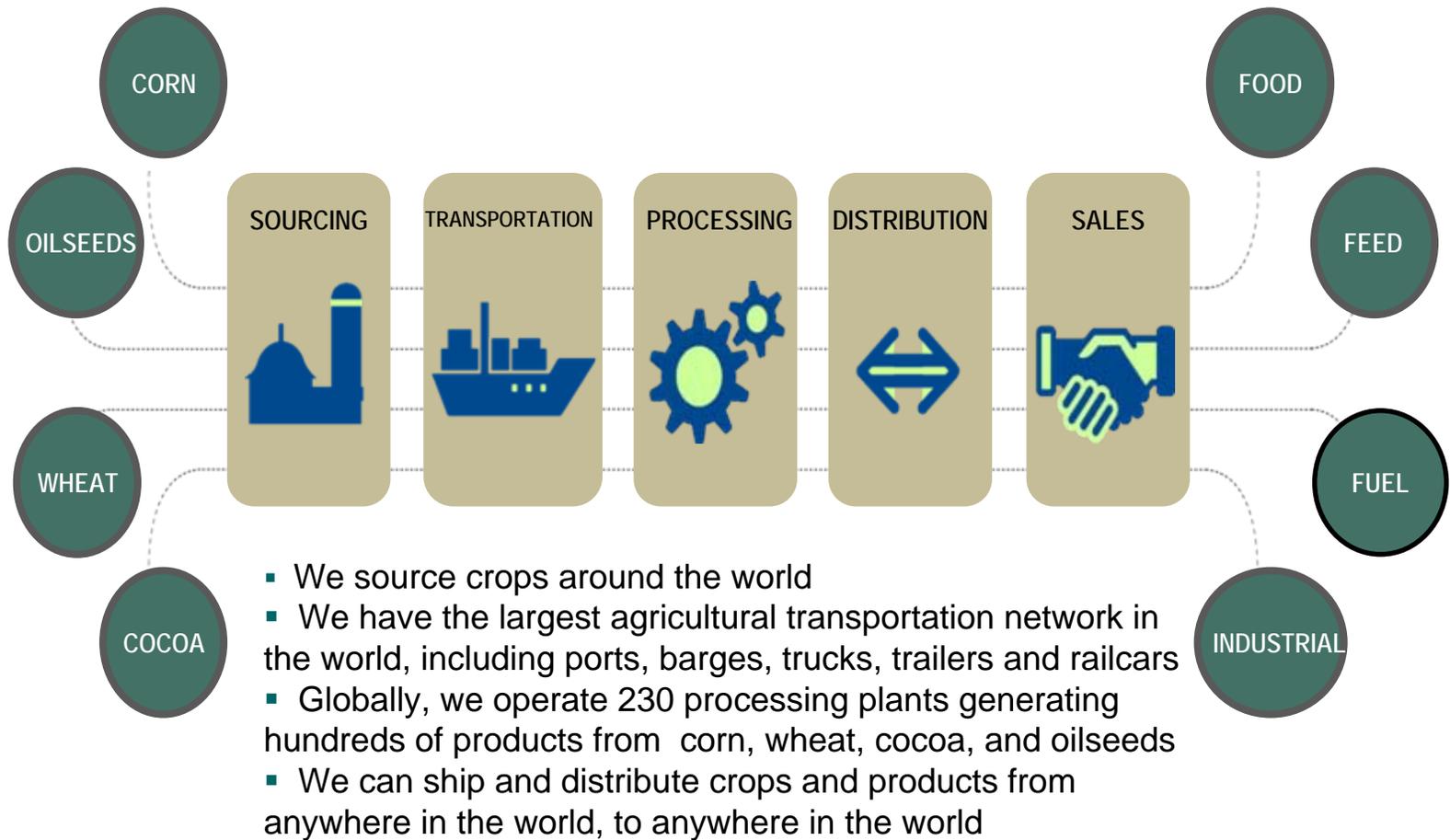




Federal Biofuels Policy: an ADM Perspective

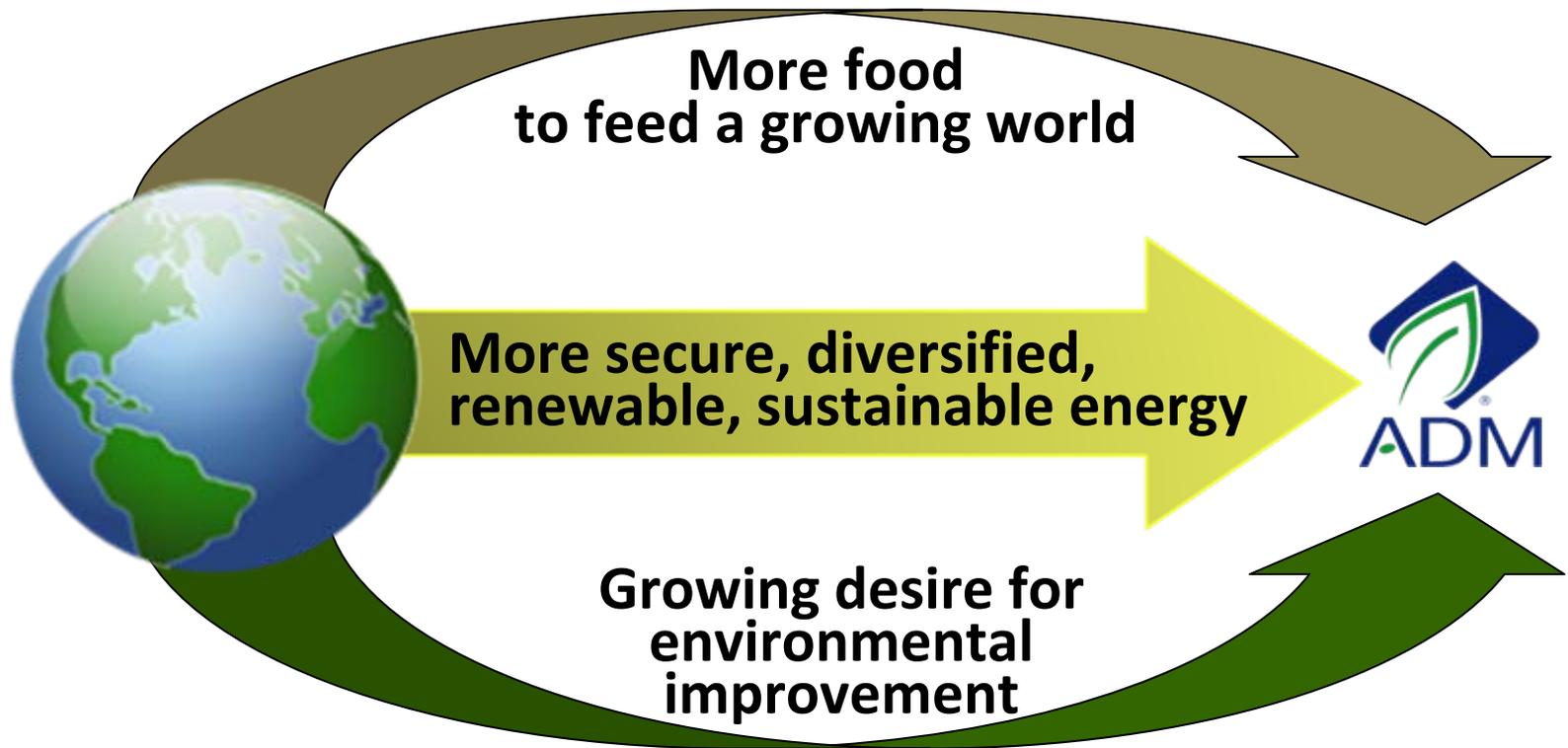
David Woodruff
Senior Director
Government Relations
Archer Daniels Midland Company

We approach BioEnergy from the role of a Global Agricultural Processor, not an energy company



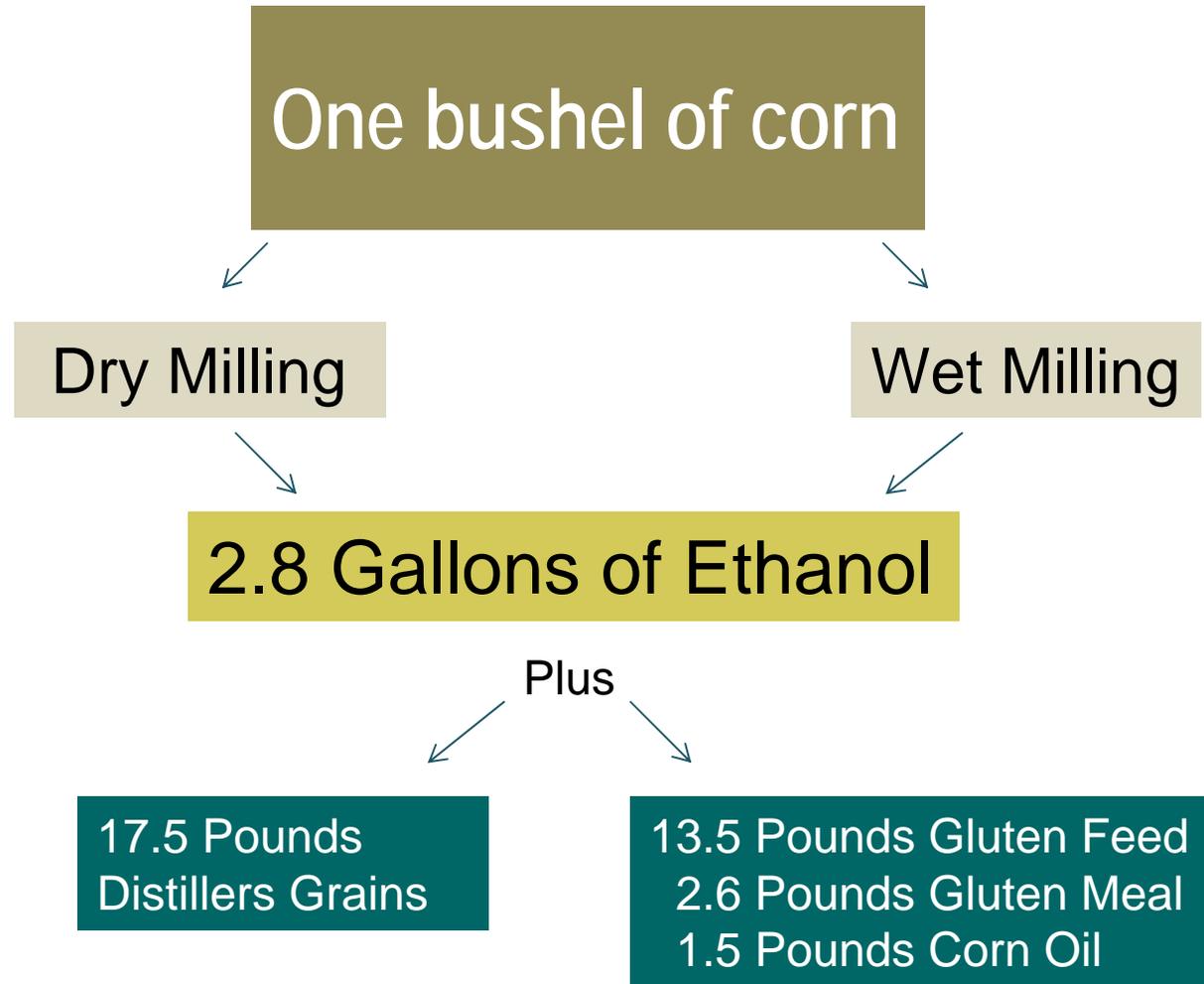
- Our strategy is to grow the entire chain

We see three trends shaping world demand; agriculture will play a growing role in satisfying all three



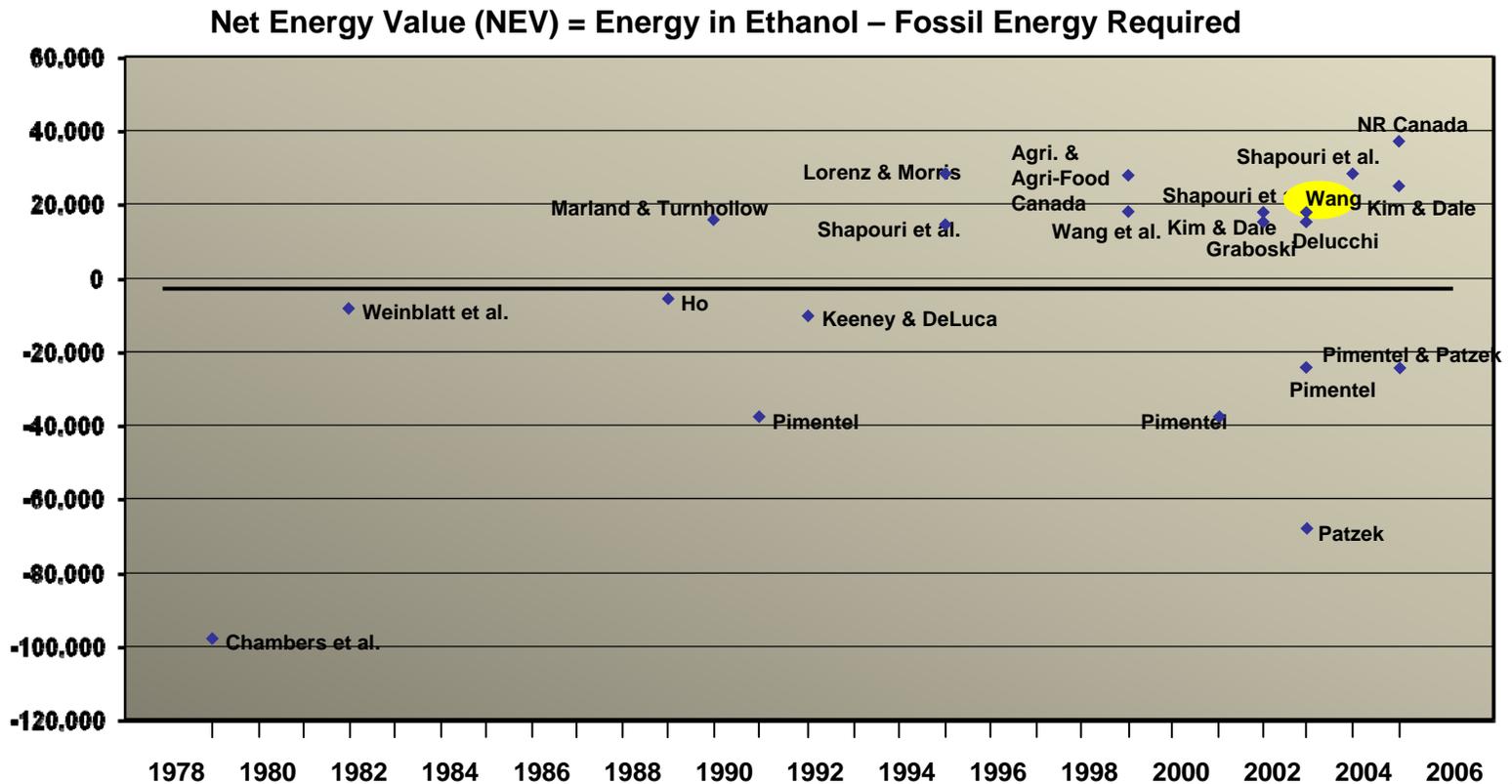
- We see opportunities in all three trends, and we are investing to meet growing demand

Ethanol Today: Any way you make it, both food and fuel are produced



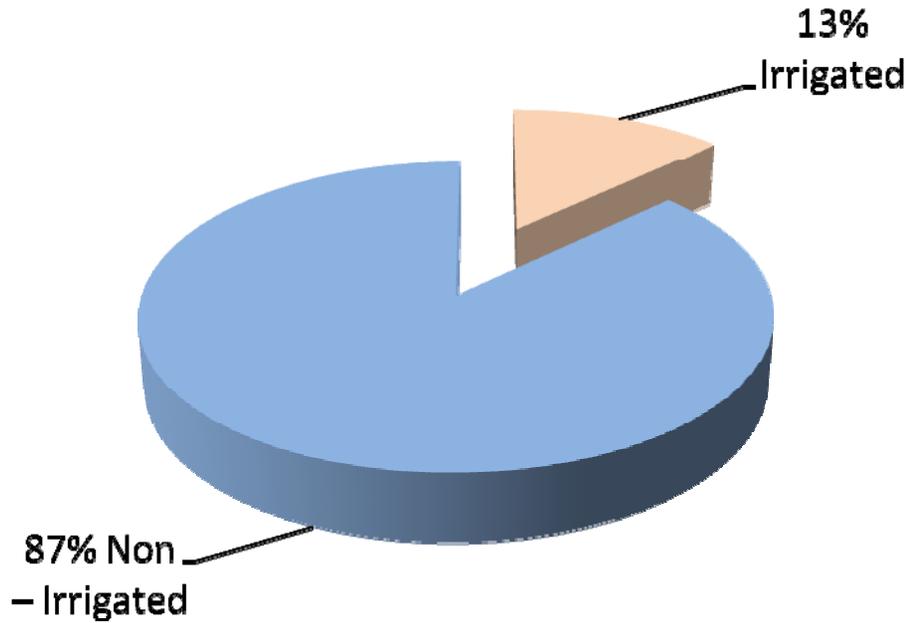
Ethanol Today: A good alternative energy product that's getting even better

- Ethanol is the only here-and-now, commercially available alternative to gasoline in the U.S.
 - Corn ethanol has a positive **energy balance**, and the balance is growing
- ADM has reduced the energy required to produce a gallon of ethanol by over 20%



Ethanol Today: A rain-fed feedstock

Water usage for Corn Acres

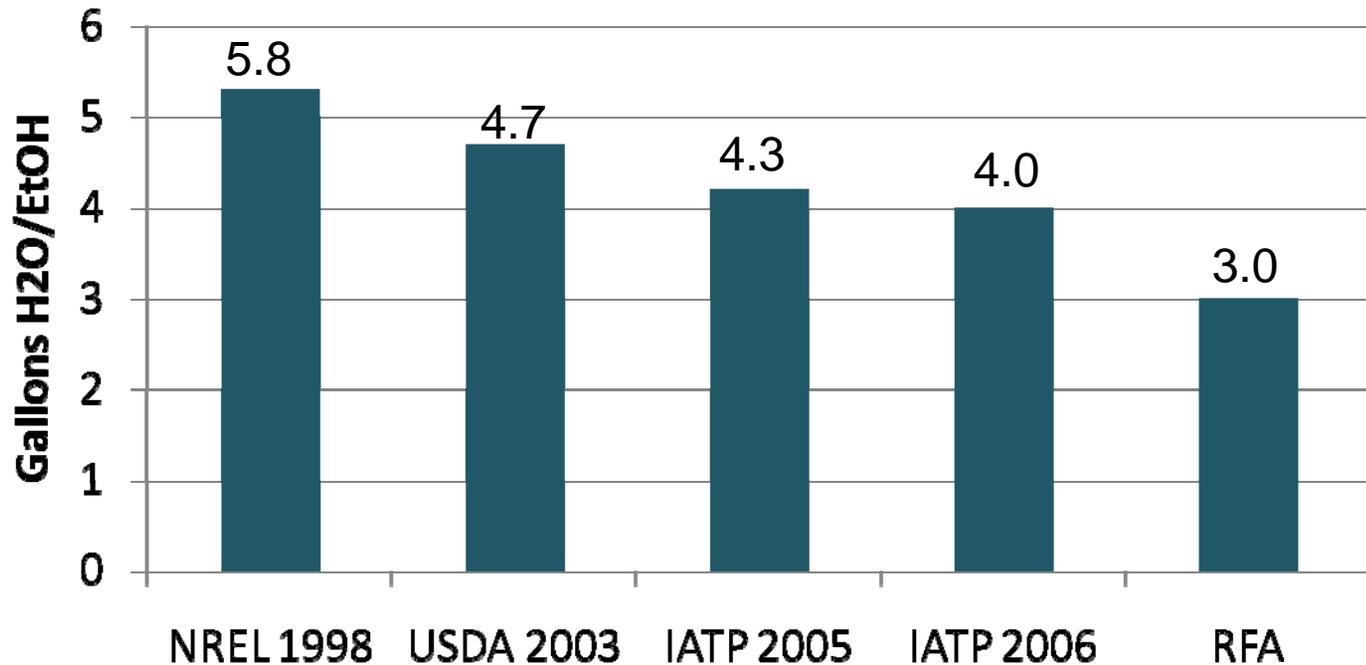


Nearly 9 out of 10 acres of corn require no water other than natural rainfall

USDA 2006

Ethanol Today: Using less and less water for production

Average Water Consumption in Dry Mills

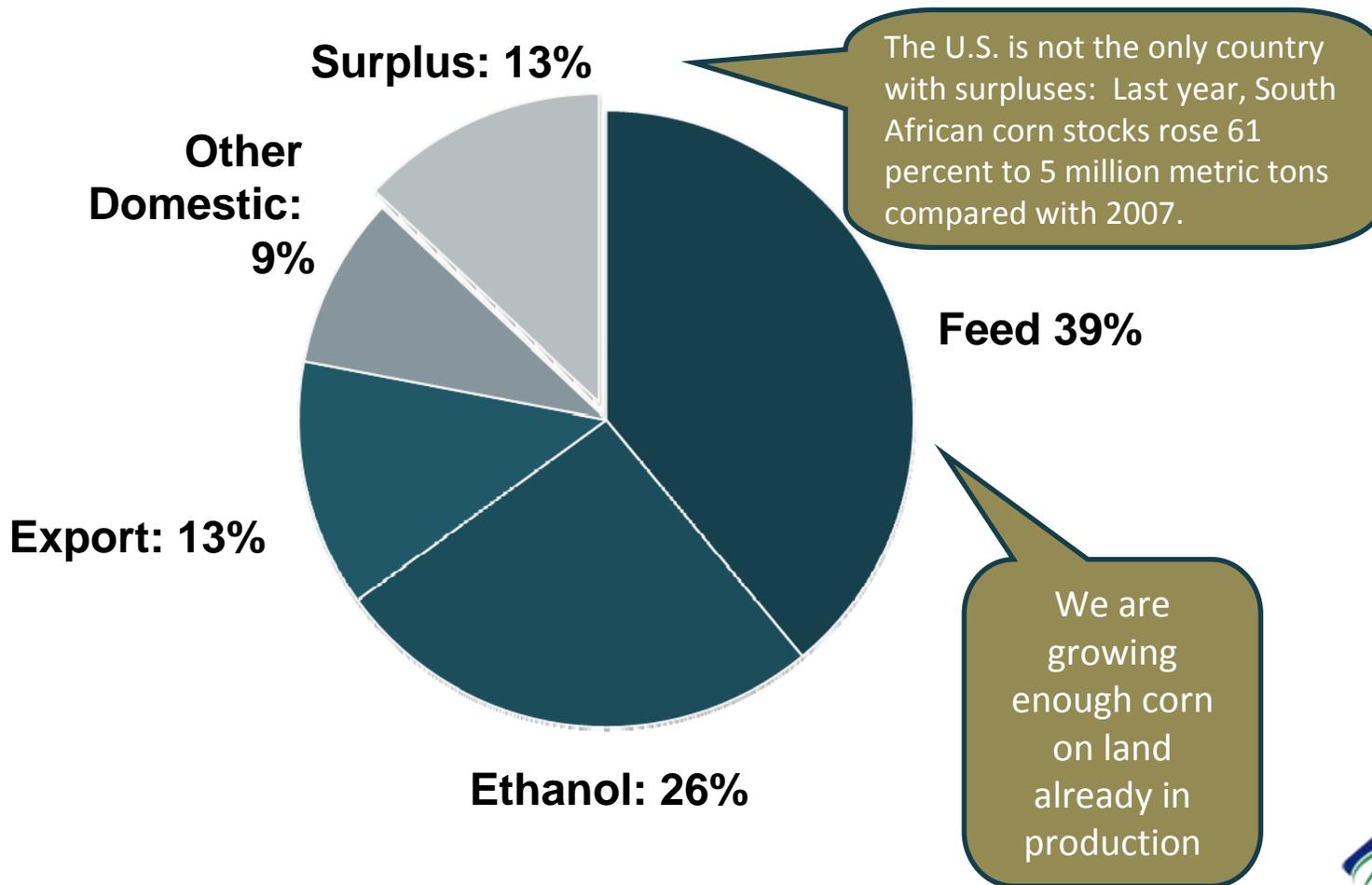


In Comparison:

- 12.5 gallons to process one lb of beet sugar to make processed sugar
- 42 gallons to process one gallon of beer

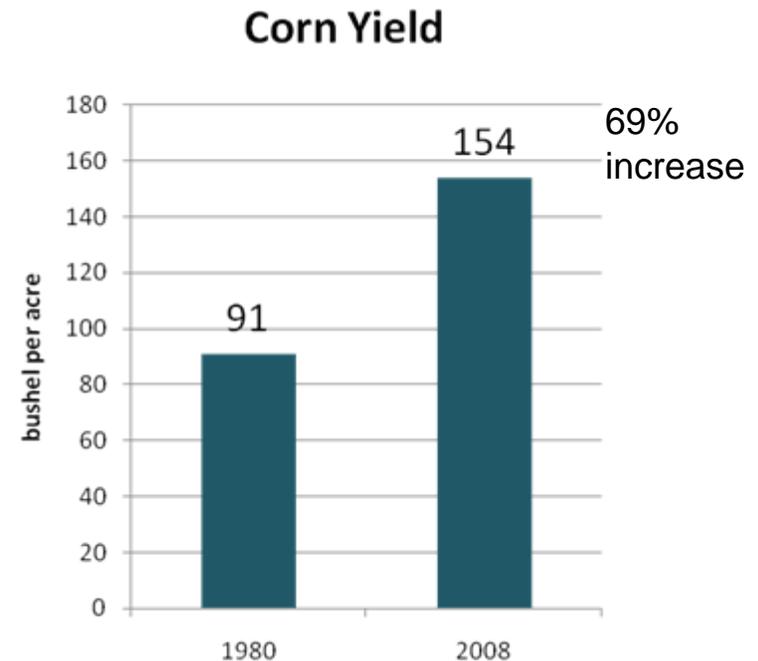
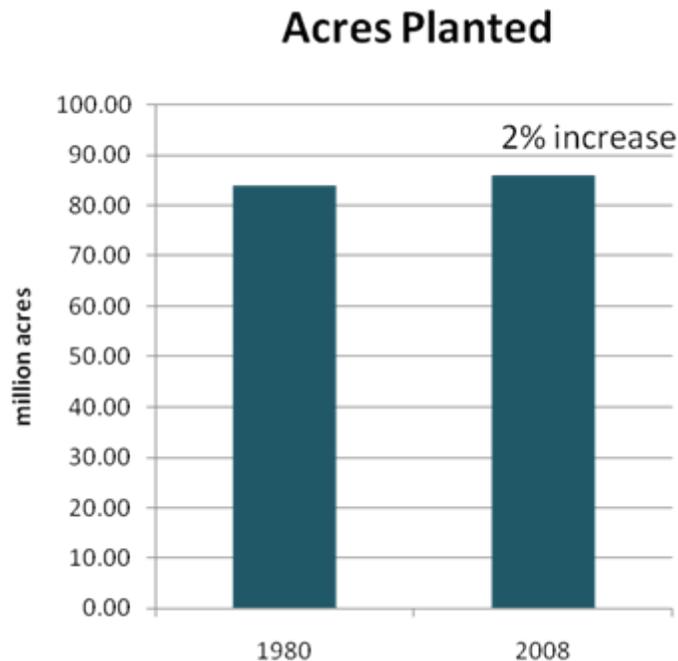
Even with growing ethanol demand, corn is meeting all needs

2008 Total U.S. Corn Supply: 13.7 billion bushels



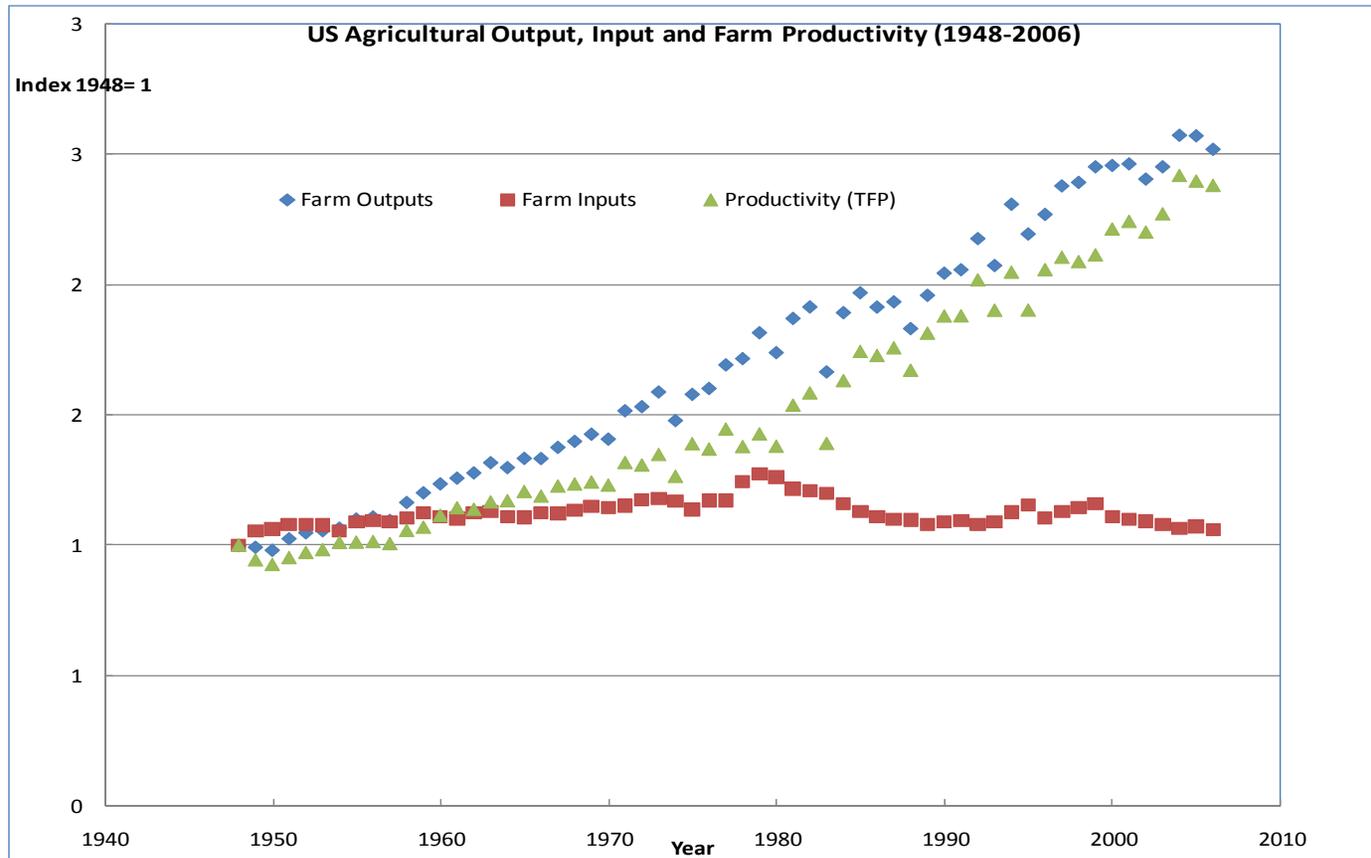
Agricultural productivity is the key: Through innovation, we've created 150 million "Virtual Acres"

- In the U.S., adding just 2% more land, we've produced 69% more corn



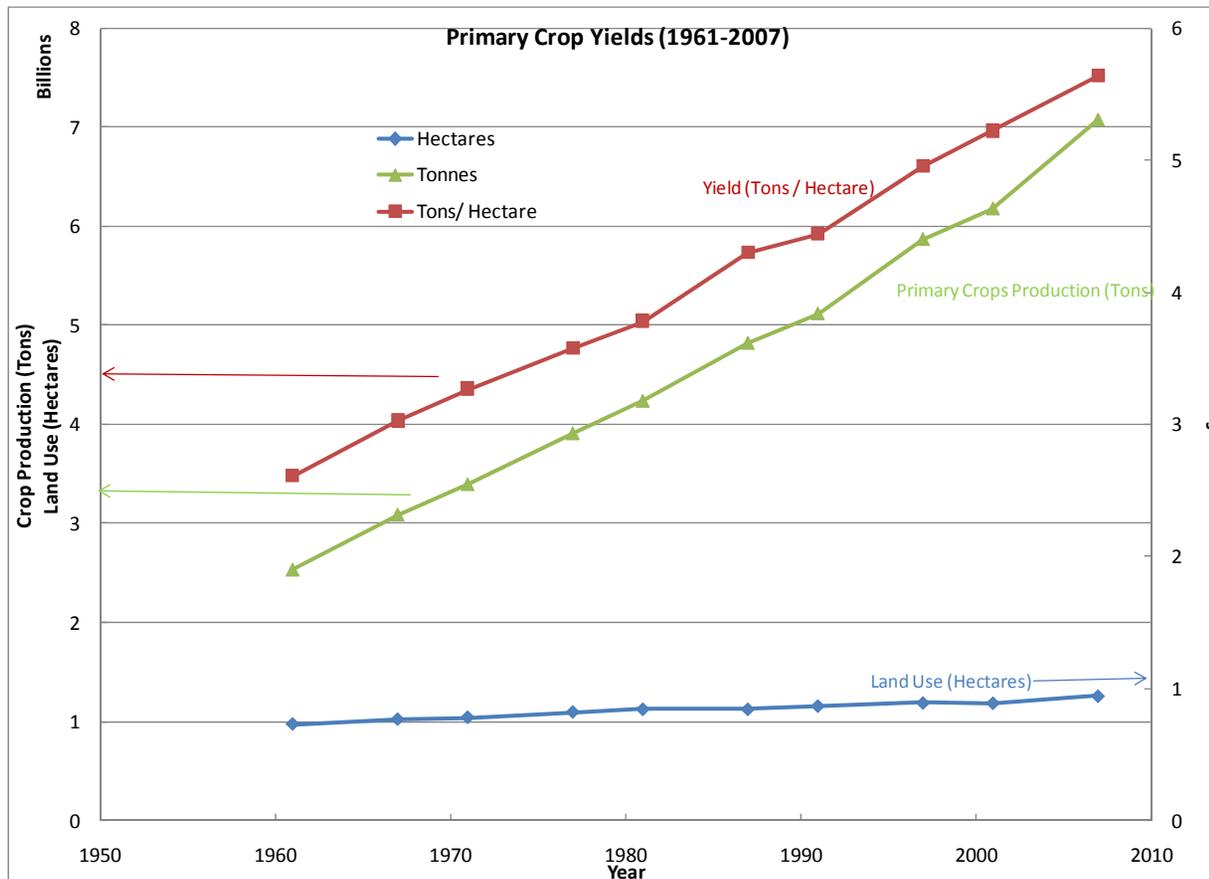
And we produced these increases using fewer inputs

- We're producing more with less pesticides, fertilizer, herbicides and water--1½ times more output today with the same amount of inputs as used in 1948.



And global agriculture is meeting growing needs through increases in productivity, too

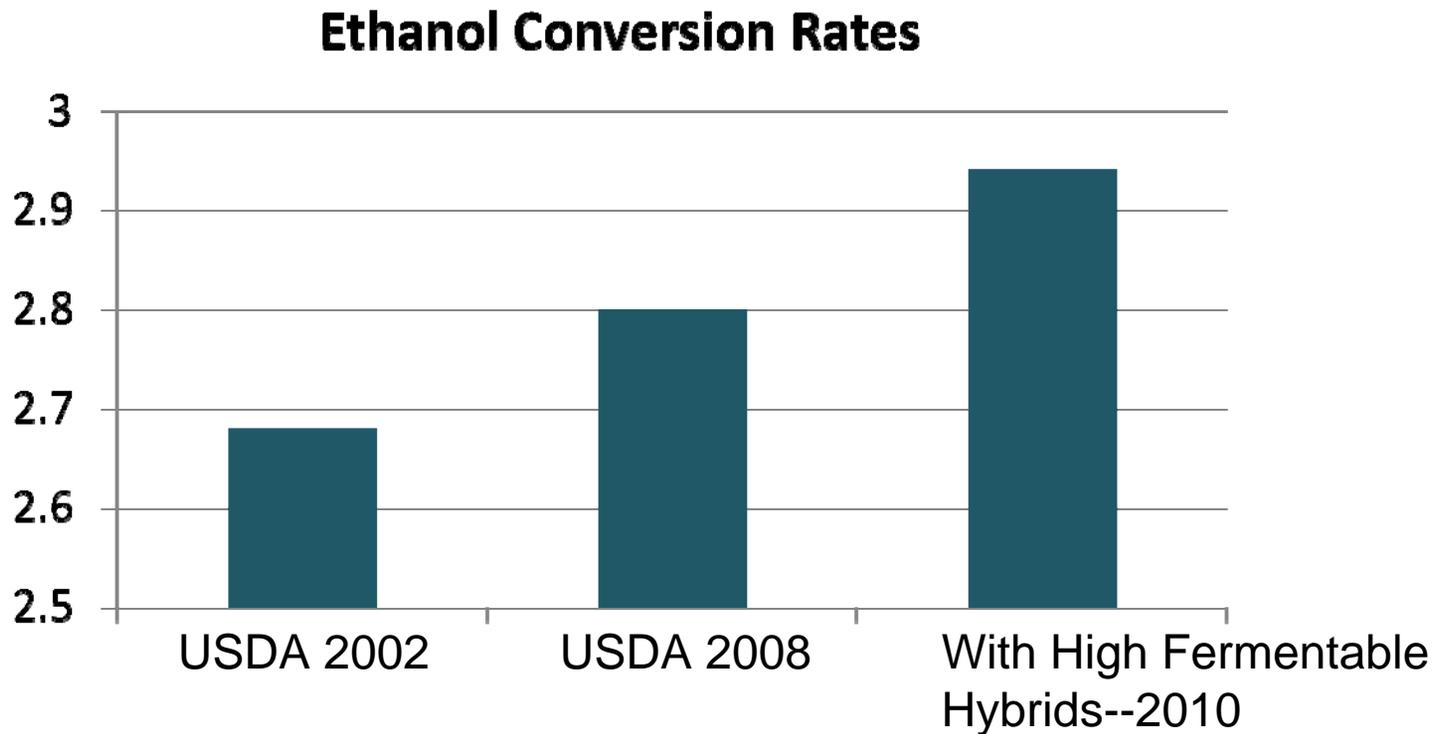
- Global agriculture is producing far more crops on only a little more land through higher productivity.



Most primary forest deforestation is currently occurring in places like Brazil, Indonesia and Russia as a direct result of logging, cattle ranching and subsistence farming.

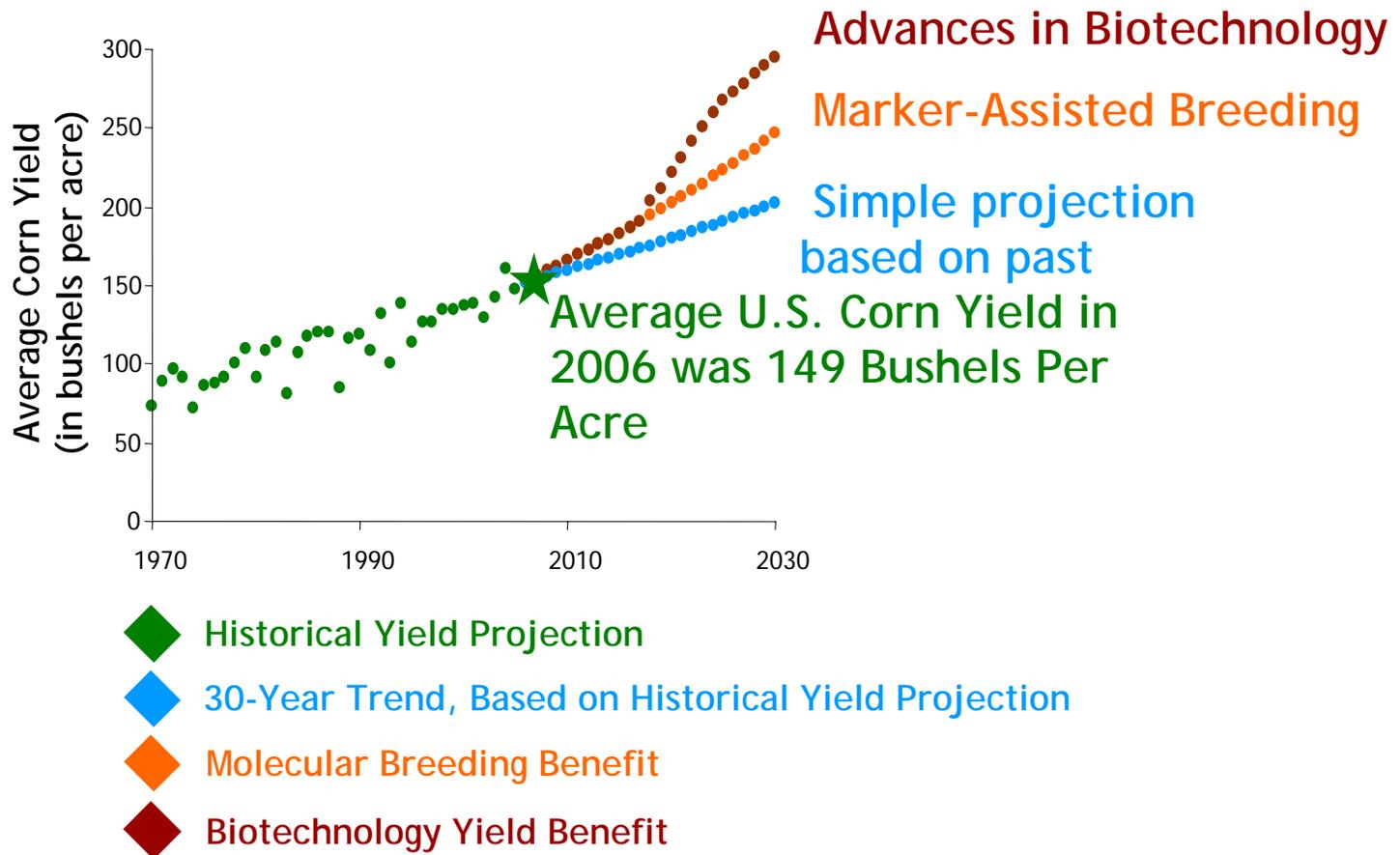
The Future for ethanol looks even better: Hybrid seeds will produce more starch, for more fuel

We'll make more ethanol from each kernel of corn



Productivity increases will also continue, improving ethanol's water, energy and GHG performance

- We'll as much as double corn yields on existing acreage



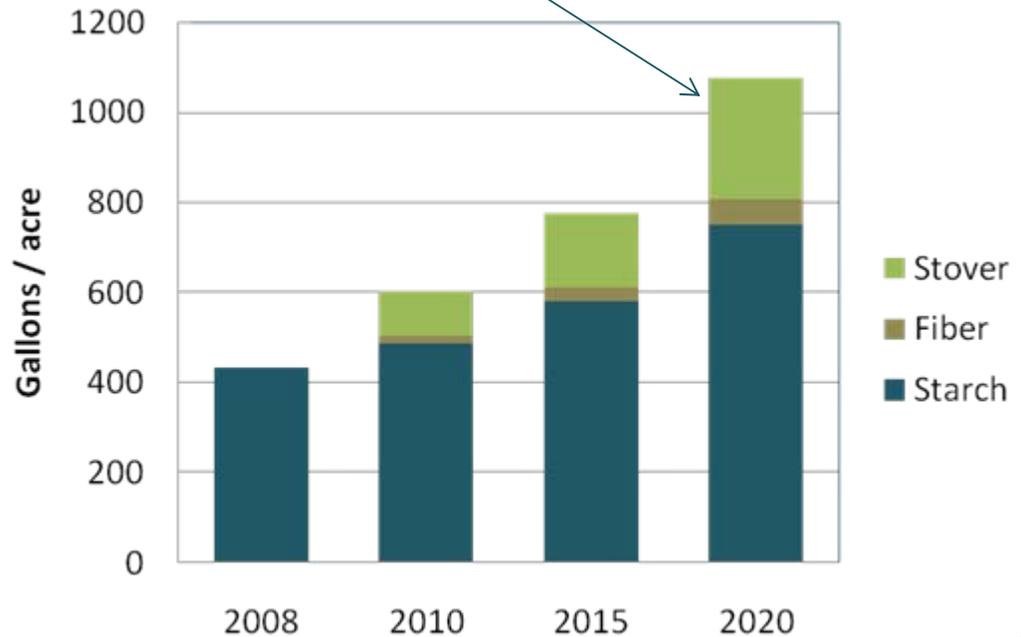
With increased yields comes more biomass, and we can do more with it

As corn yields grow, we'll also have more stover—the stalks, cobs and leaves of the corn plant--for fuel and for feed



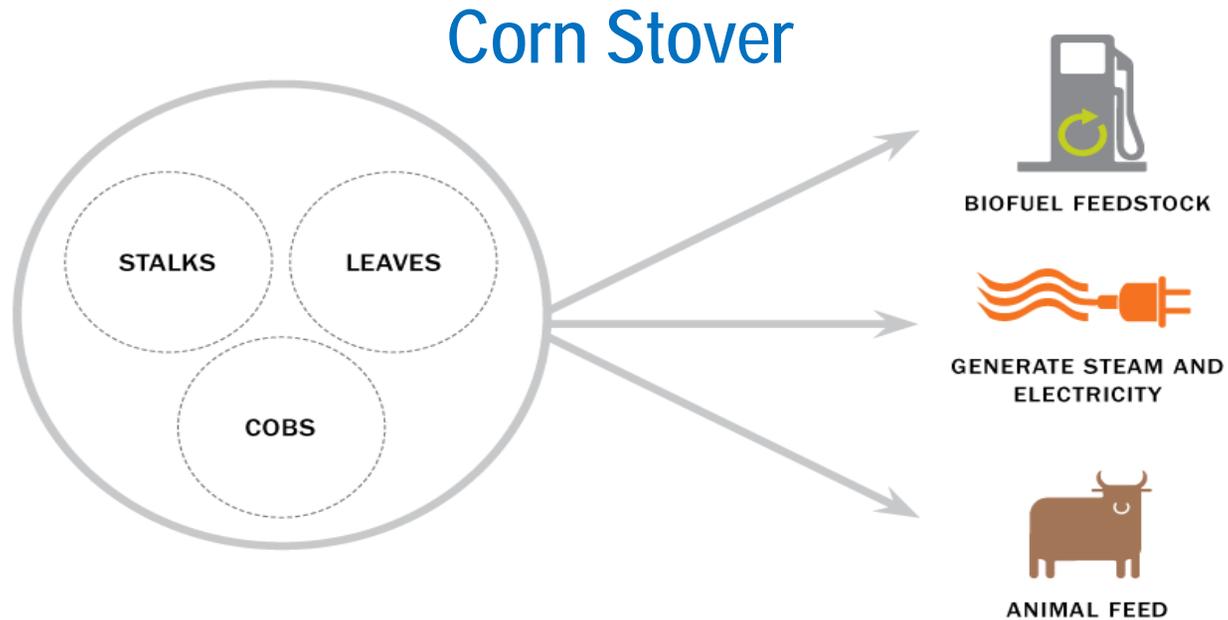
Stover can be burned for energy, treated as a feed replacement or converted for ethanol

Using stover as cellulosic biomass, we'll increase ethanol production to 1,000 gallons an acre



Source: Monsanto (2007)

Towards the Future: ADM research for better ethanol today, better biofuels tomorrow

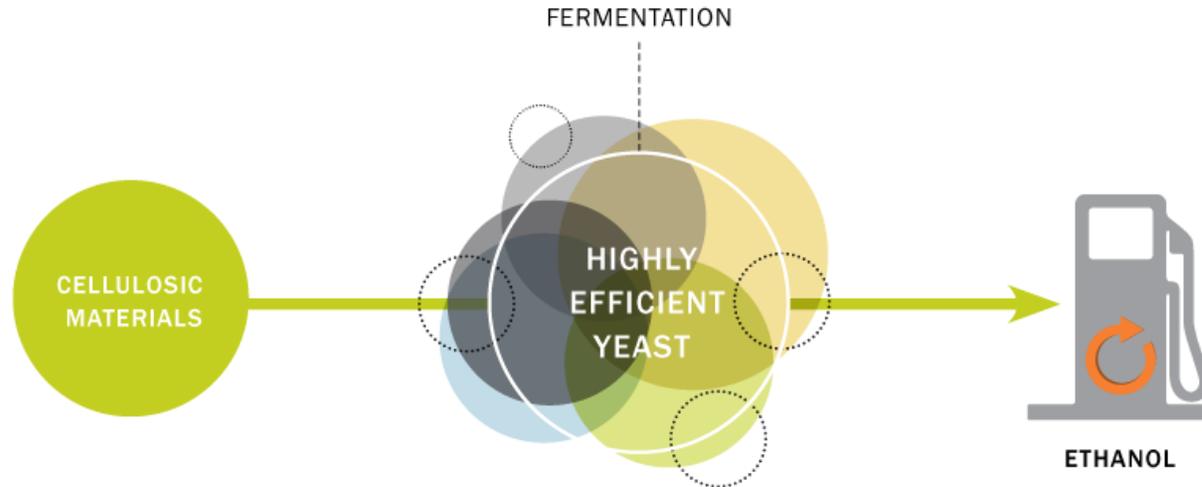


ADM, Deere & Company, and Monsanto are partnering to discover:

- How much stover can be sustainably harvested from fields—while preserving soil quality? What are the best harvest methods to use?
- How will we transport it, store it?
- What feed products can we make?
- What are its possibilities as a fuel and energy source?

Towards the Future: ADM research for better ethanol today, better biofuels tomorrow

Cellulosic Ethanol

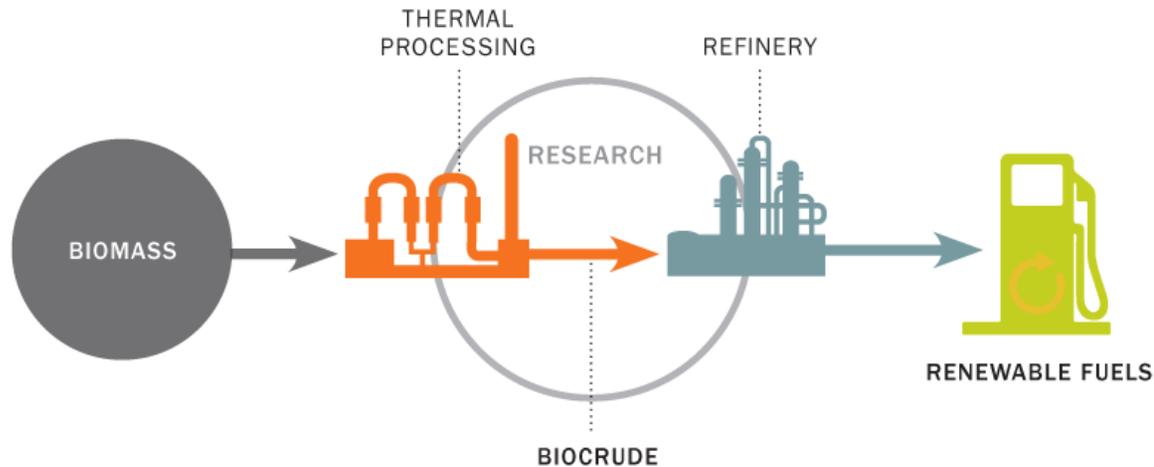


ADM is partnering with Purdue University to develop and commercialize:

- A fermentation process that uses highly efficient yeast to convert cellulosic materials into ethanol.

Towards the Future: ADM research for better ethanol today, better biofuels tomorrow

BioCrude



ADM is partnering with ConocoPhillips to:

- Process biomass—grasses, wood, and crop residues—into BioCrude, a renewable crude oil that can be made into gasoline in existing petroleum refineries and transported through existing pipelines, pumps and delivery networks.
- First pilot demonstration by 2010
- Demonstration Unit by 2011
- Commercial Deployment by 2013

Towards the Future: ADM research for better ethanol today, better biofuels tomorrow

Biomass Conversion

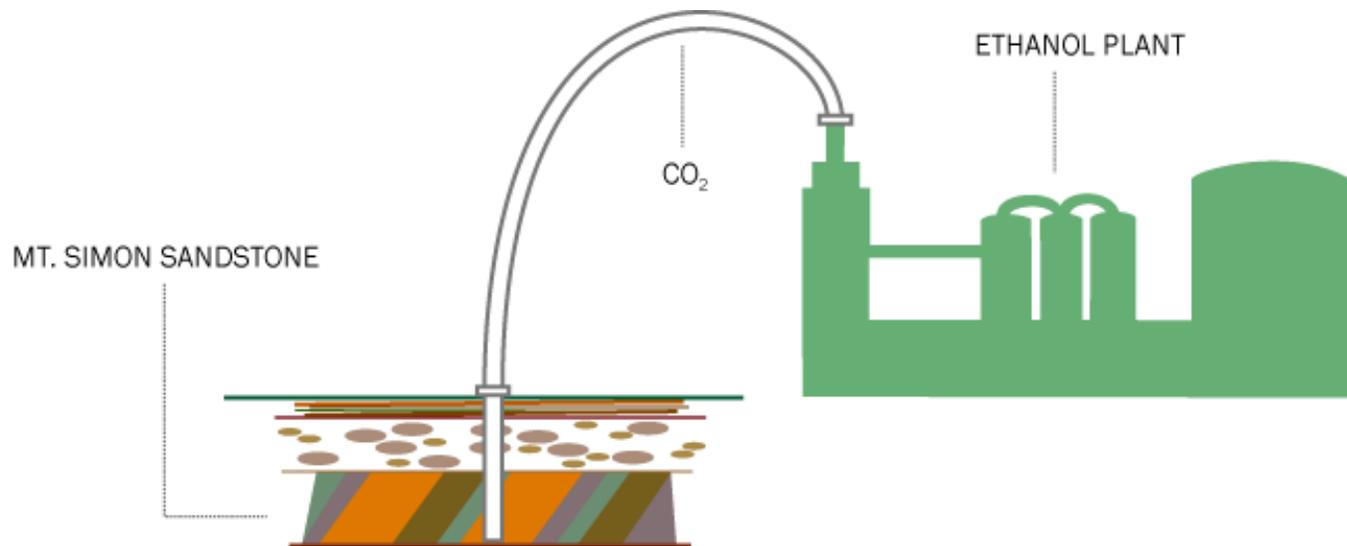


ADM, Iowa State University and partners are working to explore:

- Advanced biofuel technologies, including words that may someday be as familiar as "gasoline refining"--esterification of acids in pyrolysis oil, fermentation of syngas to acetaldehyde, and design and comparison of pyrolysis reactor configurations

Towards the Future: ADM research for better ethanol today, better biofuels tomorrow

Carbon Capture and Sequestration



ADM is partnering with the Midwest Geological Sequestration Consortium and the Illinois State Geological Survey to:

- Capture one million metric tons of carbon dioxide from ADM's ethanol stream and inject and sequester it in the Mt. Simon Sandstone formation in Illinois.

Is today's ethanol truly a bridge to tomorrow's biofuels? YES.

- Today's investment in ethanol is building the infrastructure to collect, store and process tomorrow's biomass
- Today's investment is creating a transportation and distribution network for advanced biofuel
- Today's research is creating advances in:
 - ✓ Land Management
 - ✓ Seed Technology
 - ✓ Conversion Technology
 - ✓ Recovery Technology
- Today's efforts to achieve productivity gains will create the additional food we need to feed a global population that will double by 2030.

If all 15 of the top producing nations were able to achieve between 70 and 80 percent of the yields the U.S. achieves, we'd see an increase in production of up to 50% in global maize; 52% in worldwide wheat; and up to 41% in rapeseed—on existing land.

Current Federal Policies are Working

Producing the desired effect; diversifying our fuel supply

- In the U.S. today, 70% of the U.S. gasoline market is blended with ethanol
- Last year, 9 billion gallons of ethanol were produced. The industry grew by 34% in 2008, adding nearly 240,000 jobs
 - Today, nearly 500,000 jobs are in place thanks to the ethanol industry.
- Cellulosic ethanol plants are operating today
 - Jennings, Louisiana – bagasse and sugar waste
 - Denver, Colorado – woody biomass
 - Many more on the way
- 11.1 billion gallon RFS in 2009

Federal and State Policy Challenges Ahead

- Implementation of the 2007 Renewable Fuel Standard
 - Under time constraints to produce a rule for 2010. Very significant year as biodiesel and cellulosic standards come on line in earnest
 - Calculating indirect land use with science and methodology not yet fully understood
 - European Union in their Renewable Fuels Directive decided more study was necessary
 - California's Low Carbon Fuel Standard
 - 11 state RGGI Low Carbon Fuel Standard
- How do we further enhance U.S. commitment to biofuels through greater blends of ethanol in gasoline
- How does an RFS and biofuels in general fit in to federal climate change legislation? 2009 Energy Bill?

What will it take to build a secure, sustainable energy future?

An ADM perspective

- Continued innovation. Oil and gas have a half-century head start. Biofuel has only just begun.
- Diversity of supply. Biofuels won't be the total answer. We'll need other renewable, sustainable energy: wind, solar, hydroelectric, geothermal.
- Continued advances on the farm. Regionally appropriate approaches to improve water utilization, to ensure that fertilizers and pesticides are used efficiently to achieve desired productivity gains while minimizing environmental impacts.
- Continued investment in infrastructure to transport, process and store tomorrow's larger crops.
- Dialogue, collaboration and a shared sense of possibility and purpose.