



**25x'25**

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**AMERICA'S  
ENERGY FUTURE**

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**Clean Diesel  
Ag Leaders Forum**

**March 28-29, 2007**

**Sacramento, CA**



## **25x'25 Initiative:**

- Renewable energy initiative born in the ag and forestry sectors
- Supported by the Energy Future Coalition
- Seeks to forge consensus on a new energy future
- Focuses on economic, national security and environmental benefits



- Formed in Spring 2004
- Organized to explore agriculture and forestry's role in energy production
- Four-phase project
  - create a vision
  - build an energy alliance
  - construct an implementation strategy
  - work to bring the 25x'25 to life



## Our Vision:

By the year 2025, America's farms, ranches and forests will provide 25 percent of the total energy consumed in the U.S. while continuing to produce safe, abundant and affordable food, feed and fiber.

25x'25



## **We will meet this goal by:**

- Producing transportation fuels
- Harnessing wind energy, geothermal
- Converting biogas emissions
- Capturing solar energy
- Providing biomass for generating heat and power



# **Over 400 farm, business, energy and environmental organizations!**

National Farmers Union

American Farm Bureau Federation

National Corn Growers Association

National Rural Electric Cooperative Association

National Education Association

Deere & Company

“Big 3” Automakers – Ford, Daimler Chrysler, GM

American Wind Energy Association

Basin Electric

Natural Resources Defense Council



## State alliance activity:

- Formed in CO, IA, IN, KS, MT, NE, TX, NY, OH, PA and VT
- Forming in AL, CA, FL, GA, ID, LA, ME, MS, OR, and WA
- Action pending in AR, AZ, IL, KY, MI, MN, ND, NM, NV, SD, VA, and WY



# Univ. of Tennessee Study Objectives

- Determine the ability of America's farms, forests and ranches to provide 25% of U.S. total energy needs in 2025
- Assess the economic impacts of achieving the 25x'25 goal on the ag sector and the overall economy





## Two Scenarios Examined

- **AE:** 25% of all energy consumed  
 $117.7 \text{ quads} \times 25\% = \mathbf{29.4 \text{ quads}}$
- **EPT:** 25% of electric power and transportation  
 $81.62 \text{ quads} \times 25\% = \mathbf{20.4 \text{ quads}}$



**Renewable Energy**

**Electricity**

**Residues  
Corn, Wheat**

**Dedicated  
Energy Crops**

**Cattle Manure**

**Digester  
Dairy, Poultry,  
Hogs**

**Mill Wastes**

**Forest Residues**

**Biodiesel**

**Oilseed Crops**

**Tallow  
Beef and Poultry**

**Yellow Grease**

**Ethanol**

**Corn**

**Residues  
Corn and Wheat**

**Dedicated  
Energy Crops**

**Forest Residues**

**Mill Wastes**

**Food Wastes**



# Study Results

- America's farms, forests and ranches can play a significant role in meeting the country's energy needs.
- The 25x'25 goal can be met while continuing to provide safe, abundant and affordable food, feed and fiber.

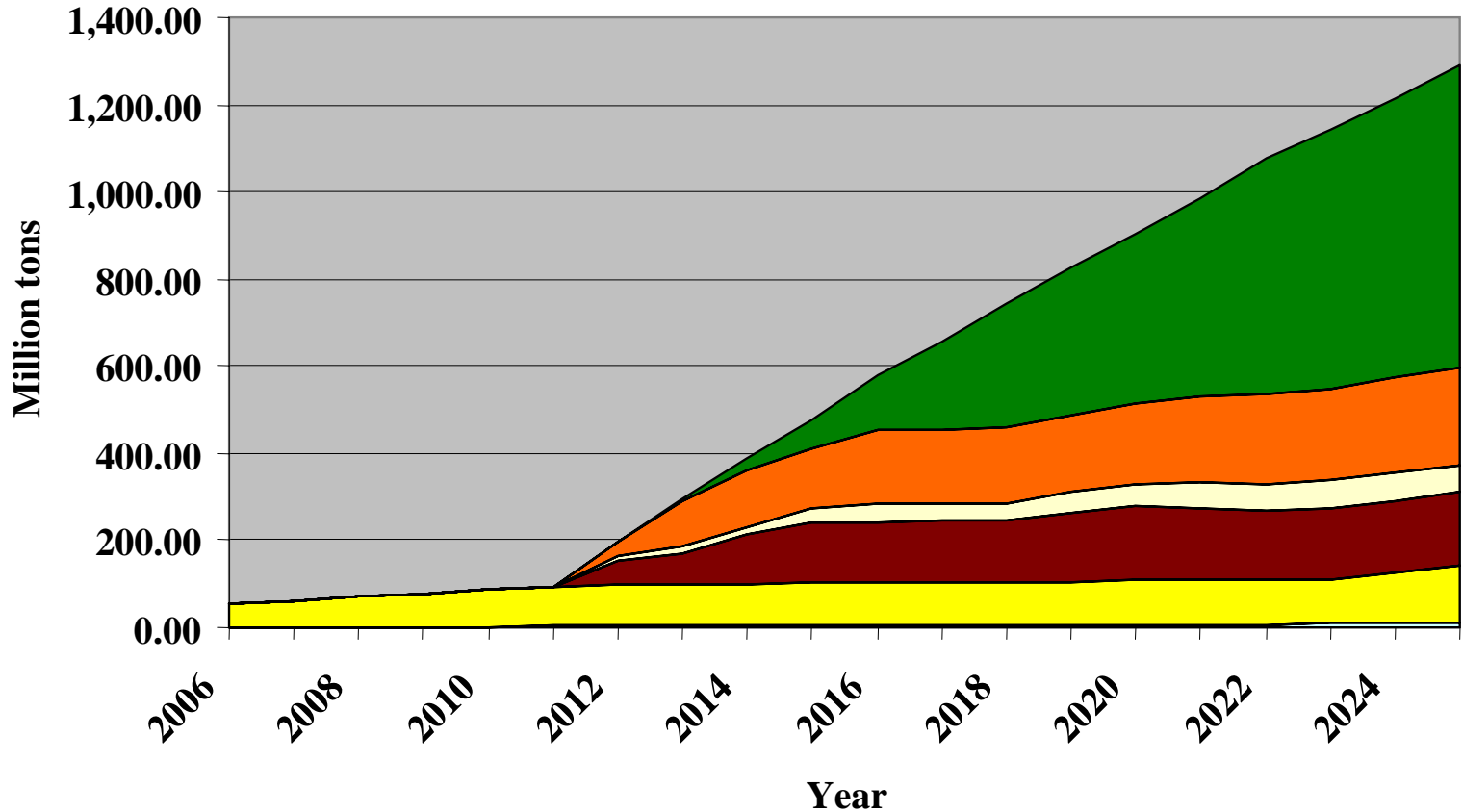


# **By 2025, America's farms, forests and ranches can annually produce:**

- 86 billion gallons of ethanol
- 1.1 billion gallons of biodiesel
- 932 billion kwh of electricity
- 15.45 quads of energy from biomass



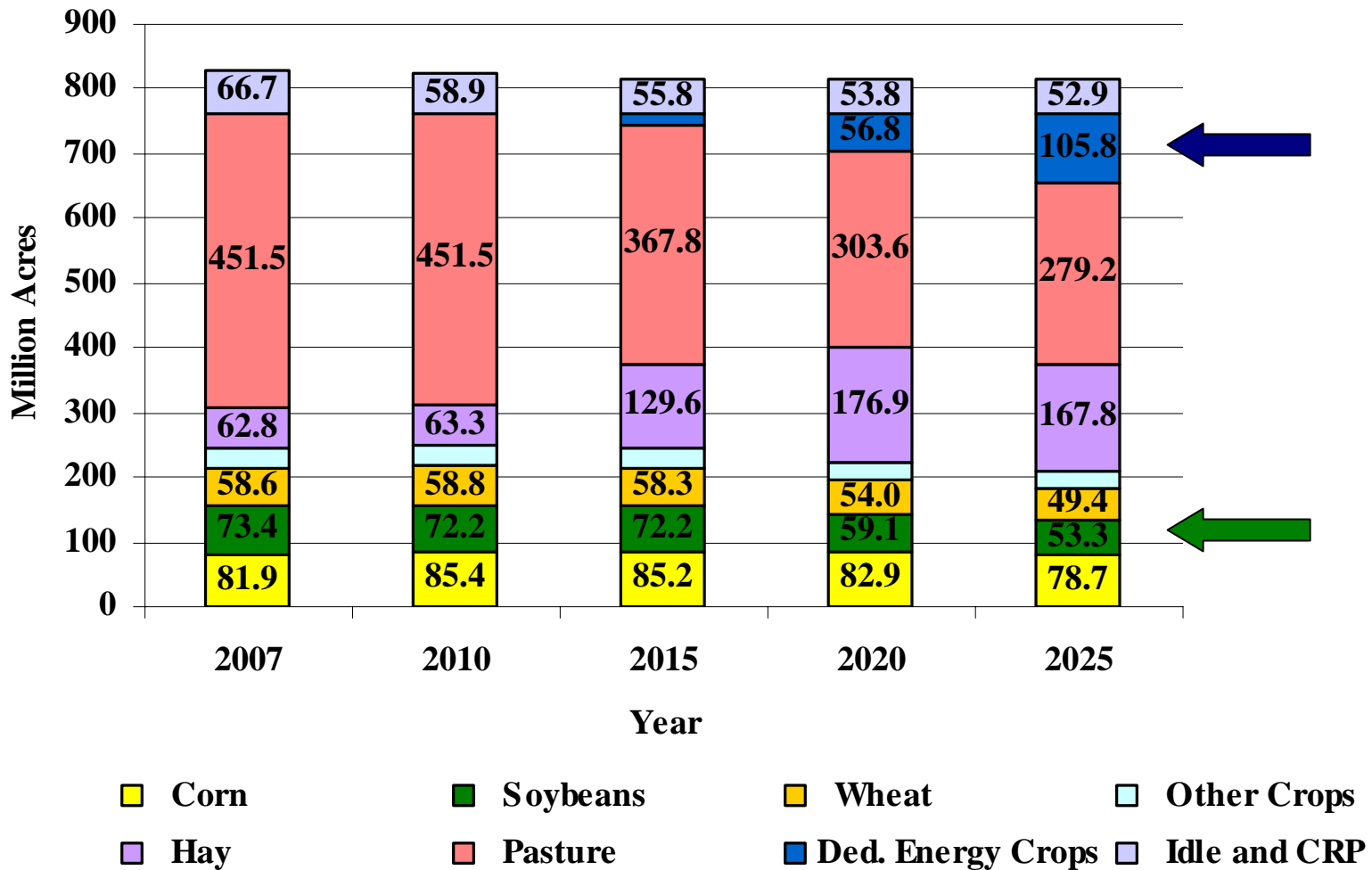
# Feedstocks Used to Reach 25x'25



Legend: Soybeans (light blue), Corn Grain (yellow), Wood Residue (dark red), Straw (light yellow), Stover (orange), Dedicated Energy Crops (green)



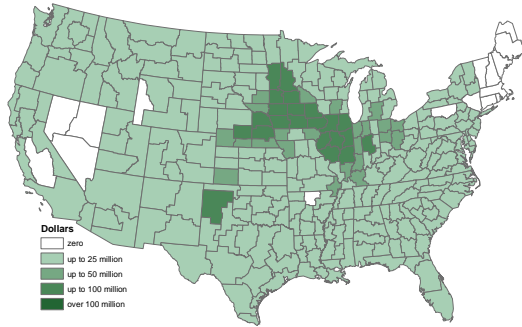
# Changes in Land Use for Selected Simulated Years under the **AE** Scenario.



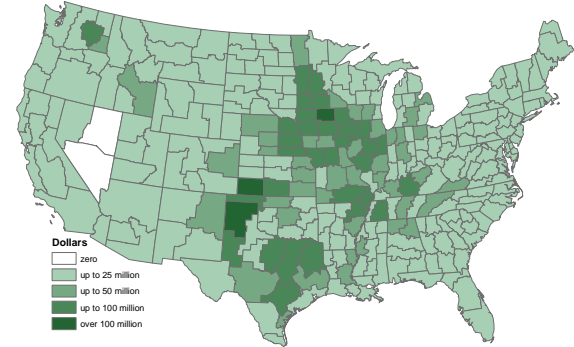


# Distribution of Changes in Net Returns, AE Scenario, 2010, 2015, 2020, and 2025.

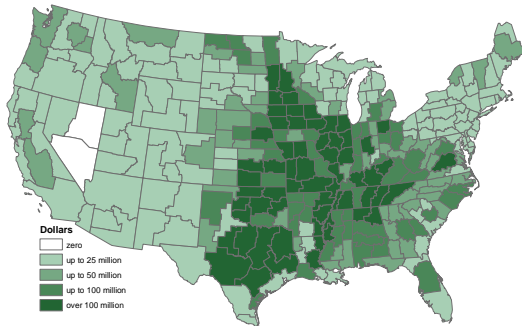
2010



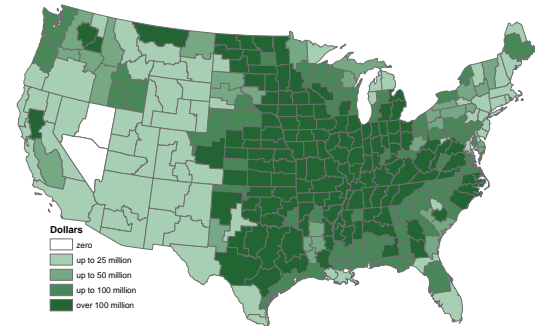
2015



2020



2025

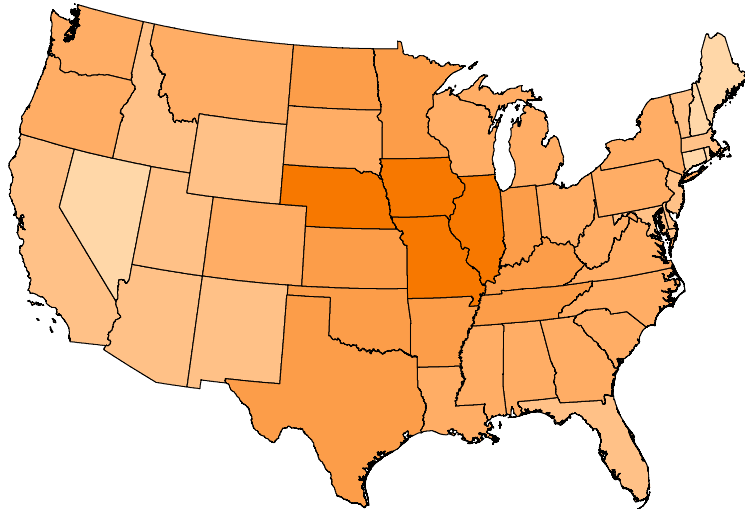




# Each State Benefits

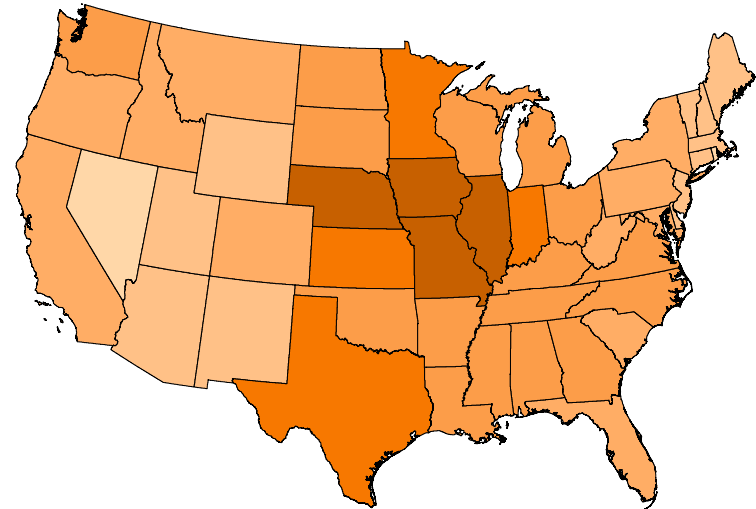
## Total Industry Output

### *Change in Agriculture*



*Agricultural Generated Economic Activity*  
Direct - \$113.6 Billion  
Total - \$170.5 Billion

### *Renewable Energy Conversion*



*Renewable Energy Sector Generated Economic Activity*  
Direct - \$138.7 Billion  
Total - \$533.8 Billion





# Impacts on National Economy in 2025

	EPT	AE
■ Economic Activity	\$587 billion	\$700 billion
■ Jobs	4.0 million	5.1 million



## 2007 objectives:

- Establish 25x'25 as a national goal
- Advance the 25x'25 Action Plan
- Grow the national and state alliances
- Establish a corporate component of 25x'25
- Build public support for a 25x'25 energy future



## Implementation strategy:

- Process began in July 2006
- Guided by “yes—if” principle
- “Whats” and “hows” to get to 25x'25
- 25x'25 Action Plan: Charting America's Energy Future- released Feb. 28<sup>th</sup>



# 35 Recommendations- Five Areas of Focus

- Increasing production
- Delivering Energy to Markets
- Expanding Renewable Energy Markets
- Improving Energy Efficiency and Productivity
- Strengthening Conservation of Natural Resources and the Environment



# Action Plan calls for:

- Increased funding for RDD&D
- Expansion of current production incentives
- New Feedstock Residue Management Program
- Exploring a permanent counter-cyclical incentive system for biofuels in relation to oil
- Incentives to build new transmission lines
- Mechanism to get to 50% flex-fuel vehicles
- Expanding conservation and energy programs in the Farm Bill



## 25x'25 Action Plan will:

- Correct energy market rules and prices
- Generate \$700 billion in economic activity annually
- Create 4-5 million jobs
- Reduce carbon dioxide emissions by one billion tons annually

***All for only an investment equal to 5 % of what America spent on imported oil in 2007.***



# The 25x'25 Vision:

- Is achievable
- Provides a positive impact on the national and rural economies
- Reduces our reliance on foreign oil and improves national security
- Creates important environmental benefits



America's Energy Future

**Please join us in bringing the  
vision of 25x'25 to life.**



**[www.25x25.org](http://www.25x25.org)**