



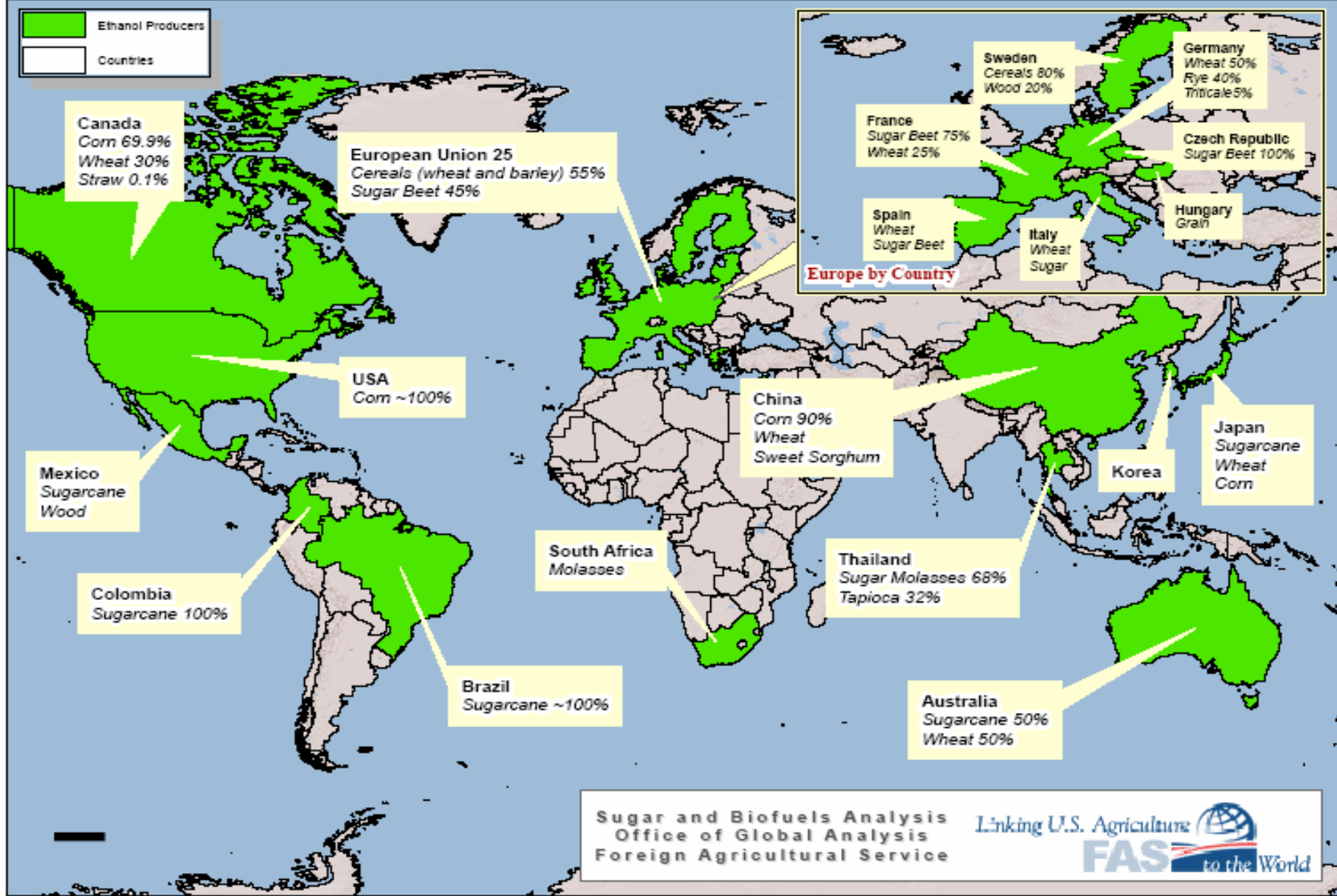
# U.S. Biofuel Developments

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**Chiapas, Mexico**  
**March 23, 2007**

**Michael Yost**  
**Administrator**  
**Foreign Agricultural Service**  
**U.S. Department of Agriculture**

# Countries Producing Ethanol by Feed Stock



Sugar and Biofuels Analysis  
 Office of Global Analysis  
 Foreign Agricultural Service

Linking U.S. Agriculture  to the World



# U.S. Biofuels Policy

## General Overview

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- **President Bush's "20 in 10" Proposal**
  - Reduce U.S. motor fuel by 20% in 10 years
  - Increase alternative fuel use to 35 billion gallons by 2017
  
- **Diversify U.S. energy supply**
  
- **Improve U.S. economic security and environment**



# U.S. Biofuels Policy

## International

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- Support rising world bioenergy production and consumption
  
- Bilateral and multilateral cooperation in biofuels
  - Advance next generation technology
  - Promote feasibility of biofuels in other countries
  - Expand international marketplace



# U.S. Biofuels Research

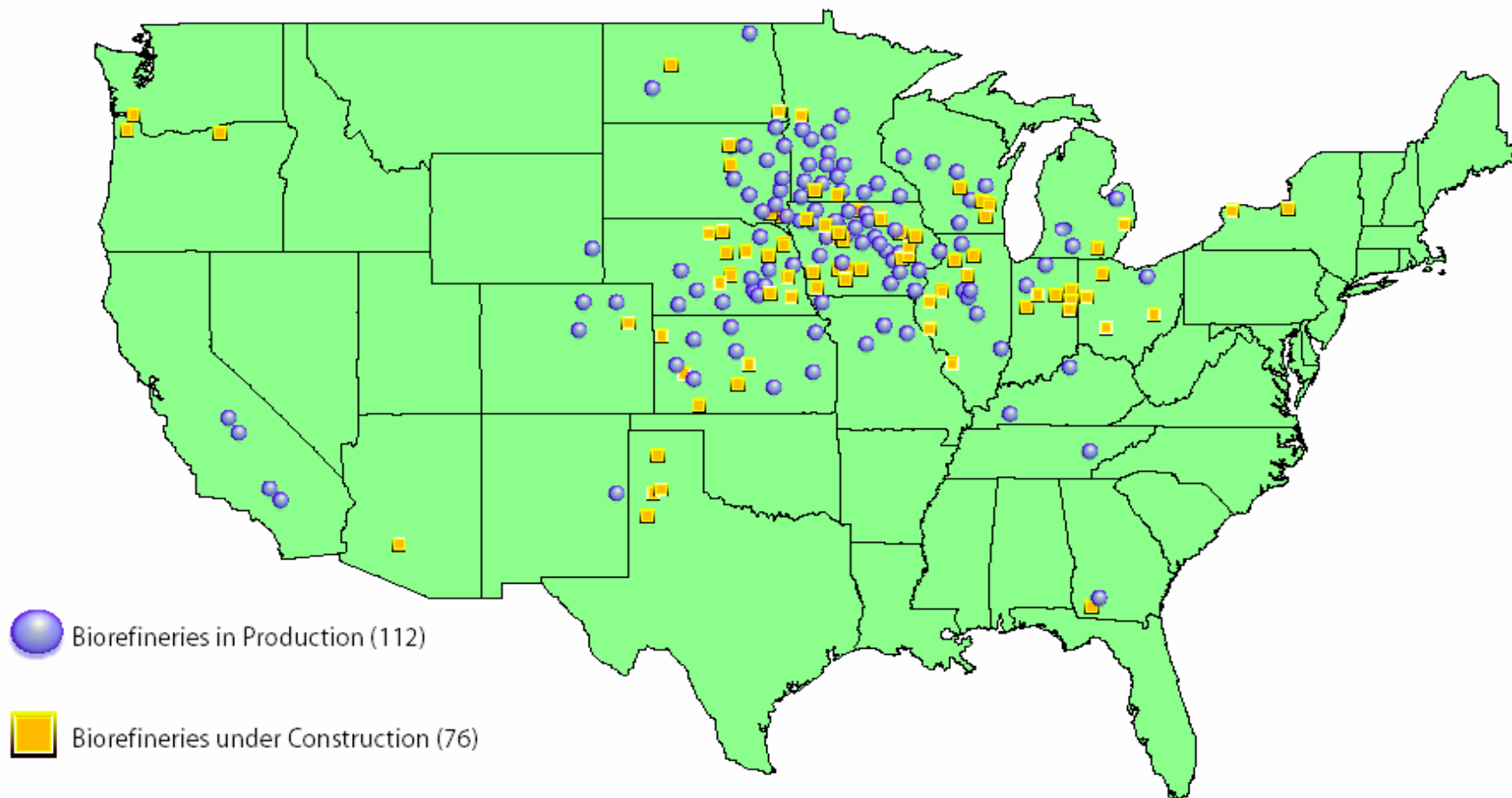
- **The United States has invested \$12 billion since 2001 on various alternative fuels technologies**
- **Technologies support policy to diversify energy supply**
- **Farm Bill proposal: \$1.6 billion over 10 years for new technologies**



# U.S. Rural Development

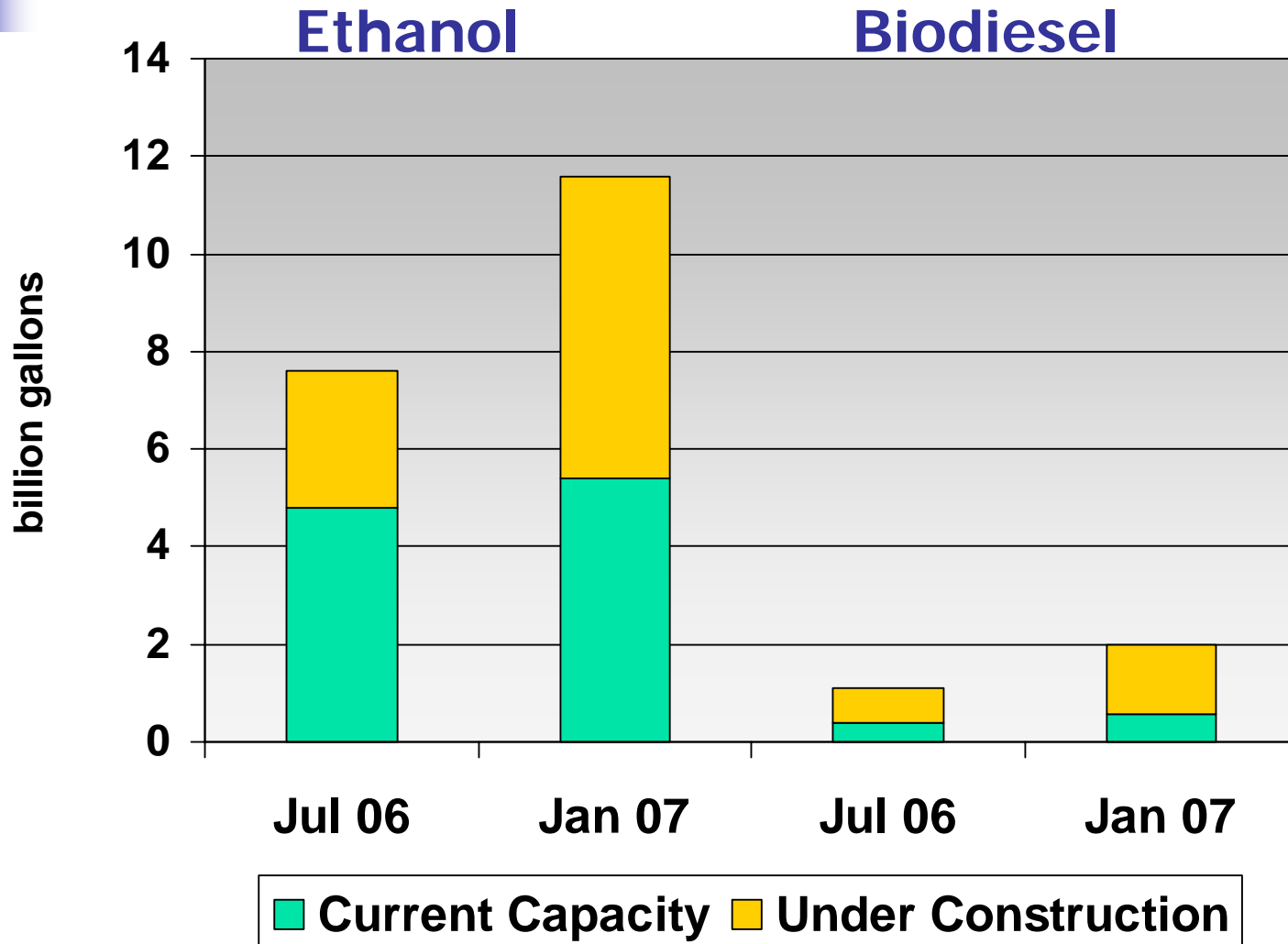
- Over the past 5 years, USDA provided \$900 million in support of biofuels
- USDA loan guarantees support a growing biofuels sector and rural economy
- Growth of biofuels spurring U.S. rural economies
  - e.g., a 50 million gallon ethanol plant leads to 800 direct and indirect new jobs and a \$30 million increase in local incomes

# U.S. Ethanol Biorefinery Locations



Source: Renewable Fuels Association  
1.29.07

# U.S Biofuel Industry - Expanding Faster Than Expected







# Drivers of U.S. Biofuel Consumption

## ■ High Petroleum Prices

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### ■ Mandates

- Federal Renewable Fuel Standard (RFS)
- State mandates

### ■ Environmental Benefits

- MTBE replacement – ethanol
- EPA Diesel Sulfur reduction – biodiesel

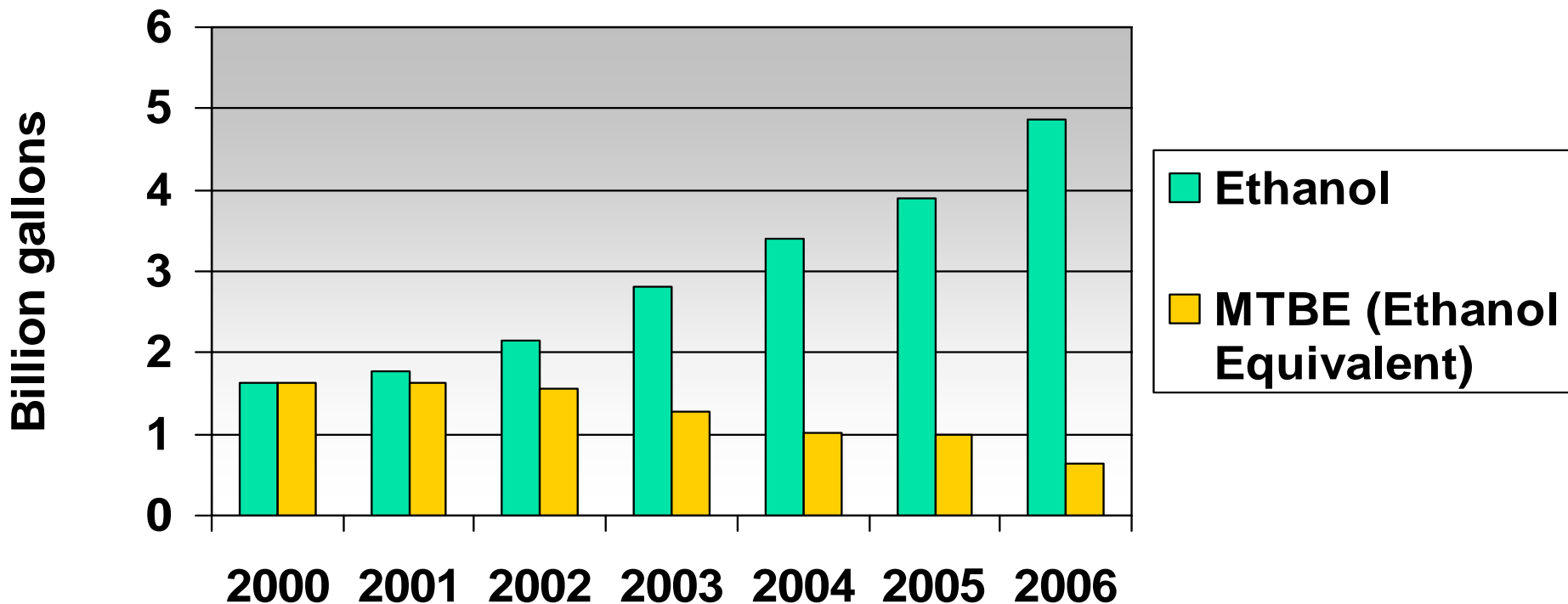
### ■ Tax Incentives

- Bigger driver for biodiesel



# Ethanol Replaces MTBE, Major Driver No Longer Factor in Future

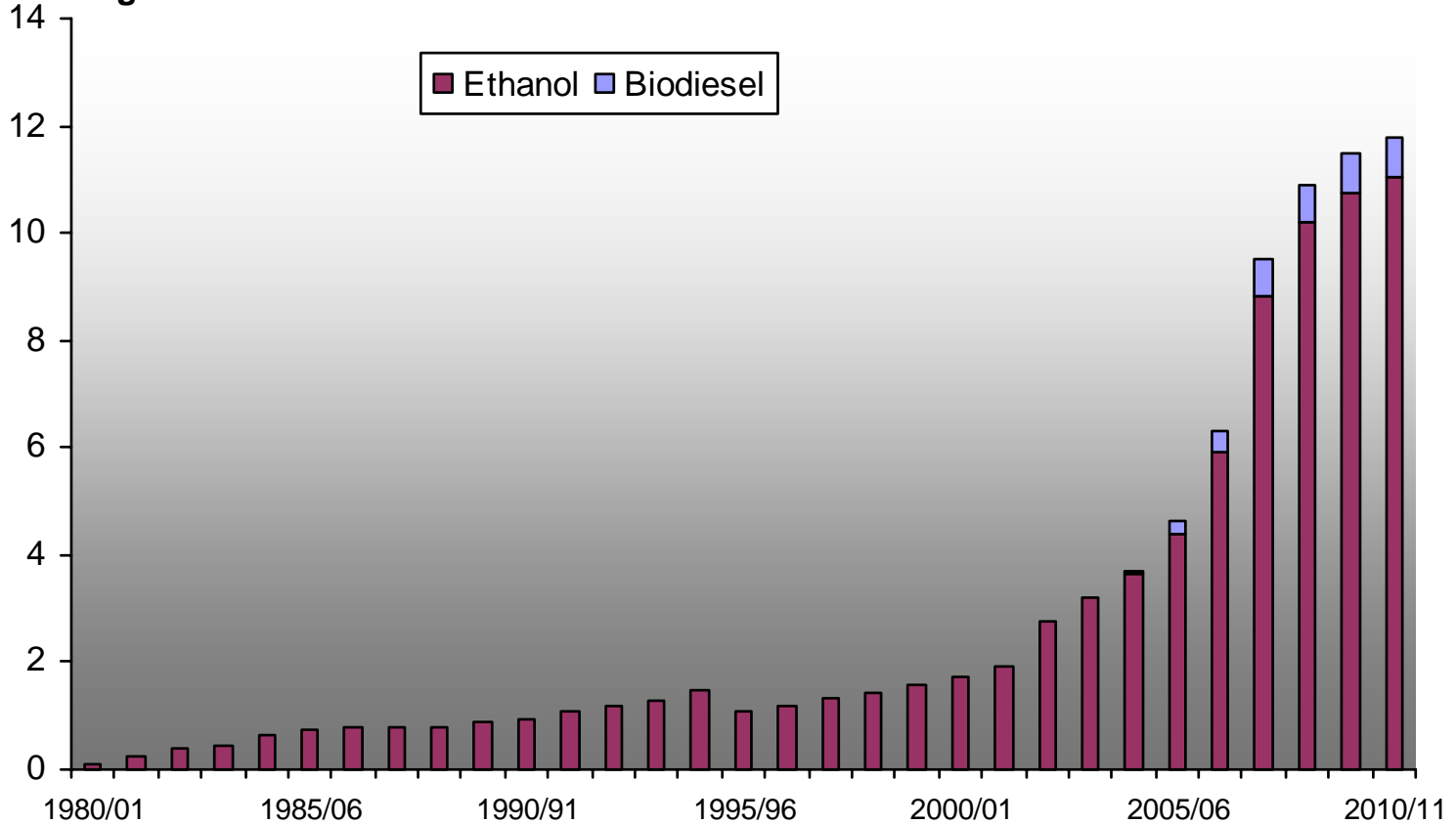
## U.S. Oxygenate Production





# U.S. Biofuel Production

Billion gallons

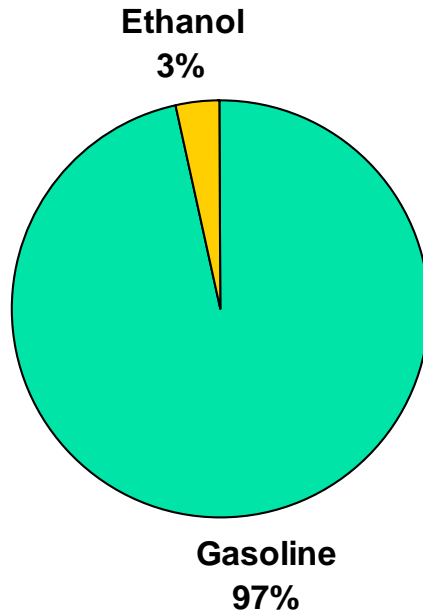


Note: 2006/07 through 2010/11 are projected based on the February 9, 2007, *World Agricultural Supply and Demand Estimates*, the March 2, 2007, *Grains and Oilseeds Outlook 2007*, and the February 2007 *USDA Agricultural Projections to 2016*.

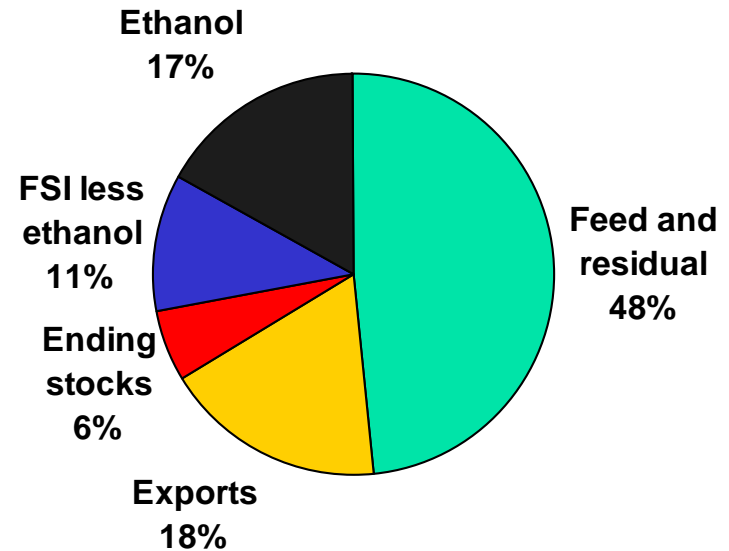


# Ethanol's role in gasoline and corn markets: An asymmetric relationship in 2006

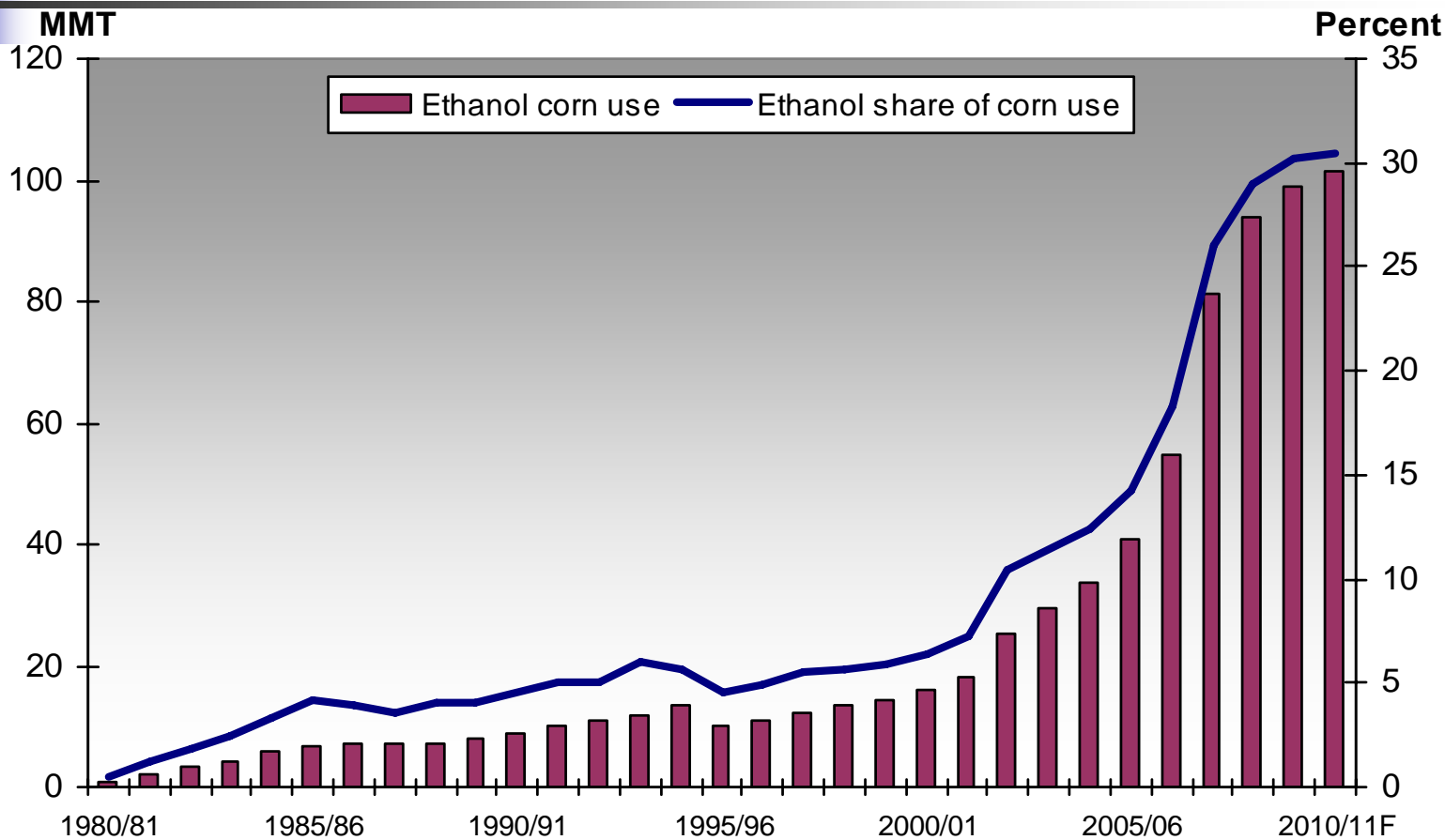
Ethanol is small relative to overall gasoline use



But ethanol accounts for a large and growing share of corn use



# U.S. Corn Used in Ethanol Production



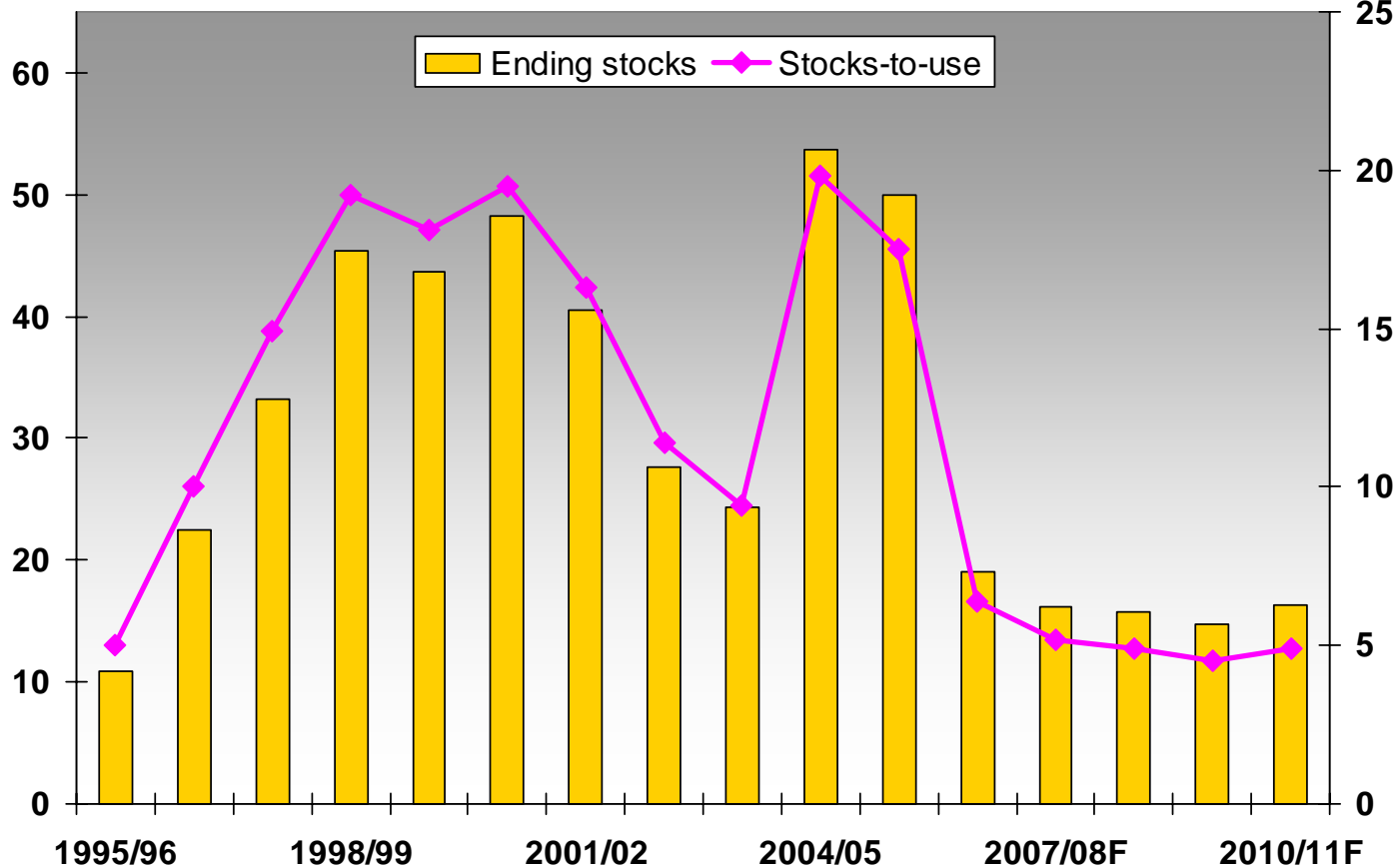
Note: 2006/07 through 2010/11 are projected based on the February 9, 2007, *World Agricultural Supply and Demand Estimates*, the March 2, 2007, *Grains and Oilseeds Outlook 2007*, and the February 2007 *USDA Agricultural Projections to 2016*.



# U.S. Corn Ending Stocks and Stocks-to-use

MMT

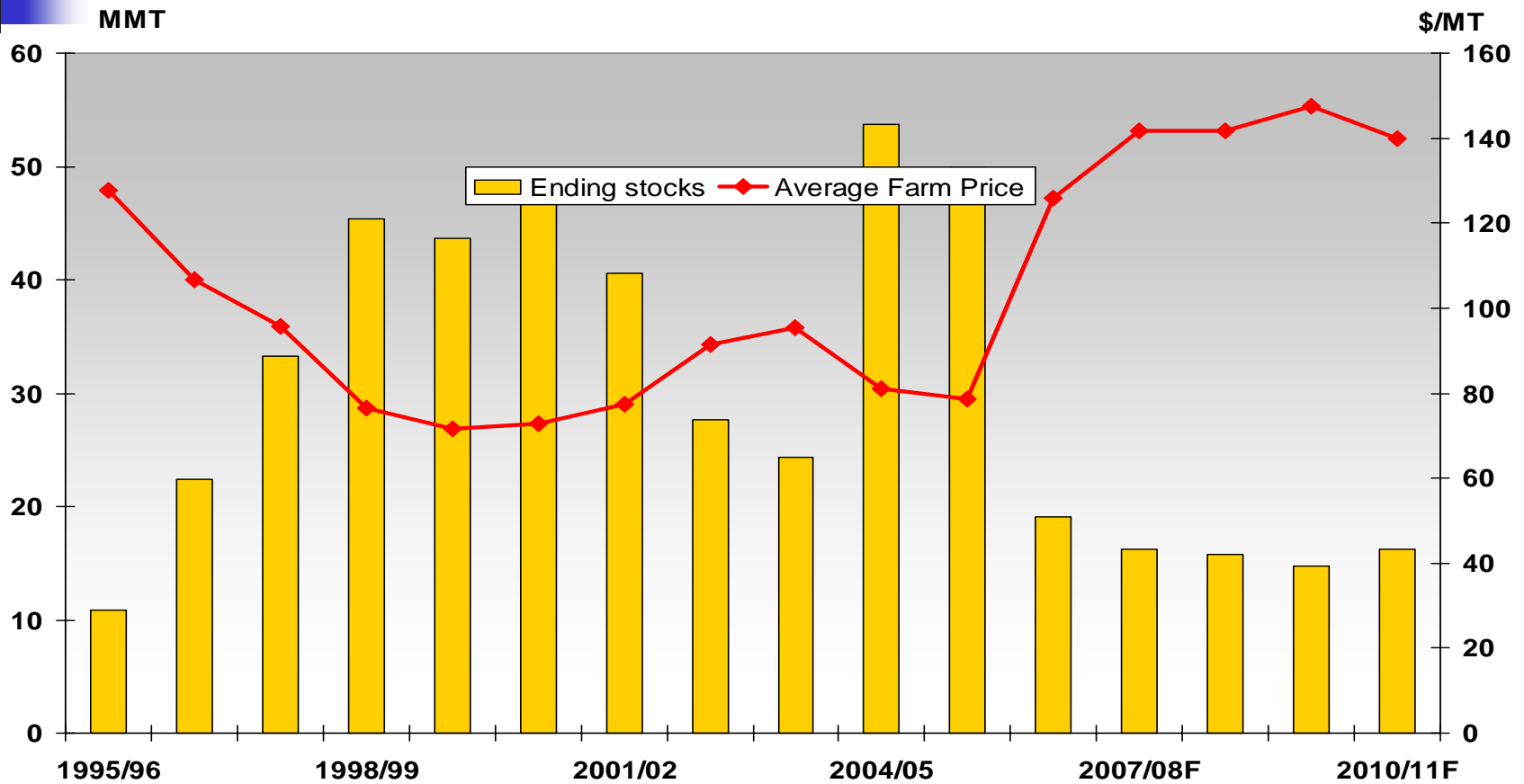
Percent



Note: 2006/07 through 2010/11 are projected based on the February 9, 2007, *World Agricultural Supply and Demand Estimates*, the March 2, 2007, *Grains and Oilseeds Outlook 2007*, and the February 2007 *USDA Agricultural Projections to 2016*.



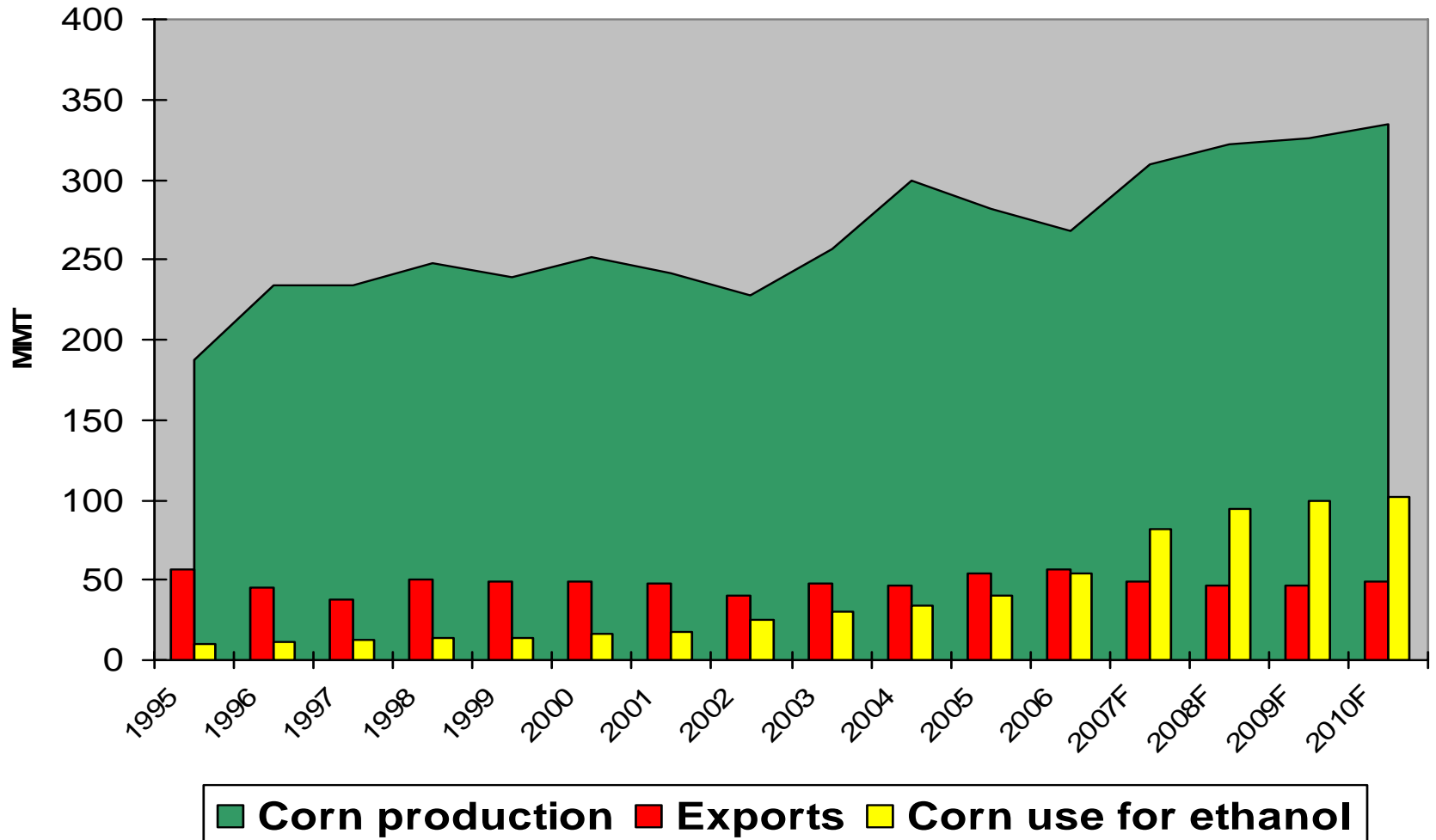
# U.S. Season Average Farm Price for Corn 1995/96 through 2010/11F



Note: 2006/07 through 2010/11 are projected based on the February 9, 2007, *World Agricultural Supply and Demand Estimates*, the March 2, 2007, *Grains and Oilseeds Outlook 2007*, and the February 2007 *USDA Agricultural Projections to 2016*.



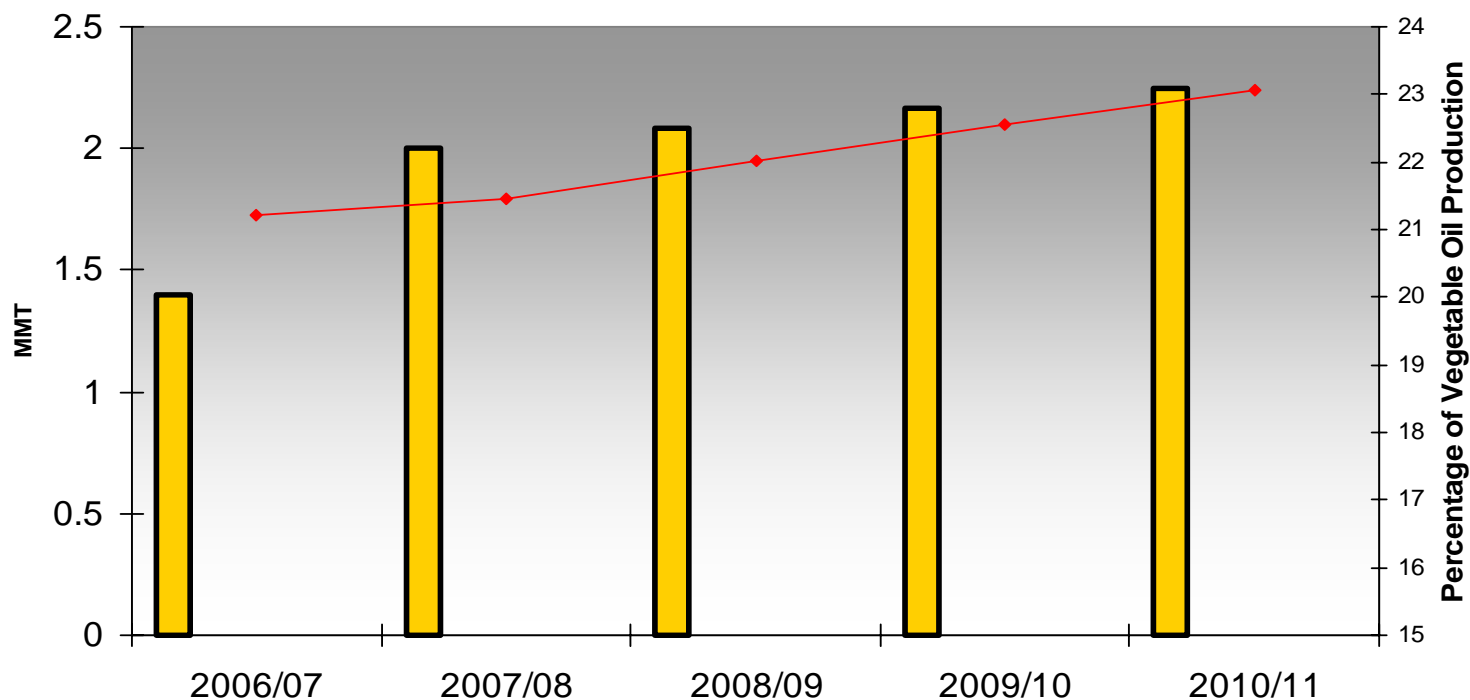
# U.S. Maintains Corn Exports as Ethanol and Corn Production Expands







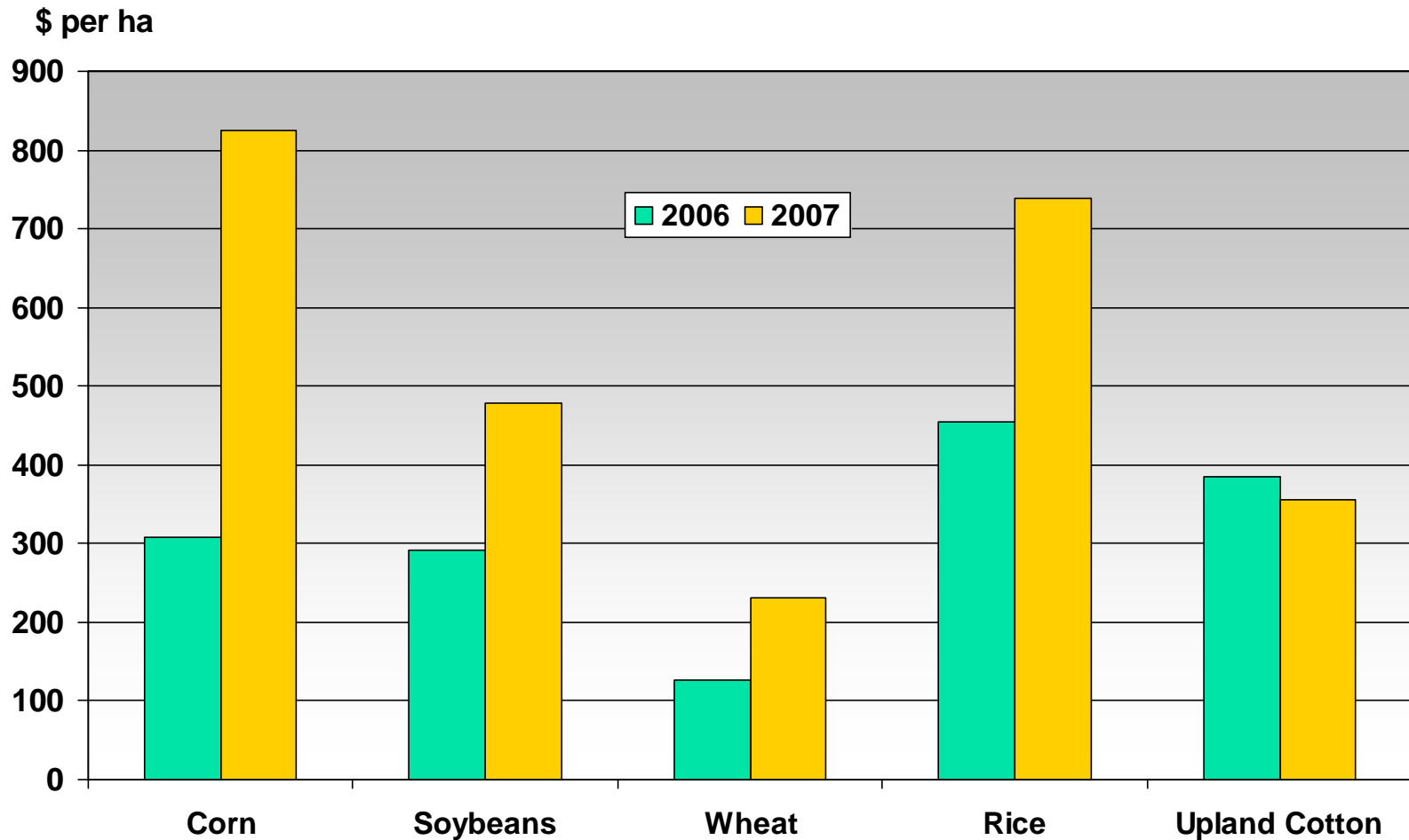
# U.S. Soybean Oil Use in Biodiesel



Note: 2006/07 through 2010/11 are projected based on the February 9, 2007, *World Agricultural Supply and Demand Estimates*, the March 2, 2007, *Grains and Oilseeds Outlook 2007*, and the February 2007 *USDA Agricultural Projections to 2016*.

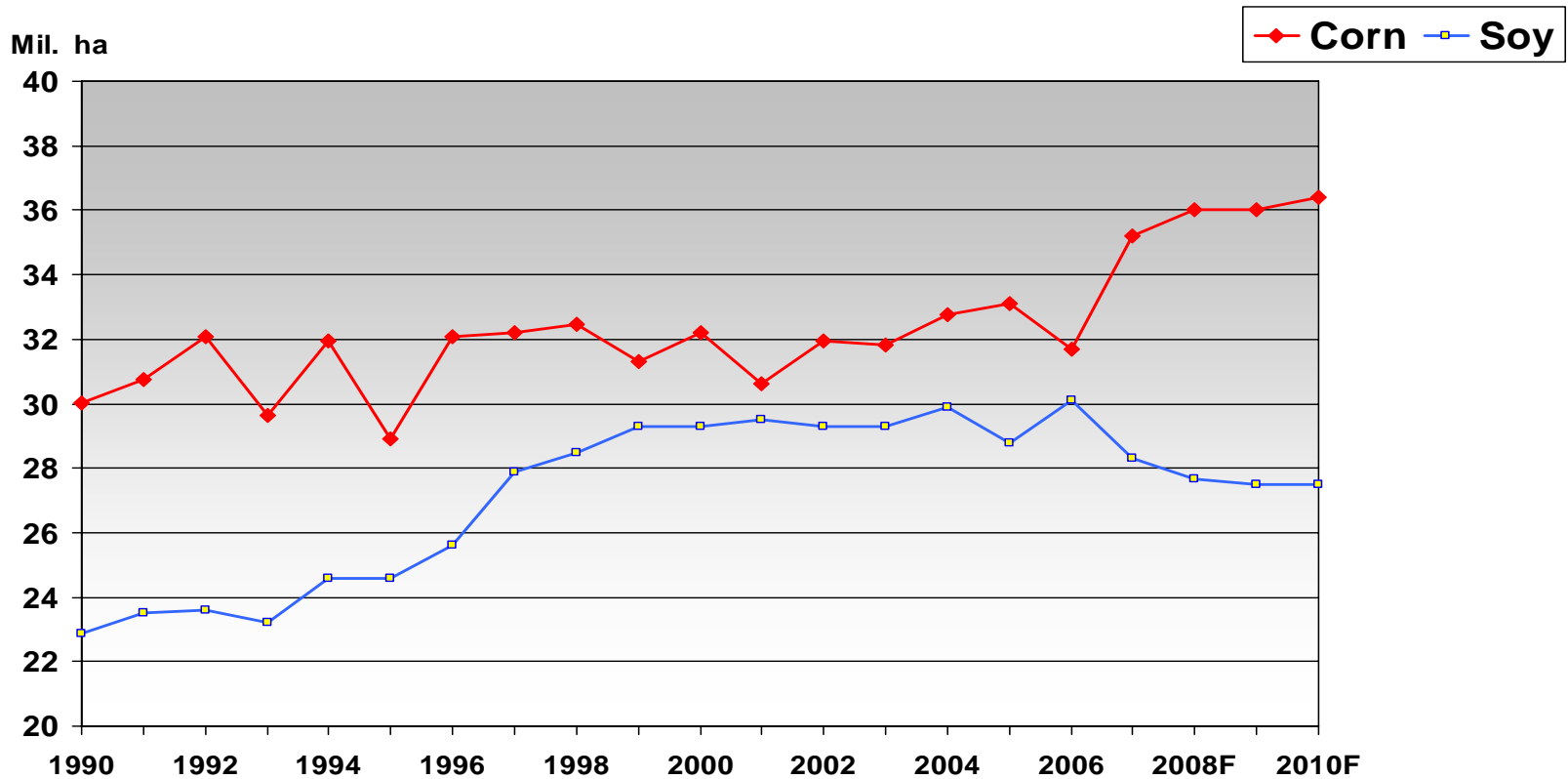


# Net Returns Outlook for the Major Field Crops





# U.S. Corn and Soy Planted Area



Note: 2006/07 through 2010/11 are projected based on the February 9, 2007, *World Agricultural Supply and Demand Estimates*, the March 2, 2007, *Grains and Oilseeds Outlook 2007*, and the February 2007 *USDA Agricultural Projections to 2016*.



## Market Impacts of increased Biofuel Production

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- Demand for biofuels will likely keep corn prices high in near to mid term
- Higher corn prices will bid away area from competing crops (soybeans, cotton, wheat, dry beans) => +3.5 mil ha in 2007
- Markets will remain tight, with much attention focused on March and June plantings report and weather this summer
- Markets will adjust over longer run as biofuel expansion slows, yield growth continues



# Concluding Remarks

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- **U.S. strongly supports biofuel use**
- **Global biofuels market is developing**



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