

NITROGEN (FIXED)—AMMONIA

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

Domestic Production and Use: U.S. ammonia producers operated at near 100% of capacity under prevailing conditions of supply-demand balance, firm prices for nitrogen compounds in all forms, and favorable profit margins. Domestic ammonia was valued at about \$4 billion, f.o.b. barge, New Orleans. Sixty percent of total U.S. ammonia production capacity was concentrated in the States of Louisiana, 40%; Oklahoma, 14%; and Texas, 6%; owing to large indigenous reserves of natural gas feedstock. Ammonia plants in the Midwest accounted for another 16% of capacity, with the remainder equally divided between the Southern, Southeastern, and Western States. Downstream nitrogen compound operating rates ranged from 90% to more than 100%. Urea producers operated at 104% of design capacity, compared with 89% in 1994, while diammonium phosphate and monoammonium phosphate (DAP and MAP) rates improved to 95% from 91% in 1994.

Approximately 80% of U.S. apparent domestic ammonia consumption was for fertilizer use, including anhydrous ammonia for direct application, urea, ammonium nitrate, ammonium phosphates, and other nitrogen compounds. Ammonia was also used to produce plastics, synthetic fibers, and resins, 10%; explosives, 4%; and numerous other chemicals, 6%.

Salient Statistics—United States:¹	1991	1992	1993	1994	1995^e
Production ²	12,800	13,400	12,600	13,400	13,200
Imports for consumption	2,740	2,690	2,660	3,450	3,600
Exports	580	354	378	215	200
Consumption, apparent	14,800	15,600	15,100	16,500	16,600
Stocks, producer, yearend	936	1,060	852	956	1,000
Price, dollars per ton, average annual, f.o.b. gulf coast ³	117	106	121	211	230
Employment, plant	2,500	2,500	2,500	2,500	2,500
Net import reliance ⁴ as a percent of apparent consumption	14	14	17	19	20

Recycling: None.

Import Sources (1991-94): Trinidad and Tobago, 32%; Canada, 29%; Former Soviet Union, 21%; Mexico, 12%; and other, 6%.

Tariff:	Item	Number	Most favored nation (MFN) 12/31/95	Non-MFN⁵ 12/31/95
	Ammonia, anhydrous	2814.10.0000	Free	Free.
	Ammonia, aqueous	2814.20.0000	Free	Free.

Depletion Allowance: Not applicable.

Government Stockpile: None.

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Events, Trends, and Issues: The U.S. fertilizer industry experienced one of its best years in history, bolstered by global supply-demand balance and solid export demand for domestic fertilizers and grain. Prices for most nitrogen commodities were at 20-year highs, operating costs were down, and profit margins up. Ammonium phosphate exports to China, India, and other parts of call continued to soar. The favorable situation and projected outlook precipitated the announcement of a new round of capacity expansion by the U.S. nitrogen fertilizer industry, including the construction of new capacity and debottlenecking activities in the United States, Canada, and Trinidad and Tobago. Canadian producers also planned to reactivate several idle ammonia plants, and debottleneck existing capacity.

U.S. ammonia import tonnage continued at record levels, led by Trinidad and Tobago, the Former Soviet Union, Canada, and Mexico, in order of importance. A dramatic 100% increase in shipments from the Black Sea Port of Yuzhny, Ukraine, to more than 1 million product tons, was largely offset by a decline in Mexican and Persian Gulf shipments. The U.S. urea trade deficit was projected to fall marginally to 1.8 million tons of product from 2.2 million tons in 1994.

Although domestic feedgrain acreage fell 9%, and foodgrains, 2%, from 1994 levels, overall crop acreage declined only 2% owing to a rebound in oilseeds and cotton. A wet spring hampered fertilizer application and lowered yields. The outlook for 1996 was optimistic, in light of prospects for improved domestic fertilizer demand and a continuation of firm market conditions for fertilizers and grains at the global level.

Because readily available nitrogen compounds can be formulated into explosives such as those used to destroy the federal building in Oklahoma City, OK, in April 1995, the U.S. Congress, federal law enforcement and other Government agencies, and the private sector were working cooperatively to implement measures to counteract terroristic activities.

World Ammonia Production, Reserves, and Reserve Base:

	Plant production		Reserves and reserve base ⁶
	1994	1995 ^e	
United States	13,400	13,200	Available atmospheric nitrogen and sources of natural gas for production of ammonia are considered adequate for all listed countries.
Canada	3,470	3,700	
China	19,800	20,200	
Germany	2,130	2,600	
India	7,330	7,900	
Indonesia	3,010	3,200	
Japan	1,430	1,450	
Mexico	2,030	2,000	
Netherlands	2,370	2,400	
Russia	7,260	7,800	
Trinidad and Tobago	1,650	1,700	
Ukraine	3,000	3,500	
Other countries	<u>25,100</u>	<u>26,000</u>	
World total (rounded)	92,000	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.

^eEstimated.

¹U.S. Department of Commerce (DOC) data unless otherwise noted.

²Annual and preliminary data as reported in Bulletins MA28B and MQ28B (DOC).

³Source: Green Markets Fertilizer Intelligence Weekly, a Pike and Fischer publication.

⁴Defined as imports - exports + adjustments for Government and industry stock changes.

⁵See Appendix B.

⁶See Appendix C for definitions.