

BMP CHALLENGE and Water Quality Trading: Opportunities for Farmers, Advisors and Educators

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General

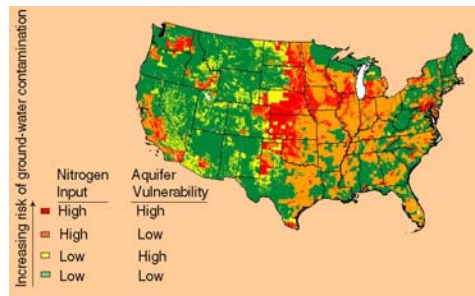
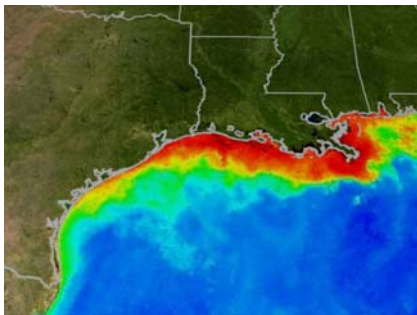
Rationale

One million tons N carried to Gulf of Mexico annually

Up to 30% of Midwest private wells exceed 10 mg nitrate standard

Great Plains cropland produces 25 million tons of sediment annually

Agriculture accounts for 10% of greenhouse gases



http://www.nasa.gov/vision/earth/environment/dead_zone.html

<http://asuwlink.uwyo.edu/~tkc/tkb.html>

http://serc.carleton.edu/images/microbelife/topics/General_Collection_deadzone.jpg

<http://cropwatch.unl.edu/photos/cwphoto/crop04-8tillingb.jpg>

General

Rationale

“Extra” is a **rational defense** against economic uncertainty

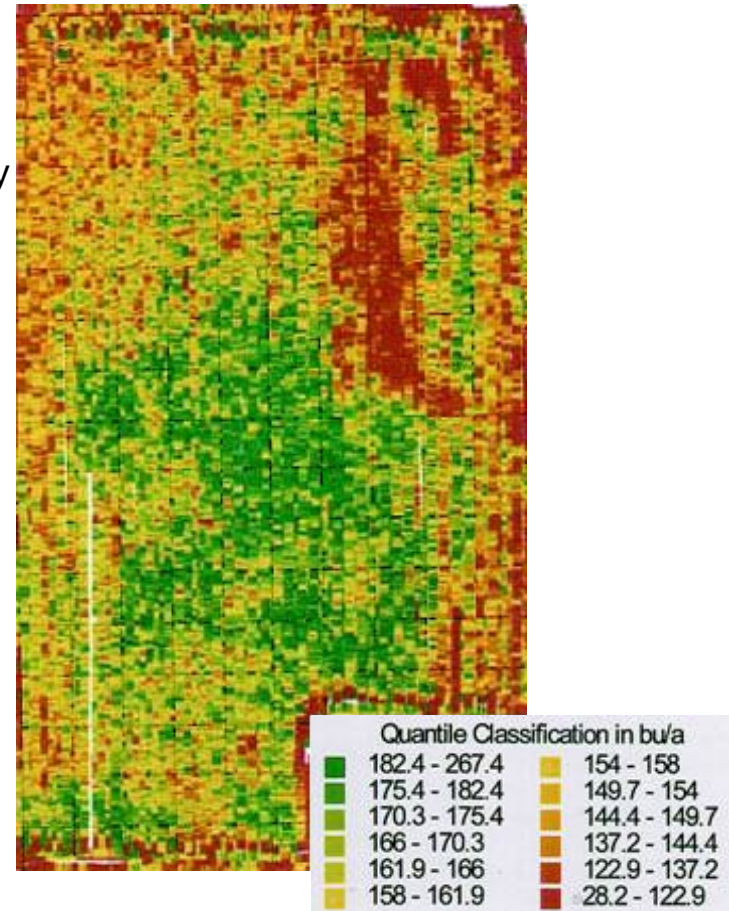
Nutrient management is an uncertain science

- 1.2 lbs N/bu no longer the standard

Applied nutrients may be lost if heavy spring rains occur

Bumper crop conditions may call for more nutrients

Reduced tillage risks include cold, wet springs



General

Rationale

We can do better!

BMP CHALLENGE participants have reduced N use by 23% or 41 lbs per acre

Net returns have remained the same on average

Enormous potential for basic and advanced practice adoption (*2005 survey results*)

- 16% do not credit N from soybeans

- 25% do not credit nutrients in manure

- 67% do not use variable rate

- 88% do not use in-season testing/application

General

Project Details

NRCS Conservation Innovation Grant: 2006 - 2009

BMP CHALLENGE in 13 states

Risk-free opportunity for *corn* farmers to experiment with nutrient and tillage reduction, on their own fields

Water Quality Credit Trading

Cost-effective water quality improvements

Buying the benefits from one who can get the job done least expensively

Partners

Project Team

Agflex, Inc.
Kieser & Associates, LLC
IPM Institute

Agren, Inc.
American Farmland Trust
Minnesota River Board

Advisory Group

Minnesota National Resource Conservation Service (NRCS)
Minnesota Department of Agriculture
Stearns County Soil and Water Conservation District (SWCD)
Crop advisors
Producers
Land Stewardship Project

Minnesota Pollution Control Agency (MPCA)
Board of Water and Soil Resources (BWSR)
University of Minnesota
AgStar Financial Services
Minnesota Project

General

Project Goals

Improve water quality:

Make BMP CHALLENGE available to corn farmers who have not reduced nutrient rates to university recommendations, or reduced tillage where conservation tillage is appropriate

Help get agriculture ready to trade water quality credits where available

Key Deliverables

- Training curriculum, three MN in-state trainers on BMP CHALLENGE and WQ Trading
- 1000-1500 farmer inquiries
- Ten point sources in Minnesota ready to trade
- Reductions across corn belt:
 - 760,000 lbs. N use
 - 40,000 lbs. P loading
 - 25,000 lbs. NO₂
 - 5,000 tons CO₂ from tillage and nutrient reduction
 - Approx. 34,000 acres of new BMPs*