

Biorenewable Policy Analysis

Center for Agricultural and Rural
Development

www.card.iastate.edu

CARD Research Areas

- Agricultural Commodity Policy
- Agricultural Trade Policy
- Food and Nutrition Policy
- Resource and Environmental Policy
- Agricultural Risk Management Policy
- Biorenewables Policy
 - Effective July 1

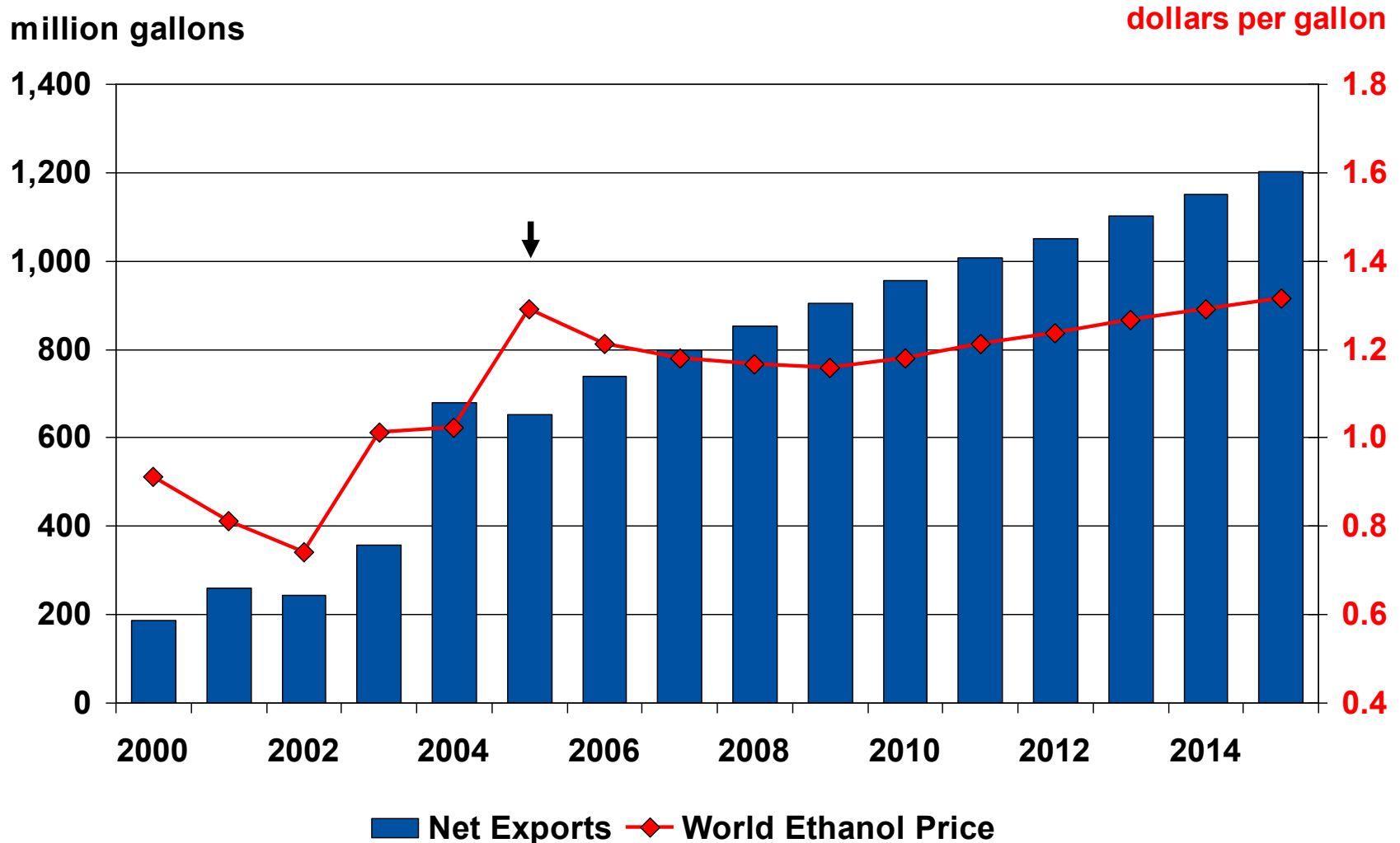
Immediate Areas to be Addressed

- Outlook for biofuels and inputs to biofuels production
 - Supply, demand, and price projections for ethanol (biodiesel in progress), and all major crops
- Impacts on local basis for corn and soybeans
- Analysis of policy changes on production and price of biofuels, corn and soybeans
- Impact of biofuels growth on crop price volatility
- Analysis of potential for value to be captured by emergence of carbon markets
- Impact of biofuels growth on mix and location of livestock

CARD International Ethanol Model

- Examines and projects ethanol production, usage, prices, and trade
- Covers Brazil, China, European Union, Japan, and United States
- Incorporates government policy (U.S. energy act, EU renewable fuels directive, Brazilian fuel mandates, etc.)

World Ethanol Price and Net Trade



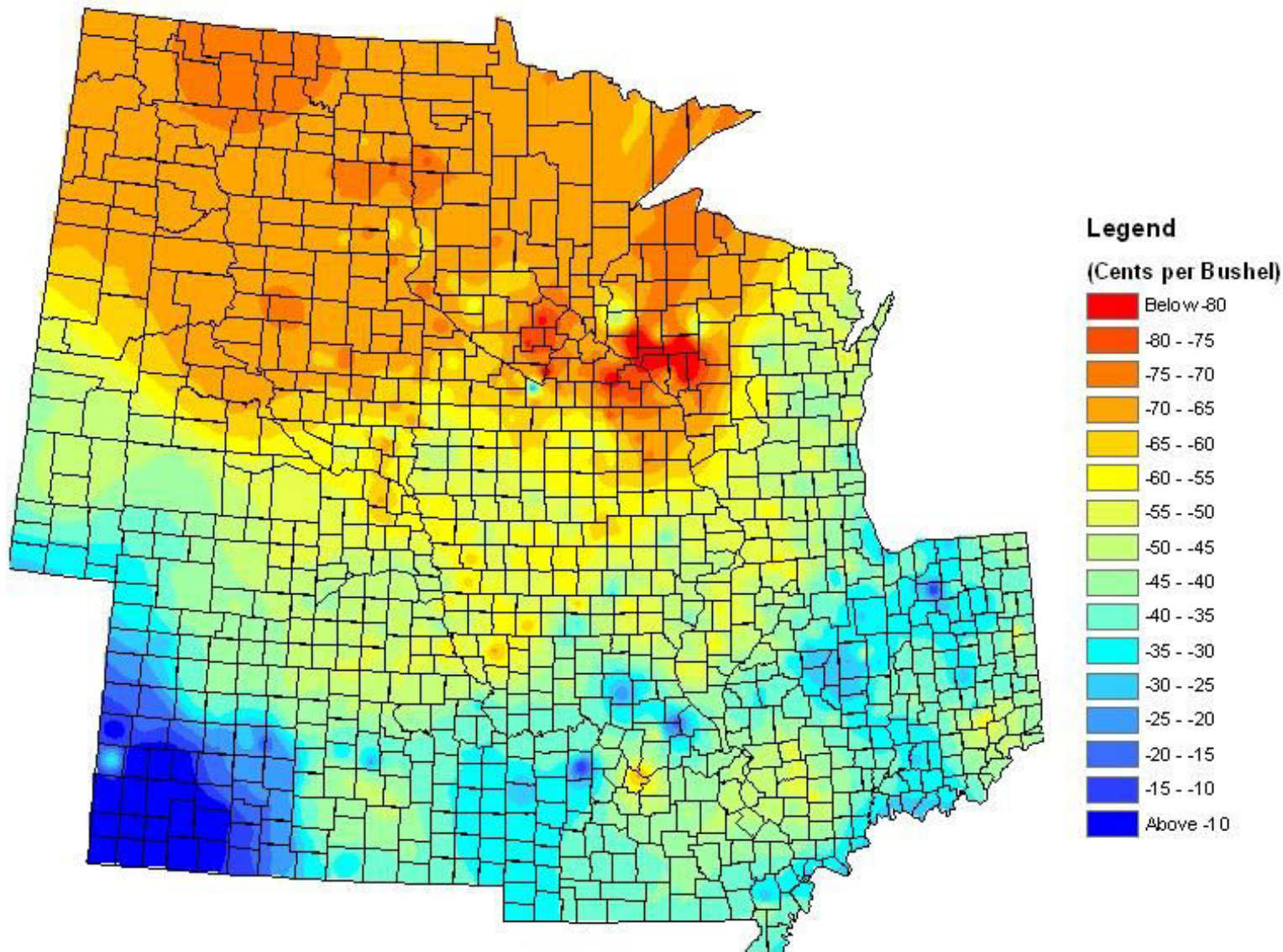
CARD Basis Map Project

- Posting daily basis maps for corn and soybeans
- Both old and new crop basis are shown
- Currently done for Iowa, will be expanded to the upper Midwest soon
- http://www.card.iastate.edu/ag_risk_tools/basis_maps/

Start with a Regional-level Map

June 8, 2006 New Corn Basis

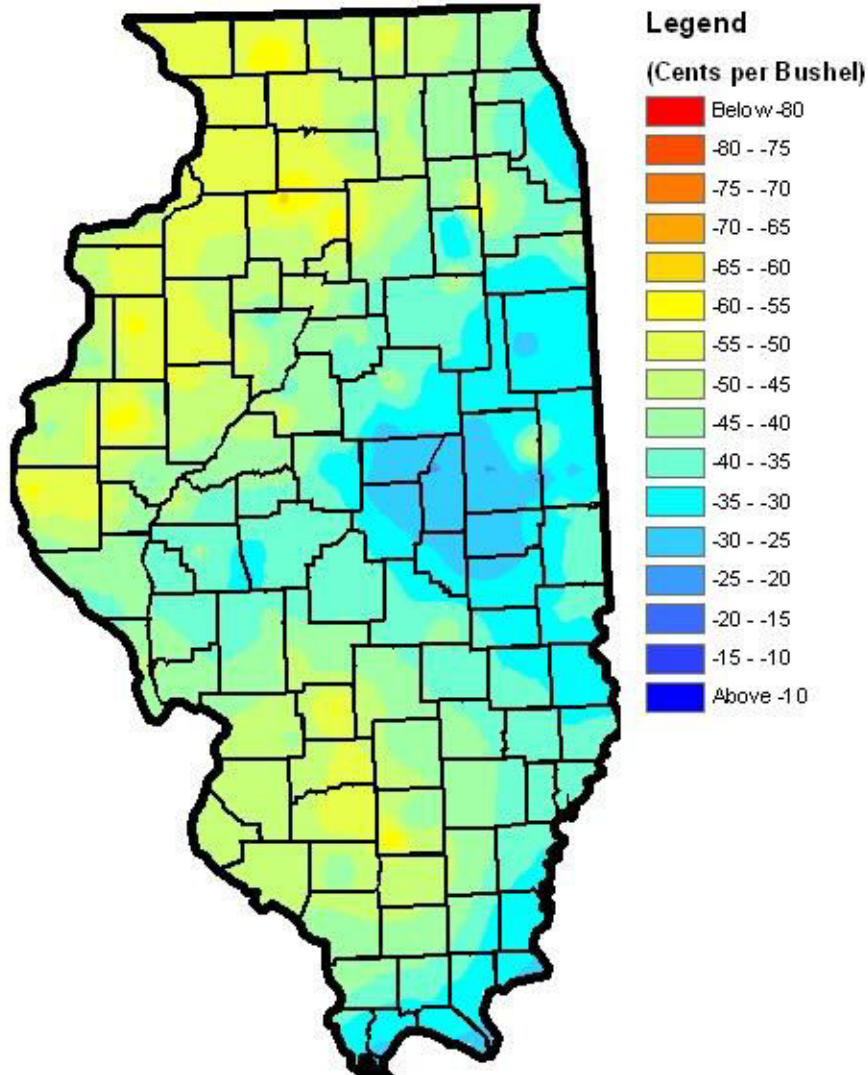
Basis Calculated from CBOT Dec Futures Prices \$2.71 per bushel



Move to State-level

June 8, 2006 New Corn Basis

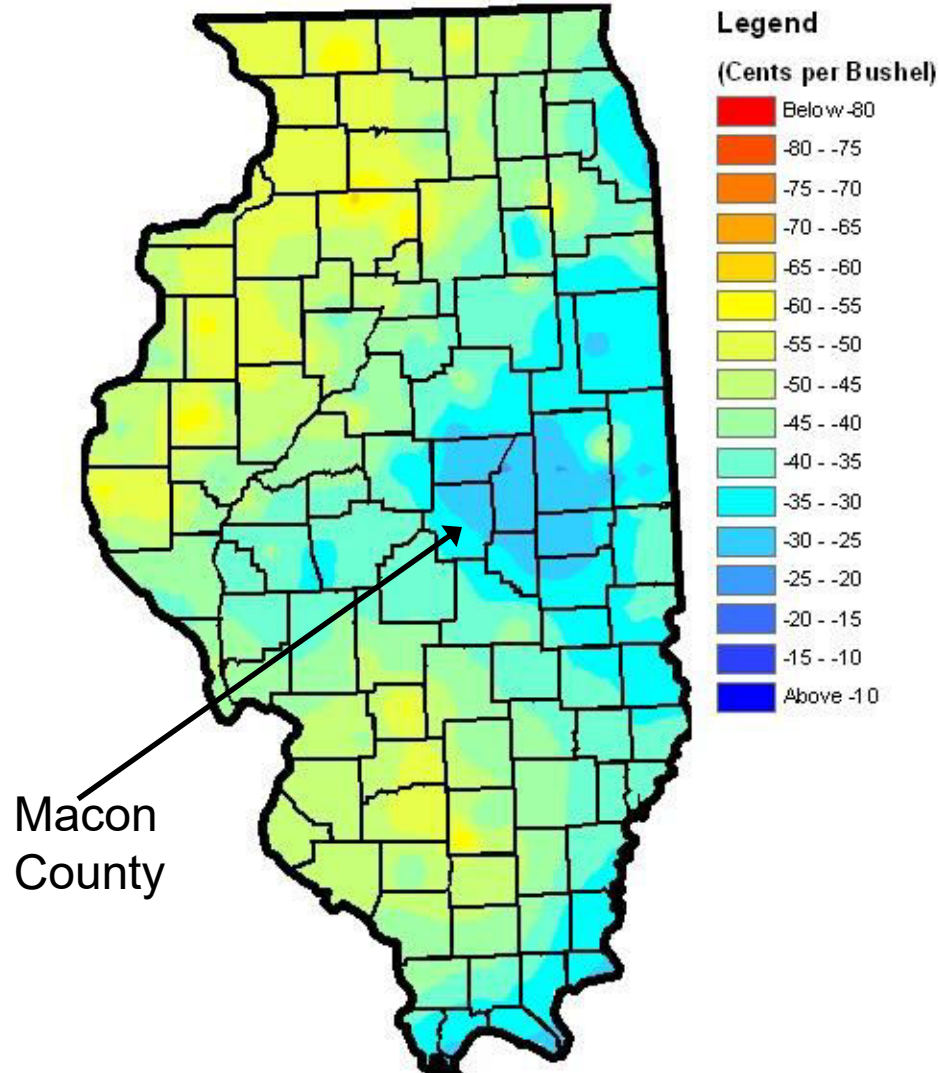
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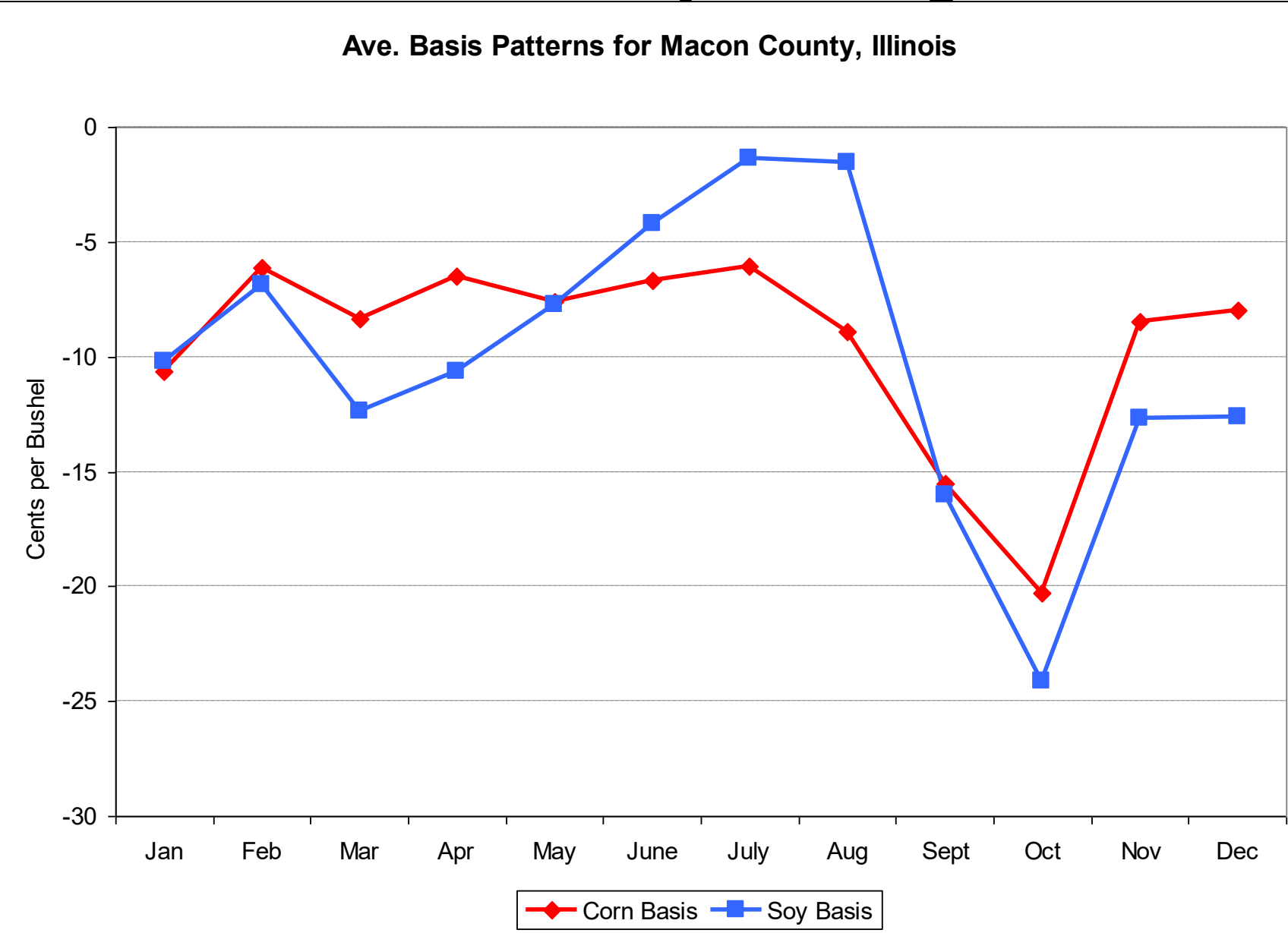
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Continue to County Average Basis

Ave. Basis Patterns for Macon County, Illinois



Other Ethanol Research Questions

- Exploring synergies between ethanol and livestock production
- Modeling ethanol costs and returns (margin of ethanol plus DDG less cost of corn and natural gas)
- Evaluating ethanol's impact on crop and livestock production

Ethanol – Livestock Synergies

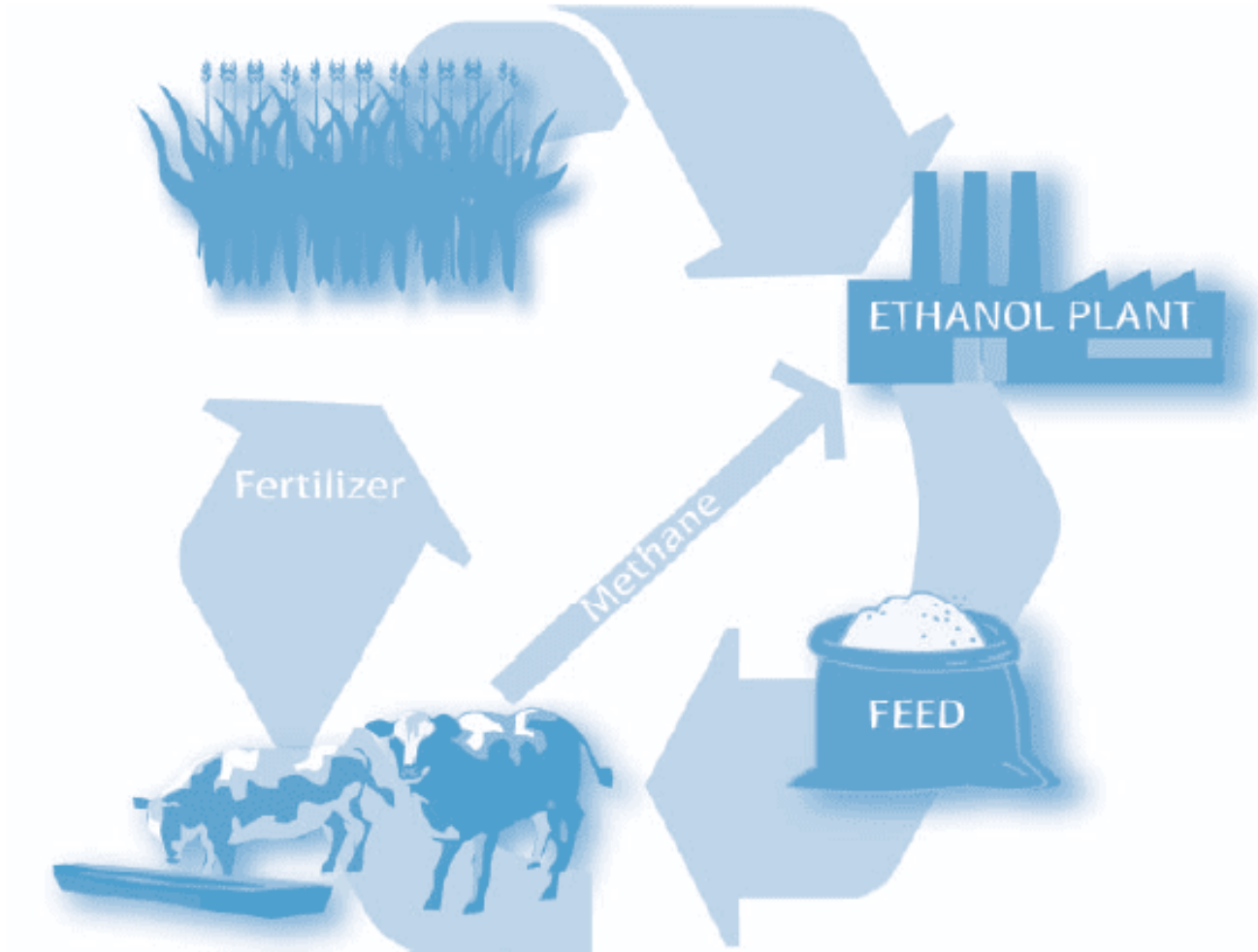


Figure 1. Possible synergies of ethanol and livestock co-production

Source: Iowa Ag Review, Spring 2006, Vol. 12 No. 2

A 50 Million Gallon Ethanol Plant

- Uses roughly 18.5 million bushels of corn
 - In Iowa, corn from 116,000 acres
- Produces 315 million pounds of distillers grains
 - This could feed approx. 60,000 dairy cattle
- Utilizes natural gas in plant operations
 - Manure from 60,000 dairy cattle could produce enough methane to meet 25 percent of the ethanol plant's needs

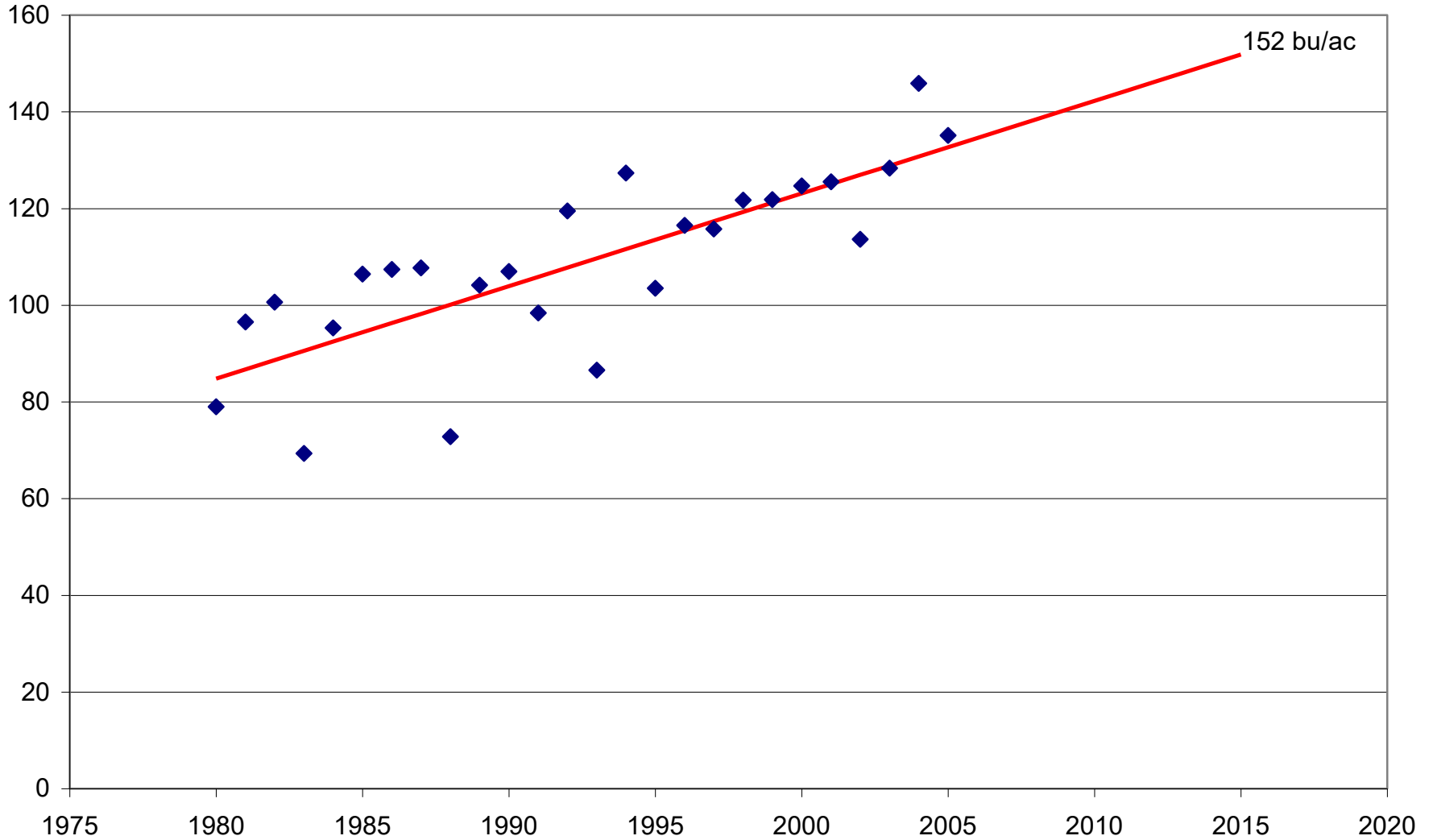
Agricultural Evolution

- Will ethanol drive cropping patterns (more corn, less soybeans and wheat)?
- What will be the ultimate impact of ethanol on livestock production?
 - Feeding corn versus distillers grains
 - Shifting livestock species (more cattle, fewer hogs and poultry?)

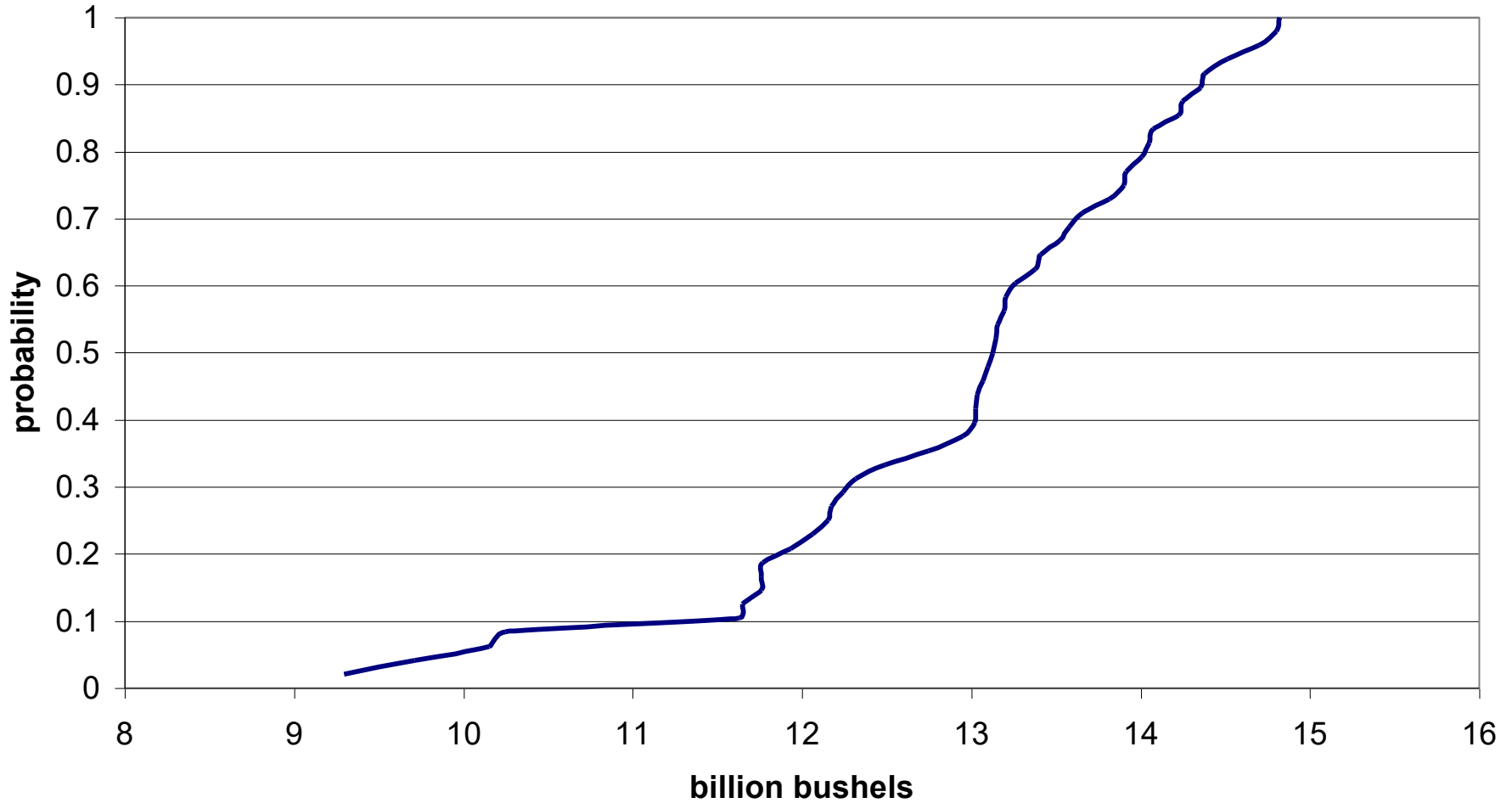
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Projected U.S. Corn Yield per Planted Acre through 2015



Cumulative Distribution of U.S. Corn Production in 2015 with 85 Million Planted Acres



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