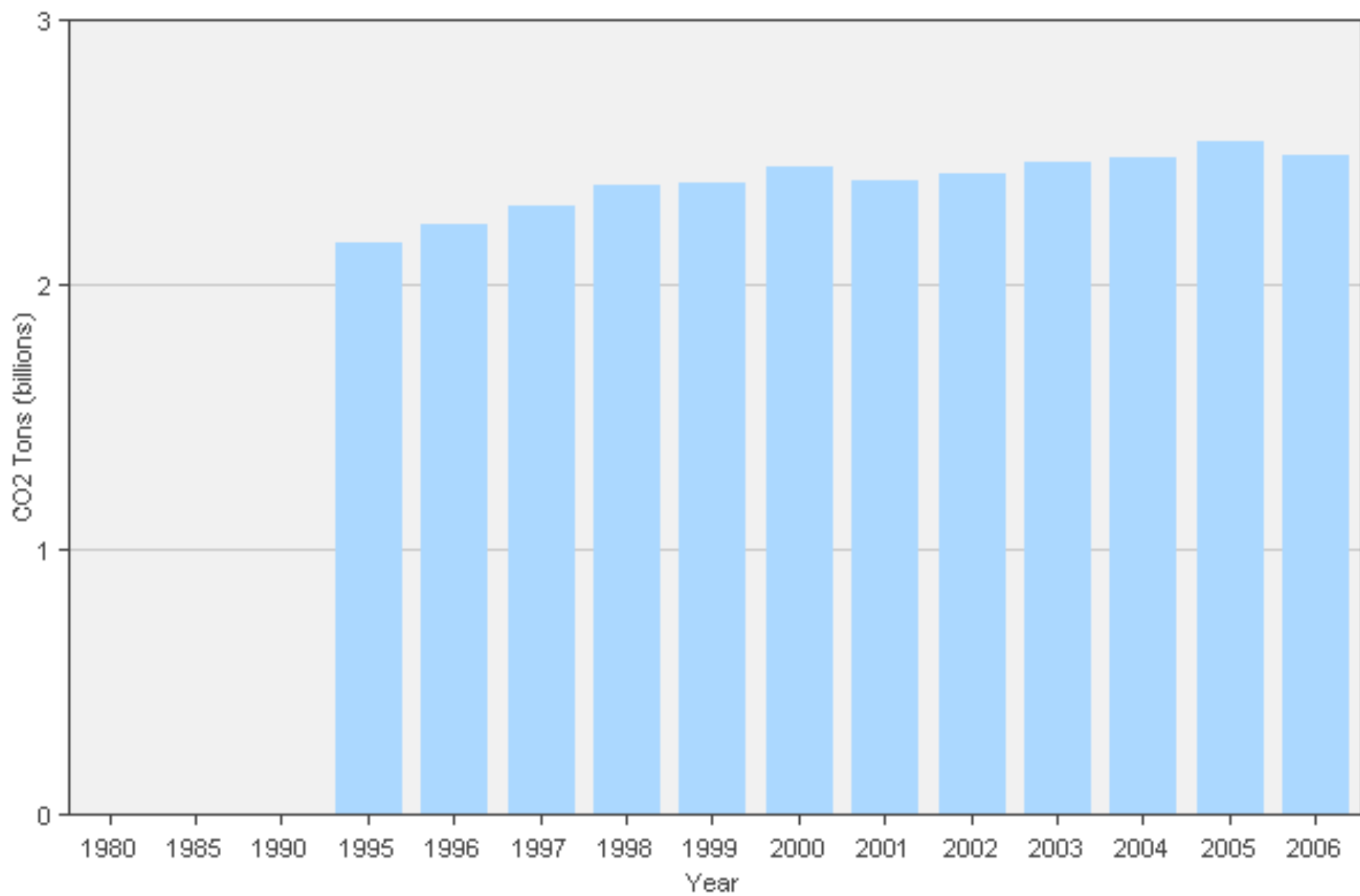




SOD-BASED ROTATIONS AND GLOBAL WARMING

James J. Marois, David L. Wright,
Cheryl L. Mackowiak, Duli Zhao

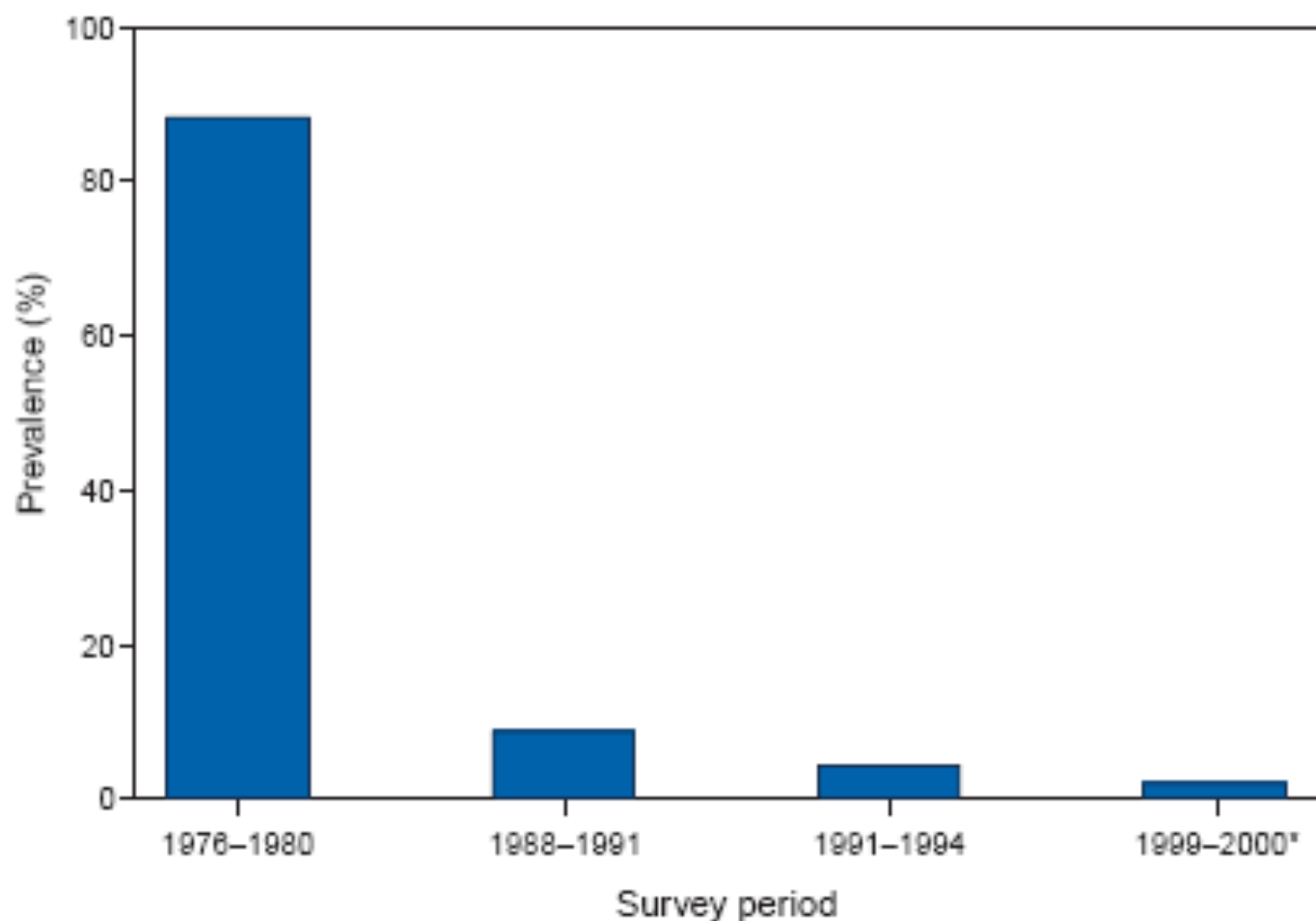




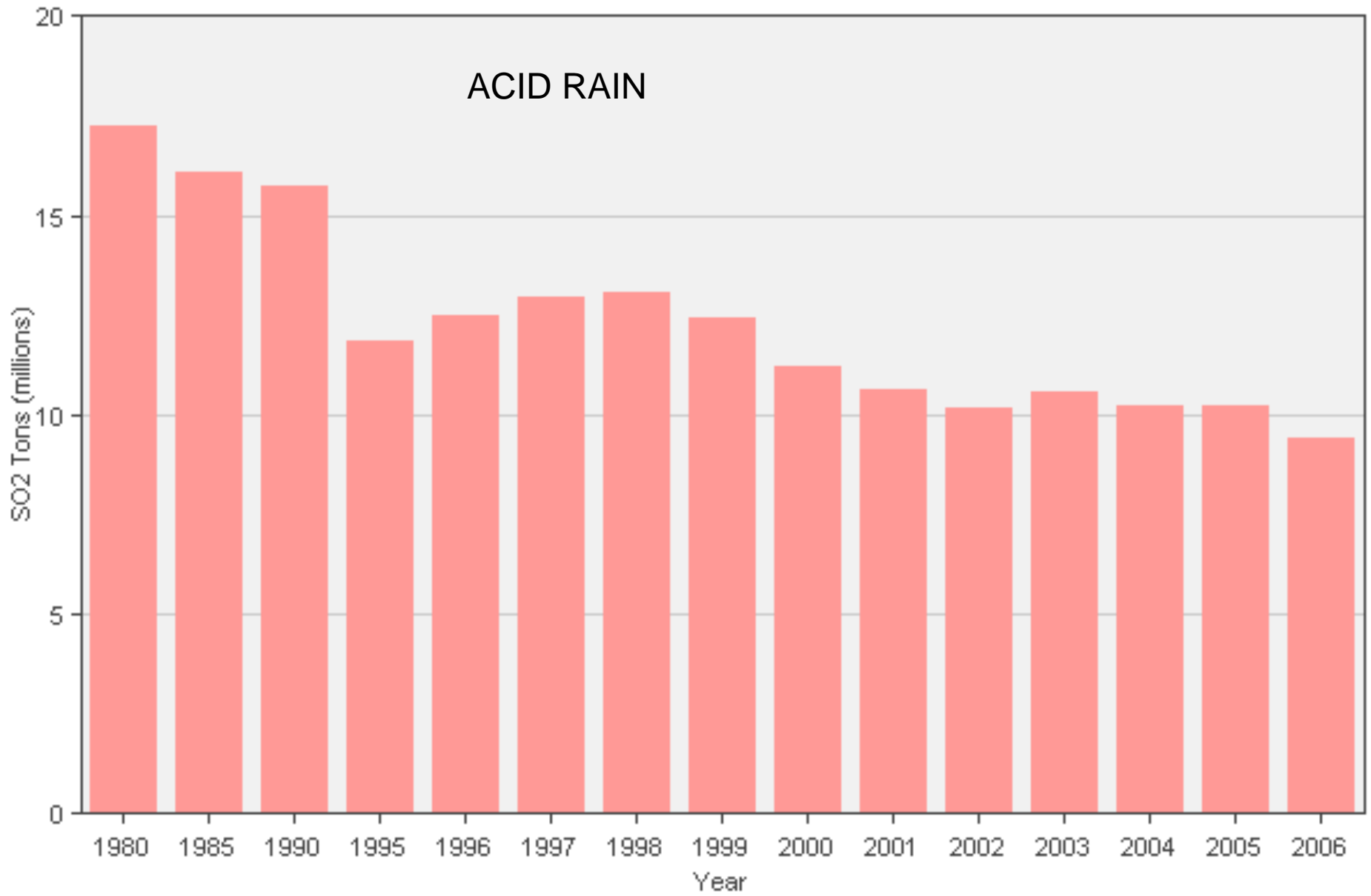
WE HAVE BEEN HERE BEFORE



FIGURE 1. Blood lead levels $\geq 10 \mu\text{g/dL}$ among children aged 1–5 years — United States, 1976–1980, 1988–1991, 1991–1994, and 1999–2000*



Source: National Health and Nutrition Examination Surveys (NHANES).
Note: In 1991, NHANES III Phase 1 was completed and Phase 2 was begun.
* Data for 1999–2000 are highly variable (relative standard error $>30\%$).



<http://cfpub.epa.gov/gdm/index.cfm?fuseaction=factstrends.trendtitleIV>

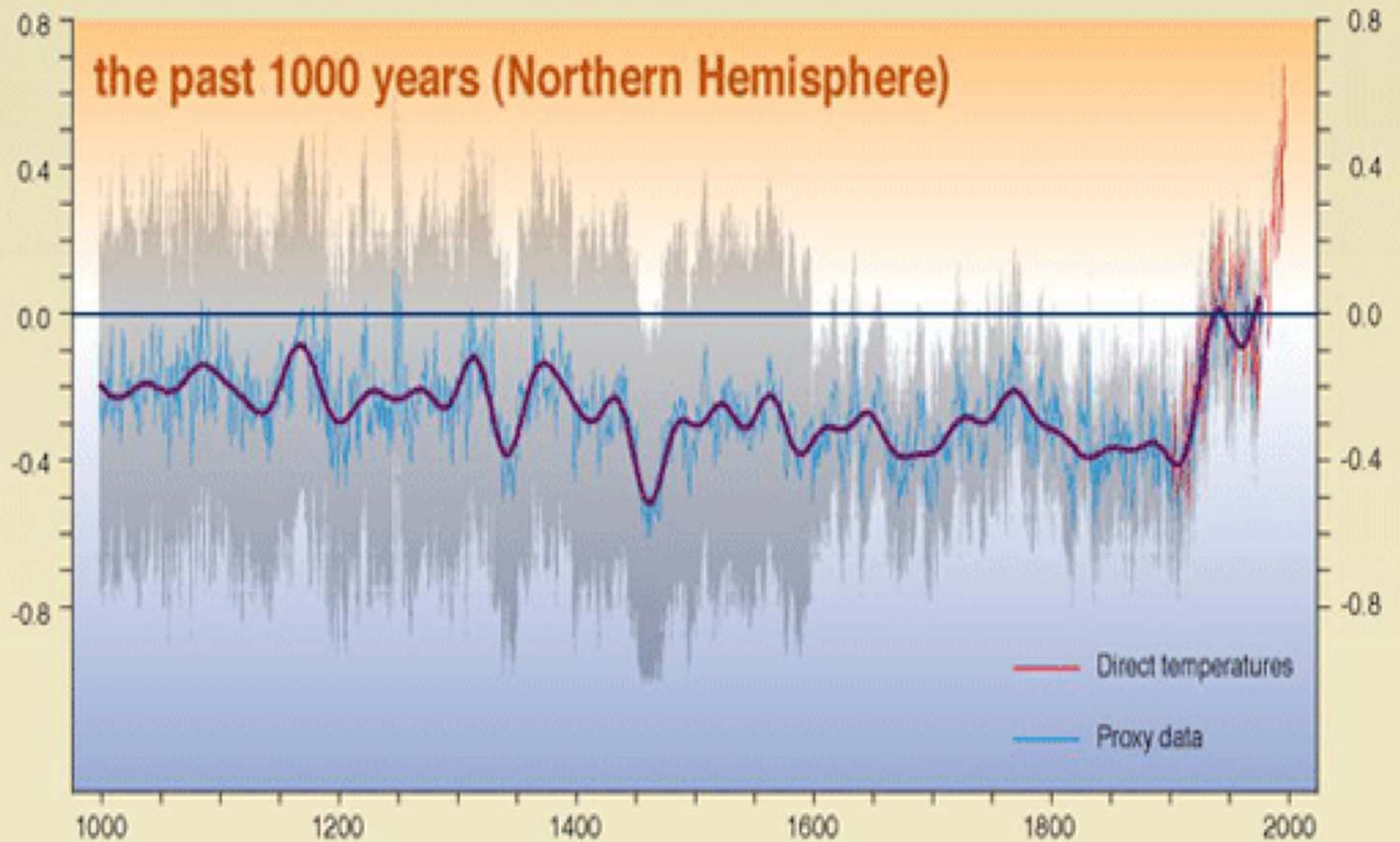
Bald Eagle Removed From Endangered Species List



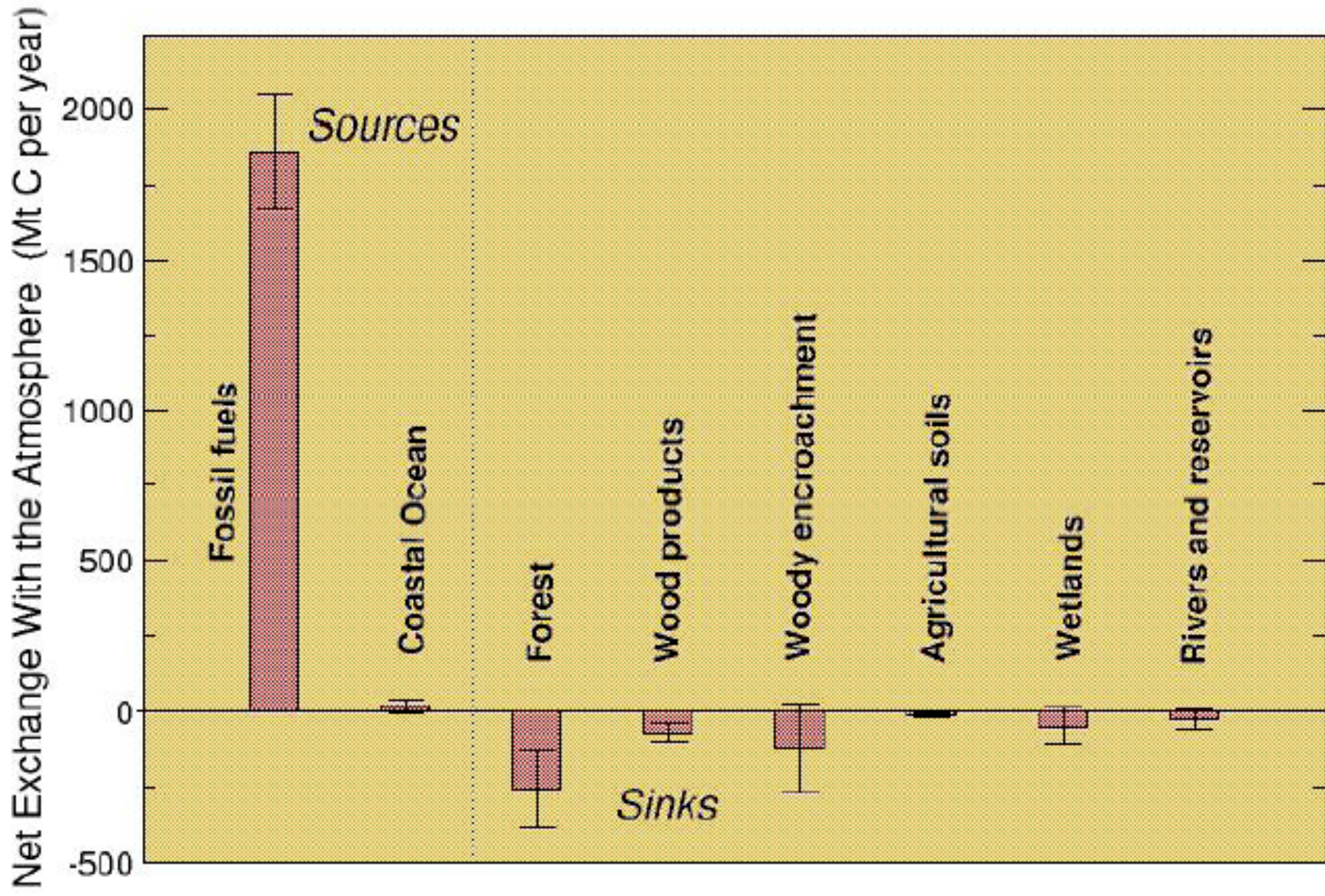
WE HAVE BEEN HERE BEFORE,
AND WE ARE HERE AGAIN



Departures in temperature in °C (from the 1961-1990 average)



source: Intergovernmental Panel on Climate Change, www.ipcc.ch



WHAT CAN A FARMER DO?

LIVESTOCK INTEGRATION INTO CONSERVATION CROPPING SYSTEMS



**SOD BASED ROTATION IS A FOUR YEAR
ROTATION CONSISTING OF:**

TWO YEARS OF BAHIA GRASS

(CATTLE ON SECOND YEAR)

ONE YEAR OF PEANUT

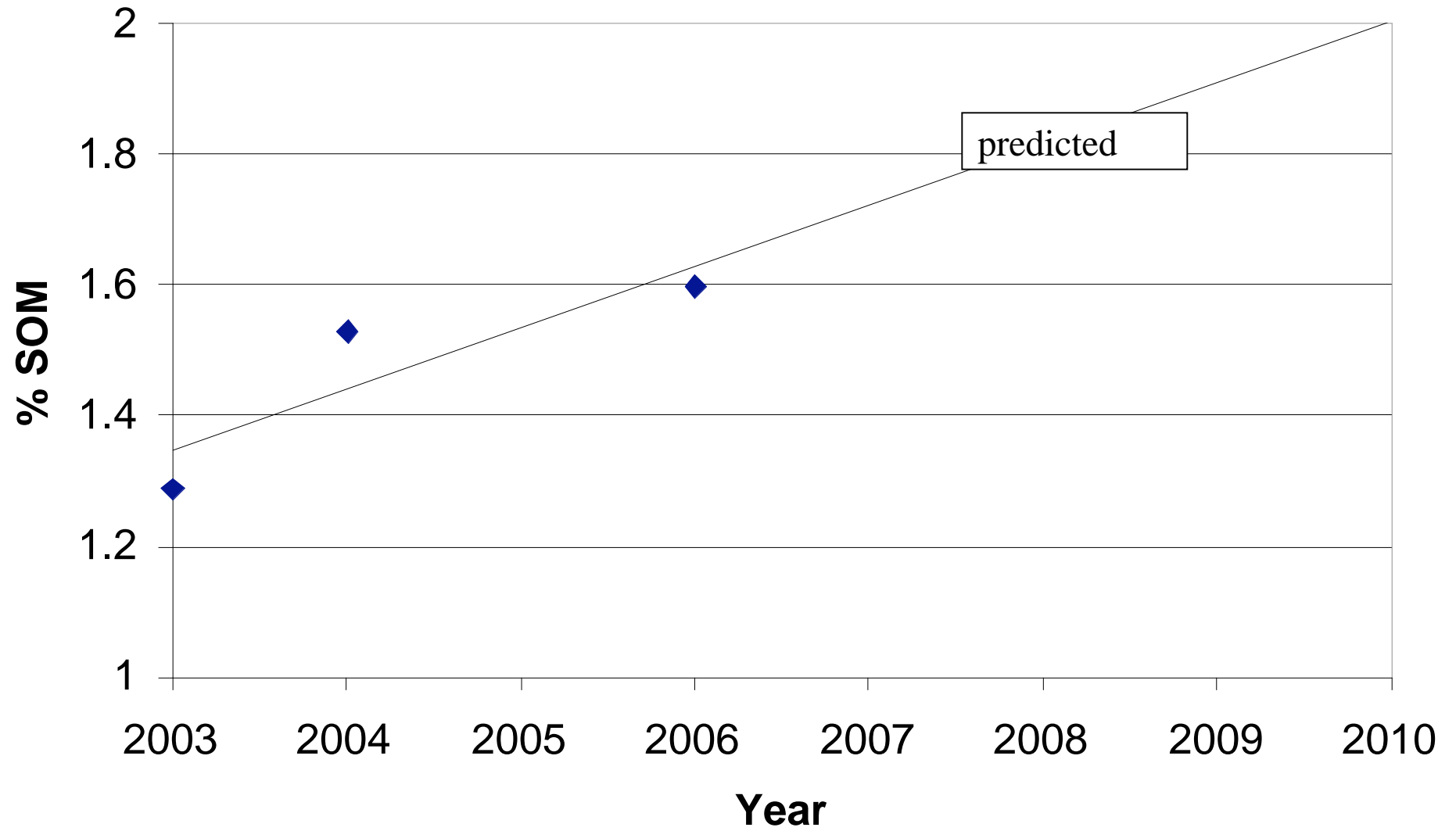
ONE YEAR OF COTTON



SOM

**ONE DATA SET THAT IS BEING
GENERATED IS THE PERCENT SOIL
ORGANIC MATTER IN THE COTTON
PLOTS**

% SOM in SOD BASED ROTATION



Calculations

2% Soil Organic Matter

2,000,000 lbs per acre 6 inch

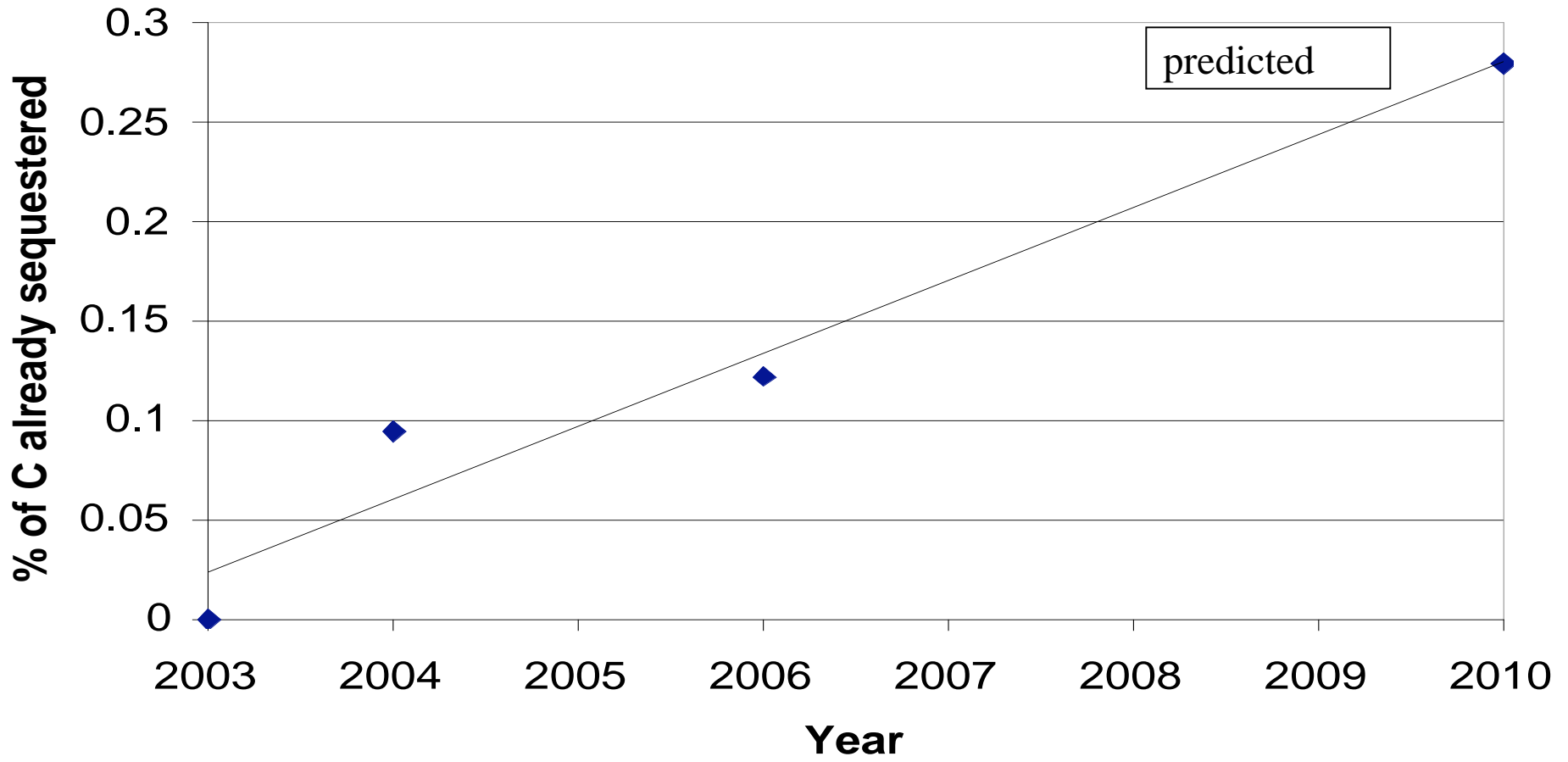
Carbon = SOM / 1.727

20 lbs CO₂/gal of gas

5.5 lbs of C/gal of gas

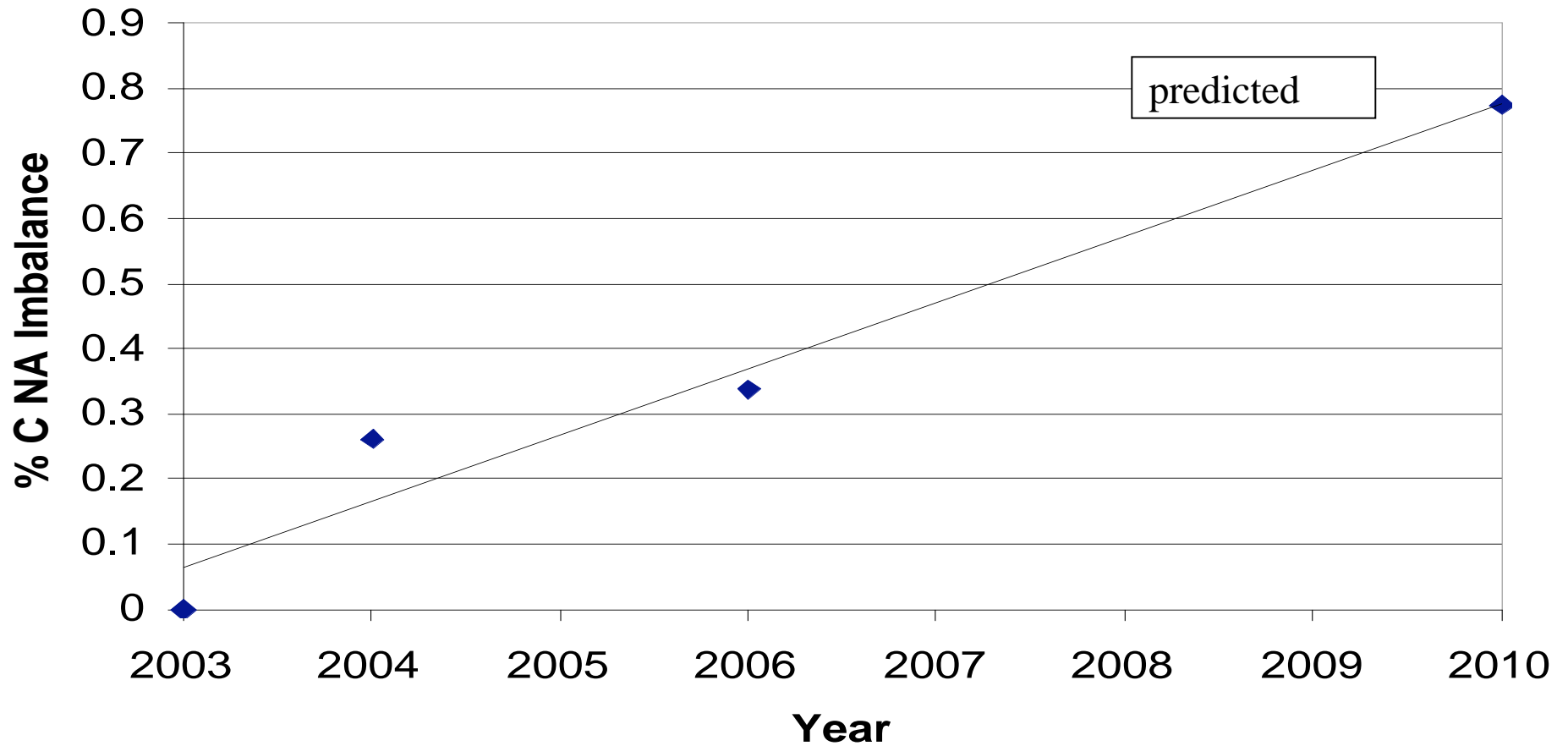
Impact of Sod Rotation on 1,000,000 acres on unsequestered Carbon for North America

% North America C Imbalance Sequestered



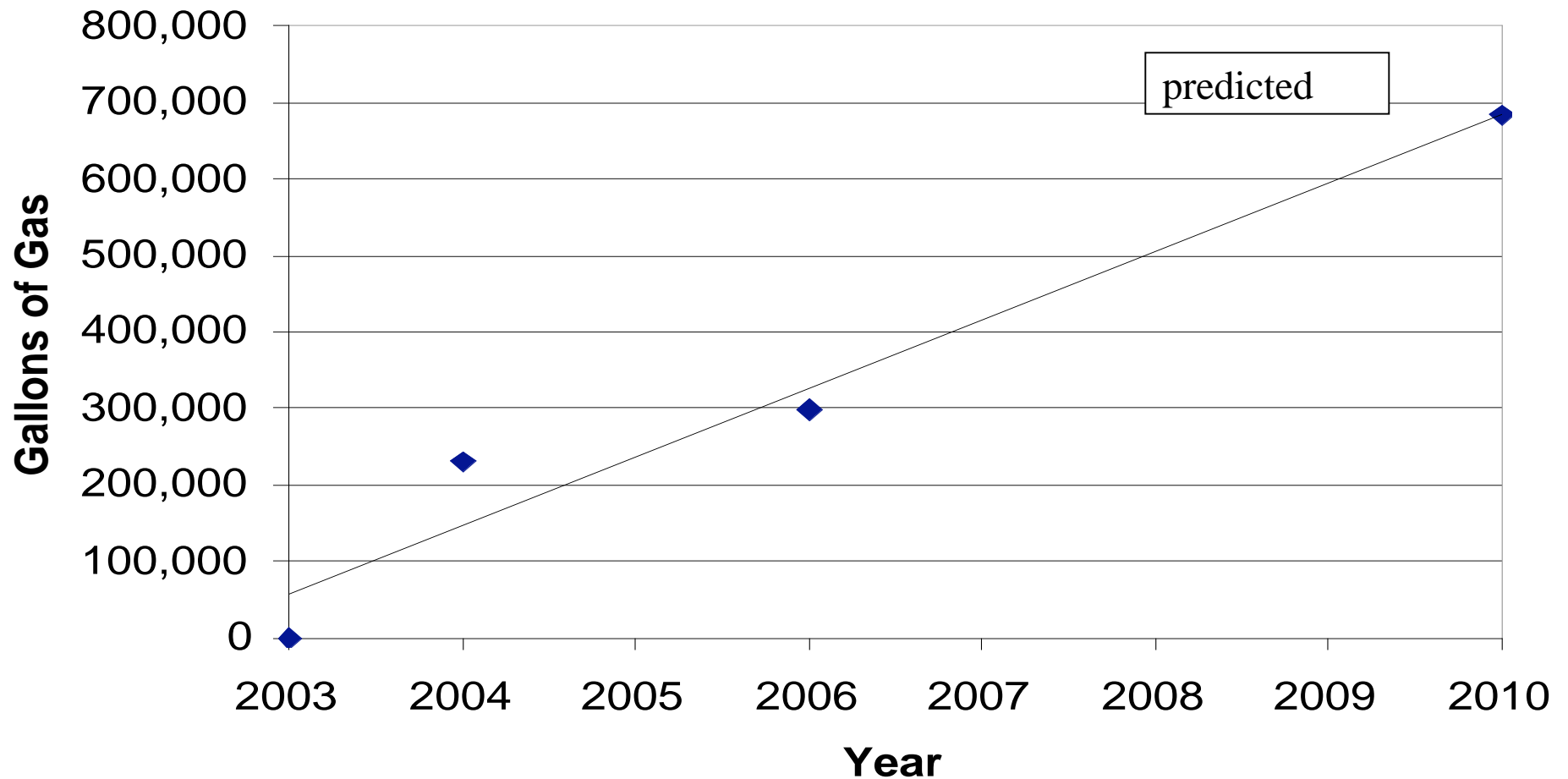
Impact of Sod Rotation on 1,000,000 acres on Increase of Sequestered Carbon in Soil in NA

% of North American C Imbalance



A 500 acre farm in the sod rotation would sequester the Carbon from about 100,000 gallons of gasoline per year

C sequestered from gasoline on 500 acres



THINK GLOBAL, ACT LOCAL



a phrase created by Canadian futurist
Hazel Henderson

