Welcome

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USDA ERS / Organizing Committee Co-Chairs

Workshop on New Developments in U.S. Land-Use Data and Analysis: Implications for Agriculture and Rural Land

October 16-17

Washington, DC

Farm Foundation

ERS
ECONOMIC RESEARCH SERVICE

Workshop Motivations

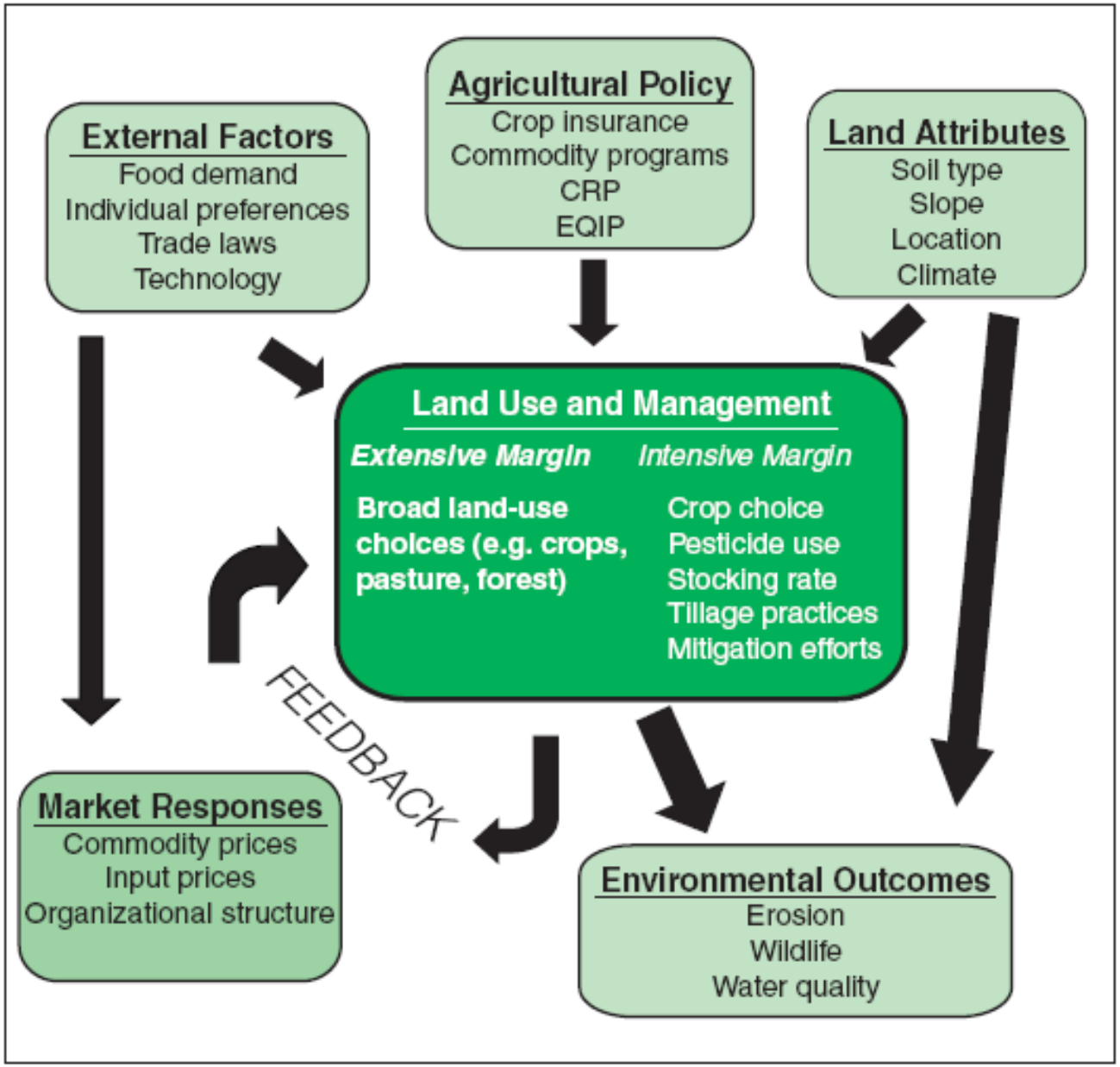
- Recent expansion and changes in data relevant to agriculture and rural land use.
  - Remote sensing and digital products.
  - Changes in existing programs (NRI).
- ERS is a consumer of land use/land cover data.
- ERS is a producer and compiler of land-use data.
  - ARMS
  - Major Uses of Land (MLU) database

Workshop Objectives

Bring together land-use data providers and users to:

- Increase awareness about new developments in data collection and availability.
- Discuss opportunities and challenges in using these data.
- Identify priorities and next steps for both data collection and research efforts.

Tracing the Links Between Policy, Land Use, and the Environment



Introductory Presentations

- ERS Land Use Data for Policy Analysis: Past, Present, and Future, Ralph Heimlich, Agricultural Conservation Economics

- USDA Remote Sensing Data Collections: Implications for Land-Use and Land-Cover Applications, Glenn Bethel, USDA/FAS

Lunch Presentations

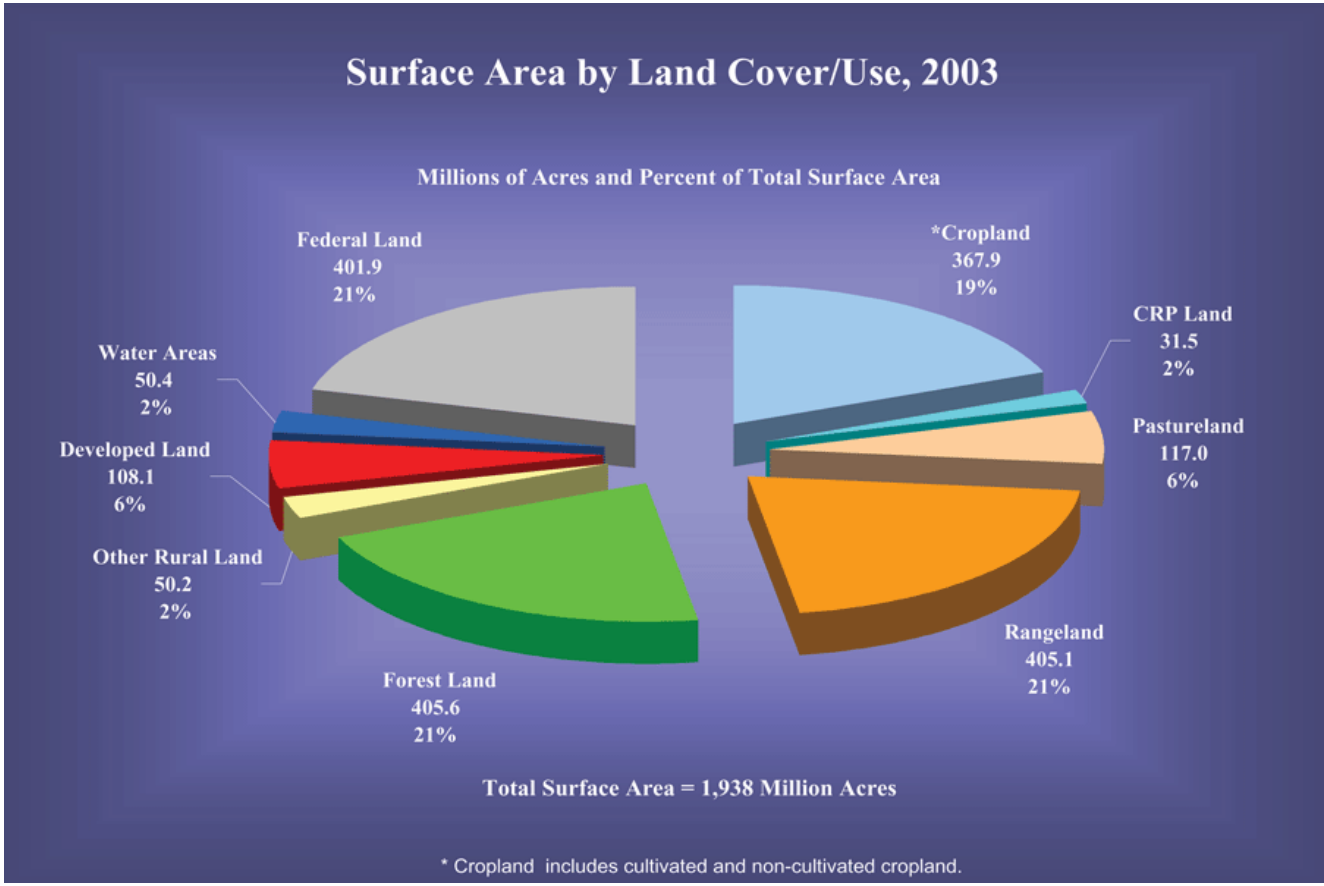
- Seeing the Elephant: Multi-Disciplinary Measures of Urban Sprawl, Gerrit Knaap, National Center for Smart Growth Research and Education, University of Maryland

- Satellite Views of Urbanization, Net Primary Production, and the Human Demand for Food and Fiber-Can the Earth Keep up?, Marc Imhoff, Goddard Space Flight Center

Survey-Based Data: National Resources Inventory

Data Background:
Jeff Goebel, NRCS

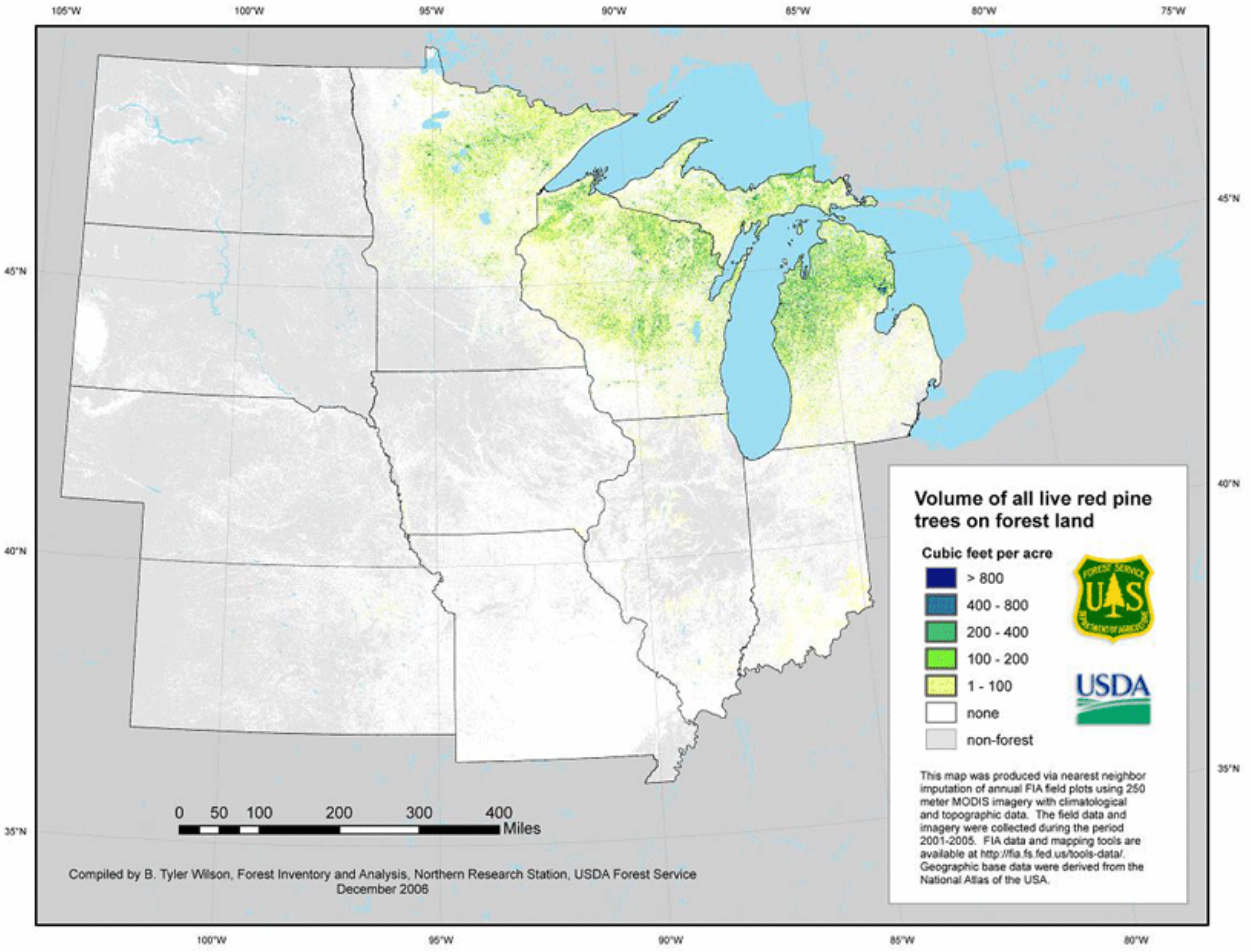
Research Application:
Andrew Plantinga, Oregon State University



Survey-Based Data: Forest Inventory and Analysis

Data Overview:
Brad Smith, USDA/FS

Research Application:
David Wear, USDA/FS



Administrative Data: FWS Wetlands Database and Wetlands Status and Trends

Data Overview:
Mitch Bergeson, USGS

Administrative Data: Common Land Unit Database

Data Overview:
Ted Payne, FSA

Research Application
Shawn Bucholtz, ERS

Remote-Sensed Data: National Land Cover Database 2001

Data Overview:
Jonathan Smith, USGS

Research Application
Terry Sohl, USGS

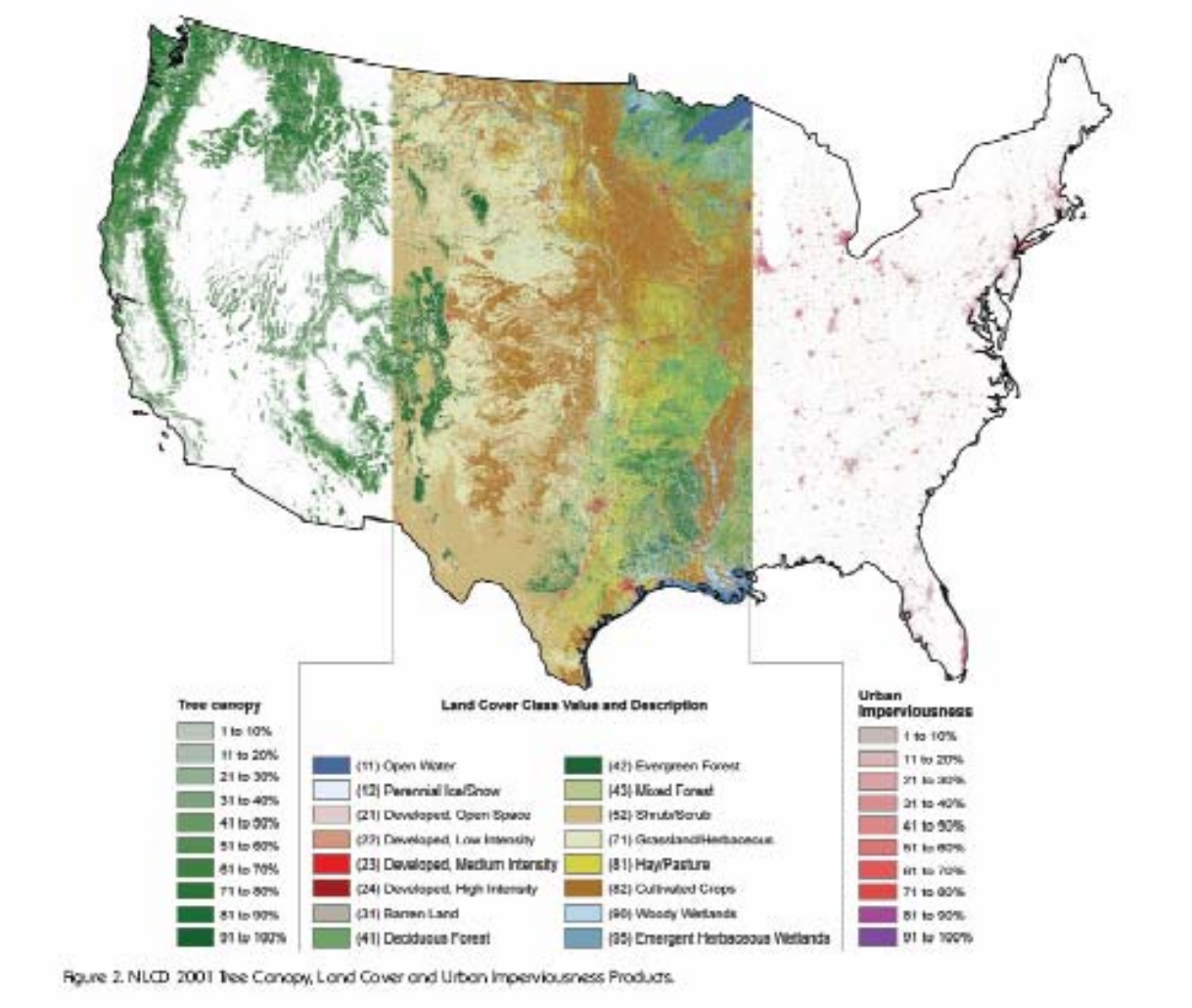
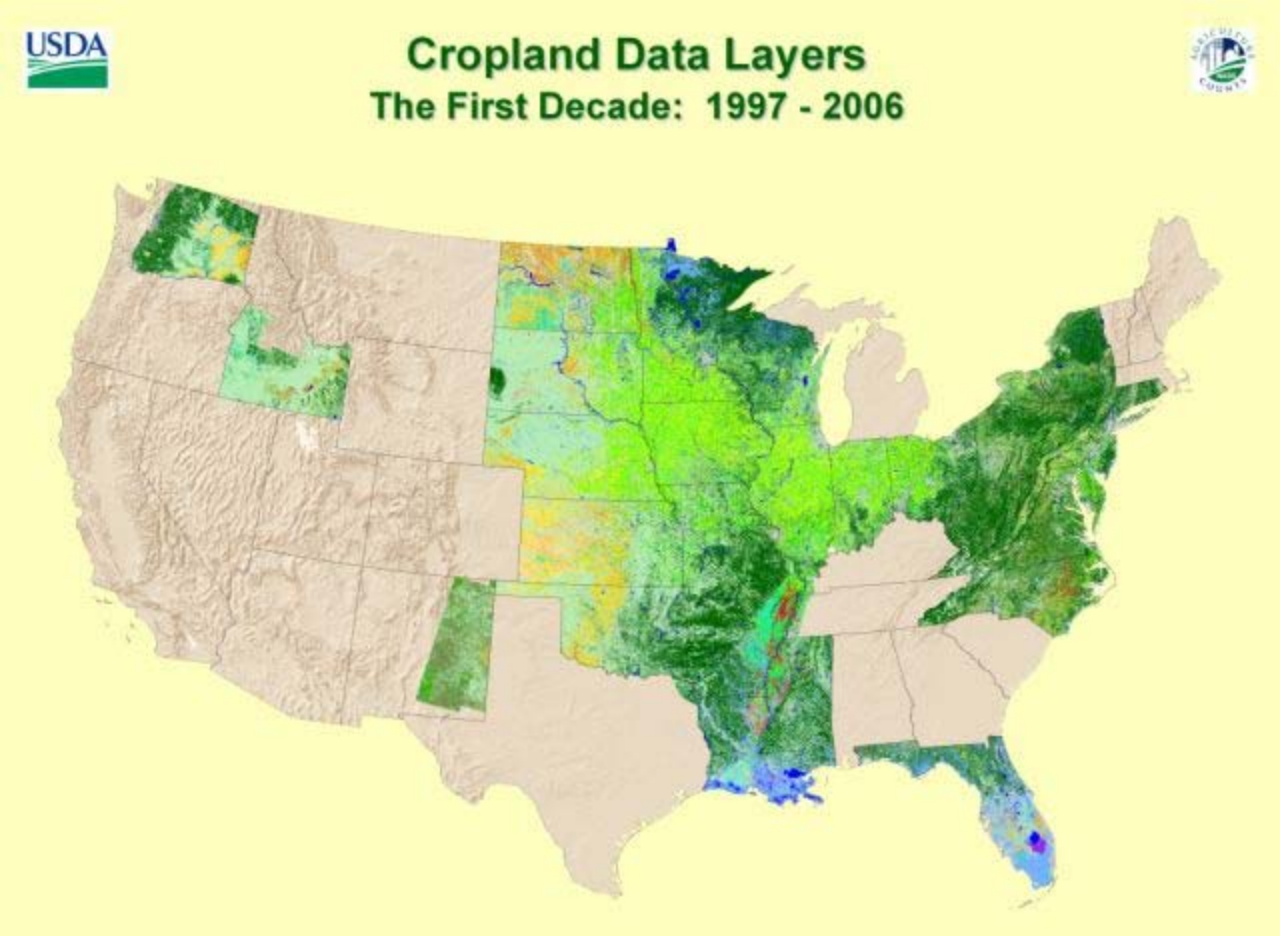


Figure 2. NLCD 2001 Tree Canopy, Land Cover and Urban Imperviousness Products.

Remote-Sensed Data: Cropland Data Layer

Data Overview:
David Johnson, NASS

Research Application
George Muehlback, John Deere

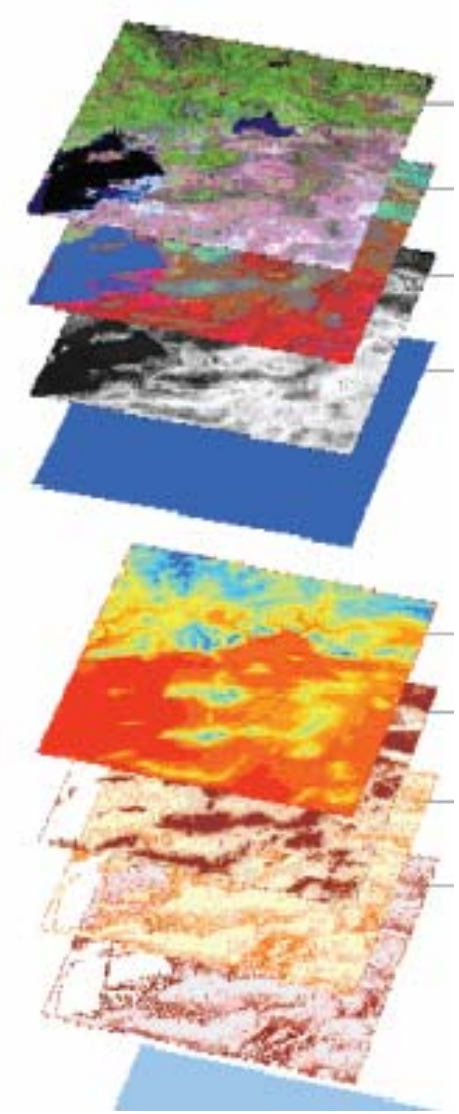


Land Use Data Integration

Research Application
Junjie Wu, Oregon State University

Research Application
Megan McLachlan, Playa Lakes Joint Venture and Ryan Reker, Rainwater Basin Joint Venture

Research Application
Frank Howell, Mississippi State University



Picture source: USGS

Environmental Effects of Agricultural Land-Use Changes: Role of Economics and Policy

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- Are less productive agricultural lands more environmentally sensitive? Is use of these lands disproportionately affected by Federal policies?
- Used NRI point-level data to observe transitioning lands and erosion characteristics.
- Used EPIC to predict nutrient runoff but limited by coarseness of practice data.
- Link with county imperiled species data from Nature Serve.
- Econometric model to identify impact of crop insurance policy change (1994) measured at county level.

Research Challenges

- Great heterogeneity in land, farm types, and farm households.
- Sample designs can introduce strong selection bias.
- Data about individuals and farms often not linked to data about land and programs.
- Lack of direct data on environmental impacts.