LIME[1]

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

Domestic Production and Use: In 1998, lime producers at 114 plants in 35 States sold or used 20.4 million tons (22.5 million short tons) of lime valued at about $1.2 billion, an increase of about 700,000 tons (770,000 short tons) and an increase of about $10 million from 1997 levels. Ten companies, operating 46 plants, accounted for about 80% of the total output. Principal producing States, each with production over 1 million tons, were Alabama, Kentucky, Missouri, Ohio, Pennsylvania, and Texas. These six States produced about 11.3 million tons (12.5 million short tons) or 55% of the total output. Major markets for lime were steel, flue gas desulfurization, mining, construction, pulp and paper, precipitated calcium carbonate, and water treatment.

Salient Statistics—United States:	1994	1995	1996	1997	1998[e]
Production[3]	17,400	18,500	19,200	19,700	20,400
Imports for consumption	204	289	262	274	250
Exports	74	72	50	80	70
Consumption, apparent[4]	17,500	18,700	19,300	19,900	20,600
Quicklime average value, dollars per ton at plant	56.43	56.77	56.68	57.80	56.40
Hydrate average value, dollars per ton at plant	67.71	72.09	79.64	80.20	73.00
Stocks, yearend	NA	NA	NA	NA	NA
Employment, mine and plant, number	5,500	5,500	5,600	5,600	5,600
Net import reliance[5] as a percent of apparent consumption	—	—	1	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 (1994-97): Canada, 91%; and Mexico, 9%.

Tariff: Item	Number	Normal Trade Relations (NTR) 12/31/98	Non-NTR[6] 12/31/98
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]
Calcined dolomite	2518.20.0000	3.6% ad. val.	30% ad. val.

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

Government Stockpile: None.

Events, Trends, and Issues: The lime industry experienced some major changes in company ownership in 1998. Dravo Lime Co. was acquired by Carmeuse Lime, Inc., in a deal made final in October.[8] Carmeuse Lime is part of the Carmeuse North America Group, which announced a joint venture merger of North American lime operations with Lafarge S.A. that was expected by the end of the year.[9] Carmeuse Lime, Inc., which will consist of the former lime operations of Marblehead Lime, Carmeuse Pennsylvania, Dravo Lime, and Lafarge, becomes the largest lime producer in the United States. Graymont Ltd., Canadian parent of Continental Lime Inc., acquired Bellefonte Lime Inc. of Pennsylvania and GenLime LP of Ohio. These operations will become part of Graymont's East Division Operations.[10] Oglebay Norton Co. of Cleveland, OH, acquired the Canadian based Global Stone Corp., which owns lime and stone operations in Canada and the United States, including lime plants in Michigan, Oklahoma, Tennessee, and Virginia.[11]

Passage of new Federal transportation legislation (Transportation Equity Act for the 21st Century) is expected to boost soil stabilization and asphalt markets. The new legislation budgets $167 billion over 6 years for highway construction, which is a 44% increase compared with previous years.

Lime sales continued to increase, continuing the growth trend that has now reached 7 years. Sales over that period have increased on average about 600,000 tons per year. The growth has been fueled mainly by increased demand for flue gas desulfurization, steel, and precipitated calcium carbonate.

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LIME

A surge in cheap steel imports beginning in the second quarter caused a decrease in domestic steel production and resulted in complaints by the U.S. steel industry and the steelworkers union of foreign dumping. At least two small steel producers were forced to declare bankruptcy, and others were forced to cut prices and production because of the record amounts of imports, which are blamed for causing prices to plummet and demand to weaken. Steel is the largest market for lime, and cuts in domestic steel production adversely affect lime sales.

Increased Federal regulation of hazardous air pollutants (such as mercury) and particulate matter is expected under existing Clean Air Act authority. Emissions of carbon dioxide and nitrous oxide may be regulated in the future in an attempt to control global greenhouse effects. Legislation does not currently exist to regulate these gases, but international discussions have been held as part of the United Nations Framework Convention on Climate Change to develop greenhouse gas reduction goals and international methods to achieve these goals. These discussions, and resulting commitments to proposed reductions (Kyoto Protocol), are being monitored very closely by the lime industry. Lime production produces carbon dioxide from the combustion of fuels (primarily coal) to fire the kilns and as a result of the calcination process, which dissociates calcium carbonate into calcium oxide (lime) and carbon dioxide. Any program regulating carbon dioxide emissions would have a direct impact on the lime industry.

World Lime Production and Limestone Reserves and Reserve Base:

	Production		Reserves and reserve base[12]
	1997	1998[e]	
United States	19,700	20,400	Adequate for all
Belgium	1,800	1,800	countries listed.
Brazil	5,700	5,700	
Canada	2,447	2,500	
China	20,500	21,000	
France	2,800	2,800	
Germany	8,000	8,000	
Italy[13]	3,500	3,500	
Japan (quicklime only)	7,850	7,800	
Mexico	6,600	6,600	
Poland	2,500	2,500	
Romania	1,750	1,750	
South Africa (sales)	1,585	1,600	
United Kingdom	2,500	2,500	
Other countries	32,800	33,000	
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.

[e]Estimated. NA Not available.

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

[2]See Appendix A for conversion to short tons.

[3]Sold or used by producers.

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

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

[6]See Appendix B.

[7]Rates include weight of the container.

[8]Dravo Corp., 1998, Dravo News: Dravo Corp. news release, October 26, 1 p.

[9]AFX News, 1998, Lafarge, Carmeuse merge North American lime operations: AFP-Extel News Ltd., July 7, 1 p.

[10]National Lime Association, 1998, Graymont Ltd. acquires Bellefonte Lime and GenLime: Limelites, v. 64. no. 3, p. 4.

[11]Global Stone Corp., 1998, Global Stone Signs Agreement with Oglebay Norton: Global Stone Corp. press release, April 15, 1 p.

[12]See Appendix D for definitions.

[13]Includes hydraulic lime.