

Mineral Industry Surveys

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MARKETABLE PHOSPHATE ROCK AND POTASH—CROP YEAR 2014

Because the growth cycles for most agricultural commodities do not coincide with the calendar year, the fertilizer industry tracks fertilizer use by crop year (July 1-June 30 of two consecutive years). Taking that into account, the U.S. Geological Survey compiles phosphate rock and potash data by calendar year and crop year.

Marketable Phosphate Rock

U.S. production of marketable phosphate rock was 28.0 million metric tons (Mt) in crop year 2014 compared with 31.9 Mt in crop year 2013.

Marketable phosphate rock used was 27.4 Mt, compared with 28.4 Mt in crop year 2013. No sales of phosphate rock were reported because all phosphate rock is used internally by the companies that mine it. The manufacturing of wet-process phosphoric acid for fertilizers and animal feed supplements was estimated to have accounted for more than 95% of phosphate rock consumption. The remainder was used to produce elemental phosphorus, or defluorinated phosphate rock.

Phosphate rock data for this report were collected through semi-annual canvasses of U.S. phosphate rock producers. All companies that produced phosphate rock in the United States participated in the voluntary surveys, representing 100% of the production, use, and value data shown in the tables.

Estimated domestic consumption decreased by 3% to 30.4 Mt in crop year 2014, from 31.5 Mt in crop year 2013. Producers' stocks increased by 11% to 7.94 Mt in crop year 2014.

The average unit value of marketable phosphate rock used in the United States was \$80.97 per metric ton, compared with \$96.05 per metric ton in crop year 2013. Imports of phosphate rock decreased by 4% to 2.99 Mt compared with 3.12 Mt in

crop year 2013. No exports of phosphate rock were reported by mining companies in crop year 2014.

Potash

U.S. production of potash was 790,000 metric tons (t) K₂O equivalent in crop year 2014 compared with 960,000 t in crop year 2013. Sales of potash were 820,000 t in crop year 2014 compared with 960,000 t in crop year 2013. Production and sales decreased owing to weather conditions and price uncertainty in the second half of 2013 that caused many farmers to delay potash purchases until 2014.

Exports of potash increased by 37% to 183,000 t from 134,000 t in crop year 2013. Imports were unchanged at 4.67 Mt. The total customs value of potash imports decreased by 51% to \$1,040,000 from \$2,130,000 in crop year 2013, owing to lower world potash prices.

Potash data for this report were collected through semi-annual canvasses of U.S. potash producers. All companies that produced potash in the United States participated in the voluntary surveys, representing 100% of the production, use, and value data show in the tables.

Apparent consumption of all forms of potash decreased by 4% to 5.30 Mt from 5.50 Mt in crop year 2013.

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TABLE 1
SALIENT U.S. PHOSPHATE ROCK STATISTICS¹

(Thousand metric tons and thousand dollars)

	Crop year ²	
	2013	2014
Mine production (crude ore)	150,000	124,000
Marketable phosphate rock production	31,900	28,000
P ₂ O ₅ content	9,120	7,930
Value	3,180,000	2,250,000
Average, dollars per metric ton ³	99.58	80.60
Used by producers	28,400	27,400
P ₂ O ₅ content	8,060	7,720
Value	2,720,000	2,220,000
Average, dollars per metric ton ³	96.05	80.97
Imports for consumption: ^{e,4}	3,120 ^r	2,990
Cost, insurance, and freight value	455,000 ^r	333,000
Average, dollars per metric ton	145.70 ^r	111.24
Consumption ^{e,5}	31,500 ^r	30,400
Stocks, June 30, producers ¹	7,140	7,940

^eEstimated. ^rRevised.

¹Data are rounded to no more than three significant digits, except prices.

²July 1– June 30.

³Average value is based on used values.

⁴Source: U.S. Census Bureau.

⁵Expressed as used plus imports.

TABLE 2
PRODUCTION OF PHOSPHATE ROCK IN THE UNITED STATES¹

(Thousand metric tons and thousand dollars)

Period	Mine production, crude ore		Marketable production, beneficiated			Stocks, end of period, rock
	Rock	P ₂ O ₅ content	Rock	P ₂ O ₅ content	Value ²	
Crop Year 2013	150,000	15,700	31,900	9,120	3,180,000	7,140
Crop Year 2014:						
July–December 2013	67,200	6,950	14,900	4,250	1,250,000	8,730
January–June 2014	57,100	6,090	13,000	3,680	999,000	7,940
Total	124,000	13,000	28,000	7,930	2,250,000	XX

XX Not Applicable.

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

²Based on the per ton sold or used values.

TABLE 3
PHOSPHATE ROCK USED BY PRODUCERS
IN THE UNITED STATES¹

(Thousand metric tons and thousand dollars)

Period	P ₂ O ₅		Value ²
	Rock	content	
Crop Year 2013	28,400	8,060	2,720,000
Crop Year 2014:			
July–December 2013	14,500	4,090	1,230,000
January–June 2014	12,900	3,630	992,000
Total	27,400	7,720	2,220,000

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

²Free on board mine.

TABLE 4
SALIENT POTASH STATISTICS^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

	Year ending June 30	
	2013	2014
United States:		
Production: ³		
Gross weight	2,200	1,800
K ₂ O equivalent	960	790
Sales by producers:		
Quantity: ³		
Gross weight	2,200	1,800
K ₂ O equivalent	960	820
Value ^{3,4}	720,000	540,000
Average value: ⁵		
Gross weight dollars per metric ton	340 ^r	300
K ₂ O equivalent do.	760 ^r	660
Exports:		
Gross weight	232	307
K ₂ O equivalent	134	183
Imports for consumption: ^{6,7}		
Quantity:		
Gross weight	7,720	7,690
K ₂ O equivalent	4,670	4,670
Value, customs	2,130,000	1,040,000
Consumption, apparent: ^{3,8}		
Gross weight	9,600	9,200
K ₂ O equivalent	5,500	5,300

^rRevised. do. Ditto.

¹Includes muriate of potash, sulfate of potash, potassium magnesium sulfate, and some parent salts. Excludes other chemical compounds that contain potassium.

²Data are rounded to no more than three significant digits unless otherwise specified.

³Data are rounded to no more than two significant digits.

⁴Free on board mine.

⁵Rounded to the nearest \$5 to avoid disclosing proprietary data.

⁶Excludes potassium chemicals and mixed fertilizers.

⁷Includes nitrate of potash.

⁸Calculated from sales plus imports minus exports.

TABLE 5
PRICES OF U.S. POTASH, BY TYPE AND GRADE^{1,2}

(Dollars per metric ton of K₂O equivalent)

Type and grade	Crop Year 2013		Crop Year 2014	
	July–	January–	July–	January–
	December 2012	June 2013	December 2013	June 2014
Muriate, 60% K ₂ O minimum:				
Standard	715	660	615	560
Granular	655	610	530	555

¹Average prices, free on board mine, based on sales.

²Data rounded to nearest \$5.

TABLE 6
U.S. EXPORTS OF POTASH¹

(Metric tons, unless otherwise specified)

Type	Approximate average K ₂ O content (percent)	July-December 2013		January-June 2014		Year ending June 30, 2014	
		Product	K ₂ O equivalent ^e	Product	K ₂ O equivalent ^e	Product	K ₂ O equivalent ^e
Potassium chloride, all grades	61	212,000	130,000	54,400	33,200	267,000	163,000
Potassium nitrate	45	7,100	3,200	4,600	2,070	11,700	5,270
Potassium sulfate	51	16,000	8,160	12,600	6,430	28,700	14,600
Total	XX	236,000	141,000	71,600	41,700	307,000	183,000

^eEstimated. XX Not applicable.

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

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF POTASH¹

(Metric tons, unless otherwise specified)

Type	Approximate average K ₂ O content (percent)	July–December 2013			January–June 2014			Year ending June 30, 2014		
		Product	K ₂ O equivalent ^c	Customs value (thousands)	Product	K ₂ O equivalent ^c	Customs value (thousands)	Product	K ₂ O equivalent ^c	Customs value (thousands)
Potassium chloride	61	3,610,000	2,200,000	\$750,000	3,890,000	2,370,000	\$183,000	7,500,000	4,580,000	\$933,000
Potassium sulfate	51	51,300	26,200	22,200	52,400	26,700	27,200	104,000	52,800	49,400
Potassium nitrate	45	32,900	14,800	23,200	50,100	22,500	34,500	83,000	37,400	57,700
Potassium nitrate mixtures	14	300	42	300	900	126	400	1,200	168	700
Total	XX	3,700,000	2,240,000	796,000	3,990,000	2,420,000	245,000	7,690,000	4,670,000	1,040,000

^cEstimated. XX Not applicable.

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

Source: U.S. Census Bureau.