PHOSPHATE ROCK

(Data in thousand metric tons, marketable phosphate rock, unless otherwise specified)

Domestic Production and Use: In 2025, phosphate rock ore was mined by five companies at 10 mines in four States and processed into an estimated 20 million tons of marketable product, valued at $1.9 billion, free on board (f.o.b.) mine. Phosphate rock was produced in Florida, Idaho, North Carolina, and Utah. Marketable product refers to beneficiated phosphate rock with phosphorus pentoxide (P_2O_5) content suitable for phosphoric acid or elemental phosphorus production. More than 95% of the phosphate rock mined in the United States was used to manufacture wet-process phosphoric acid and superphosphoric acid, which were used as intermediate feedstocks in the manufacture of granular and liquid ammonium phosphate fertilizers and animal feed supplements. About 25% of the wet-process phosphoric acid produced was exported in the form of upgraded granular diammonium phosphate (DAP), monoammonium phosphate (MAP) fertilizer, merchant-grade phosphoric acid, and other phosphate fertilizer products. The balance of phosphate rock mined was for the manufacture of elemental phosphorus, which was used to produce phosphorus compounds for industrial applications, primarily glyphosate herbicide.

Salient Statistics—United States:	2021	2022	2023	2024	2025[e]
Production, marketable	21,600	[e]19,800	[e]19,600	[e]19,400	20,000
Sold or used by producers	21,900	[e]19,800	[e]20,000	[e]19,100	18,000
Imports for consumption	2,460	2,500	2,590	3,390	3,400
Consumption, apparent[1]	24,400	[e]22,300	[e]22,600	[e]22,500	21,000
Price, average value, f.o.b. mine,[2] dollars per metric ton	83	[e]99	[e]101	96	100
Stocks, producer, yearend	10,700	[e]10,600	[e]9,550	[e]8,740	8,400
Employment, mine and beneficiation plant, number[e]	2,000	1,900	2,000	2,000	1,900
Net import reliance[3] as a percentage of apparent consumption	11	12	16	18	16

Recycling: None.

Import Sources (2021–24): Peru, >99%; other <1%.

Tariff: Item	Number	Normal Trade Relations 12–31–25
Natural calcium phosphates:		
Unground	2510.10.0000	Free.
Ground	2510.20.0000	Free.

Depletion Allowance: 14% (domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: U.S. apparent consumption of phosphate rock in 2025 was estimated to be 7% lower than that in 2024, owing to a decrease in the production of phosphoric acid. Phosphate rock production has been about 20 million tons over the past several years as producers in Florida contend with decreasing reserves and lower P_2O_5 content. This has resulted in an increase in imports over the same period.

Global production of phosphate rock was estimated to be 5% higher than that in 2024, with China, Morocco, the United States, and Russia, in descending order of production, remaining the leading producers. World consumption of P_2O_5 contained in fertilizers was estimated to have been 47.8 million tons in 2025 compared with 47.1 million tons in 2024. World consumption of P_2O_5 in fertilizers was projected to increase to 51.5 million tons by 2029. The leading regions for growth were expected to be Asia and South America.

In October 2025, the U.S. Bureau of Land Management approved a new phosphate rock mine in Caribou County, ID. The new mine will replace an existing mine when that mine is depleted within the next decade.

Global phosphate production capacity, in terms of P_2O_5 content, was projected to increase to 71.7 million tons by 2029 compared with 63.7 million tons in 2025. Capacity expansions to phosphate rock production that were expected to be completed by 2028 were ongoing in Brazil, Kazakhstan, Mexico, Morocco, and Russia. Significant new mining projects that were planned to be completed after 2028 were under development in Canada, Congo (Brazzaville), Guinea-Bissau, and Senegal.

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On November 7, 2025, the U.S. Final 2025 List of Critical Minerals was published in the Federal Register (90 FR 50494). The changes in the 2025 list from the prior list published in 2022 (87 FR 10381) were the addition of copper, lead, potash, rhenium, silicon, and silver, based on the U.S. Geological Survey updated methodology for the 2025 list. As required by the Energy Act, public comment and interagency input were requested in response to the draft U.S. list of critical minerals published in the Federal Register (90 FR 41591). Based on that input, boron, metallurgical coal, phosphate rock, and uranium were also added.

World Mine Production and Reserves: Significant revisions were made to the 2024 production for Morocco, Syria, and Turkey based on company and Government reports. Reserves for Australia, China and Jordan were revised based on company and Government reports.

	Mine production[e]		Reserves[4]
	2024	2025	
United States	19,400	20,000	1,000,000
Algeria	2,000	2,000	2,200,000
Australia	2,500	2,500	[5]800,000
Brazil	5,300	5,000	1,600,000
China[6]	105,000	110,000	3,400,000
Egypt	5,300	5,500	2,800,000
Finland	974	980	1,000,000
India	1,700	1,500	31,000
Israel	2,380	2,400	60,000
Jordan	11,500	12,000	820,000
Kazakhstan	1,700	1,900	260,000
Mexico	365	450	30,000
Morocco	35,300	36,000	50,000,000
Peru	4,800	4,800	210,000
Russia	14,400	14,000	2,400,000
Saudi Arabia	10,000	10,000	1,000,000
Senegal	2,800	2,800	50,000
South Africa	2,220	2,200	1,500,000
Syria	800	800	250,000
Togo	1,560	1,600	30,000
Tunisia	3,280	3,300	2,500,000
Turkey	1,220	1,200	71,000
Uzbekistan	950	950	100,000
Vietnam	3,000	3,000	30,000
Other countries	769	770	800,000
World total (rounded)	239,000	250,000	73,000,000

World Resources:[4] Some world reserves were reported only in terms of ore tonnage and grade. Phosphate rock resources occur principally as sedimentary marine phosphorites. The largest sedimentary deposits are found in northern Africa, the Middle East, China, and the United States. Significant igneous occurrences are found in Brazil, Canada, Finland, Russia, and South Africa. Large phosphate resources have been identified on the continental shelves and on seamounts in the Atlantic Ocean and the Pacific Ocean. World resources of phosphate rock are more than 300 billion tons. There are no imminent shortages of phosphate rock.

Substitutes: There are no substitutes for phosphorus in agriculture.

[e]Estimated.

[1]Defined as phosphate rock sold or used by producers + imports. U.S. producers stopped exporting phosphate rock in 2003.

[2]Marketable phosphate rock, weighted value, all grades.

[3]Defined as imports ± adjustments for industry stock changes.

[4]See Appendix C for resource and reserve definitions and information concerning data sources.

[5]For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 120 million tons.

[6]Production data for large mines only, as reported by the National Bureau of Statistics of China.