

## NITROGEN (FIXED)—AMMONIA

(Data in thousand metric tons of nitrogen, unless otherwise noted)

**Domestic Production and Use:** U.S. ammonia producers continued to operate at or near rated capacity. Fifty-nine percent of total U.S. ammonia production capacity was centered in Louisiana, Oklahoma, and Texas because of their large reserves of natural gas, the dominant domestic feedstock.<sup>1</sup> The United States remained the world's second largest ammonia producer and consumer following China. Urea, ammonium nitrate, ammonium phosphates, ammonium sulfate, and nitric acid were the major derivatives of ammonia in the United States, in descending order of importance.

Approximately 86% of U.S. apparent domestic ammonia consumption was for fertilizer use, including anhydrous ammonia for direct application, urea, ammonium nitrates, ammonium phosphates, and other nitrogen compounds. Ammonia was also used to produce plastics, synthetic fibers, and resins, explosives, and numerous other chemical compounds.

<b>Salient Statistics—United States:</b> <sup>1</sup>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997<sup>e</sup></b>
Production <sup>2</sup>	12,800	13,400	13,000	13,200	13,000
Imports for consumption	2,660	3,450	2,630	2,460	2,600
Exports	378	215	319	435	500
Consumption, apparent	15,300	16,500	15,300	15,300	15,100
Stocks, producer, yearend	852	956	959	953	960
Price, dollars per ton, average annual, f.o.b. gulf coast <sup>3</sup>	121	211	212	225	192
Employment, plant, number	2,500	2,500	2,500	2,500	2,500
Net import reliance <sup>4</sup> as a percent of apparent consumption	17	19	16	13	14

**Recycling:** None.

**Import Sources (1993-96):** Trinidad and Tobago, 49%; Canada, 40%; Mexico, 6%; and other, 5%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Most favored nation (MFN) 12/31/97</b>	<b>Non-MFN<sup>5</sup> 12/31/97</b>
Ammonia, anhydrous	2814.10.0000	Free	Free.
Ammonia, aqueous	2814.20.0000	Free	Free.

**Depletion Allowance:** Not applicable.

**Government Stockpile:** None.

## NITROGEN (FIXED)—AMMONIA

**Events, Trends, and Issues:** The U.S. fertilizer industry experienced another robust year, which was bolstered by global supply-demand balance and good export demand for domestic produced fertilizers and grain. Ammonia prices retreated from the record highs of 1996, declining by about 20% from January through June, which was followed by a turn around of nearly 10% in July and August; prices decreased again in September. World demand for U.S. produced ammoniated phosphates continued at a high level.

On a worldwide basis, a capacity expansion was announced for Trinidad and Tobago; new capacity was announced for south Asia; and upgrading and modernizing was scheduled for facilities in the Former Soviet Union. A major industrial accident in Trinidad and Tobago in September severely curtailed production in the fourth quarter.

The outlook for the U.S. and world fertilizer industry continued to be optimistic because low world grain inventories should stimulate increased planting here and abroad.

### **World Ammonia Production, Reserves, and Reserve Base:**

	Plant production		Reserves and reserve base <sup>6</sup>
	<u>1996</u>	<u>1997<sup>e</sup></u>	
United States	13,200	13,000	Available atmospheric nitrogen and sources of natural gas for production of ammonia are considered adequate for all listed countries.
Canada	3,800	3,800	
China	23,000	23,000	
Germany	1,200	1,300	
India	7,800	7,700	
Indonesia	2,870	2,900	
Japan	1,560	1,600	
Mexico	2,150	2,200	
Netherlands	2,500	2,500	
Russia	7,000	7,000	
Trinidad and Tobago	1,800	1,600	
Ukraine	3,000	3,000	
Other countries	<u>26,200</u>	<u>26,300</u>	
World total (may be rounded)	96,000	96,000	

**World Resources:** The availability of nitrogen from the atmosphere for fixed nitrogen production is unlimited. Mineralized occurrences of sodium and potassium nitrates, found in the Atacama Desert of Chile, contribute minimally to global nitrogen demand.

**Substitutes:** Nitrogen is an essential plant nutrient that has no substitute. Also, there are no known practical substitutes for nitrogen explosives and blasting agents.

<sup>e</sup>Estimated.

<sup>1</sup>U.S. Department of Commerce (DOC) data unless otherwise noted.

<sup>2</sup>Annual and preliminary data as reported in Bulletins MA28B and MQ28B (DOC).

<sup>3</sup>Source: Green Markets Fertilizer Intelligence Weekly, a Pike and Fischer publication.

<sup>4</sup>Defined as imports - exports + adjustments for Government and industry stock changes.

<sup>5</sup>See Appendix B.

<sup>6</sup>See Appendix D for definitions.