Dust Cloud on the Horizon:
Avoiding the Soil for Oil Trade-off
A Word from the Field

Dan Cotter
District Conservationist
USDA NRCS
Lafayette County, Wisconsin
GOING with the GRAIN

COOPERATIVE APPROACH GETS ETHANOL PLANT UP AND RUNNING

ETHANOL EUPHORIA
Land price boom

How Will Corn Find The Acres It Needs?
Ethanol’s hefty appetite will affect how much corn farmers must produce.

Crazy About Corn
High corn prices trigger shifts in production practices

BY JEANNE BERNICK
Corn Rush

Demand for ethanol is turning kernels into gold, but how long can the corn boom last?
Income from Market and USDA

Break even point

2005

2007
Oak Savannah, Lafayette County, 2006
Cleared for cropland 2007
Woodland (2005) to Cropland (2007), Grant County

74 acres of sodbusting
60 acres of cleared woodland
Pasture to Cropland, 2007
Green County
Continuous Corn vs Crop Rotation

- Continuous corn - more fall tillage
- Corn-soybean crop rotation commonly grown using no tillage on highly erodible land
A View from Above: Grant River at the Mississippi 1937-2004
1949

Mouth of Grant

Potosi Point

Railroad
1955

Mouth of Grant

Potosi Point
Erosion, and Consequences

Judy Derricks
Conservation Agronomist
USDA NRCS
Wisconsin
The Power of Water
Vulnerable Soil

- Declining Organic Matter, Microbial Activity, Soil Structure
- When Saturated...loses its ability to stay together

****Test Soil Health and Consolidation
Tools to Measure Soil Loss and Soil Quality

• Soil Loss Prediction…\textit{RUSLE2}
  – “T” value

• Soil Conditioning Index…\textit{SCI}
Soil Erosion Trends Wisconsin

1982: 4.7
1987: 4.1
1992: 3.8
1997: 3.7
2003: 3.1
Impacts of Increasing Corn and Tillage

• Soil Quality Declines
• Erosion Rate Increases
• Surface water risk from sediment and nutrients increases
Sediment in Runoff
Nutrients -- phosphorous, manure delivered to surface water
Changing crop rotations to monoculture....
Pest Cycles
More fertilizer inputs
It’s just for a few years...
But it only takes one rainstorm
Productive Lands
Healthy Environment

Pat Murphy
State Resource Conservationist
USDA NRCS
Wisconsin
Benefits at Risk

- Agricultural Market Transition Act (AMTA)
- Production Flexibility Contract Payments
- Farm storage facility loans
- *Disaster payments*
- Milk payments
- Conservation program payments
- Agricultural Credit Act of 1976 payments
Environmental Regulations

- EPA Clean Water Act
- EPA Safe Drinking Water Act
- Wisconsin Ag Performance Standards
Conservation Planning

- NRCS’ role is to develop conservation systems to address
  - Capability of the land
  - Client’s long-term objectives
  - Compliance with federal, state and local laws
  - Resource concerns identified by the planner
Flat land
Moderate slopes
Rotations!
Limit Soil Erosion

Contour buffers, conservation tillage, grassed waterways
Buffers!
Slopes over 12% not suitable
Intensive Cropping Requires Intensive Conservation
Too close to the edge
Productive Lands
Healthy Environment