have experience in, agriculture. Some countries have land and water resources suited to but underemployed in agriculture. Increased productivity within agriculture is possible with appropriate capital and technology, and growth within this sector supports development in other, industrial sectors. Agriculture is thus the "engine" that drives development, providing as it does the increased incomes, the foreign exchange, and other resources necessary to industrialization, and general economic development.

"Fourth, raising productivity in agriculture in the developing countries need not, as in general proposition, pose a competitive threat for U.S. producers." Schuh and others have observed that many of the developing nations are located outside the temperate zones of the world, where the food and feed grains and many livestock are produced. The products for which the developing nations have comparative advantage will be emphasized, and they are often those which are not produced in the U.S. or they are produced within seasons that are unlike our own. The agriculture of the developing nations is thus non-competitive or complementary to our own in many instances. Exceptions are always to be found. But there is a tendency for increased exports of our own principal commodities to nations experiencing economic development and within which there is increased productivity among agricultural enterprises. Often we

have facilitated agricultural development by provision of technical and economic assistance.

So what should be our attitude toward developmental assistance? What should be our policy relative to technical and economic aid to developing nations? Brady, writing about technology transfer policy, suggests some forms of assistance that we should, and should not, attempt in efforts to facilitate development (Brady, 1987). Because we have "a comparative advantage in policy dialogue and institution building, and in agricultural technology generation, adaptation, and application" we should:

1. Promote a country policy environment conducive to broad-based agricultural development. We should encourage those policies that do not distort the production incentives of farmers, but that do create a positive environment for growth within the private sector and promote a positive impact on natural resource management.
2. Support cost-reducing (productivity increasing) technology development and transfer in agriculture. Our experience tells us that agricultural research can have a high payoff. In application of technology we should give attention to the sustainability of agricultural production practices.
3. Encourage development within the private sector, with particular emphasis on small- and medium-scale enterprises and institutions. We should assist developing nations to improve the efficiency of public and semi-public agricultural (and agribusiness) enterprises and to divest themselves of inappropriate or inefficient ones.
4. Utilize the PL 480 program to facilitate development when food aid is appropriate to food security and nutritional needs within low income countries. While food aid can be competitive with locally-produced food supplies, it is possible to use it to strengthen human and institutional resources and thus to enhance the development of the private sector.

Brady also points to some areas of assistance wherein we do not have a clear comparative advantage. In these areas we should look to others for significant activity. We should not:

1. Compete with others in the provision of infrastructure, e.g. buildings and roads. Often developing countries finance buildings, roads, market structures, etc. with loans from other donors. The U.S. may contribute to the development of infrastructure, e.g. provide training of personnel who will occupy agricultural college campuses or marketing facilities, but that assistance is complementary to that which is given by other developed nations.
2. Contribute to activities which may result in clear disadvantage to U.S. farmers. Brady points out that "it is A.I.D. policy to avoid supporting the production of agricultural commodities for

export by developing countries when the commodities would directly compete with exports of similar U.S. agricultural commodities to third world countries and have a significant impact on U.S. exporters." There are a few cases where programs of assistance have created competition for U.S. agricultural exporters. The A.I.D. policy demands careful planning of programs of assistance, recognition of potential trade-offs in export of commodities as they are affected by development, and extension of assistance that will provide for development that is beneficial to developing and developed nations as well.

We come now to the "bottom line". Today there is need and opportunity for development in most countries of the "third world". The poor in many countries have a continual problem of a food deficit; while the developed nations experience increasing abundance--even surpluses of food. Our own "farm problem" will be alleviated by helping others to improve their agriculture, to facilitate economic development and thus to increase incomes, some of which will be used for the import of food. The evidence supports this scenario of development; the data show the developing nations to be important to world-wide demands for food. The concensus among those who have critically examined the questions of technical and economic assistance is that it is in our interest to continue our extension of assistance to agriculture in developing nations.

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CONSUMPTION STABILITY AND THE
CRUCIAL ROLE OF FOOD AID IN AFRICA

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Food consumption in most areas of Africa has been characterized by declining trends and instability. Most African countries are dependent on a large subsistence agricultural sector to meet from two-thirds to all of their consumption requirements. Productivity and variations in food production are therefore directly transmitted to consumption levels. In addition to slow long-term production growth, the lack of irrigated agriculture leaves the region vulnerable to drought, thus increasing production-consumption variability. For this region, which has always struggled with malnutrition and famine, food imports appeared to be the solution to the problem of variable consumption. However, limited financial capabilities have reduced their commercial import capacity. In recent years, as financial difficulties grew, these countries have become increasingly dependent on food aid to stabilize consumption.

This study reviews consumption patterns of African countries, identifies the main factors that shape the consumption trend, quantifies the impact of these factors on food availability, and estimates the expected need for food aid under different target consumption levels. Cereals are used as a proxy for food because of data availability, as well as the fact that they account for more than 60 percent of total food consumption in this region. In this study, cereals are defined as wheat, corn, rice, sorghum, millet, teff, and barley. The study includes 17 African countries: Ethiopia, Gambia, Kenya, Lesotho, Liberia, Madagascar, Mali, Morocco, Niger, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Tunisia, Zaire, and Zambia. The observed time period is 1966 to 1986.

Consumption Variability

Africa, consumption is shaped by characteristics of production, commercial imports, and food aid (stocks are limited). In almost all of the countries, foreign exchange availability sets a limit on commercial imports. Governments are involved in regulating imports, in general, and food imports in particular. Although, food imports are used to compensate for production shortfalls, average annual consumption variation remains high, 13 percent. Production variation averages about 17 percent, meaning that imports reduced variation by 4 percent (table 1). Most of the consumption stabilization can be attributed to commercial imports. Variation, with just production and commercial imports, was only slightly higher than consumption variation--13.3 percent, meaning that food aid has not worked to reduce variation during the study period. The reasons behind this are: delays in assessing food needs, delays in responding to the needs, and distribution problems in the recipient country (ports and roads). Both donors and recipients have been known to react slowly to a drought situation. Drought stricken countries are reluctant to admit that they have a production shortfall or that starvation exists in their countries. Often, political considerations on the part of donors and, in many cases, inadequate information about the seriousness of the problem slows responses. The food aid issue has become an increasingly important factor as the financial condition in these countries continues to deteriorate. Commercial imports, which have contributed to reducing consumption variation during the last two decades, will most likely be reduced over time, resulting in a greater need for food aid to stabilize consumption.