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The U.S. Farmer and World Market Development

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ABSTRACT

The rapid expansion of U.S. agricultural exports over the past two decades has greatly enhanced the role of exports in the U.S. agricultural economy and has increased the stake of U.S. farmers in foreign economic growth and trade, and the development of foreign markets. The growth of U.S. agricultural exports has been closely related to income growth in foreign countries. This study examines the changing nature of world import demand for agricultural products, induced by economic growth and increased incomes, and its impact on and significance for (1) U.S. agriculture, (2) changes in the commodity composition of U.S. agricultural exports, (3) market shares of U.S. agricultural exports, (4) future market potential for U.S. farm products, and (5) income and export opportunities for American farmers with continued growth in world demand and agricultural trade.

Keywords: World economic growth, market development, foreign demand, market share import demand, farm income and products, import elasticities of demand, major markets, food consumption, food expenditures

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CONTENTS

SUMMARY

In a world made more interdependent by economic growth and change in economic events, the welfare of American farmers and foreign consumers has become tied closely together. The rapid expansion of U.S. agricultural exports over the past two decades has greatly increased the role of agricultural exports in the U.S. economy, world trade, and U.S. farm income. Foreign markets are taking an increasing share of U.S. crop production and accounting for a growing share of total U.S. farm income. The proportion of total U.S. farm products shipped overseas and acres devoted to production for exports has more than doubled during the past two decades because domestic demand has grown much more slowly than foreign demand.

This study examines the changing nature of world import demand for agricultural products, induced by economic growth and increased incomes, and its impact on and significance for (1) U.S. agriculture, (2) changes in the commodity composition of U.S. agricultural exports, (3) market shares of U.S. agricultural exports, (4) market potential for U.S. farm products, and (5) income and export opportunities for American farmers with continued growth in world demand and agricultural trade.

World economic growth has altered the pattern, direction, and volume of world trade. This growth has altered the type of consumer products demanded and, thereby, the commodity composition of world trade. The changing nature of world import demand for agricultural products, induced by economic growth and increased incomes, has greatly altered the market shares of U.S. agricultural exports, the market potential for some U.S. agricultural commodities, the commodity composition of U.S. agricultural trade, and the production and income opportunities for American farmers.

The growth of U.S. agricultural exports has been closely related to income growth in foreign countries. As consumers in these countries achieve more purchasing power and begin to demand a larger quantity and a wider variety of products, not widely grown or produced in their countries, the demand for imported agricultural products increases. With higher incomes, the people in foreign countries want both more and better food and clothing. This demand has been translated into increased imports of agricultural products from all countries in general, and the United States in particular.

Over the past two decades import demand has increased most in the rapidly growing developing countries. Developed countries have been the principal markets for feed products and high-value products such as fruits, meats, and processed products, but demand for food grains such as wheat and rice has increased slowly. Expansion of U.S. farm exports to high-income countries may be relatively modest, and will stem primarily from population growth and shifts by consumers to higher quality foods such as meats and meat products. During the eighties, most of the growth in demand for food grains has been, and will continue to be, in the middle to low-income countries. The

proportion of income spent on food is still high in these countries, and demand for food rises rapidly with per capita income increases.

The most significant change in the commodity composition of world and U.S. agricultural exports in the past 20 years has been the relative increase in importance of food and feed exports at the expense of agricultural raw material exports. These changes in U.S. agricultural exports have acted as a mirror image of the structural changes in world import demand for agricultural products. These changes portend increased income opportunities for grain farmers relative to cotton and tobacco farmers.

The United States is likely to reduce its role as an exporter of raw materials for industrial use and expand its exports of food and feed products. World demand should continue this trend and may increase the export share of feed products relative to food products.

INTRODUCTION

In a world made more interdependent by economic growth and changes in economic events, the welfare of American farmers and foreign consumers has become irreversibly tied together. The rapid expansion of U.S. agricultural exports in the past 20 years has increased the stake of U.S. farmers in continued foreign economic growth and trade, and the development of foreign markets.

This study examines the changing nature of world import demand for agricultural products, induced by economic growth and increased incomes, and its impact on and significance for (1) U.S. agriculture, (2) changes in the commodity composition of U.S. agricultural exports, (3) market shares of U.S. agricultural exports, (4) market potential for U.S. farm products, and (5) income and export opportunities for American farmers with continued growth in world demand and agricultural trade.

Foreign demand for U.S. farm products rose sharply during the seventies and greatly increased the role of agricultural exports in the U.S. economy and world trade. Foreign markets take an increasing share of U.S. crop production and account for a growing share of total U.S. farm income. The proportion of total U.S. farm production shipped overseas and acres devoted to production for exports has more than doubled during the past two decades because domestic demand has grown much more slowly than foreign demand. The rapid growth of food imports by the less-developed and centrally planned countries of Eastern Europe and the USSR has greatly enlarged U.S. grain markets. Thus, while the world has been looking increasingly to the American farmer for more of its food imports, the U.S. farmers have become more dependent upon foreign markets for a larger share of their total income.

Maintenance of farm prices and income levels acceptable to U.S. farmers is very difficult to achieve without continued expansion and growth of export markets. Long-term growth of U.S. agriculture is enhanced by U.S. foreign aid programs that promote foreign economic growth. This is because growth of U.S. exports depends heavily upon expanding world markets for farm products, and that expansion can come from increasing consumer incomes in foreign countries.

The growth of U.S. agricultural exports has been closely related to income growth in foreign countries. As consumers in these countries achieve more purchasing power they begin to demand a larger quantity and a wider variety of products not widely grown or produced in their countries, increasing their demand for imported agricultural products. With higher incomes, people in foreign countries want more and better food and clothing. This demand has been translated into increased imports of agricultural products from all countries in general, and the United States in particular.

World economic growth over the past two decades has altered the patterns, directions, and volume of world trade, changing the types of consumer products demanded, the commodity composition of world trade, market potentials for different products, and market shares of exporting countries.

SIGNIFICANCE OF EXPORT GROWTH TO U.S. AGRICULTURE

Foreign demand for U.S. farm products over the past decade expanded faster than domestic demand, so a higher proportion of crop production now goes to foreign markets. In 1951-55, about 8 percent of our total farm production (cash receipts from farm marketings) went to foreign markets (table 1). This proportion increased to 21 percent by 1976-80 (24 percent in 1980).

During 1976-80, 56 percent of U.S. wheat production and 61 percent of U.S. rice production was exported, primarily to developing and centrally planned economies to meet their growing food needs. During this period, 39 percent of our cotton and tobacco production, 48 percent of our corn and soybean production, and 41 percent of our grain sorghum production was exported as animal feeds, primarily for use in developed countries.

As U.S. crop farmers have become more dependent upon foreign markets to purchase a larger share of their crop production, the acreage harvested for export has increased. In 1981, farmers harvested more than 367 million acres, 61 million acres more than 10 years earlier. The output from roughly 2 out of every 5 acres was destined for foreign markets, compared with only 1 out of 5 acres in 1971 (table 2). Farm production from 117 million acres was exported during 1976-80, compared with the output from 72 million acres during 1961-65, and 42 million acres during 1951-55. Thirty-five percent of the 117 million acres harvested for exports during 1976-80 was wheat and rice, while feed grain (primarily corn) accounted for 24 percent, and oilseeds (primarily soybeans) constituted 29 percent. In 1951-55, when the acreage devoted to exports was at the lowest point since the post-war years, wheat and rice accounted for 45 percent of all acres harvested for exports, while exports of feed grain and oilseed crops accounted for only 21 and 9 percent, respectively.

Without the rapid expansion of exports during the seventies, U.S. crop acreage would have remained fairly constant. Improved yields would have offset most of the growth in domestic demand without bringing more land into production. Instead, 11 of the 21 major crops registered increases in harvested acreage, for a combined gain of 76 million acres. The other 10 crops showed a combined loss of only 15 million acres. Nearly all of the increases came from the big three export crops—corn, wheat, and soybeans, which together accounted for nearly 67 million additional acres. These crops gained ground almost entirely because of the growth in export sales (table 3). Corn and wheat export volume increased more than 150 percent between 1971 and 1981, and soybean volume more than doubled.

Table 1--U.S. agricultural exports 1/ share of total cash receipts from farm marketings 2/

Calendar year	Total	Crops	Live-stock	Food grain	Wheat	Rice	Feed grains 3/	Corn	Soy-beans 4/	Cotton	Tobacco
						Percent					
1951-55	8.4	16.7	2.0	28.4	24.3	36.2	11.2	11.0	13.2	21.1	22.0
1956-60	10.3	20.7	2.7	35.0	28.7	43.5	14.9	12.6	21.4	26.9	26.4
1961-65	11.6	23.5	2.8	49.4	46.6	43.0	13.9	24.4	20.8	19.8	24.1
1966-70	10.6	24.0	2.3	51.6	45.3	54.5	20.2	21.8	39.9	24.3	32.4
1971-75	12.8	30.0	2.9	53.4	49.5	54.0	26.8	31.1	44.5	30.6	33.2
1976-80	21.0	39.3	4.3	59.0	55.6	61.3	41.0	48.6	48.1	39.3	38.6
1971	11.0	24.1	2.5	44.0	40.3	45.3	14.4	16.5	47.8	31.3	29.9
1972	11.5	19.7	2.5	42.7	37.0	60.8	21.1	26.4	43.6	21.8	37.3
1973	11.6	31.3	2.8	52.7	53.4	40.1	27.0	31.1	44.9	26.6	36.4
1974	18.9	31.7	3.4	51.6	50.3	56.9	26.9	30.3	44.6	36.9	31.8
1975	19.7	35.8	3.1	64.0	52.8	65.6	34.8	39.7	42.9	34.3	31.6
1976	19.3	33.9	4.1	54.7	53.1	48.8	36.9	44.1	41.2	24.1	31.9
1977	19.3	34.5	4.5	48.4	42.5	61.4	33.0	38.0	53.2	36.4	37.5
1978	20.3	39.3	4.1	75.8	74.0	66.9	41.4	51.0	47.5	40.2	41.7
1979	20.9	42.9	4.4	56.9	53.8	57.7	44.4	54.3	48.6	40.8	41.7
1980	24.0	43.4	4.5	60.4	56.7	68.6	46.8	52.8	49.2	51.2	39.9

1/ Agricultural exports f.o.b. adjusted 20 percent for transportation charges.
2/ Includes government (CCC) payments.
3/ Includes hay and fodder.
4/ Exports include soybeans and soybean products.

Source: State Farm Income Statistics, annual issues, 1952-80, and Economic Indicators of the Farm Sector, Statistical Buls. 674 and 678, Econ. Res. Serv., U.S. Dept. Agr., USDA.

Table 2--U.S. crop acreage harvested, total and for export, averages 1950-80 and annual 1971-82

Calendar year	For export						Total harvested 2/	Acreage diverted 3/
	Food grains	Feed grains 1/	Oilcrops	Cotton	Other crops	Total		
	Million acres							
1950	23	11	4	8	4	50	345	0
1951-55	19	9	4	6	4	42	345	0
1956-60	23	13	9	7	3	55	324	24
1961-65	31	21	13	4	3	72	313	57
1966-70	25	14	18	4	4	65	297	54
1971-75	35	20	26	5	4	90	217	24
1976-80	41	28	34	7	7	117	344	0
1971	20	15	21	4	2	62	305	37
1972	38	18	27	5	3	91	294	63
1973	38	21	27	6	4	96	321	19
1974	39	21	28	4	7	99	328	0
1975	39	25	26	4	6	100	336	0
1976	32	26	28	5	6	97	337	0
1977	42	26	32	6	6	112	344	0
1978	40	25	35	7	7	114	337	0
1979	42	29	38	8	8	125	349	0
1980	50	34	37	7	9	137	352	0
1981	51	23	40	6	9	129	366	0
1982	43	23	38	4	9	117	365	0

1/ Includes feed required to produce livestock products exported.

2/ Area in 59 principal crops harvested, as to statistics reported, Econ. and Stat. Serv., U.S. Dept. Agr., plus acreages in fruits, tree nuts, and farm gardens.

3/ Total diverted or set aside under various programs, Agr. Stab. and Conserv. Serv., U.S. Dept. Agr., including limited acreage devoted to substitute crops.

Table 3--Acreage harvested to major crops increase 21 percent since 1971; 11 of 21 crops show gains

Commodity	1971	1981	Change
	---1,000 acres---		Percent
Crops with more acreage:			
Corn 1	73,631	83,207	13
Wheat	47,685	80,948	70
Soybeans	42,705	66,688	56
Cotton	11,471	13,821	20
Sunflowers	--	3,811	--
Rice	1,818	3,804	109
Dry edible beans	1,296	2,201	70
Peanuts	1,455	1,488	2
Tobacco	838	966	15
Sugarcane	648	754	16
Popcorn	174	247	42
Total	181,721	257,935	42
Crops with less acreage:			
Hay	61,355	60,212	-2
Sorghum 1/	19,828	15,564	-22
Oats	15,705	9,411	-40
Barley	10,104	9,151	-9
Potatoes	1,391	1,232	-11
Sugarbeets	1,342	1,230	-8
Rye	1,751	697	-60
Flaxseed	1,545	617	-60
Sweet potatoes	113	109	-4
Dry edible peas	203	108	-47
Total	113,337	98,331	-13
All 21 crops 2/	295,058	356,266	21

-- = less than 1,000 acres.

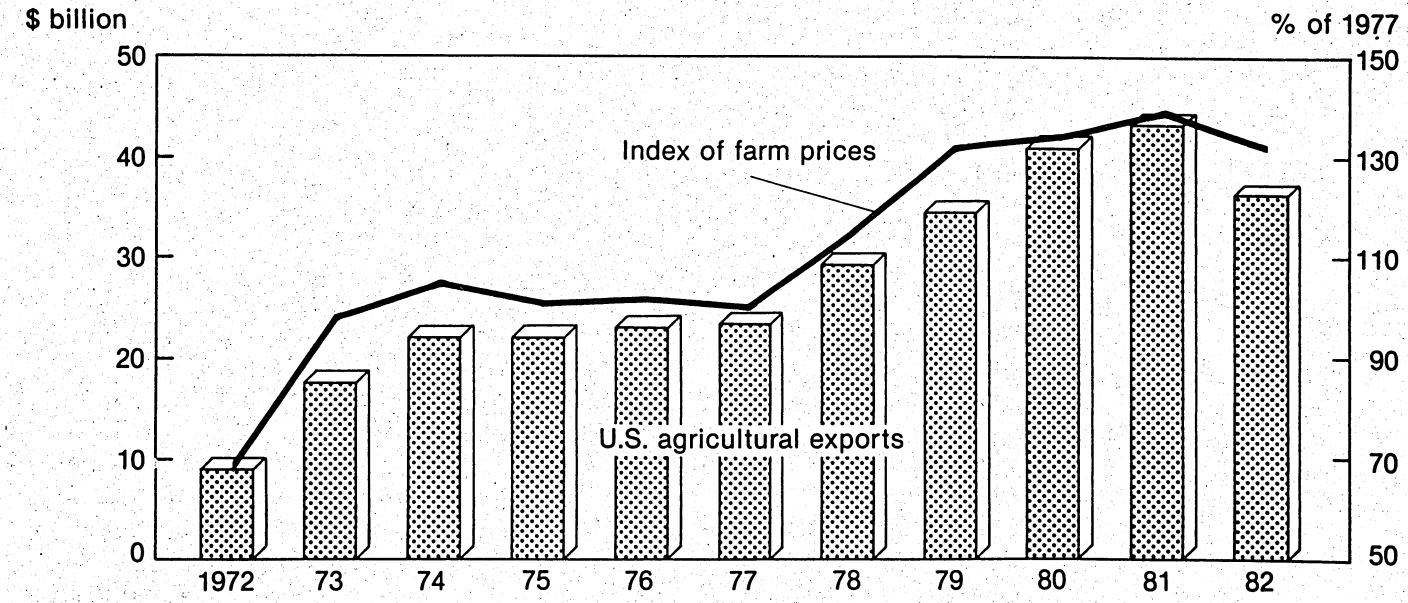
1/ Includes acreage for silage and forage.

2/ These 21 crops typically account for about 97 percent of the total U.S. harvested acreage.

Farm product exports have benefited both the farm and nonfarm sectors by generating employment, income, and purchasing power. Farmers' purchases of fuel, fertilizer, and other inputs to produce commodities for export, require additional economic activity by U.S. manufacturing, trade, and transportation sectors. Each dollar received for agricultural exports generates another $2 of domestic economic activity, indicating a multiplier effect of 2. Thus, as U.S. farmers purchase more household appliances, farm equipment, building supplies, and other capital

Figure 1

U.S. Agricultural Exports and Farm Prices



	1972	73	74	75	76	77	78	79	80	81	82
U.S. Exp.	9.4	17.7	21.9	21.9	23.0	23.6	29.4	34.7	41.2	43.3	36.6
Index FP	69	98	105	101	102	100	115	132	134	139	133

and consumer goods with the additional income earned from exports, more purchasing power has spread throughout the total economy. Also, increases in trade and transportation, stimulated by agricultural exports, have boosted investments in plants and equipment.

Agriculture's contribution to the U.S. balance of trade has also increased substantially. Net exports (exports minus imports) of U.S. farm products have increased from an average of about $1.6 billion in fiscal years 1961-70 to almost $26.6 billion in fiscal year 1981 (table 4).

Net exports of agricultural commodities are estimated to be large enough to offset a significant portion of the nonfarm item deficits resulting from growing oil imports. For example, agricultural exports offset all but $22 billion per year of our nonagricultural trade deficit between 1976-80.

This situation is a reversal from the early fifties when agricultural trade was a negative and nonagricultural trade was creating a positive total trade balance. Nonagricultural items posted a $5 billion positive trade balance per year while agricultural commodities ran a deficit of about $1 billion.

Agricultural exports have significantly benefited farm incomes by enlarging the total demand for U.S. farm products. They have also contributed to the increased variability of farm prices and incomes, especially since the early seventies. Because of the growing importance of foreign markets and the variable nature of foreign demand for U.S. farm products (especially grains), the impact of year-to-year fluctuations in foreign demand on U.S. prices and farm incomes has been significant. The relationship between the level of U.S. agricultural exports and the index of farm prices is shown in Figure 1. Since 1970, the impact of a $1 billion increase or decrease in U.S. farm exports has caused farm prices to fluctuate by more than 2.5 percentage points. Year-to-year fluctuations of $1 billion in U.S. exports have also generated a 2.5 percentage point increase in the index of prices received since 1970. Prior to 1970, little or no increases in the U.S. farm price index was recorded. Variability in the prices received for all farm products has more than doubled since 1970. The index of crop prices was more than four times that for livestock and all other products. The variability of farm income has nearly doubled, but the variability of farm prices has been higher, primarily because increased Government payments to farmers have reduced income variability.

Relatively strong economic growth around the world, combined with the steady decline in the value of the dollar during the seventies, contributed to the unprecedented growth of U.S. agricultural exports. Increases in exports, averaging 17 percent per year in value, led to an average annual growth in net farm income of over 12 percent from 1971 to 1981. In 1982, however, the worldwide recession considerably weakened the demand for U.S. agricultural products and exports fell 15 percent in value. The volume decreased 5 percent, while overall prices fell 10 percent,

Table 4--U.S. merchandise trade, agricultural and nonagricultural, averages 1951-80 and annual 1976-82

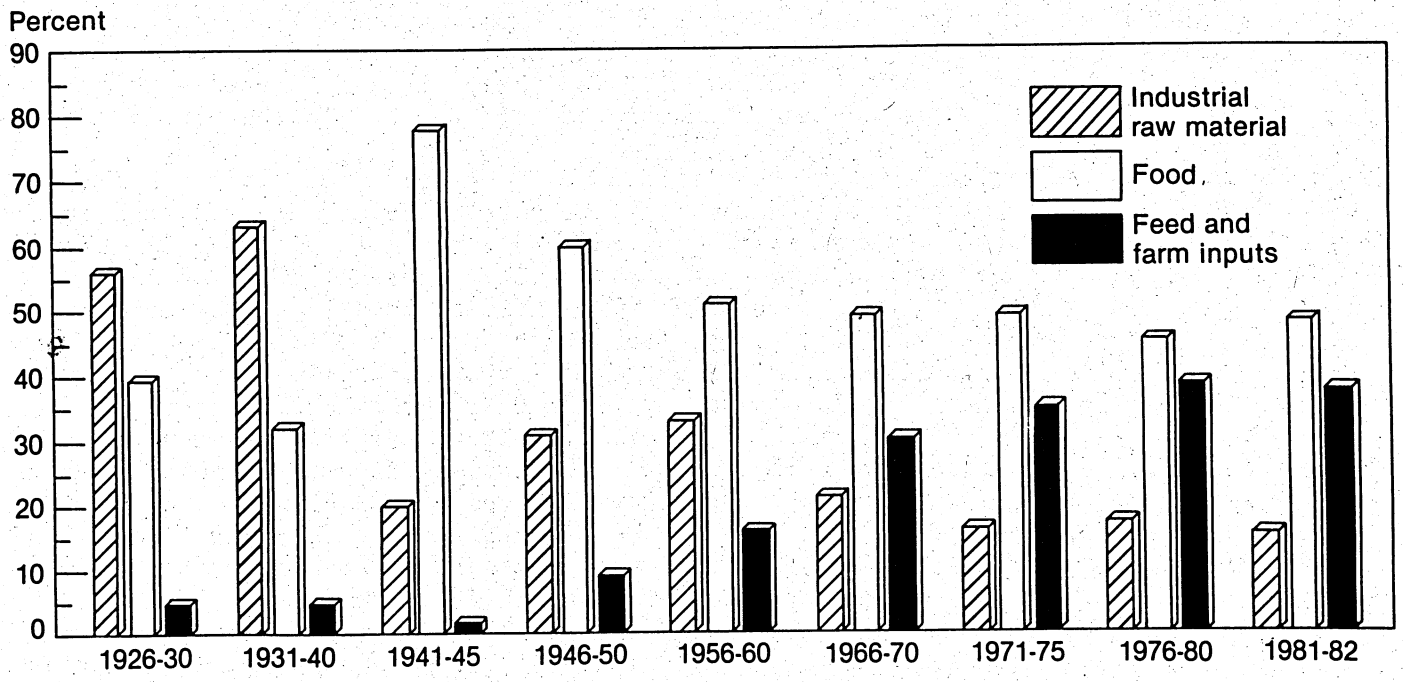
Fiscal year 1/	Exports			Imports			Trade balances		
	Total	Agri-cultural	Nonagri-cultural	Total	Agri-cultural	Nonagri-cultural	Total	Agri-cultural	Nonagri-cultural
	Billion dollars								
1951-55	14.68	3.26	11.42	10.58	4.42	6.16	4.10	-1.16	5.26
1956-60	18.52	4.10	14.42	13.40	4.00	9.40	5.12	.10	5.02
1961-65	22.90	5.46	17.44	16.74	3.88	12.86	6.16	1.58	4.58
1966-70	33.62	6.50	27.12	30.34	4.88	25.46	3.28	1.62	1.66
1971-75	69.19	14.93	54.26	70.72	7.87	62.85	-1.53	7.06	-8.59
1976-80	148.05	29.29	118.76	170.56	14.24	156.32	-22.51	15.05	-37.56
1976	111.79	22.74	89.05	114.23	10.49	103.74	-2.44	12.25	-14.69
1977	119.12	23.97	95.15	142.42	13.36	129.06	-23.30	10.61	33.91
1978	131.56	27.29	104.27	165.98	13.89	152.09	-34.42	13.40	-47.82
1979	167.62	31.98	135.64	193.61	16.19	177.42	-25.99	15.79	-41.78
1980	210.23	40.48	169.75	236.58	17.28	219.30	-26.35	23.20	-49.55
1981	229.20	43.78	185.42	254.69	17.22	237.47	-25.49	26.56	-52.05
1982	215.41	39.09	176.32	248.83	15.35	233.48	-33.42	23.74	-57.16

1/ Year ending June 30 for 1951-75; year ending September 30 for 1976-82.

Source: U.S. Foreign Agricultural Trade Statistical Report Fiscal year 1982, Econ. Res. Serv., U.S. Dept. of Agr.

Figure 2

Composition of U.S. Agricultural Exports 1926-30 - 1981-82



thereby decreasing the total value of U.S. agricultural exports to the lowest level in 3 years. Net farm income adjusted for inflation has been lower in the eighties than in the seventies.

Foreign demand will continue to fluctuate in the eighties. A number of countries are expanding production in marginal areas; that is, areas often affected by drought, frost, or flood. The New Lands of Siberia is one example. These countries try to keep consumption stable, using imports to offset deficits when weather cuts local production. In addition, more countries are using trade policies and programs to isolate domestic markets from world markets. The result is likely to be an increase in both the magnitude and frequency of fluctuations in the world market.

COMMODITY COMPOSITION OF U.S. AGRICULTURAL TRADE

The commodity composition of U.S. agricultural exports has changed significantly over the past three decades from primarily raw materials, mostly cotton and tobacco, for industrial use in other developed countries, to food and feed exports to feed Western Europe and Asia. The share of food exports increased to 78 percent in 1941-45, from about 30 percent in 1931-40, while the proportion of raw materials exported declined from more than 60 percent to 20 percent of all U.S. agricultural exports (table 5). Food's share of total agricultural exports has continued to decline since 1950 to about 50 percent (figure 2). Food exports decreased in the post-war years, and this decline was not offset by a proportionate increase in exports of agricultural raw materials for industrial use. Rather, the raw materials share of total agricultural exports has declined steadily since 1950, reaching an alltime low of 13 percent in 1975. Since then, raw materials' share has increased slightly because of higher cotton and tobacco exports in 1978-80.

The underlying cause of the decline in the relative shares of U.S. food and raw material exports has been the dramatic increase in exports of feeds and feed grains, from less than 10 percent prior to 1950, to 38 percent in 1976-80. Half of this increase occurred since 1960. These rapid changes in the commodity composition of U.S. agricultural exports have been related to the increased demand by Japan and Western Europe during the sixties for feeds and feed grains to enhance their livestock production. More recently, economic growth in Eastern Europe, the USSR, South Korea, and Taiwan has rapidly increased consumer demand for meats and meat products. This trend has greatly altered the commodity composition of agricultural imports in these countries in favor of feed, rather than food and raw materials.

The United States is no longer the raw materials exporter it was during the forties and fifties, but an exporter of food and feed products. World demand should continue this trend and may increase the export share of feed products relative to food products. These changes signify increased markets and income opportunities for grain and soybean farmers in the Midwest relative to cotton and tobacco farmers in the South and Southeast (table 6).

Table 5—Commodity composition of U.S. agricultural exports, 1926-82

Commodity group	1926-30	1931-40	1941-45	1946-50	1951-55	1956-60	1961-65	1966-70	1971-75	1976-80	1981-82
	Million U.S. dollars										
Food products	657	227	1,286	2,058	1,630	2,167	2,967	3,207	7,701	13,760	19,935
Wheat and flour	231	47	105	957	687	845	1,296	1,157	3,349	4,777	7,547
Rice	11	7	30	84	19	128	179	311	598	893	1,269
Other food grains and preparations	36	6	50	68	38	53	69	82	121	221	334
Meat and live animals	78	27	379	129	59	107	166	187	418	1,056	1,444
Dairy products and eggs	19	8	376	275	149	194	187	138	142	210	460
Lard	98	24	96	81	87	65	49	32	17	18	12
Fruits, nuts, vegetables, and preparations	136	89	176	255	247	379	435	532	1,067	2,314	3,320
Food oils and oilseeds 1/	20	7	28	78	159	316	483	632	1,727	3,691	4,573
Other food and beverages	28	12	46	131	85	80	103	136	262	580	976
Feed and farm inputs	84	39	40	289	412	681	1,300	1,952	5,485	11,612	14,140
Feed grains	49	23	16	228	296	449	816	1,047	3,193	6,868	7,963
Feeds and fodders	26	10	4	19	33	65	179	387	935	2,009	2,616
Soybeans 1/	0	1	3	16	58	122	244	439	1,200	2,450	3,101
Seeds and breeding animals	9	5	17	26	25	45	61	79	157	285	460
Raw materials	948	453	329	1,058	1,272	1,416	1,377	1,411	2,516	5,024	5,906
Cotton	766	325	152	674	761	778	638	408	878	1,888	2,129
Tobacco	144	107	137	267	315	354	393	521	700	1,177	1,502
Tallow	0	0	0	19	68	102	129	145	292	546	609
Hides and skins	9	5	1	16	37	64	89	139	288	780	875
Essential oils, starch	9	5	17	20	16	18	25	46	86	108	118
Vegetable products	23	11	22	62	75	100	103	152	272	525	673
Total exports	1,689	719	1,655	3,405	3,314	4,264	5,644	6,570	15,702	30,396	39,981
	Percent										
Share of all U.S. agricultural exports:											
Food	39	32	78	60	49	51	53	49	49	45	58
Feed	5	5	2	9	13	16	23	30	35	38	35
Raw materials	56	63	20	31	38	33	24	21	16	17	15

1/ Half of soybeans is recorded as beans and half is recorded as oil for food consumption.

Source: U.S. Department of Commerce, "U.S. Exports and Imports Classified by End-Use Commodity Categories 1923-1968, OBE-SUP 70-1;" U.S. Department of Agriculture, Foreign Agricultural Trade of the United States, Statistical Supplements, annual 1969-82.

Table 6--U.S. agricultural exports by leading producing States, 1981

Commodity	Rank by value (1 is highest)				
	1	2	3	4	5
Total agricultural exports	IA	IL	CA	TX	MN
Feed grains	IA	IL	NB	IN	MN
Wheat	KS	OK	ND	WA	TX
Rice	AR	CA	TX	LA	MS
Soybeans	IA	IL	IN	MN	MO
Cotton	TX	CA	AZ	MS	LA
Tobacco	NC	KY	SC	GA	VA
Vegetables	CA	WA	MI	ID	OR
Fruits	CA	FL	WA	AZ	OR

IMPORTANCE OF THE UNITED STATES IN WORLD MARKETS

The United States is the leading exporter of agricultural products, completely dominating trade in temperate zone commodities. U.S. farm exports averaged $37.5 billion in 1978-80, exceeding the combined value of our four principal competitors--Argentina, Australia, Canada, and France.

Exports of U.S. agricultural products increased more than ninefold, from an annual average of $3.4 billion in 1951-55, to an annual average of $32.3 billion for 1976-80. They increased threefold between 1972 and 1980. The U.S. share of world agricultural exports increased from 12.7 percent in 1951-55 to an average of 17 percent per year during the past 5 years (table 7). During this period, U.S. agricultural exports increased faster than world agricultural exports, rising 9 percent per year compared with 7.8 percent for world agricultural trade. Agricultural exports, as a percentage of all export products, declined during this period both for the world and the United States. This latter trend was temporarily interrupted in 1973-74, when an increase in world demand for U.S. agricultural products resulted from worldwide crop shortfalls while the U.S. had surplus stocks of grain.

The increase in the U.S. share of world agricultural exports for several important commodities has been dramatic. For instance, the United States accounted for 49.4 percent of the average 189 million metric tons of world grains exported annually in 1976-80, compared with 31.4 percent of the much smaller total shipped by all countries in 1951-55 (table 8). Between 1966-70 and 1976-80, the United States accounted for 63 percent of the increase in world grain exports, 52 percent of the increase in wheat exports, and 74 percent of the increase in feed grain exports. Since 1971-75, the United States accounted for 90 percent of the increase in world feedgrain exports, so that by 1976-80, the U.S. market share rose to 61 percent, up from 49

Table 7—U.S. market share of world total and agricultural exports, by 5-year averages 1951-70 and annual 1971-80

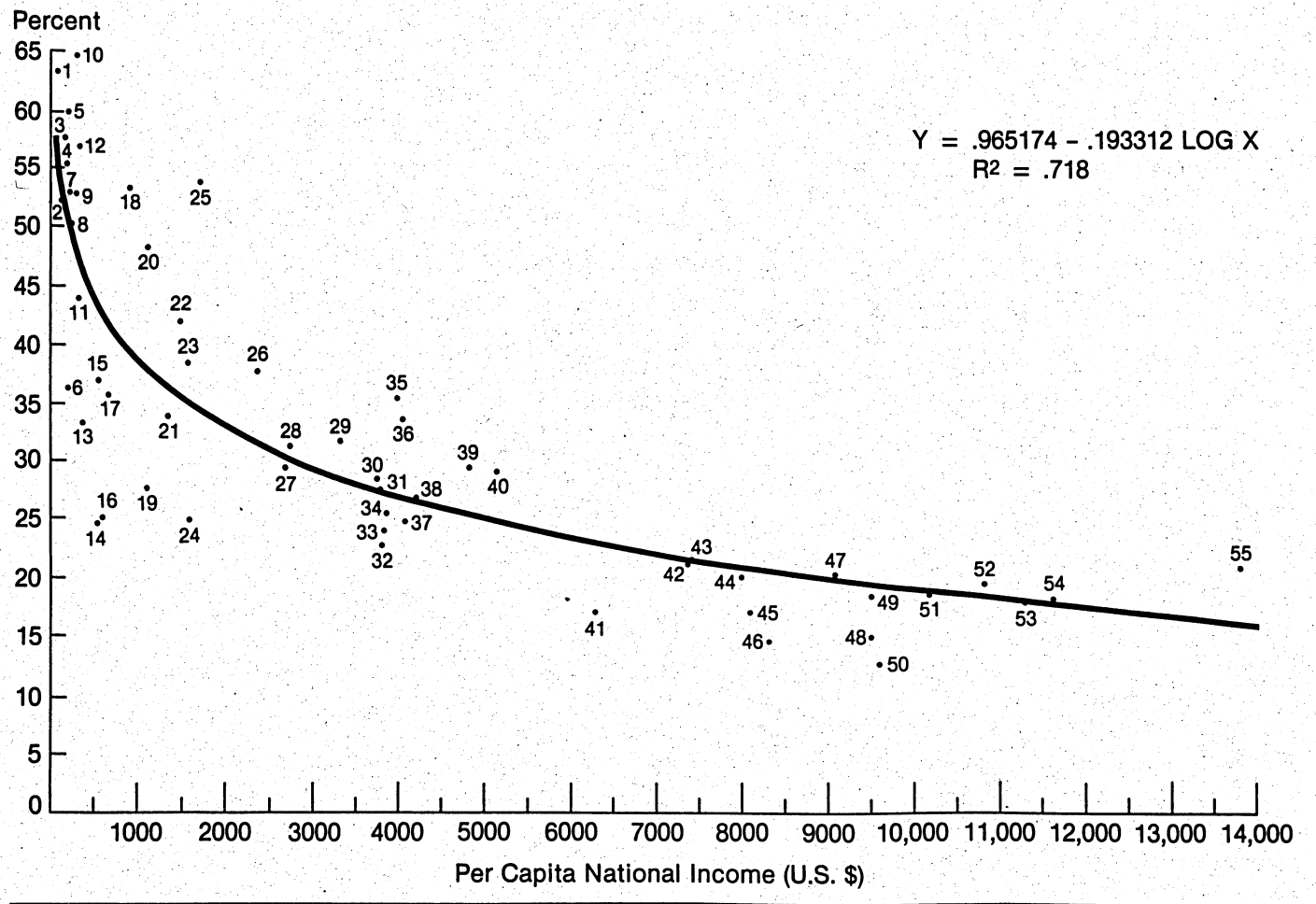
Calendar year	Total exports			Agricultural 1/ exports			Share of agriculture in total trade	
	World	United States	U.S. share	World	United States	U.S. share	World	United States
	--Billion dollars--		Percent	--Billion dollars--		Percent	--Percent--	
1951-55	84.82	15.20	17.9	26.80	3.42	12.7	31.6	22.5
1956-60	113.32	19.06	16.8	31.62	4.59	14.5	27.9	24.1
1961-65	157.52	23.76	15.1	38.46	6.05	15.7	24.4	25.5
1966-70	247.65	35.05	14.1	47.48	7.01	14.8	19.2	20.0
1971-75	608.61	73.20	12.0	96.87	16.49	17.0	15.9	22.5
1976-80	1,408.83	151.56	10.8	190.60	32.29	16.9	13.5	21.3
1971	346.27	43.49	12.5	57.77	8.22	14.2	16.7	18.9
1972	413.48	48.98	11.8	69.94	9.95	14.2	16.9	20.3
1973	573.79	70.25	12.2	102.26	18.44	18.0	17.8	26.2
1974	838.27	97.14	11.6	125.77	23.05	18.3	15.0	23.7
1975	871.22	106.16	12.2	128.62	22.80	17.7	14.8	21.5
1976	989.26	113.32	11.5	140.34	24.13	17.2	14.2	21.3
1977	1,124.88	117.93	10.5	160.45	24.93	15.5	14.3	21.1
1978	1,298.12	140.00	10.8	182.54	31.10	17.2	13.9	22.2
1979	1,636.40	173.65	10.6	218.31	37.21	16.9	13.4	21.4
1980	1,994.31	212.89	10.7	251.34	44.08	17.7	12.5	20.7
1981	1,961.15	225.78	11.5	248.21	46.02	18.4	12.7	20.4
1982 estimate	1,841.77	206.05	11.2	246.00	39.40	15.7	13.3	19.0

1/ Agricultural exports include Standard International Trade Classification (SITC) Sections 0, 1, 2, and 4 but exclude Divisions 081.42, 03, 24, 25, 27, 28, and 411.1.

Sources: United Nations, Monthly Bulletin of Statistics, selected issues, 1969-83.
United Nations, Statistical Yearbook, 1960-63.
United Nations, United Nations Conference on Trade and Development (UNCTAD Handbook of International Trade and Development Statistics, 1972-81.

Figure 3

Expenditures on Food in 55 Countries As A Share of Total Private Expenditures, 1979



Country and Rank by Income Level

1 Niger [3]	12 Philippines [3]	23 Portugal [2]	34 Puerto Rico	45 Australia
2 Togo [3]	13 Zambia	24 South Africa	35 Greece	46 Canada
3 Tanzania [3]	14 Zimbabwe [1]	25 Jordan	36 USSR	47 Norway
4 India	15 Thailand	26 Yugoslavia	37 Israel	48 Netherlands
5 China	16 Mauritius	27 Malta	38 Ireland	49 France
6 Madagascar [3]	17 El Salvador [1]	28 Cyprus [2]	39 Spain	50 United States
7 Sierra Leone [1]	18 Ghana [1]	29 Venezuela	40 Italy	51 Belgium
8 Sri Lanka	19 Fiji [1]	30 Poland	41 U.K.	52 West Germany
9 Papua [3]	20 Panama [1]	31 Hungary	42 Finland	53 Sweden
10 Sudan [3]	21 Jamaica [1]	32 Hong Kong	43 Japan	54 Denmark
11 Honduras [3]	22 South Korea	33 Singapore	44 Austria	55 Switzerland

[1] For 1977.
[2] For 1976.
[3] For 1975.

Source: United Nations, Yearbook of National Accounts Statistics, 1980, Vols. I, II and III. OECD, National Accounts Volume II, 1963-80, Paris, France, 1982.

percent in 1971-75 (table 8). Most of the increased share resulted from the U.S. ability to meet the sharply rising requirements of the more prosperous, developed and fast-growing middle-income countries. These countries were importing feed grains to build up livestock industries in response to strong, effective consumer demand.

The U.S. share of increasing world wheat exports has been substantial, although less rapid. Population growth provides the major stimulus for increased wheat consumption and imports by the developed countries. Population grows slowest in the developed countries, where rising consumer incomes lead to a substitution of livestock products for wheat in diets. On the other hand, demand for wheat grows most rapidly in the developing countries, where population growth rates are high, and along with rising incomes, increases the demand for wheat faster than domestic production can be expanded. Under these conditions, imports rise to meet the demand, unless policies are instituted to restrict food imports.

EXPORT EXPANSION AND FOREIGN ECONOMIC GROWTH

The expansion of export markets became a key element of U.S. farm policy in the seventies; no doubt, it will remain a central feature of the decade ahead. The demand of the world's more prosperous nations for food products is reaching saturation from the U.S. farmer's standpoint. Incomes in most of these countries are high, and consumers can be expected to spend a smaller portion of their additional income on food (table 9 and figure 3). Moreover, population growth has slowed sharply in the developed countries. High-income, developed countries currently account for about 50 percent of all U.S. agricultural exports, while the developing countries account for about one-third, and the centrally-planned countries account for the remainder (table 10).

Developed countries were the principal market outlets for feed grains and soybean exports during 1976-80. The opposite is true for wheat, as the developed countries accounted for only 25 percent of U.S. food grain exports (wheat and rice) in 1976-80. In recent years, exports to developed country markets expanded most rapidly for feed products and high-value products such as fruits, but gains have been slow for food grains such as wheat and rice. As the demand has weakened in the eighties, imports of feed grains decreased significantly, while food grain imports remained stable. Food imports in these countries will continue to be determined by population growth, not income growth.

Expansion of U.S. farm product exports to high-income countries may be relatively modest and will stem primarily from population growth and consumer shifts to higher quality foods such as meats and meat products. Such demand shifts are predictable; they usually result in growth of feed and feed grain imports, thereby affecting the commodity composition and the growth rate of import demand.

Table 8--World grain trade and U.S. exports, averages 1951-81

Calendar year and commodity	World exports	U.S. exports	U.S. share of: Total exports	U.S. share of: Increase in total
	Million metric tons			
All grains:				
1951-55	46.30	14.53	31.4	--
1956-60	61.35	21.76	35.5	48.1
1961-65	89.80	37.45	41.7	55.1
1966-70	105.38	40.92	38.8	22.3
1971-75	142.95	63.12	44.1	59.1
1976-80	188.77	93.36	49.4	65.9
1981	231.68	113.40	48.9	46.7
Wheat:				
1951-55	21.77	8.11	37.3	--
1956-60	28.16	10.39	36.9	35.7
1961-65	43.35	17.42	40.2	46.3
1966-70	48.00	17.45	36.3	0.7
1971-75	61.00	27.51	45.0	72.4
1976-80	73.60	30.72	41.8	25.6
1981	93.66	43.91	46.9	65.7
Feed grains:				
1951-55	15.06	4.59	30.5	--
1956-60	21.21	8.65	40.8	66.0
1961-65	33.23	16.22	48.8	63.0
1966-70	43.50	20.02	46.0	37.0
1971-75	67.13	32.74	48.8	53.8
1976-80	96.02	58.99	61.3	90.1
1981	114.00	65.16	57.2	34.3

--Not applicable.

Most of the growth in demand for food grains during the eighties will be in the middle- to low-income countries. The portion of income spent on food is still high in these countries, and demand for food rises with per capita income (table 9).

Analyses of the changes in agricultural imports associated with changes in per capita incomes, since 1959-61, in about 100 countries shows that agricultural import growth has kept pace with income growth for these countries as a group. However, the growth of import demand has varied greatly among these countries, depending on whether they were high- or low-income countries. It has been slowest in the high-income countries. The analyses showed that as per capita income rose 10 percent, agricultural imports:

Table 9--Share expenditures on food*, beverages and tobacco of total private domestic consumption expenditures, 55 countries, 1979

Country	National disposable income per capita	Food, beverage, and tobacco	Food	Nonalcoholic beverages	Alcoholic beverages	Tobacco
	U.S. dollars	Percent				
Niger 1/	80	67.7	63.6	0.8	1.0	2.3
Togo 1/	130	58.3	52.4	1.9	2.1	1.9
Tanzania 1/	159	65.2	57.9	.3	4.4	2.6
India	195	60.0	55.5	1.1	1.2	2.2
China	200	64.0	60.0	1.0	1.0	2.0
Madagascar 1/	200	41.5	36.4	1.2	1.5	2.4
Sierra Leone 2/	214	60.5	53.0	[1.8	3.8	1.9] 3/
Sri Lanka	236	59.3	50.3	.2	3.9	4.9
Papua 1/	301	61.8	52.9	2.0	3.9	3.0
Sudan 1/	305	69.4	64.8	.2	1.6	2.8
Honduras 1/	340	53.6	44.1	[1.2	5.8	2.5] 3/
Philippines 1/	343	64.0	56.9	1.1	3.0	3.0
Zambia	370	40.4	[33.5	.9	4.3	2.6] 3/
Zimbabwe 2/	532	37.0	24.6	2.2	[6.2	4.0] 3/
Thailand	538	51.2	37.2	3.2	6.6	4.2
Mauritius	596	36.6	25.2	2.0	6.2	3.2
El Salvador 2/	630	41.8	35.8	1.2	3.2	1.6
Ghana 2/	873	58.6	53.6	.8	3.0	1.2
Fiji 2/	1,095	39.4	27.7	.7	7.0	4.3
Panama 2/	1,119	56.0	48.6	1.4	3.9	2.1
Jamaica 2/	1,358	43.5	33.9	1.3	3.7	4.6
South Korea	1,493	52.7	42.0	1.2	5.7	3.8
Portugal 4/	1,598	50.1	38.4	1.5	8.1	2.1
South Africa	1,599	34.6	25.0	1.3	5.8	2.5
Jordan	1,766	57.1	54.0	.4	.5	2.2
Yugoslavia	2,370	48.4	37.8	[1.8	6.0] 5/	2.8
Malta	2,710	45.3	29.5	1.9	8.9	5.0
Cyprus 4/	2,752	40.1	31.3	1.5	3.2	4.1
Venezuela	3,332	40.5	[31.8	.8	4.7	3.2] 3/
Poland	3,770	45.3	28.3	[2.3	12.1] 5/	2.6
Hungary	3,780	42.8	27.6	[1.2	11.6] 5/	2.4
Hong Kong	3,809	27.5	22.8	1.1	2.1	1.5
Singapore	3,829	30.4	24.1	1.3	2.4	2.6
Puerto Rico	3,840	31.7	25.6	.7	3.7	1.7
Greece	4,009	41.8	35.7	1.0	2.6	2.5
USSR	4,040	49.0	33.7	[1.0	10.0	4.0] 3/
Israel	4,060	28.5	25.0	1.1	.9	1.5
Ireland	4,223	44.7	26.9	1.6	12.1	4.1
Spain	4,837	32.2	29.6	.4	1.2	1.0
Italy	5,142	33.6	29.2	.3	2.0	2.1
United Kingdom	6,297	23.3	17.3	.7	2.1	3.2
Finland	7,383	28.1	21.3	.5	4.1	2.2
Japan	7,414	24.8	[21.5	.6	1.4	1.3] 3/
Austria	7,998	26.2	20.2	.7	2.8	2.5
Australia	8,096	25.4	17.1	.3	6.0	2.0
Canada	8,323	20.7	14.5	.9	3.2	2.1
Norway	9,132	27.3	20.4	1.1	3.6	2.2
Netherlands	9,507	19.5	15.0	.5	2.1	1.9
France	9,509	22.2	18.5	.5	2.2	1.0
United States	9,595	16.4	12.7	.8	1.6	1.3
Belgium	10,202	24.6	18.6	1.1	3.3	1.6
West Germany	10,837	25.9	[19.5	.8	3.5] 3/	2.1
Sweden	11,309	24.7	18.0	.5	4.1	2.1
Denmark	11,666	25.8	18.3	[.8	4.1	2.6] 3/
Switzerland	13,823	28.8	21.0	[1.0	4.3	2.5] 3/

1/ For 1975. 2/ For 1977. 3/ Distribution within group was estimated. 5/ Expenditures for alcoholic beverages were estimated from reported expenditures for all beverages. 4/ For 1976.

*Does not include expenditures in restaurants and institutions.

Source: United Nations, Yearbook of National Accounts Statistics, 1980, Vols. I, II, and III. Organisation for Economic Co-operation and Development, National Accounts Volume II, 1963-80, Paris, France, 1982.

Table 10--Destination of U.S. agricultural exports, 1961-65 and 1971-81

Fiscal year	Total	Agri-cultural exports	Grain exports: Total	Grain exports: Wheat and products	Grain exports: Rice	Grain exports: Feed grains	Soybeans	Oilseeds and products 1/
	Percent							
Developed countries:								
1961-65	65	66	53	26	29	88	90	91
1971-75	65	58	45	25	19	71	87	77
1976-80	62	56	42	24	24	58	81	66
1981	59	51	36	20	23	54	82	72
Less developed countries:								
1961-65	34	32	43	69	69	10	8	8
1971-75	32	33	42	60	80	17	9	16
1976-80	35	32	38	57	74	19	11	24
1981	38	35	43	54	76	27	14	22
Centrally planned countries:								
1961-65	1	2	4	5	2	2	2	1
1971-75	--	9	13	15	1	12	4	7
1976-80	3	12	20	19	2	23	8	10
1981	3	12	20	26	1	19	4	6

1/ Includes soybeans and products.

(1) From all countries rose by about 12 percent in the early sixties, and increased by 15.4 percent in 1971-73 before declining to 8.2 percent in 1979-81 in countries with less than $1,000 per capita income. However, they rose only 5 percent since the early sixties in those high-income countries with a per capita income of more than $1,000 per year.

(2) From the United States rose very rapidly in the early sixties (32.9 percent), less rapidly (19.3 percent) in 1971-73, and only 13.6 percent in 1979-81 in those low-income countries with less than $1,000 per capita income. However, imports by the high-income countries during the early seventies increased by 9.8 percent, by only 2 percent in 1971-73, and by 6.9 percent in 1979-81 in countries with a per capita income of more than $1,000 per year (table 11).

According to these figures, per capita agricultural import growth was more than proportional to per capita income gains in the poorer nations and less than proportional in the richer nations. The implications of these results for the American farmer are considerable. When income rises in foreign countries, the people in low-income countries, who are not totally satisfied with their diets, are likely to spend a larger part of their increased income on more and better food and fiber. This need for more food and fiber will be translated into market demand, and, as we have seen, into increased demand for food imports from all countries in general and the United States in particular. Thus, it seems axiomatic that economic growth is the way to a nation's ability to import.

Recent studies of food purchases in India have shown that when the average family income rises by $1, about 60 percent of the increased income is spent on food and fiber (table 9). In terms of the import relations (elasticities). shown in table 11, this could be viewed in terms of the effects of income levels abroad on U.S. agricultural exports.

In the developing countries of Asia, Africa, and Latin America, where per capita incomes are currently less than $800 a year, U.S. exports of farm products averaged about $6.91 per person per year in 1979-81, about double the average for 1971-73 ($3.41).

In developed countries like Japan, where per capita incomes are about $7,414 a year (1979), U.S. exports of farm products averaged $60.40 per person. In Switzerland and Denmark, where per capita incomes were even higher in 1979, U.S. exports of farm products averaged $47.15. The average imports from the United States for all high-income countries was $35.77 per capita during 1979-81 (table 11). They were about half that level in 1971-73 ($14.23) and about one-fifth in 1964 ($7.88). Not all of these differences can be attributed to growth in income, since commodity price inflation has increased the value of world trade in agricultural products since 1972.

Table 11--Agricultural imports per capita related to level of income

Country group	1959-61	1964	1971-73	1979-81
	Dollars per capita			
High-income countries:				
Income	700.00	2,280.00	2,710.00	9,020.00
Imports from--				
World	48.13	79.49	92.82	228.42
United States	5.27	7.88	14.23	35.77
Low-income countries:				
Income	110.00	240.00	352.00	800.00
Imports from--				
World	5.08	7.90	13.91	29.15
United States	.51	1.15	3.41	6.91
	Import elasticity			
High-income countries:				
Imports from--				
World	.52	.55	.57	.84
United States	.98	.77	.21	.69
Low-income countries:				
Imports from--				
World	1.15	1.20	1.54	.82
United States	3.29	2.48	1.93	1.36

Recent experience has borne out the implications of the above results. According to Food and Agricultural Organization of the United Nations (FAO) trade statistics for world agricultural imports, during the past 15 years (1965-80) the developed nations increased their total volume of agricultural imports from all sources by 2.4 percent per year, while the developing countries increased their volume of agricultural imports by 6.8 percent per year (table 12). The value of imports of agricultural products increased by 15 percent per year between 1965 and 1980 in the developing countries, while they increased only 10.9 percent per year in the developed countries.

During this period, imports of agricultural products from the United States increased faster in all groups than they did from all sources. Furthermore, the value of agricultural products imported by the developing countries increased faster than all other groups during the past 15 years (except for imports by the centrally planned countries from the United States, which were greater because of the small base in 1965). These data support the empirical results suggested previously by the data

Table 12--Changes in volume of agricultural imports, 1965-80

	Annual growth rate	
	From all countries	From United States
	Percent	
World	3.6	6.1
Developed Countries	2.4	4.2
Developing Countries	6.8	7.1
Centrally Planned	4.5	21.4

on import elasticities for the various regions as shown in table 11, as well as the differential population growth rates. World economic growth has increased world demand for agricultural products since 1965, but the demand for U.S. agricultural products has increased faster than all other countries.

The U.S. share of the major world markets for agricultural products has tended to be higher in the less-developed countries and in the more rapidly developing and growing countries, regardless of the stage of economic development. The U.S. share of the 46 largest importers of agricultural products in 1979-81 is shown in table 13. The largest markets for agricultural products are, of course, the developed countries. The average U.S. market share of the 10 largest markets was about 15 percent in 1979-81. However, the U.S. market share of the next 10 largest markets, was much larger, averaging about 28 percent.

ECONOMIC DEVELOPMENT AND TRADE

The general economic development of a country and, therefore, its ability to buy farm products from abroad, depends upon its ability to develop a strong agricultural base for its own expanding economy. No country can build a very high stage of economic development upon the shaky foundations of rural stagnation, poverty, illiteracy, ill-health, and indebtedness. This is especially true in the less-developed countries, where most of the people live in rural areas and make their living by farming. Therefore, a country's economy cannot rise enough to enable it to buy U.S. farm products unless the country develops a strong agricultural institution and productivity base.

Discussion of food exports and imports too often becomes confused with questions of competition for existing markets. Shortrun competitive relationships will, of course, arise. However, this is not as serious a problem with the developing countries as it is with the more developed countries, whose production patterns more closely parallel our own. In any event, the real interest of American agriculture is in expanding the total world market. Given a rapidly expanding and truly enormous potential world food market, U.S. agriculture can

Table 13--Major markets (billion dollars or more) for agricultural products, 1979-81

Country and rank	Agricultural imports from: World	Agricultural imports from: United States	Country ranked by importance: 1970	Country ranked by importance: 1976	Share of country imports: World exports	Share of country imports: United States	U.S. share in major markets: 1979-81	U.S. share in major markets: 1970
	--Billion dollars--		--Number--		Percent			
1 West Germany	23.56	1.67	2	1	9.7	4.2	7.1	8.4
2 United States	18.19	--	1	2	7.5	--	--	--
3 USSR	17.68	1.86	7	5	7.3	4.7	10.5	.6
4 Japan	17.64	5.98	4	3	7.2	15.0	33.9	29.3
5 United Kingdom	15.80	.98	3	4	6.5	2.5	6.2	7.1
Subtotal	92.87	10.49			38.2	26.4	11.3	11.6
6 France	14.01	.71	6	7	5.8	1.8	5.1	5.0
7 Italy	14.00	1.09	5	6	5.7	2.7	7.8	6.2
8 Netherlands	10.88	3.11	8	8	4.5	7.8	28.6	24.9
9 Belgium-Luxembourg	7.83	.68	9	9	3.1	1.7	8.9	9.2
10 China (PRC)	4.57	2.82	13	12	3.0	7.1	38.6	15.5
Subtotal	54.03	8.41			22.2	21.1	15.6	10.5
11 Canada	4.53	1.83	10	10	1.9	4.6	40.4	64.7
12 Spain	4.12	1.11	14	11	1.7	2.8	26.9	16.8
13 Saudi Arabia	4.11	.39	38	26	1.7	1.0	9.5	12.4
14 South Korea	3.46	1.75	21	23	1.4	4.4	50.6	51.1
15 Hong Kong	3.03	.40	17	14	1.2	1.0	13.2	8.3
Subtotal	19.25	5.48			7.9	13.8	28.5	36.7
16 Poland	2.98	.61	19	15	1.2	1.5	20.5	8.6
17 Switzerland	2.97	.27	11	13	1.2	.7	9.1	10.1
18 Taiwan	2.74	1.10	20	24	1.1	2.8	36.4	40.2
19 Mexico	2.57	1.97	41	44	1.1	4.9	76.7	71.9
20 Egypt	2.42	.78	42	22	1.0	2.0	32.2	12.5
21 Iran	2.41	.22	52	19	1.0	.6	9.1	21.5
Subtotal	13.35	3.8			5.5	9.7	28.8	17.1
22 Brazil	2.34	.64	28	24	1.0	1.6	27.3	22.8
23 Denmark	2.34	.64	28	24	1.0	1.6	27.3	22.8
24 Nigeria	2.30	.37	57	36	.9	.9	16.1	24.5
25 East Germany	2.28	.36	12	16	.9	.9	15.8	1.4
26 Sweden	2.19	.12	16	18	.9	.3	5.5	7.7
Subtotal	11.42	1.67			4.7	4.2	14.6	9.7
27 Czechoslovakia	2.07	0.16	15	20	0.9	0.4	7.7	1.2
28 Algeria	1.976	.20	46	27	.8	.5	10.1	10.8
29 Singapore	1.92	.14	22	28	.8	.3	7.3	4.2
30 Iraq	1.73	.18	61	42	.7	.5	10.4	1.7
31 Austria	1.68	.03	23	25	.7	.1	1.8	2.7
32 Venezuela	1.58	.70	43	36	.7	1.8	44.3	48.9
33 Portugal	1.57	.62	30	29	.6	1.6	40.8	12.2
34 Indonesia	1.52	.38	36	31	.6	1.0	25.0	55.3
35 Yugoslavia	1.51	.23	25	32	.6	.6	15.2	11.9
36 Ireland	1.39	.08	35	41	.6	.2	5.8	10.3
Subtotal	16.94	2.72			7.0	6.8	16.1	12.2
37 Romania	1.34	.39	40	33	.6	1.0	29.1	12.7
38 Malaysia	1.32	.09	26	37	.5	.2	6.8	4.5
39 India	1.31	.35	18	17	.5	.9	26.7	38.9
40 Norway	1.70	.18	27	34	.5	.5	15.4	11.6
41 Greece	1.70	.22	37	38	.5	.6	19.0	11.7
42 Libya	1.13	.02	54	46	.5	.1	1.8	4.5
43 Hungary	1.12	.02	24	30	.5	.1	1.8	5.3
44 Finland	1.08	.08	29	39	.4	.2	7.4	4.5
45 Kuwait	1.07	.04	56	45	.4	.1	3.7	3.3
46 Cuba	.99	.00	32	35	.4	.0	0	0
Subtotal	11.69	1.39			4.8	3.5	11.9	13.7
Total 46 countries	219.55	34.01			90.3	85.5		
World	243.34	39.77			100.0	100.0		

-- = Not applicable.

Source: Trade Yearbook 1981, Food and Agriculture Organization of the United Nations; and U.S. Foreign Agricultural Trade, Statistical Report, Calendar Year 1978-81, Econ. Res. Serv., U.S. Dept. Agr.

find the opportunity to adjust its production patterns and expand its total export sales. It is working for this larger pie, rather than for slightly larger pieces of a shrinking pie, that the American farmer's economic interests are best served.

An examination of 26 selected countries (table 14), that have been major recipients of U.S. economic and technical assistance (and many have graduated from the need for such aid) shows that as they developed their economies and consumer income levels, their imports of commercial U.S. farm products increased faster than imports from all other countries since 1969-71. During this time, they increased their imports from all sources only 427 percent, while increasing them from the United States by 683 percent.

As other countries continue to advance toward higher per capita income levels, the general pattern of increased food imports can be expected to be comparable. Not all the agricultural imports by any country will come from the United States, and some may not increase imports from the United States at all. But demand will expand the world market for agricultural production, especially as per capita incomes rise to the point where developing countries start shifting significantly toward higher quality diets. It is this potential for continuous, long-term expansion of the world market for agricultural products that provides American farmers with income and export opportunities.

Table 14--Commercial agricultural imports from all countries and United States, selected countries, 1969-71 to 1979-81

Country	From all countries			From United States		
	1969-71	1979-81	Increase 1969-71 to 1979-81	1969-71	1979-81	Increase 1969-71 to 1979-81
	Million dollars		Percent	Million dollars		Percent
Japan	4,030	17,642	338	1,076	7,061	556
Spain	905	4,105	353	154	1,039	575
Iran	154	1,978	1,184	17	241	1,318
India	450	1,198	166	25	180	620
South Korea	315	2,690	754	100	1,686	1,586
Egypt	246	1,479	591	28	332	1,085
Israel	182	866	375	52	250	380
Taiwan	375	2,740	631	127	1,150	805
Thailand	96	633	559	36	192	433
Morocco	160	916	473	15	92	513
Nigeria	129	2,304	1,686	15	349	2,226
Jamaica	81	198	144	32	75	134
Brazil	272	2,240	723	36	661	1,736
Hong Kong	696	3,035	336	76	436	474
Indonesia	238	1,517	537	10	282	2,720
Kenya	52	167	221	1	8	700
Algeria	182	1,973	984	19	198	942
Ivory Coast	90	439	588	1	23	2,200
Dominican Rep.	31	188	506	26	183	604
Sri Lanka	317	348	10	1	15	1,400
Iraq	136	1,733	1,174	3	175	5,733
Philippines	146	478	227	61	276	352
El Salvador	31	144	364	9	42	366
Colombia	60	419	598	20	235	1,075
Ghana	56	125	123	3	16	433
Jordan	67	458	583	5	47	840
Total	9,497	50,013	427	1,948	15,244	683

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