SALT

(Data in thousand metric tons, unless otherwise noted)

Domestic Production and Use: Domestic production of salt increased in 1998, with total value estimated at $965 million. Twenty-eight companies operated 68 plants in 14 States. The estimated percentage of salt sold or used, by type, was salt in brine, 51%; rock salt, 31%; vacuum pan and solar salt, 9%, each.

The chemical industry consumed about 45% of total salt sales, with salt brine representing about 88% of the type of salt used for feedstock. Chlorine and caustic soda manufacture was the main consuming sector within the chemical industry. Salt for highway deicing accounted for 30% of U.S. demand. The remaining markets for salt, in declining order, were distributors, 8%; industrial, 7%; agricultural, 4%; food, 3%; other combined with exports, 2%; and primary water treatment, 1%.

Salient Statistics—United States:[1]	1994	1995	1996	1997	1998[e]
Production	40,100	42,100	42,200	41,400	42,100
Sold or used by producers	39,700	40,800	42,900	40,600	40,700
Imports for consumption	9,630	7,090	10,600	9,160	9,300
Exports	742	670	869	748	800
Consumption: Reported	47,200	46,500	52,800	49,500	49,200
Apparent	48,600	47,200	52,600	49,000	49,200
Price, average value of bulk, pellets and packaged salt, dollars per ton, f.o.b. mine and plant:					
Vacuum and open pan salt	115.35	118.63	120.54	119.61	106.00
Solar salt	34.77	30.82	39.97	38.81	32.00
Rock salt	22.33	21.80	22.14	20.50	17.90
Salt from brine	5.40	6.91	6.72	6.67	6.00
Stocks, producer, yearend[e 2]	400	1,300	1,400	800	1,400
Employment, mine and plant, number	4,150	4,150	4,150	4,150	4,150
Net import reliance[3] as a percent of apparent consumption	18	14	19	17	17

Recycling: None.

Import Sources (1994-97): Canada, 39%; Chile, 20%; Mexico, 20%; The Bahamas, 12%; and other, 9%.

Tariff: Item	Number	Normal Trade Relations (NTR) 12/31/98	Non-NTR[4] 12/31/98
Iodized salt	2501.00.0000	Free	26% ad val.

Depletion Allowance: 10% (Domestic), 10% (Foreign).

Government Stockpile: None.

Events, Trends, and Issues: The winter of 1997-98 was relatively mild compared with that of previous years because of the El Niño weather phenomenon. As a result, consumer salt inventories were higher than normal and led to reduced salt sales in 1998. Severe rain storms attributed to El Niño also were responsible for destroying 1,200 solar salt operations in India and others in Kenya. In India, the bodies of 415 salt workers were recovered after a storm subsided. Salt from several countries had to be imported to meet the demand by the chloralkali and synthetic soda ash producers in India.

A major U.S. salt company was acquired early in the year by a large domestic fertilizer producer that owned a small byproduct salt operation in Hersey, MI, and salt operations in Canada. Aside from purchasing the domestic salt facilities, the sale also included the acquisition of other salt operations in Canada and England. Another U.S. salt company sold one of its solar salt facilities at Amboy, CA, to a calcium chloride producer. The salt company will continue to market the salt from the operation.

A rock salt mine in Detroit, MI, that was closed since the mid-1980's was purchased and reopened by a new salt company. The renovated mine will replace some of the production capacity lost when the Retsof, NY, mine closed in 1995. In addition, construction of a new rock salt mine began in November at Hampton Corners, NY. This project was the intended replacement mine for the flooded Retsof Mine but the original owner abandoned plans to develop it in 1996. First production was scheduled for late 1999.

Prepared by **Dennis S. Kostick [(703) 648-7715, dkostick@usgs.gov, fax: (703) 648-7722]**

SALT

A large U.S. salt company celebrated its 150th anniversary of being in the salt business. The Chicago-based company began in 1848 as a sales agency for salt made at Lake Onondaga near Syracuse, NY. As the demand for salt grew, the company acquired other salt operations. Today, the company ranks among the top three U.S. salt producers.

Consumption of salt in 1999 is expected to be higher than that of 1998. Many weather forecasters were forecasting below-normal temperatures following the previous year's El Niño weather phenomenon, which increases the likelihood of adverse conditions requiring large quantities of deicing salt.

World Production, Reserves, and Reserve Base:

	Production		Reserves and reserve base[5]
	1997	1998[e]	
United States[1]	41,400	42,100	Large. Economic and subeconomic deposits of salt are substantial in principal salt-producing countries. The oceans comprise an inexhaustible supply of salt.
Australia	8,722	8,800	
Brazil	5,520	5,700	
Canada	13,264	13,000	
China	29,300	30,000	
France	7,160	7,200	
Germany	15,700	15,000	
India	9,500	9,400	
Italy	3,600	3,600	
Mexico	7,933	7,900	
Poland	3,968	4,000	
Russia	1,400	1,300	
Spain	4,000	4,100	
Ukraine	2,500	2,400	
United Kingdom	6,600	6,600	
Other countries	40,433	38,900	
World total (may be rounded)	201,000	200,000	

World Resources: World resources of salt are practically unlimited. Domestic resources of rock salt and salt from brine are in the Northeast, Central Western, and southern Gulf Coast States. Saline lakes and solar evaporation salt facilities are near populated regions in the Western United States. Almost every country in the world has salt deposits or solar evaporation operations of various sizes.

Substitutes: There are no economic substitutes or alternates for salt. Calcium chloride and calcium magnesium acetate, hydrochloric acid, and potassium chloride can be substituted for salt in deicing, certain chemical processes, and food flavoring, but at a higher cost.

[e]Estimated.

[1]Excludes Puerto Rico.

[2]Reported stock data are incomplete. For apparent consumption and net import reliance calculations, changes in annual stock totals are assumed to be the difference between salt produced and salt sold or used.

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

[4]See Appendix B.

[5]See Appendix D for definitions.