

# U.S. Agricultural & Biofuels Policy

## Classifying Biofuel Subsidies: Farm Bill and WTO Considerations

12:00 - 1:30 pm, September 14, 2010  
Rayburn Office Building, Room B - 340

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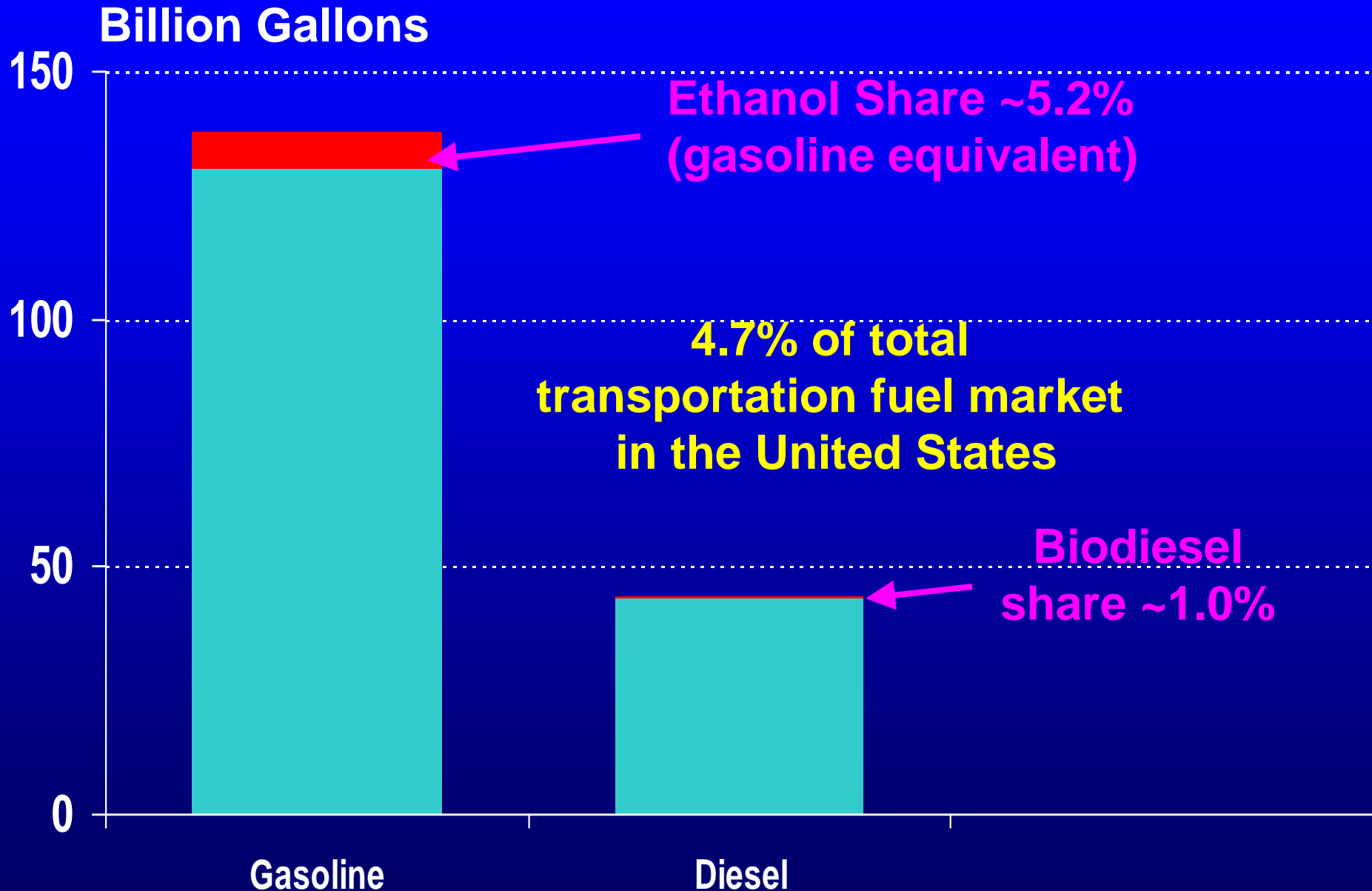
# Presentation Overview

- **Govt Biofuels Policy Distorts Markets**
  - ▶ Typically more expensive than petroleum counterparts, policy lowers the price gap to encourage greater production and use
    - ➔ But biofuels policy is not presently limited under WTO rules
- **Are Biofuels part of U.S. farm policy?**
  - ➔ Types of Biofuels Support:
    - Non-Agricultural: Tax credit; mandate; tariff; R&D; infrastructure
    - Agricultural: Biomass Crop Asst. Program (BCAP), biomass R&D
  - ➔ Feedstock Linkage
- **What is the implication for Govt Outlays?**
  - ➔ Indirect Price Support
    - Raises crop prices; lowers traditional program outlays
    - Tax credits are targeted to blenders, not biofuel producers
  - ➔ How to measure the market effect?
  - ➔ Notifications?

# Biofuels Policy is Linked to Agriculture by the Feedstock

- ETHANOL— an alternative to gasoline, is made by fermenting sugar into alcohol
  - Corn (starch): United States
  - Sugarcane: Brazil
- BIODIESEL— an alternative to diesel fuel, is made from vegetable oil
  - Rapeseed oil: EU
  - Soybean oil: United States

# U.S. Motor Vehicle Fuel Use, 2009



# Primary U.S. Biofuel Policies

- **Blenders Tax Credit (TC)**
  - ➔ Lowers the cost of ethanol (versus gasoline) to blender
  - ➔ Enhances the effect of high oil prices
  - ➔ By increasing the demand for ethanol, the TC raises the demand for feedstocks... corn
- **Mandated (RFS) Minimum Usage Requirement**
  - ➔ If NOT binding, its effect is null at the margin
  - ➔ If binding,
    - guaranteed market reduces risk of investing in biofuel production
    - artificially increases demand and prices for biofuels & their feedstocks
- **Import Tariff on Foreign Ethanol**
  - ➔ Raises the cost of acquiring lower-cost foreign-produced ethanol
  - ➔ Allows less efficient U.S. biofuel producers to remain competitive

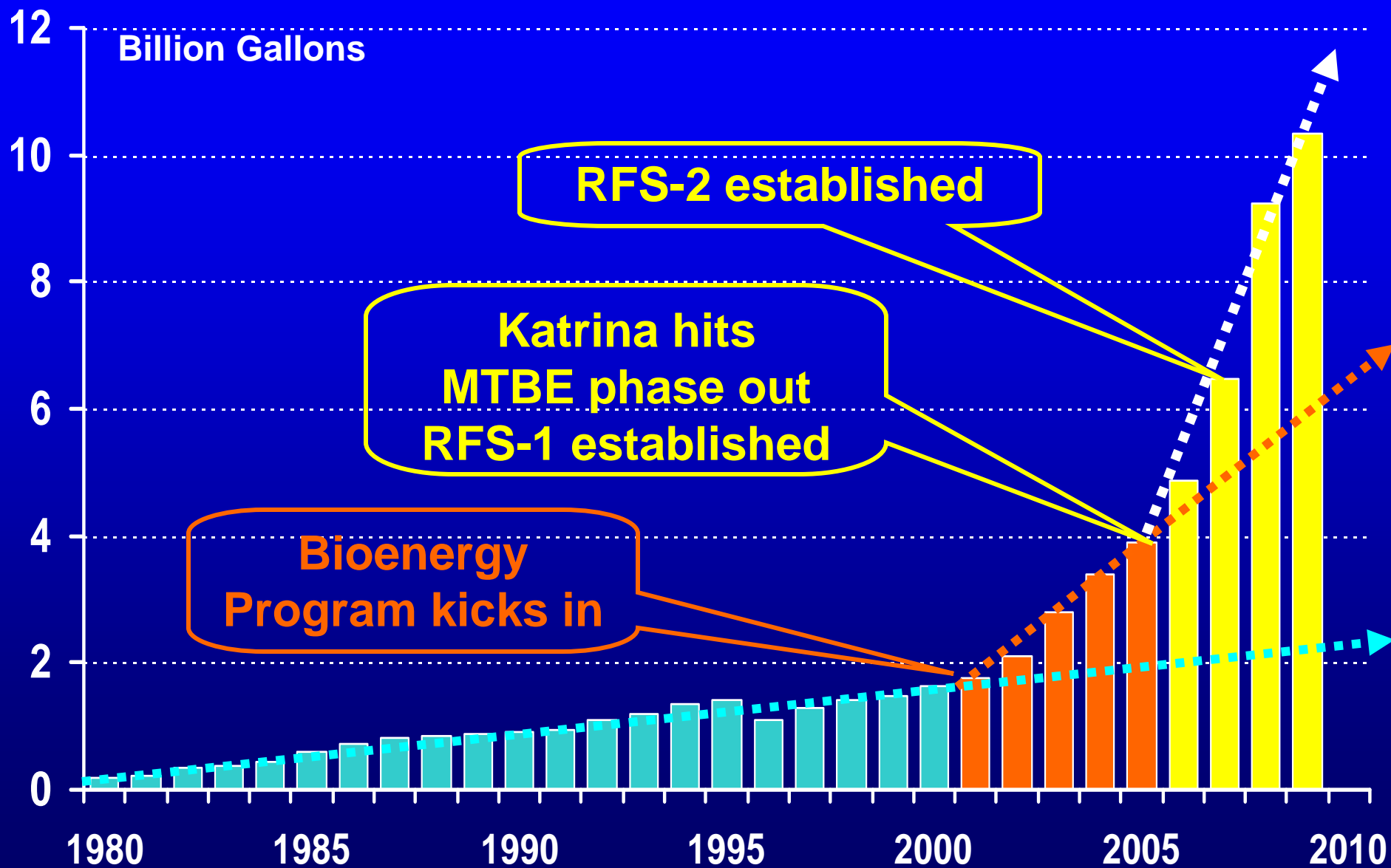
# Secondary: U.S. Biofuels Policy

- **Loans, Loan Guarantees, and Grants**
  - ▶ **Research & Development Funds**
    - Feedstocks
    - Processing technology
  - ▶ **Physical Infrastructure**
    - Processing
    - Delivery & Distribution
- **Biomass Crop Assistance Program (BCAP)**
  - ▶ Cost-share payments for biomass crops
- **Farm Programs**
  - ▶ support production of biofuel feedstock crops– corn, soybeans
    - Price support: Marketing loan program
    - Income support: Counter-cyclical program + ACRE
    - Risk reduction: Crop Insurance + SURE provides
    - Additional support: Extension and research

# Key Federal Legislation that Supports Biofuels... it's not just Farm Policy

- **2002 Farm Bill (P.L. 107-171)**
  - ▶ First Energy Title; funded Bioenergy Program
- **Energy Policy Act of 2005 (P.L. 109-58)**
  - ▶ Established first mandate (RFS-1) of 7.5 billion gallons by 2012
- **Energy Independence and Security Act of 2007 (EISA, P.L. 110-140)**
  - ▶ Expanded mandate (RFS-2) to 36 billion gallons by 2022.
- **2008 Farm Bill (P.L. 110-246)**
  - ▶ Several energy-related provisions— grants, loans, and loan guarantees

# Rate of U.S. Ethanol Production

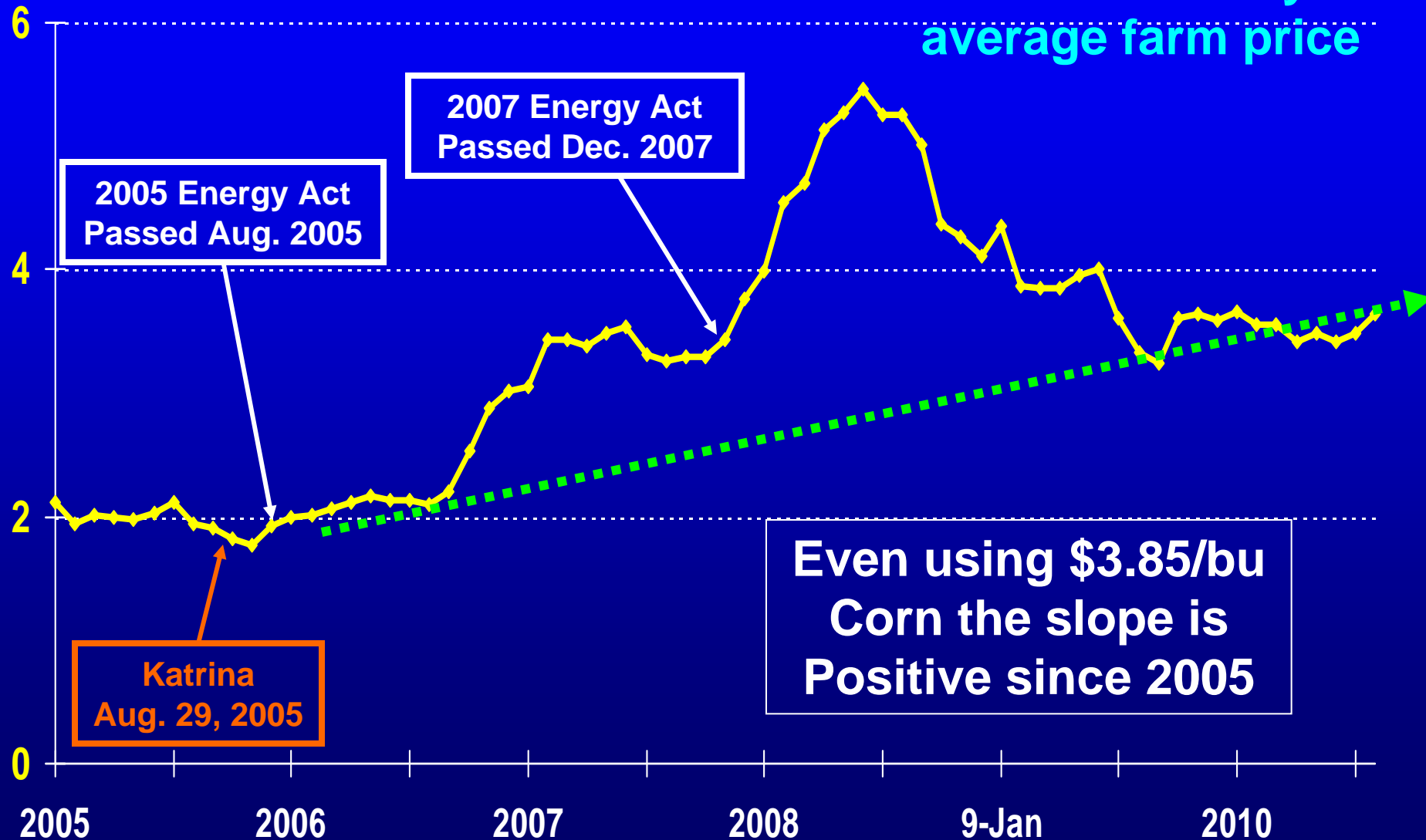


Source: Actual production data from Renewable Fuels Association.



# Biofuels Policy Have Clearly Supported Corn Price

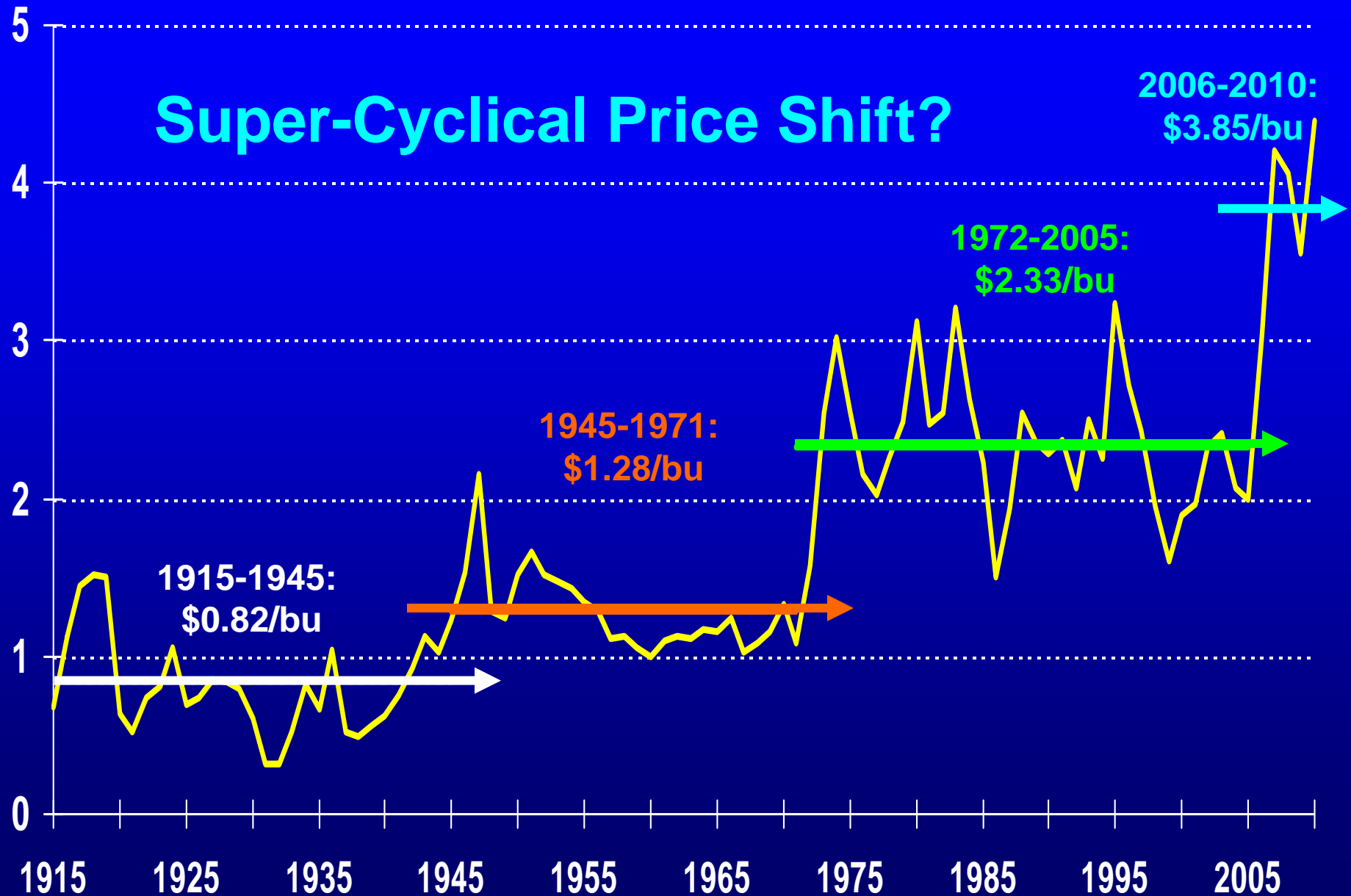
\$ per bushel



Source: USDA, NASS; regular, unleaded U.S. city average gasoline prices, EIA, DOE.

# \$ per bu. Have Corn Prices Moved to a New Plateau?

## Super-Cyclical Price Shift?



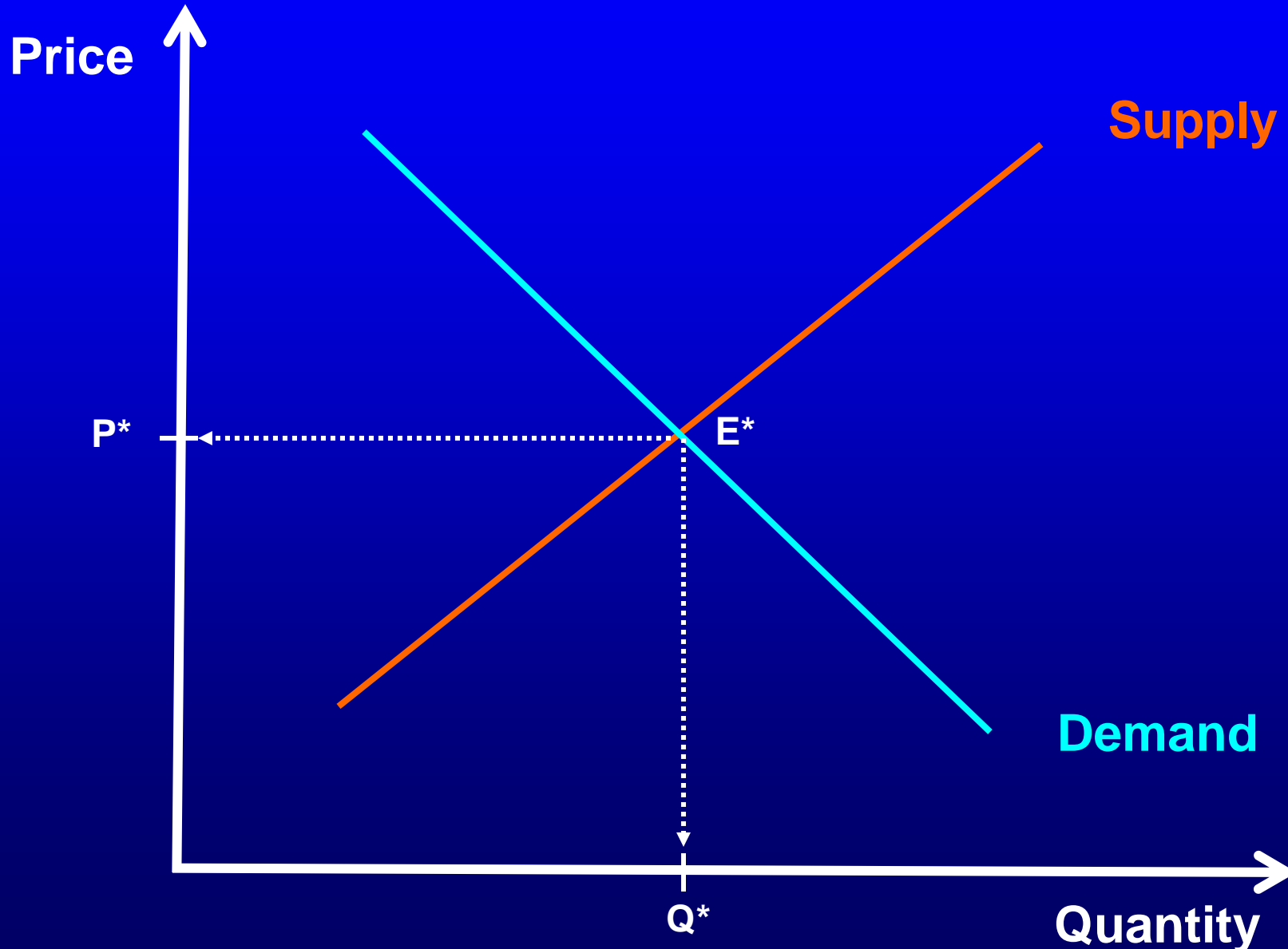
# Ethanol Production Capacity Expands due to Profit Outlook...

- **Market forces Impact biofuel feedstocks indirectly by changing demand for biofuels**
  - ▶ **U.S. Govt Biofuel Incentives + High oil prices**
    - ➔ high ethanol price ➔ new prod. Capacity
    - ➔ more corn demand ➔ higher corn prices
- **Once built, ethanol capacity will continue to operate if: revenue > operating costs**

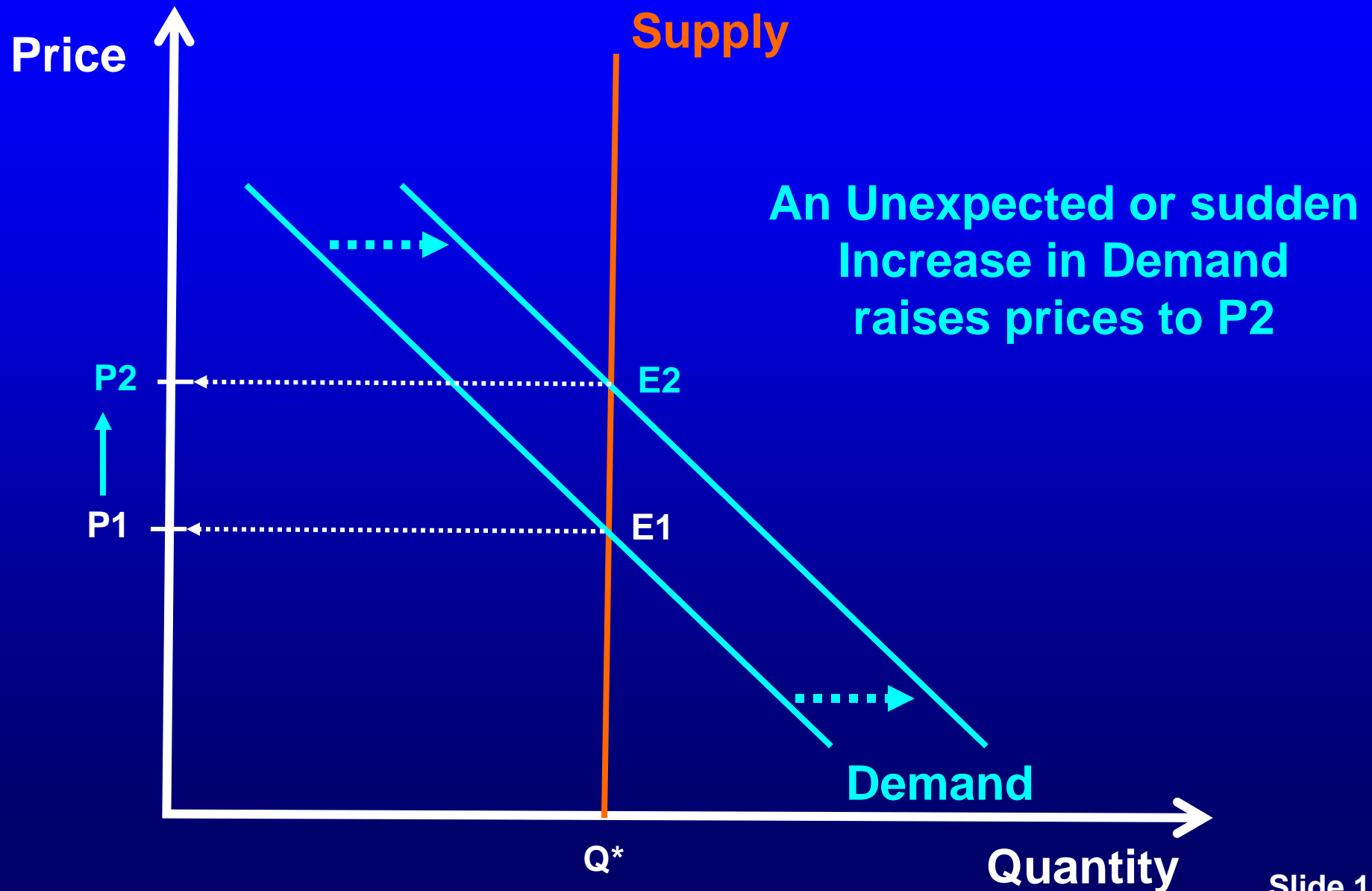
## Biofuels Market Dynamics can be Very Complex

- ➔ High corn prices ➔ high production costs
- ➔ High protein feed by-product ➔ advantageous to local livestock

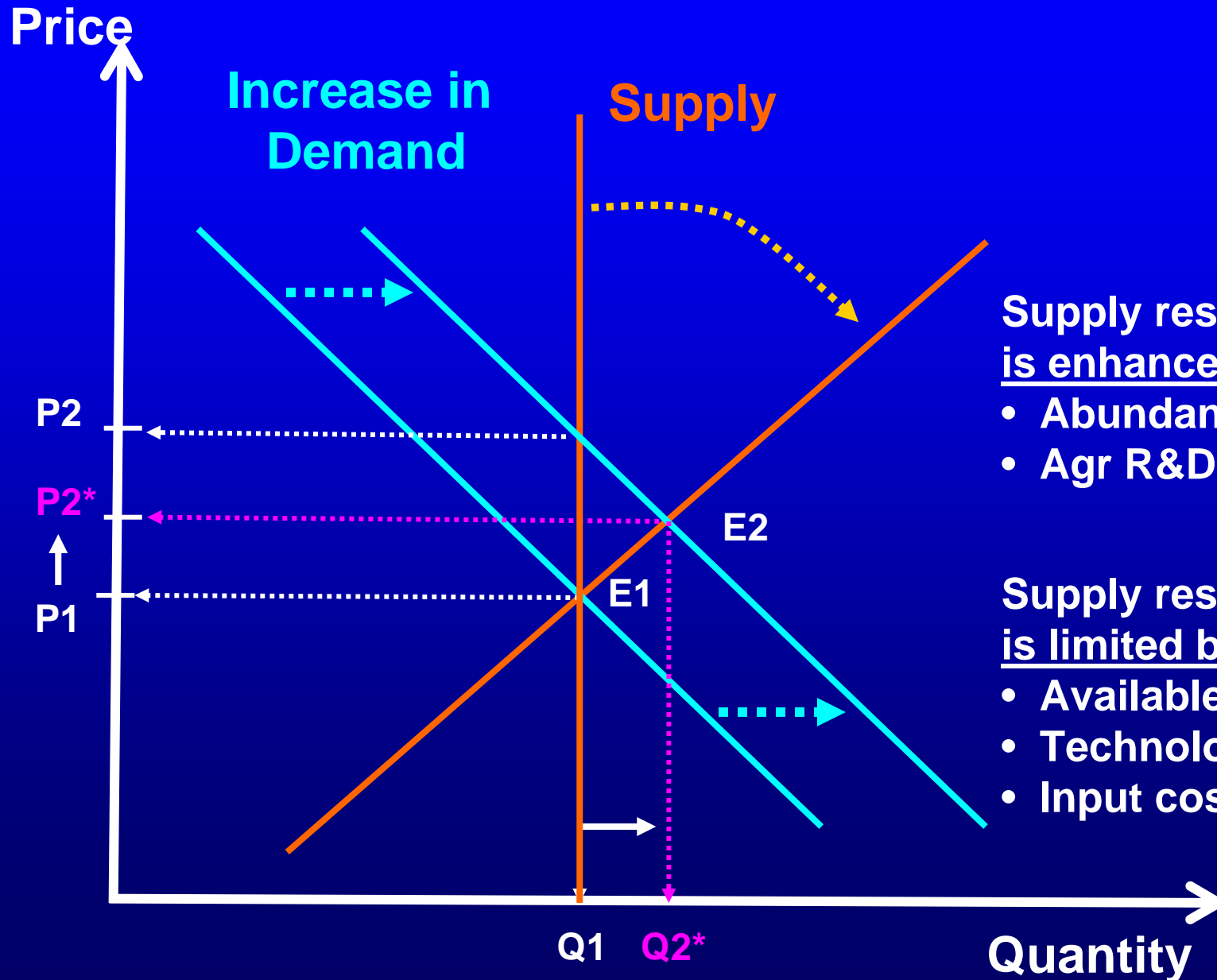
# Consider Traditional Supply & Demand Intersection at Equilibrium $P^*$ and $Q^*$



# In the Very Short-Term Supply is Fixed



Over longer time period Supply responds to market incentives and policy, lowering price impact



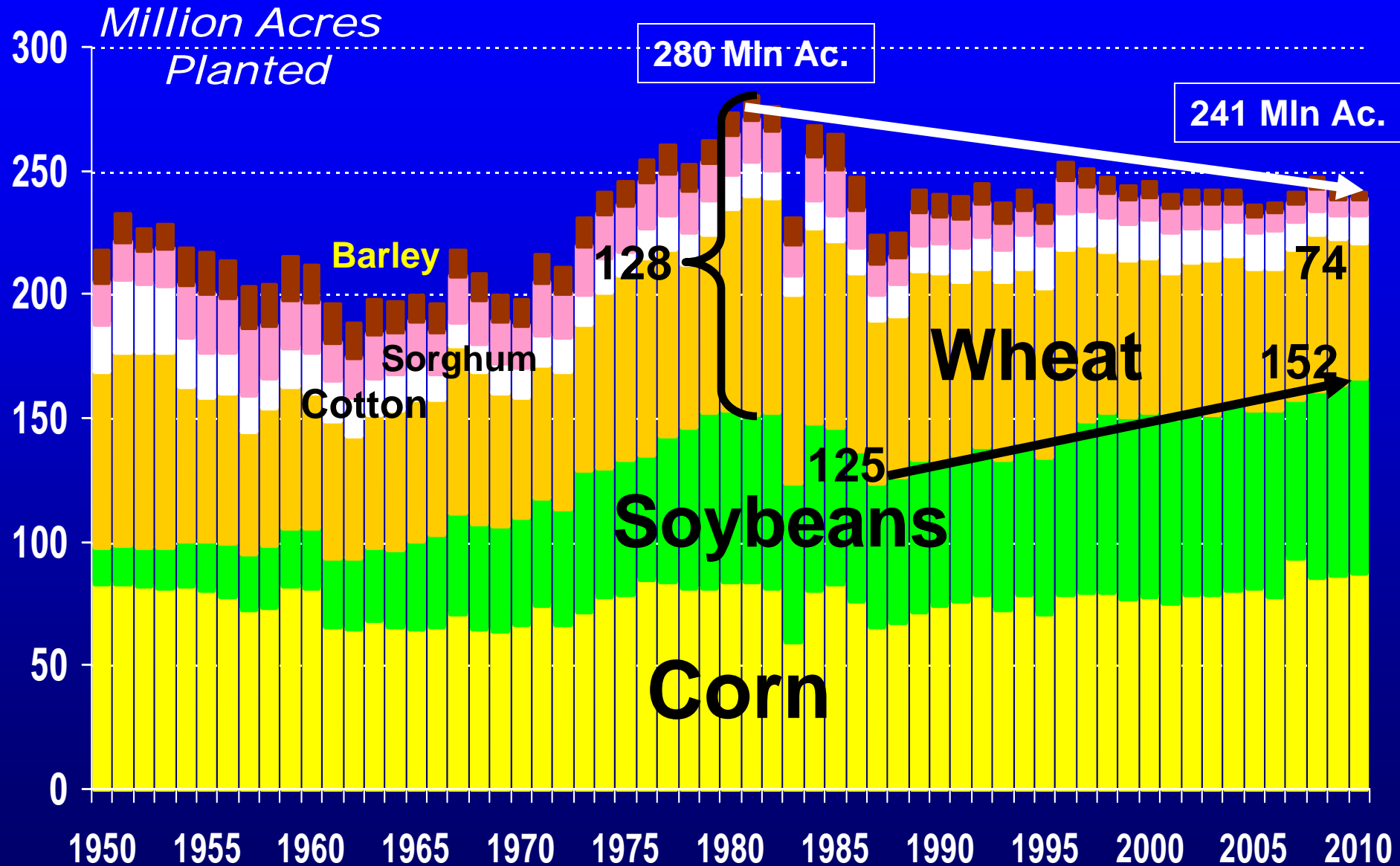
Supply responsiveness is enhanced by \_\_\_\_\_:

- Abundant substitutes
- Agr R&D Policy

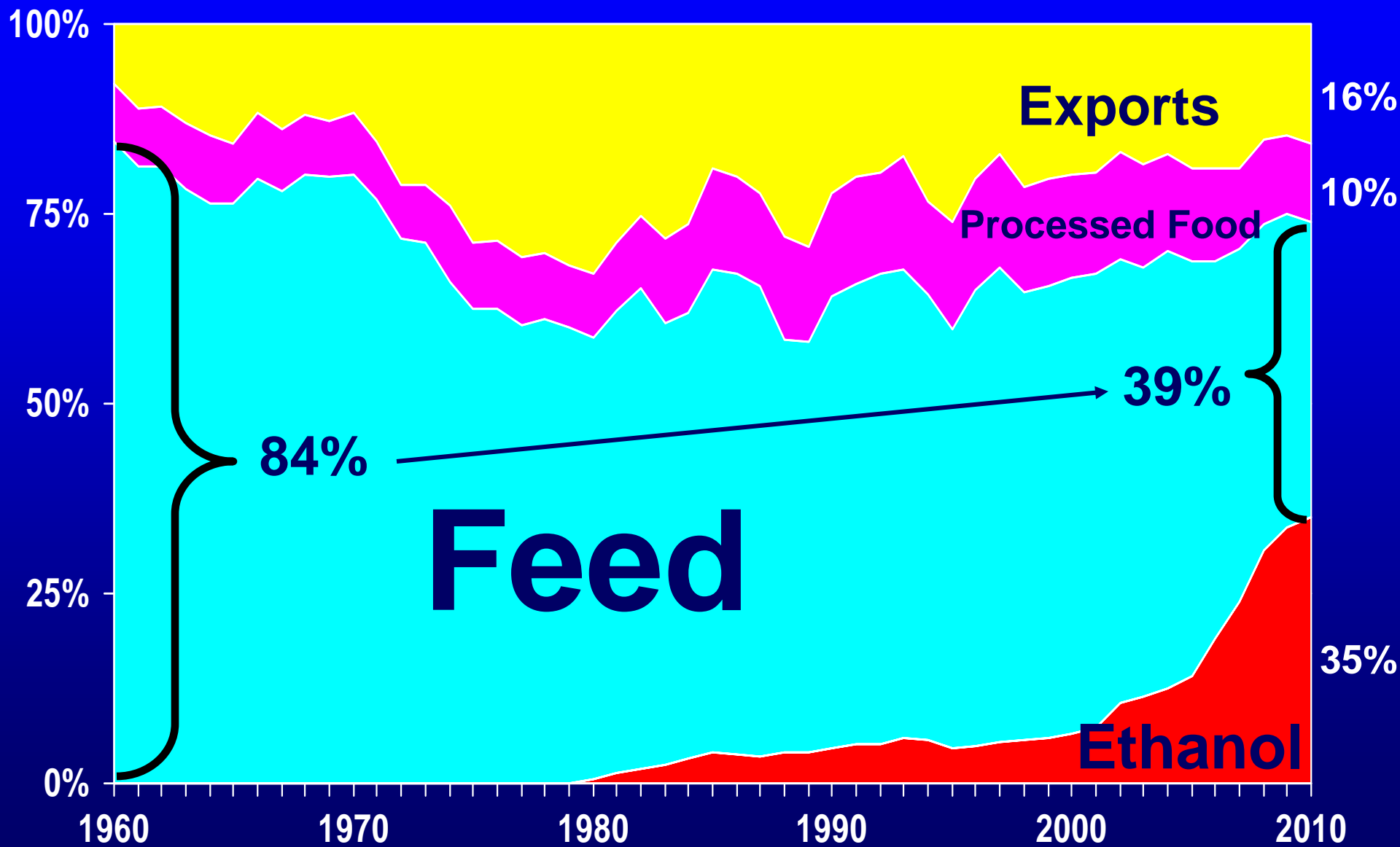
Supply responsiveness is limited by \_\_\_\_\_:

- Available land
- Technology
- Input costs

# U.S. Planted Area: 6 Major Crops

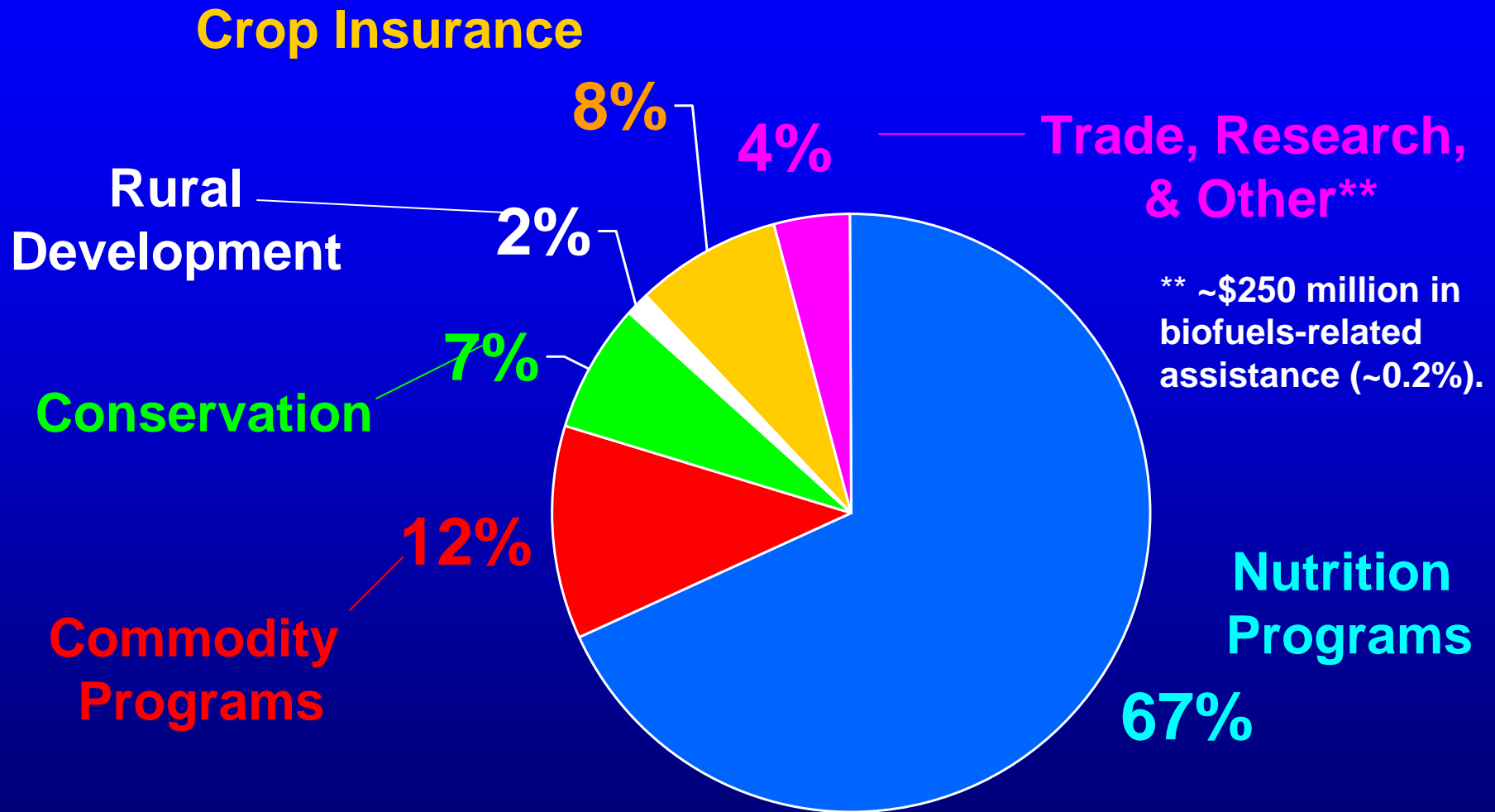


# Ethanol Uses an Increasing Share of U.S. Corn Production



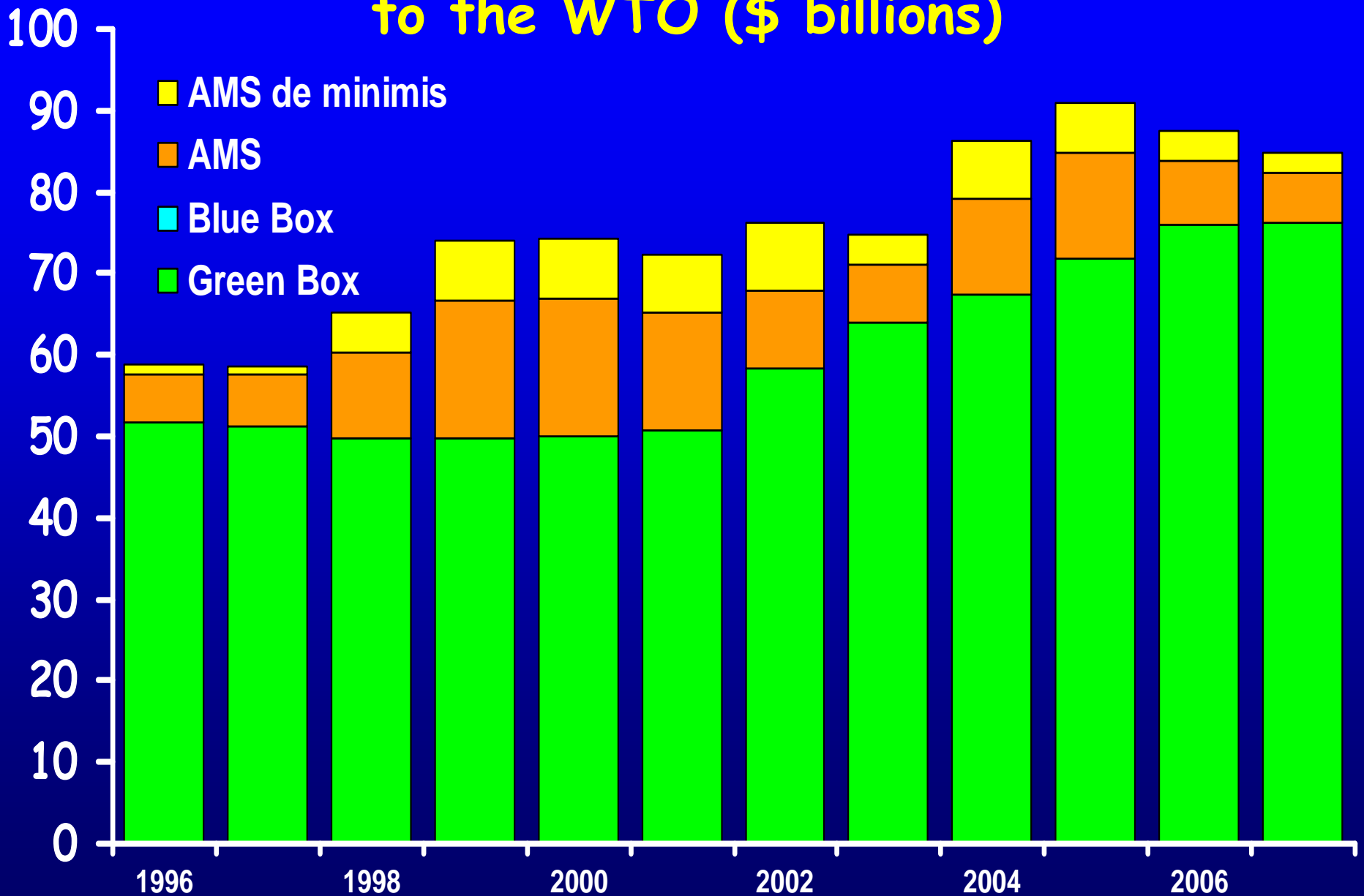


# USDA's Spent \$114.4 Billion in 2009\*



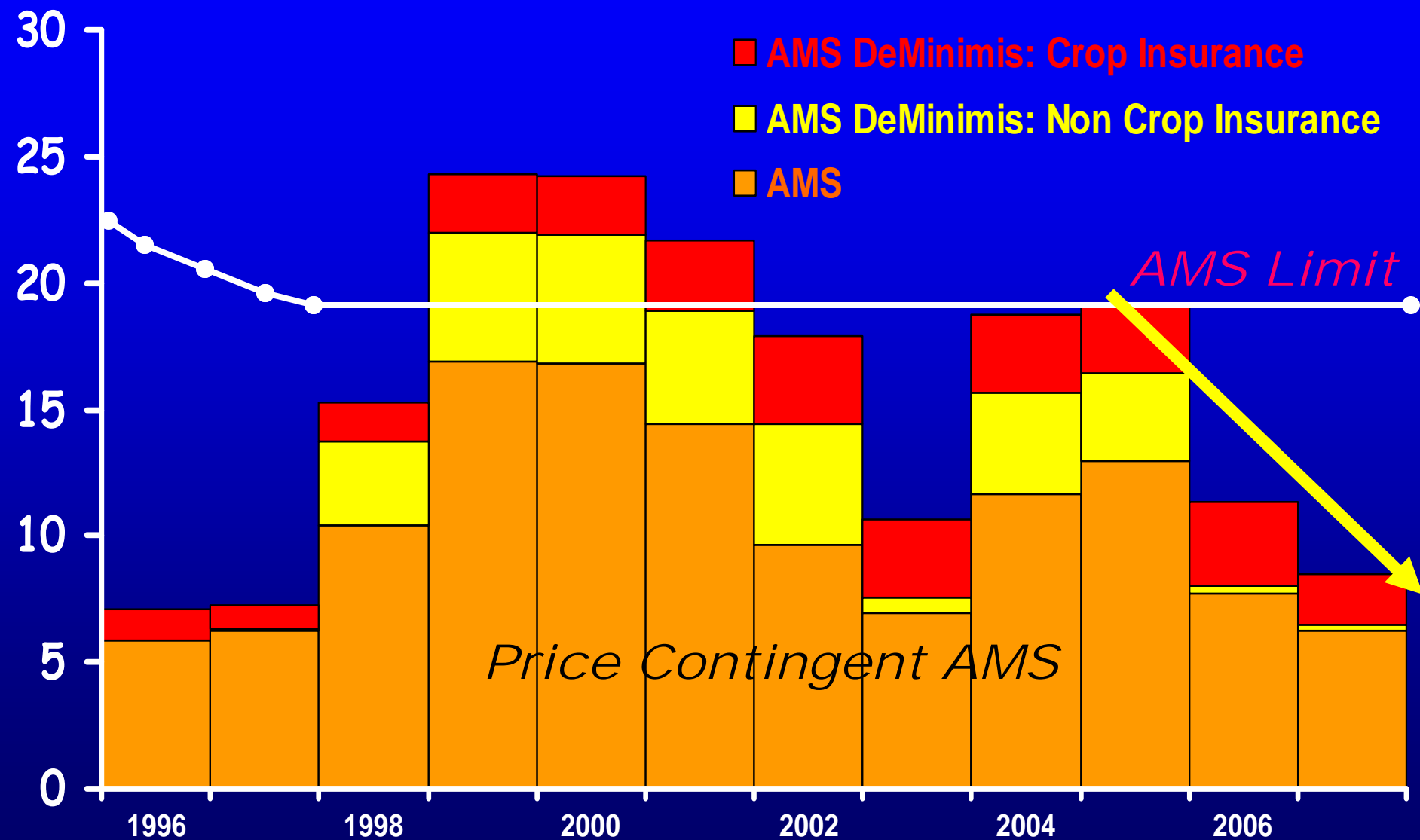
\*Includes \$3.6 billion in offsetting receipts; \$108.3 billion was initially authorized.  
Conservation includes Forestry Outlays. Source: USDA, FY2011 Budget Summary.

# U.S. Farm Program Outlays as Notified to the WTO (\$ billions)

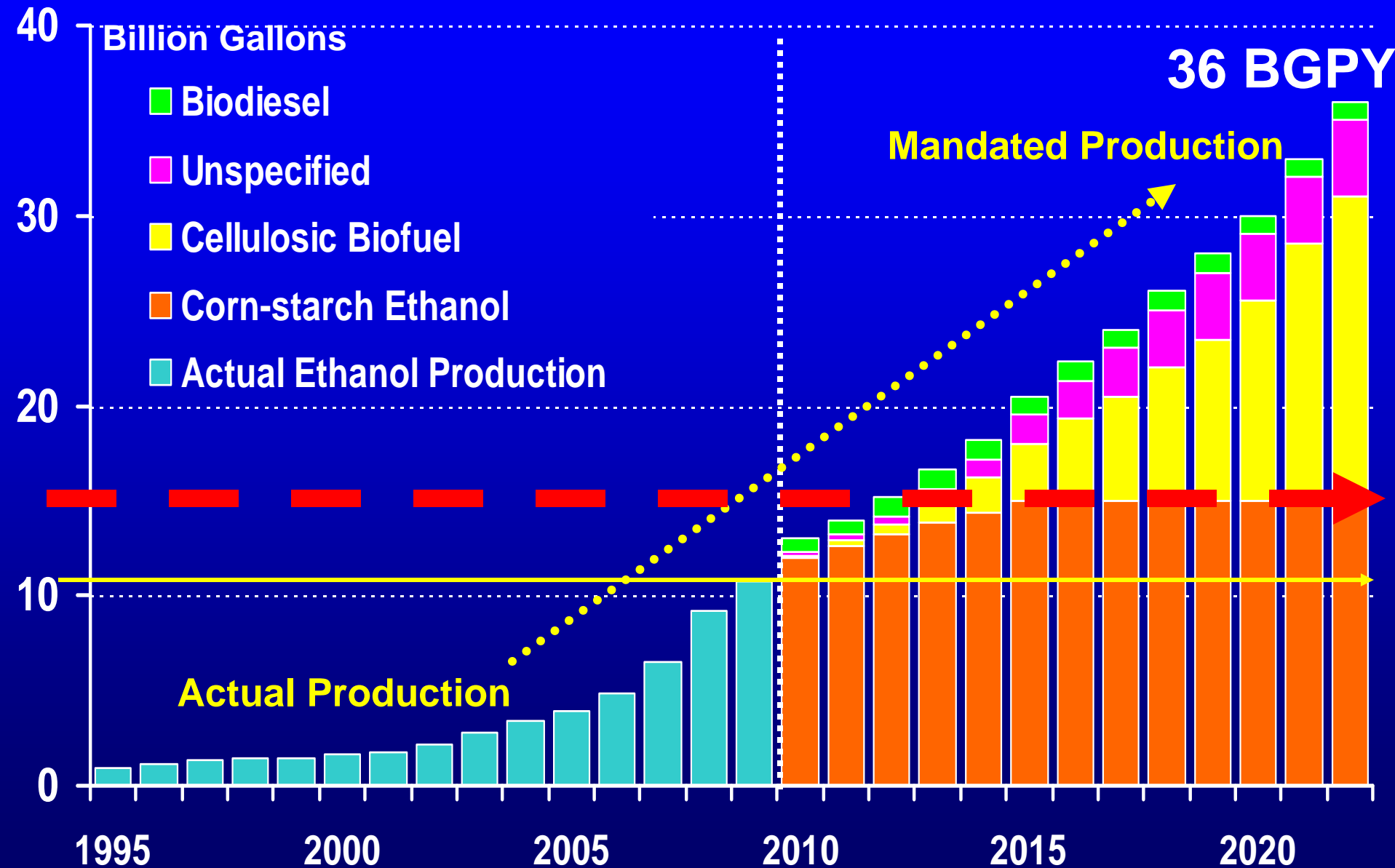


\*Source: WTO notifications.

# U.S. Farm Program Outlays (non-Green Box) as Notified to the WTO (\$ billions)

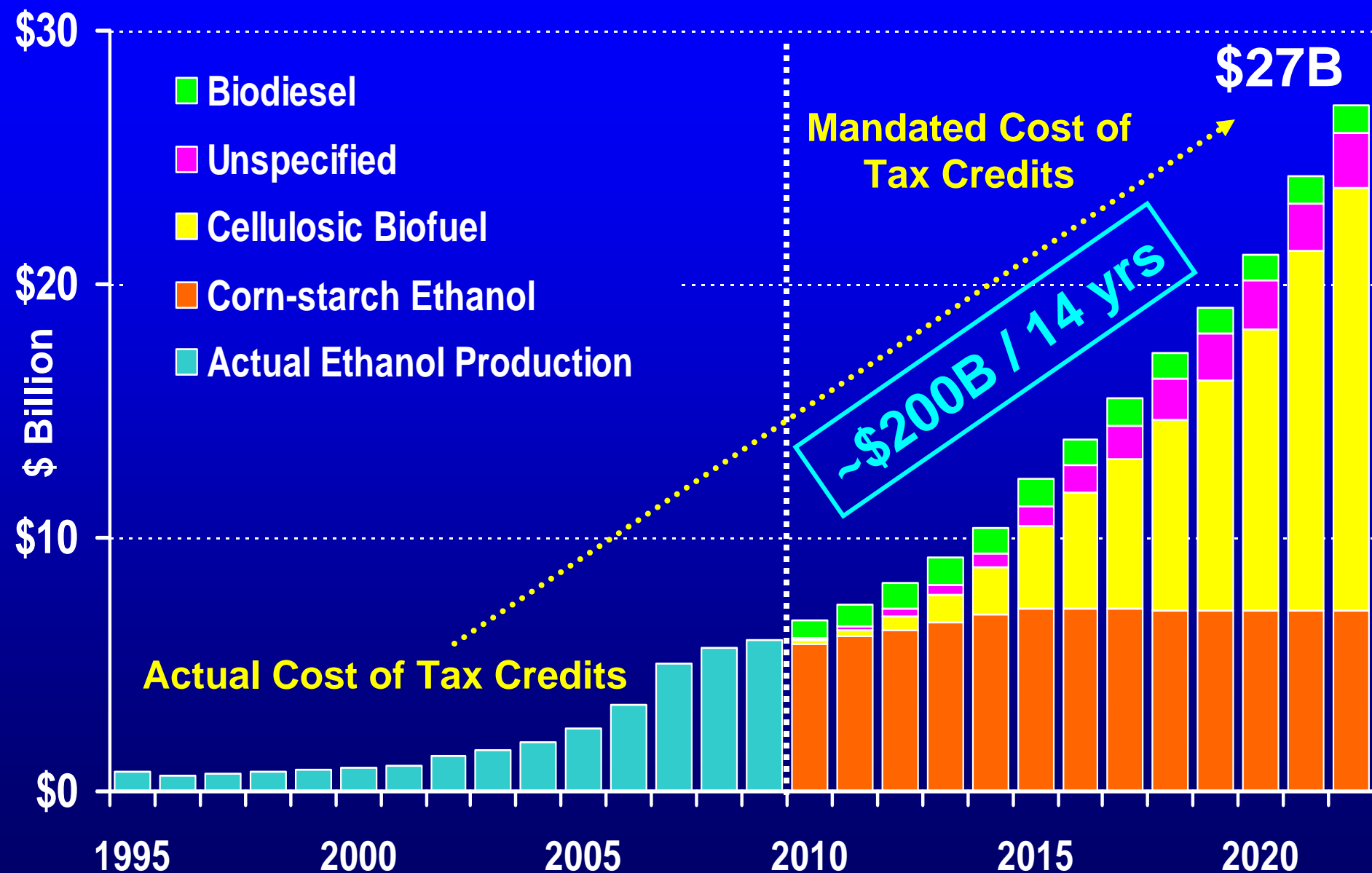


# Biofuel Prod-- Renewable Fuel Standard (RFS-2)\*



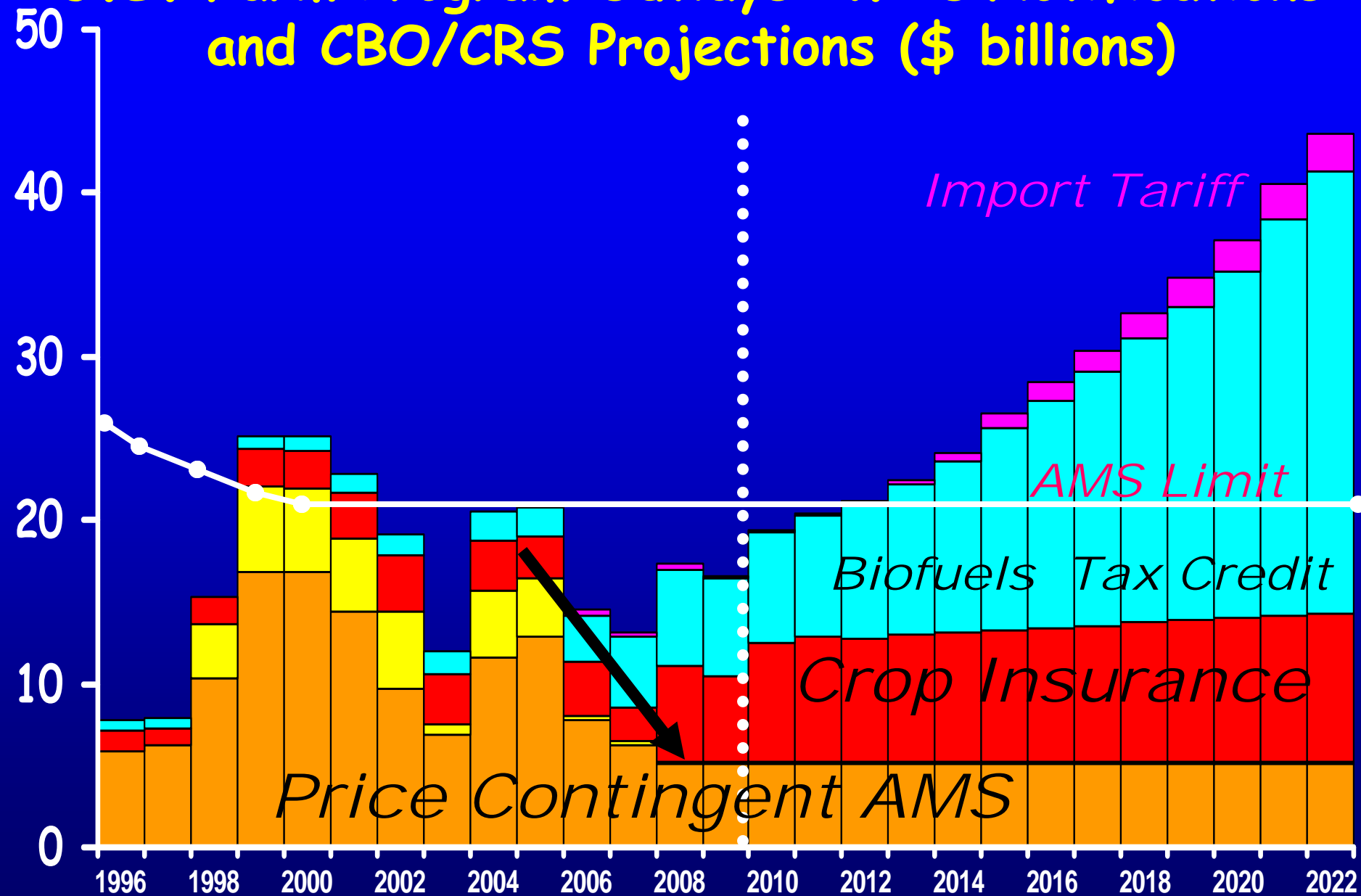
\*Under the EISA of 2007 (PL 110-140) the enlarged and extended RFS starts in 2008 with 9 billion gallons.

# Annual Cost of RFS-2 Mandated Tax Credits\*



\*Assumes that all expiring tax credits are extended through 2022.

# U.S. Farm Program Outlays: WTO Notifications and CBO/CRS Projections (\$ billions)



# Summary: U.S. Biofuels Policy

- **Higher commodity prices →**
  - ▶ lower farm program payments as biofuels subsidies substitute for traditional price supports
  - ▶ Distort commodity, land, & environmental markets
- **How do WTO Members want to treat biofuels subsidies?**
  - ▶ Exclude from AMS entirely
  - ▶ Green with no limits?
  - ▶ Blue with some limits?
  - ▶ AMS with hard limits?

# For More Information on U.S. Farm and Biofuel Programs...

- Contact me directly at:
  - ▶ Randy Schnepf, 7-4277, [rschnepf@crs.loc.gov](mailto:rschnepf@crs.loc.gov)
- CRS Reports
  - ▶ RL41282— Agriculture-Based Biofuels: Overview+Emerging Issue
  - ▶ R40110 — Biofuels Incentives: A Summary of Federal Programs
  - ▶ R40155 — Renewable Fuel Standard (RFS): Overview & Issues
  - ▶ RL34130— Renewable Energy Programs in the 2008 Farm Bill
  - ▶ R41296 — Biomass Crop Assistance Program (BCAP): Status and Issues
  - ▶ R41317 — Farm Safety Net Programs: Issues for the Next Farm Bill
  - ▶ RL34394— Farm Commodity Programs in the 2008 Farm Bill