

# Influences of Decoupled Farm Programs on Agricultural Production

---

Paul C. Westcott and C. Edwin Young  
Agricultural Economists  
U.S. Department of Agriculture  
Economic Research Service  
May 2002

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



# Decoupled Programs--Overview

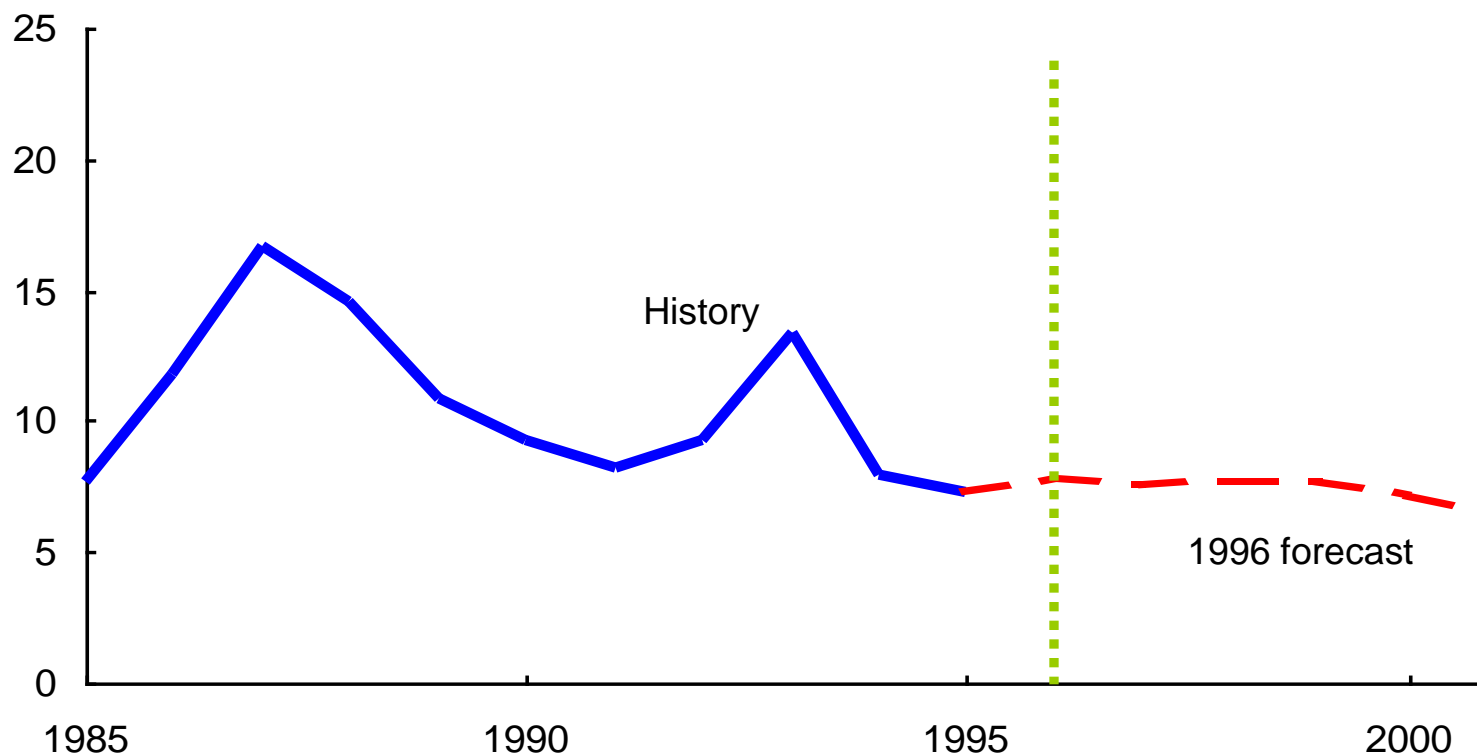
---

- Government payments background
- Coupled vs. decoupled programs
- Coupled program effects and examples
- Decoupled programs effects
  - Focus on 4 mechanisms/avenues of decoupled program market influences
- Conclusions

# Government payments, 1996 forecast

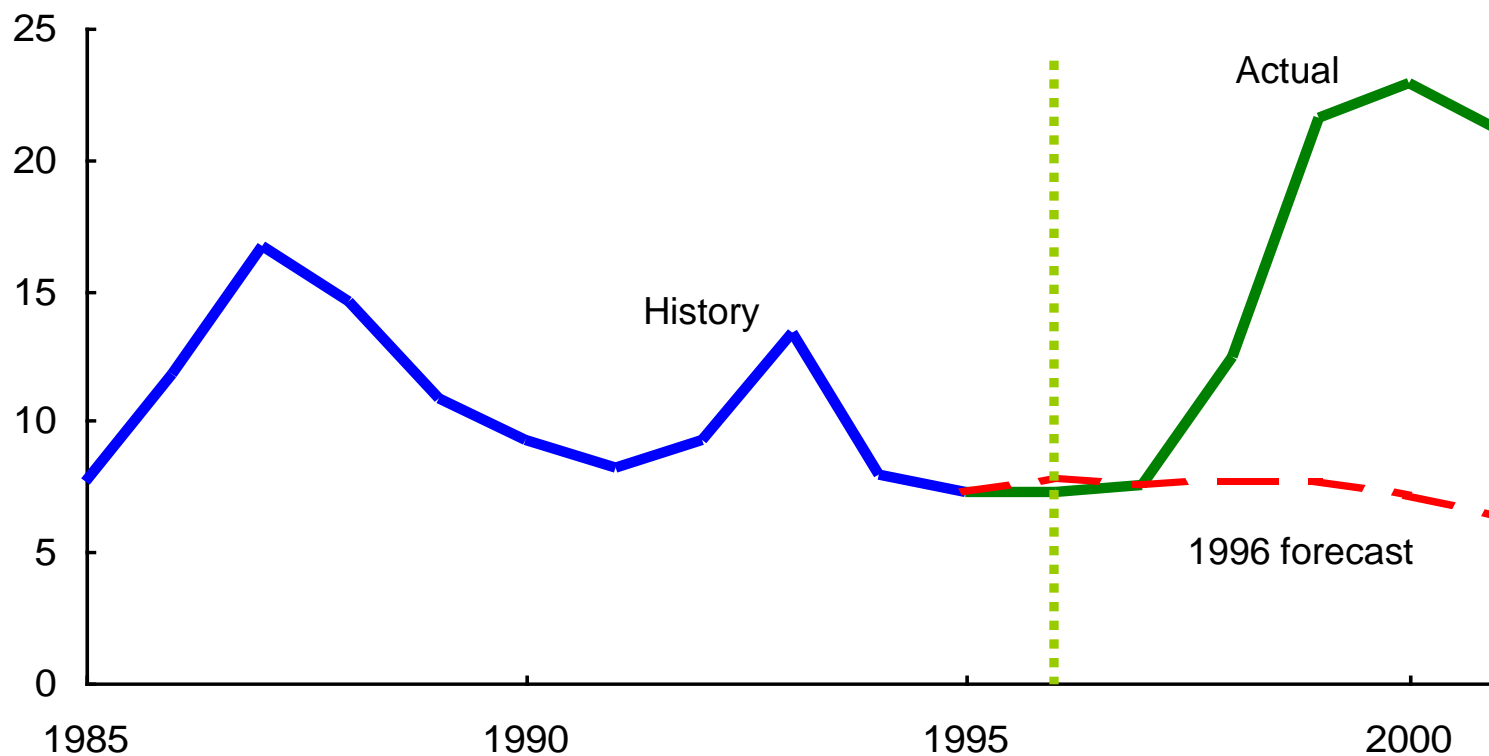
## Direct government payments

\$ billion



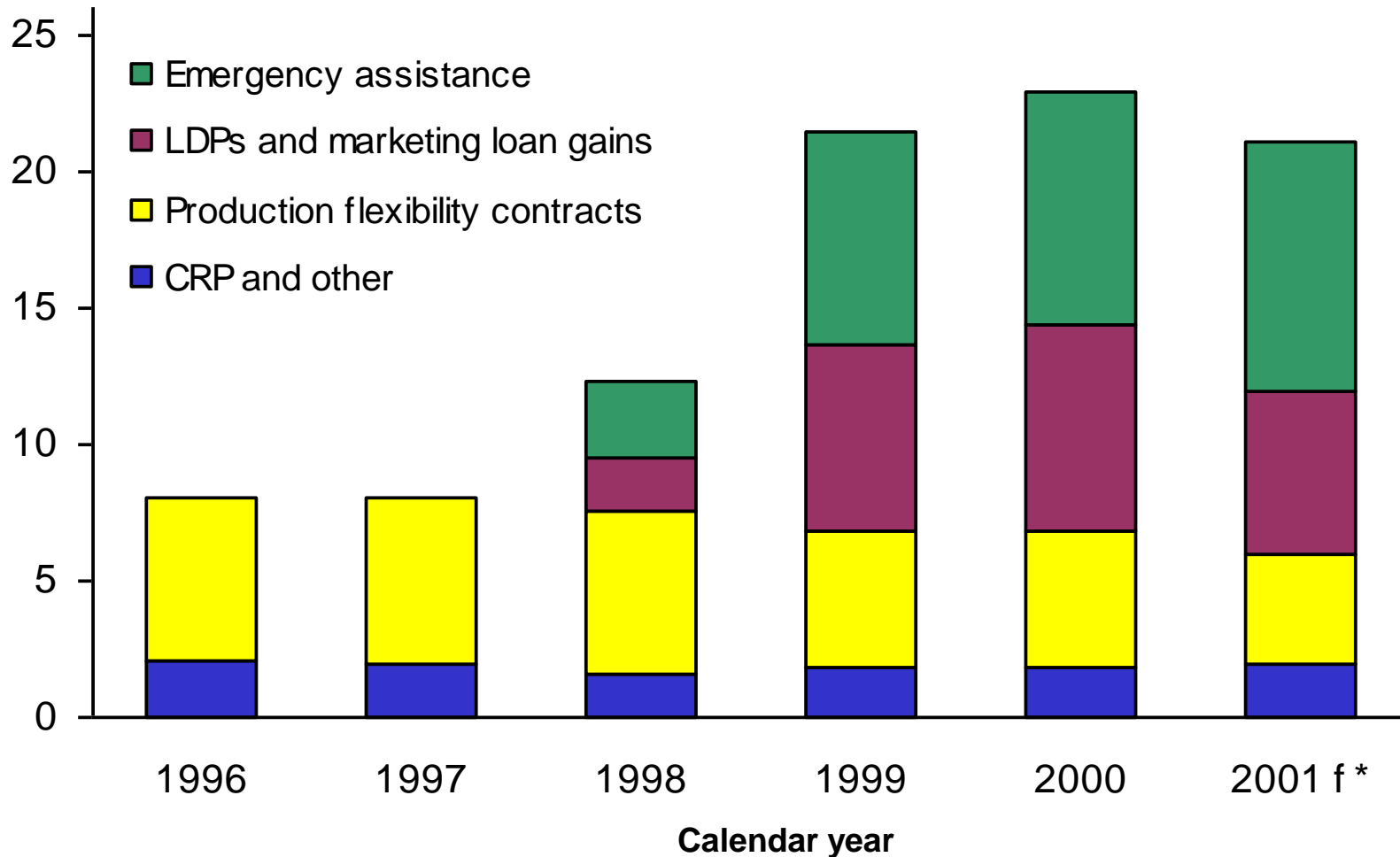
# Government payments, 1996 forecast and actual

## Direct government payments \$ billion



# Direct government payments

\$ billion



\* January 2002 forecast.

Source: Economic Research Service, USDA.

# Farm Programs and Market Effects

---

- Variation in market effects reflects:
  - Degree of dependence of program benefit on farmer behavior and/or market outcome
  - Influence of benefit on production choice
- Market impacts reflect production effects
  - Impacts on prices, domestic use, and exports

# Coupled vs. Decoupled Programs

---

- Coupled programs
  - Strong links between the program benefit and the production decision & market conditions
  - Benefits affect net returns for specific production
- Decoupled programs
  - Benefits not linked to production or market prices
  - Raise total revenue more generally

# Coupled Programs and Land Use

---

- Coupled programs affect total land use ...
  - Subsidy to sector increases overall production
- .... and cropping mix
  - Benefits linked to production of specific crops, affecting relative net returns



# Coupled Program Examples

---

- Crop insurance premium subsidy
  - Young, Vandever, and Schnepf (AJAE, 2001)
  - Close to 1 million acres
  - Wheat, cotton increase the most, reflecting subsidy structure
- Marketing loans
  - Westcott and Price (ERS AER, 2001)
  - Varies by year: 2 to 4 million acres, 1999-2001
  - Cropping mix impacts reflect year-specific benefits

# Decoupled Programs and Land Use

---

- Decoupled programs affect total land use
  - Impacts more general
  - Aggregate subsidy to the sector affects aggregate resource use
- Cropping mix less affected
  - Net returns for specific crops not affected
  - Planting mix reflects relative market returns

# Avenues for Effects of Decoupled Programs

---

- Discuss 4 General Mechanisms
  - Wealth & investment
  - Sector consolidation
  - Program eligibility & payment basis
  - Ad hoc programs & expectations
- Mechanisms overlap & interact
- Programs may have both coupled and decoupled features
- May change over time

# Wealth and Investment Effects

---

- Direct wealth effect
  - Capitalization of benefits
  - Payments can change risk attitudes
  - Less risk averse with higher wealth
    - \* Chavas and Holt (AJAE, 1990)
- Payments can raise agricultural investment
  - Greater loan availability
  - Lower cost of loans
  - Shifts out production possibilities frontier
  - Secondary wealth effect

# Sector Consolidation Effects

---

- Payments may keep marginally viable producers in business
  - Slows consolidation and reduces production
- Larger operations use payments to buy smaller operations or rent more land
  - Accelerates consolidation and increases production
- Second effect larger
  - Only marginally accelerates ongoing sector trends towards consolidation

# Benefit Eligibility/Payment Basis Effects

---

- Require land to remain in agricultural use
- Base acreage updating
  - Leads to expectations that base acreage will be updated in the future
  - Undermines planting flexibility
  - Keeps and expands production in historical program crops
- Payment yield updating
  - Inefficient use of yield-enhancing inputs

# Ad hoc Programs & Expectation Effects

---

- One-time ad hoc program after production choice may have no effect on production ....
- ....But, frequent ad hoc programs change expectations
  - Truncation of expected revenues for low price or production outcomes lowers risk
  - Affects production of specific crops if benefits viewed as linked to specific market situations
    - Similar to fully subsidized crop insurance
  - Less specific assistance affects aggregate production more generally

# Decoupled Programs--Conclusions

---

- Decoupled programs have indirect effects on production
  - Aggregate production influenced by subsidy to sector
  - Less-specific influences than coupled programs
    - Crop mix based on market returns
- Impacts small, but no program is completely decoupled from having potential production effects
- Other market distortions reflect production impacts