



Agriculture and Global Warming: A Small Part of the Problem – A Large Part of the Solution

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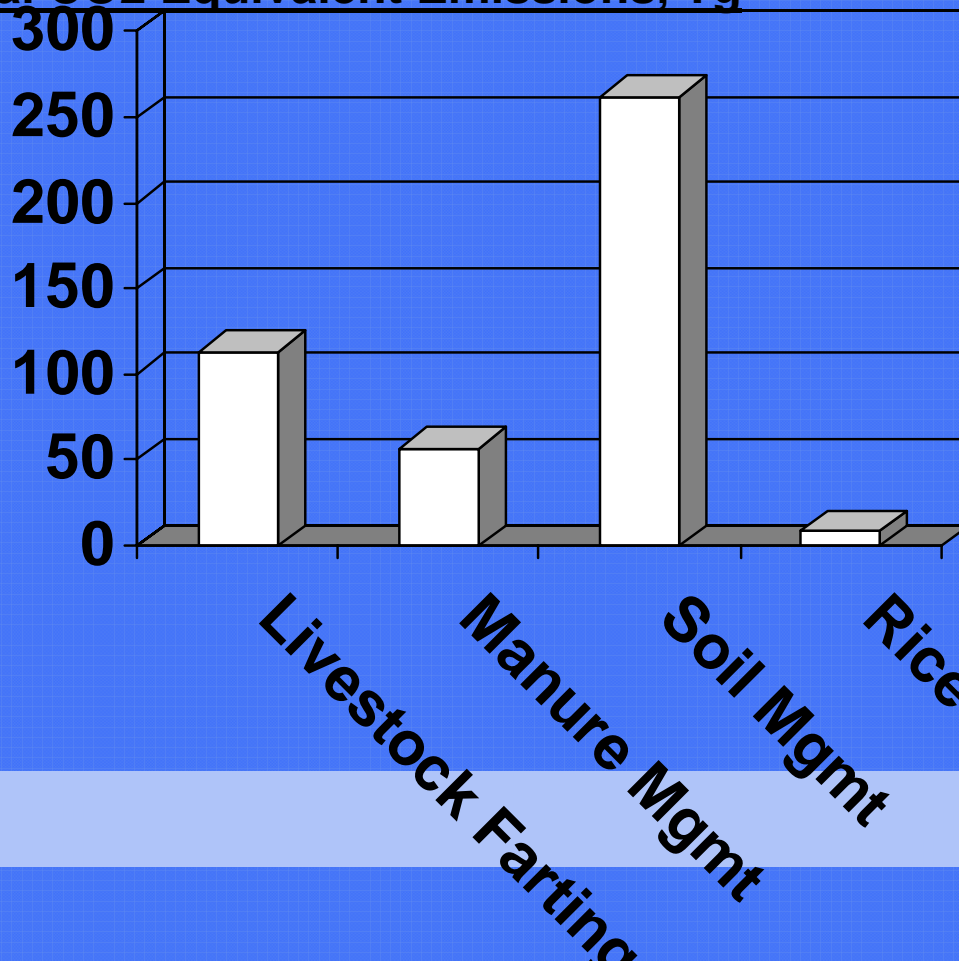
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Agriculture = 7% of U.S. GHG Pollution

Annual CO₂ Equivalent Emissions, Tg



**Total Ag CO₂
Pollution Unchanged
since 1990**



Key Factors Affecting Pollution Levels

- **Record corn acreage (driven by ethanol boom)**
- **Fertilizer Usage (NH_4)**
- **Expiring CRP contracts**
- **Record Livestock Herds**



Agronomic Options to Reduce Ag Pollution Are Limited

- **Livestock: Increased grass feeding**
- **Manure Management: Anaerobic Digesters**
- **Soil Management:**
 - **Reduced row crop acreage**
 - **Reduced fertilizer usage (precision ag)**
 - **Reduced tillage**



Biofuels and Global Warming

- **Corn-based ethanol reduces net CO₂ pollution by 18%-29% at best**
- **Ethanol production is a carbon-intensive process**
 - **Corn production**
 - **Natural gas and coal energy inputs for plants**



Agronomic Solutions to Reducing Ethanol's CO2 Profile

- **Plant winter cover crops**
- **Reduce tillage**
- **Substitute biomass for natural gas**
- **Cellulosic ethanol production**



Greenhouse Gas Benefits of Cellulosic Ethanol

- **Consensus is that cellulosic ethanol lowers net GHG pollution by 80%+ relative to gasoline.**
- **Benefits derived from reduced fertilizer inputs, reduced tillage and carbon sequestration from energy crops.**



Federal Policy Framework for Greenhouse Gas Reductions

Grants
Loan
Guarantees
R&D
Technical
Assistance

Farm Bill

Energy Bill

**Comprehensive
Carbon Legislation**

Tax Credits
RPS
RFS
CAFE



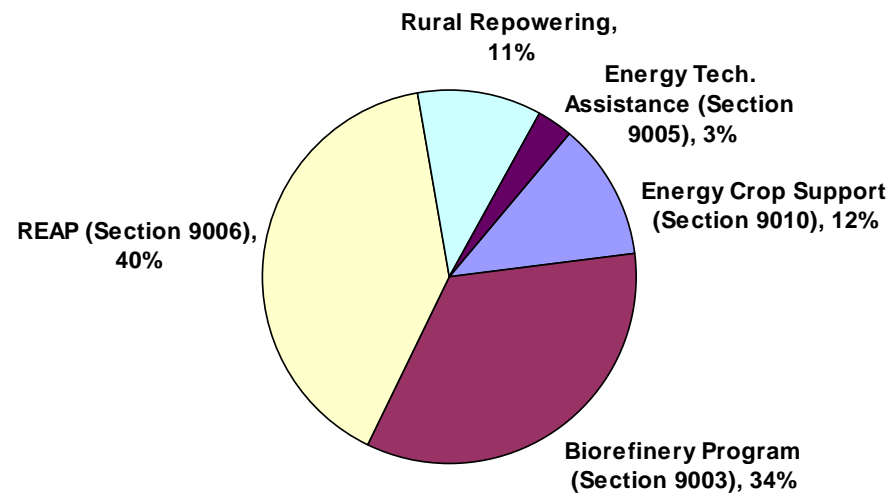
The 2007 Farm Bill: Driving GHG Reductions through the Energy Title

- **ELPC Study: “Mitigating Climate Change through the Farm Bill Energy Title”**
- **Study concludes that \$1 billion in annual Energy Title funding would yield 57 million metric tons in annual CO₂ reductions. That is the CO₂ pollution reduction equivalent of 11 million cars**



The 2007 Farm Bill: Driving GHG Reductions through the Energy Title

Potential Greenhouse Gas Savings
Major Energy Title Programs



The 2007 Farm Bill: Driving GHG Reductions through the Energy Title

- **REAP: Grants and loan guarantees for locally-owned biofuel, wind, solar projects, digesters, energy efficiency**
- **Biorefineries: Loan guarantees for cellulosic ethanol plants**
- **Rural Repowering: Grants to encourage substitution of biomass for natural gas**
- **Transitional Biomass Crop Assistance**
- **Energy Audits and Technical Assistance**



Strong Public/Private Support for Major Energy Title Investments

- **Dole-Daschle Report – The Ag Policy Project for the 21st Century**

Recommended more than \$2 billion/year for Farm Bill Energy Programs

- **25 x '25 Action Plan**

Recommended \$1 billion/year for Farm Bill Energy Programs





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