

# Perspectives on Impacts of the 2002 U.S. Farm Act

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# Presentation Overview

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- Overview of 3-piece commodity program
- USDA & FAPRI impacts
- Potential additional marketing loans effects
- Counter-cyclical payments
- Direct payments
- Other effects

# 3-Piece Commodity Program

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# 3-Piece Commodity Program

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- Marketing loan program
  - Most loan rates raised, except soybeans, rice
  - Loan rates fixed
  - Additional commodities added
- New counter-cyclical payments
  - Price dependent payments
- Direct payments
  - Replace Production Flexibility Contract payments
  - Soybeans, minor oilseeds, peanuts added

# 3-Piece Commodity Program

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- Marketing loans coupled
  - Paid on current production
  - Depend on market prices
- Counter-cyclical payments mostly decoupled
  - Do not depend on current production (fixed base and payment yield)
  - But depend on market prices
- Direct payments fixed and decoupled
  - Do not depend on current production or market prices

# 2002 Farm Act Provisions for Income Support Illustrations

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## Corn

## 2003 program provisions

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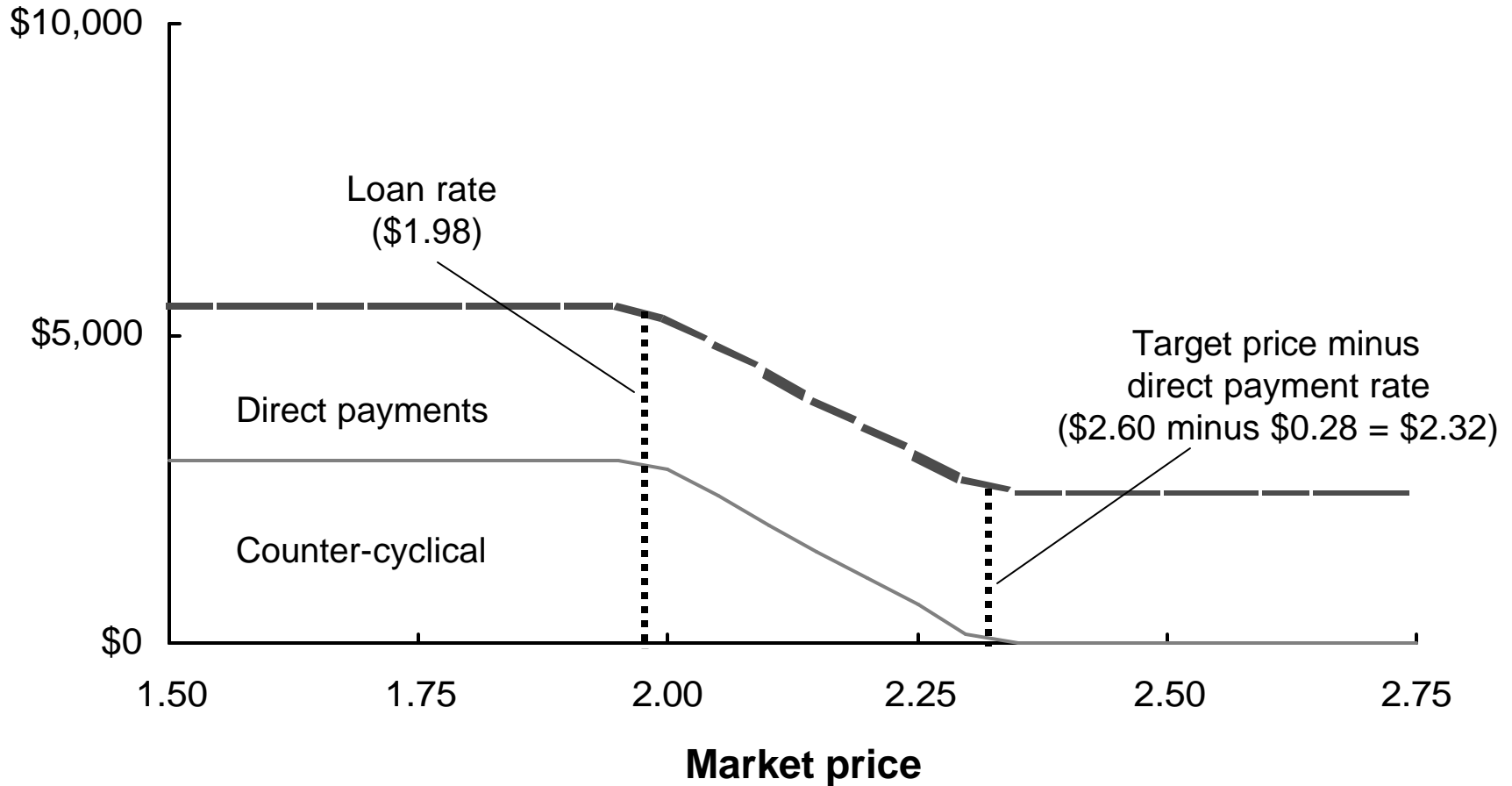
	\$/bushel
Loan rate	1.98
Target price	2.60
Direct payment rate	0.28
Implicit “effective” target price	2.32

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“Effective” target price (for counter-cyclical payments) equals the target price minus the direct payment rate;  $\$2.60 - \$0.28 = \$2.32$  for corn.

# Counter-cyclical and direct payments for corn under the 2002 Farm Act

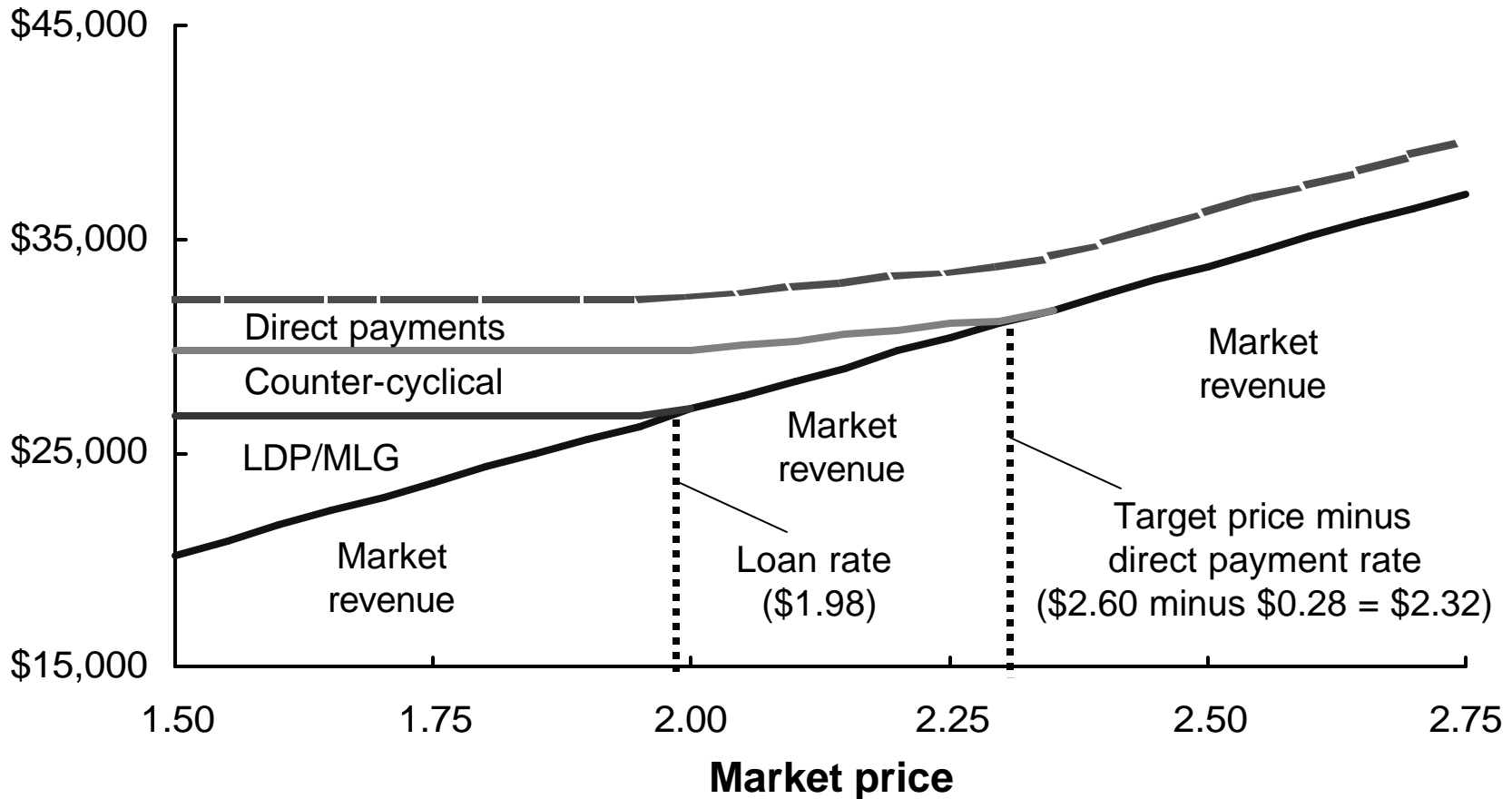
## Decoupled payments



Assumes 100 acres of corn base, 103 bushels/acre direct payment yield, and 120 bushels/acre counter-cyclical payment yield.

# Corn revenues under the 2002 Farm Act

## Corn revenues



Assumes 100 acres of corn, 100 acres of corn base, 135 bushels/acre yield, 103 bushels/acre direct payment yield, and 120 bushels/acre counter-cyclical payment yield.



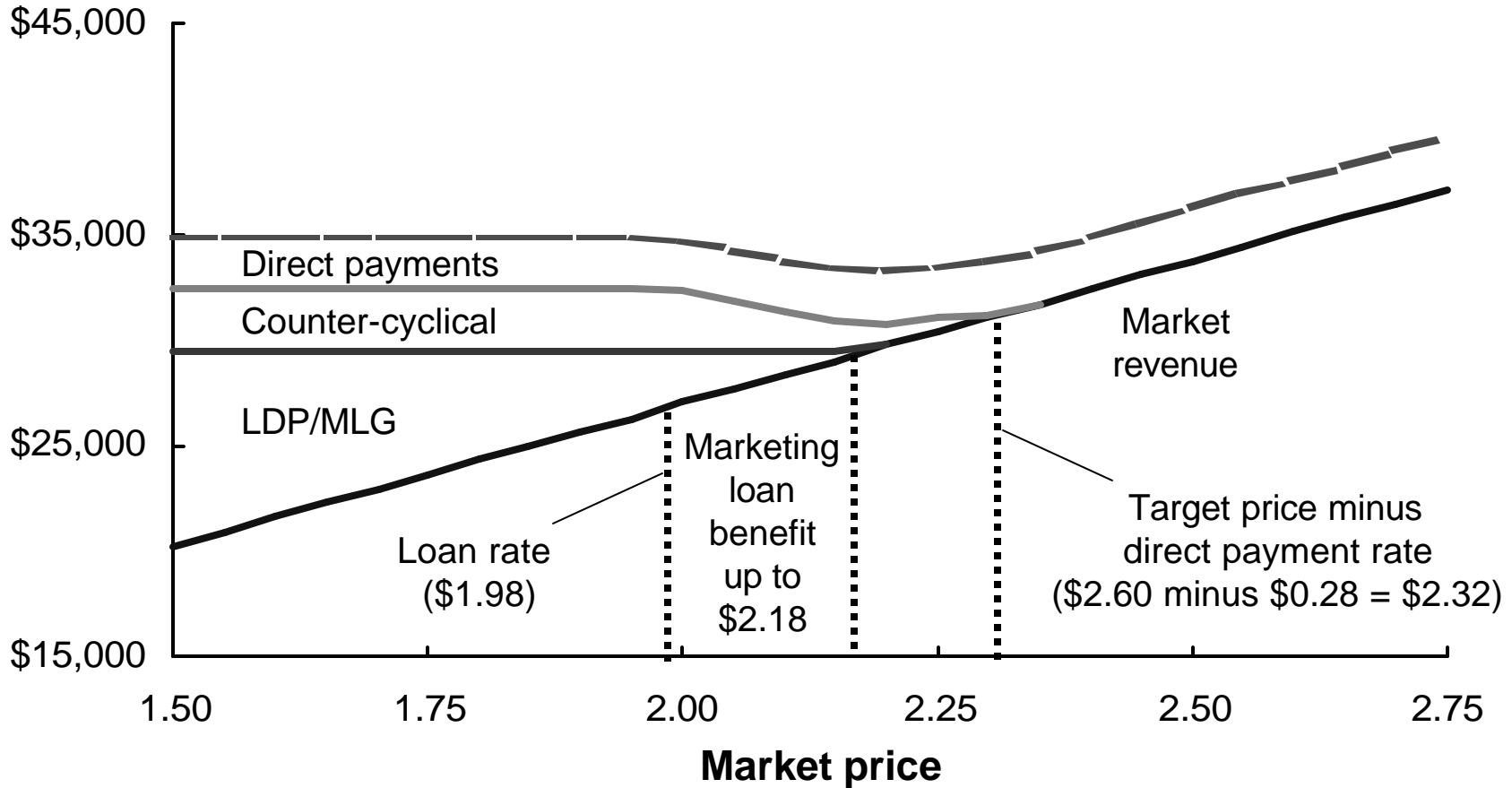
# Counter-cyclical payments overlap marketing loans

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- Marketing loans enable farmers to attain per-unit revenue that, on average, exceeds commodity loan rates (Marketing loan or LDP “bonus”)
  - Corn LDP bonus has been about \$0.20
  - Implies corn marketing loan benefits up to \$2.18
- Counter-cyclical payments extend down to loan rate
- Implicit “double” counter-cyclical benefits in price range from \$1.98 (corn loan rate) to \$2.18
- As price falls to loan rate, gain two counter-cyclical benefits

# Corn revenues under the 2002 Farm Act, with above-loan-rate marketing loan benefit

## Corn revenues



Assumes 100 acres of corn, 100 acres of corn base, 135 bushels/acre yield,  
103 bushels/acre direct payment yield, and 120 bushels/acre counter-cyclical payment yield.  
Assumes per-unit revenue facilitated by marketing loans exceeds loan rate by an average of 20 cents/bushel.

# Market Impacts--Supply Response Effects

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# Market Impacts--Supply Response Analysis

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- FAPRI & USDA analyses similar
  - Differences reflect baseline differences
- Focus on acreage effects
  - Main impacts through planting decisions
  - Other impacts reflect market adjustments to production changes
- Analysis conducted in 2002, at the time that the 2002 Act became law
  - Before 2002 production shortfall & price runup

# Acreage Impact Analysis--3 Main Causes

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- Marketing loan impacts
  - Particularly in near term years
  - 2002 acreage impacts reduced by 50 percent and no 2002 winter wheat impact, due to timing of enactment of law
- Conservation Reserve Program increase
- Marketing loans for dry peas and lentils

# Marketing loans under the 2002 Farm Act

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- Affect planting decisions
  - Paid on current production
- Loan rate changes
  - Wheat, corn, sorghum loan rates increased
  - Soybean loan rate decreased
  - Upland cotton loan rate increased slightly
  - Rice loan rate unchanged

# Marketing assistance loan rates, 2002 Farm Act and 2001 rates

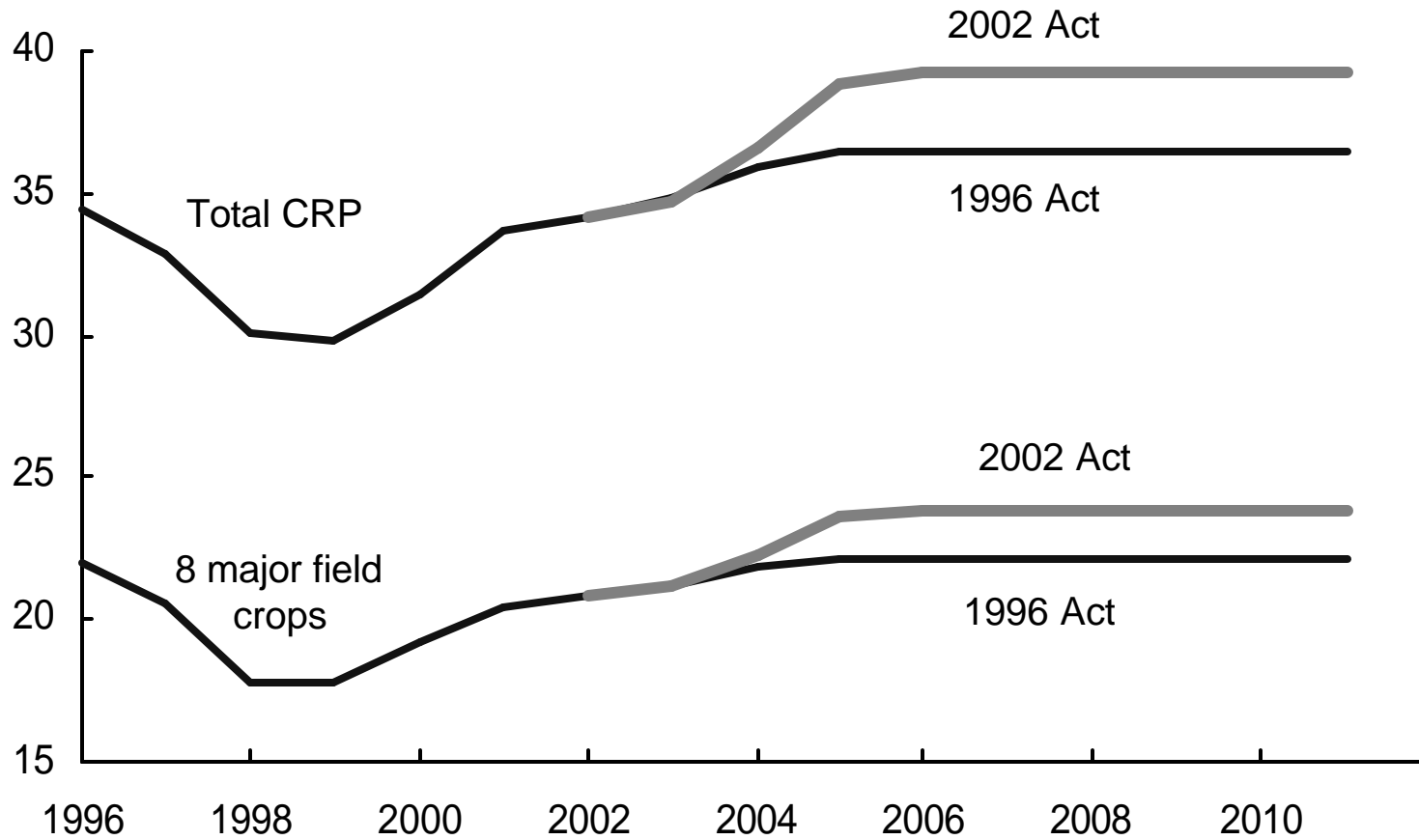
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<b>Crop</b>	<b>2001</b>	<b>2002-2003</b>	<b>2004-2007</b>
Wheat (\$/bu)	2.58	2.80	2.75
Corn (\$/bu)	1.89	1.98	1.95
Soybeans (\$/bu)	5.26	5.00	5.00
Sorghum (\$/bu)	1.71	1.98	1.95
Upland cotton (\$/lb)	0.5192	0.52	0.52
Rice (\$/cwt)	6.50	6.50	6.50

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# Conservation Reserve Program

Million acres

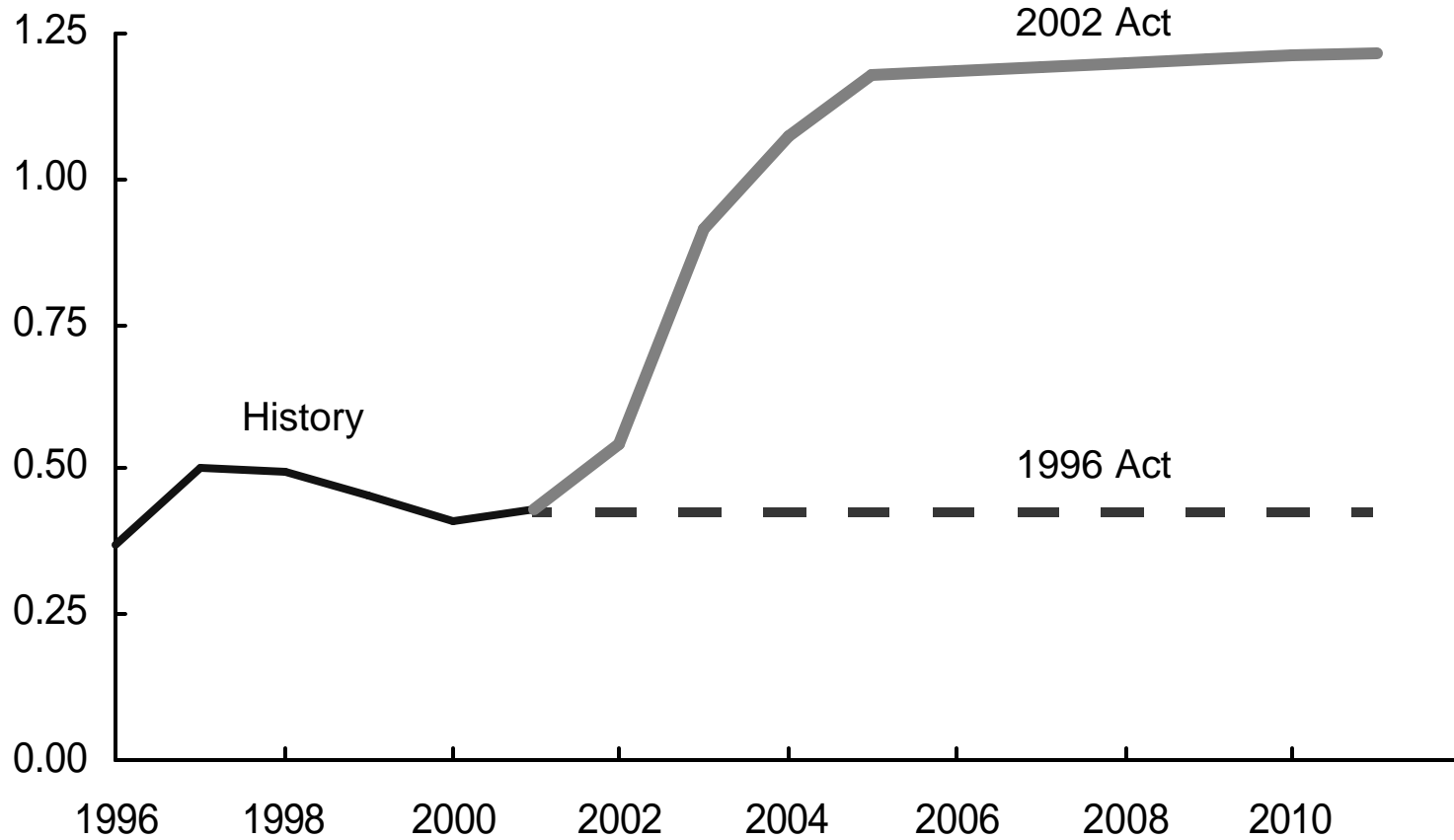




# Plantings of dry peas and lentils

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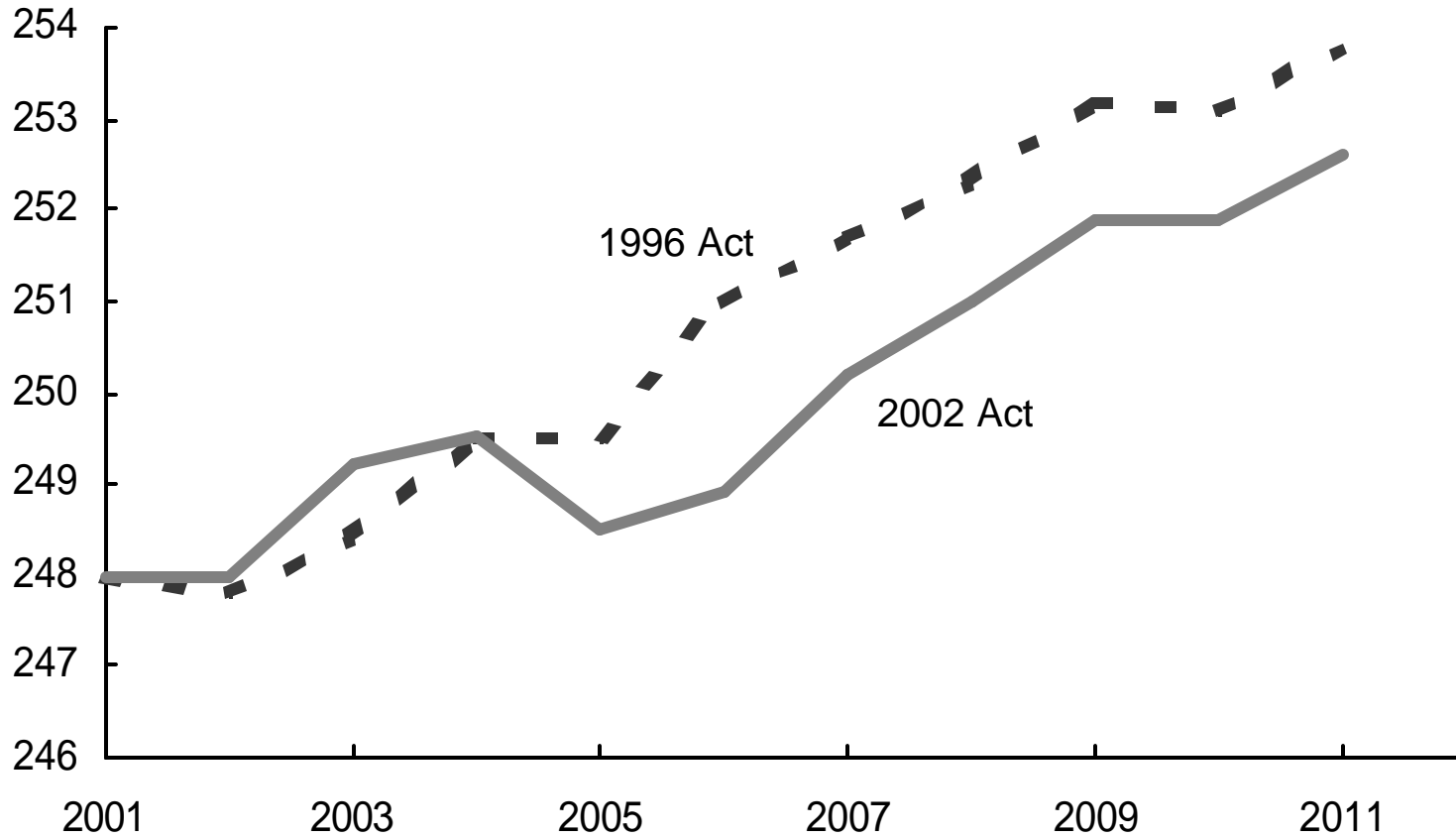
Million acres



# Planted area: eight major crops

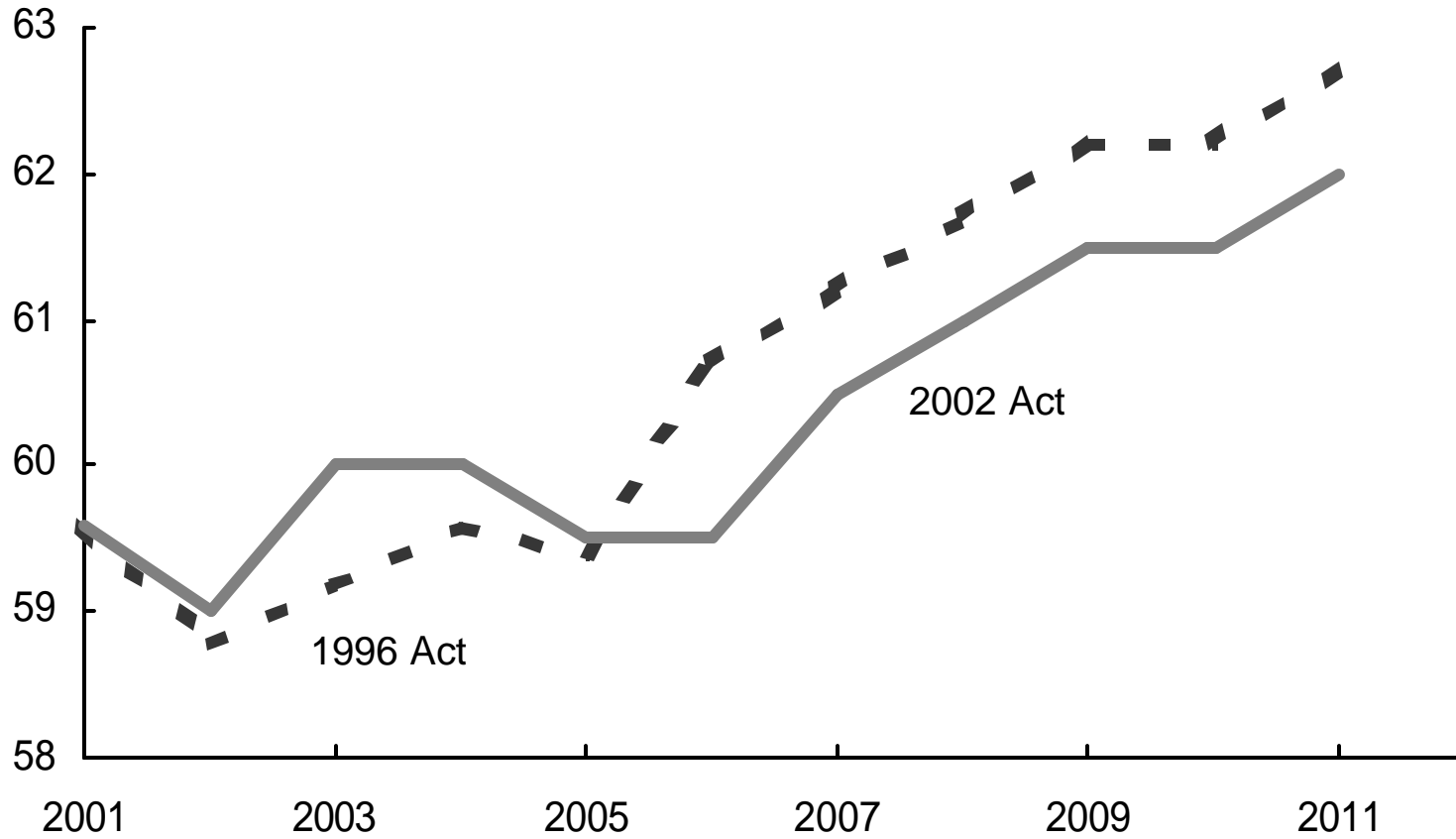
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Million acres



# Planted area: wheat

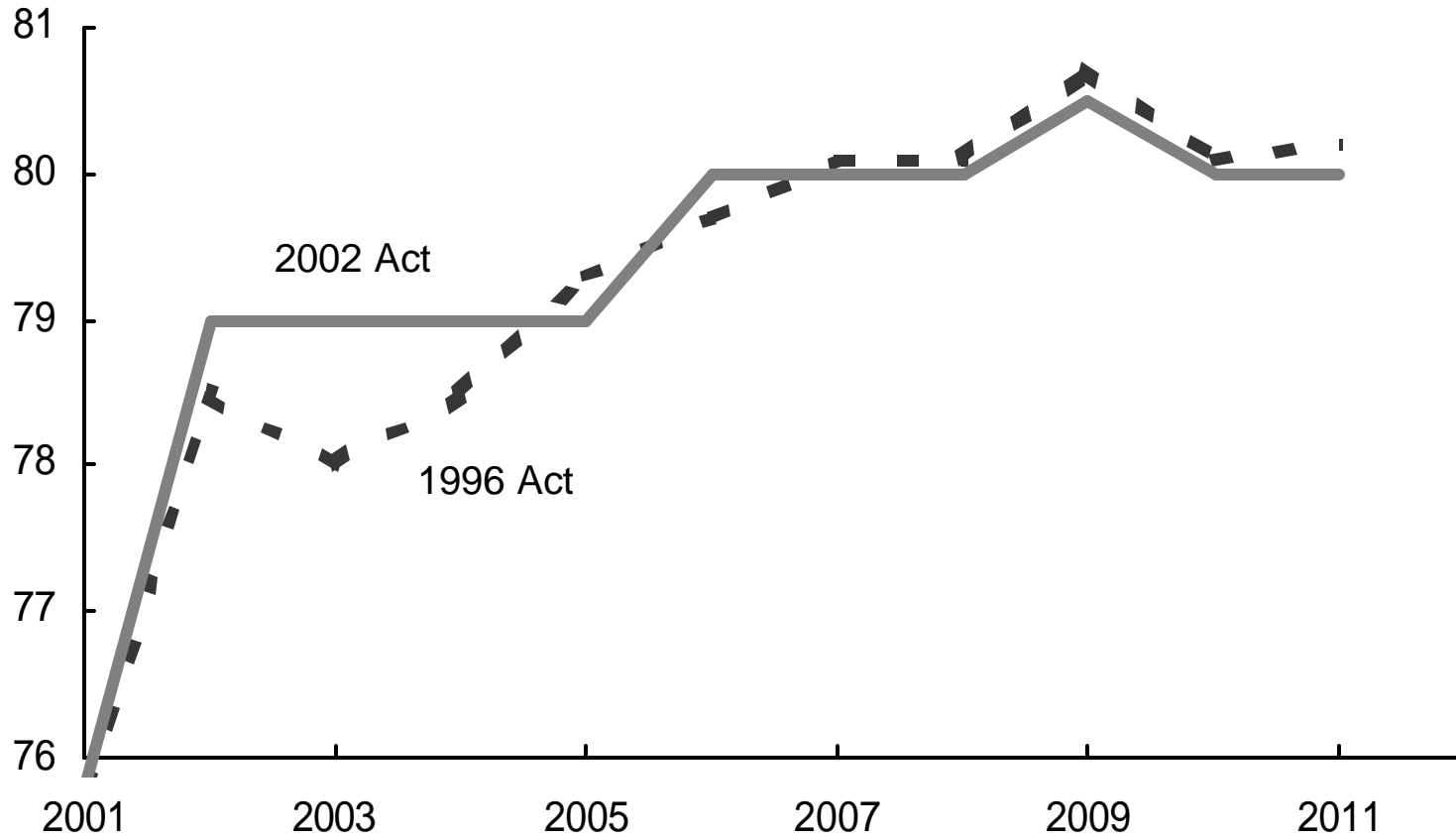
Million acres



# Planted area: corn

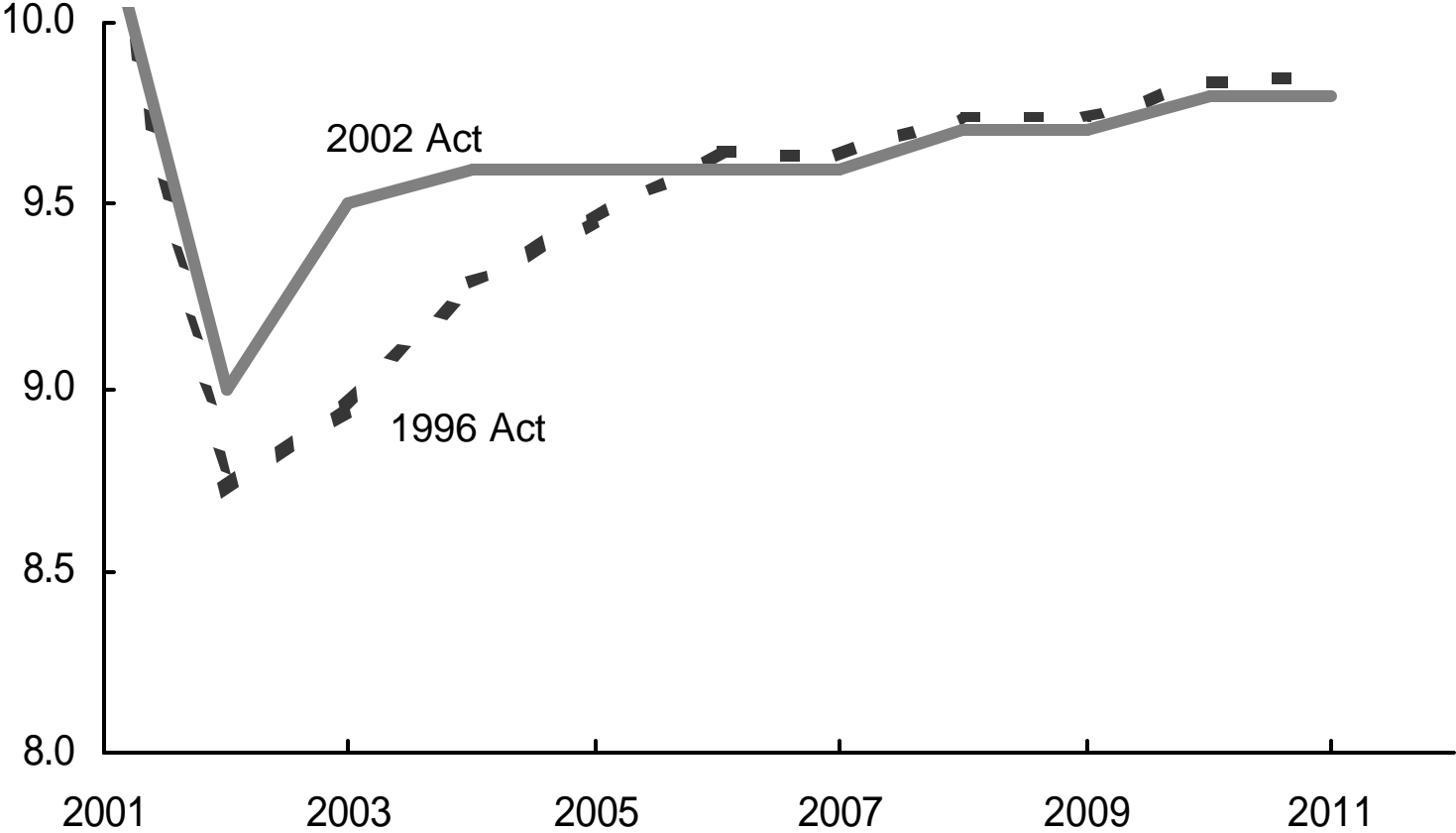
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Million acres



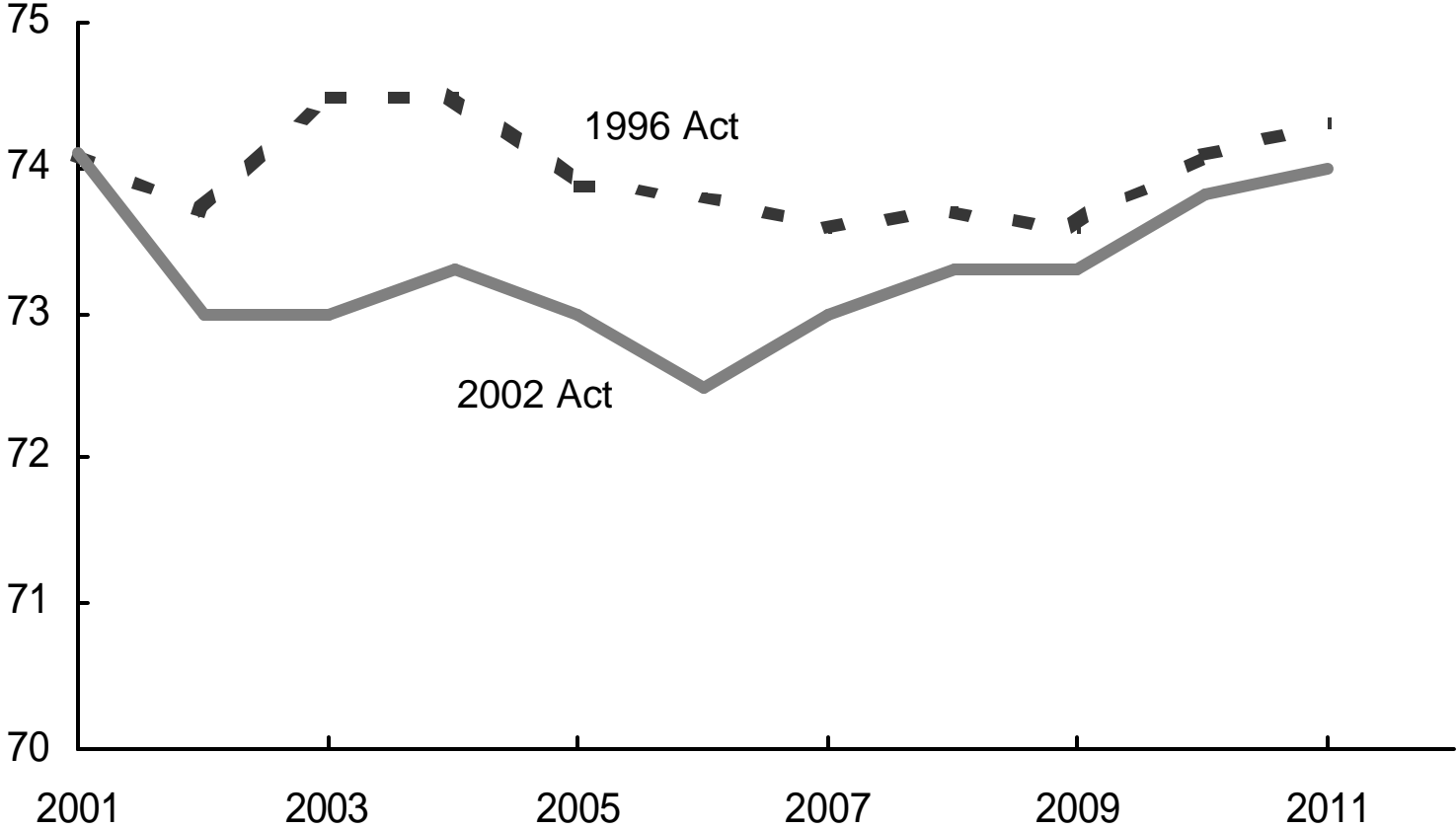
# Planted area: sorghum

Million acres



# Planted area: soybeans

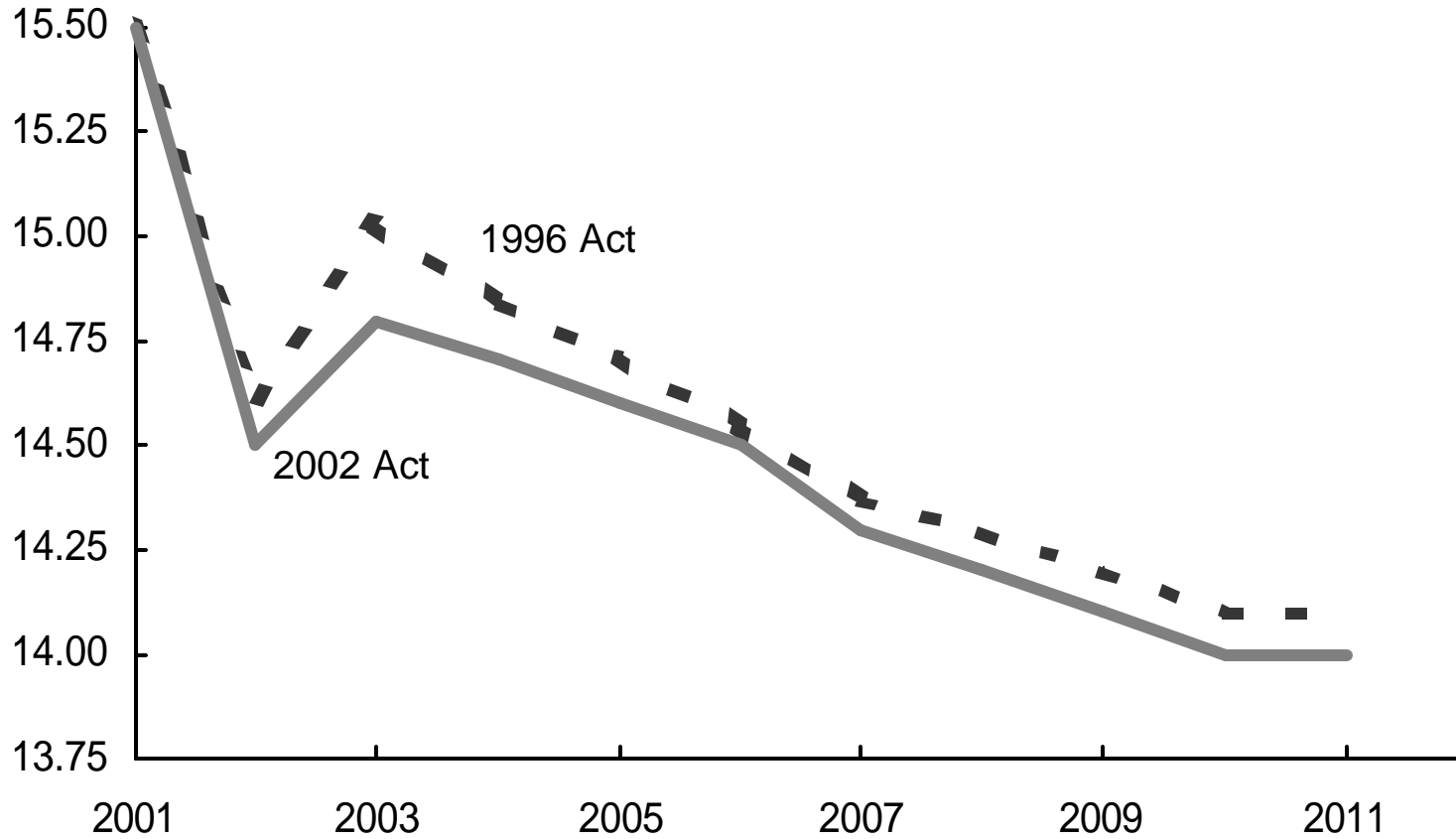
Million acres



# Planted area: upland cotton

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Million acres



# Potential Additional Marketing Loan Impacts

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# Potential Additional Marketing Loan Impacts

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- 1996 Farm Act had discretionary authority to lower loan rates, based on historical prices
- 2002 Farm Act did not continue this authority
- Potential for larger marketing loan impacts if return to lower commodity prices

# Alternative Loan Rates, Lower Price Setting

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Alternative loan rate assumptions, 2001 market conditions

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Crop	Loan rates at 1996 act caps (2001 baseline)	2002 act loan rates for 2002 & 2003	Loan rates using 1996 act formulas *	Loan rates using unconstrained 1996 act formulas **
			\$ per bushel	
Wheat	2.58	2.80	<b>2.43</b>	2.43
Corn	1.89	1.98	<b>1.76</b>	1.76
Soybeans	5.26	5.00	<b>4.92</b>	<b>4.62</b>

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\* Soybean loan rate at 1996 farm act legislative floor.

\*\* Assumes no floor for soybean loan rate.

# Acreage Impacts with Alternative Loan Rates, Lower Price Setting

Planted acreage estimates with alternative loan rates, 2001 market conditions

Crop	Loan rates at 1996 act caps (2001 baseline)	2002 act loan rates for 2002 & 2003	Loan rates using 1996 act formulas	Loan rates using unconstrained 1996 act formulas
Million acres				
Wheat	62.0	63.1	<b>61.4</b>	<b>61.5</b>
	---	(1.1)	<b>(-0.6)</b>	<b>(-0.5)</b>
Corn	78.5	79.5	<b>78.0</b>	<b>78.5</b>
	---	(1.0)	<b>(-0.5)</b>	<b>(0.0)</b>
Soybeans	75.0	73.5	<b>74.7</b>	<b>73.8</b>
	---	(-1.5)	<b>(-0.3)</b>	<b>(-1.2)</b>
8-crop total	253.5	254.7	<b>251.9</b>	<b>251.5</b>
	---	(1.2)	<b>(-1.6)</b>	<b>(-2.0)</b>

Numbers in parentheses are differences from 1996 act capped loan rate scenario.

# Alternative Loan Rate Scenarios--Implications

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- If return to a low price setting, fixing loan rates when market-price-based, formula loan rates would be lower holds land in production
- Keeps long-run market price signals from being transmitted to producers
- Land resources shifted and economic efficiency reduced

# Counter-cyclical Payment Effects

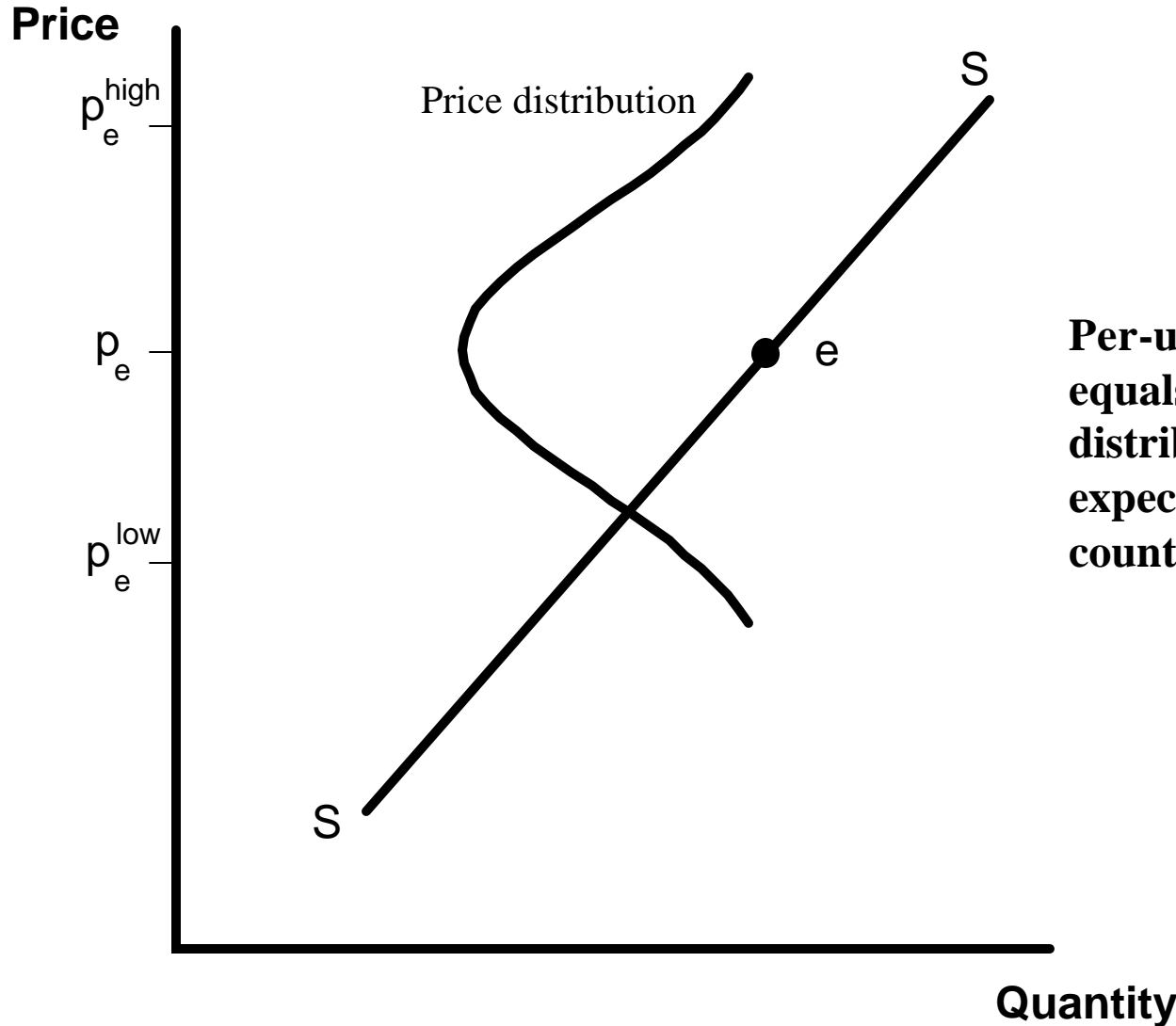
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# Counter-cyclical Payment Effects

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- Paid on pre-determined quantity--decoupled from actual production
- Linked to market prices in range from loan rate to “effective target price”
- Affects revenue risk
- May encourage production of program crop for which producer has acreage base, if risk averse

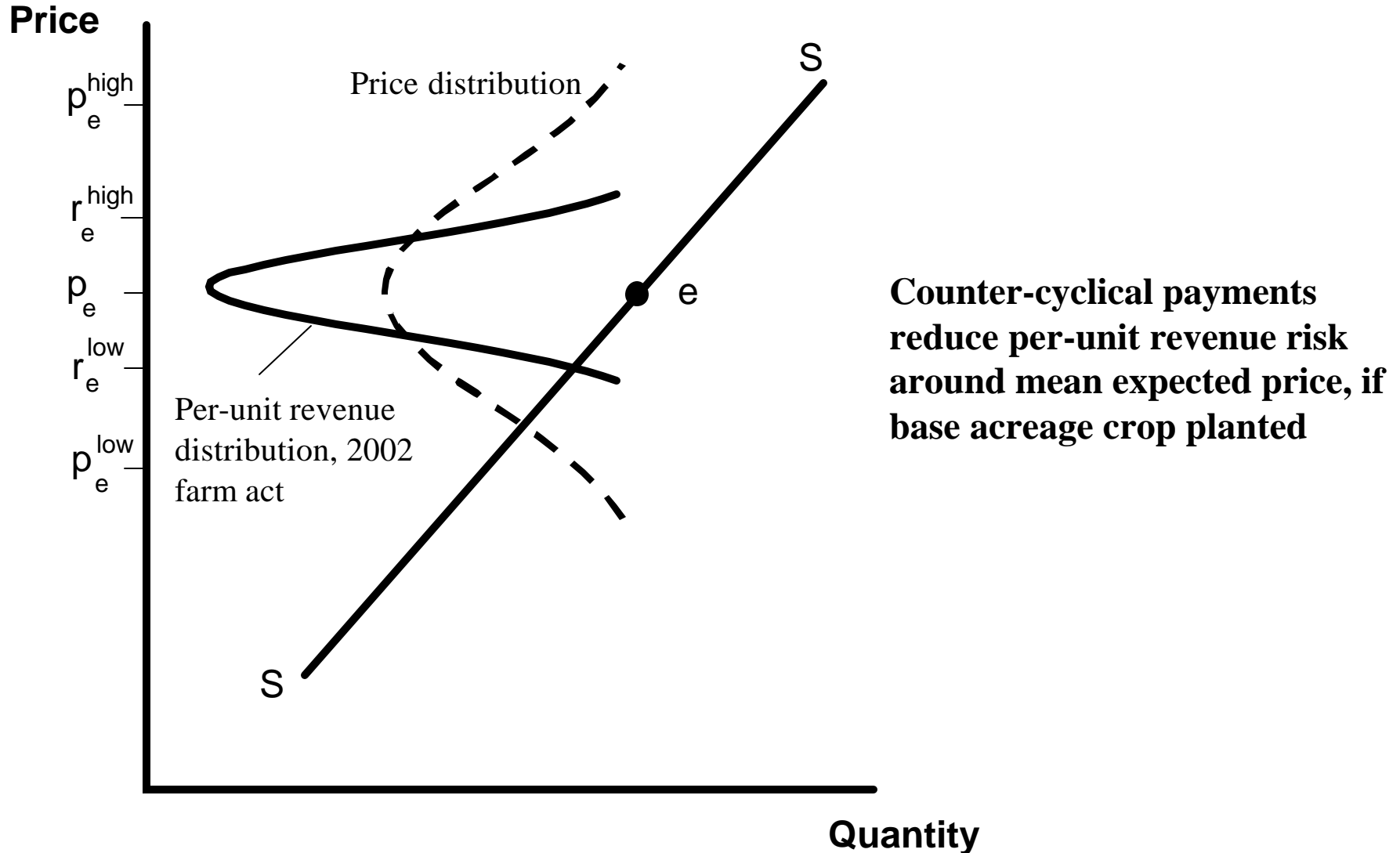
# Supply curve and price (per-unit revenue) risk under the 1996 farm act (without counter-cyclical payments)



**Per-unit revenue distribution equals expected market price distribution around mean expected price, without counter-cyclical payments**

Note: Price distribution shown is hypothetical.

# Supply curve and reduced per-unit revenue risk under the 2002 farm act (with counter-cyclical payments)



Note: Price and per-unit revenue distributions shown are hypothetical. They are used here to illustrate concepts related to counter-cyclical payments in the price range where these payments vary.



# Direct Payments

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# Direct Payment Effects

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- Fixed, decoupled payments
  - Income transfers to participating farm households
- Wealth effect
  - Less risk averse with higher wealth
- Payments can raise agricultural investment
  - Greater loan availability
  - Lower cost of loans
- Wealth and investment effects may have small production impacts

# Other Effects

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# Effects of Other 2002 Farm Act Provisions: Acreage Base and Payment Yield Updating

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- Options to update lead to expectations of possible updates in the future
- Acreage base updating
  - Protect current acreage base and build planting history
  - Keeps and expands plantings in program crops
  - Undermines planting flexibility
- Payment yield updating
  - Increase use of yield-enhancing inputs

# Conclusions

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- Production impacts are mostly from marketing loan program changes, CRP, dry peas & lentils
- Potential additional marketing loan impacts in a lower price setting
- Additional indirect impacts could result from:
  - Counter-cyclical payments
  - Direct payments
  - Base acreage and payment yield updates

# USDA Web Sites for 2002 Farm Act Information

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- USDA Farm Act homepage
  - <http://www.usda.gov/farmbill>
- Side by side comparison of 1996 and 2002 Farm Acts, with selected analyses
  - <http://www.ers.usda.gov/features/farmbill>
- Frequently asked questions
  - <http://www.fsa.usda.gov/pas/farmbill/fbfaqhome.asp>
- Economic analysis and impacts of the 2002 Farm Act
  - <http://www.ers.usda.gov/publications/aib778>