Mitigation of GHGs by Agriculture

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Reducing GHGs…Energy Use

• Reduce emissions by conserving energy.
• We have done this in agriculture.
  – In 1978, agriculture consumed 2.4 quadrillion BTUs of energy annually to raise food and fiber.
  – In 2002, this number was reduced to 1.7Q BTUs…nearly a 30% reduction.
  – At the same time, yields have increased (30% for corn alone).
Energy Use Reductions in Agriculture

• We are using less fertilizer than we did a generation ago. N fertilizer is derived from natural gas.
• Biotechnology
• Increases in minimum till / no till techniques reduces trips across the field, saves fuel.
• Larger equipment reduces fieldwork time.
• Center pivot technology...more efficient.
Reducing GHGs...Renewables

- Ag derived renewable energy will allow agriculture play a role both on reducing dependence on fossil fuels and reducing GHG emissions.
  - Ethanol...production has doubled over the last four years to 3.4 billion gallons.
  - Cellulosic Ethanol shows great promise.
  - Biodiesel has a promising future.
  - Wind, biopower, biomass, methane digestion also growing through tax incentives.
  - Role in hybrids/hydrogen technology.
Carbon Sequestration

• AFBF supports carbon sequestration and the development of a voluntary carbon trading system.
• Applaud the ground work laid by USDA, Chicago Climate Exchange and other groups like the Iowa Farm Bureau.
• Also applaud those producers who have implemented cropping systems and tillage regimens that promote soil sequestration.
No-Till Adoption in the U.S.

- Has nearly double in last 10 years.
  - 38.9 million acres in 1994
- Decision by producers to invest capital in no-till is based on several factors...
  - Environment, region, types of crops grown.
  - Savings in energy vs. increased cost in new equipment and chemical use.
  - Yield...bottom line, is it a good business decision.
Government Assistance

• USDA Conservation programs being utilized for sequestration/GHG reductions.
  – EQIP…Assists both crop and livestock producers.
  – CRP…The management of idled acres.
  – CSP…Energy component has huge potential.
  – Forest Land Enhancement Program

• Climate VISION Program.
  – Focuses on reducing CO2 Intensity 18% by 2018.
Carbon Accounting System

• Difficult situation…
  – Must be verifiable yet must adhere to the KIS (keep it simple) rule.

• Accounting can not be:
  – Overly cumbersome
  – Cost prohibitive

• Participation will most likely be maximized
  – Indirect methods…stratified accounting, remote sensing, modeling.
Other Sequestration Factors...

• Forest acres may consume a significant portion of the funding and program assistance.

• Other sequestration methods such as geologic injection and oceanic technologies may deemphasize agricultural sequestration.

• Farmer will still no-till and recapture methane, etc. if it makes good business sense.