

# Mineral Industry Surveys

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#### **POTASH IN CROP YEAR 1999**

U.S. potash production and sales were about 1.3 million metric tons, K<sub>2</sub>O equivalent, in the crop year 1999, according to the U.S. Geological Survey (USGS). Imports and exports changed by less than 10% from those of the previous crop year.

The USGS developed domestic potash data from voluntary semiannual surveys of U.S. operations. Of the nine survey requests sent to operations for the first half of the crop year (July through December 1998), eight responded and one was estimated. Data from the responding sites for the first reporting period are estimated to represent more than 95% of the total. For the second half of the crop year (January through June 1999), eight survey requests were sent and seven responded. IMC Kalium Carlsbad Potash Co. stopped hoisting ore through Western Ag-Mineral's original mine shaft at Nash Draw during this second half of the crop year. Those reserves were mined through an underground connection by the IMC Kalium and ore was hoisted up IMC Kalium's shaft. Data were estimated for the nonreporting firm. Data from the responding sites for the second reporting period are estimated to represent more than 95% of the published production total.

Sales declined by less than 10% compared to that of the 1998 crop year. Prices paid for most grains declined and prices for hogs fell strongly, leading to expectations of low prices for grains and animals in crop year 1999. This expectation led farmers to reduce their costs for the next crop cycle. Reducing their fertilizer purchases was a method of lowering costs in the short run.

Exports apparently rose by more than 7% as compared to last year's export data, after adjusting for apparent discrepancies in muriate of potash (MOP) exports to Asia Pacific. About 70% of this year's exports went to Latin America, 20% to the Pacific Basin, and the rest to Europe, Africa, and other regions. Exports to Latin America rose by about 28% as compared to last year's

exports, while exports to the Pacific Basin declined by about 29%. MOP exports were about 55% of the totals of this year's exports, sulfate of potash magnesia (SOPM) about 25%, sulfate of potash (SOP) about 19%, and potassium nitrate about 1%. MOP exports rose by about 24% as compared to last year's exports, SOPM by about 39%, however, SOP fell by about 35% on the same basis, and potassium nitrate by about 6%.

Imports apparently fell by about 10% for the report period compared to crop year 1998, after adjusting for discrepancies in MOP imports and MOP product used as an intermediate to produce domestic potash. This decline was caused by the decrease indemand for grains and the grain-fed cattle exported to Asia following the economic problems of 1997. U.S. farmers purchased less fertilizer to reduce their costs in the short run.

Prices for standard and granular MOP moved up slightly. After the end of this report period, farmers have become reluctant to pay another increase owing to their need to reduce production costs.

At the end of crop year 1999, there were only four potash producers in the United States, working seven production sites. Eddy Potash Mine of Mississippi Chemical Corp. was permanently shut down at the end of calendar year 1997, leaving Mississippi Potash with two mines in New Mexico. IMC Global purchased Western Ag-Mineral in the fall of 1997, which gave IMC Global Inc. the ownership of the Nash Draw Mine, a langbeinite production site, next to IMC Global's mine in New Mexico. IMC Global purchased Harris Chemical in the spring of 1998 which gave them the ownership of the Great Salt Lake Minerals SOP production site near Ogden, UT. Potash Corporation of Saskatchewan, a Canadian firm, owns the Moab Salt Co. in Moab, UT. Reilly Industries, Inc. of Indiana owns Reilly-Wendover potash site east of Wendover, UT.

## TABLE 1 SALIENT POTASH STATISTICS 1/2/

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

		Year ending	June 30
	_	1998	1999
United States:			
Production (Gross weight)		2,900	2,700
K2O equivalent		1,400	1,300
Sales by producers (Gross weight)		2,900	2,600
K2O equivalent		1,400	1,300
Value 3/	dollars	\$330,000	\$290,000
Average value per ton of product		\$110	\$110
Average value per ton of K2O equivalent		\$240	\$230
Exports 4/		1,000	1,100
K2O equivalent		450	450
Imports for consumption 4/5/		8,700	7,800
K2O equivalent		5,300	4,700
Customs value		\$650,000	\$680,000
Consumption, apparent 6/ (Gross weight)		11,000	9,200 7/
K2O equivalent		6,200	5,400 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 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)

	Crude salts 1/					
	(mine production)					
	Gross K2O					
Period	weight	equivalent				
Crop year 1998:						
July - Decenber 1997 2/	7,000	800				
January - June 1998 2/	6,000	700				
Total 3/	13,000	1,500				
Crop year 1999:						
July - December 1998 2/	6,000	700				
January - June 1999 2/	6,000	700				
Total 3/	12,000	1,400				

- 1/ Sylvinite and langbeinite.
- $2/\,Data$  rounded to one significant digit.
- 3/ Column totals.

 $\label{eq:table 3} \textbf{PRICES 1/ OF U.S. POTASH, BY TYPE AND GRADE}$ 

(Dollars per metric ton of K2O equivalent)

	19	97	199	98	1999	
	January -	July -	January -	July -	January -	
Type and grade	June	December	June	December	June	
Muriate, 60% K2O minimum:						
Standard	137.01	139.00	144.00	146.00	150.00 3/	
Granular	144.62	153.00	171.00 r	/ 169.00	170.00 3/	

- r/ Revised.
- 1/Average prices, f.o.b. mine, based on sales.
- 2/Excluding soluble and chemical muriates.
- 3/ Data rounded to the nearest five dolloars.

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

(Thousand metric tons of K2O equivalent)

	19	97	19	98	1999	July 1997	July 1998	
	January -	July -	January -	July -	January -	to	to	
Grade	June	June December		June December		June 1998	June 1999	
Agricultural:								
Muriate of potash:								
Standard	176	129	191	97	NA	320	NA	
Coarse	1,320	1,320	1,110	1,100	NA	2,430	NA	
Granular	1,290	839	998	670	NA	1,840	NA	
Soluble	327	235	271	18	NA	506	NA	
Sulfates of potash 2/	146	93	128	NA	NA	221	NA	
Total	3,260	2,620	2,700	NA	NA	5,320	NA	
Nonagricultural:								
Standard Muriate	314	142	220	308	NA	604	NA	
Soluble Muriate	32	32 34		51	NA	73	NA	
Sulfates of potash 2/	10	9	17	NA	NA	25	NA	
Total	356	185	281	NA	NA	702	NA	

NA Not available.

Source: Potash & Phosphate Institute.

TABLE 5 U.S. EXPORTS OF POTASH 1/

(Metric tons, unless otherwise specified)

	Approximate						
	average						
	K2O	July - Dece	ember 1998	January -	June 1999	Year ending.	June 30, 1999
	content		K2O		K2O		K2O
	(percent)	Product	equivalent e/	Product	equivalent e/	Product	equivalent e/
Potassium chloride, all grades	61	198,000	121,000	180,000	110,000	378,000	230,000
Potassium nitrate	45	6,630	2,980	8,060	3,630	14,700	6,610
Potassium sulfate	51	111,000	56,000	68,000	34,900	179,000	91,000
Potassium magnesium sulfate 2/	22	245,000	54,000	291,000	64,100	537,000	118,000
Total	XX	560,000	234,000	548,000	212,000	1,110,000	446,000

e/ Estimated. XX Not applicable.

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

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Includes potassium sulfate and potassium magnesium sulfate.

 $<sup>1/\,\</sup>mbox{Data}$  are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Contains exports listed under Harmonized Code Category 3104.10.0000.

## $\label{eq:table 6} \text{U.S. IMPORTS FOR CONSUMPTION OF POTASH } 1/$

(Metric tons, unless otherwise specified)

	Approximate average	July	y - December 199	98	Jai	nuary - June 199	ry - June 1999 Yea			r ending June 30, 1999		
	K <sub>2</sub> O	Customs			Customs					Customs		
	content		K2O			K2O	Value		K2O	value		
	(percent)	Product	equivalent e/	(thousands)	Product	equivalent e/	(thousands)	Product	equivalent e/	(thousands)		
Potassium chloride 2/3/	61	3,510,000	2,140,000	\$300,000	4,150,000	2,530,000	\$352,000	7,660,000	4,670,000	\$652,000		
Potassium sulfate	51	34,700	17,700	7,650	70,100	35,700	14,500	105,000	53,400	22,200		
Potassium nitrate	45	6,690	3,010	2,060	16,800	7,560	4,680	23,500	10,600	6,740		
Potassium nitrate mixtures	14	28	4	3	15,700	2,190	2,570	15,700	2,200	2,570		
Total	XX	3,550,000	2,160,000	309,000	4,250,000	2,580,000	374,000	7,810,000	4,740,000	683,000		

e/ Estimated. XX Not applicable.

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

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

#### (Metric tons)

												Total v	alue	
						Potassium						(thousa	ınds)	
	Potassiu	m chloride	Potassiu	n sulfate	Potassiur	tassium nitrate sodium nitrate		Total		Customs		C.i.f.		
Country	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
Belarus	244,000	94,000							244,000	94,000	\$20,900	\$8,130	\$23,000	\$9,040
Belgium			126						126		40		40	
Canada	7,820,000	7,360,000	8,330	18,700	1	35	753	120	7,830,000	7,380,000	566,000	630,000	643,000	685,000
Chile				11,900	20,800	21,400	20,500	15,500	41,300	48,800	7,700	10,200	8,840	11,390
Germany	5,520	2,320	76,000	73,500	2	40		22	81,900	75,900	15,100	15,000	17,000	17,000
Israel	2	18			990	704	8		1,000	722	391	274	501	342
Poland					72	127			72	127	41	71	46	81
Russia	460,000	202,000							460,000	202,000	37,000	18,000	42,000	20,200
United Kingdom	240	803	1						241	803	49	93	54	101
Other	214	1	569	587	407	1,170		20	1,190	1,780	385	834	440	922
Total	8,530,000	7,660,000	85,400	105,000	22,300	23,500	21,000	15,700	8,660,000	7,810,000	648,000	683,000	735,000	744,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

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

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

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

<sup>3/</sup> Contains imports listed under Harmonized Code Category 3104.10.0000.

<sup>2/</sup> Crop year 1998 contains data from July 1, 1997 to June 30, 1998 and crop year 1999 contains data from July 1, 1998 to June 30, 1999.