

# Maryland Fertilizer Use Trends

Montgomery County Department  
of Economic Development  
-Agricultural Services Division-

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# The Use of Fertilizers in the State of Maryland

*Prepared by:*  
Montgomery County Department of Economic Development  
Agricultural Services Division

All citizens in the State of Maryland need to acknowledge their personal contributions to the water quality and pollution of the tributaries that ultimately feed into the Chesapeake Bay. Everyone contributes to the waste stream of the Chesapeake Bay watershed when we drive our vehicles, fertilize our lawns and flush our toilets. The facts outlined below help to provide a foundation of understanding surrounding this issue.

Between 1960 and 2003, Maryland experienced a loss of 1.67 million acres of farmland. At the same time, the population increased by over 2 million people. Population trends show no sign of slowing; farm acreage loss also continues. New state residents are living on land that was once in agriculture. The ratio of farm acres to people dropped markedly, from 1.2 farm acres per person in 1960 to .4 acres per person in 2000. The Maryland Department of Agriculture reports that Maryland consists of 2.1 million acres of farmland, while the Department of Assessments and Taxation reports that Maryland consists of 2.644 million acres of agriculturally assessed farmland.

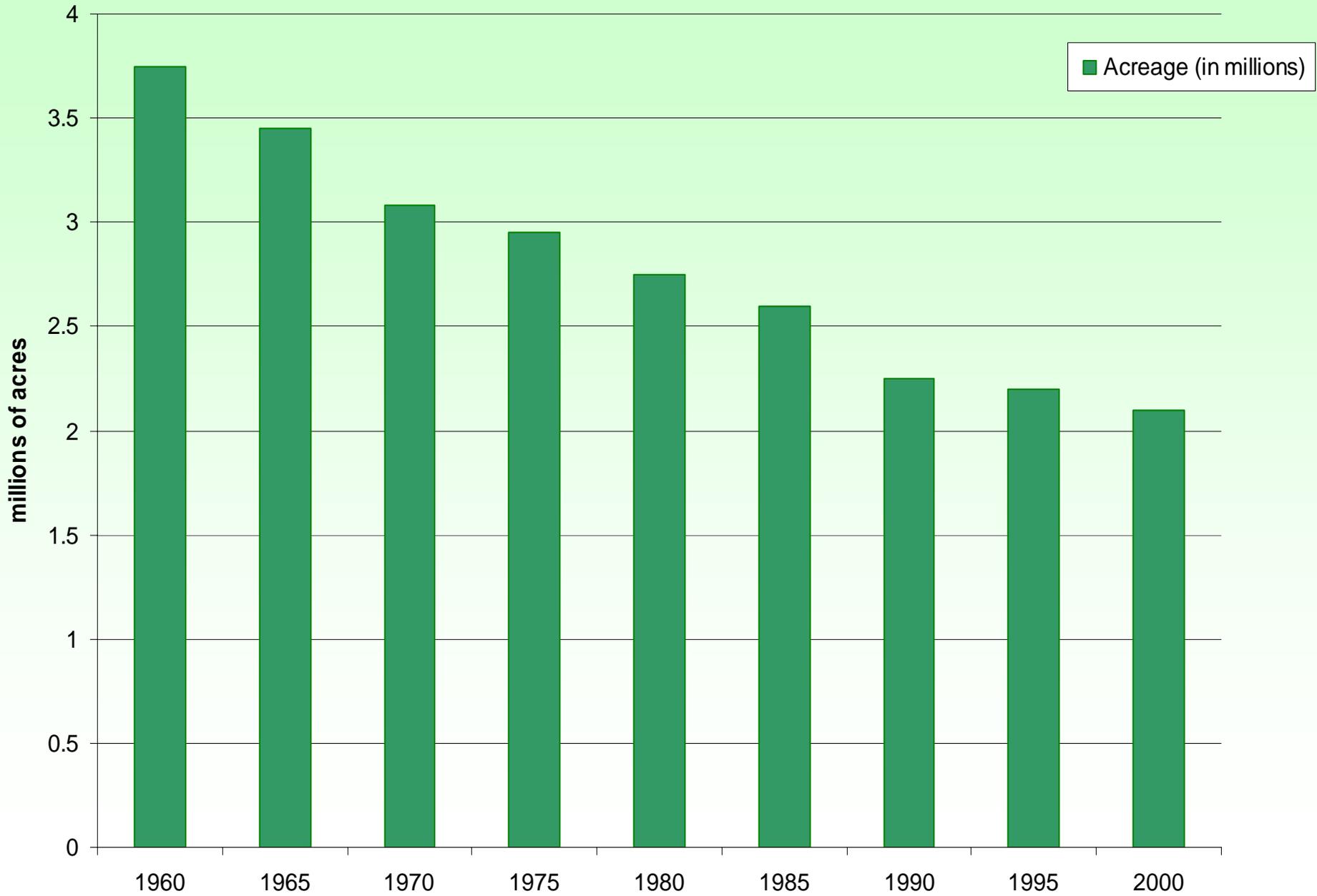
Overall fertilizer use for the state has shown a general upward trend, even as farm acres have decreased. This has several root causes. The first is an increase in efficiency; farmers, working from scientifically established nutrient standards, have learned to grow more on less land through a judicious application of fertilizers. The second, discussed in more detail below, is the increased use of fertilizers by the general populace.

Total Maryland fertilizer use between 1990 and 2004 has averaged 485,780 tons, except for two spikes in 1999 (925,000 tons) and 2000 (684,000 tons). In 1990, non-farm fertilizer use averaged 13% of the total. After 1999, that average jumped to 37%, with 45% of fertilizer in 2001 representing non-farm use.

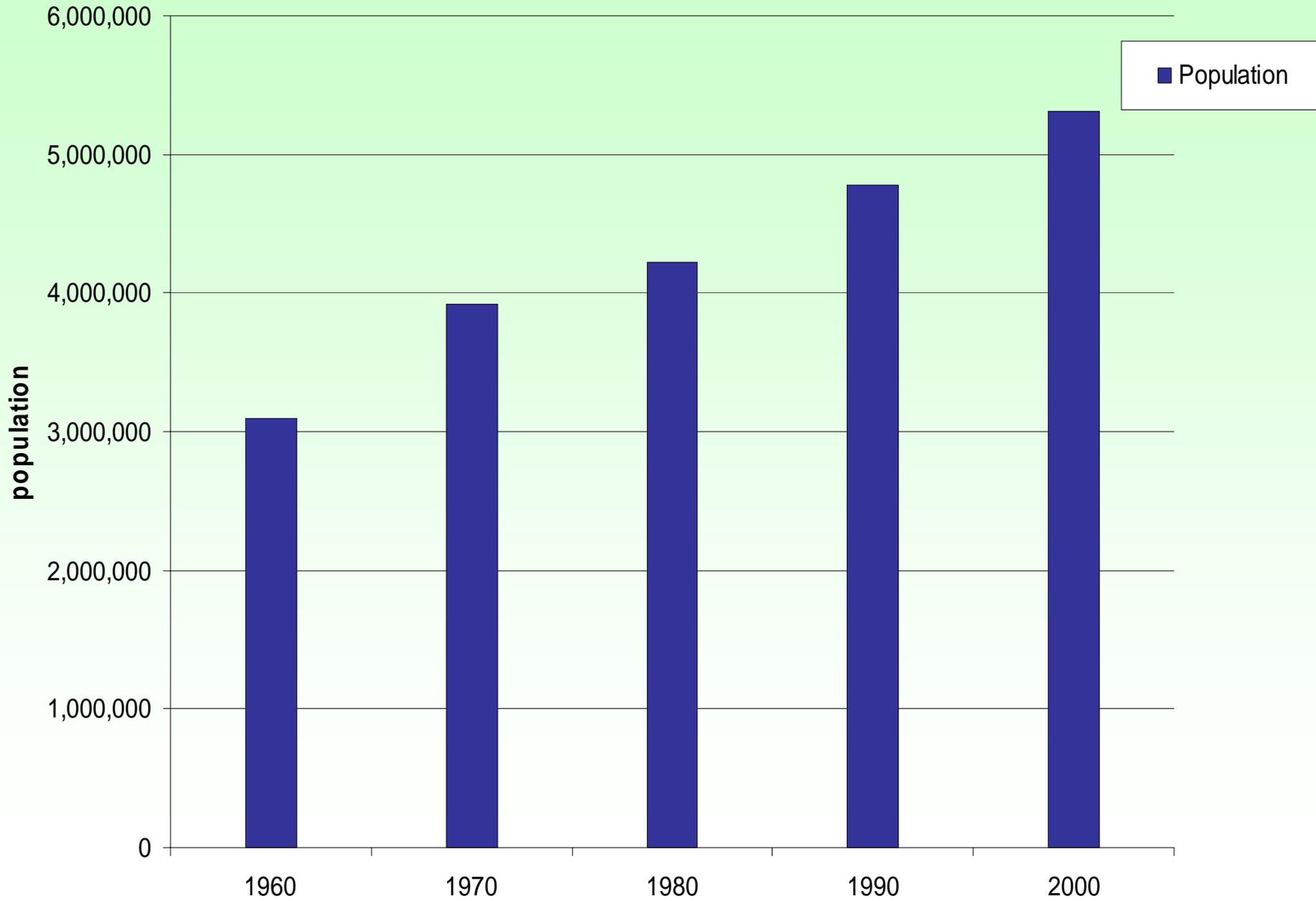
The growing trend of non-farm fertilizer use illustrates that we will need to do more in the future to establish controls for non-farm fertilizer use. Furthermore, as more farms come into compliance with the Maryland Nutrient Management Regulations, our policy-makers will need to establish better controls for non-farm fertilizer use if we are to achieve our nutrient reduction goals for the Chesapeake Bay.

The fluctuations visible in the fertilizer trend in Chart 4 are due to various factors, including Federal Farm Bills governing set-aside acreage, crop prices, as well as production decisions by farmers. Representatives from the MDA say that the cause of the sharp spike in fertilizer usage for the years 1999 and 2000 was caused by double reporting of tonnage numbers.

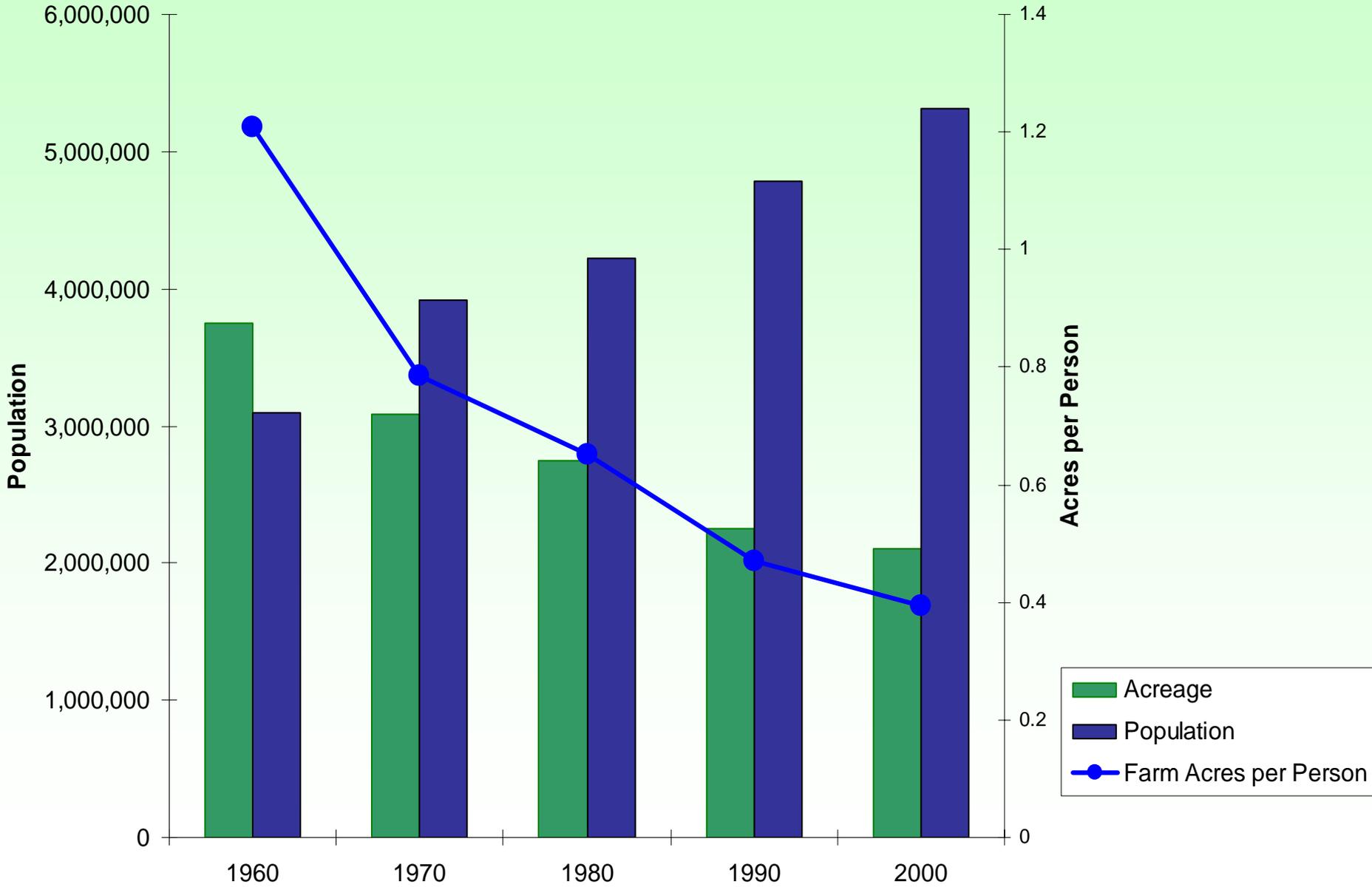
# 1. Maryland Farm Acreage 1960 to 2000



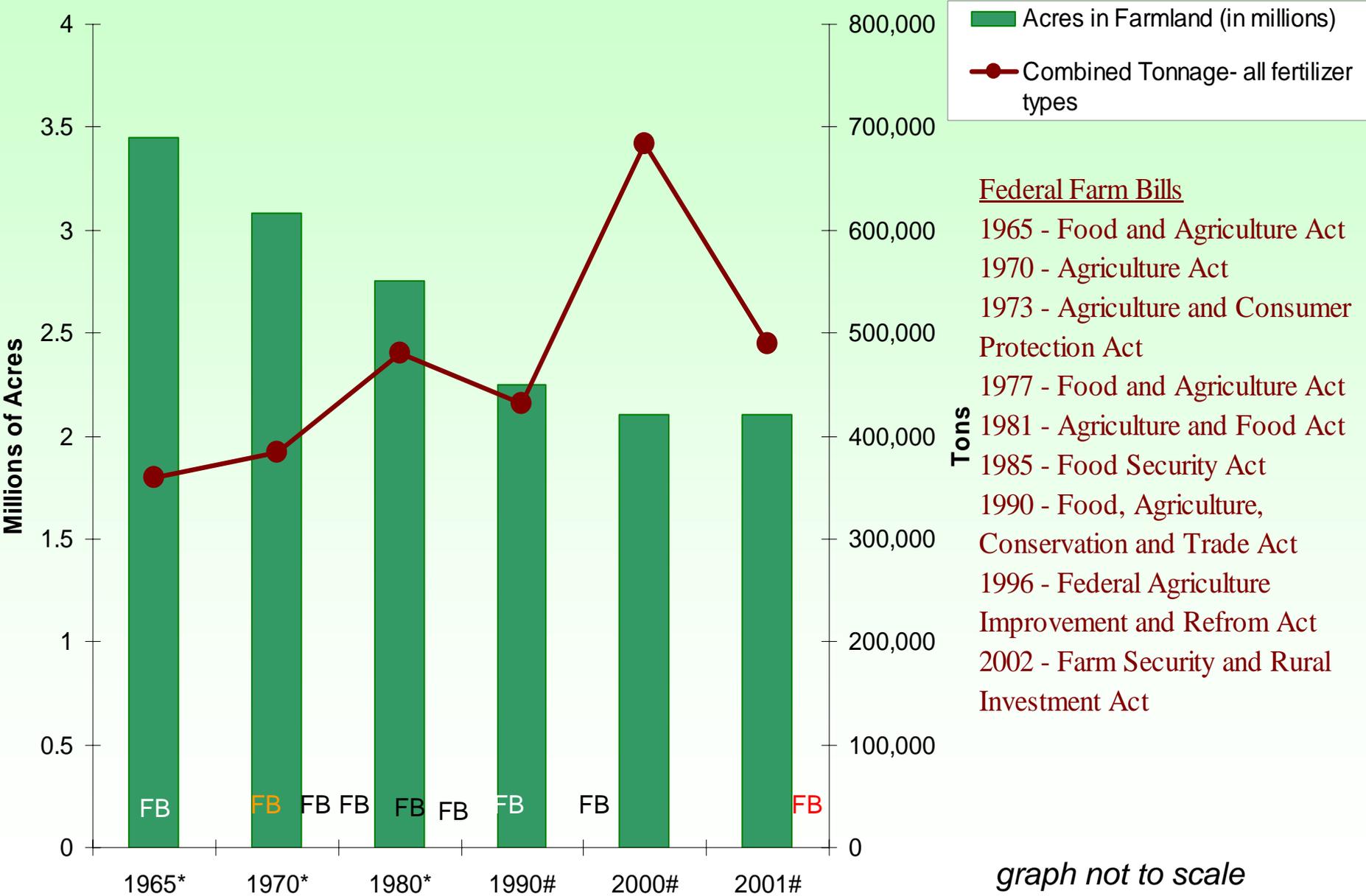
## 2. Maryland Population 1960-2000



### 3. Farm Acreage vs. Population, with Farm Acres per Person 1960-2000

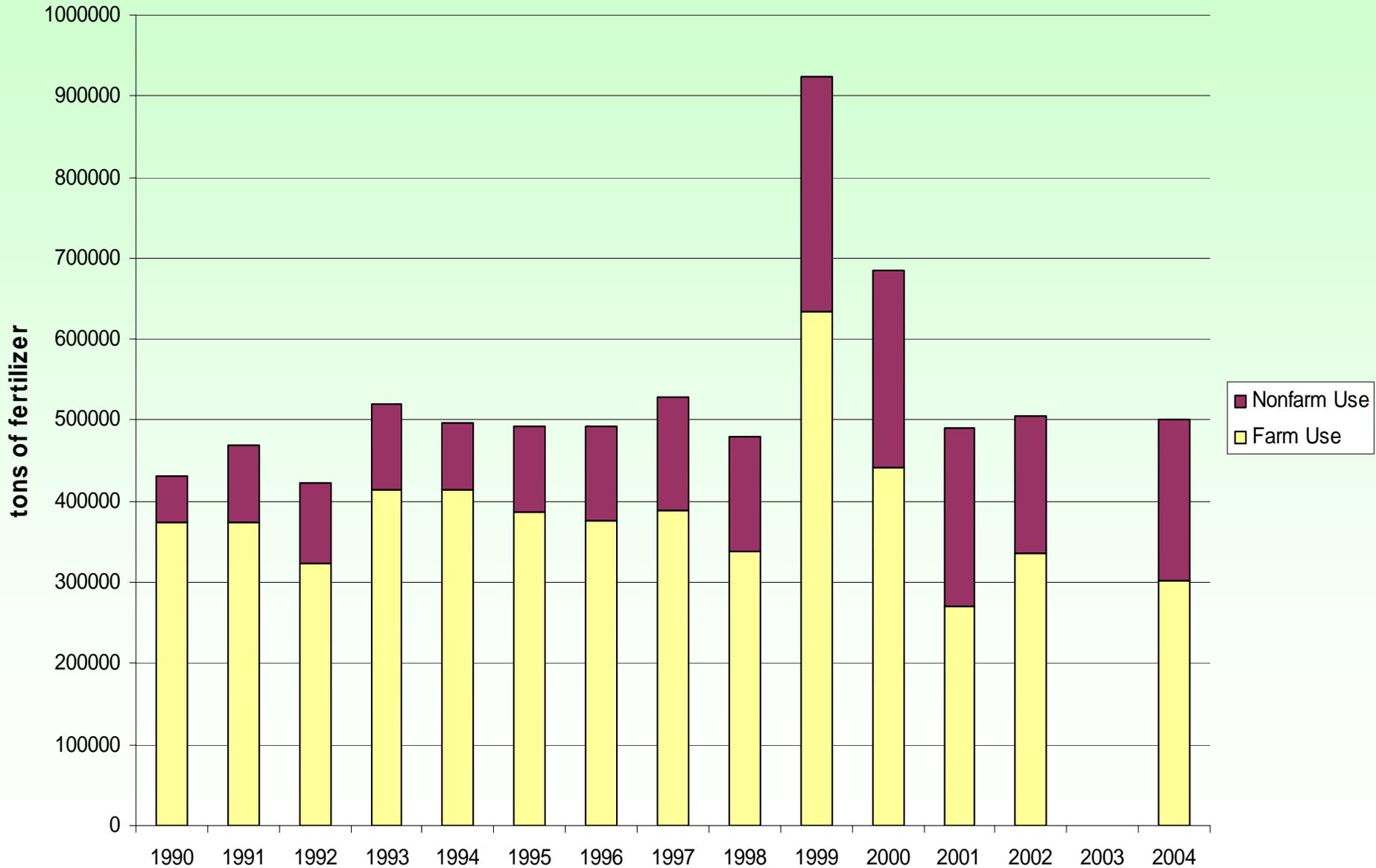


### 4. Total Maryland Fertilizer Use, 1965 to June 30, 2001

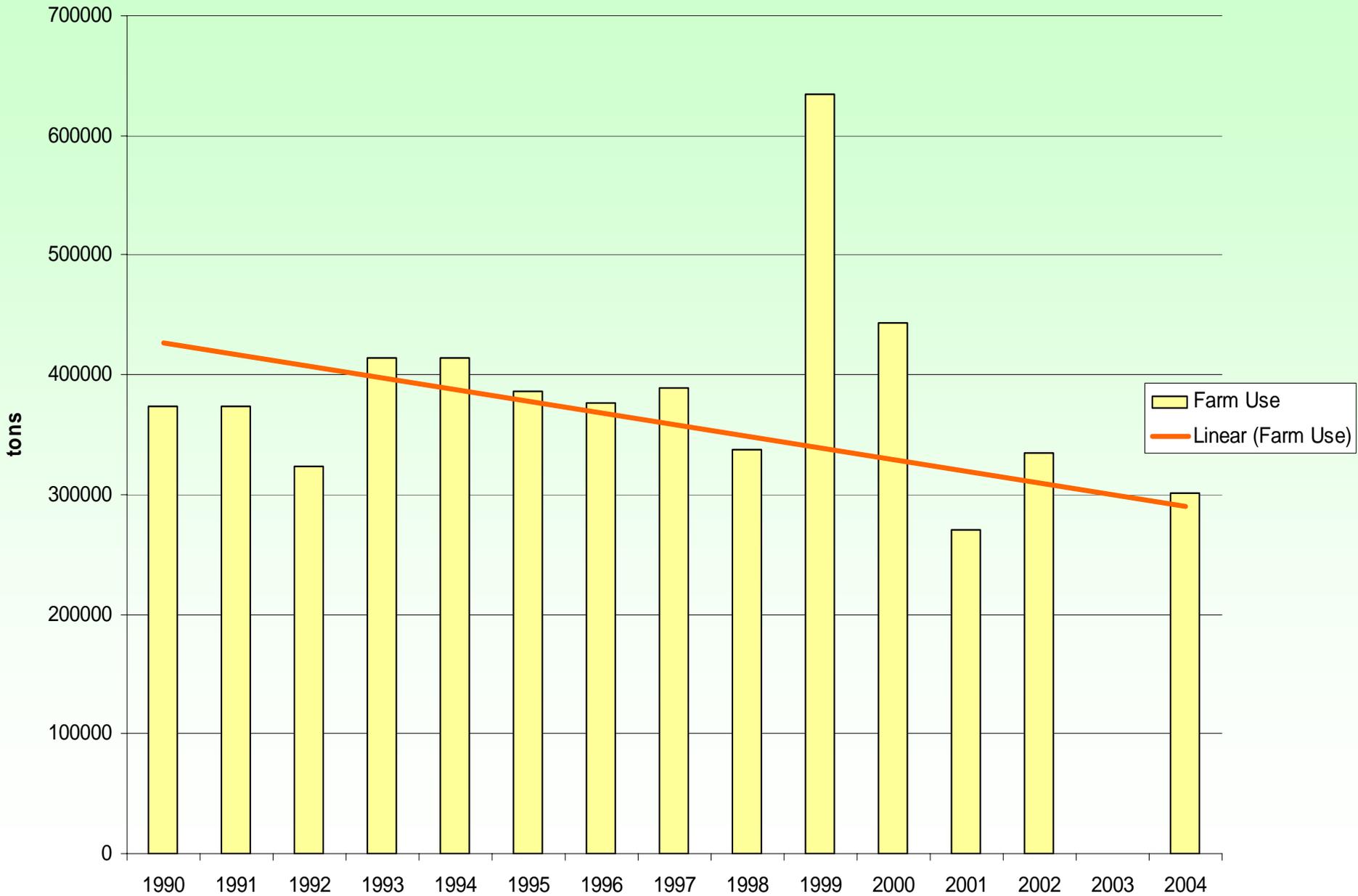


*graph not to scale*

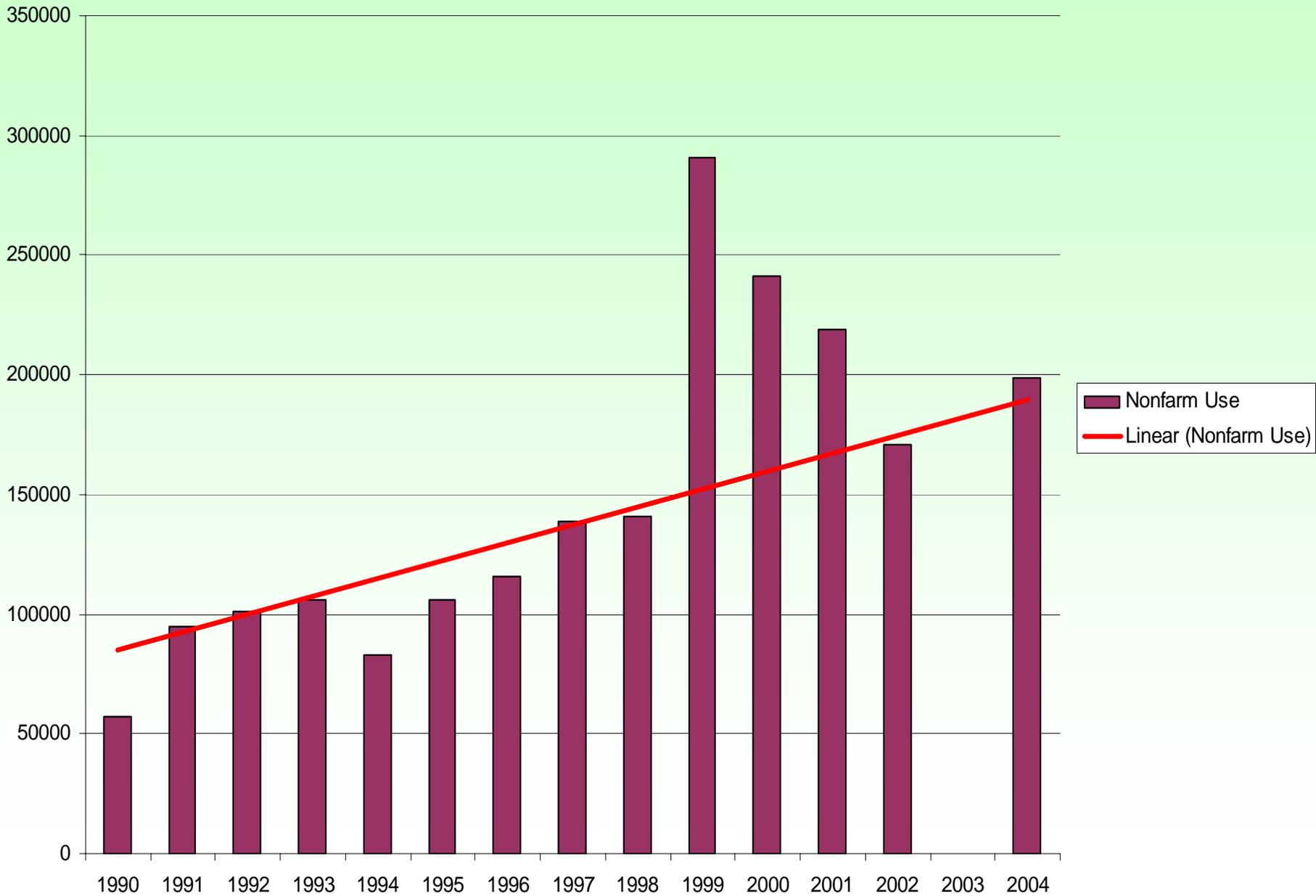
## 5. Total Maryland Fertilizer Use FY1990 to FY2004



## 6. Farm Fertilizer Use FY1990 to FY2004



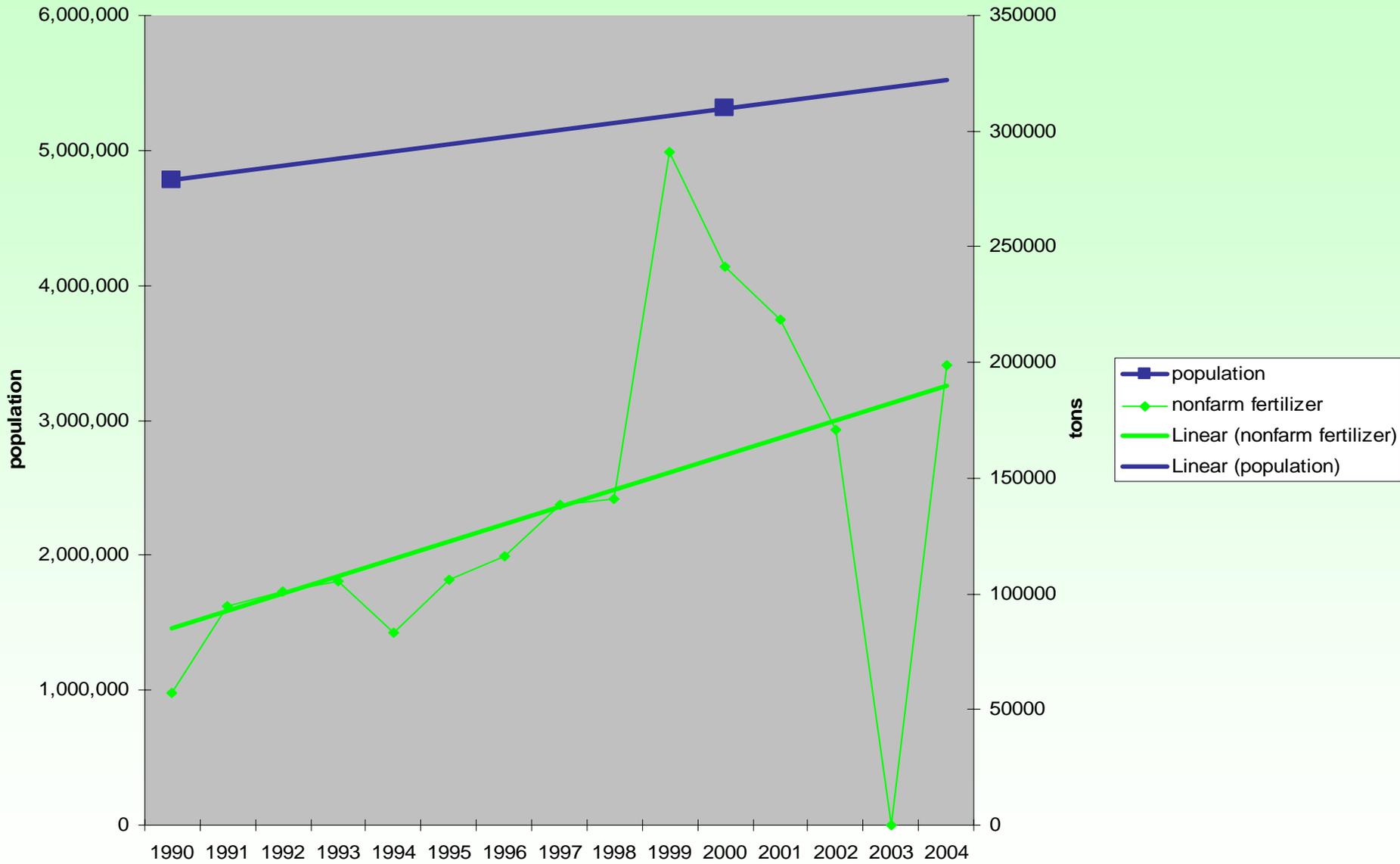
## 7. Nonfarm Fertilizer Use FY1990 to FY2004



### 8. Total Maryland Fertilizer Tonnage FY1990 to FY2004, by Use



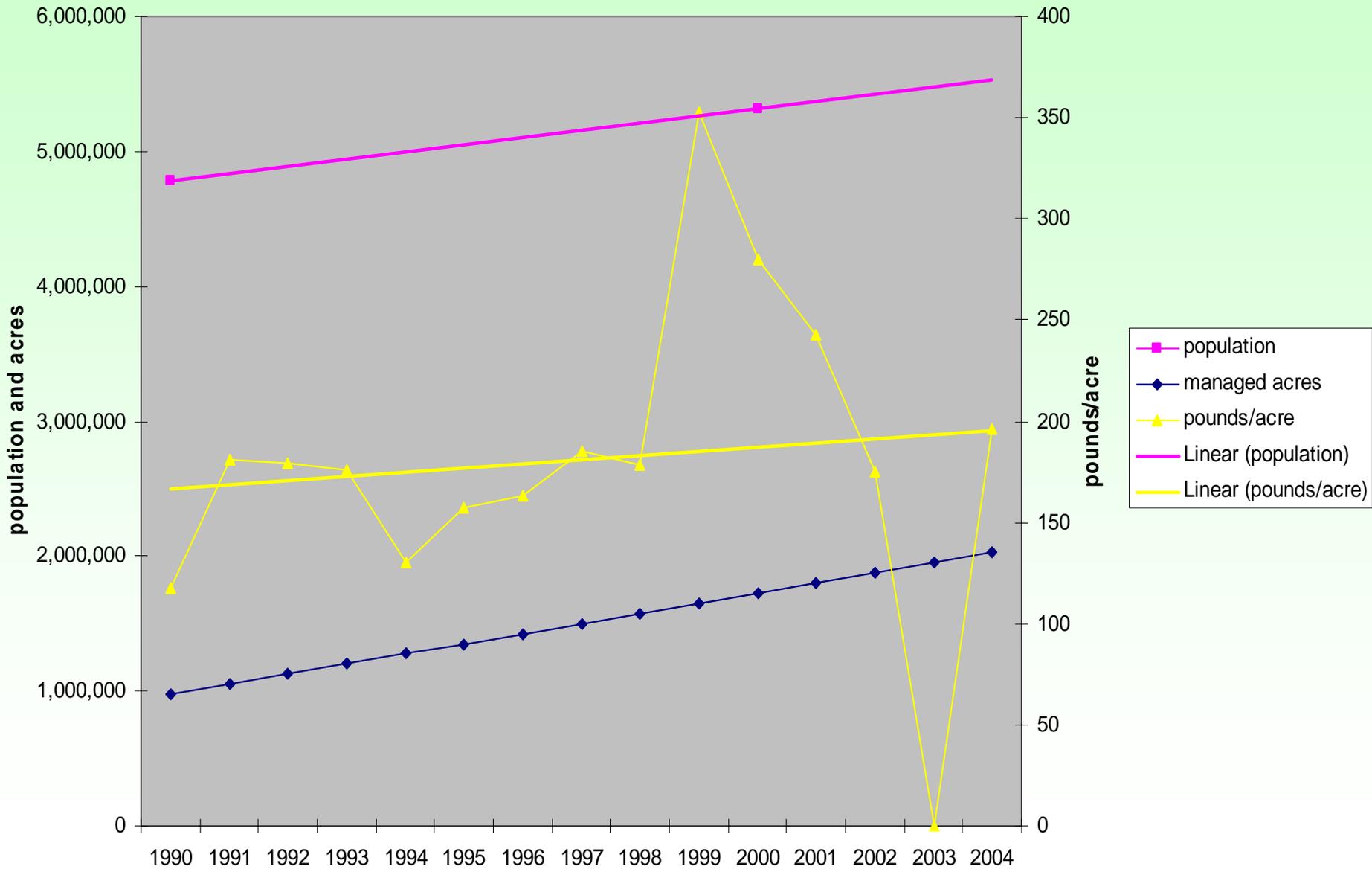
# 9. Maryland Population vs. Nonfarm Fertilizer Use, 1990-2004



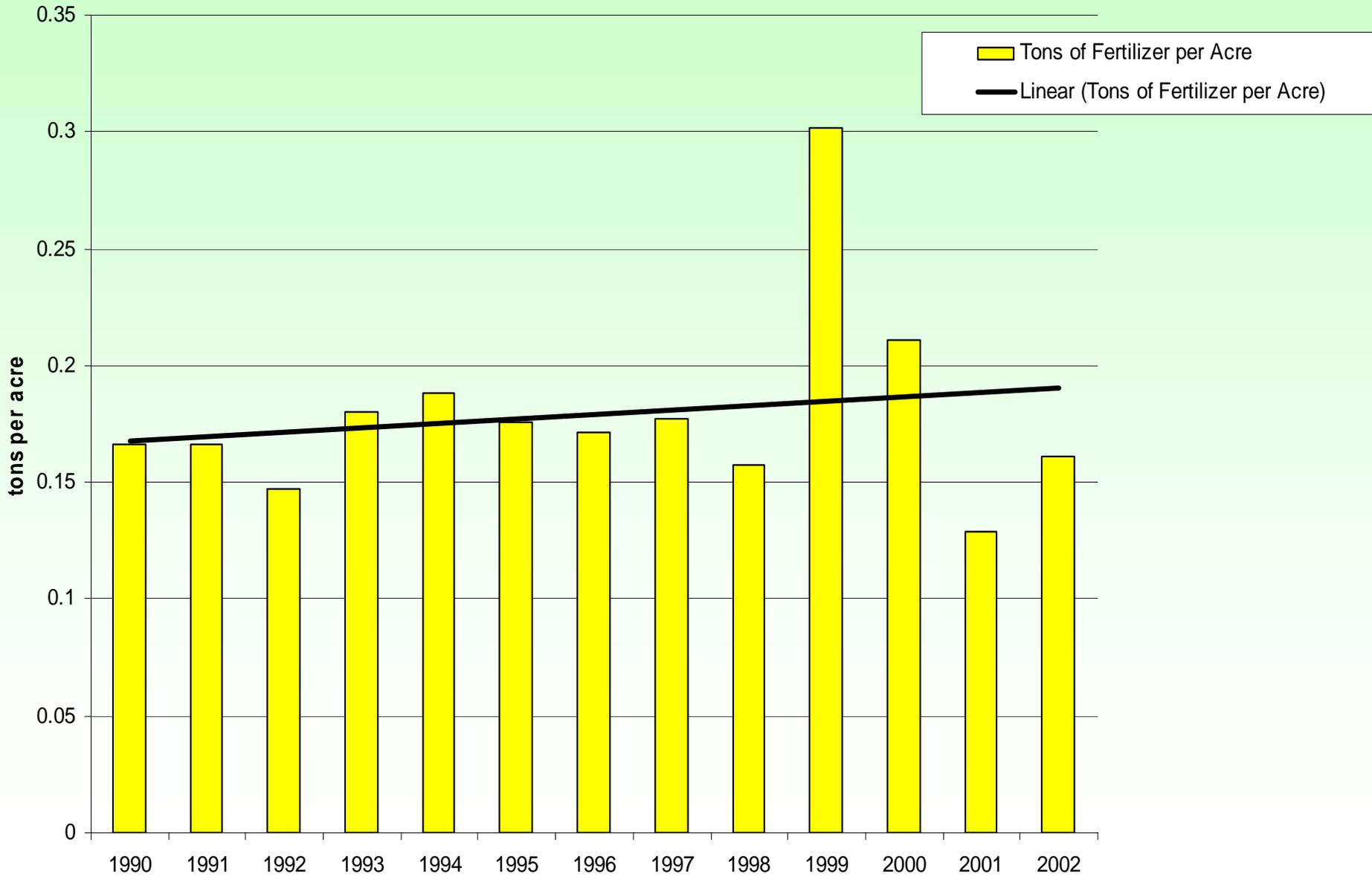
Source of Data: Maryland Department of Planning (based on 1990 and 2000 Census Reports); MDA Fertilizer Tonnage Reports 1990-2001

\*data for 2003 is not available\*

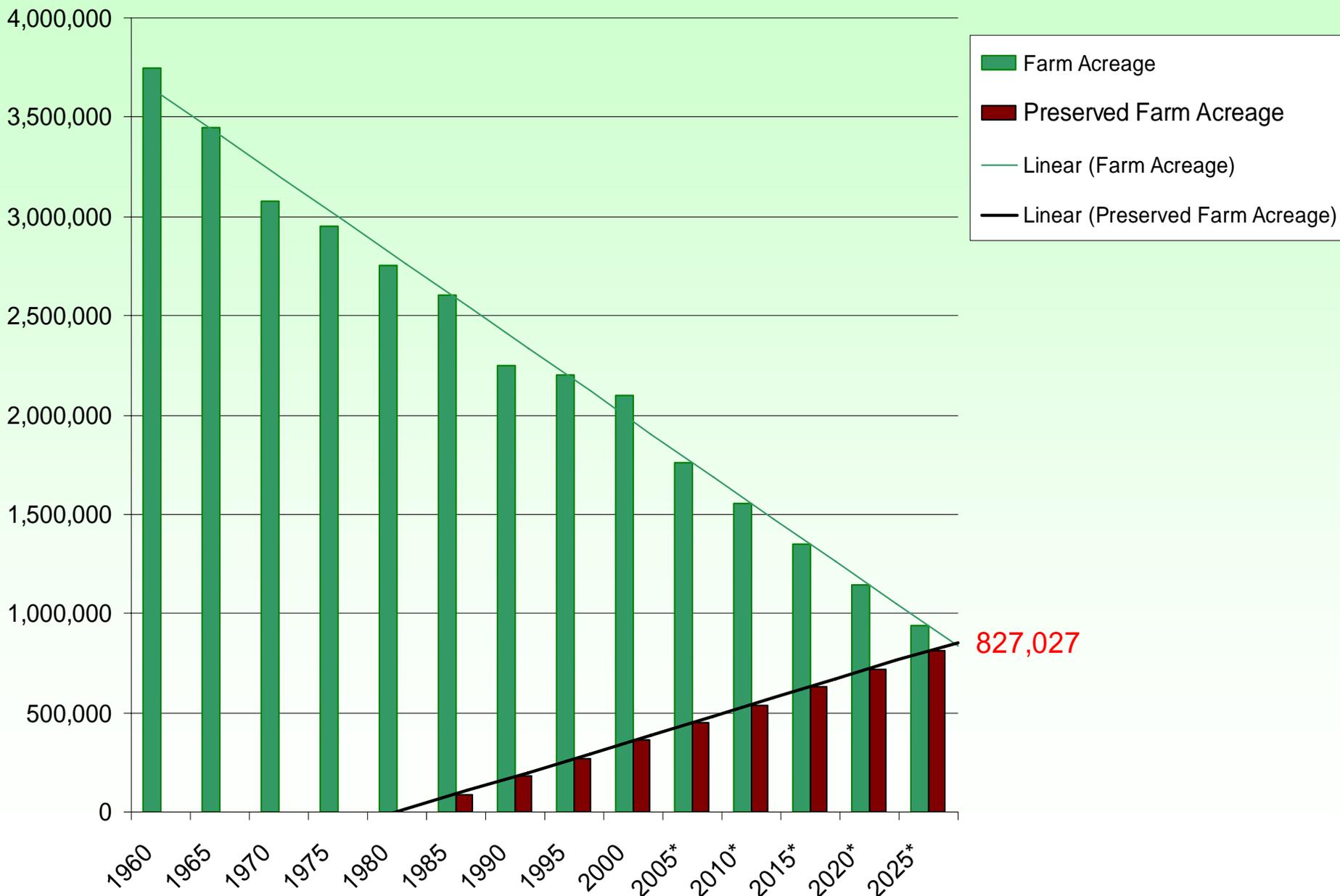
# 10. Population Trend, with Nonfarm Fertilizer Application Rates and Estimated Managed Acres (1990-2004)



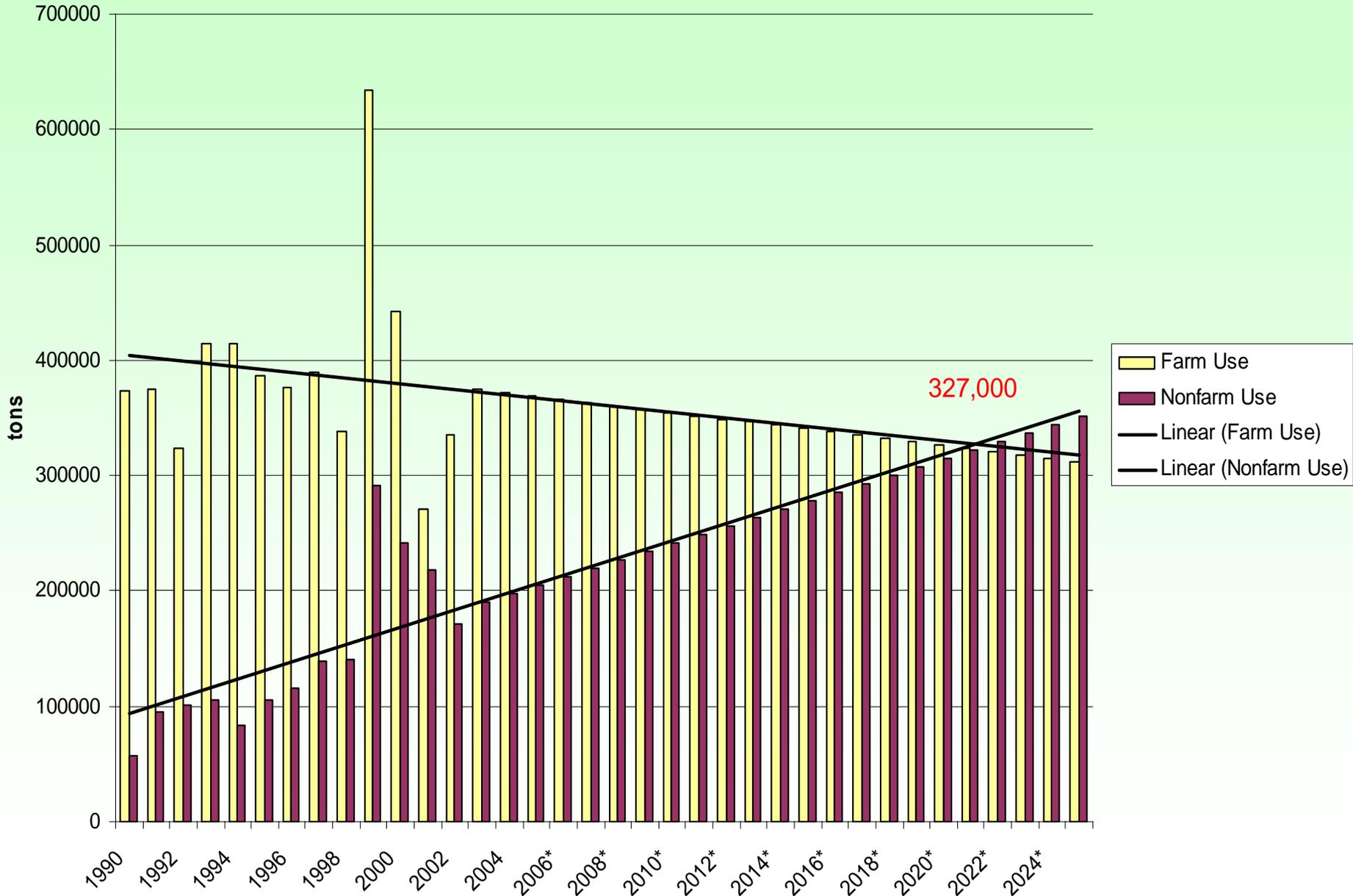
# 11. Farm Use Fertilizer Application 1990-2002 (tons per acre)



## 12. Maryland Farm Acreage Loss Projections through 2035



### 13. Maryland Farm vs. Nonfarm Fertilizer Use, Projected through 2015



## Data Sources

Maryland Agricultural Statistics Service

Maryland Department of Agriculture

*Agriculture in Maryland – Summary for 2001-2002, 2003*

*Annual Fertilizer Tonnage Reports, 1990 to 2004 (fertilizer data for 2003 not available)*

Maryland Department of Assessments and Taxation

Maryland Department of Planning