## NITROGEN (FIXED)—AMMONIA STATISTICS ${ }^{1}$

## U.S. GEOLOGICAL SURVEY

[All values in metric tons (t) nitrogen content unless otherwise noted]
Last modification: October 26, 2007

| Year | Production | Imports | Exports | Stocks | $\begin{array}{c\|} \hline \text { Apparent } \\ \text { consumption } \end{array}$ | $\begin{array}{\|c\|} \hline \text { Unit value } \\ (\$ / \mathbf{t}) \\ \hline \end{array}$ | Unit value (98\$/t) | $\begin{gathered} \text { World } \\ \text { production } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1943 | 406,000 |  | 1,000 |  | 405,000 |  |  |  |
| 1944 | 405,000 |  | 2,700 |  | 403,000 |  |  |  |
| 1945 | 409,000 | 3,000 | 3,000 |  | 409,000 |  |  |  |
| 1946 | 541,000 | 5,000 | 4,000 |  | 542,000 |  |  | 2,380,000 |
| 1947 | 831,000 |  | 4,000 |  | 827,000 |  |  | 3,330,000 |
| 1948 | 813,000 | 156,000 | 2,000 |  | 967,000 |  |  | 3,950,000 |
| 1949 | 965,000 |  | 1,000 |  | 964,000 |  |  | 4,560,000 |
| 1950 | 1,170,000 |  | 7,000 |  | 1,160,000 | 69.80 | 472 | 4,810,000 |
| 1951 | 1,330,000 |  | 5,000 |  | 1,320,000 | 72.00 | 451 | 5,240,000 |
| 1952 | 1,530,000 |  | 11,000 |  | 1,520,000 | 72.00 | 443 | 5,300,000 |
| 1953 | 1,710,000 |  | 11,300 |  | 1,690,000 | 78.40 | 479 | 6,450,000 |
| 1954 | 2,040,000 |  | 29,300 |  | 2,010,000 | 78.40 | 475 | 7,300,000 |
| 1955 | 2,430,000 |  | 33,000 |  | 2,390,000 | 77.00 | 468 | 8,070,000 |
| 1956 | 2,520,000 | 19,000 | 39,800 |  | 2,500,000 | 68.00 | 408 | 8,620,000 |
| 1957 | 2,780,000 |  | 50,700 |  | 2,730,000 | 76.10 | 441 | 9,270,000 |
| 1958 | 2,890,000 |  | 49,000 |  | 2,850,000 | 76.10 | 429 | 10,800,000 |
| 1959 | 3,370,000 | 40,000 | 63,000 |  | 3,350,000 | 77.90 | 436 | 11,800,000 |
| 1960 | 3,590,000 |  | 81,000 |  | 3,510,000 | 83.40 | 459 | 12,900,000 |
| 1961 | 3,890,000 |  | 76,000 |  | 3,810,000 | 83.40 | 455 | 14,000,000 |
| 1962 | 4,340,000 |  | 44,300 |  | 4,290,000 | 83.40 | 450 | 11,900,000 |
| 1963 | 4,990,000 | 13,000 | 56,100 |  | 4,950,000 | 83.40 | 444 | 17,100,000 |
| 1964 | 5,700,000 | 118,000 | 111,000 | 490,000 | 5,700,000 | 83.40 | 439 | 19,400,000 |
| 1965 | 6,620,000 | 152,000 | 138,000 | 519,000 | 6,600,000 | 83.40 | 432 | 21,800,000 |
| 1966 | 7,910,000 | 231,000 | 169,000 | 491,000 | 8,000,000 | 83.40 | 420 | 25,000,000 |
| 1967 | 9,100,000 | 330,000 | 323,000 | 1,390,000 | 8,210,000 | 76.10 | 371 | 28,700,000 |
| 1968 | 9,040,000 | 298,000 | 595,000 | 1,190,000 | 8,950,000 | 68.90 | 323 | 32,100,000 |
| 1969 | 9,540,000 | 333,000 | 835,000 | 983,000 | 9,240,000 | 45.30 | 201 | 35,900,000 |
| 1970 | 10,300,000 | 361,000 | 727,000 | 1,070,000 | 9,880,000 | 51.60 | 217 | 38,800,000 |
| 1971 | 10,900,000 | 344,000 | 369,000 | 1,240,000 | 10,700,000 | 50.70 | 204 | 41,100,000 |
| 1972 | 11,300,000 | 288,000 | 530,000 | 1,190,000 | 11,100,000 | 54.40 | 212 | 43,000,000 |
| 1973 | 11,300,000 | 246,000 | 672,000 | 640,000 | 11,500,000 | 77.00 | 283 | 46,700,000 |
| 1974 | 11,700,000 | 338,000 | 296,000 | 849,000 | 11,600,000 | 181 | 598 | 48,400,000 |
| 1975 | 12,200,000 | 601,000 | 262,000 | 1,540,000 | 11,900,000 | 168 | 509 | 49,500,000 |
| 1976 | 12,500,000 | 543,000 | 327,000 | 1,680,000 | 12,500,000 | 168 | 481 | 56,900,000 |
| 1977 | 13,200,000 | 802,000 | 314,000 | 2,060,000 | 13,400,000 | 118 | 317 | 62,000,000 |
| 1978 | 12,800,000 | 1,130,000 | 394,000 | 1,800,000 | 13,800,000 | 74.30 | 186 | 67,200,000 |
| 1979 | 13,900,000 | 1,450,000 | 587,000 | 1,630,000 | 14,900,000 | 118 | 265 | 71,100,000 |
| 1980 | 14,700,000 | 1,740,000 | 618,000 | 1,460,000 | 15,900,000 | 111 | 220 | 73,600,000 |
| 1981 | 14,200,000 | 1,560,000 | 459,000 | 1,900,000 | 14,900,000 | 120 | 215 | 77,000,000 |
| 1982 | 11,800,000 | 1,580,000 | 553,000 | 1,910,000 | 12,800,000 | 106 | 179 | 75,900,000 |
| 1983 | 10,200,000 | 1,970,000 | 270,000 | 1,410,000 | 12,400,000 | 161 | 263 | 80,400,000 |
| 1984 | 12,500,000 | 2,450,000 | 397,000 | 1,550,000 | 14,300,000 | 131 | 206 | 88,600,000 |
| 1985 | 12,900,000 | 2,090,000 | 916,000 | 1,630,000 | 14,000,000 | 98.30 | 149 | 91,000,000 |
| 1986 | 10,800,000 | 1,860,000 | 482,000 | 1,370,000 | 12,400,000 | 65.20 | 97.00 | 91,100,000 |
| 1987 | 12,000,000 | 2,140,000 | 769,000 | 955,000 | 13,800,000 | 86.10 | 124 | 95,100,000 |
| 1988 | 12,500,000 | 2,750,000 | 582,000 | 925,000 | 14,700,000 | 98.80 | 136 | 99,300,000 |
| 1989 | 12,300,000 | 2,860,000 | 346,000 | 849,000 | 14,900,000 | 94.20 | 124 | 99,300,000 |
| 1990 | 12,700,000 | 2,670,000 | 482,000 | 797,000 | 14,900,000 | 96.00 | 120 | 97,500,000 |
| 1991 | 12,800,000 | 2,740,000 | 580,000 | 936,000 | 14,800,000 | 106 | 127 | 93,800,000 |
| 1992 | 13,400,000 | 2,690,000 | 354,000 | 1,060,000 | 15,600,000 | 96.00 | 112 | 93,400,000 |
| 1993 | 12,600,000 | 2,660,000 | 378,000 | 852,000 | 15,000,000 | 110 | 124 | 91,600,000 |
| 1994 | 13,300,000 | 3,450,000 | 215,000 | 956,000 | 16,400,000 | 191 | 210 | 93,800,000 |

## NITROGEN (FIXED)—AMMONIA STATISTICS ${ }^{1}$

U.S. GEOLOGICAL SURVEY
[All values in metric tons ( $\mathbf{t}$ ) nitrogen content unless otherwise noted]
Last modification: October 26, 2007

| Year | Production | Imports | Exports | Stocks | Apparent <br> consumption | Unit value <br> $\mathbf{( \$ / t )}$ | Unit value <br> $\mathbf{( 9 8 \$ / t )}$ | World <br> production |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1995 | $13,000,000$ | $2,630,000$ | 319,000 | 959,000 | $15,300,000$ | 173 | 185 | $100,000,000$ |
| 1996 | $13,400,000$ | $3,390,000$ | 435,000 | 881,000 | $16,400,000$ | 172 | 179 | $105,000,000$ |
| 1997 | $13,300,000$ | $3,530,000$ | 395,000 | $1,530,000$ | $15,800,000$ | 157 | 159 | $103,000,000$ |
| 1998 | $13,800,000$ | $3,460,000$ | 614,000 | $1,050,000$ | $17,100,000$ | 110 | 110 | $104,000,000$ |
| 1999 | $12,900,000$ | $3,890,000$ | 562,000 | 996,000 | $16,300,000$ | 98.80 | 97.00 | $107,000,000$ |
| 2000 | $11,800,000$ | $3,880,000$ | 662,000 | $1,120,000$ | $14,900,000$ | 153 | 145 | $108,000,000$ |
| 2001 | $9,120,000$ | $4,550,000$ | 647,000 | 261,000 | $13,200,000$ | 166 | 153 | $105,000,000$ |
| 2002 | $10,300,000$ | $4,670,000$ | 437,000 | 286,000 | $14,500,000$ | 124 | 112 | $109,000,000$ |
| 2003 | $8,450,000$ | $5,720,000$ | 400,000 | 195,000 | $13,900,000$ | 222 | 197 | $110,000,000$ |
| 2004 | $8,990,000$ | $5,900,000$ | 381,000 | 298,000 | $14,400,000$ | 248 | 214 | $117,000,000$ |
| 2005 | $8,340,000$ | $6,520,000$ | 525,000 | 254,000 | $14,400,000$ | 285 | 238 | $122,000,000$ |
| 2006 | $8,180,000$ | $5,920,000$ | 194,000 | 201,000 | $14,000,000$ | 274 | 222 | $124,000,000$ |

${ }^{\mathbf{1}}$ Compiled by C.A. DiFrancesco (retired) and D.A. Kramer.
Data are calculated, estimated, or reported. See notes for more information.

## Nitrogen (fixed)—Ammonia Worksheet Notes

## Data Sources

The sources of data for the nitrogen (fixed)—ammonia worksheet were the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey-Minerals Yearbook (MYB) and Mineral Facts and Problems (MFP). The years of publication and corresponding years of data coverage are listed in the References section below. Blank cells in the worksheet indicate that data were not available. Data were for nitrogen content except where noted.

## Production

Production data for ammonia (nitrogen content) in the United States were for anhydrous ammonia, excluding coke byproducts and aqueous ammonia when possible. Data were from the MYB.

## Imports

Import data reported the amounts of ammonia (nitrogen content) imported into the United States. Data were from the MYB. Blank cells in the worksheet indicate that data were not available for the years 1943-44, 1947, 1949-55, 1957-58, and 1960-62.

## Exports

Export data reported the amounts of ammonia (nitrogen content) exported from the United States. Data for the years 1958-62 were for both industrial chemical and fertilizer ammonia. Data were from the MYB.

## Stocks

Stocks data reported the amount of ammonia (nitrogen content) held in stocks. Data were from the MFP for the years 1964-83 and the MYB for the years 1984-2006. Blank cells in the worksheet indicate that data were not available for the years 1943-63.

## Apparent Consumption

Apparent consumption was estimated for the years 1943-2006, by using the formula:

$$
\text { APPARENT CONSUMPTION = PRODUCTION + IMPORTS - EXPORTS } \pm \text { STOCK CHANGES. }
$$

Data were from the MYB.

## Unit Value (\$/t)

Unit value is the value in dollars of 1 metric ton ( t ) of ammonia (nitrogen content) apparent consumption. Unit value was estimated for the United States in actual dollars by using price data "delivered east of the Rockies" for 1950-77 and "Gulf Coast" prices for 1978-2006. Data for 1950-87 are yearend prices. Data for 1988-2006 are average annual prices. Data were from the MYB. Blank cells in the worksheet indicate that data were not available for the years 1943-49.

## Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars. Blank cells in the worksheet indicate that data were not available for the years 1943-49.

## World Production

World production data were for ammonia produced. Data for 1946-57 were for "fertilizer nitrogen compounds," and were reported as fertilizer years (July 1-June 30), not calendar years. Blank cells in the worksheet indicate that data were not available for the years 1943-45. Data were from the MYB.

## References

U.S. Bureau of Mines, 1943-96, Minerals Yearbook, 1941-94.
U.S. Bureau of Mines, 1976, Mineral Facts and Problems, 1975 ed.: U.S. Bureau of Mines Bulletin 667.
U.S. Bureau of Mines, 1980, Mineral Facts and Problems, 1980 ed.: U.S. Bureau of Mines Bulletin 671.
U.S. Geological Survey, 1997-2007, Minerals Yearbook, v. I, 1995-2006.

## Recommended Citation Format:

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, in Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, available online at http://pubs.usgs.gov/ds/2005/140/. (Accessed [date].)

## For more information, please contact:

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