

**Biofuels Policy Options**

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**Where We Are**

- **Corn-based ethanol is poised to dramatically expand**

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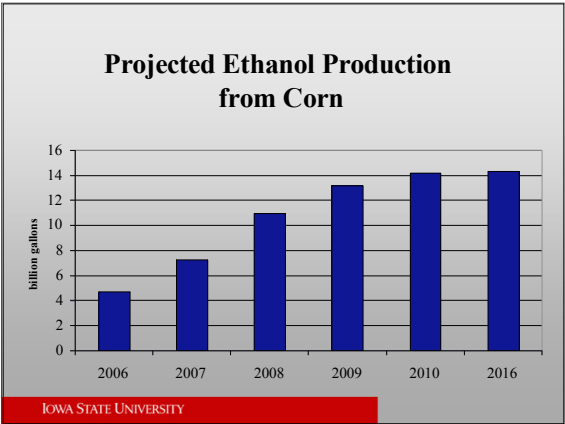
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## Where We Are

- Corn-based ethanol is poised to dramatically expand
- **New-crop corn and soybean contracts trading at all-time highs**
  - \$4.20/bu for corn and \$8.30/bu for soybeans

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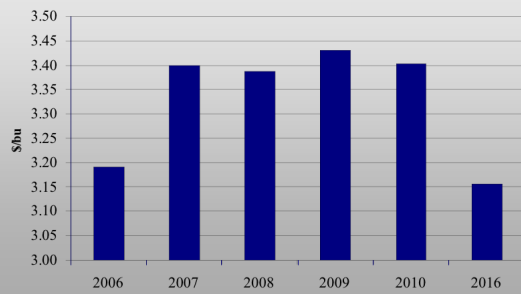
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## Projected Corn Prices



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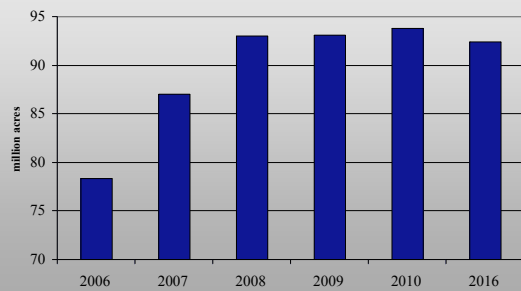
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## Projected Corn Planted Acreage



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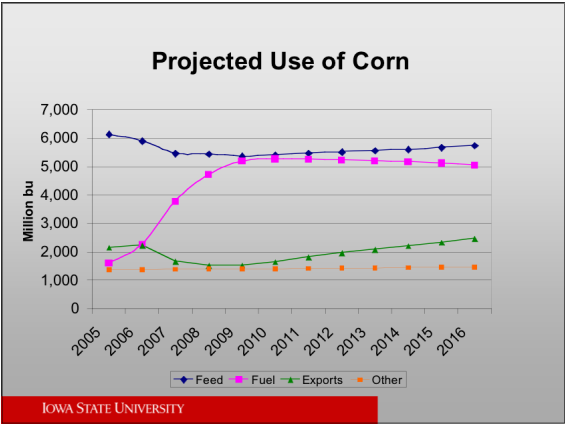
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### Impacts of Corn Ethanol Boom

- High commodity prices will lead to high land prices and land rents
- Livestock returns will drop until markets adjust
- Growth in U.S. livestock industry will slow
- High feedstock prices will cut returns to investments in ethanol and biodiesel plants

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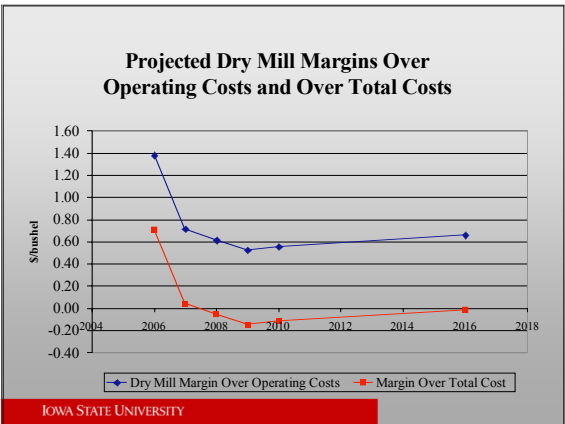
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## Environmental Worries

- CRP supporters believe that high corn prices will reduce CRP acres
- Increased corn acreage will increase nutrient and soil losses

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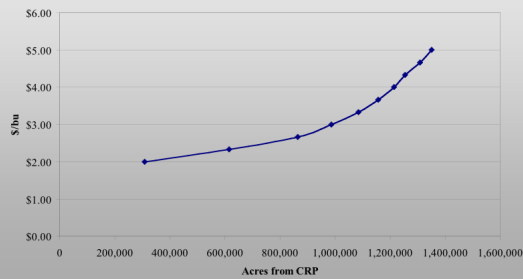
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Supply of Iowa CRP Acres to be Cropped at Different Corn Prices



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## Does it Make Sense?

- Higher food prices
- Higher land prices
- Some environmental losses
- Lower growth rates in livestock industry
- For 10% of U.S. gasoline consumption

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## Societal Benefits of Biofuels

- Reduction in greenhouse gas emissions
- Increased energy security

➤ Are we achieving these benefits with current policies?

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## Current Policy Incentives

- \$0.51 per gallon fuel tax credit to blenders of ethanol
- \$1.00 per gallon subsidy for biodiesel producers who use virgin vegetable oil, \$0.50 per gallon for non-virgin oil
- Renewable Fuels Standard
- Various state initiatives to encourage ethanol

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## Greenhouse Gas Reduction

- Carbon dioxide emitted when ethanol or gasoline are burned
- But ethanol carbon source came from atmosphere
- Hence net emissions are lower with ethanol

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## Corn Ethanol's Net Gain

- **Reduced because**
  - Diesel fuel, pesticides, fertilizer, irrigation electricity and propane all cause emissions
  - Electricity and fossil fuels used to run the ethanol plant and dry distillers grains

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## Net is positive but...

- **Much smaller than Brazilian ethanol from sugar cane**
- **Much smaller than it could be if plants were co-located with livestock**
  - Save drying energy
  - Save transportation energy
  - Run the plant on methane generated from manure

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## Increased Energy Security

- **Not energy independence**
  - Why should we strive for independence from Canada and Mexico who want to sell us energy for less than we can produce it for?
- **Energy diversification will reduce U.S. vulnerability to oil supply disruptions and price shocks**

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## Policy Choice

- Is our objective more ethanol from corn or do we want to efficiently lessen greenhouse gas emissions and increase energy security?

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## Efficient Greenhouse Gas Reduction

- Create a general incentive for reducing greenhouse gases
- Let the private sector find the least cost way of doing it.
  - Cap total emissions, trade credits
  - Tax fossil fuels, don't tax other energy sources

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## Efficient Energy Diversification

- Create disincentive to use petroleum or natural gas
- Create incentive for anything else
  - Wind, solar, ethanol, biodiesel, bio-butanol, cellulosic ethanol, methane from manure, methanol, etc.

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## Efficient Policy Principle

- **Be neutral with respect to means by which social objectives are met**
  - Don't have government pick winners!
- **Make market rewards proportionate to contribution to meeting objective**

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## Conclusions

- **Ethanol from corn is a huge success story for Iowa and the United States**
  - Demonstrates that biofuels can help meet social objectives
  - Starts putting in place the needed mindset and infrastructure to move away from fossil fuels

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## Is Corn Ethanol the Best Solution?

- **Can only tell if policy incentives become more neutral over time**
  - Less focus on ethanol, more focus on meeting broad incentives
- **Result would be a change in the way we produce corn ethanol and we would get additional sources of alternative fuels**

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