



Highlights of [GAO-03-1148](#), a report to the Ranking Democratic Member, Committee on Agriculture, Nutrition and Forestry, U.S. Senate

## Why GAO Did This Study

Natural gas is the most costly component used in manufacturing nitrogen fertilizer. Therefore, when natural gas prices increased in 2000–2001, U.S. companies that produce nitrogen fertilizer reported adverse financial consequences resulting from much higher production costs. Concerns also arose that the nation's farmers would face much higher nitrogen fertilizer prices and that there might not be an adequate supply of nitrogen fertilizer to satisfy farmers' demands at any price. Responding to congressional concerns, GAO undertook a study to determine (1) how the price of natural gas affects the price, production, and availability of nitrogen fertilizer and (2) what role the federal government plays in mitigating the impact of natural gas prices on the U.S. fertilizer market.

[www.gao.gov/cgi-bin/getrpt?GAO-03-1148](http://www.gao.gov/cgi-bin/getrpt?GAO-03-1148).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Jim Wells at (202) 512-3841, [wellsj@gao.gov](mailto:wellsj@gao.gov).

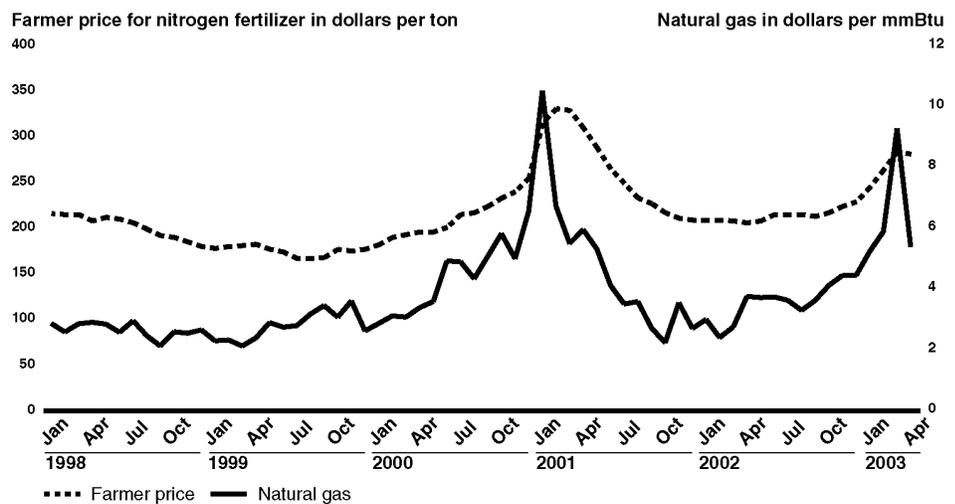
## NATURAL GAS

# Domestic Nitrogen Fertilizer Production Depends on Natural Gas Availability and Prices

## What GAO Found

Higher natural gas prices have contributed to higher nitrogen fertilizer prices and reduced domestic production. The following figure shows the relationship between natural gas prices and the farmer price for nitrogen fertilizer.

**Farmer Price for Nitrogen Fertilizer Relative to Natural Gas Prices, January 1998–March 2003**



Sources: GAO analysis of USDA, National Agricultural Statistics Service, and industry data.

Higher gas prices in 2000–2001 also led to a 25 percent reduction in domestic production of nitrogen but, despite this decline, the supply of nitrogen fertilizer was adequate to meet farmers' demand in 2001. Demand was met because U.S. nitrogen production was supplemented by a 43 percent increase in nitrogen imports and a 7 percent decrease in agricultural consumption of nitrogen fertilizer.

The federal government does not set natural gas prices, and it has a limited role in managing the impact of natural gas prices on the U.S. fertilizer market. Three federal agencies—(1) the Federal Energy Regulatory Commission, (2) the Commodities Futures Trading Commission, and (3) the Energy Information Administration—are responsible for ensuring that natural gas prices are determined in a competitive and informed marketplace. Moreover, the federal government has no role in controlling fertilizer prices, but the U.S. Department of Agriculture (USDA) does monitor developments in the agricultural sector, including fertilizer markets, that could affect farmers. Also, in 2001, USDA collected additional survey information in response to concerns about the price and availability of nitrogen fertilizer.