

Air Resources Activities at ERS

**USDA Agricultural Air Quality Task Force Meeting
September 15-17, 2009**

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Economic Research Service**





ERS Mission

- ERS is the main source of economic information and research from USDA
- ERS brings the perspective of economic analysis to critical issues confronting farmers, agribusiness, consumers, and policymakers



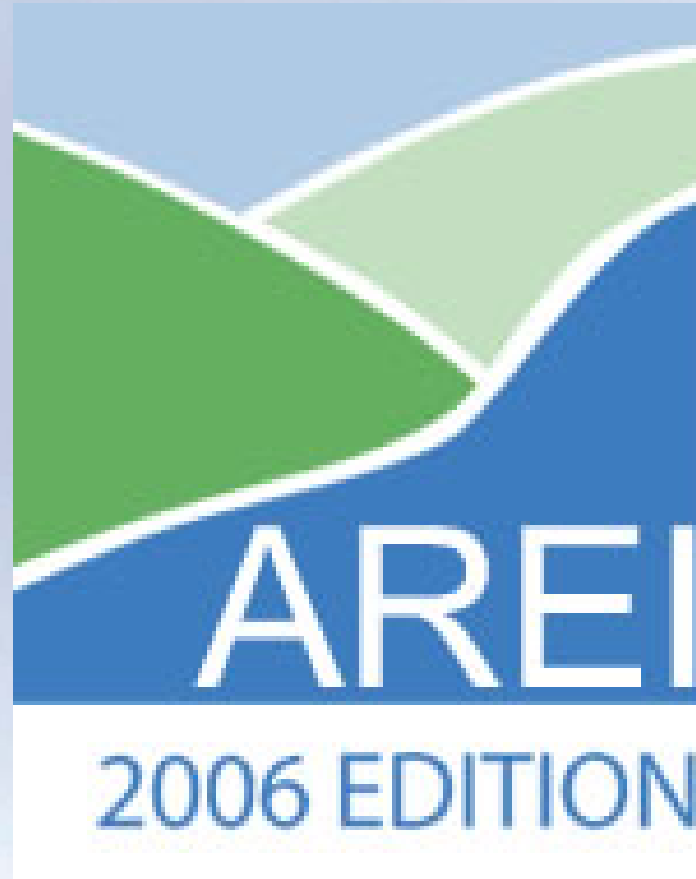


Air Quality Research

- Report status and trends of indicators related to air quality
- Assess potential impacts on air resources of USDA policies that affect technology choices at the farm and ranch level
- Assess potential impacts to agricultural sector of environmental policies that protect air quality



Agricultural Resources and Environmental Indicators



<http://www.ers.usda.gov/publications/arei/eib16/>



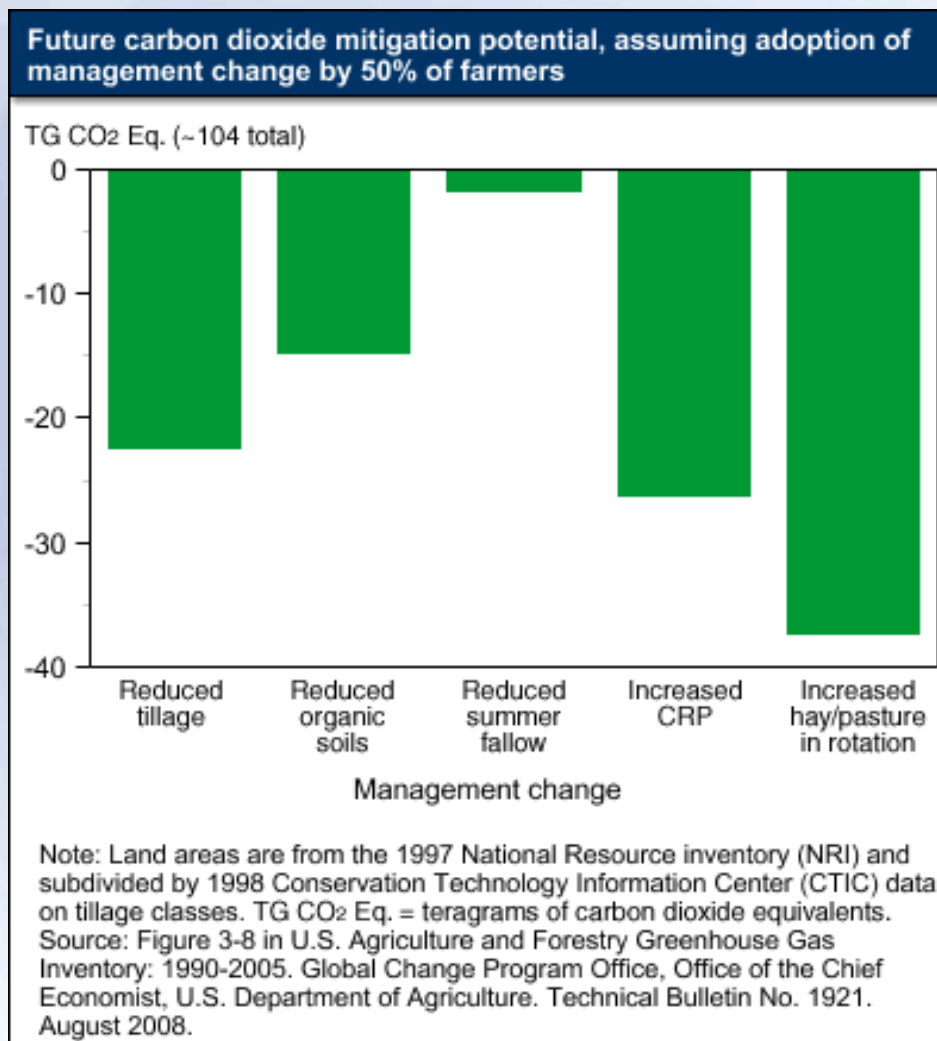


ERS Climate Change Research

- Builds on extensive expertise on the economics of land use, land management, technology adoption, conservation program design, and biofuels production and distribution
- Estimate the likely responses of farmers to carbon mitigation policies
- Assess the likely impacts of policies on carbon balance, land and water use, and agricultural markets



Mitigation



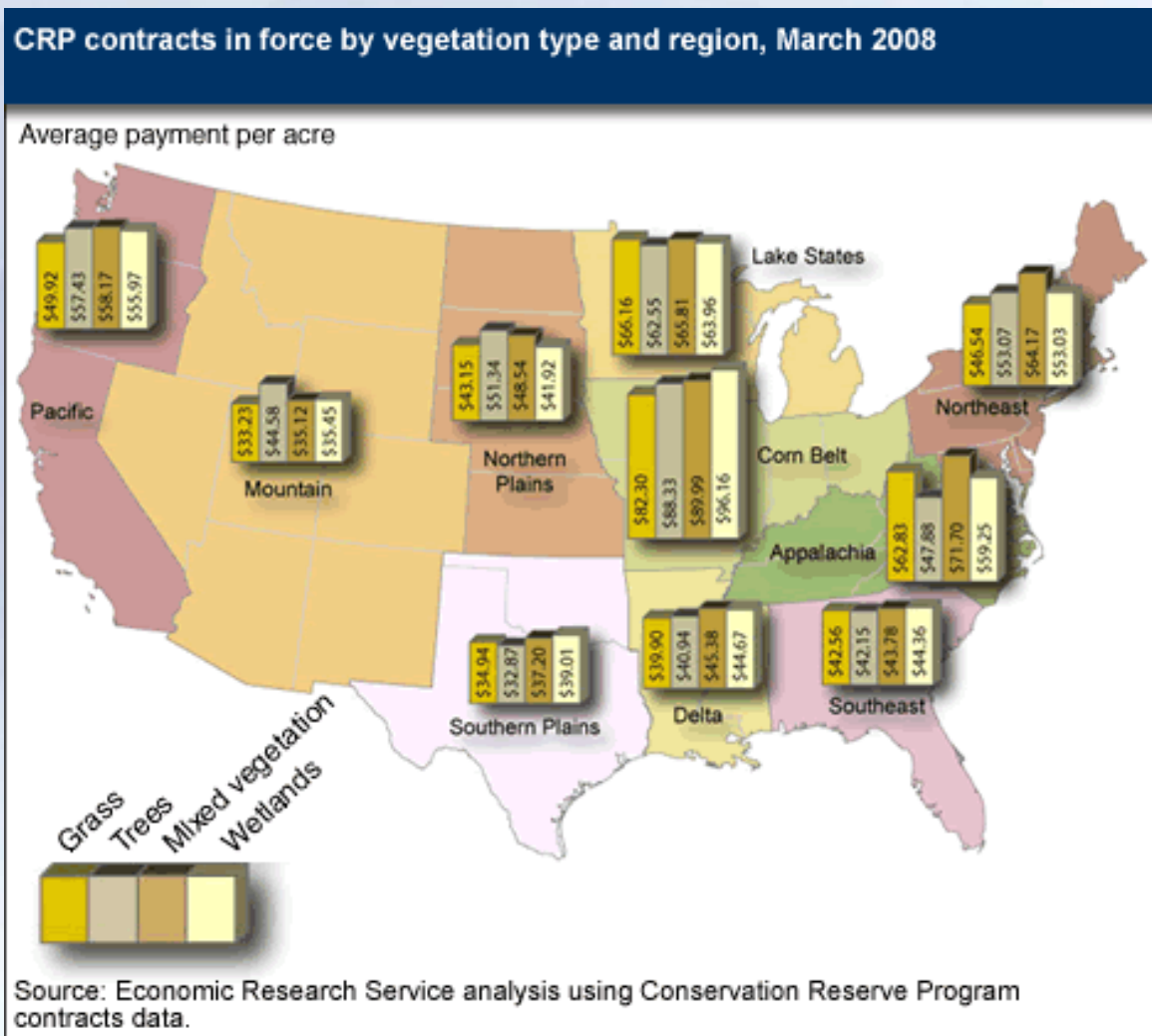


Mitigation

- ERS research will estimate the practice adoption rates that might occur at any given carbon price
- Research will show how the agriculture sector adjusts to different policy approaches
- Research will estimate the economic value of additional environmental benefits, such as improving water quality or providing wildlife habitat



Climate and Conservation Policy Linkages



Bioenergy

ERS provides analysis of market effects and their implications

- Monitoring the state of the agricultural system and rural communities
- Providing market analysis for bioenergy products
- Developing projections of commodity supply, demand, and retail food prices





Biofuels research

BR&Di
BIOMASS RESEARCH & DEVELOPMENT INITIATIVE

Increasing Feedstock Production for Biofuels
Economic Drivers, Environmental Implications, and the Role of Research





Adaptation and Market Effects

- Research on investment in agricultural research and on crop genetic resources indicates the importance of maintaining and improving agricultural productivity and genetic diversity, which enhances agriculture's ability to adapt to changing conditions
- Examine farmers' responses to changing resource availability and productivity changes
- Research provides policy makers, stakeholders, and producers the economic analysis to support decision making under uncertain conditions





Nitrogen Use in Agriculture

- Great concern over the environmental consequences of reactive nitrogen used in agriculture
 - Water quality
 - Air quality
 - Climate change
 - Ecosystems





Current Nitrogen Practices

- Examine the use of nitrogen in agriculture
 - Application rates
 - Application practices
 - Application timing
- Identify crop acreage in need of management improvements
 - By crop
 - By region
 - By farm type
 - By known water impairment





Economic Drivers Affecting Use

- Crop prices
- Input prices
- Risk
- Information/extension
- Conservation programs





Implications for Improved Management

- Farmer costs of changing management
 - Lower application rates
 - Injection
 - No fall applications
 - Rotations
- Environmental consequences
 - Greenhouse gases
 - Surface runoff
 - Groundwater leaching





Policy Approaches for Managing Nitrogen

- Financial assistance
 - Are current incentives adequate?
- Land retirement
 - Is there intensification in use on remaining acres?
- Water quality trading
 - Do EPA baseline guidelines hinder trades?
- On-site management vs. off-site filtering



Information from ERS

- www.ers.usda.gov
- Briefing Rooms
 - Bioenergy
 - Conservation Policy
 - Environmental Interactions with Agricultural Production
 - Global Climate Change

