

LIME¹(Data in thousand metric tons, unless otherwise noted)²

Domestic Production and Use: In 1996, lime producers at 114 plants in 32 States sold or used 19.0 million tons (20.9 million short tons) of lime valued at about \$1.13 billion, an increase of about 500,000 tons (550,000 short tons) and \$30 million from 1995 levels. The level of commercial sales actually increased by about 800,000 tons (880,000 short tons), but the captive sector saw a decrease of about 300,000 tons (330,000 short tons). The increase in commercial sales was the result of increased quicklime sales in the environmental sector. Ten companies, operating 34 plants, accounted for 66% of the total output. Principal producing States, in decreasing order, were Ohio, Missouri, Alabama, Pennsylvania, Kentucky, Texas, and Illinois. These seven States produced 11.8 million tons (13.0 million short tons) or 63% of the total output. Based on monthly data, the leading commercial markets were chemical and industrial, environmental, steel, and construction, in descending order of importance.

Salient Statistics—United States:	1992	1993	1994	1995	1996^e
Production ³	16,200	16,700	17,400	18,500	19,000
Imports for consumption	193	201	204	289	260
Exports	59	69	74	72	55
Consumption, apparent ⁴	16,300	16,900	17,500	18,700	19,200
Quicklime average value, dollars per ton at plant	55.48	55.02	56.43	56.77	57.00
Hydrate average value, dollars per ton at plant	72.15	67.84	67.71	72.09	72.00
Stocks, yearend	NA	NA	NA	NA	NA
Employment, mine and plant, number	5,500	5,500	5,500	5,500	5,600
Net import reliance ⁵ as a percent of apparent consumption	—	—	—	1	1

Recycling: Large quantities of lime are regenerated by paper mills. Some municipal water treatment plants regenerate lime from softening sludge. Quicklime is regenerated from waste hydrated lime in the carbide industry. Data for these plants are not included as production in order to avoid duplication.

Import Sources (1992-95): Canada, 91%; Mexico, 8%; and other, 1%.

Tariff: Item	Number	Most favored nation (MFN) 12/31/96	Non-MFN⁶ 12/31/96
Quicklime	2522.10.0000	Free	0.2¢/kg. ⁷
Slaked lime	2522.20.0000	Free	0.3¢/kg. ⁷
Hydraulic lime	2522.30.0000	Free	0.2¢/kg. ⁷

Depletion Allowance: 14% (Domestic), 14% (Foreign), for limestone produced and used for lime production.

Government Stockpile: None.

LIME

Events, Trends, and Issues: The lime industry continued to add new capacity in 1996. Kilns totaling 330,000 tons (363,000 short tons) of new annual capacity were added at existing plants in Nevada, Ohio, Tennessee, and Virginia. At the same time, two plants in Illinois and Michigan were closed, which subtracted about 185,000 tons (204,000 short tons) of annual capacity, for an overall net gain of 145,000 tons (160,000 short tons) of annual capacity. This continues the construction boom that began in 1993 and is expected to continue at least into 1998. Construction during this 6-year period will have added more than 4.4 million tons (4.9 million short tons) of new annual capacity, while the industry will have lost 1.0 million tons (1.1 million short tons) of annual capacity.

World Lime Production and Limestone Reserves and Reserve Base:

	Production		Reserves and reserve base ⁸
	<u>1995</u>	<u>1996^e</u>	
United States	18,500	19,000	Adequate for all countries listed.
Belgium	1,800	1,800	
Brazil	5,700	5,700	
Canada	2,600	2,700	
China	20,000	20,000	
France	2,600	2,600	
Germany	8,000	8,000	
Italy ⁹	3,500	3,500	
Japan (quicklime only)	7,900	7,900	
Mexico	6,600	6,600	
Poland	2,500	2,500	
Romania	1,700	1,700	
South Africa, (sales)	1,700	1,700	
United Kingdom	2,500	2,500	
Other countries	<u>34,000</u>	<u>35,000</u>	
World total (rounded)	120,000	121,000	

World Resources: Domestic and world resources of limestone and dolomite suitable for lime manufacture are adequate.

Substitutes: Limestone is a substitute for lime in many uses, such as agriculture, fluxing, and sulfur removal. Limestone contains less reactive material, is slower to react, and may have other disadvantages to lime depending on the use; however, limestone is considerably less expensive than lime. Calcined gypsum is an alternative material in industrial plasters and mortars. Cement and lime kiln dust and fly ash are potential substitutes for some construction uses of lime.

^eEstimated. NA Not available.

¹Data are for quicklime, hydrated lime, and refractory dead-burned dolomite. Excludes Puerto Rico, unless noted.

²See Appendix A for conversion to short tons.

³Sold or used by producers.

⁴Stocks data are not available; stock changes are assumed to be zero for apparent consumption and net import reliance calculations.

⁵Defined as imports - exports + adjustments for Government and industry stock changes.

⁶See Appendix B.

⁷Rates include weight of the container.

⁸See Appendix C for definitions.

⁹Includes hydraulic lime.