



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

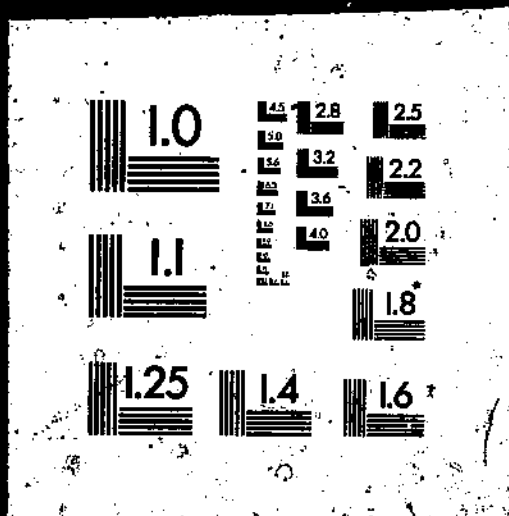
AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

PB89-211023

USDA/SB-782 FERTILIZER TRADE STATISTICS, 1970-88. (STATISTICAL
BULLETIN.) / H. VROOMEN ECONOMIC RESEARCH SERVICE, WASHINGTON, DC.
RESOURCES AND TECHNOLOGY DIV. JUN 89 34P

1 OF 1
PB 89
211 023

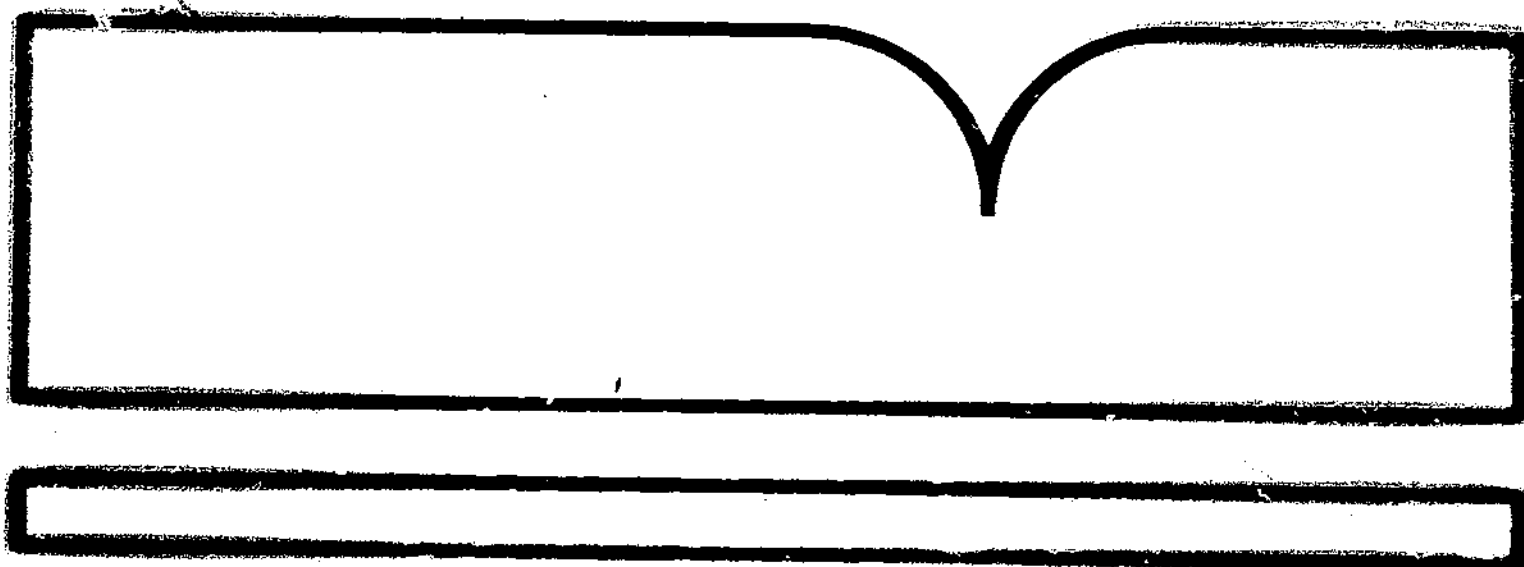


PB89-211023

Fertilizer Trade Statistics, 1970-88

(U.S.) Economic Research Service, Washington, DC

Jun 89



U.S. Department of Commerce
National Technical Information Service

NTIS

REPORT DOCUMENTATION PAGE		1. REPORT NO.	2.	3. Recipient's Accession No. PB89-211023/AS	
4. Title and Subtitle Fertilizer Trade Statistics, 1970-88				5. Report Date	
7. Author(s) Harry Vroomen				8. Performing Organization Rept. No. SB-782	
9. Performing Organization Name and Address Resources and Technology Division Economic Research Service U.S. Department of Agriculture Washington, D.C. 20005-4788				10. Project/Task/Work Unit No.	
				11. Contract(G) or Grant(G) No. (C) (G)	
12. Sponsoring Organization Name and Address				13. Type of Report & Period Covered	
				14.	
15. Supplementary Notes					
16. Abstract (Limit 200 words)					
<p>The United States has become the world's largest phosphate exporter and the world's largest potash importer during the last decade. The U.S. nitrogen trade balance, relatively stable before 1983, has also shifted as the United States became a net importer of nitrogen beginning in 1983. This bulletin includes statistics (for fertilizer years 1970-88) on U.S. imports and exports of selected fertilizer materials; world and U.S. imports and exports of nitrogen, phosphate, and potash; and U.S. import origins and export destinations for selected fertilizer materials, market areas, and years.</p>					
17. Document Analysis a. Descriptors					
Fertilizer Nitrogen Phosphate Potash					
b. Identifiers/Open-Ended Terms					
c. COSATI Field/Group 02-B, 05-C					
<div style="border: 1px solid black; padding: 5px; float: right; width: 30%;"> Prices as of 1/1/89 Paper: A03 Fiche: A01 Cost codes are: A03 for Paper and A01 for Fiche A01 </div>					
18. Availability Statement: National Technical Information Service 5285 Port Royal Road, Springfield, VA 22161				19. Security Class (This Report) Unclassified	
				20. Security Class (This Page) Unclassified	
				21. No. of Pages 34	
				22. Price See box 17	

PB89-211023



U.S. DEPARTMENT OF COMMERCE

Statistical
Bulletin
Number 782

Fertilizer Trade Statistics, 1970-88

Harry Vroomen



REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

Fertilizer Trade Statistics, 1970-88. By Harry Vroomen, Resources and Technology Division, Economic Research Service, U.S. Department of Agriculture, Statistical Bulletin No. 782.

Abstract

The United States has become the world's largest phosphate exporter and the world's largest potash importer during the last decade. The U.S. nitrogen trade balance, relatively stable before 1983, has also shifted as the United States became a net importer of nitrogen beginning in 1983. This bulletin includes statistics (for fertilizer years 1970-88) on U.S. imports and exports of selected fertilizer materials; world and U.S. imports and exports of nitrogen, phosphate, and potash; and U.S. import origins and export destinations for selected fertilizer materials, market areas, and years.

Keywords: Fertilizer, trade, nitrogen, phosphate, potash.

Acknowledgments

The author thanks Stan Daberkow, LeRoy Hansen, and Harold Taylor of the Economic Research Service, U.S. Department of Agriculture; Homer Stroikey of the Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture; and Ed Harre of the Tennessee Valley Authority for their reviews. Debra Haugan of the Economics Management Staff edited the report.

Contents

Introduction	1
U.S Fertilizer Trade By Nutrient	1
Nitrogen	1
Phosphate	4
Potash	4
U.S. Share of World Imports	4
U.S. Share of World Exports	7
Regional Trade Patterns By Nutrient	8
Nitrogen	9
Phosphate	9
Potash	10
References	10

Figures

1. U.S. nitrogen fertilizer trade	2
2. U.S. imports of selected nitrogen materials	3
3. U.S. exports of selected nitrogen materials	3
4. U.S. phosphate fertilizer trade	5
5. U.S. exports of selected phosphate materials and phosphate rock	5
6. U.S. potash fertilizer trade	6
7. U.S. imports and exports of selected potash materials	6
8. U.S. share of world fertilizer imports	7
9. U.S. share of world fertilizer exports	8

Tables

1. U.S. imports of selected nitrogen fertilizer materials	11
2. U.S. exports of selected nitrogen fertilizer materials	12
3. U.S. exports of ammonium phosphates	13
4. U.S. exports of concentrated superphosphate, phosphoric acid, and phosphate rock	14
5. U.S. exports and imports of selected potash fertilizer materials	15

6. World and U.S. plant nutrient imports	16
7. World and U.S. plant nutrient exports	17
8. U.S. imports of anhydrous ammonia, selected market areas and years	18
9. U.S. imports of urea, selected market areas and years	19
10. U.S. exports of anhydrous ammonia, selected market areas and years	20
11. U.S. exports of urea, selected market areas and years	21
12. U.S. exports of ammonium sulfate, selected market areas and years	22
13. U.S. exports of diammonium phosphate, selected market areas and years	23
14. U.S. exports of concentrated superphosphate, selected market areas and years	24
15. U.S. exports of phosphoric acid, selected market areas and years	25
16. U.S. exports of phosphate rock, selected market areas and years	26
17. U.S. imports of potassium chloride, selected market areas and years	27
18. U.S. exports of potassium chloride, selected market areas and years	28

Fertilizer Trade Statistics, 1970-88

Harry Vroomen

Introduction

World fertilizer production, use, and trade have increasingly affected the U.S. fertilizer market. World economic conditions, world crop prospects, new sources of fertilizer supplies, country policies concerning fertilizer production and use, and changing crop production and trade patterns all influence U.S. fertilizer trade patterns.

Imports and exports of fertilizer products affect the fertilizer industry and the U.S. farm sector. Changes in U.S. fertilizer trade have resulted in increased public and private interest in factors affecting the fertilizer market. This bulletin includes statistics on U.S. imports and exports of selected fertilizer materials and world and U.S. imports and exports of nitrogen, phosphate, and potash for fertilizer years (July 1-June 30) 1970-88. Most of these data have been reported in various Government and private sources. A consistent time series, however, has not been readily available in a single source. Combining the data into a single source allows one to examine the long-term changes in U.S. fertilizer trade.

U.S. Fertilizer Trade By Nutrient

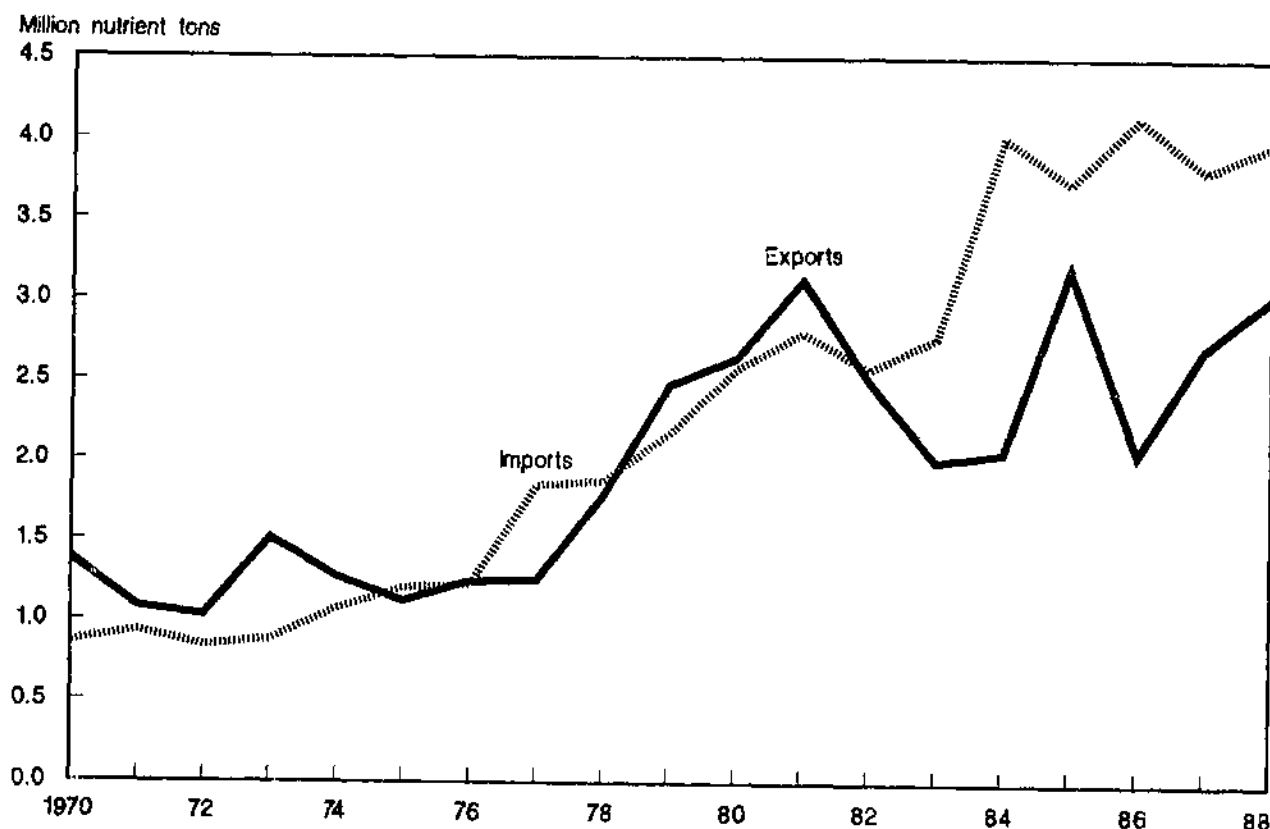
U.S. trade in fertilizer varies widely by nutrient. The United States became a net nitrogen importer in 1983 as low-cost foreign products replaced higher cost domestic products. The United States became the world's largest phosphate fertilizer exporter over the last decade and remained the world's largest potash importer.

Nitrogen

Annual U.S. imports and exports of nitrogen were approximately equal before 1983, with the trade balance varying from year to year (fig. 1).^{1/} The trade balance shifted in 1983, however, and the United States became a net nitrogen importer, as low-cost foreign products replaced higher cost domestic products.

^{1/} All fertilizer trade data are reported on a fertilizer-year basis that begins July 1 of the previous year and ends June 30.

Figure 1
U.S. nitrogen fertilizer trade



Anhydrous ammonia and urea remain the two most important nitrogen fertilizer import materials, although other products have contributed to total U.S. nitrogen imports since 1970 (table 1 and fig. 2). (Tables are grouped together at the end of this report.) Imports of these materials have increased significantly since 1970 from countries with access to inexpensive natural gas. As recently as 1974, the United States was a net exporter of anhydrous ammonia. But the trade surplus in anhydrous ammonia had reversed by 1984 to an almost 3-million-ton deficit (tables 1 and 2). Urea imports have fluctuated in relation to the price of urea and the availability of other nitrogen fertilizers. Although a net exporter of urea during 1979-82, the United States has been a net urea importer since 1983.

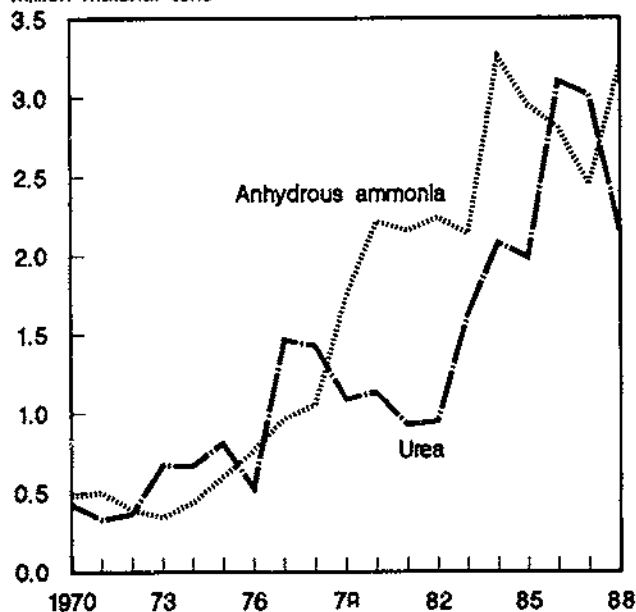
The most important nitrogen fertilizer materials exported by the United States are anhydrous ammonia, urea, and ammonium sulfate (table 2 and fig. 3). Nitrogen solutions exports, historically minor and extremely variable, reached their highest level in 1988, when they accounted for 8 percent of total nitrogen exports (fig. 3). Ammonium phosphates have also contributed significantly to total nitrogen exports since 1970; exports of diammonium phosphate (DAP) accounted for almost 45 percent of total nitrogen exports in 1985.

Figure 2

U.S. imports of selected nitrogen materials

Anhydrous ammonia and urea

Million material tons



Other nitrogen materials

Million material tons

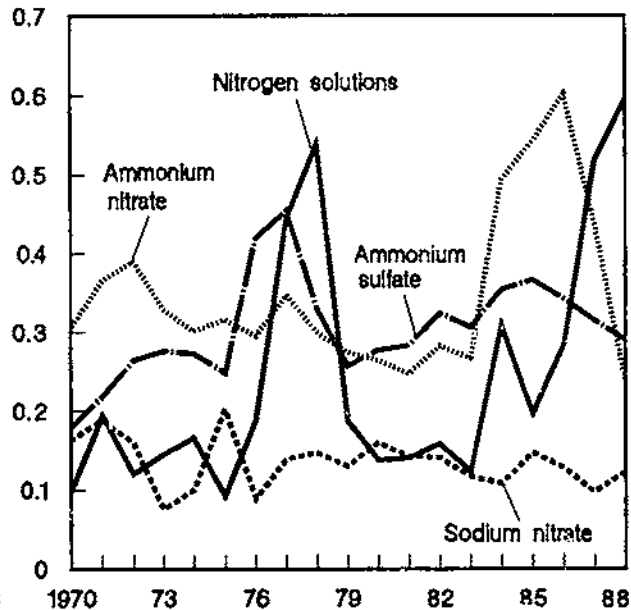
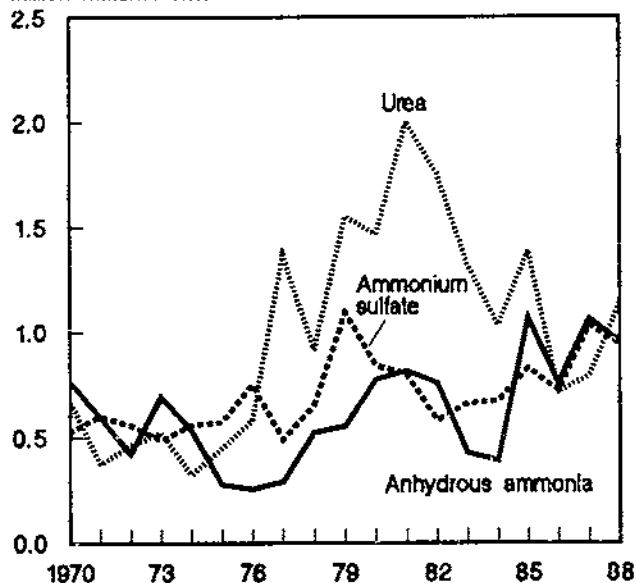


Figure 3

U.S. exports of selected nitrogen materials

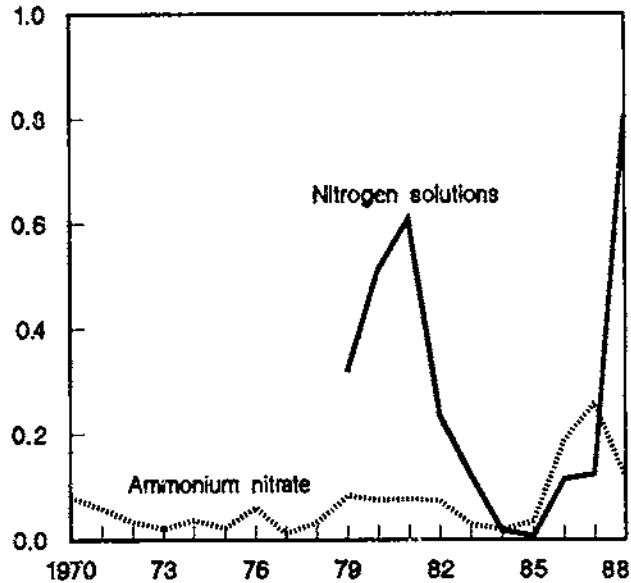
Anhydrous ammonia, urea, and ammonium sulfate

Million material tons



Ammonium nitrate and nitrogen solutions

Million material tons



Note: Data for nitrogen solutions, 1970-78 not available.

Phosphate

The United States became the world's largest phosphate fertilizer exporter during the last decade (fig. 4). The growth in U.S. phosphate fertilizer exports was due primarily to increased exports of DAP, which reached a record 7.9 million tons in 1985 (table 3 and fig. 5). While DAP exports fell to 4.3 million tons in 1986, with drastically decreased shipments to Asian countries, these exports rebounded in 1987 and reached 6.4 million tons in 1988 as shipments to Asian countries increased (table 13).

Concentrated superphosphate exports have remained relatively stable since 1979 (table 4 and fig. 5). Phosphoric acid exports have increased, but compared with the increase in ammonium phosphate exports, the increase has had a smaller effect on phosphate fertilizer exports. Phosphate rock exports reached a high of 17.2 million tons in 1980, but fell in 1988 to under 10 million tons (fig. 5).

Potash

The United States is the world's largest potash importer (fig. 6). U.S. imports of potassium chloride increased steadily during the 1970's as farm demand increased and as Canada discovered and developed vast reserves that could be mined efficiently. In addition to lower production costs, Canada enjoys comparatively low-cost transportation to the large potash markets in the Midwest.

U.S. potassium chloride imports peaked at 9.1 million tons in 1981 as potash consumption reached record levels (table 5 and fig. 7). Potassium chloride imports fell after 1981 in response to a drop in U.S. fertilizer use. The United States also imports small amounts of potassium sulfate to meet certain specific market needs. Potassium sulfate imports have ranged from 29,000 to 93,000 tons since 1970.

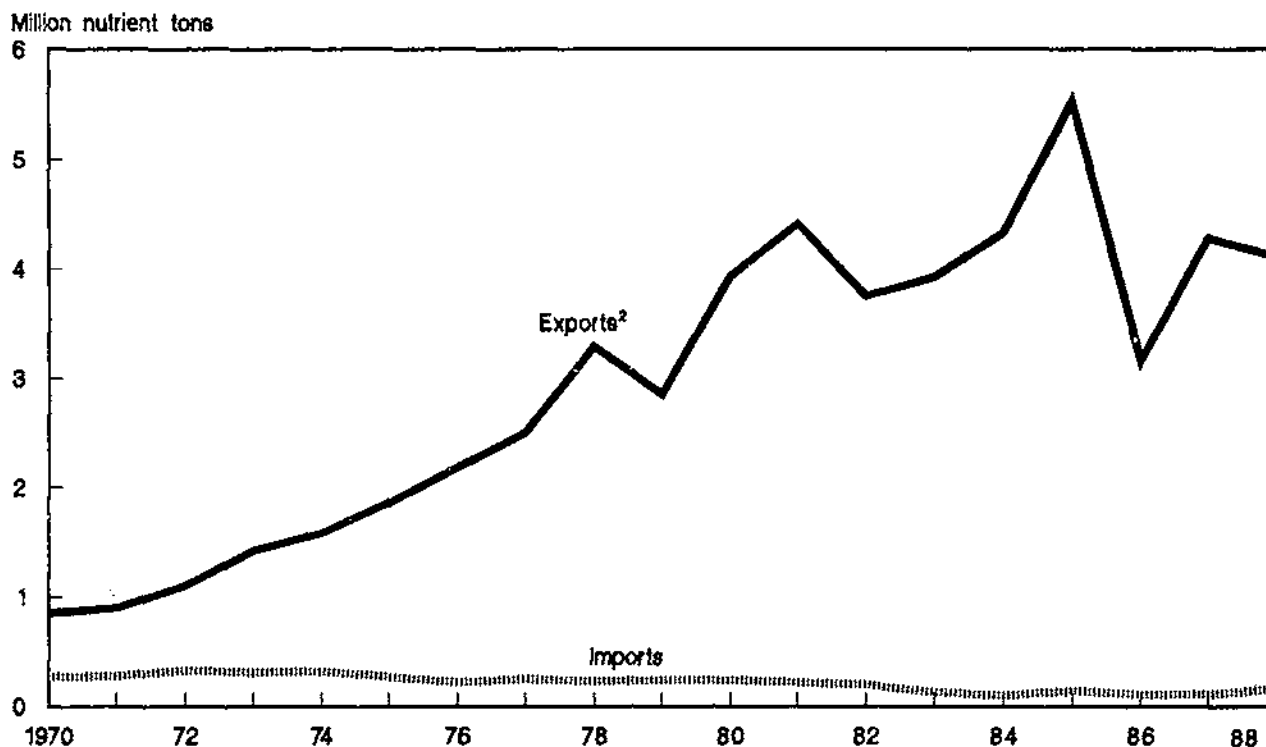
U.S. potash exports generally increased before 1980 because of expanding world demand for fertilizer (table 5 and fig. 7). Since 1980, however, slower growth in world fertilizer use, along with increased competition from other potash-producing nations, has caused U.S. potash exports to decline. Potassium chloride exports, which reached 1.3 million tons in 1977, fell to 528,000 tons in 1988.

U.S. Share of World Imports

The U.S. share of world nitrogen fertilizer imports increased from 12 percent of 1970 world totals to nearly 24 percent by 1984, as nitrogen fertilizers produced in countries with less expensive gas supplies moved into the higher priced, less competitive U.S. market (table 6 and fig. 8). The U.S. share has since declined and stood at 21 percent in 1987. At the same time, world nitrogen imports continued to increase, while U.S. imports stabilized.

The United States has never imported a significant quantity of phosphate fertilizers relative to other fertilizers. Phosphate fertilizer imports have ranged from 100,000 to 330,000 tons of P_2O_5 during 1970-88. The U.S. share of world phosphate imports declined from almost 10 percent in 1972 to just over 1 percent in 1987 as world imports increased while U.S. imports declined.

Figure 4
U.S. phosphate fertilizer trade¹



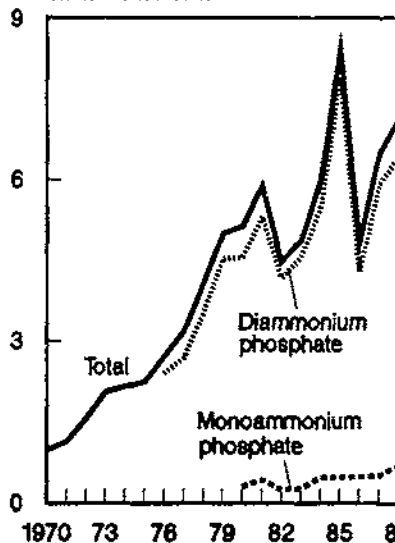
1/ Does not include phosphate rock.

2/ Before 1985, U.S. phosphate exports included both wet-process phosphoric acid and superphosphoric acid. Superphosphoric acid reports were discontinued after June 1985; 1986-88 data are no longer comparable with 1985 and earlier years.

Figure 5
U.S. exports of selected phosphate materials and phosphate rock

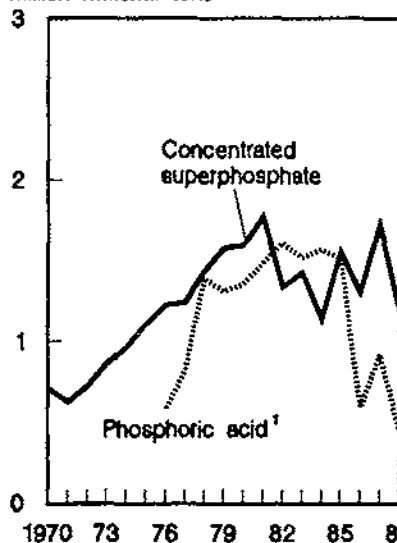
Ammonium phosphates

Million material tons



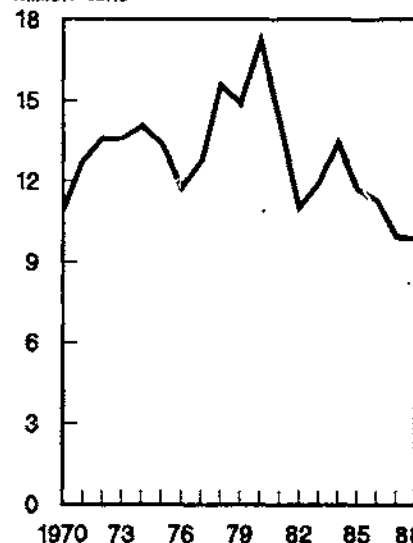
Concentrated superphosphate and phosphoric acid

Million material tons



Phosphate rock

Million tons



1/ Before 1985, phosphoric acid exports included both wet-process phosphoric acid and superphosphoric acid. Superphosphoric acid reports were discontinued after June 1985; 1986-88 data are no longer comparable with 1985 and earlier years.

Figure 6
U.S. potash fertilizer trade

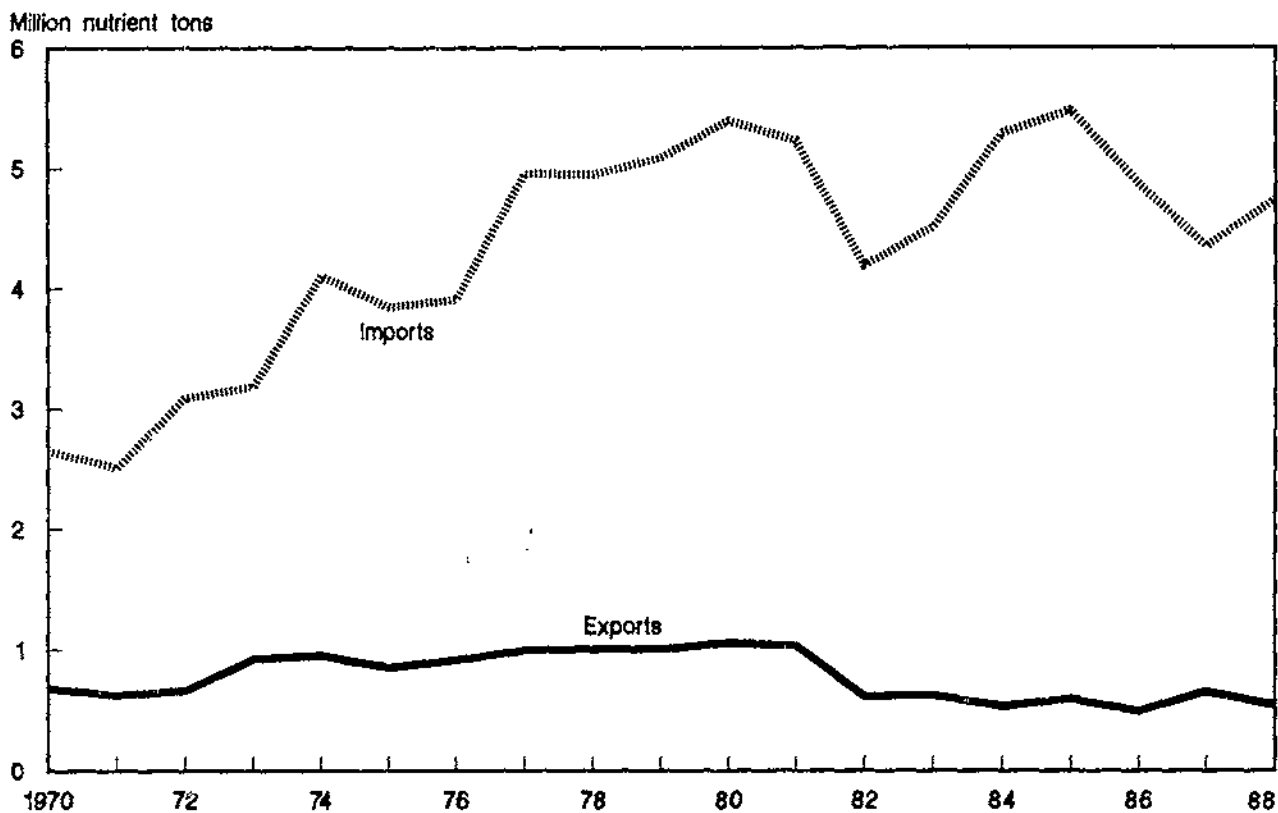
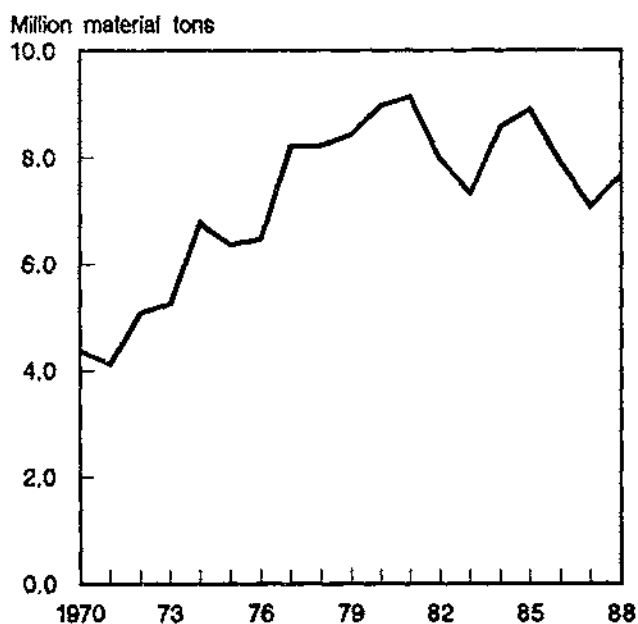


Figure 7
U.S. imports and exports of selected potash materials

U.S. imports of potassium chloride



U.S. exports of potassium chloride
and potassium sulfate

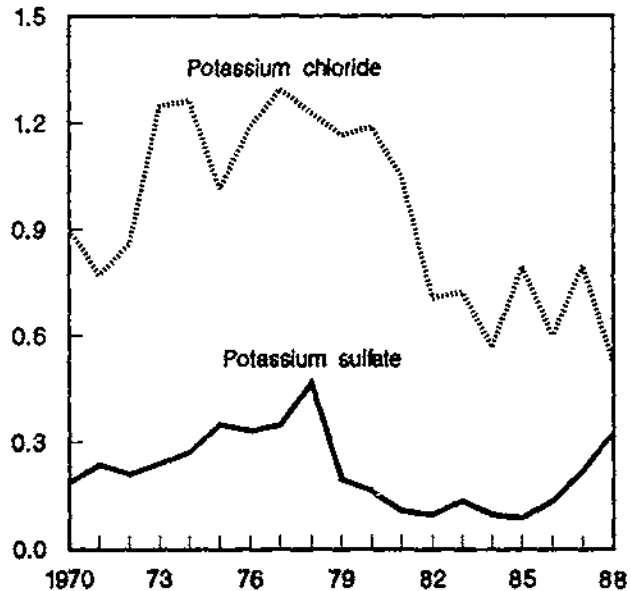
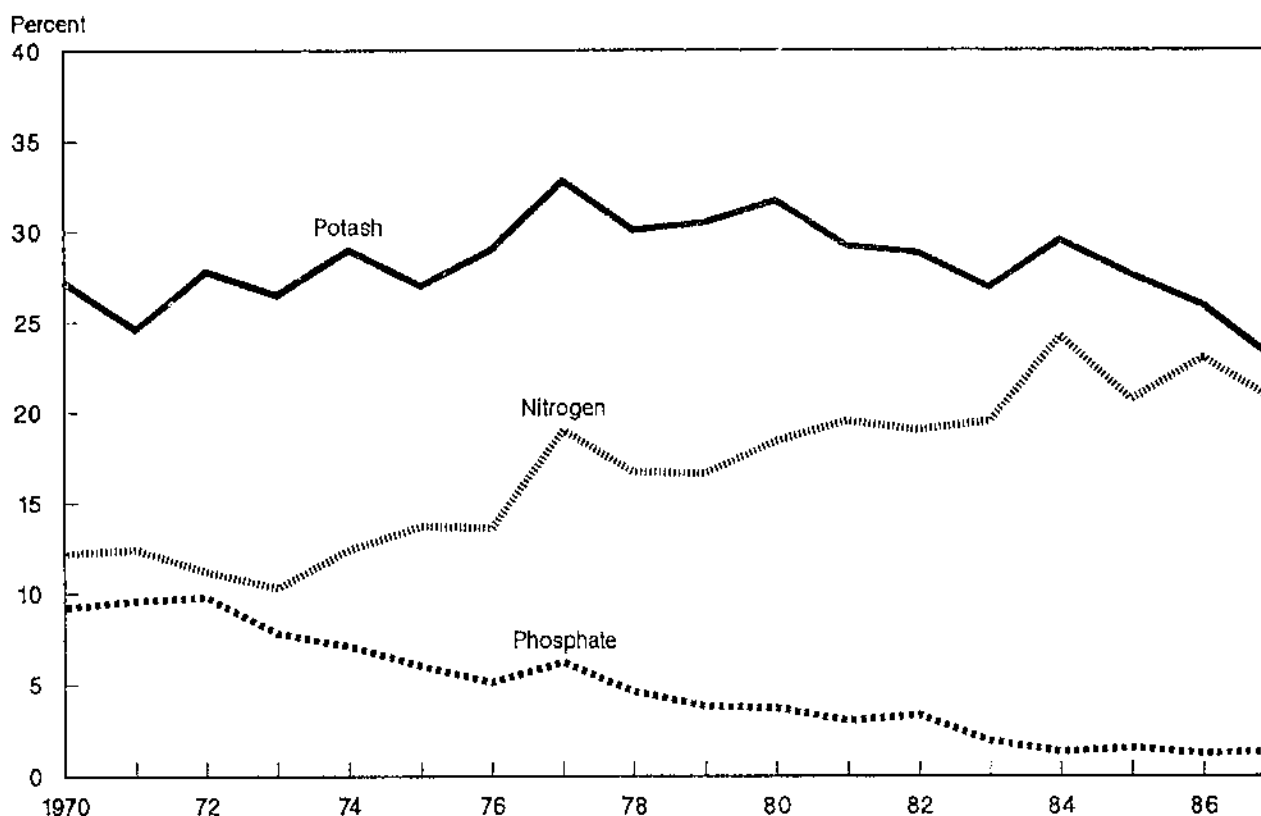


Figure 8

U.S. share of world fertilizer imports

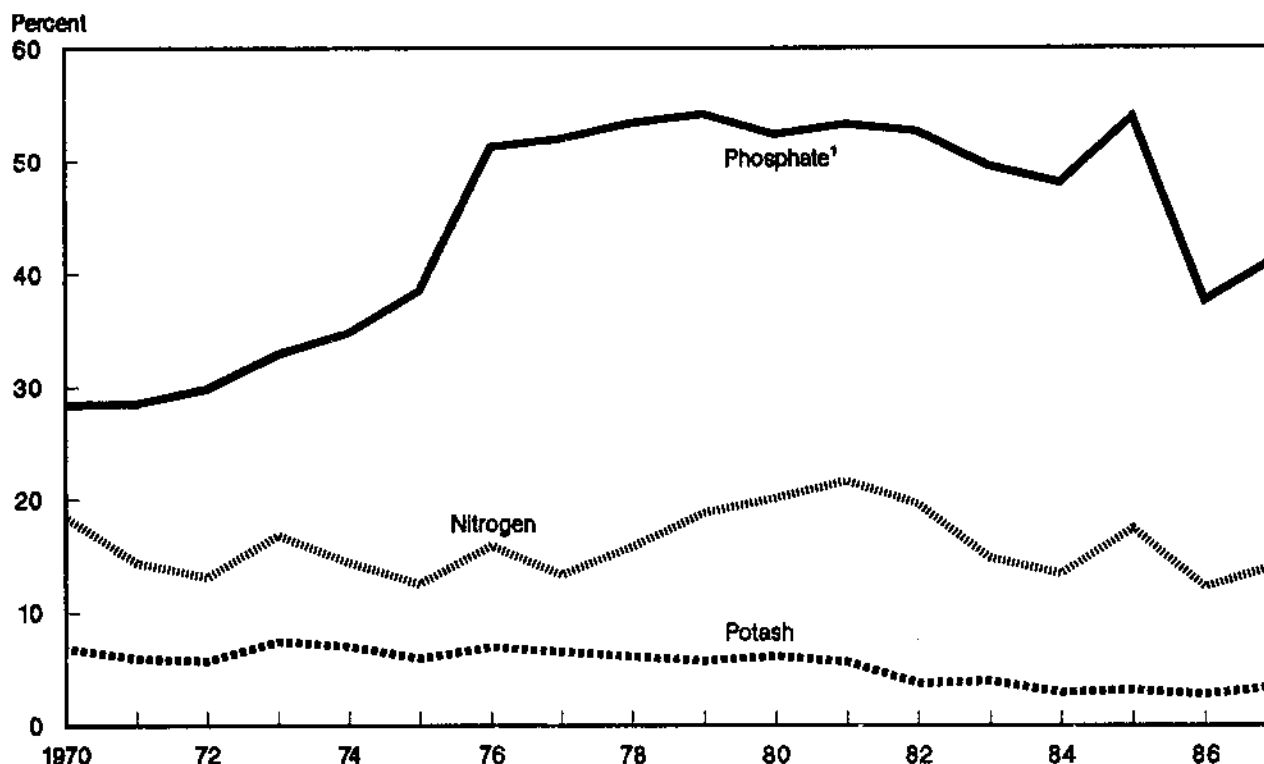
The United States has accounted for about a fourth to a third of total world potash imports since 1970. World and U.S. imports of potash have each increased. World potash imports increased by about 10 million tons during 1970-85, while U.S. imports increased by almost 3 million tons.

U.S. Share of World Exports

Anhydrous ammonia, urea, ammonium sulfate, and DAP are the primary contributors to U.S. nitrogen fertilizer exports. The steady increase in DAP exports added significantly to U.S. nitrogen exports from 1970 to 1981, when the U.S. share of world nitrogen exports peaked at almost 22 percent. The U.S. share varied considerably during this period due to changing levels of anhydrous ammonia and urea exports (table 7 and fig. 9).

After 1981, increased volatility in DAP exports also contributed to fluctuating levels of nitrogen exports, while exports of anhydrous ammonia and urea became even more variable. For example, the United States exported a record 3.2 million tons of nitrogen during 1985, accounting for over 17 percent of total world nitrogen exports, as U.S. exports of anhydrous ammonia and DAP reached record levels. The U.S. share fell to 12 percent by 1986, however, as exports of anhydrous ammonia, urea, and DAP declined significantly.

Figure 9
U.S. share of world fertilizer exports



1/ Does not include phosphate rock. Before 1986, U.S. phosphate exports included both wet-process phosphoric acid and superphosphoric acid. Superphosphoric acid reports were discontinued after June 1985; 1986-88 data are no longer comparable with 1985 and earlier years.

U.S. phosphate fertilizer production has accounted for approximately one-fourth of total world production since 1970. The U.S. phosphate fertilizer industry is one of the world's lowest cost producers of phosphate fertilizers, allowing U.S. products to compete effectively in the world market.

DAP became the most important U.S. fertilizer export item during the 1980's. Growth in U.S. DAP exports has accounted for most of the increase in the U.S. share of world phosphate exports, from about 28 percent in 1970 to almost 54 percent in 1985.

The decline in the competitive position of the U.S. potash industry since 1980 has been the major reason for the decline in the U.S. share of world potash fertilizer exports. The U.S. share of the world potash market has been cut in half, falling from almost 6.8 percent in 1970 to 3.4 percent in 1987.

Regional Trade Patterns By Nutrient

Regional shifts in world fertilizer production and consumption have affected country origins of U.S. fertilizer imports and country destinations of fertilizer exports. Increased fertilizer use in Asia, slower growth of fertilizer use in Western Europe, and increased phosphate fertilizer production in Africa have affected U.S. export patterns. Increased nitrogen and potash production in Canada and increased nitrogen fertilizer production in Latin American and Eastern Europe have affected U.S. fertilizer imports.

Nitrogen

Canada has become the top U.S. supplier of nitrogen fertilizer imports, providing almost 50 percent of the total in 1988, including 47 percent of the anhydrous ammonia and 55 percent of the urea (tables 8 and 9). Other major U.S. suppliers of nitrogen fertilizers include the Soviet Union, Trinidad and Tobago, and Europe.

The share of U.S. anhydrous ammonia exports going to Europe fell from 83 percent in 1970 to 33 percent in 1988 (table 10). Increased anhydrous ammonia production by Eastern European countries has forced the United States to relinquish market share in Western Europe. Meanwhile, the Asian market, with its huge nitrogen fertilizer deficit, has become an important alternate market for U.S. nitrogen fertilizer.^{2/} Asia's share of anhydrous ammonia exports increased from 5 percent in 1970 to 49 percent by 1985, and stood at 29 percent in 1988, with South Korea accounting for 92 percent of the Asian total. The African market has also become important, taking one-fourth of U.S. anhydrous ammonia exports in 1988.

Important markets for U.S. urea exports have included Asia and Latin America (table 11).^{3/} Asia, historically a strong but highly variable region for U.S. nitrogen exports, received 53 percent of total urea exports in 1988, with China the primary destination. Latin America's share of U.S. urea exports fell from 40 percent in 1985 to 21 percent in 1988 as shipments to Central America declined. Urea exports to Europe have risen, particularly in 1988.

Latin America has been a major market for U.S.-produced ammonium sulfate (table 12). In 1988, 51 percent of ammonium sulfate exports went to Brazil, while another 21 percent was marketed in other Latin American countries.

Phosphate

DAP has been the most popular U.S. phosphate fertilizer export, typically accounting for 90 percent or more of U.S. ammonium phosphate exports. Europe, Asia, and Latin America have been the traditional markets for DAP since 1970 (table 13). But Latin America's share of U.S. DAP exports dropped from 26 percent in 1970 to 14 percent in 1988, while Asia's share increased from 27 percent to 50 percent. China, India, Pakistan, and Japan have been the major Asian DAP customers.

Latin America, Europe, and Asia have also been the major markets for U.S. concentrated superphosphate (table 14). Latin America took about 60 percent of U.S. concentrated superphosphate exports in 1970, while Europe and Asia took 21 percent and 16 percent. Although shipments to Latin America have remained strong, particularly to Brazil and Chile, exports to Asia have fallen since 1985, while exports to Europe fell significantly in 1988. Latin America and Asia were the most important markets for U.S. phosphoric acid before 1980 (table 15). Brazil was the principal customer in Latin America, while India was the major Asian purchaser. After 1980, however,

^{2/} A significant amount of nitrogen fertilizer also gets exported into the Asian market in the form of ammonium phosphates, primarily as diammonium phosphate (see table 13).

^{3/} Latin America includes both Central and South America.

Latin America's share declined as Brazil purchased phosphoric acid from north African producers. Meanwhile, the Soviet Union initiated a new agricultural policy emphasizing increased phosphate fertilizer use as an adjunct to expanding their agricultural production. The United States became the principal supplier of phosphoric acid for the Soviet expansion in phosphate fertilizer use, increasing the Soviet Union's share of U.S. phosphoric acid exports to 34 percent by 1985.^{4/}

Europe, Canada, and Asia, particularly Japan and South Korea, remain major purchasers of U.S. phosphate rock (table 16). These regions, which accounted for 87 percent of total phosphate rock exports in 1970, took 89 percent of the total in 1988. Export shares to Latin America and Western Europe have declined, however, as a result of increased competition from north African producers.

Potash

Canadian imports dominated the U.S. potassium chloride market (table 17). From 1970 to 1987, 93 percent or more of potassium chloride imports came from Canada. Israel was the only other significant supplier of potash fertilizer over this period. In 1988, however, East Germany, Israel, and the Soviet Union supplied over 10 percent of total U.S. potash imports, while Canada's share dropped to 88 percent as an antidumping case resulted in higher prices for Canadian potassium chloride.

Latin America became an increasingly important export market for U.S. potassium chloride from 1970 to 1988 (table 18). Latin America's share of potassium chloride exports increased from 35 to 84 percent during that period, while the share of shipments to the Asian market dropped from 42 to 8 percent and Oceania's share fell from 20 to 1 percent. Deterioration in the competitive position of the U.S. potash industry before 1985 had reduced U.S. potash exports to Asia. However, because of its closer proximity to Latin America, the United States has been able to compete more effectively in that market. Competition from Eastern Europe reduced the Latin America share in 1986 and 1987, while the share to Asia increased because of increased exports to Japan, India, China, and Hong Kong.

References

- (1) Food and Agriculture Organization, FAO Fertilizer Yearbook. Rome, Italy. Statistics Division, Vol. 37, 1987 and earlier issues.
- (2) U.S. Department of Commerce, Bureau of the Census, U.S. Exports Commodity and Country, 1988 and earlier issues.
- (3) _____, U.S. Imports Commodity and Country, 1988 and earlier issues.

^{4/} Exports of phosphoric acid to the Soviet Union are primarily in the form of superphosphoric acid. U.S. export data for superphosphoric acid were discontinued after 1985; 1986-88 data are no longer comparable with 1985 and earlier years.

Table 1--U.S. imports of selected nitrogen fertilizer materials

Year ending June 30	Anhydrous ammonia	Ammonium nitrate	Ammonium sulfate	Sodium nitrate	Urea	Nitrogen solutions
1,000 material tons						
1970	477	306	179	164	424	98
1971	501	366	219	188	330	194
1972	393	390	264	160	365	120
1973	343	329	276	75	672	145
1974	438	301	273	100	668	166
1975	598	316	248	202	812	92
1976	767	295	420	89	528	188
1977	968	347	454	139	1,466	444
1978	1,054	300	330	147	1,430	538
1979	1,743	274	257	130	1,090	187
1980	2,219	264	277	160	1,136	138
1981	2,161	247	283	142	931	140
1982	2,243	282	324	141	952	158
1983	2,144	267	306	117	1,636	124
1984	3,259	493	354	108	2,083	308
1985	2,956	542	366	147	1,990	197
1986	2,815	601	342	128	3,105	284
1987	2,449	440	315	97	3,020	517
1988	3,200	238	290	122	2,155	595

Source: (3).

Table 2--U.S. exports of selected nitrogen fertilizer materials

Year ending June 30	Anhydrous ammonia	Ammonium nitrate	Ammonium sulfate	Urea	Nitrogen solutions
	1,000 material tons				
1970	765	81	528	671	NA
1971	598	59	601	374	NA
1972	421	34	558	464	NA
1973	694	21	486	523	NA
1974	532	37	557	323	NA
1975	277	22	572	450	NA
1976	255	61	752	581	NA
1977	291	11	491	368	NA
1978	524	32	652	917	NA
1979	553	83	1,093	1,550	319
1980	776	75	841	1,467	513
1981	816	77	800	2,003	810
1982	758	73	580	1,753	235
1983	426	29	661	1,317	121
1984	390	19	672	1,033	17
1985	1,069	34	829	1,388	7
1986	759	188	721	718	113
1987	1,062	258	1,031	790	123
1988	953	120	943	1,133	806

NA = Not available.

Source: (2).

Table 3--U.S. exports of ammonium phosphates

Year ending June 30	Ammonium phosphates			
	DAP 1/	MAP 2/	Other 3/	Total 4/
	1,000 material tons			
1970	NA	NA	NA	986
1971	NA	NA	NA	1,135
1972	NA	NA	NA	1,542
1973	NA	NA	NA	2,060
1974	NA	NA	NA	2,154
1975	NA	NA	NA	2,242
1976	2,415	NA	307	2,721
1977	2,682	NA	486	3,168
1978	3,534	NA	525	4,059
1979	4,531	NA	470	5,001
1980	4,557	305	272	5,134
1981	5,308	429	150	5,887
1982	4,170	239	54	4,463
1983	4,556	272	41	4,869
1984	5,501	472	28	6,001
1985	7,896	479	66	8,440
1986	4,287	485	57	4,829
1987	5,918	505	78	6,500
1988	6,414	691	25	7,130

NA = Not available.

1/ Diammonium phosphate.

2/ Monoammonium phosphate.

3/ Includes monoammonium phosphate from 1976 to 1979.

4/ Includes diammonium phosphate, monoammonium phosphate, and other ammonium phosphates.

Source: (2).

Table 4--U.S. exports of concentrated superphosphate, phosphoric acid, and phosphate rock

Year ending June 30	Concentrated superphosphate	Phosphoric acid 1/	Phosphate rock
1,000 material tons			
1970	710	NA	10,973
1971	627	NA	12,758
1972	724	NA	13,580
1973	865	NA	13,588
1974	957	NA	14,051
1975	1,107	NA	13,393
1976	1,225	575	11,748
1977	1,242	822	12,758
1978	1,433	1,391	15,578
1979	1,577	1,311	14,882
1980	1,597	1,358	17,226
1981	1,773	1,485	14,166
1982	1,341	1,612	11,031
1983	1,426	1,522	11,912
1984	1,140	1,570	13,448 3/
1985	1,556	1,515	11,694 3/
1986	1,308	594 2/	11,294 3/
1987	1,724	921 2/	9,933 3/
1988	1,194	448 2/	9,869 3/

NA = Not available.

1/ Includes both wet-process and superphosphoric acid before 1986.

2/ Superphosphoric acid exports were discontinued after June 1985; 1986-88 data are no longer comparable with 1985 and earlier years.

3/ Effective January 1984, phosphate rock exports include a small tonnage of miscellaneous fertilizers.

Source: (2).

Table 5--U.S. exports and imports of selected potash fertilizer materials

Year ending June 30	Exports		Imports	
	Potassium chloride	Potassium sulfate	Potassium chloride	Potassium sulfate
	1,000 material tons			
1970	902	186	4,378	70
1971	772	238	4,115	63
1972	859	211	5,082	48
1973	1,247	240	5,250	54
1974	1,264	272	6,767	74
1975	1,015	350	6,359	51
1976	1,188	333	6,466	63
1977	1,296	350	8,211	93
1978	1,230	468	8,215	29
1979	1,166	197	8,441	40
1980	1,189	163	8,970	60
1981	1,048	107	9,132	34
1982	706	97	7,981	31
1983	723	135	7,323	31
1984	567	97	8,574	68
1985	795	88	8,892	68
1986	602	135	7,907	53
1987	797	220	7,066	54
1988	528	324	7,672	83

Source: (2, 3).

Table 6--World and U.S. plant nutrient imports

Year ending June 30	Nitrogen			Phosphate			Potash		
	World	U.S.	U.S. share	World	U.S.	U.S. share	World	U.S.	U.S. share
	Million nutrient tons		Percent	Million nutrient tons		Percent	Million nutrient tons		Percent
1970	7.07	0.86	12.2	2.92	0.27	9.2	9.74	2.65	27.2
1971	7.47	.93	12.4	2.92	.28	9.6	10.21	2.51	24.6
1972	7.53	.84	11.2	3.37	.33	9.8	11.13	3.09	27.8
1973	8.55	.88	10.3	3.99	.31	7.8	12.02	3.19	26.5
1974	8.65	1.07	12.4	4.49	.32	7.1	14.19	4.11	29.0
1975	8.77	1.20	13.7	4.50	.27	6.0	14.28	3.85	27.0
1976	8.97	1.22	13.6	4.34	.22	5.1	13.48	3.91	29.0
1977	9.67	1.84	19.0	4.06	.25	6.2	15.11	4.96	32.8
1978	11.22	1.87	16.7	4.97	.23	4.6	16.42	4.95	30.1
1979	13.07	2.17	16.6	6.35	.24	3.8	16.71	5.09	30.5
1980	13.93	2.57	18.4	6.43	.24	3.7	17.06	5.40	31.7
1981	14.36	2.80	19.5	7.27	.22	3.0	17.91	5.23	29.2
1982	13.54	2.57	19.0	6.08	.20	3.3	17.03	4.91	28.8
1983	14.19	2.77	19.5	7.00	.13	1.9	16.74	4.51	26.9
1984	16.64	4.02	24.2	7.47	.10	1.3	17.92	5.29	29.5
1985	18.05	3.73	20.7	9.25	.14	1.5	19.88	5.48	27.6
1986	18.01	4.14	23.0	9.06	.11	1.2	18.77	4.87	25.9
1987	18.52	3.81	20.6	8.34	.11	1.3	19.03	4.35	22.9
1988	NA	3.98	NA	NA	.16	NA	NA	4.74	NA

NA = Not available.

Source: (1, 3).

Table 7--World and U.S. plant nutrient exports

Year ending June 30	Nitrogen			Phosphate 1/			Potash		
	World	U.S.	U.S. share	World	U.S.	U.S. share	World	U.S.	U.S. share
	Million nutrient tons		Percent	Million nutrient tons		Percent	Million nutrient tons		Percent
1970	7.19	1.33	18.5	2.99	0.85	28.4	9.95	0.68	6.8
1971	7.51	1.08	14.4	3.16	.90	28.5	10.44	.62	5.9
1972	7.89	1.03	13.1	3.69	1.10	29.8	11.48	.66	5.7
1973	8.99	1.51	16.8	4.32	1.42	32.9	12.37	.92	7.4
1974	8.85	1.27	14.4	4.54	1.58	34.8	13.65	.95	7.0
1975	8.98	1.12	12.5	4.83	1.86	38.5	14.30	.85	5.9
1976	7.82	1.24	15.9	4.25	2.18	51.3	13.10	.91	6.9
1977	9.39	1.25	13.3	4.81	2.50	52.0	15.15	.99	6.5
1978	11.29	1.78	15.8	6.16	3.29	53.4	16.48	1.00	6.1
1979	13.12	2.47	18.8	7.10	3.85	54.2	17.45	1.00	5.7
1980	13.12	2.64	20.1	7.50	3.93	52.4	17.25	1.05	6.1
1981	14.50	3.13	21.6	8.27	4.41	53.3	18.43	1.03	5.6
1982	12.74	2.50	19.6	7.11	3.75	52.7	16.43	.61	3.7
1983	13.47	2.00	14.8	7.91	3.92	49.6	15.73	.62	3.9
1984	15.30	2.05	13.4	9.00	4.33	48.1	18.22	.53	2.9
1985	18.37	3.20	17.4	10.26	5.53	53.9	18.86	.59	3.1
1986	16.84	2.05	12.2	8.41	3.16 2/	37.6 2/	18.39	.49	2.7
1987	19.23	2.71	14.1	10.36	4.28 2/	41.3 2/	19.26	.65	3.4
1988	NA	3.03	NA	NA	4.11 2/	NA	NA	.54	NA

NA = Not available.

1/ Does not include phosphate rock.

2/ Before 1986, U.S. phosphate exports included both wet-process phosphoric acid and superphosphoric acid. Superphosphoric acid exports were discontinued after June 1985; 1986-88 data are no longer comparable with 1985 and earlier years.

Source: (1, 2).

Table 8--U.S. imports of anhydrous ammonia, selected market areas and years 1/

Country of origin 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	182,741	92,370	542,816	998,476	1,208,432	1,167,792	1,493,341	38	15	24	34	43	48	47
Mexico	0	4,981	383,906	186,644	130,349	24,644	207,403	0	1	17	6	5	1	6
Netherlands Antilles	17,389	80,563	8,774	0	9,508	0	0	4	13	4/	0	4/	0	0
Trinidad and Tobago	272,013	143,427	345,569	701,288	470,441	378,461	372,443	57	24	16	24	17	15	12
Central America 3/	289,402	228,971	738,249	887,932	610,298	403,105	579,846	61	38	33	30	22	16	18
Venezuela	0	15,971	650	44,109	20,939	17,412	13,791	0	3	4/	1	1	1	4/
South America, other	0	7,495	0	0	0	3,231	141	0	1	0	0	0	4/	4/
South America	0	23,466	650	44,109	20,939	20,643	13,932	0	4	4/	1	1	1	4/
Belgium-Luxembourg	0	32,359	0	0	0	0	0	0	5	0	0	0	0	0
Italy	0	0	0	78,725	139,086	160,430	189,462	0	0	0	3	5	7	6
Netherlands	5,020	42,087	11,254	12,202	0	0	0	1	7	1	4/	0	0	0
Europe, other	0	11,909	0	0	322	0	6,353	0	2	0	0	4/	0	4/
Europe	5,020	86,355	11,254	90,927	139,408	160,430	195,815	1	14	1	3	5	7	6
Soviet Union	0	0	925,685	934,964	803,097	687,916	916,628	0	0	42	32	29	28	29
Iran	0	14,301	0	0	0	0	0	0	2	0	0	0	0	0
Japan	0	54,141	0	0	0	0	0	0	9	0	0	0	0	0
Kuwait	0	17,149	0	0	0	0	0	0	3	0	0	0	0	0
Qatar	0	13,730	0	0	23,500	0	0	0	2	0	0	1	0	0
United Arab Emirates	0	17,630	0	0	0	0	0	0	3	0	0	0	0	0
Asia, other	0	0	79	0	8,909	8,837	0	0	0	4/	0	4/	4/	0
Asia	0	116,951	79	0	32,409	8,837	0	0	20	4/	0	1	4/	0
Australia	26	50,179	0	0	0	0	0	4/	8	0	0	0	0	0
Africa	0	0	0	0	56	160	40	0	0	0	0	4/	4/	4/
Total	477,189	598,292	2,218,733	2,956,408	2,814,639	2,448,883	3,199,602	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that have supplied at least 10,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (3).

Table 9--U.S. imports of urea, selected market areas and years 1/

Country of origin 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	170,437	149,462	740,927	879,289	1,021,309	1,233,413	1,187,147	40	18	65	44	33	41	55
Cayman Islands	0	0	0	13,809	28,688	9,138	0	0	0	0	1	1	4/	0
Mexico	1,939	2,155	0	2,054	26,917	25,348	78,764	4/	4/	0	4/	1	1	4
Netherlands Antilles	8,397	0	12,075	0	0	0	0	2	0	1	0	0	0	0
Trinidad and Tobago	63,099	56,458	39,922	43,688	72,273	117,957	262,590	15	7	4	2	2	4	12
Central America, other	0	0	0	0	17	0	0	0	0	0	0	4/	0	0
Central America 3/	73,435	58,613	51,997	59,551	127,895	152,443	341,354	17	7	5	3	4	5	16
Venezuela	0	0	0	11,491	27,224	81,991	123,656	0	0	0	1	1	3	6
South America, other	0	0	0	0	0	0	75	0	0	0	0	0	0	4/
South America	0	0	0	11,491	27,224	81,991	123,731	0	0	0	1	1	3	6
Belgium-Luxembourg	39,691	11,110	9,020	0	0	2,755	10	9	1	1	0	0	4/	4/
East Germany	0	0	0	44,643	200,646	67,559	0	0	0	0	2	6	2	0
Finland	0	0	11,684	0	0	0	0	0	0	1	0	0	0	0
Ireland	0	0	13,986	0	60,876	0	0	0	0	1	0	2	0	0
Italy	14,143	51,721	1	59,394	27,144	182,474	28,278	3	6	4/	3	1	6	1
Netherlands	82,453	421,329	202,945	130,795	180,104	236,986	181,289	19	52	18	7	6	8	8
Norway	37,720	84,837	37,935	7,718	4,600	1,102	0	9	10	3	4/	4/	4/	0
Romania	0	0	32,849	346,581	409,975	111,977	0	0	0	3	17	13	4	0
West Germany	6	11,146	33,768	33,669	56,595	29,956	118,793	4/	1	3	2	2	1	6
Yugoslavia	0	0	0	0	0	89,723	20,120	0	0	0	0	0	3	1
Europe, other	56	10,448	39	6	1,383	1,140	131	4/	1	4/	4/	4/	4/	4/
Europe	174,069	590,591	342,227	622,806	941,323	723,672	348,621	41	73	30	31	30	24	16
Soviet Union	0	0	0	357,171	706,455	362,322	1,105	0	0	0	18	23	12	4/
Indonesia	0	0	0	0	23,234	33,629	0	0	0	0	0	1	1	0
Kuwait	0	0	0	0	0	114,919	7,317	0	0	0	0	0	4	4/
Malaysia	0	0	0	0	22,567	55,686	48,599	0	0	0	0	1	2	2
Qatar	0	0	0	13,806	113,584	60,058	0	0	0	0	1	4	2	0
Saudi Arabia	0	0	0	0	52,907	0	0	0	0	0	0	2	0	0
United Arab Emirates	0	0	0	0	0	117,946	23,148	0	0	0	0	0	4	1
Asia, other	5,636	13,176	866	262	427	136	452	1	2	4/	4/	4/	4/	4/
Asia	5,636	13,176	866	14,068	212,719	382,374	79,516	1	2	4/	1	7	13	4
New Zealand	0	0	0	36,630	67,622	84,115	21,991	0	0	0	2	2	3	1
Oceania, other	0	0	0	0	115	0	22	0	0	0	0	4/	0	4/
Oceania	0	0	0	36,630	67,737	84,115	22,013	0	0	0	2	2	3	1
Nigeria	0	0	0	0	0	0	51,872	0	0	0	0	0	0	2
Africa, other	0	0	0	8,737	0	0	8	0	0	0	4/	0	0	4/
Africa	0	0	0	8,737	0	0	51,880	0	0	0	4/	0	0	2
Total	423,577	811,842	1,136,017	1,989,743	3,104,662	3,020,330	2,155,367	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that have supplied at least 10,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (3).

Table 10--U.S. exports of anhydrous ammonia, selected market areas and years 1/

Country of destination 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	356	15,875	49,012	46,679	18,008	15,118	9,145	4/	6	6	4	2	1	1
Mexico	23,366	43,225	28,194	49,662	22	110,188	49,373	3	17	4	5	4/	10	5
Trinidad and Tobago	16,976	61,781	0	0	19,288	0	4	2	24	0	0	3	0	4/
Central America, other	2,161	340	13,204	742	22,464	6,050	25,391	4/	4/	2	4/	3	1	3
Central America 3/	42,503	105,346	41,398	50,404	41,774	116,238	74,768	6	41	5	5	6	11	8
Brazil	13,905	50,943	97,346	18,762	0	22,412	20,931	2	20	13	2	0	2	2
South America, other	121	6	64	1,665	141	34	14,241	4/	4/	4/	4/	4/	4/	1
South America	14,026	50,949	97,410	20,427	141	22,446	35,172	2	20	13	2	4/	2	4
Belgium-Luxembourg	137,373	0	27,831	164,127	33,069	118,711	55,145	18	0	4	15	4	11	6
Denmark	76,427	0	7,881	0	0	0	9,259	10	0	1	0	0	0	1
Finland	60,632	0	166,858	0	17,674	17,666	95,085	8	0	22	0	2	2	10
France	0	41,920	18,584	67,123	413	0	0	0	16	2	6	4/	0	0
Netherlands	82,690	0	16,298	46,118	14	0	31	11	0	2	4	4/	0	4/
Norway	59,035	0	45,998	12,671	0	76,383	117,928	8	0	6	1	0	7	12
Portugal	0	0	0	0	44,115	0	0	0	0	0	0	6	0	0
Spain	63,540	7,620	48,189	62,505	136,005	85,873	40,625	8	3	6	6	18	8	4
Sweden	0	0	0	0	0	25,289	0	0	0	0	0	0	2	0
Turkey	0	9,996	119,916	16,310	44,698	0	0	0	4	15	2	6	0	0
United Kingdom	143,784	21	35	1	13	4	83	19	0	4/	4/	4/	4/	4/
West Germany	0	0	46,571	0	9	11,023	0	0	0	6	0	4/	4/	0
Europe, other	7,568	10,251	14,822	0	0	20,360	0	1	4	2	0	0	2	0
Europe	631,049	69,808	512,983	368,855	276,010	355,309	318,156	83	27	66	35	36	33	33
Philippines	8,188	0	0	51,305	22,020	3,823	0	1	0	0	5	3	4/	0
South Korea	0	0	0	379,860	241,115	329,408	256,655	0	0	0	36	32	31	27
Taiwan	0	24	0	51,943	51,728	35,594	21,761	0	4/	0	5	7	3	2
Asia, other	29,194	110	179	38,533	17,756	9,049	72	4	4/	4/	4	2	1	4/
Asia	37,382	134	179	521,641	332,619	377,874	278,488	5	4/	4/	49	44	36	29
Oceania	10,746	0	41	0	0	11,024	5	1	0	4/	0	0	1	4/
Algeria	26,963	15,169	14,509	0	0	0	0	4	6	2	0	0	0	0
Morocco	0	0	0	8,101	0	4,409	26,761	0	0	0	1	0	4/	3
Mozambique	0	0	35,947	0	0	5,538	0	0	0	5	0	0	1	0
South Africa	0	0	0	35,598	0	71,248	109,906	0	0	0	3	0	7	12
Tunisia	0	0	0	6,350	83,175	67,526	76,719	0	0	0	1	11	6	8
Africa, other	1,624	508	24,282	10,585	7,363	15,301	24,164	4/	4/	3	1	1	1	3
Africa	28,587	15,677	74,738	60,634	90,538	164,022	237,550	4	6	10	6	12	15	25
Total	764,649	257,789	775,761	1,068,640	759,090	1,062,031	953,284	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that received at least 25,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (2).

Table 11--U.S. exports of urea, selected market areas and years 1/

Country of destination 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	777	5,828	85,561	146,463	100,530	98,082	85,360	4/	1	6	11	14	12	6
Dominican Republic	0	11,282	45,951	22,209	3,288	0	0	0	3	3	2	4/	0	0
Guatemala	0	19,597	35,425	23,902	57,080	22,638	0	0	4	2	2	8	3	0
Mexico	12,417	0	101,379	0	99	16,784	129	2	0	7	0	4/	2	4/
Central America, other	1,937	23,305	81,026	50,279	44,193	37,646	17,373	4/	5	6	4	6	5	2
Central America 3/	14,354	54,184	263,781	96,390	104,660	77,068	17,502	2	12	18	7	15	10	2
Brazil	69	13,758	425,645	3,306	0	0	0	4/	3	29	4/	0	0	0
Chile	0	3,011	84,230	102,016	76,428	146,003	180,713	0	1	6	7	11	18	16
Colombia	0	0	17,734	31,006	63,709	24,904	36,897	0	0	1	2	9	3	3
Ecuador	0	0	4,794	27,926	37,824	19,825	0	0	0	4/	2	5	3	0
South America, other	3,099	4,704	14,467	10,417	167	169	2,499	4/	1	1	1	4/	4/	4/
South America	3,168	21,473	546,870	174,671	178,128	190,901	220,109	4/	5	37	13	25	24	19
Belgium-Luxembourg	0	22	9	0	0	18	56,508	0	4/	4/	0	0	4/	5
France	3,850	3,492	417	0	0	44,123	63,597	1	1	4/	0	0	6	6
United Kingdom	0	0	926	0	9	0	29,187	0	0	4/	0	4/	0	3
West Germany	12	26	48	88	0	832	35,258	4/	4/	4/	4/	0	4/	3
Europe, other	941	0	4,317	6,444	42	5,792	3,075	4/	0	4/	4/	4/	1	4/
Europe	4,803	3,540	5,717	6,532	51	50,765	187,625	1	1	4/	4/	4/	6	17
Bangladesh	0	606	0	118,433	0	0	0	0	4/	0	9	0	0	0
China	0	0	191,048	132,133	84,761	241,708	567,387	0	0	13	10	9	31	50
Hong Kong	0	0	0	38,598	86,969	84	0	0	0	0	3	12	4/	0
India	227,306	64,998	225,595	338,401	56,820	0	0	34	14	15	24	8	0	0
Indonesia	61,664	145,038	0	102,203	0	0	0	9	32	0	7	0	0	0
Japan	0	0	1,337	9,100	11,710	3,456	29,481	0	0	4/	1	2	4/	3
Malaysia	0	0	0	36,264	0	0	0	0	0	0	3	0	0	0
Pakistan	358,292	0	0	0	0	0	0	53	0	0	0	0	0	0
Philippines	0	32,243	45,456	46,574	48,762	46,044	0	0	7	3	3	7	6	0
Vietnam	0	96,710	0	0	0	0	0	0	21	0	0	0	0	0
Asia, other	400	25,359	23,694	33,934	406	36,557	4,268	4/	6	2	2	4/	5	4/
Asia	647,662	364,954	487,130	855,640	269,228	327,849	601,136	97	81	33	62	37	41	53
Australia	0	0	28,507	43,041	44,799	24,300	35,116	0	0	2	3	6	3	3
Oceania, other	0	0	196	182	0	0	0	0	0	4/	4/	0	0	0
Oceania	0	0	28,703	43,223	44,799	24,300	35,116	0	0	2	3	6	3	3
Sudan	0	0	0	62,410	0	0	0	0	0	0	4	0	0	0
Zambia	0	0	32,610	0	0	0	0	0	0	2	0	0	0	0
Africa, other	77	3	16,911	2,506	20,939	21,413	6,433	4/	4/	1	4/	3	3	1
Africa	77	3	49,521	84,916	20,939	21,413	6,433	4/	4/	3	5	3	3	1
Total	670,841	449,982	1,467,283	1,387,835	718,335	790,378	1,133,281	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that received at least 25,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (2).

Table 12--U.S. exports of ammonium sulfate, selected market areas and years 1/

Country of destination 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	18,655	31,408	15,064	10,336	31,311	8,691	18,056	4	6	2	1	4	1	2
Dominican Republic	28,727	71,348	85,577	76,019	67,039	74,301	72,655	5	13	10	9	9	7	8
El Salvador	16,177	73,169	26,819	152,966	97,416	90,362	38,421	3	13	3	18	14	9	4
Guatemala	16	6,051	15,852	27,676	53,549	55,561	39,271	4/	1	2	3	7	5	4
Mexico	486	162,142	52	86	275	209	1,082	4/	29	4/	4/	4/	4/	4/
Central America, other	9,735	21,294	11,713	29,215	15,761	17,087	9,418	2	4	1	4	2	2	1
Central America 3/	55,141	334,004	140,013	285,962	234,040	237,520	160,847	10	60	17	34	32	23	17
Brazil	91,426	128,042	604,246	328,906	296,164	560,053	476,677	17	23	72	40	41	54	51
Peru	11,087	0	24,509	9,025	25,897	40,015	11,583	2	0	3	1	4	4	1
South America, other	17,625	83	20,838	12,862	14,238	13,455	30,127	3	4/	2	2	2	1	3
South America	120,138	128,125	649,593	350,793	336,299	613,523	518,387	23	23	77	42	47	60	55
Belgium-Luxembourg	0	0	0	0	14,880	37,542	0	0	0	0	0	2	4	0
Turkey	0	0	0	129,196	88,030	21,736	78,280	0	0	0	16	12	2	8
Europe, other	5,978	62	26	194	212	22,903	103	1	4/	4/	4/	4/	2	4/
Europe	5,978	62	26	129,390	103,122	82,181	78,383	1	4/	4/	16	14	8	8
China	0	34,471	82	0	0	0	0	0	6	4/	0	0	0	0
India	281,827	5,514	4,884	19,675	0	0	0	53	1	1	2	0	0	0
Philippines	14	22,205	367	119	20	501	28,322	0	0	0	0	0	0	0
Sri Lanka	34,369	0	0	0	0	0	0	7	0	0	0	0	0	0
Thailand	0	0	60	0	0	0	62,829	0	0	0	0	0	0	0
Asia, other	12,166	1,363	0	22,211	56	0	5,605	2	4/	0	3	4/	0	1
Asia	328,376	63,553	5,393	42,005	76	501	96,756	62	11	1	5	4/	4/	10
New Zealand	60	18	13,110	10,325	14,818	20,616	32,885	4/	4/	2	1	2	2	3
Oceania, other	5	38	11,595	0	0	16,496	3,472	4/	4/	1	0	0	2	4/
Oceania	65	56	24,705	10,325	14,818	37,112	36,357	4/	4/	3	1	2	4	4
Egypt	0	0	0	0	0	0	33,183	0	0	0	0	0	0	4
Tunisia	0	0	0	0	0	37,325	73	0	0	0	0	0	4	4/
Africa, other	91	3,127	6,094	420	1,025	14,106	968	4/	1	1	4/	4/	1	4/
Africa	91	3,127	6,094	420	1,025	51,431	34,224	4/	1	1	4/	4/	5	4
Total	528,444	560,335	840,888	829,231	720,691	1,030,959	943,010	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that received at least 25,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (2).

Table 13--U.S. exports of diammonium phosphate, selected market areas and years 1/

Country of destination 2/	1976 3/	1980	1985	1986	1987	1988	1976 3/ 1980	1985	1986	1987	1988	
	Short tons						Percent					
Canada	111,689	130,303	158,910	167,253	178,222	222,532	5	3	2	4	3	3
Mexico	3,564	164,095	343,860	91,802	65,088	6,218	5/	4	4	2	1	5/
Central America, other	87,459	133,855	122,449	87,455	119,757	111,352	4	3	2	2	2	2
Central America 4/	91,023	297,950	466,309	179,257	184,845	117,570	4	7	6	4	3	2
Argentina	12,145	107,319	58,236	78,895	104,078	130,528	1	2	1	2	2	2
Brazil	465,434	629,143	85,398	61,317	191,780	90,575	19	14	1	1	3	1
Chile	14,054	35,131	53,732	78,522	98,772	102,851	1	1	1	2	2	2
Colombia	0	45,513	81,797	122,299	120,485	148,400	0	1	1	3	2	2
Venezuela	5	13,227	11,562	0	101,740	172,229	5/	5/	5/	0	2	3
South America, other	40,845	124,253	102,085	100,480	133,400	128,911	2	3	1	2	2	2
South America	532,483	954,586	392,810	441,513	750,255	773,494	22	21	5	10	13	12
Belgium-Luxembourg	76,092	343,983	684,180	403,779	688,050	548,174	3	8	9	9	12	9
France	226,863	215,146	26,317	39,679	111,362	177,737	9	5	5/	1	2	3
Italy	538,463	704,153	179,915	271,244	200,950	284,937	22	15	2	6	3	4
Spain	22,206	130,941	0	0	106,950	181,259	1	3	0	0	2	3
Turkey	0	66,407	23,038	280,887	440,440	336,585	0	1	5/	7	7	5
West Germany	0	37,948	45,956	152,663	168,339	96,367	0	1	1	4	3	2
Yugoslavia	0	54,566	101,510	77,148	44,563	70,470	0	1	1	2	1	1
Europe, other	54,412	47,257	110,880	113,923	139,817	128,582	2	1	1	3	2	2
Europe	918,036	1,600,401	1,171,796	1,339,323	1,900,471	1,824,111	38	35	15	31	32	28
China	0	112,665	1,543,467	246,534	1,194,110	2,095,253	0	2	20	6	20	33
Hong Kong	0	0	117,283	0	0	32	0	0	1	0	0	5/
India	288,802	741,067	1,878,945	999,666	311,376	0	12	16	24	23	5	0
Iran	54,138	0	29,089	0	0	180,758	2	0	5/	0	0	3
Japan	64,147	153,271	581,143	209,080	226,629	482,471	3	3	7	5	4	8
Pakistan	183,674	187,266	362,813	415,941	695,133	306,173	8	4	5	10	12	5
South Korea	2,738	0	100,114	0	0	0	5/	0	1	0	0	0
Taiwan	16,916	0	632,105	0	116	584	1	0	8	0	5/	5/
Asia, other	43,556	99,036	98,141	12,193	136,936	137,081	2	2	1	5/	2	2
Asia	653,971	1,293,305	5,343,100	1,883,414	2,564,300	3,202,352	27	28	68	44	43	50
Australia	404	24,278	257,584	194,952	248,784	128,520	5/	1	3	5	4	2
Oceania, other	17,037	23,063	24,602	22,735	36,131	38,561	1	1	5/	1	1	1
Oceania	17,441	47,341	282,166	217,687	284,915	165,081	1	1	4	5	5	3
Africa	89,862	233,098	81,243	58,437	54,763	109,227	4	5	1	1	1	2
Total	2,414,505	4,556,984	7,896,334	4,286,884	5,917,771	6,414,367	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that received at least 100,000 short tons of material in any selected year.

3/ Information on diammonium phosphate exports not available before fertilizer year 1976.

4/ Central America includes Caribbean countries.

5/ Less than 0.5 percent.

Source: (2).

Table 14--U.S. exports of concentrated superphosphate, selected market areas and years 1/

Country of destination 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	23,681	18,305	79,524	322,609	303,486	666,000	354,422	3	2	5	21	23	39	30
Mexico	12,871	22	0	0	269,002	26,396	0	2	4/	0	0	21	2	0
Central America, other	14,177	20,890	33,765	40,028	45,277	32,008	19,573	2	2	2	3	3	2	2
Central America 3/	27,048	20,912	33,765	40,028	314,279	58,404	19,573	4	2	2	3	24	3	2
Argentina	9,208	7,111	37,386	3,307	4,400	19,641	4,066	1	1	2	4/	4/	1	4/
Brazil	177,940	290,586	405,870	41,497	60,617	239,899	170,792	25	26	25	3	5	14	14
Chile	163,951	154,431	107,725	146,849	136,127	201,299	234,100	23	14	7	9	10	12	20
Colombia	33,604	21,603	20,691	13,054	18,181	20,494	19,395	5	2	1	1	1	1	2
Peru	66	13,792	13,103	19,203	17,230	27,834	31,716	4/	1	1	1	1	2	3
Venezuela	3,134	19,008	40,259	2,710	0	0	1,652	4/	2	3	4/	0	0	4/
South America, other	7,133	8,804	28,686	6,040	23,130	34,610	13,253	1	1	2	4/	2	2	1
South America	395,036	515,333	653,720	232,660	259,685	543,777	474,974	56	47	41	15	20	32	40
Belgium-Luxembourg	1,543	0	130,286	131,699	18,186	51,879	28,901	4/	0	8	8	1	3	2
Bulgaria	0	0	0	75,776	22,044	50,581	25,353	0	0	0	5	2	3	2
Czechoslovakia	0	0	0	142,791	121,541	134,567	0	0	0	0	9	9	8	0
France	2,425	37,999	94,138	33,834	0	3,472	0	4/	3	6	2	0	4/	0
Ireland	0	0	51,257	49,699	19,447	33,430	0	0	0	3	3	1	2	0
Netherlands	37,484	0	0	0	0	0	0	5	0	0	0	0	0	0
Poland	52,150	104,699	0	0	0	11,573	16,870	7	9	0	0	0	1	1
Turkey	15,792	0	25,352	0	0	0	0	2	0	2	0	0	0	0
West Germany	8,777	0	142,499	78,559	21,389	16	0	1	0	9	5	2	4/	0
Europe, other	34,431	32,250	23,132	28,273	3,630	19,778	0	5	3	1	2	4/	1	0
Europe	152,602	174,948	466,664	540,631	206,237	305,296	71,124	21	16	29	35	16	18	6
Bangladesh	0	21,521	0	294,428	121,444	0	84,162	0	2	0	19	9	0	7
China	0	0	138,596	0	0	0	0	0	0	9	0	0	0	0
Indonesia	25,496	178,402	9,921	0	0	0	0	4	16	1	0	0	0	0
Japan	30,533	11,912	35,403	33,388	43,640	44,157	77,377	4	1	2	2	3	3	6
Pakistan	38,684	0	0	0	0	0	0	5	0	0	0	0	0	0
Singapore	0	0	118,072	0	0	3,621	0	0	0	7	0	0	4/	0
South Korea	0	94,613	0	13	0	0	0	0	9	0	4/	0	0	0
Sri Lanka	0	32,369	0	0	0	0	0	0	3	0	0	0	0	0
Asia, other	17,381	35,972	11,806	20,735	5,523	17,162	25,156	2	3	1	1	4/	1	2
Asia	112,094	374,789	313,798	348,564	170,607	64,940	186,695	16	34	20	22	13	4	16
Australia	0	0	0	61,318	39,598	79,428	86,739	0	0	0	4	3	5	7
Oceania, other	0	0	0	5,510	10,588	3,667	0	0	0	0	4/	1	0	0
Oceania	0	0	0	66,828	50,186	83,095	86,739	0	0	0	4	4	5	7
Algeria	0	0	47,363	0	0	0	0	0	0	3	0	0	0	0
Africa, other	0	0	2,417	4,455	3,306	2,755	44	0	0	4/	4/	4/	4/	4/
Africa	0	0	49,780	4,455	3,306	2,755	44	0	0	3	4/	4/	4/	4/
Total	710,461	1,104,287	1,597,251	1,555,775	1,307,786	1,724,267	1,193,571	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that received at least 25,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (2).

Table 15--U.S. exports of phosphoric acid, selected market areas and years 1/

Country of destination 2/	1975 3/	1980	1985	1986 4/	1987 4/	1988 4/	1975 3/	1980	1985	1986 4/	1987 4/	1988 4/
	Short tons						Percent					
Canada	4,059	10,843	66,156	2,220	2,041	1,780	2	1	4	6/	6/	6/
Central America 5/	578	14,130	500	11	3,300	3,354	6/	2	6/	6/	6/	1
Brazil	87,496	312,348	74,342	47,070	263,877	13,499	38	40	5	8	29	3
Colombia	31,741	20,370	6,879	8,801	3,859	11,320	14	3	6/	1	6/	3
Venezuela	759	3,114	141,445	146,968	133,259	33,376	6/	6/	9	25	14	7
South America, other	140	6,077	0	0	0	0	6/	1	0	0	0	0
South America	120,136	341,909	222,666	202,839	400,995	58,195	52	43	15	34	44	13
Belgium-Luxembourg	13	0	10,810	10,640	0	0	6/	0	1	2	0	0
Czechoslovakia	0	0	27,842	18,177	6,881	0	0	0	2	3	1	0
Denmark	0	0	5,769	20,209	5,927	0	0	0	6/	3	1	0
France	18,427	0	0	0	0	0	8	0	0	0	0	0
Netherlands	7,123	23,265	0	0	0	0	3	3	0	0	0	0
Turkey	4	0	153,895	20,698	0	0	6/	0	10	3	0	0
West Germany	243	0	48,852	1,981	0	0	6/	0	3	6/	0	0
Europe, other	243	7,375	0	0	0	95	6/	1	0	0	0	6/
Europe	26,053	30,640	247,168	71,705	12,808	95	11	4	16	12	1	6/
Soviet Union	0	228,540	511,099	0	0	0	0	29	34	0	0	0
India	60,900	104,896	375,462	242,041	383,436	208,024	26	13	25	41	42	46
Indonesia	0	56,835	85,570	72,895	67,755	72,734	0	7	6	12	7	16
Iran	12,318	0	0	0	0	0	5	0	0	0	0	0
Japan	78	0	0	0	0	86,914	6/	0	0	0	0	19
Asia, other	740	64	6,890	0	0	0	6/	6/	6/	0	0	0
Asia	74,036	161,795	467,922	314,936	451,191	367,672	32	21	31	53	49	82
Australia	7,035	0	0	0	50,382	17,357	3	0	0	0	5	4
Oceania, other	636	0	0	2,664	0	0	6/	0	0	6/	0	0
Oceania	7,671	0	0	2,664	50,382	17,357	3	0	0	6/	5	4
Africa	150	9	0	0	0	0	6/	6/	0	0	0	0
Total	232,683	787,866	1,515,511	594,375	920,717	448,453	100	100	100	100	100	100

1/ Includes superphosphoric acid and wet-process phosphoric acid exports; years ending June 30.

2/ Specific countries listed include those that received at least 10,000 short tons of material in any selected year.

3/ Information on phosphoric acid exports not available before fertilizer year 1975.

4/ Includes only wet-process phosphoric acid because superphosphoric acid reports were discontinued after June 1985; 1986-88 data are no longer comparable with 1985 and earlier years.

5/ Central America includes Caribbean countries.

6/ Less than 0.5 percent.

Source: (2).

Table 16--U.S. exports of phosphate rock, selected market areas and years 1/

Country of destination 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	2,004,864	3,975,256	4,257,756	3,011,021	2,787,218	2,027,417	1,442,211	18	30	25	26	25	20	14
Mexico	932,963	1,046,235	370,888	207,609	339,152	487,358	511,131	9	8	2	2	3	5	5
Central America, other	22,852	14,576	1,001	20,696	15,001	8,238	20,009	4/	4/	4/	4/	4/	4/	4/
Central America 3/	955,815	1,060,811	371,869	228,305	354,153	495,596	531,140	9	8	2	2	3	5	5
Brazil	372,370	518,088	407,395	21,816	39,668	28,791	26,502	3	4	2	4/	4/	4/	4/
Colombia	19,514	100,221	38,722	60,515	45,435	58,853	43,656	4/	1	4/	1	4/	1	4/
South America, other	34,635	111,950	45,315	13,006	27,101	21,500	31,045	4/	1	4/	4/	4/	4/	4/
South America	426,519	730,259	491,432	95,337	112,204	109,144	101,203	4	5	3	1	1	1	1
Austria	99,428	0	107,471	22,269	0	88,555	68,902	1	0	1	4/	0	1	1
Belgium-Luxembourg	395,181	759,666	888,456	708,797	779,482	296,081	370,685	4	6	5	6	7	3	4
Finland	0	0	129,979	180,696	166,208	71,854	91,977	0	0	1	2	1	1	1
France	327,450	270,276	1,045,198	706,989	835,018	841,438	903,949	3	2	6	6	7	8	9
Italy	1,305,543	366,446	353,864	103,057	110,982	249,024	446,300	12	3	2	1	1	3	4
Netherlands	408,204	846,843	1,002,852	679,028	500,377	722,931	811,601	4	6	6	6	4	7	8
Norway	107,520	102,541	112,890	0	7,276	61,582	75,071	1	1	1	0	4/	1	1
Poland	0	301,202	934,443	695,161	967,339	456,852	637,121	0	2	5	6	9	5	6
Romania	0	36,405	684,965	338,897	193,699	92,593	165,448	0	4/	4	3	2	1	2
Spain	235,801	53,931	41,222	22	21	127,548	23,409	2	4/	4/	4/	4/	1	4/
Sweden	194	49,007	107,397	151,434	141,955	77,029	138,896	4/	4/	1	1	1	1	1
United Kingdom	69,689	81,699	532,515	31	759	902	0	1	1	3	4/	4/	4/	0
West Germany	1,355,320	799,092	1,000,821	588,896	566,125	817,128	578,728	12	6	6	5	5	8	6
Europe, other	953	67	138,488	695	24,061	0	3,203	4/	4/	1	4/	4/	0	4/
Europe	4,305,283	3,667,175	7,080,561	4,175,972	4,293,302	3,903,517	4,315,290	39	27	41	36	38	39	43
India	364,440	239,764	306,241	340,425	315,203	286,352	466,438	3	2	2	3	3	3	5
Indonesia	0	0	44,298	124,006	107,783	113,933	75,403	0	0	4/	1	1	1	1
Iran	33,331	417,206	0	0	0	0	0	4/	3	0	0	0	0	0
Japan	2,014,913	2,475,473	1,989,987	1,454,905	1,323,018	1,222,010	1,027,309	18	18	12	12	12	12	10
Philippines	148,334	157,216	108,683	0	33,167	35,072	0	1	1	1	0	4/	4/	0
South Korea	609,324	615,563	2,043,224	1,653,816	1,701,829	1,502,296	1,643,949	6	5	12	14	15	15	16
Asia, other	70,576	54,176	79,788	440	0	232	10,668	1	4/	4/	4/	0	4/	4/
Asia	3,240,918	3,959,398	4,572,221	3,573,592	3,481,000	3,159,895	3,223,767	30	30	27	31	31	32	32
Australia	20,699	329	393,725	300,697	168,262	120,702	183,462	4/	4/	2	3	1	1	2
New Zealand	13,443	18	58,431	156,282	97,851	116,719	183,174	4/	4/	4/	1	1	1	2
Oceania, other	0	0	0	26	0	0	0	0	0	0	4/	0	0	0
Oceania	34,142	347	452,156	457,005	266,113	237,421	366,636	4/	4/	3	4	2	2	4
South Africa	0	0	0	152,581	0	0	0	0	0	0	1	0	0	0
Africa, other	5,627	0	0	19	18	0	0	4/	0	0	4/	4/	0	0
Africa	5,627	0	0	152,600	18	0	0	4/	0	0	1	4/	0	0
Total	10,972,968	13,393,246	17,225,995	11,693,832	11,294,008	9,932,990	9,980,247	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that received at least 100,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (2).

Table 17--U.S. imports of potassium chloride, selected market areas and years 1/

Country of origin 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	4,300,133	6,227,401	8,528,104	8,310,088	7,442,830	6,690,762	6,751,659	98	98	95	93	94	95	88
Dominican Republic	0	0	0	0	0	8,130	14,273	0	0	0	0	0	5/	5/
Central America, other	0	0	6,620	1,217	5,771	0	0	0	0	5/	5/	5/	0	0
Central America 3/	0	0	6,620	1,217	5,771	8,130	14,273	0	0	5/	5/	5/	5/	5/
East Germany	0	0	48,799	26,719	52,851	71,756	138,197	0	0	1	5/	1	1	2
Iceland	0	0	0	29,554	27,777	0	0	0	0	0	5/	5/	0	0
Netherlands	0	0	3,472	6,708	4,425	4,959	10,816	0	0	5/	5/	5/	5/	5/
Spain	3,000	0	24,937	0	0	0	0	5/	0	5/	0	0	0	0
United Kingdom	100	303	116	732	534	438	15,297	5/	5/	5/	5/	5/	5/	5/
West Germany	17,573	11,026	3,826	9,987	34,712	5,877	31,787	5/	5/	5/	5/	5/	5/	5/
Europe, other	0	0	0	41	0	7,326	0	0	0	0	5/	0	5/	0
Europe	20,673	11,329	81,150	73,741	120,299	90,356	196,097	5/	5/	1	1	2	1	3
Soviet Union	0	0	27,677	36,215	0	67,569	265,140	0	0	5/	5/	0	1	3
Israel	33,028	67,534	325,495	470,490	336,538	208,888	436,716	1	1	4	5	4	3	6
Asia, other	0	805	706	0	1,656	582	7,639	0	5/	5/	0	5/	5/	5/
Asia	33,028	68,339	326,201	470,490	338,194	209,470	444,355	1	1	4	5	4	3	6
Benin (Dahomey)	0	28,396	0	0	0	0	0	0	5/	0	0	0	0	0
Congo	23,921	22,677	0	0	0	0	0	1	5/	0	0	0	0	0
Africa, other	0	0	0	1,024	0	33	0	0	0	0	5/	0	5/	0
Africa	23,921	51,073	0	1,024	0	33	0	1	1	0	5/	0	5/	0
Other 4/	0	508	0	0	0	0	0	0	5/	0	0	0	0	0
Total	4,377,755	6,358,650	8,969,752	8,892,775	7,907,094	7,066,320	7,671,524	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that have supplied at least 10,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Country of origin unknown.

5/ Less than 0.5 percent.

Source: (3).

Table 18--U.S. exports of potassium chloride, selected market areas and years 1/

Country of destination 2/	1970	1975	1980	1985	1986	1987	1988	1970	1975	1980	1985	1986	1987	1988
	Short tons							Percent						
Canada	454	4,371	4,235	1,412	2,968	343	1,994	4/	4/	4/	4/	4/	4/	4/
Costa Rica	14,451	24,424	14,890	9,234	8,310	6,515	26,269	2	2	1	1	1	1	5
Dominican Republic	5,555	16,890	45,989	23,532	18,156	33,803	34,736	1	2	4	3	3	4	7
Mexico	43,101	117,144	68,139	80,671	51,109	63,688	12,381	5	12	6	10	8	8	2
Central America, other	19,473	19,323	28,178	4,155	16,094	26,772	32,032	2	2	2	1	3	3	6
Central America 3/	82,580	177,781	157,196	117,592	93,669	130,778	105,418	9	18	13	15	16	16	20
Brazil	172,848	191,728	605,606	367,901	189,795	190,894	289,474	19	19	51	46	32	24	55
Colombia	20,844	15,685	38,984	88,764	17,770	23,008	9,679	2	2	3	11	3	3	2
Peru	2,481	6,953	12,025	26,330	7,087	20,451	13,946	4/	1	1	3	1	3	3
South America, other	34,082	24,646	26,016	21,590	25,299	16,875	27,669	4	2	2	3	4	2	5
South America	230,255	239,012	682,631	504,585	239,951	251,228	340,768	26	24	57	63	40	32	64
Belgium-Luxembourg	72	0	0	0	23,699	79,982	11,574	4/	0	0	0	4	10	2
Denmark	0	0	39,581	0	0	23	0	0	0	3	0	0	4/	0
Ireland	0	32,127	0	0	0	20,421	13,128	0	3	0	0	0	3	2
Netherlands	12,322	6	0	0	0	50,112	0	1	4/	0	0	0	6	0
Europe, other	13,922	10,496	493	550	14,963	1,066	9,872	2	1	4/	4/	2	4/	2
Europe	26,316	42,629	40,074	550	38,662	151,604	34,574	3	4	3	4/	6	19	7
China	0	0	0	0	55	59,554	0	0	0	0	0	4/	7	0
Hong Kong	0	0	0	0	0	42,339	0	0	0	0	0	0	5	0
India	0	0	0	0	95,072	19,239	0	0	0	0	0	16	2	0
Japan	281,803	74,401	103,959	59,677	73,194	98,332	42,112	31	7	9	8	12	12	8
Philippines	25,759	56,622	8,128	0	48	48	26	3	6	1	0	4/	4/	4/
Taiwan	45,363	38,786	0	308	0	28,918	0	5	4	0	4/	0	4	0
Asia, other	29,557	23,627	12,321	15,720	240	64	80	3	2	1	2	4/	4/	4/
Asia	382,482	193,436	124,408	75,705	168,609	248,494	42,218	42	19	10	10	28	31	8
Australia	87,929	156,261	17,827	6,691	13,140	8,621	85	10	15	1	1	2	1	4/
New Zealand	92,379	201,313	182,524	88,080	45,085	5,689	3,176	10	20	14	11	7	1	1
Oceania	180,308	357,574	180,351	94,771	58,205	14,310	3,261	20	35	15	12	10	2	1
Africa	13	165	103	212	276	138	143	4/	4/	4/	4/	4/	4/	4/
Total	902,408	1,014,968	1,188,998	794,827	602,340	796,895	528,376	100	100	100	100	100	100	100

1/ Years ending June 30.

2/ Specific countries listed include those that received at least 25,000 short tons of material in any selected year.

3/ Central America includes Caribbean countries.

4/ Less than 0.5 percent.

Source: (2).

END
DATE
FILMED
9-18-89
NTIS