



*Domestic and Trade Impacts of U.S. Farm Policy:  
Future Directions and Challenges*

# **Eliminating Fruit and Vegetable Planting Restrictions: Market Considerations**

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**November 15, 2006**

The views expressed in this article reflect the views of the authors and do not necessarily reflect the views of the U.S. Department of Agriculture.

# WTO cotton case

“...production flexibility contract payments and direct payments are not "decoupled income support" within the meaning of paragraph 6, are not green box measures exempt from the reduction commitments by virtue of Annex 2 of the *Agreement on Agriculture*, and are not, therefore, sheltered from challenge ...”

*Report of WTO appellate body, March 2005*

# Conflicting pressures

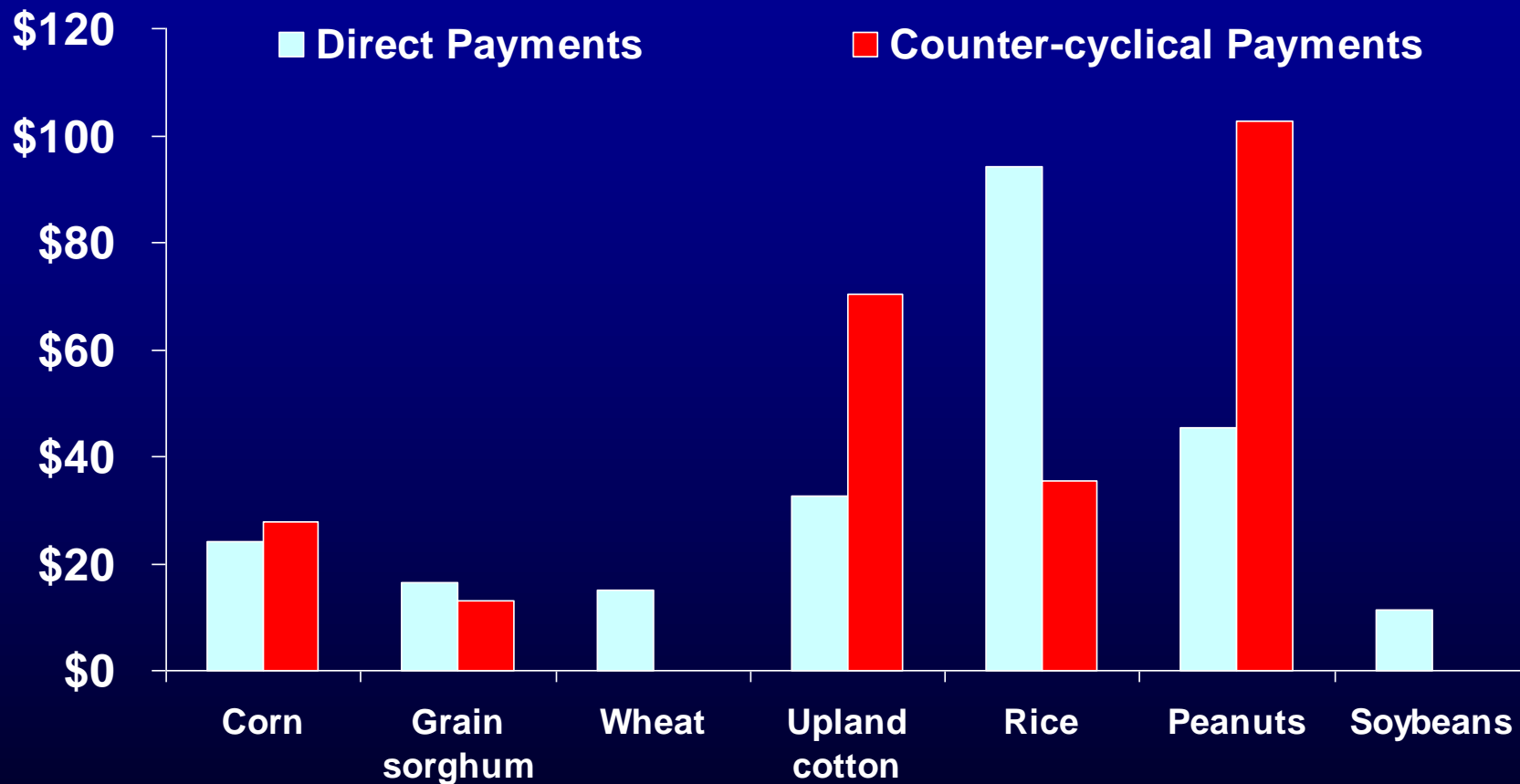
- Fruit and vegetable growers oppose planting flexibility
  - Concerned about price-depressing effect
- Processors favor planting flexibility
  - Lower risk of localized crop problems
  - Lower commodity and transportation costs

# Our study approach

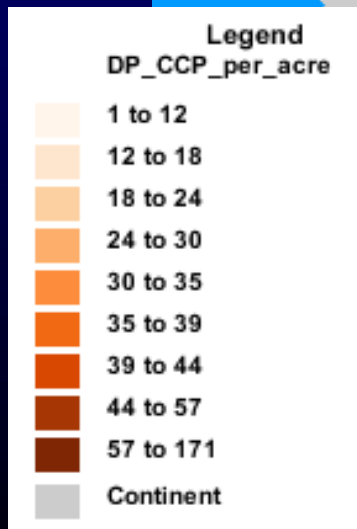
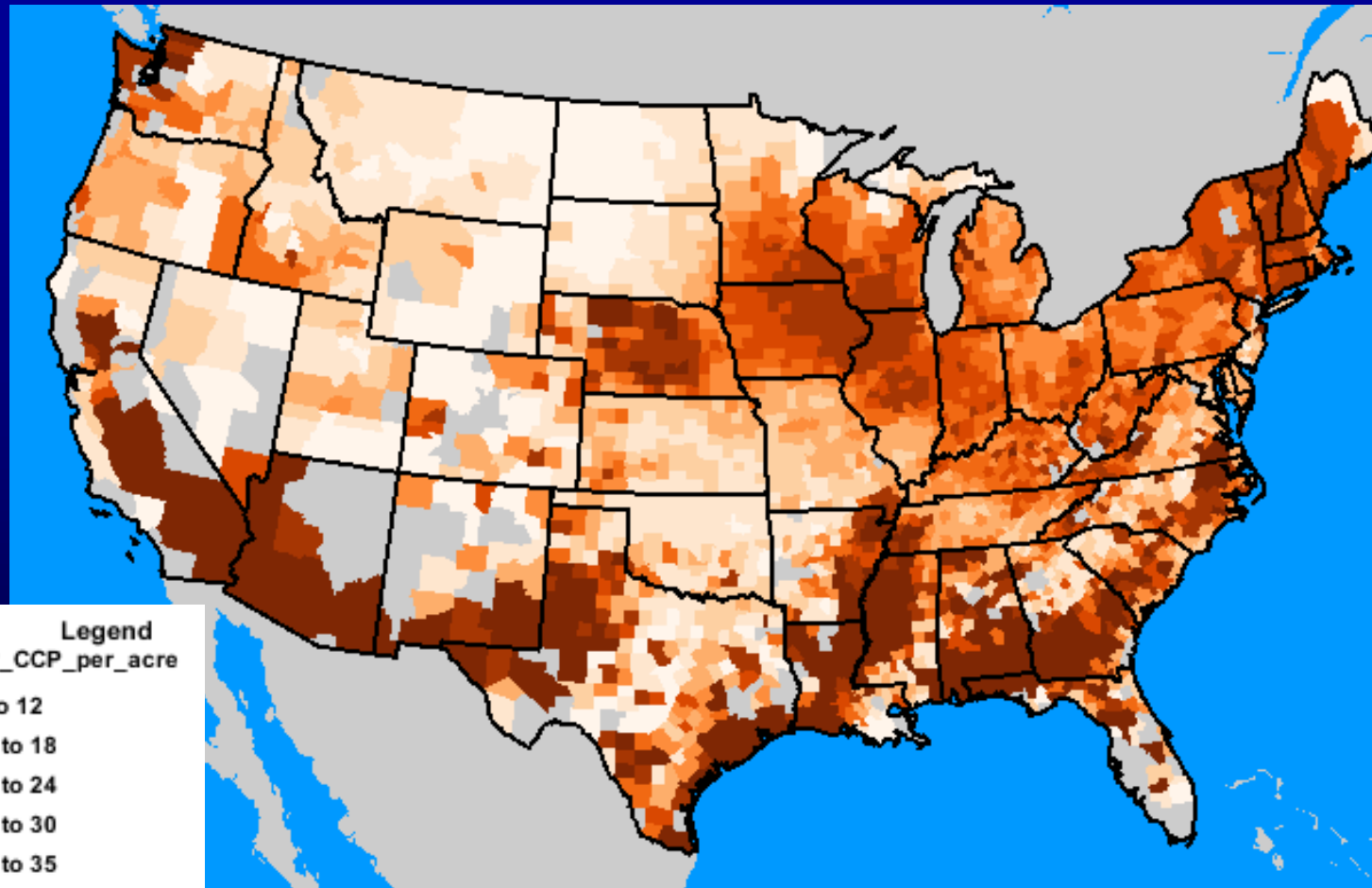
- **Assess incentives to expand fruit and vegetable production along with the associated market impacts**
- **Look at the incentives program crop producers have to switch to production of fruit and vegetables.**
  - Program rules and administrative data
  - Regional information
  - Underlying agronomic and market constraints
  - Production and price data
- **Available evidence suggests limited market effects**
- **Also review attempts to value the costs of the compensation necessary to offset the value of direct and counter-cyclical payments.**

# Direct and counter-cyclical payments, 2004/05

\$ per base acre



# Average direct and counter-cyclical payments per county, 2004-05



# Planting restrictions on base acres

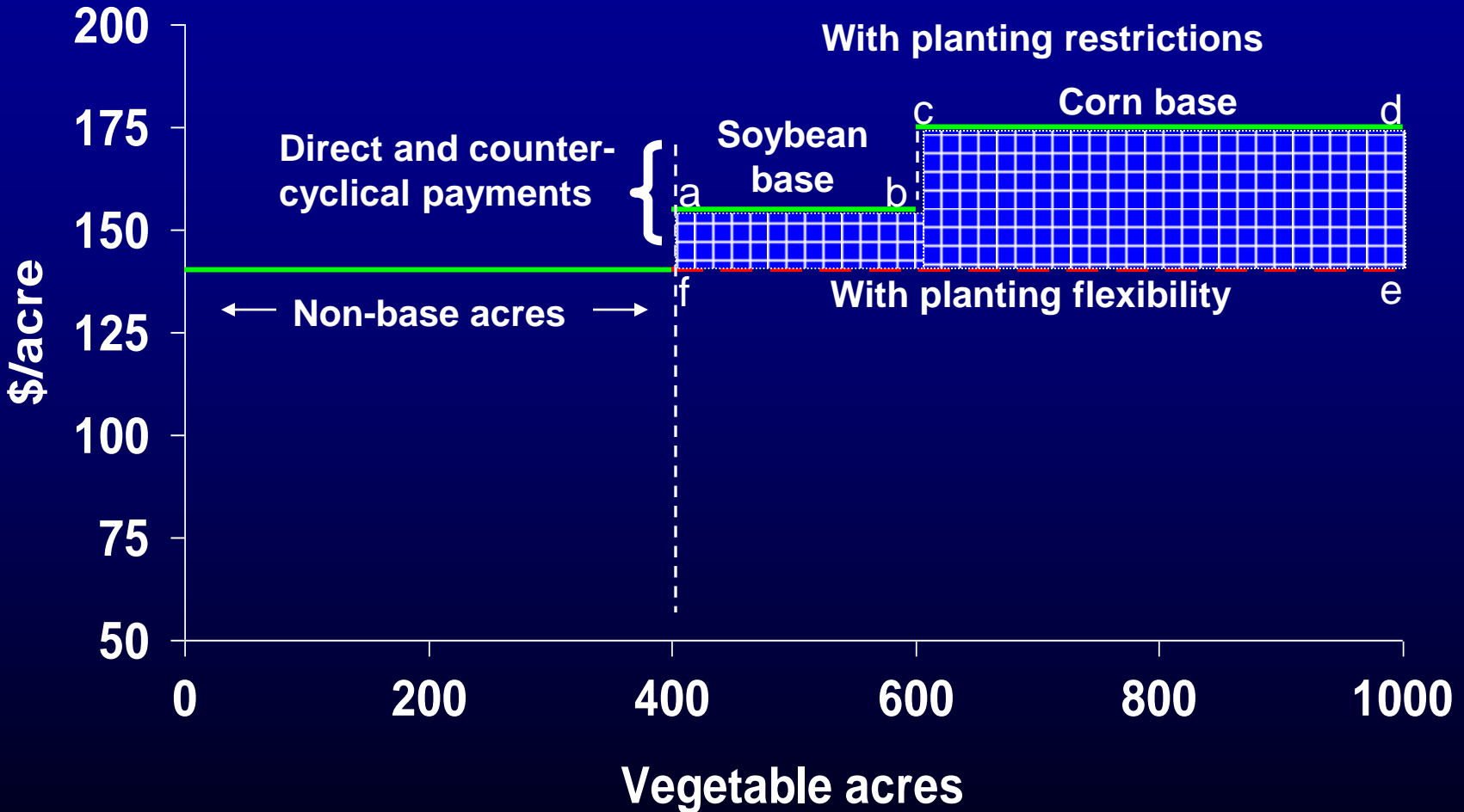
- Loss of direct and counter-cyclical payments (DCP) if fruit, vegetables, and wild rice are harvested on base acres
- Varies by farm:
  - DCPs reflect
    - Crop base (corn, wheat, cotton, etc.)
    - Program yields (farm-specific)
  - Farms (or farmer) with history: acre-for-acre reductions
  - Farms (or farmer) without history: can lose all DCP
  - Double cropping permitted in some regions

# Farm-level supply decision

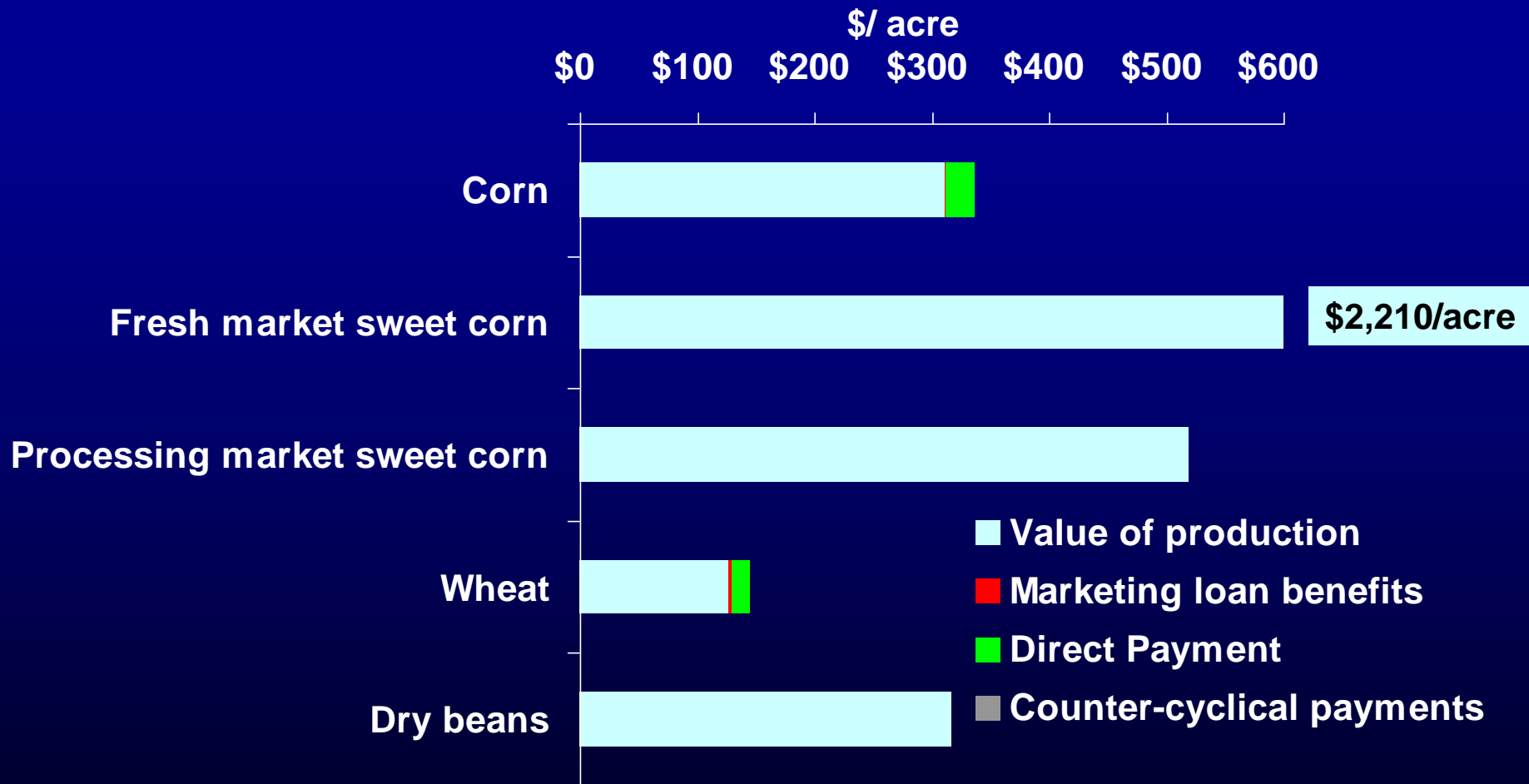
- Farm with 1000 acres
  - 400 non-base
  - 200 soybean base
  - 400 corn base
- Expected market net returns:
  - \$140/acre alternative crop
- Direct and counter-cyclical payments
  - \$15/acre soybean DCP
  - \$35/acre corn DCP
- Other factors such as risk and crop rotations also affect supply response



# Farm-level vegetable supply function



# Corn and wheat compared to vegetables (value per acre, 2003)

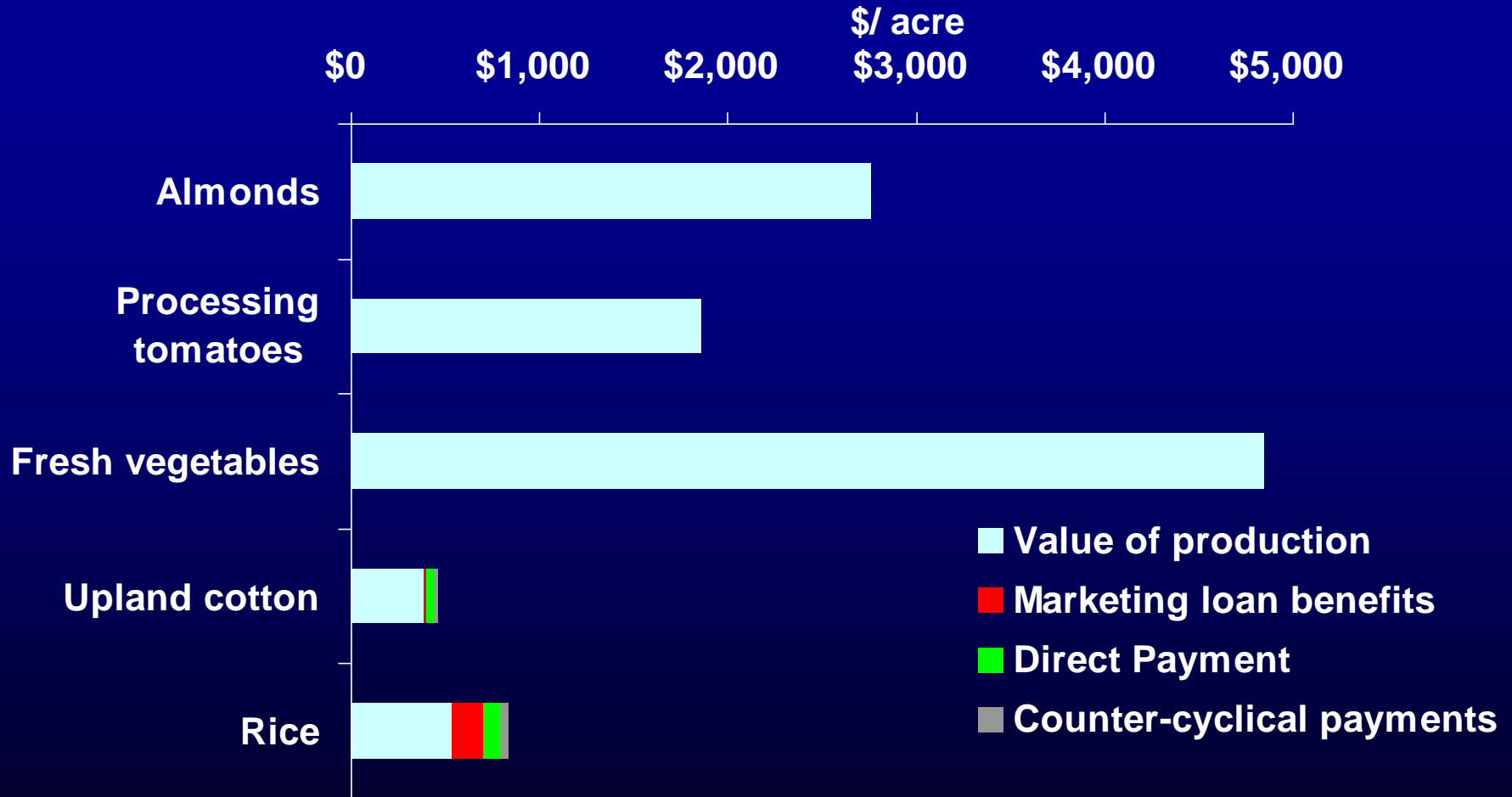


1/ Assumes national average payment yields for direct payments.

Source: Compiled by USDA's Economic Research Service from the Farm Service Agency and National Agricultural Statistics Service.



# Cotton and rice compared to fruit and vegetables (value per acre, 2003)



1/ Assumes national average payment yields for direct payments.

Source: Compiled by USDA's Economic Research Service from the Farm Service Agency and National Agricultural Statistics Service.



# Economic considerations

- **Market demand considerations: locate, develop and secure markets**
  - Contracting is prevalent
  - Inelastic demand
  - Marketing expertise
- **High production costs**
  - High labor requirements
  - Specialized equipment
  - Irrigation
  - High pesticide and herbicide costs
  - Several years needed fruit and vines to mature for production

# Market impacts likely to be small

- Access to non-base acres
- Reduction in payments may be small relative to expected returns
- Barriers to entry in fruit and vegetable markets
  - Supply-side
  - Demand-side
- BUT fruit and vegetable growers concerned that it would be unfair for new competitors to receive payments

# Payments per acre calculation

Value of direct and counter-cyclical payments in ith county per base acre

$$1) \$DCP_i = (\$DP_i + \$CCP_i) / \text{Base}_i$$

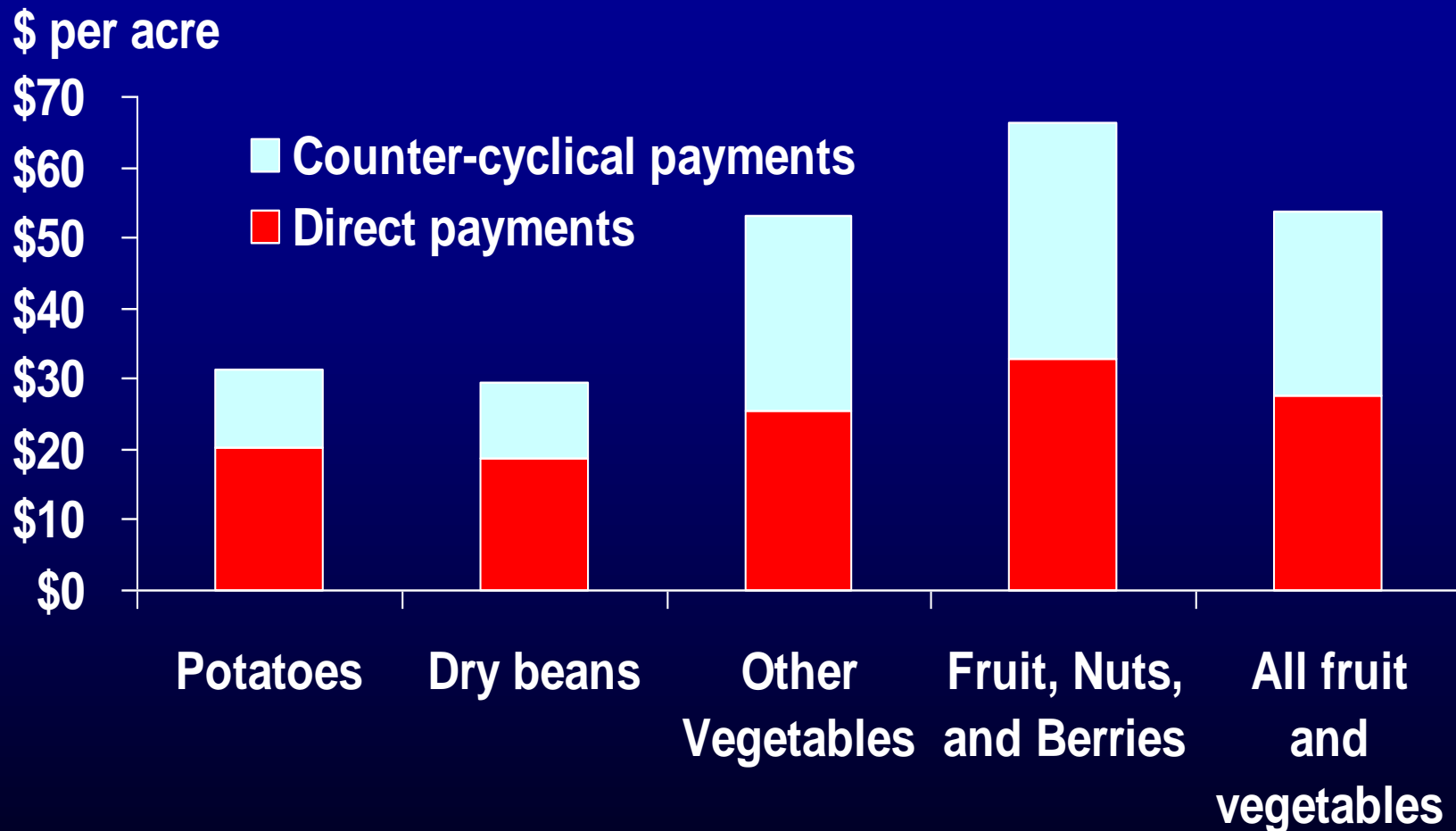
Total value of payments to the jth commodity in the ith county

$$2) \$FV_{ij} = \$DCP_i \times \text{AcresFV}_{ij}$$

Average payment for jth commodity

$$3) \$FV_j = \text{Sum}(\$FV_{ij}) / \text{Sum}(\text{AcresFV}_{ij})$$

# Estimated per-acre payment equivalents for fruit and vegetables



# Additional considerations

- **Planting restrictions are not prohibitive**
  - About 14,400 to 15,000 program farms planted fruit and vegetables on just over 600,000 base acres nationwide in 2003 and 2004
- **Limited competition with base acres in many areas and for fruit and vegetables**
  - 9% of fruit and vegetable acreage is located in counties where payment amounts are negligible
- **If market impacts are small the number of new entrants will be low**
- **Commodities such as alfalfa also compete for land**
- **Alternative solution would be to eliminate direct and counter-cyclical payments for program crops**



# Concluding points

- Removing restrictions could expand fruit and vegetable production and reduce grower prices
- Markets effects
  - Likely to be limited, barriers to enter industry
  - Confined to specific regions and commodities
  - Adjust quickly to new economic incentives
- Analysis of market effects is complicated by the large number of commodities and lack of comprehensive and consistent data

# Additional Resources

**Economic Research Service (ERS) web site**

**<http://ers.usda.gov>**

**1996 and 2002 Farm Bill side-by-side comparison**

**<http://ers.usda.gov/Features/farmbill>**

**Farm Bill impacts**

**<http://ers.usda.gov/briefing/FarmPolicy>**

**Farm policy, farm households, and the rural economy**

**<http://ers.usda.gov/Briefing/Adjustments/>**

