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Fertilizer Materials - 1997

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Information about the scope of the survey, methodology, explanation of terms, and historical notes for this survey may be found in the 1996 Manufacturing Profiles issued July 1998.

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Address inquiries concerning these data to U.S. Department of Commerce, Bureau of the Census, Manufacturing and Construction Division, Washington, D.C. 20233, or call Walter R. Hunter, Jr., 301-457-4798.

### Summary of Findings

United States production of sulfuric acid in 1997 totaled 48,018.0 thousand short tons (100 percent H<sub>2</sub>SO<sub>4</sub>), approximately 1 percent above the 1996 figure of 47,770.3 thousand short tons. Value of shipments, including interplant transfers in 1997 amounted to \$528.3 million, as compared to the 1996 value of \$578.1 million.

Value of shipments of synthetic ammonia, nitric acid, and ammonium compounds decreased 9 percent to \$3,494.0 million in 1997 from the 1996 level of \$3,818.8 million. Shipments of urea decreased 15 percent to \$772.3 million in 1997, and shipments of phosphoric acid increased 14.5 percent to \$1,405.1 million.

Production of superphosphate and other phosphatic fertilizer materials for 1997 decreased 1 percent to 10,431.4 thousand short tons (100 percent P<sub>2</sub>O<sub>5</sub>). Value of shipments amounted to \$3,674.9 million in 1997, as compared to the 1996 value of \$3,927.6 million.

Table 1. Shipments and Production of Principal Fertilizer Materials: 1997 to 1993  
 [Quantity in thousands of short tons. Value in millions of dollars]

Product code	Product description	Year	Total shipments, including interplant transfers		
			Total production	Quantity (f.o.b. plant)	Value
28731 31	Ammonia, synthetic anhydrous 1/.....	1997	17,890.7	8,588.6	1,577.9
		1996	17,922.8	9,919.1	1,689.7
		1995	17,402.2	9,722.8	1,661.6
		1994	17,869.1	10,525.3	1,540.8
		1993	17,195.2	10,435.5	1,174.3
28731 44	Ammonium nitrate, original melt liquor 2/..	1997	8,604.4	(X)	(X)
		1996	r/ 8,497.8	(X)	(X)
		1995	8,489.1	(X)	(X)
		1994	8,567.6	(X)	(X)
		1993	8,280.9	(X)	(X)
28731 57	Ammonium sulfate 1/.....	1997	2,710.7	2,544.0	180.6
		1996	2,662.0	2,543.5	213.6
		1995	2,646.7	2,551.7	195.3
		1994	2,584.1	2,484.9	168.8
		1993	2,432.4	2,416.9	150.4
28732 --	Urea (100%).....	1997	8,189.9	5,342.0	772.3
		1996	8,548.3	5,781.4	911.9
		1995	8,116.7	5,242.8	848.3
		1994	8,360.3	5,456.9	726.1
		1993	8,329.6	5,254.8	629.6
28731 11	Nitric acid (100%).....	1997	9,432.7	1,804.5	216.2
		1996	9,204.8	1,460.9	196.9
		1995	8,839.0	1,291.1	168.2
		1994	8,713.7	931.8	116.5
		1993	8,253.9	678.0	88.5
28741 --	Phosphoric acid (100% P2O5).....	1997	13,158.7	4,587.5	1,405.1
		1996	13,210.0	4,401.8	1,226.8
		1995	13,133.8	4,409.3	1,219.5
		1994	12,792.0	4,227.7	1,103.1
		1993	11,515.1	3,687.5	969.3
28193 --	Sulfuric acid, gross (100%).....	1997	48,018.0	12,961.7	528.3
		1996	47,770.3	13,014.8	578.1
		1995	47,519.3	12,677.7	539.3
		1994	44,861.9	11,767.2	461.9
		1993	39,838.5	11,362.0	515.9
28742 --	Superphosphates and other fertilizer materials (100% P2O5).....	1997	10,431.4	10,429.0	3,675.0
		1996	10,547.2	10,500.9	3,927.6
		1995	10,364.2	10,231.0	3,594.3
		1994	10,041.6	9,966.9	2,920.7
		1993	8,800.9	8,813.8	2,057.3

r/Revised by 5 percent or more from previously published data. X Not applicable.

1/Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.

2/Represents total amount of original melt liquor produced for all purposes.

Table 2. Production and Shipments of Fertilizer Materials: 1997 and 1996  
(Quantity in thousands of short tons. Value in millions of dollars)

Product code	Chemical and basis	1997			1996		
		Total production	Total shipments, including interplant transfers		Total production	Total shipments, including interplant transfers	
			Quantity	Value		Quantity	Value
28193 --	Sulfuric acid, gross (new and fortified).....	48,018.0	12,961.7	528.3	47,770.3	13,014.8	578.1
	By feedstock:						
28193 32	Elemental sulfur.....	39,046.5	7,637.4	353.2	38,413.0	7,274.7	373.6
28193 34	Smelting metallic sulfide ore.....	3,847.1	3,378.9	51.0	3,900.7	3,416.9	57.0
28193 36	Decomposition of alkylation and other spent acid.....	4,774.5	1,700.9	109.7	r/ 5,038.2	2,091.5	135.3
28193 38	Other.....	350.0	244.6	14.5	r/ 418.414	231.6	12.2
	By grade:						
28193 11	Oleum under 40 percent.....	1,296.6	806.7	44.2	1,304.3	888.3	60.6
28193 21	Oleum 40 percent and over 40 percent....	206.9	205.0	11.2	226.5	256.5	14.4
28193 31	Other than oleum /1.....	46,514.6	11,950.1	472.9	46,239.5	11,870.0	496.8
28731 --	Synthetic ammonia, nitric acid, and ammonium compounds.....	(X)	(X)	3,494.0	(X)	(X)	3,818.8
28731 11	Nitric acid (100% HNO3) /2.....	9,432.7	1,804.5	216.2	9,204.8	1,460.9	196.9
28731 31	Ammonia, synthetic anhydrous (100% NH3) /3.....	17,890.7	8,588.6	1,577.9	17,922.8	9,919.1	1,689.7
28731 30	Fertilizer use.....	15,348.7	6,816.7	1,285.0	15,617.2	8,286.9	1,371.5
28731 32	Other uses.....	2,542.1	1,771.9	293.0	2,305.5	1,632.3	318.2
	Ammonium nitrate:						
28731 44	Original melt liquor (100% NH4 NO3) /4.....	8,604.4	4,416.2	630.0	r/ 8,497.8	4,322.7	653.9
	Consumed in the manufacture of:						
28731 45	Other nitrogen solutions (100% NH4 NO3).....	245.3	(X)	(X)	r/ 279.2	(X)	(X)
28731 46	Ammonium nitrate-urea solutions.....	3,770.3	(X)	(X)	r/ 3,786.1	(X)	(X)
28731 47	High density prill and granular.....	2,550.5	2,467.2	335.2	2,503.1	2,448.8	363.1
28731 48	Low density prill and grained.....	1,653.3	1,619.1	250.4	1,556.2	1,539.5	246.1
28731 49	All other (liquor sales, etc.).....	385.0	330.0	44.4	373.2	334.3	44.7
28731 57	Ammonium sulfate, synthetic and byproduct other than coke oven (100% (NH4)2 SO4) /3.....	2,710.7	2,544.0	180.6	2,662.0	2,543.5	213.6
28731 56	Synthetic.....	(D)	(D)	(D)	(D)	(D)	(D)
28731 58	Byproduct, other than coke oven.....	(D)	(D)	(D)	(D)	(D)	(D)
28731 55	Nitrogen solutions (100% N), including mixtures containing urea.....	3,627.0	3,197.7	815.6	3,649.8	3,665.7	1,006.1
28731 66	Ammonium nitrate/urea solutions.....	3,495.6	3,067.1	787.9	3,529.3	3,547.2	983.0
28731 68	All other compounds and solutions (e.g. CAN17, AN20, AAN and others) and solutions containing free						

Continued

Table 2. Production and Shipments of Fertilizer Materials: 1997 and 1996  
(Quantity in thousands of short tons. Value in millions of dollars)

Product code	Chemical and basis	1997			1996		
		Total production	Total shipments, including interplant transfers Quantity	Value	Total production	Total shipments, including interplant transfers Quantity	Value
	ammonia, including data for solutions containing two or more products such as (a) ammonia, ammonium-nitrate; (b) ammonia, urea; (c) ammonia, ammonium-nitrate, urea.....	131.4	130.6	27.7	120.5	118.5	23.1
28731 69	Other ammonium compounds, including ammonium chloride, gray and white.....	(X)	(X)	73.7	(X)	(X)	58.7
28732 --	Urea original melt liquor (100%).....	8,189.9	5,342.0	772.3	8,548.3	5,781.4	911.9
	Consumed in the manufacture of:						
28732 17	Urea-ammonium nitrate solutions.....	2,776.5	(X)	(X)	2,761.2	(X)	(X)
28732 19	Prills.....	2,455.1	2,412.5	348.7	2,736.4	2,746.3	397.7
28732 20	Granular.....	2,696.3	2,665.1	390.0	2,765.1	2,750.4	479.5
28732 23	All other (liquor sales, melamine, feedstock, other).....	262.0	264.4	33.6	r/ 285.7	284.7	34.7
28741 --	Phosphoric acid (100% P2O5).....	13,158.7	4,587.5	1,405.1	13,210.0	4,401.8	1,226.8
28741 81	Thermal.....	299.1	169.2	117.9	306.5	156.7	124.0
28741 85	Wet.....	12,859.6	4,418.3	1,287.2	12,903.5	4,245.1	1,102.8
	By use:						
28741 86	Fertilizer.....	11,979.7	(D)	(D)	11,877.6	(D)	(D)
28741 87	Feed and other.....	880.0	(D)	(D)	1,026.0	(D)	(D)
	By grade:						
28741 88	Ortho (less than 65% P2O5).....	11,411.1	3,251.2	897.1	11,479.6	3,026.9	776.8
28741 89	Super (65% or more P2O5).....	1,448.5	1,167.1	390.1	1,423.9	1,218.3	326.1
28742 --	Superphosphates and other phosphatic fertilizer materials:						
	Gross weight /5.....	21,107.6	20,429.0	(X)	20,843.8	20,451.2	(X)
	Phosphoric oxide content (100% P2O5).....	10,431.4	10,429.0	3,674.9	10,547.2	10,500.9	3,927.6
28742 15	Normal and enriched superphosphates: /6						
	Gross weight.....	(D)	(D)	(D)	(D)	(D)	(D)
	Phosphoric oxide content (100% P2O5).....	(D)	(D)	(D)	(D)	(D)	(D)
28742 41	Concentrated superphosphates: /6						
	Gross weight.....	1,619.6	1,428.5	(X)	1,841.3	1,604.5	(X)
	Phosphoric oxide content (100% P2O5).....	728.0	675.9	201.6	822.8	763.2	307.9
28742 51	Monoammonium phosphates:						
	Gross weight.....	3,416.3	3,434.7	(X)	3,333.0	3,915.1	(X)
	Phosphoric oxide content (100% P2O5).....	1,910.6	1,912.1	667.3	1,797.6	1,773.7	660.6

Continued

Table 2. Production and Shipments of Fertilizer Materials: 1997 and 1996  
(Quantity in thousands of short tons. Value in millions of dollars)

Product code	Chemical and basis	Total production	1997		Total production	1996	
			Total shipments, including interplant transfers Quantity	Value		Total shipments, including interplant transfers Quantity	Value
28742 52	Diammonium phosphates:						
	Gross weight.....	15,539.1	15,005.3	(X)	15,033.3	14,293.6	(X)
	Phosphoric oxide content (100% P2O5).....	7,531.7	7,564.3	2,704.6	7,590.2	7,617.2	2,853.4
28742 55	Other ammonium phosphates: /7						
	Gross weight.....	(D)	(D)	(D)	(D)	(D)	(D)
	Phosphoric oxide content (100% P2O5).....	(D)	(D)	(D)	(D)	(D)	(D)
28742 61	Other phosphatic fertilizer materials: /7						
	Gross weight.....	532.6	560.4	(X)	636.2	638.1	(X)
	Phosphoric oxide content (100% P2O5).....	261.1	276.6	101.4	336.5	346.7	105.7

D Withheld to avoid disclosing data for individual companies. r/Revised by 5 percent or more from previously published data. X Not applicable.

1/Data for "Other than oleum" include "Chamber process acid."

2/Includes unspecified amounts of nitric acid produced but not withdrawn from the system.

3/Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.

4/Represents total amount of original melt liquor produced, including amounts used for fertilizer, explosives, and other uses and amounts consumed in manufacturing other products such as nitrogen solutions (product code 28731 55).

5/Value for gross weight and (100% P2O5) are the same value for each 28742 product code.

6/Product code 28742 15 is combined with product code 28742 41.

7/Product code 28742 55 is combined with product code 28742 61.

Table 3. Quantities of Selected Fertilizer Materials Produced and Consumed: 1997 and 1996  
 [Quantity in thousands of short tons]

Product code	Product code	Basis	Consumed in producing plants	
			1997	1996
28193 --	Sulfuric acid, gross (new and fortified).....	100% H <sub>2</sub> SO <sub>4</sub> .....	34,945.1	34,948.6
28731 11	Nitric acid.....	100% HNO <sub>3</sub> .....	8,399.0	7,961.4
28731 31	Ammonia, synthetic anhydrous 1/.....	100% HN <sub>3</sub> .....	8,049.2	7,769.3
Ammonium nitrate:				
28731 45	Other nitrogen solutions 2/.....	100% NH <sub>4</sub> NO <sub>3</sub> .....	245.3	r/ 279.2
28731 46	Ammonium nitrate-urea solutions.....	.....do.....	3,776.1	r/ 3,786.1
28731 47	High density prill and granular.....	.....do.....	(D)	(D)
28731 48	Low density prill and grained.....	.....do.....	(D)	(D)
28731 49	All other (liquor sales, etc.).....	.....do.....	48.2	71.9
28731 57	Ammonium sulfate 1/.....	100% (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> ...	70.3	65.3
Urea:				
28732 17	Urea-ammonium nitrate solutions 2/.....	100% urea.....	2,776.5	2,761.2
28732 19	Prills.....	.....do.....	(D)	(D)
28732 20	Granular.....	.....do.....	(D)	53.5
28732 23	All other (liquor sales, melamine, feedstock, other).....	.....do.....	(D)	(D)
28741 --	Phosphoric acid (100% P <sub>2</sub> O <sub>5</sub> ).....	100% P <sub>2</sub> O <sub>5</sub> .....	8,555.7	8,855.1
28741 81	Thermal.....	.....do.....	(D)	(D)
28741 85	Wet.....	.....do.....	(D)	(D)
28742 --	Superphosphates and other phosphatic fertilizer materials.....	.....do.....	47.2	37.8

D Withheld to avoid disclosing data for individual companies. r/Revised by 5 percent or more from previously published data.

1/Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.

2/Excludes amount converted to solid nitrate.

Table 4. Summary of Selected Fertilizer Materials, Interplant Transfers: 1997 and 1996  
 [Quantity in thousands of short tons. Value in millions of dollars]

Product code	Product description	Basis	Interplant transfers		
			Year	Quantity	Value, freight on board plant
28193 --	Sulfuric acid, gross (new and fortified).....	100% H2SO4.....	1997	2,102.2	41.3
			1996	2,102.2	42.5
28193 11	Oleum under 40 percent.....	do.....	1997	(D)	(D)
			1996	(D)	(D)
28193 21	Oleum 40 percent and over 40 percent... ..	do.....	1997	(D)	(D)
			1996	(D)	(D)
28193 31	Other than oleum /1.....	do.....	1997	(D)	(D)
			1996	(D)	(D)
28731 31	Ammonia, synthetic anhydrous /2.....	100% NH3.....	1997	903.8	137.9
			1996	928.5	158.9
28731 30	Fertilizer use.....	do.....	1997	(D)	(D)
			1996	(D)	(D)
28731 32	Other uses.....	do.....	1997	(D)	(D)
			1996	(D)	(D)
28731 57	Ammonium sulfate /2.....	100% (NH4)2 SO4..	1997	(D)	(D)
			1996	(D)	(D)
28731 11	Nitric acid.....	100% HNO3.....	1997	(D)	(D)
			1996	(D)	(D)
28732 --	Urea.....	100% urea.....	1997	(D)	(D)
			1996	(D)	(D)
28741 --	Phosphoric acid (100% P2O5).....	100% P2O5.....	1997	1,998.7	485.9
			1996	1,877.9	418.5
28742 --	Superphosphates and other phosphatic fertilizer materials.....	do.....	1997	(D)	(D)
			1996	(D)	(D)

D Withheld to avoid disclosing data for individual companies.

1/Data for "Other than oleum" includes chamber process acid.

2/Excludes data for byproduct ammonia liquor and ammonium sulfate published by the Department of Energy.

Table 5. Total Shipments, Including Interplant Transfers, of Sulfuric Acid by States: 1997 and 1996

[Quantity in thousands of short tons of 100% H<sub>2</sub>SO<sub>4</sub>. Value in millions of dollars]

State	1997		1996	
	Quantity	Value	Quantity	Value
United States.....	12,961.7	528.3	13,014.8	578.1
Arizona.....	(D)	(D)	(D)	(D)
California.....	848.5	(D)	935.8	(D)
Florida.....	950.0	30.0	879.7	26.5
Georgia.....	447.7	20.4	419.9	18.7
Illinois.....	(D)	(D)	(D)	(D)
Louisiana.....	1,936.9	92.4	2,006.4	113.4
New Jersey.....	(D)	(D)	(D)	(D)
Ohio.....	(D)	(D)	352.4	27.1
Texas.....	1,883.4	115.6	1,893.5	114.5
Virginia.....	(D)	(D)	(D)	(D)
Washington.....	(D)	(D)	(D)	(D)
Other states.....	4,009.8	136.9	3,995.9	160.6

D Withheld to avoid disclosing data for individual companies.

Table 6. Production of New Sulfuric Acid by States: 1997 and 1996

[Thousands of short tons of 100% H<sub>2</sub>SO<sub>4</sub>]

State	1997 1/	1996 1/
United States.....	43,243.6	42,732.2
Arizona.....	2,361.5	2,402.5
California.....	1,206.8	1,353.9
Florida.....	20,989.5	20,893.9
Georgia.....	595.3	577.5
Illinois.....	(D)	(D)
Louisiana.....	6,103.5	6,169.6
Missouri.....	(D)	(D)
New Jersey.....	(D)	(D)
New Mexico.....	(D)	(D)
Ohio.....	(D)	420.3
Oklahoma and Texas.....	4,140.9	4,119.8
Virginia.....	(D)	(D)
Washington.....	(D)	(D)
Other states.....	4,884.9	r/ 4,437.8

D Withheld to avoid disclosing data for individual companies. r/Revised by 5 percent or more from previously published data.

1/Includes data for government-owned, privately-operated plants.



Table 7. Primary Production of Inorganic Fertilizer Chemicals by Quarter: 1997 and 1996  
 [Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter	
28731 31	Ammonia, synthetic anhydrous (100% NH <sub>3</sub> ): Production.....	1997	17,340.4	4,266.9	4,328.6	4,269.4	4,475.5	
		1996	17,922.8	4,594.7	4,404.2	4,364.8	4,559.2	
		Stocks on hand, end of quarter.....	1997	(NA)	1,554.5	822.2	1,456.0	2,045.3
			1996	(NA)	1,566.4	1,024.9	988.7	1,181.9
28731 30	Fertilizer use: Production.....	1997	14,798.3	3,714.6	3,712.8	3,602.2	3,768.6	
		1996	15,617.2	4,000.8	3,833.6	3,830.5	3,952.4	
		Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
			1996	(NA)	(D)	(D)	(D)	(D)
28731 32	Other uses: Production.....	1997	2,542.1	552.2	615.8	667.2	706.9	
		1996	2,305.5	593.9	570.6	534.2	606.8	
		Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
			1996	(NA)	(D)	(D)	(D)	(D)
28731 44	Ammonium nitrate (100% NH <sub>4</sub> NO <sub>3</sub> ): Original melt liquor 1/: Production.....	1997	8,604.4	2,194.8	2,206.8	2,008.6	2,194.2	
		1996	r/8,497.8	r/2,188.4	r/2,143.6	r/1,982.7	r/2,183.1	
		Stocks on hand, end of quarter.....	1997	(NA)	284.9	255.6	301.5	218.8
			1996	(NA)	220.1	168.3	195.6	191.9
28731 45	Total production: Consumed in the manufacture of other nitrogen solutions (e.g. CAN17, AN20, AAN): Production.....	1997	245.3	63.0	60.9	52.7	68.7	
		1996	r/279.2	r/58.8	r/55.8	r/70.6	r/94.0	
		Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
			1996	(NA)	(D)	(D)	(D)	(D)
28731 46	Liquor consumed in the manufacture of urea-ammonium nitrate solutions: Production.....	1997	3,770.3	989.6	948.0	935.2	897.4	
		1996	r/3,786.1	r/1,050.1	r/996.4	r/831.1	r/908.5	
		Stocks on hand, end of quarter.....	1997	(NA)	32.1	31.0	32.1	62.0
			1996	(NA)	47.1	25.1	30.6	33.6
28731 47	High density prill and granular: Production.....	1997	2,550.5	703.7	681.4	513.9	651.5	
		1996	2,503.1	626.1	638.0	566.6	672.4	
		Stocks on hand, end of quarter.....	1997	(NA)	46.2	42.4	(D)	35.6
			1996	(NA)	31.2	38.6	48.4	42.7
28731 48	Low density prill and grained: Production.....	1997	1,653.3	336.5	418.4	417.3	481.1	
		1996	1,556.2	367.2	364.2	411.2	413.6	
		Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
			1996	(NA)	(D)	(D)	(D)	(D)
28731 49	All other (e.g. liquor sales, etc.) Production.....	1997	385.0	102.1	98.1	89.4	95.4	
		1996	373.2	86.2	89.2	103.1	94.7	
		Stocks on hand, end of quarter.....	1997	(NA)	12.7	(D)	(D)	3.4
			1996	(NA)	(D)	(D)	(D)	(D)
28731 57	Ammonium sulfate (100% (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> ): Production.....	1997	2,644.8	579.6	692.6	679.8	692.7	
28731 58		1996	2,669.7	635.2	659.0	688.5	687.0	
Stocks on hand, end of quarter.....		1997	(NA)	138.3	100.2	220.4	266.6	
		1996	(NA)	250.3	130.8	173.1	218.8	

Table 7. Primary Production of Inorganic Fertilizer Chemicals by Quarter: 1997 and 1996  
 [Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28731 11	Nitric acid (100% HNO <sub>3</sub> ): Production.....	1997	9,432.7	2,426.3	2,421.1	2,185.6	2,399.7
		1996	9,204.8	2,277.0	2,287.5	2,163.4	2,476.9
	Stocks on hand, end of quarter.....	1996	(NA)	(X)	(X)	(X)	(X)
		1995	(NA)	(X)	(X)	(X)	(X)
28731 55	Nitrogen solutions, including mixtures containing urea (100% N): Production.....	1997	3,627.0	978.6	935.0	844.0	869.3
		1996	3,649.8	938.6	935.8	883.6	892.0
	Stocks on hand, end of quarter.....	1997	(NA)	468.0	310.4	470.0	424.4
		1996	(NA)	368.2	270.4	262.1	274.0
28731 66	Solutions containing ammonium nitrate/ urea: Production.....	1997	3,495.6	946.7	895.0	803.6	850.3
		1996	3,529.3	908.8	906.5	845.9	868.1
	Stocks on hand, end of quarter.....	1997	(NA)	455.8	304.3	462.9	420.2
		1996	(NA)	362.7	266.7	251.2	268.8
28731 68	All other solutions: Production.....	1997	131.4	31.9	40.1	40.4	19.0
		1996	120.5	29.8	29.3	37.7	23.8
	Stocks on hand, end of quarter.....	1997	(NA)	12.2	6.1	7.1	4.3
		1996	(NA)	5.5	3.7	10.9	5.2
28741 --	Phosphoric acid (100% P <sub>2</sub> O <sub>5</sub> ): Production.....	1997	13,158.7	3,214.1	3,251.2	3,212.5	3,481.0
		1996	13,210.0	3,241.9	3,129.6	3,451.3	3,387.3
	Stocks on hand, end of quarter.....	1997	(NA)	208.1	220.2	216.7	234.9
		1996	(NA)	280.6	276.6	238.9	212.2
28741 81	Thermal: Production.....	1997	299.1	130.0	56.4	56.6	56.2
		1996	306.5	78.0	75.1	78.8	74.5
	Stocks on hand, end of quarter.....	1997	(NA)	12.6	10.3	8.2	8.1
		1996	(NA)	21.2	9.1	11.6	10.4
28741 85	Wet: Production.....	1997	12,859.6	3,084.1	3,194.8	3,155.9	3,424.8
		1996	12,903.5	3,163.9	3,054.4	3,372.5	3,312.8
	Stocks on hand, end of quarter.....	1997	(NA)	195.5	210.0	208.5	226.9
		1996	(NA)	259.3	267.6	227.3	201.8
28741 86	By use: Fertilizer: Production.....	1997	11,980.3	2,876.4	2,966.7	2,930.7	3,206.5
		1996	11,877.6	2,908.4	2,808.8	3,112.0	3,048.3
	Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
		1996	(NA)	(D)	(D)	(D)	(D)
28741 87	Feed and other: Production.....	1997	880.0	207.7	228.1	225.8	218.4
		1996	1,026.0	255.4	245.6	260.5	264.4
	Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
		1996	(NA)	(D)	(D)	(D)	(D)
28741 88	By grade: Ortho (less than 65% P <sub>2</sub> O <sub>5</sub> ): Production.....	1997	11,411.1	2,737.6	2,827.7	2,791.3	3,054.5
		1996	11,479.6	2,816.8	2,744.5	2,996.7	2,921.6
	Stocks on hand, end of quarter.....	1997	(NA)	170.9	184.7	182.8	198.9
		1996	(NA)	232.6	241.5	209.0	181.0
28741 89	Super (more than 65% P <sub>2</sub> O <sub>5</sub> ):						

Table 7. Primary Production of Inorganic Fertilizer Chemicals by Quarter: 1997 and 1996  
 [Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
	Production.....	1997	1,448.5	346.4	367.2	364.6	370.4
		1996	1,423.9	347.1	309.9	375.8	391.1
	Stocks on hand, end of quarter.....	1997	(NA)	24.7	25.2	24.0	28.0
		1996	(NA)	26.7	26.1	18.3	20.9
28732 --	Urea original melt liquor (100% urea):						
	Production.....	1997	7,666.2	2,069.0	1,966.5	1,812.8	1,817.9
		1996	8,548.3	2,236.6	2,132.6	2,027.8	2,151.4
	Stocks on hand, end of quarter.....	1997	(NA)	373.7	296.1	328.2	259.7
		1996	(NA)	300.3	239.8	239.0	212.8
	Total production:						
28732 17	Consumed in the manufacture of urea-ammonium nitrate solutions:						
	Production.....	1997	2,776.5	725.1	693.9	679.5	677.9
		1996	2,761.2	741.8	713.4	623.4	682.6
	Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
		1996	(NA)	(D)	(D)	(D)	(D)
28732 19	Prills:						
	Production.....	1997	2,080.5	612.6	563.6	444.4	459.9
		1996	2,736.4	714.7	682.5	648.1	691.2
	Stocks on hand, end of quarter.....	1997	(NA)	87.2	44.0	47.3	82.9
		1996	(NA)	93.0	79.1	120.2	45.7
28732 20	Granular:						
	Production.....	1997	2,696.3	697.6	680.4	665.0	653.2
		1996	2,765.1	704.6	669.3	686.5	704.6
	Stocks on hand, end of quarter.....	1997	(NA)	139.1	109.5	130.6	72.9
		1996	(NA)	84.0	59.1	26.1	78.3
28732 23	All other (solid and solution):						
	Production.....	1997	112.9	33.6	28.5	23.9	26.9
		1996	r/285.7	r/75.5	r/67.4	r/69.8	73.0
	Stocks on hand, end of quarter.....	1997	(NA)	(D)	(D)	(D)	(D)
		1996	(NA)	(D)	(D)	(D)	(D)

D Withheld to avoid disclosing data for individual companies. NA Not available. r/Revised 5 percent or more from previously published data. X Not applicable.

1/Represents total amount of original solution produced, including amounts used for fertilizer, explosive, and other uses and amounts consumed in manufacturing other products, such as nitrogen solutions.

Note: The 1997 and 1996 stocks on hand, end of quarter, were originally published in the Current Industrial Report series, MQ28B, "Fertilizer Materials." Detail may not add to total because of independent rounding.

Table 8. Production, Shipments, and Stocks of Superphosphates and Other Phosphatic Fertilizer Materials  
by Quarter: 1997 and 1996  
[Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28742 --	Superphosphates and other phosphatic fertilizer materials:	Production (100% P2O5).....	1997 10,431.4	2,547.0	2,659.9	2,592.4	2,632.1
			1996 10,547.2	2,593.7	2,422.1	2,835.7	2,695.6
		Shipments, including interplant transfers (100% P2O5).....	1997 10,429.0	2,602.0	2,772.0	2,496.3	2,558.6
			1996 10,500.9	2,467.2	2,720.8	2,743.7	2,569.2
		Stocks on hand, end of quarter (gross weight).....	1997 (NA)	669.3	569.9	513.7	771.3
			1996 (NA)	838.9	552.4	638.6	745.5
28742 15	Normal and enriched superphosphates:/1	Production (100% P2O5).....	1997 (D)	(D)	(D)	(D)	(D)
			1996 (D)	(D)	(D)	(D)	(D)
		Shipments, including interplant transfers (100% P2O5).....	1997 (D)	(D)	(D)	(D)	(D)
			1996 (D)	(D)	(D)	(D)	(D)
		Stocks on hand, end of quarter (gross weight).....	1997 (NA)	(D)	(D)	(D)	(D)
			1996 (NA)	(D)	(D)	(D)	(D)
28742 41	Concentrated superphosphates (triple) (over 40% P2O5):/1	Production (100% P2O5).....	1997 728.0	164.6	195.9	202.0	165.5
			1996 822.8	213.2	174.3	231.7	203.6
		Shipments, including interplant transfers (100% P2O5).....	1997 675.9	153.3	193.8	206.1	122.6
			1996 763.2	131.1	376.3	144.8	111.0
		Stocks on hand, end of quarter (gross weight).....	1997 (NA)	109.0	80.1	54.1	124.3
			1996 (NA)	63.4	82.0	(D)	116.1
28742 51	Ammonium phosphates: Monoammonium phosphates:	Production (100% P2O5).....	1997 1,910.6	475.8	486.2	480.3	468.3
			1996 1,797.6	435.6	352.4	577.8	431.9
		Shipments, including interplant transfers (100% P2O5).....	1997 1,912.1	445.6	512.0	496.1	458.5
			1996 1,773.7	389.5	370.1	607.8	406.3
		Stocks on hand, end of quarter (gross weight).....	1997 (NA)	174.4	134.8	88.8	120.4
			1996 (NA)	162.6	119.9	80.6	150.8
28742 52	Diammonium phosphates:	Production (100% P2O5).....	1997 7,531.7	1,847.1	1,890.3	1,862.3	1,932.0
			1996 7,590.2	1,868.4	1,814.9	1,939.4	1,967.4
		Shipments, including interplant transfers (100% P2O5).....	1997 7,564.3	1,942.8	1,961.1	1,732.6	1,927.8
			1996 7,617.2	1,882.6	1,841.1	1,909.8	1,983.8
		Stocks on hand, end of quarter (gross weight).....	1997 (NA)	298.3	287.9	288.2	470.6
			1996 (NA)	506.0	282.9	388.5	355.6

Continued

Table 8. Production, Shipments, and Stocks of Superphosphates and Other Phosphatic Fertilizer Materials  
by Quarter: 1997 and 1996  
[Thousands of short tons]

Product code	Product description	Year	Total	First quarter	Second quarter	Third quarter	Fourth quarter
28742 55	Other ammonium phosphates and other/2 Production (100% P2O5).....	1997	(D)	(D)	(D)	(D)	(D)
		1996	(D)	(D)	(D)	(D)	(D)
	Shipments, including interplant transfers (100% P2O5).....	1997	(D)	(D)	(D)	(D)	(D)
		1996	(D)	(D)	(D)	(D)	(D)
	Stocks on hand, end of quarter (gross weight).....	1997	(NA)	(D)	(D)	(D)	(D)
		1996	(NA)	(D)	(D)	(D)	(D)
28742 61	Phosphatic fertilizer materials:/2 Production (100% P2O5).....	1997	261.1	59.5	87.5	47.8	66.3
		1996	336.5	76.5	80.6	86.8	92.7
	Shipments, including interplant transfers (100% P2O5).....	1997	276.6	60.4	105.2	61.4	49.7
		1996	346.7	64.0	133.2	81.3	68.1
	Stocks on hand, end of quarter (gross weight).....	1997	(NA)	87.6	67.0	82.5	56.1
		1996	(NA)	106.9	67.7	(D)	(S)

D Withheld to avoid disclosing data for individual companies. NA Not available. S Does not meet publication standards.

1/"Normal and enriched superphosphates" (28742 15) is combined with "Concentrated superphosphates" (28742 41) to avoid disclosure of data for individual companies.

2/"Other ammonium phosphates" (28742 55) is combined with "Other phosphatic fertilizer materials" (28742 61) to avoid disclosure of data for individual companies.

Note: The 1997 and 1996 stocks on hand, end of quarter, were originally published in the Current Industrial Report series, MQ28B, "Fertilizer Materials." Detail may not add to total because of independent rounding.

Table 9. Production and Stocks of Sulfuric Acid by Process and by Quarter: 1997 and 1996  
 [Thousands of short tons of 100% H<sub>2</sub>SO<sub>4</sub>]

Quarter and year	Sulfuric acid, gross, new and fortified			New acid 1/	Sulfuric acid produced through decomposition of alkylation and other spent acid 2/	Stocks (gross) at producing plants at end of period
	Total	Oleum grades	Other than oleum grades			
1997						
Total.....	48,018.0	1,503.5	46,514.6	43,243.6	4,774.5	(NA)
First quarter.....	11,634.2	355.5	11,278.7	10,343.7	1,290.6	777.3
Second quarter.....	11,976.6	387.5	11,589.1	10,757.8	1,218.7	679.5
Third quarter.....	12,250.0	395.8	11,854.2	10,965.0	1,285.0	723.9
Fourth quarter.....	12,157.2	364.6	11,792.6	11,177.1	980.1	893.0
1996						
Total.....	47,770.3	1,530.9	46,239.5	42,732.2	r/ 5,038.2	(NA)
First quarter.....	11,807.9	424.6	11,383.3	10,856.8	r/ 951.2	677.6
Second quarter.....	11,364.6	310.7	11,053.9	10,399.1	r/ 965.5	686.8
Third quarter.....	12,437.6	446.0	11,991.6	10,811.8	r/ 1,625.8	724.5
Fourth quarter.....	12,160.2	349.5	11,810.7	10,664.5	r/ 1,495.7	855.3

NA Not available. r/Revised by 5 percent or more from previously published data.

1/Represents gross production of sulfuric acid less acid produced through decomposition and spent acid used in fortification.

2/Spent acid fortified by the addition of sulfur trioxide.

Note: Detail may not add to total because of independent rounding.

Table 10. Production, Exports, Imports, and Apparent Consumption of Fertilizer Materials: 1997 and 1996  
 [Quantity in thousands of metric tons

Product code	Product description	Production (quantity)	Exports of domestic merchandise (quantity) 1/	Percent exports to production (quantity)	Imports for consumption (quantity) 2/	Apparent consumption (quantity) 3/	Percent imports to apparent consumption (quantity)
1997							
28731 31	Ammonia, synthetic anhydrous.....	16,230.3	(D)	(D)	(D)	(D)	(D)
28731 44	Ammonium nitrate, original solution.....	7,805.9	47.5	0.6	708.1	8,466.6	8.4
28731 66	Nitrogen solutions, ammonium nitrate/urea solutions.....	3,290.4	57.5	1.7	780.4	4,013.3	19.4
28731 57	Ammonium sulfate.....	2,459.2	868.3	35.3	478.4	2,069.4	23.1
28732 --	Urea.....	7,429.8	932.7	12.6	2,533.1	9,030.2	28.1
28741 --	Phosphoric acid.....	11,937.5	(D)	(D)	24.6	(D)	(D)
28742 15	Normal and enriched superphosphate/4...	(D)	(D)	(D)	(D)	(D)	(D)
28742 41	Concentrated superphosphate/4.....	1,469.3	592.2	40.3	-	877.1	-
28742 52	Diammonium phosphates.....	14,097.0	9,439.2	67.0	56.6	4,714.4	1.2
28193 --	Sulfuric acid, gross.....	43,561.7	117.8	0.3	2,014.6	45,458.5	4.4
1996							
28731 31	Ammonia, synthetic anhydrous.....	16,259.4	(D)	(D)	(D)	(D)	(D)
28731 44	Ammonium nitrate, original solution.....	7,709.1	61.9	0.8	720.6	8,367.8	8.6
28731 66	Nitrogen solutions, ammonium nitrate/urea solutions.....	3,311.1	33.1	1.0	628.2	3,906.3	16.1
28731 57	Ammonium sulfate.....	2,414.9	824.4	34.1	373.4	1,963.9	19.0
28732 --	Urea.....	7,755.0	1,470.5	19.0	2,521.1	8,805.6	28.6
28741 --	Phosphoric acid.....	11,984.1	(D)	(D)	50.0	(D)	(D)
28742 15	Normal and enriched superphosphate/4...	(D)	(D)	(D)	(D)	(D)	(D)
28742 41	Concentrated superphosphate/4.....	1,670.4	687.6	41.2	-	982.8	-
28742 52	Diammonium phosphates .....	13,638.1	7,917.3	58.1	76.5	5,797.3	1.3
28193 --	Sulfuric acid, gross.....	43,337.0	627.5	1.4	1,629.6	44,339.1	3.7

- Represents zero. D Withheld to avoid disclosing data for individual companies.

1/Source: Bureau of the Census report EM 545, U.S. Exports.

2/Source: Bureau of the Census report IM 145, U.S. Imports for Consumption.

3/Apparent consumption is derived by subtracting exports from manufacturers' production plus imports. Apparent consumption does not include any adjustments for changes in inventories.

4/Product code 28742 15 "Normal and enriched superphosphates" is combined with product code 28742 41 "Concentrated superphosphates" to avoid disclosing data for individual companies.

Note: For comparison of SIC product code numbers, HTSUSA import numbers, and Schedule B export numbers, see Table 11.

Table 11. Comparison of Standard Industrial Classification-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 1997

Product code	Product description	Export number 1/	Import number 2/
28731 11	Nitric acid.....	(NA)	2808.00.0010
28731 31	Anhydrous ammonia, synthetic.....	2814.10.0000 2814.20.0000	2814.10.0000 2814.20.0000
28731 44	Ammonium nitrate, original solution.....	3102.30.0000	3102.30.0000
28731 57	Ammonium sulfate.....	3102.21.0000	3102.21.0000
28731 66	Nitrogen solutions, ammonium nitrate/ urea solutions.....	3102.80.0000	3102.80.0000
28732 --	Urea.....	3102.10.0000	3102.10.0000
28742 15	Normal and enriched superphosphates.....	3103.10.0010	3103.10.0010
28742 41	Concentrated superphosphates.....	3103.10.0020	3103.10.0020
28742 51	Monoammonium phosphates.....	(NA)	3105.40.0010
28742 52	Diammonium phosphates.....	3105.30.0000	3105.30.0000
28741 --	Phosphoric acid.....	2809.20.0010 2809.20.0020 2809.20.0030	2809.20.0010 2809.20.0020 2809.20.0030
28193 --	Sulfuric acid, gross.....	2807.00.0000	2807.00.0000

NA Not available.

1/Source: 1997 edition, Harmonized System-Based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.

2/Source: Harmonized Tariff Schedule of the United States, Annotated (1997).