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**FERTILIZER MATERIALS
MA28B
ANNUAL REPORT 1993**

Issued August 1994

SCOPE OF SURVEY—The statistics in this publication were collected on annual form MA28B. This survey covers establishments manufacturing inorganic fertilizer chemicals, phosphatic fertilizer materials, and sulfuric acid; except spent sulfuric acid recovered by hydrolysis and evaporation. The panel for this survey consist of all known producers of these products, approximately 231 establishments.

SURVEY METHODOLOGY—Data for the 1993 annual may include estimates for reports which were not received in time for tabulation. Data for the missing reports are "imputed" based on quarter-to-quarter movement shown by reporting firms. Data cells with imputation greater than 20 percent are footnoted.

REVISIONS—Data for previous quarters may be revised due to corrected data from respondents, including data for reports received to late to include in the original publication. Figures which have been revised by more than 5 percent are footnoted.

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SUMMARY OF FINDINGS

United States production of sulfuric acid in 1993 totaled 39,347.6 thousand short tons (100 percent H₂SO₄), approximately 11.6 percent below the 1992 figure of 44,523.7 thousand short tons. Value of shipments (including interplant transfers) in 1993 amounted to \$479.8 million, as compared to the 1992 value of \$528.7 million.

Value of shipments of synthetic ammonia, nitric acid, and ammonium compounds increased 4.4 percent to \$2,753.8 million in 1993 from the 1992 level of \$2,637.0 million. Shipments of urea decreased 10.7 percent to \$621.2 million in 1993, and shipments of phosphoric acid decreased 17.9 percent to \$969.3 million.

Production of superphosphate and other phosphatic fertilizer materials for 1993 decreased 10.8 percent to 8,645.1 thousand short tons (100 percent P₂O₅). Value of shipments amounted to \$2,042.9 million in 1993, as compared to the 1992 value of \$2,530.1 million.

Table 1. SHIPMENTS AND PRODUCTION OF PRINCIPAL FERTILIZER MATERIALS: 1989 TO 1993
(Quantity in thousands of short tons; value in millions of dollars)

Product code	Product description	Year	Total production	Total shipments including interplant transfers	
				Quantity	Value (f.o.b. plant)
28731 31	Ammonia, synthetic anhydrous (1).....	1993	16,858.0	10,072.4	1,134.0
		1992	17,924.2	10,642.5	1,095.4
		1991	17,169.2	10,002.2	1,036.0
		1990	17,003.3	10,381.6	1,072.1
		1989	16,467.0	9,599.4	1,009.7
28731 50	Ammonium nitrate, original solution (2).....	1993	8,255.2	(X)	(X)
		1992	7,980.6	(X)	(X)
		1991	7,819.2	(X)	(X)
		1990	7,713.7	(X)	(X)
		1989	7,871.0	(X)	(X)
28731 57	Ammonium sulfate (1).....	1993	2,424.1	2,415.3	150.4
		1992	2,391.0	2,239.3	139.6
		1991	2,243.0	2,251.3	129.9
		1990	2,519.0	2,528.7	130.1
		1989	2,383.8	2,282.2	142.1
28732 --	Urea (100%).....	1993	8,286.4	5,215.2	621.2
		1992	8,766.3	5,343.0	695.7
		1991	8,132.8	5,431.5	722.6
		1990	8,216.8	5,361.8	639.5
		1989	8,003.7	5,230.7	624.6
28731 11	Nitric acid (100%).....	1993	8,253.9	668.1	88.0
		1992	8,136.0	672.0	85.4
		1991	7,926.6	623.1	81.8
		1990	7,931.0	647.4	80.6
		1989	8,348.6	743.1	84.6
28741 81 28741 85	Phosphoric acid (100% P2O5).....	1993	11,515.1	3,687.5	969.3
		1992	12,825.9	4,375.0	1,181.5
		1991	12,109.4	4,397.6	1,282.0
		1990	12,034.5	4,169.7	1,226.3
		1989	11,736.4	4,306.9	1,300.3
28193 --	Sulfuric acid, gross (100%).....	1993	39,347.6	11,407.5	479.8
		1992	44,523.7	10,950.2	528.7
		1991	43,466.1	11,536.3	586.5
		1990	44,336.9	11,878.6	589.4
		1989	43,301.2	11,841.6	638.1
28742 --	Superphosphates and other fertilizer materials (100% P2O5).....	1993	8,645.1	8,666.0	2,042.9
		1992	9,696.0	9,665.6	2,530.1
		1991	9,043.9	9,017.0	2,832.4
		1990	8,981.5	9,015.8	2,711.2
		1989	8,362.0	8,247.0	2,449.3

r) Revised by 5 percent or more from previously published figures. (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 solution produced for all purposes.

Table 2. PRODUCTION AND SHIPMENTS OF FERTILIZER MATERIALS: 1993 AND 1992

(Quantity in thousands of short tons; value in millions of dollars)

Product code	Chemical and basis	1993			1992		
		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).....	39,347.6	11,407.5	479.8	44,523.7	10,950.2	528.7
28193 11	Oleum under 40 percent.....	1,253.7	767.4	44.9	1,249.3	811.9	50.6
28193 15	Oleum 40 percent.....	(D)	(D)	(D)	(D)	(D)	(D)
28193 17	Oleum over 40 percent.....	(D)	(D)	(D)	(D)	(D)	(D)
28193 31	Other than oleum (1).....	37,816.8	10,370.1	418.0	42,888.9	9,793.9	456.8
28193 51	Sulfuric acid produced through decomposition of alkylation acid and other spent acids, including sulfuric acid sludge.....	(D)	(X)	(X)	(D)	(X)	(X)
28731 --	Synthetic ammonia, nitric acid, and ammonium compounds.....	(X)	(X)	2,753.8	(X)	(X)	2,637.0
28731 11	Nitric acid (100% HNO ₃).....	2) 8523.87	668.1	86.0	2) 8136.0	672.0	85.4
28731 31	Ammonia, synthetic anhydrous (100% NH ₃)(3).....	16,858.0	10,072.4	1,134.0	17,924.2	10,642.5	1,095.4
28731 30	Fertilizer use.....	15,089.8	8,972.4	1,011.7	16,114.6	9,535.3	974.9
28731 32	Other uses.....	1,768.2	1,100.0	122.3	1,809.6	1,107.3	120.5
	Ammonium nitrate:						
28731 50	Original solution (100% NH ₄ NO ₃)(4).....	8,255.2	(X)	(X)	7,980.6	(X)	(X)
	Fertilizer use (100% NH ₄ NO ₃):						
	Solution.....	3,913.7	268.8	24.2	3,759.6	269.3	24.1
28731 52	Solution produced for sale.....	226.4	(D)	(D)	227.9	(D)	(D)
28731 54	Solution produced for consumption.....	3,687.2	(D)	(D)	3,531.7	(D)	(D)
28731 51	Solid.....	2,225.8	2,169.0	256.3	2,212.3	2,346.1	274.1
28731 53	Explosives and other uses (solution and solid).....	2,118.4	1,993.3	234.9	2,001.9	1,984.4	253.0
28731 55	Nitrogen solutions (100% N) (including mixtures containing urea).....	3,584.3	3,440.5	748.3	3,381.7	3,227.9	644.2
28731 65	Solutions containing ammonia (5).....	127.4	106.1	24.5	117.8	115.0	23.2
28731 66	Ammonium nitrate/urea solutions.....	3,456.9	3,334.4	723.8	3,264.0	3,112.9	621.0
28731 73	Ammonium nitrate/calcium nitrate solutions.....	(5)	(5)	(5)	(5)	(5)	(5)
28731 67	All other two component products.....	(5)	(5)	(5)	(5)	(5)	(5)
28731 57	Ammonium sulfate, synthetic and byproduct other than coke oven byproduct (100% (NH ₄) ₂ SO ₄)(3).....	2,424.1	2,415.3	150.4	2,391.0	2,239.3	139.5
28731 56	Synthetic.....	(D)	(D)	(D)	(D)	(D)	(D)
28731 58	Byproduct, other than coke oven.....	(D)	(D)	(D)	(D)	(D)	(D)
28731 69	Other ammonium compounds (including ammonium chloride, gray and white).....	(X)	(X)	150.0	(X)	(X)	145.4
28732 --	Urea (100%).....	8,286.4	5,215.2	621.2	8,766.3	5,343.0	695.7
	For fertilizer use:						
28732 16	Solutions produced as intermediate in nitrogen solutions.....	3,123.8	(D)	(D)	3,170.6	(D)	(D)
28732 18	Solid.....	4,231.3	4,230.2	487.7	4,558.4	4,298.5	557.1
	Other uses:						
28732 21	Feed (solid and solution).....	263.1	(D)	(D)	248.7	(D)	(D)
28732 22	All other (solid and solution).....	668.2	679.4	89.4	788.6	757.3	99.2

Table 2. PRODUCTION AND SHIPMENTS OF FERTILIZER MATERIALS: 1993 AND 1992

(Quantity in thousands of short tons; value in millions of dollars)

Product code	Chemical and basis	1993			1992		
		Total Production	Total Shipments Including Interplant Transfers		Total Production	Total Shipments Including Interplant Transfers	
			Quantity	Value		Quantity	Value
28741 --	Phosphoric acid (100% P2O5).....	11,515.1	3,687.5	969.3	12,825.9	4,375.0	1,181.5
28741 81	Thermal.....	322.1	148.1	123.5	340.3	143.6	r)113.4
28741 85	Wet.....	11,193.0	3,539.4	845.8	12,485.6	4,231.4	1,068.1
	By use:						
28741 86	Fertilizer.....	10,324.7	3,000.8	652.0	11,627.8	3,710.6	879.3
28741 87	Feed and other.....	868.3	538.6	193.8	857.8	520.8	188.8
	By grade:						
28741 88	Ortho (less than 65% P2O5).....	10,068.0	2,692.0	600.6	11,394.6	3,356.7	830.5
28741 89	Super (65% or more P2O5).....	1,125.0	847.4	245.2	1,091.0	874.7	237.6
28742 --	Superphosphates and other phosphatic fertilizer materials:						
	Gross weight.....	16,993.5	16,801.0	2,042.9	(X)	(X)	(X)
	Phosphoric oxide content (100% P2O5).....	8,645.1	8,666.0	(6)	9,696.0	9,665.6	2,530.1
28742 15	Normal and enriched superphosphates: AND						
28742 41	Concentrated superphosphates:						
	Gross weight.....	1,532.1	1,368.8	153.1	(X)	(X)	(X)
	Phosphoric oxide content (100% P2O5).....	765.4	753.5	(6)	1,025.0	962.7	210.3
28742 51	Monoammonium phosphates:						
	Gross weight.....	3,046.3	3,065.9	359.2	(X)	(X)	(X)
	Phosphoric oxide content (100% P2O5).....	1,460.9	1,468.4	(6)	1,303.1	1,306.9	326.8
28742 52	Diammonium phosphates:						
	Gross weight.....	12,026.3	12,021.3	1,456.4	(X)	(X)	(X)
	Phosphoric oxide content (100% P2O5).....	6,124.6	6,162.0	(6)	7,069.6	7,103.8	1,916.9
28742 55	Other ammonium phosphates: AND						
28742 61	Other phosphatic fertilizer materials:						
	Gross weight.....	388.7	345.0	74.2	(X)	(X)	(X)
	Phosphoric oxide content (100% P2O5).....	294.1	282.1	(6)	298.2	292.2	76.1

(D) Data withheld to avoid disclosing figures for individual companies. r) Revised by 5 percent or more from previously published figures. (X) Not applicable.

(1) Figures 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 solution 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) "Ammonium nitrate/calcium nitrate solutions" (product code 28731 73) and "All other two component products" (product code 28731 67) are combined with "solutions containing ammonia" (product code 28731 65) to avoid disclosing figures for individual companies.

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

**Table 3. QUANTITIES OF SELECTED FERTILIZER MATERIALS PRODUCED
AND CONSUMED IN THE SAME PLANT: 1993 AND 1992**

Product code	Product description	Basis	Consumed in producing plants (thousands of short tons)	
			1993	1992
28193 --	Sulfuric acid, gross (new and fortified).....	100% H ₂ SO ₄	26,961.6	32,769.7
28731 11	Nitric acid.....	100% HNO ₃	7,919.5	7,629.6
28731 30	Ammonia (synthetic) anhydrous (1).....	100% NH ₃	6,944.0	7,306.4
28731 32				
	Ammonium nitrate:			
28731 52	Fertilizer use solution (2).....	100% NH ₄ NO ₃	3,644.7	3,488.7
28731 54				
28731 51	Fertilizer use solid.....	do.....	(D)	(D)
28731 53	Explosives and other uses (solution and solid).....	do.....	(D)	(D)
28731 57	Ammonium sulfate (1).....	100% (NH ₄) ₂ SO ₄ ...	(D)	(D)
	Urea:			
28732 16	Fertilizer use, solution and solid.....	100% Urea.....	2,988.1	3,214.8
28732 18				
	Phosphoric acid.....			
28741 81	Thermal.....	do.....	(D)	195.2
28741 85	Wet.....	do.....	(D)	8,356.4
28742 --	Superphosphates and other fertilizer materials.....	do.....	34.2	36.6

(D) Data withheld to avoid disclosing figures for individual companies. r) Revised by 5 percent or more from previously published figures.

(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: 1993 AND 1992**
(Quantity in thousands of short tons; value in millions of dollars)

Product code	Product description	Basis	Year	Interplant transfers	
				Quantity	Value (f.o.b. plant)
28193 --	Sulfuric acid, gross (new and fortified).....	100% H ₂ SO ₄	1993	2,066.8	51.2
			1992	1,633.3	45.3
28193 11	Oleum under 40 percent.....	do.....	1993	(D)	(D)
			1992	(D)	(D)
28193 15	Oleum 40 percent.....	do.....	1993	(D)	(D)
			1992	(D)	(D)
28193 17	Oleum over 40 percent.....	do.....	1993	(D)	(D)
			1992	(D)	(D)
28193 31	Other than oleum (1).....	do.....	1993	2,008.2	48.5
			1992	1,596.7	43.5
28731 31	Ammonia, synthetic anhydrous (2).....	100% NH ₃	1993	1,002.0	102.3
			1992	1,299.9	122.9
28731 30	Fertilizer use.....	do.....	1993	(D)	(D)
			1992	(D)	(D)
28731 32	Other uses.....	do.....	1993	(D)	(D)
			1992	(D)	(D)
28731 57	Ammonium sulfate (2).....	100% (NH ₄) ₂ SO ₄	1993	(D)	(D)
			1992	(D)	(D)
28731 11	Nitric acid.....	100% HNO ₃	1993	(D)	(D)
			1992	(D)	(D)
28732 --	Urea.....	100% Urea.....	1993	(D)	(D)
			1992	(D)	(D)
28741 81 28741 85	Phosphoric acid.....	100% P ₂ O ₅	1993	(D)	(D)
			1992	(D)	(D)
28742 --	Superphosphates and other phosphatic fertilizer materials.....	do.....	1993	(D)	(D)
			1992	(D)	(D)

(D) Data withheld to avoid disclosing figures for individual companies.

(1) Figures 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: 1993 AND 1992**
(Quantity in thousands of short tons of 100% H₂SO₄; value in millions of dollars)

State	1993		1992	
	Quantity	Value	Quantity	Value
United States.....	11,407.5	493.5	10,950.2	528.7
Arizona.....	(D)	(D)	(D)	(D)
California.....	684.6	38.6	590.0	40.4
Florida.....	433.6	8.7	435.6	13.4
Georgia.....	332.5	13.1	(D)	(D)
Illinois.....	(D)	(D)	(D)	(D)
Louisiana.....	1,718.8	96.4	1,686.9	97.3
New Jersey.....	(D)	(D)	(D)	(D)
Ohio.....	346.9	27.6	366.1	23.5
Texas.....	1,729.9	88.5	1,788.1	122.3
Virginia.....	(D)	(D)	(D)	(D)
Washington.....	(D)	(D)	(D)	(D)
Other states.....	3,921.9	153.8	3,739.3	146.8

(D) Data withheld to avoid disclosing figures for individual companies.

Table 6. PRODUCTION OF NEW SULFURIC ACID, BY STATES: 1993 AND 1992
 (Thousands of short tons of 100% H₂SO₄)

State	1993 (1)	1992 (1)
United States.....	36,697.8	41,347.5
Arizona.....	1,923.3	1,841.1
California.....	569.4	618.8
Florida.....	16,039.8	19,946.0
Georgia.....	504.1	535.1
Illinois.....	(D)	(D)
Louisiana.....	4,813.5	5,555.4
Missouri.....	(D)	(D)
New Jersey.....	(D)	(D)
New Mexico.....	(D)	(D)
Ohio.....	305.3	349.0
Oklahoma and Texas.....	1,911.2	1,897.9
Virginia.....	(D)	(D)
Washington.....	(D)	(D)
Other states.....	8,274.6	8,419.2

(D) Data withheld to avoid disclosing figures for individual companies.

(1) Includes data for Government-owned, privately-operated plants.

Table 7. PRIMARY PRODUCTION OF INORGANIC FERTILIZER CHEMICALS, BY QUARTER: 1993 AND 1992

(Thousands of short tons)

Product code	Product description	Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
28731 31	Ammonia, synthetic anhydrous (100% NH ₃): Production.....	1993	16,858.0	4,195.5	4,000.4	4,135.7	4,526.4	
		1992	17,924.2	4,590.9	4,592.1	4,246.7	4,494.5	
		Stocks on hand, end of month.....	1993	(NA)	1,994.5	1,243.2	1,138.1	1,142.4
			1992	(NA)	1,614.7	908.7	963.7	1,419.9
28731 30	Fertilizer use: Production.....	1993	15,089.8	3,801.5	3,573.1	3,663.3	4,052.0	
		1992	16,114.6	4,159.1	4,189.1	3,795.0	3,971.4	
		Stocks on hand, end of month.....	1993	(NA)	1,804.0	1,085.4	956.2	987.8
			1992	(NA)	1,475.1	810.7	841.1	1,264.6
28731 32	Other uses: Production.....	1993	1,768.2	394.0	427.4	472.4	474.4	
		1992	1,809.6	431.8	403.0	451.7	523.1	
		Stocks on hand, end of month.....	1993	(NA)	(S)	(S)	181.9	(S)
			1992	(NA)	139.6	98.0	122.6	155.3
28731 50	Ammonium nitrate (100% NH ₄ NO ₃): Original solution (1): Production.....	1993	8,257.8	2,146.3	2,055.2	1,872.3	2,184.1	
		1992	7,980.6	2,015.8	2,030.9	1,942.8	1,991.1	
		Stocks on hand, end of month.....	1993	(NA)	215.4	148.1	274.0	317.2
			1992	(NA)	217.4	123.1	220.0	230.5
28731 52	Fertilizer use: Solution produced for sale as such for direct application: Production.....	1993	226.4	61.8	60.6	52.3	51.8	
		1992	227.9	60.6	65.2	60.4	41.8	
		Stocks on hand, end of month.....	1993	(NA)	(D)	(D)	(S)	(S)
			1992	(NA)	(S)	(S)	(S)	(S)
28731 54	Solution produced for consumption in the manufacture of nitrogen solutions or other fertilizer materials: Production.....	1993	3,687.2	936.9	959.6	822.0	968.8	
		1992	3,531.7	884.0	926.4	828.3	893.0	
		Stocks on hand, end of month.....	1993	(NA)	31.3	38.1	(S)	(S)
			1992	(NA)	64.4	41.7	59.7	71.9
28731 51	Solid: Production.....	1993	2,225.8	643.4	538.8	482.8	560.8	
		1992	2,212.3	611.4	589.7	467.3	543.9	
		Stocks on hand, end of month.....	1993	(NA)	103.7	(S)	93.8	112.0
			1992	(NA)	62.3	30.1	75.5	114.2
28731 53	Explosives and other uses (solutions and solids)(2): Production.....	1993	2,118.4	504.2	496.2	515.2	602.8	
		1992	2,001.9	463.7	458.3	565.8	514.1	
		Stocks on hand, end of month.....	1993	(NA)	(S)	(S)	(S)	(S)
			1992	(NA)	(S)	(S)	(S)	(S)

Table 7. PRIMARY PRODUCTION OF INORGANIC FERTILIZER CHEMICALS, BY QUARTER: 1993 AND 1992

(Thousands of short tons)

Product code	Product description	Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
28731 56 28731 58	Ammonium sulfate (100% (NH ₄) ₂ SO ₄): Production.....	1993	2,424.1	584.6	620.7	605.6	613.2
		1992	2,391.0	576.1	618.9	599.7	596.3
	Stocks on hand, end of month.....	1993	(NA)	98.9	49.6	170.6	176.8
		1992	(NA)	122.4	102.6	187.5	212.3
28731 11	Nitric acid (100% HNO ₃): Production.....	1993	8,523.9	2,112.6	2,179.8	1,946.8	2,284.6
		1992	8,136.0	2,043.8	2,063.4	1,991.8	2,037.0
	Stocks on hand, end of month.....	1993	(NA)	(X)	(X)	(X)	(X)
		1992	(NA)	(X)	(X)	(X)	(X)
28731 55	Nitrogen solutions (including mixtures containing urea) (100% N): Production.....	1993	3,584.3	848.8	864.0	851.6	1,020.0
		1992	3,381.8	845.6	905.8	790.4	839.9
	Stocks on hand, end of month.....	1993	(NA)	380.1	160.9	387.1	335.7
		1992	(NA)	360.4	206.1	396.4	345.4
28731 65	Solutions containing ammonia (3): Production.....	1993	127.4	10.6	11.9	53.9	51.0
		1992	117.8	21.7	37.8	33.4	24.9
	Stocks on hand, end of month.....	1993	(NA)	18.8	13.2	8.2	10.1
		1992	(NA)	11.5	21.2	18.4	19.8
28731 66	Solutions containing ammonium nitrate/ urea: Production.....	1993	3,456.9	838.2	852.2	797.6	969.0
		1992	3,264.0	823.9	868.0	757.0	815.0
	Stocks on hand, end of month.....	1993	(NA)	361.3	147.7	378.9	325.6
		1992	(NA)	348.9	184.9	378.0	325.6
28731 73	Solutions containing ammonium nitrate/ calcium nitrate: Production.....	1993	(3)	(3)	(3)	(3)	(3)
		1992	(3)	(3)	(3)	(3)	(3)
	Stocks on hand, end of month.....	1993	(NA)	(X)	(X)	(X)	(X)
		1992	(NA)	(X)	(X)	(X)	(X)
28731 67	All other two-component products: Production.....	1993	(3)	(3)	(3)	(3)	(3)
		1992	(3)	(3)	(3)	(3)	(3)
	Stocks on hand, end of month.....	1993	(NA)	(3)	(3)	(3)	(3)
		1992	(NA)	(3)	(3)	(3)	(3)
28741 --	Phosphoric acid (100% P ₂ O ₅): Production.....	1993	11,515.1	2,872.0	3,014.1	2,688.1	2,940.9
		1992	12,825.9	3,207.1	3,176.3	3,190.9	3,251.7
	Stocks on hand, end of month.....	1993	(NA)	303.2	284.7	274.6	248.4
		1992	(NA)	246.6	246.1	264.4	303.5
28741 81	Thermal: Production.....	1993	322.1	85.6	86.4	83.3	66.7
		1992	340.3	92.8	85.1	72.0	90.4
	Stocks on hand, end of month.....	1993	(NA)	13.0	11.6	13.0	13.6
		1992	(NA)	14.1	10.3	13.9	13.1

Table 7. PRIMARY PRODUCTION OF INORGANIC FERTILIZER CHEMICALS, BY QUARTER: 1993 AND 1992
(Thousands of short tons)

Product code	Product description	Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
28741 85	Wet: Production.....	1993	11,193.0	2,786.4	2,927.7	2,604.8	2,874.2	
		1992	12,485.6	3,114.3	3,091.2	3,118.9	3,161.3	
		Stocks on hand, end of month.....	1993	(NA)	290.2	273.1	261.6	234.8
			1992	(NA)	232.5	235.8	250.5	290.4
28741 86	Fertilizer: Production.....	1993	10,324.6	2,562.8	2,722.5	2,407.3	2,632.0	
		1992	11,627.8	2,884.6	2,902.0	2,910.8	2,930.3	
		Stocks on hand, end of month.....	1993	(NA)	(D)	(D)	(D)	(D)
			1992	(NA)	(D)	(D)	(D)	(D)
28741 87	Feed and other: Production.....	1993	868.3	224.9	201.1	196.6	245.7	
		1992	857.8	229.6	189.2	208.1	230.9	
		Stocks on hand, end of month.....	1993	(NA)	(D)	(D)	(D)	(D)
			1992	(NA)	(D)	(D)	(D)	(D)
28741 88	By grade: Ortho (less than 65% P2O5): Production.....	1993	10,068.0	2,515.4	2,653.5	2,336.9	2,562.2	
		1992	11,394.6	2,670.8	2,882.7	2,896.7	2,944.4	
		Stocks on hand, end of month.....	1993	(NA)	236.9	232.0	227.9	201.4
			1992	(NA)	158.7	185.9	204.7	241.0
28741 89	Super (more than 65% P2O5): Production.....	1993	1,125.0	271.1	274.6	267.7	311.5	
		1992	1,091.0	406.6	221.7	233.0	229.6	
		Stocks on hand, end of month.....	1993	(NA)	53.4	41.1	33.7	33.4
			1992	(NA)	73.8	49.9	45.8	49.4
28732 --	Urea (100% urea): Production.....	1993	8,286.4	2,132.6	2,048.7	1,894.9	2,210.2	
		1992	8,766.3	2,324.5	2,252.7	1,998.8	2,190.2	
		Stocks on hand, end of month.....	1993	(NA)	342.2	329.7	532.9	542.0
			1992	(NA)	423.5	337.8	363.9	411.2
28732 16	For fertilizer use: Solutions produced as intermediate in nitrogen solutions: Production.....	1993	3,123.8	822.4	759.7	674.3	867.4	
		1992	3,170.6	831.0	825.0	735.7	778.9	
		Stocks on hand, end of month.....	1993	(NA)	(D)	(D)	(D)	(D)
			1992	(NA)	(D)	(D)	(D)	(D)
28732 18	Solid: Production.....	1993	4,231.3	1,042.6	1,069.6	989.5	1,129.5	
		1992	4,558.4	1,221.4	1,176.4	1,018.0	1,142.5	
		Stocks on hand, end of month.....	1993	(NA)	243.4	262.9	396.3	443.0
			1992	(NA)	310.9	223.9	275.0	393.3
28732 21	Other uses: Feed (solid and solution): Production.....	1993	263.1	67.0	48.4	67.1	80.6	
		1992	248.7	91.1	48.8	51.3	57.5	
		Stocks on hand, end of month.....	1993	(NA)	5.4	3.6	12.9	6.6
			1992	(NA)	9.6	4.0	8.0	8.8

Table 7. PRIMARY PRODUCTION OF INORGANIC FERTILIZER CHEMICALS, BY QUARTER: 1993 AND 1992
(Thousands of short tons)

Product code	Product description	Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
28732 22	All other (solid and solution): Production.....	1993	668.2	200.6	171.0	164.0	132.6
		1992	788.6	181.0	202.5	193.8	211.3
	Stocks on hand, end of month.....	1993	(NA)	(D)	(D)	(D)	(S)
		1992	(NA)	(D)	(D)	(D)	(D)

Note: The 1992 and 1991 stocks on hand, end of quarter, were originally published in the Current Industrial Report Series, MQ28B, "Fertilizer Materials." Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.
(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

(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 (product code 28731 55).

(2) Excludes data for government-owned, privately operated plants.

(3) "Ammonium nitrate/calcium nitrate solutions" (product code 29731 73) and "All other two-component products" (product code 28731 67) combined with "Solutions containing ammonia" (product code 28731 65) to avoid disclosing figures for individual companies.

Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF SUPERPHOSPHATES AND OTHER PHOSPHATIC FERTILIZER MATERIALS,
 BY QUARTER: 1993 AND 1992
 (Thousands of short tons)

Product code	Product description	Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
28742 --	Superphosphates and other phosphatic fertilizer materials:						
	Production (100% P2O5).....	1993	8,645.1	2,143.5	2,366.7	1,967.0	2,167.9
		1992	9,696.0	2,428.5	2,465.3	2,344.3	2,457.9
	Shipments, including interplant transfers (100% P2O5).....	1993	8,666.0	2,071.5	2,552.1	1,967.2	2,075.1
		1992	9,665.6	2,421.6	2,458.2	2,403.1	2,382.7
	Stocks on hand, end of quarter (gross weight).....	1993	(NA)	928.7	598.2	611.8	721.4
	1992	(NA)	655.1	634.7	664.8	849.2	
28742 15	Normal and enriched superphosphates: AND						
28742 41	Concentrated superphosphates (triple) (over 40% P2O5):						
	Production (100% P2O5).....	1993	765.4	236.9	204.0	139.5	185.1
		1992	1,025.0	252.2	256.6	247.4	268.9
	Shipments, including interplant transfers (100% P2O5).....	1993	753.5	229.1	195.8	140.0	188.6
		1992	962.7	232.4	241.5	251.4	237.4
	Stocks on hand, end of quarter (gross weight).....	1993	(NA)	132.2	(D)	(D)	85.2
	1992	(NA)	122.0	117.7	104.8	150.2	
28742 51	Ammonium phosphates: Monoammonium phosphates:						
	Production (100% P2O5).....	1993	1,460.9	382.5	355.3	375.3	347.9
		1992	1,303.1	366.0	294.8	308.2	334.2
	Shipments, including interplant transfers (100% P2O5).....	1993	1,468.4	353.8	429.6	360.7	324.3
		1992	1,306.8	385.3	307.6	306.1	307.8
	Stocks on hand, end of quarter (gross weight).....	1993	(NA)	207.9	88.0	180.4	179.6
	1992	(NA)	93.3	74.5	135.9	172.5	
28742 52	Diammonium phosphates:						
	Production (100% P2O5).....	1993	6,124.6	1,441.2	1,709.5	1,399.0	1,574.8
		1992	7,069.6	1,724.6	1,826.1	1,731.7	1,787.2
	Shipments, including interplant transfers (100% P2O5).....	1993	6,162.0	1,418.2	1,807.2	1,428.4	1,508.2
		1992	7,103.8	1,730.0	1,822.2	1,785.9	1,765.7
	Stocks on hand, end of quarter (gross weight).....	1993	(NA)	490.0	331.1	252.0	358.0
	1992	(NA)	421.4	401.5	354.8	439.6	

**Table 8. PRODUCTION, SHIPMENTS, AND STOCKS OF SUPERPHOSPHATES AND OTHER PHOSPHATIC FERTILIZER MATERIALS,
BY QUARTER: 1993 AND 1992
(Thousands of short tons)**

Product code	Product description	Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
28742 55 28742 61	Other ammonium phosphates and other phosphatic fertilizer materials (1):						
	Production (100% P2O5).....	1993	294.1	82.9	98.0	53.2	60.1
		1992	298.2	85.7	87.8	56.9	67.7
	Shipments, including interplant transfers (100% P2O5).....	1993	282.1	70.4	119.6	38.1	54.0
		1992	292.2	73.8	86.9	59.7	71.9
	Stocks on hand, end of quarter (gross weight).....	1993	(NA)	98.6	43.1	70.8	98.6
		1992	(NA)	58.4	41.0	69.3	86.9

Note: The 1992 and 1991 stocks on hand, end of quarter, were originally published in the Current Industrial Report Series, MQ28B, "Fertilizer Materials." Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available.

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

Table 9. PRODUCTION AND STOCKS OF SULFURIC ACID, BY PROCESS, BY QUARTER; 1993 AND 1992
(Thousands of short tons of 100% H₂SO₄)

Quarter and year	Production				Spent acid used in fortification (2)	Stocks (gross) at producing plants at end of period
	Sulfuric acid, gross, new and fortified			New acid (1)		
	Total	Oleum grades	Other than oleum grades			
1993						
Total.....	39,347.6	1,530.8	37,816.8	36,697.8	(D)	(NA)
First Quarter.....	9,572.6	519.6	9,053.0	8,966.4	(D)	720.7
Second Quarter.....	10,216.2	432.2	9,784.0	9,572.1	(D)	687.6
Third Quarter.....	9,140.7	50.6	9,090.1	8,429.7	(D)	737.0
Fourth Quarter.....	10,418.1	528.4	9,889.7	9,729.6	(D)	728.8
1992						
Total.....	44,523.7	1,634.8	42,888.9	41,347.5	(D)	(NA)
First Quarter.....	11,166.0	424.9	10,741.1	10,439.4	(D)	810.2
Second Quarter.....	10,894.0	377.7	10,516.4	10,121.9	(D)	725.1
Third Quarter.....	11,047.2	449.6	10,597.6	10,195.0	(D)	701.7
Fourth Quarter.....	11,416.5	382.7	11,033.8	10,591.2	(D)	814.5

Note: Detail may not add to total due to independent rounding.

(D) Data withheld to avoid disclosing figures for individual companies.

(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.

Table 10. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF FERTILIZER MATERIALS: 1993 AND 1992
(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)
1993							
28731 30							
28731 32	Ammonia, synthetic anhydrous.....	15,283.8	(D)	(D)	(D)	(D)	(D)
28731 50	Ammonium nitrate, original solution.....	7,484.3	66.0	0.9	485.3	7,903.6	6.1
28731 66	Nitrogen solutions, ammonium nitrate/urea solutions.....	3,249.6	28.0	0.9	391.0	3,612.2	10.8
28731 56							
28731 58	Ammonium sulfate.....	2,167.7	758.0	34.5	367.0	1,806.7	20.3
28732 --	Urea.....	7,512.6	659.1	8.8	2,964.1	9,817.6	30.2
28741 81							
28741 85	Phosphoric acid.....	10,439.8	(D)	(D)	16.1	(D)	(D)
28742 15	Normal and enriched superphosphate.....						
AND							
28742 41	Concentrated superphosphate.....	1,389.0	780.3	56.2	-	608.7	-
28742 52	Diammonium phosphates.....	10,903.3	7,238.7	66.4	38.4	3,703.0	1.0
28193 --	Sulfuric acid, gross.....	35,673.3	144.9	0.4	2,430.1	37,958.5	6.4
1992							
28731 30							
28731 32	Ammonia, synthetic anhydrous.....	16,250.4	(D)	(D)	(D)	(D)	(D)
28731 50	Ammonium nitrate, original solution.....	7,235.4	39.9	0.6	443.3	7,638.8	5.8
28731 66	Nitrogen solutions, ammonium nitrate/urea solutions.....	3,065.9	368.7	12.0	108.1	2,805.3	3.9

Table 10. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF FERTILIZER MATERIALS: 1993 AND 1992
(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)
28731 56 28731 58	Ammonium sulfate.....	2,167.7	801.1	37.0	335.8	1,702.4	19.7
28732 --	Urea.....	7,947.7	913.3	11.5	1,560.1	8,594.5	18.2
28741 81 28741 85	Phosphoric acid.....	11,628.2	(D)	(D)	12.5	(D)	(D)
28742 15	Normal and enriched superphosphate..... AND						
28742 41	Concentrated superphosphate (4).....	929.3	1,151.6	123.9	-	(222.3)	-
28742 52	Diammonium phosphates (4).....	6,409.4	11,867.8	185.2	22.5	(5435.9)	(0.4)
28193 --	Sulfuric acid, gross.....	40,366.0	143.4	0.4	1,985.4	42,208.0	4.7

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

- Represents zero. (D) Data withheld to avoid disclosing figures 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) The "Superphosphates and other phosphatic fertilizer materials" production figures are collected and published on a 100% P₂O₅ basis, while the import and export figures are collected and published on a gross weight basis. Due to the difference in the basis, production, import, and export data are not comparable.

Table 11. COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1993

Product code	Product description	Export number (1)	Import number (2)
28731 11	Nitric acid.....	(NA)	2808.00.0010
28731 30		2814.10.0000	2814.10.0000
28731 32	Anhydrous ammonia, synthetic.....	2814.20.0000	2814.20.0000
28731 50	Ammonium nitrate, original solution.....	3102.30.0000	3102.30.0000
28731 56			
28731 58	Ammonium sulfate.....	3102.21.0000	3102.21.0000
28731 66	Nitrogen solutions, ammonium nitrate/ urea solutions.....	3102.80.0000	3102.80.0000
28732 00	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 81		2809.20.0010	2809.20.0010
28741 85	Phosphoric acid.....	2809.20.0020 2809.20.0030	2809.20.0020 2809.20.0030
28193 --	Sulfuric acid, gross.....	2807.00.0000	2807.00.0000

(NA) Not available.

(1) Source: 1993 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 (1993).