

Mineral Industry Surveys

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POTASH IN CROP YEAR 2000

U.S. potash production and sales were about the 1.3 million metric tons,¹ down slightly from crop year 2000 (July 1, 1999-June 30, 2000), according to the U.S. Geological Survey (USGS). Apparent consumption was down slightly.

The USGS developed domestic potash data from voluntary semiannual surveys of U.S. operations. Of the eight survey requests sent to operations for the first half of the crop year (July through December 1999) and the second half of the year (January through June 2000), seven responded and one was estimated. Data from the responding sites for both reporting periods are estimated to represent more than 95% of the total output and sales. Producers were 1) IMC Global Inc. with ores and brines in Michigan, New Mexico, and Utah; 2) Mississippi Chemical Corp. with two mines in New Mexico; 3) Reilly Industries, Inc. with a near-surface brine reserve near Ogden, UT; and 4) Intrepid Oil & Gas, LLC. of Denver, CO, which bought Moab Salt Inc. and its solution mine and mill, from Potash Corporation of Saskatchewan, Inc. of Saskatchewan, Canada, in February 2000.

Potash consumption declined slightly. The previous year's weather patterns of heavy rains and local severe droughts contrived to produce high productivity with less fertilizers, discouraging fertilizer application for this crop year. As of the beginning of this crop year, market prices for crops, which consume potash, were down, reflecting oversupply conditions and lack of international demand. The September 1999 index of Food Grains was 89 (1990-92 index = 100), which translated into the all wheat price of \$2.56 per bushel (National Agriculture Statistics Service, 1999). For Feed Grains and Hay, the index was 82, which translated into corn at \$1.79 per bushel. The farmer's Prices Paid index was 117 (1990-1992 index = 100), which translates into an average farmer being squeezed between high costs and low income. Low crop prices and high costs typically cause a farmer to reduce expenditures on investments such as potash. At the end of this crop year, however, corn production was forecast at a record 10.4

billion bushels, with near-record yield forecast at 141.9 bushels per acre (National Agricultural Statistics Service, 2000). Soybean production was forecast at 2.99 billion bushels, a record. The average yield was 40.7 bushels per acre, the second highest yield since 1994. This crop year was another year of high productivity with less fertilizers.

Exports of domestic potash declined by less than 2% from crop year 1999 while imports declined by about 4% on the same basis. Exports of the four types of potash to Latin America declined, but that region's purchases of muriate of potash (MOP) was still 44% of total exports. Latin America purchased more than 9% as sulfate of potash (SOP) of the exports and about 10% as sulfate of potash-magnesia (SPM). Asia Pacific purchased about 6% of total exports of both MOP and SPM while purchasing less than 10% as SOP. Sales to Europe of the four types of potash declined strongly, but shipments of MOP and SPM to Africa increased. The largest source of potash imports was Canada, totaling about 94% of imports of all types of potash, nearly all of it as MOP. Canada produced about one-third of the world's total MOP production for this report period. Canada has two SOP manufacturers. Canada has not produced nitrates, but a Chilean nitrate producer unloads nitrates in Canada and then tranships the nitrates across the border into the United States simply for easy access to western New York. Russia and Belarus were the source of 5% of potash imports, which was solely MOP. The remaining 1% came from several countries.

It is expected that farmers will use even less potash next year, since they, again, will have to contend with large grain stocks from several years of excellent harvests, low crop prices and high costs for fuel, little or no profits, and reduced foreign demand for the farmer's production of grain or protein.

References Cited

- National Agricultural Statistics Service, 1999, Agricultural Prices—Monthly: U.S. Department of Agriculture, PAP-BB, September 29, p. A1-A2.
———2000, Crop Production—Monthly: U.S. Department of Agriculture, PCP-BB, August 11, p. 1.

¹All tonnages are reported in metric tons, K₂O equivalent, unless otherwise noted.

TABLE 1
SALIENT POTASH STATISTICS 1/ 2/

(Thousand metric tons and thousand dollars, unless otherwise specified)

	Year ending June 30	
	1999	2000
United States:		
Production (gross weight)	2,700	2,700
K ₂ O equivalent	1,300	1,300
Sales by producers (gross weight)	2,600	2,700
K ₂ O equivalent	1,300	1,300
Value 3/ dollars	\$290,000	\$300,000
Average value per ton of product	\$110	\$110
Average value per ton of K ₂ O equivalent	\$230	\$230
Exports 4/	1,100	1,000
K ₂ O equivalent	450	440
Imports for consumption 4/ 5/	7,800	7,500
K ₂ O equivalent	4,700	4,600
Customs value	\$680,000	\$550,000
Consumption, apparent 6/ (gross weight)	9,200 7/	9,100 7/
K ₂ O equivalent	5,400 7/	5,300 7/

1/ Includes muriate and sulfate of potash, potassium magnesium sulfate, and parent salts.

Excludes other chemical compounds and mixtures containing potassium.

2/ Data are rounded to no more than two significant digits.

3/ F.o.b. mine.

4/ Excludes potassium chemicals and mixed fertilizers.

5/ Includes nitrate of potash and mixed sodium-potassium nitrate.

6/ Measured by sales plus imports minus exports.

7/ Data rounded to within 200,000 tons to avoid disclosing proprietary data.

TABLE 2
PRODUCTION OF CRUDE ORE IN NEW MEXICO

(Thousand metric tons)

Period	Crude salts 1/ (mine production)	
	Gross weight	K ₂ O equivalent
Crop year 1999:		
July - December 1998 2/	6,000	700
January - June 1999 2/	6,000	700
Total	12,000	1,400
Crop year 2000:		
July - December 1999 2/	6,000	700
January - June 2000 2/	6,000	700
Total	12,000	1,400

1/ Sylvinite and langbeinite.

2/ Data rounded to no more than one significant digit.

TABLE 3
PRICES OF U.S. POTASH, BY TYPE AND GRADE 1/

(Dollars per metric ton of K₂O equivalent)

Type and grade	1998 2/		1999 3/		2000 3/
	January - June	July - December	January - June	July - December	January - June
Muriate, 60% K ₂ O minimum:					
Standard	144.00	146.00	150.00	145.00	155.00
Granular	171.00	169.00	170.00	150.00	165.00

1/ Average prices, f.o.b. mine, based on sales.

2/ Data rounded to the nearest dollar.

3/ Data rounded to the nearest five dollars.

TABLE 4
SALES OF NORTH AMERICAN POTASH TO U.S. CUSTOMERS, BY GRADE 1/

(Thousand metric tons of K₂O equivalent)

Grade	1998		1999		2000	July 1998 to	July 1999 to
	January - June r/	July - December	January - June	July - December	January - June	June 1999	June 2000
Agricultural:							
Muriate of potash:							
Standard	183	97	150	96	125	247	220
Coarse	1,050	1,100	998	997	1,070	2,090	2,070
Granular	811	670	837	687	1,040	1,510	1,730
Soluble	245	181 r/	235	175	234	416	409
Sulfates of potash 2/	115	NA	NA	NA	NA	NA	NA
Total	2,400	NA	NA	NA	NA	NA	NA
Nonagricultural:							
Standard muriate	287	308	316	285	285	623	570
Soluble muriate	39	51	58	66	66	110	132
Sulfates of potash 2/	16	NA	NA	NA	NA	NA	NA
Total	343	NA	NA	NA	NA	NA	NA

r/ Revised. NA Not available.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes potassium sulfate and potassium magnesium sulfate.

Source: Potash & Phosphate Institute.

TABLE 5
U.S. EXPORTS OF POTASH 1/

(Metric tons, unless otherwise specified)

	Approximate average K ₂ O content (percent)	July - December 1999		January - June 2000		Year ending June 30, 2000	
		K ₂ O		K ₂ O		K ₂ O	
		Product	equivalent e/	Product	equivalent e/	Product	equivalent e/
Potassium chloride, all grades	61	222,000	136,000	183,000	112,000	405,000	247,000
Potassium nitrate	45	5,450	2,450	6,910	3,110	12,400	5,560
Potassium sulfate	51	65,700	33,500	113,000	57,700	179,000	91,200
Potassium magnesium sulfate 2/	22	175,000	38,600	260,000	57,100	435,000	95,700
Total	XX	469,000	210,000	563,000	230,000	1,030,000	440,000

e/ Estimated. XX Not applicable.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Contains exports listed under Harmonized Code Category 3104.10.0000.

Source: U.S. Census Bureau, as adjusted by the U.S. Geological Survey.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF POTASH 1/

(Metric tons, unless otherwise specified)

	Approximate average K ₂ O content (percent)	July - December 1999			January - June 2000			Year ending June 30, 2000		
		Product	K ₂ O equivalent e/	Customs value (thousands)	Product	K ₂ O equivalent e/	Customs value (thousands)	Product	K ₂ O equivalent e/	Customs value (thousands)
Potassium chloride 2/ 3/	61	3,450,000	2,110,000	\$248,000	3,930,000	2,400,000	\$277,000	7,390,000	4,510,000	\$525,000
Potassium sulfate	51	15,900	8,120	4,260	51,800	26,400	11,200	67,700	34,500	15,400
Potassium nitrate	45	4,440	2,000	1,630	20,900	9,390	6,180	25,300	11,400	7,810
Potassium nitrate mixtures	14	72	10	25	9,100	1,270	1,490	9,170	1,280	1,520
Total	XX	3,470,000	2,120,000	254,000	4,010,000	2,440,000	296,000	7,490,000	4,550,000	550,000

e/ Estimated. XX Not applicable.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Purchases of muriate by U.S. companies were subtracted from imports to prevent double counting due to conversion to sulfate of potash.

3/ Contains imports listed under Harmonized Code Category 3104.10.0000.

Source: U.S. Census Bureau, as adjusted by the U.S. Geological Survey.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF POTASH, BY COUNTRY 1/ 2/

(Metric tons)

Country	Potassium chloride		Potassium sulfate		Potassium nitrate		Potassium sodium nitrate		Total		Total value (thousands)			
	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	Customs		C.i.f.	
											1999	2000	1999	2000
Belarus	94,200	96,800	--	--	--	--	--	--	94,200	96,800	\$8,130	\$8,100	\$9,040	\$9,330
Belgium	--	--	--	23	--	--	--	--	--	23	--	7	--	9
Canada	7,360,000	7,010,000	18,700	20,800	35	--	120	105	7,380,000	7,030,000	630,000	499,000	685,000	530,000
Chile	--	50	11,900	300	21,400	19,800	15,500	9,030	48,800	29,200	10,200	7,250	11,400	8,160
Germany	2,320	62	73,500	46,300	40	419	22	10	75,900	46,800	15,300	9,840	17,000	10,500
Israel	18	40	--	--	704	1110	--	--	722	1,150	274	455	342	549
Poland	--	--	--	--	127	111	--	--	127	111	71	60	81	73
Russia	202,000	276,000	--	--	--	--	--	--	202,000	276,000	18,000	23,300	20,200	26,700
United Kingdom	803	597	--	--	--	--	--	--	803	597	93	288	101	317
Other 3/	1	1060	587	262	1,170	3,830	20	22	1,780	5,170	834	1840	922	2250
Total	7,660,000	7,390,000	105,000	67,700	23,500	25,300	15,700	9,170	7,810,000	7,490,000	683,000	550,000	744,000	588,000

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Crop year 1999 contains data from July 1, 1998 to June 30, 1999 and crop year 2000 contains data from July 1, 1999 to June 30, 2000.

3/ Includes Bulgaria (2000), Denmark, China, Finland (2000), France, India, Italy (2000), Japan, Mexico, the Netherlands, Spain (2000), Switzerland (2000).

Source: U.S. Census Bureau, as adjusted by the U.S. Geological Survey.