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U.S. Cotton Supply Response Under the 2002 Farm Act

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Presentation Overview

- Program provisions of the 2002 Farm Act
 - Marketing loans
 - Counter-cyclical payments
 - Direct payments
- Income support features
- Potential production influences
- 2003 acreage projections for upland cotton
- USDA baseline projections for upland cotton

2002 Farm Act

3-Piece Commodity Program

3-Piece Commodity Program

- Marketing loan program
 - Upland cotton loan rate increased slightly
 - Loan rates raised for competing crops, except soybeans
- New counter-cyclical payments
 - Price dependent payments
- Direct payments
 - Replace Production Flexibility Contract payments
 - Soybeans, minor oilseeds, peanuts added

3-Piece Commodity Program

- 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

Counter-cyclical payment terms

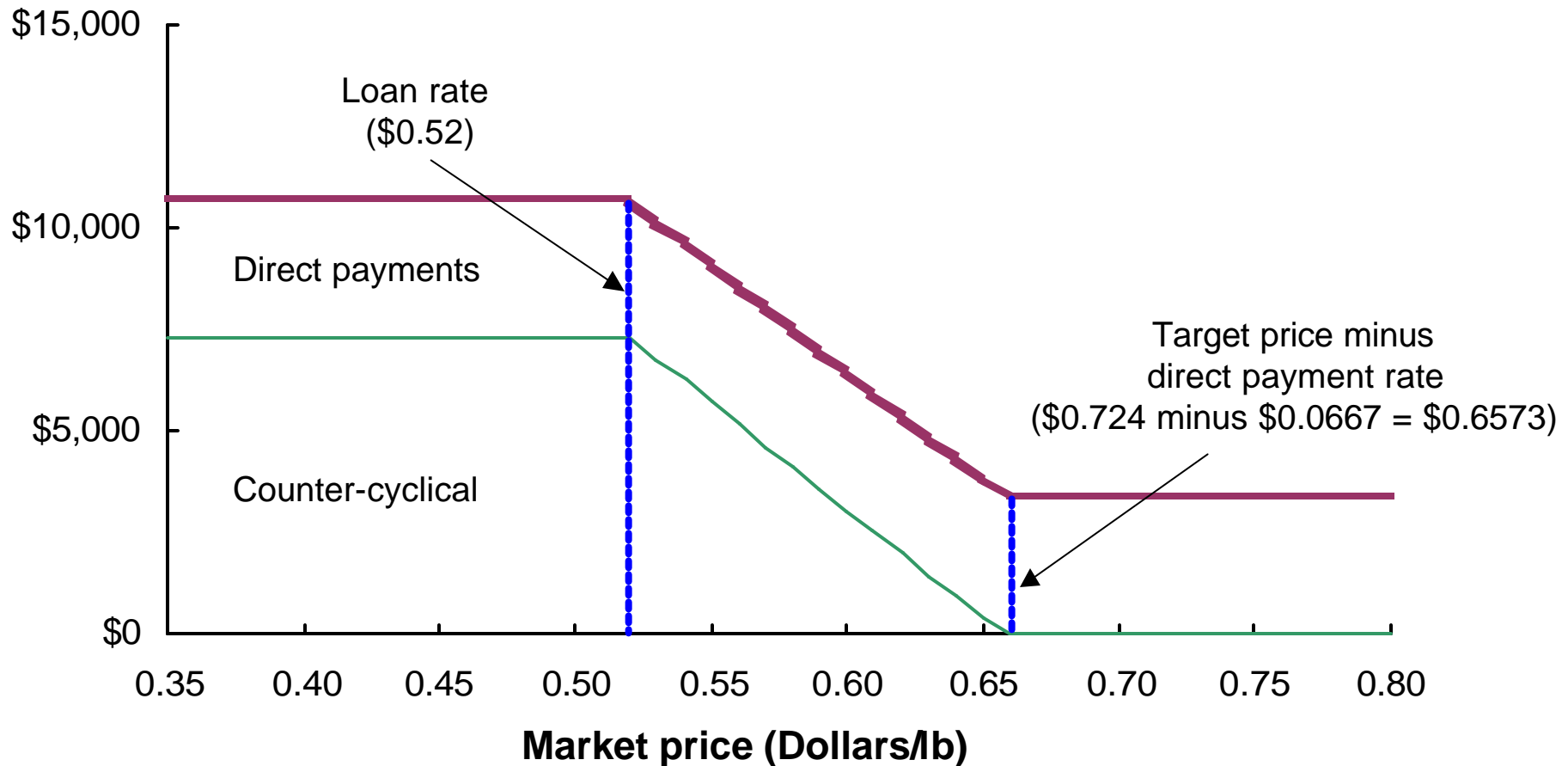
- Upland cotton example for 2003--loan rate \$0.52, target price \$0.724, direct payment rate \$0.0667
- “Effective price” defined as higher of market price or loan rate, plus direct payment rate
- CCP equals target price minus “effective price”
- Alternatively, CCP equals (target price - direct payment rate) - higher of market price or loan rate
 - Per-unit revenue protection of CCPs up to the “effective target price” of \$0.6573

Counter-cyclical payment examples

- Upland cotton examples for 2003--loan rate \$0.52, target price \$0.724, direct payment rate \$0.0667
- Example 1--Assume price of \$0.55
$$\text{CCP} = 0.724 - (0.55 + 0.0667) = 0.1073$$
(re-arranging terms)
$$\text{CCP} = (0.724 - 0.0667) - 0.55 = 0.1073$$
- Example 2--Assume price of \$0.6573
$$\text{CCP} = 0.724 - (0.6573 + 0.0667) = 0$$
(re-arranging terms)
$$\text{CCP} = (0.724 - 0.0667) - 0.6573 = 0$$
- Illustrate “effective target price” concept (\$0.6573)

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

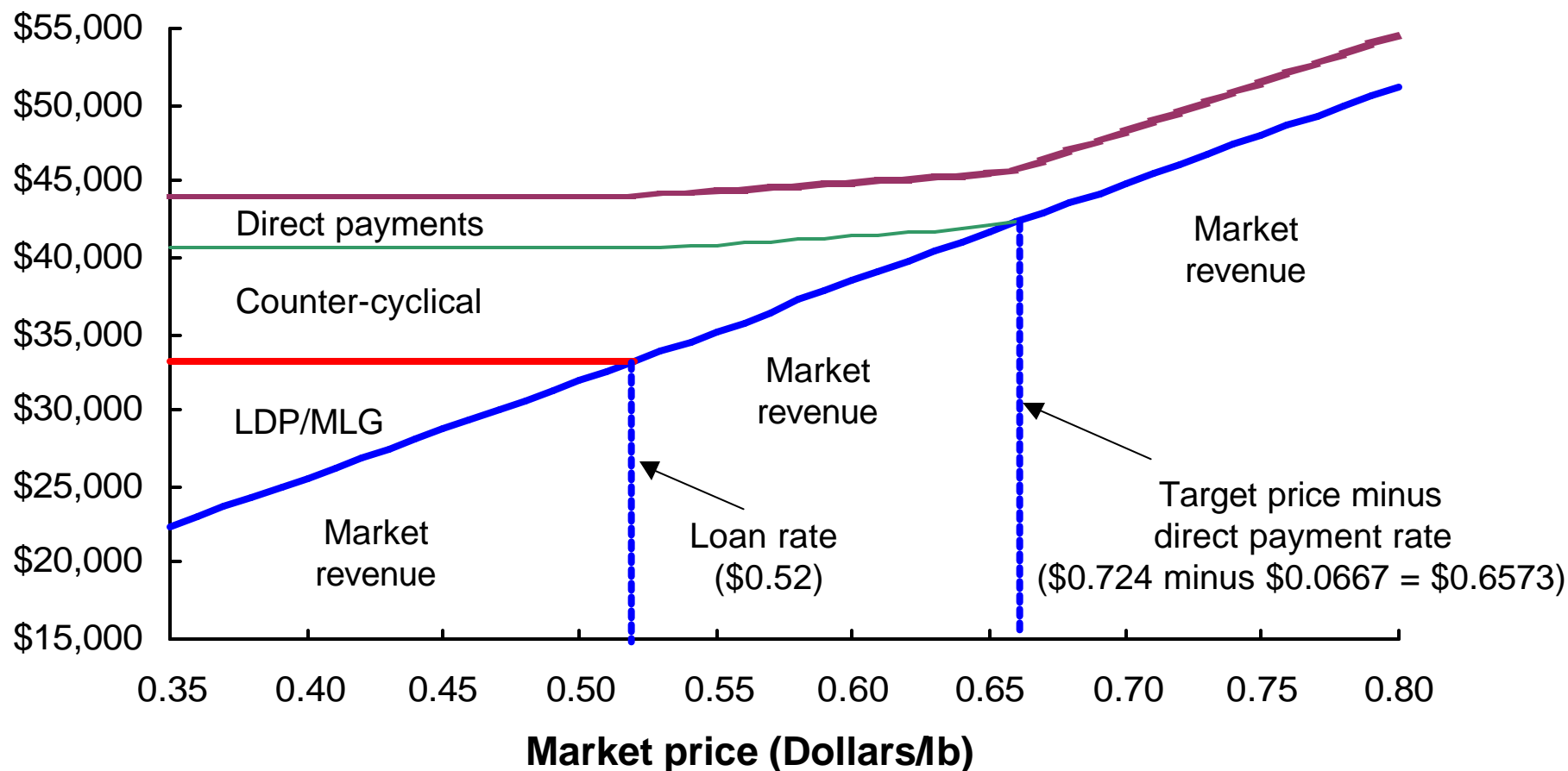
Decoupled payments



Assumes 100 acres cotton, 100 acres cotton base, 640 lbs/acre yield,
605 lbs/acre direct payment yield, 625 lbs/acre counter-cyclical payment yield.

Cotton revenues under the 2002 Farm Act

Cotton revenues



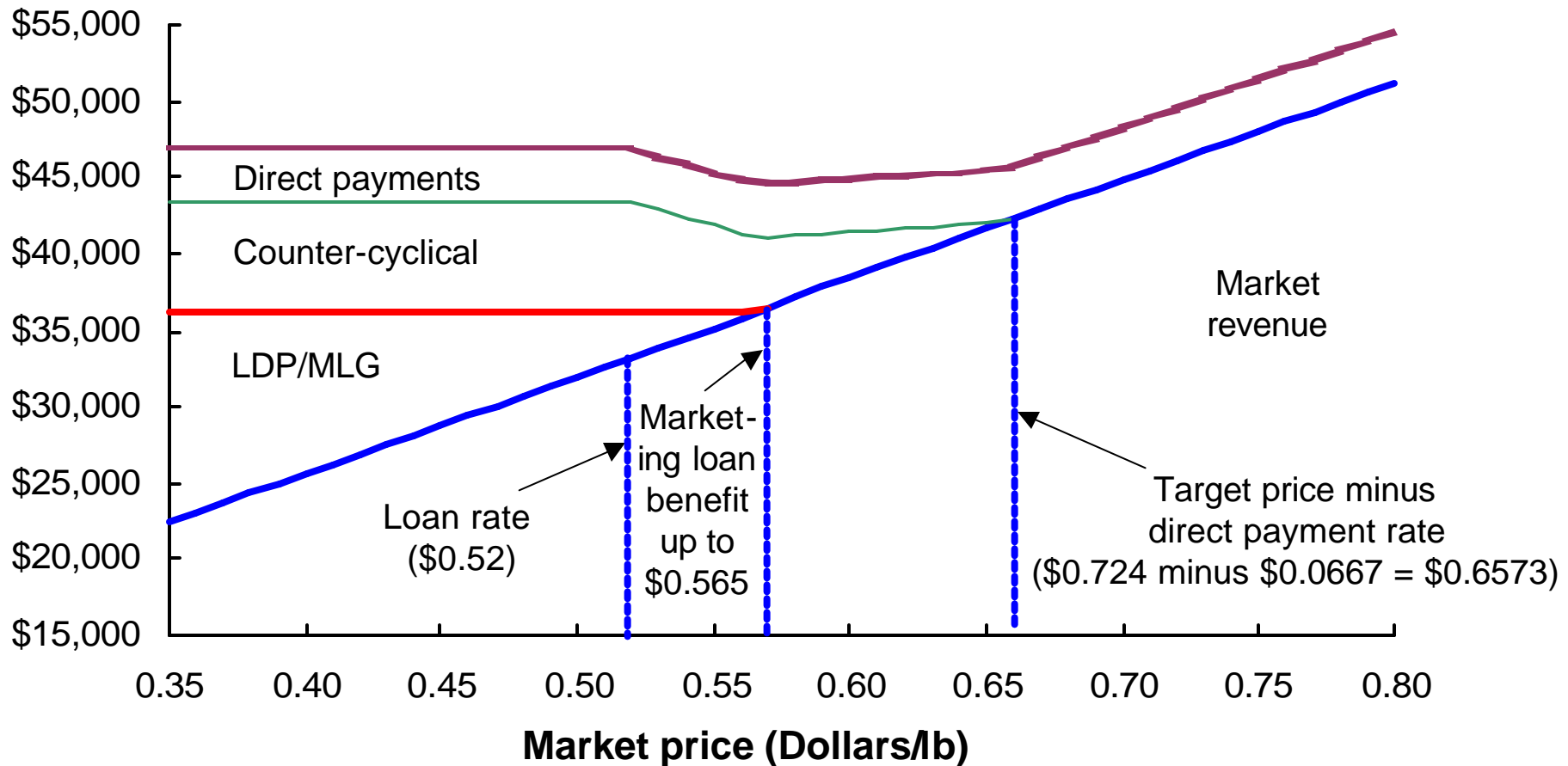
Assumes 100 acres cotton, 100 acres cotton base, 640 lbs/acre yield,
605 lbs/acre direct payment yield, 625 lbs/acre counter-cyclical payment yield.

Counter-cyclical payments overlap with marketing loan benefits

- Marketing loans enable farmers to attain per-unit revenues that, on average, exceed commodity loan rates (Marketing loan or LDP “bonus”)
 - Cotton LDP bonus has been about \$0.045
 - Implies cotton marketing loan benefits up to a \$0.565 price
- Counter-cyclical payments increase as prices decline to the \$0.52 loan rate
- Implicit “double” counter-cyclical benefits in price range from \$0.52 to \$0.565
- As price falls to loan rate, gain two counter-cyclical benefits

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

Cotton revenues



Assumes 100 acres cotton, 100 acres cotton base, 640 lbs/acre yield,
605 lbs/acre direct payment yield, 625 lbs/acre counter-cyclical payment yield.

Assumes per-unit revenue facilitated by marketing loans exceeds loan rate by an average of 4.5 cents/lb.

Marketing Loans

Marketing loans under the 2002 Farm Act

- Affect planting decisions
 - Paid on current production
- Change in marketing loan rate for upland cotton
 - Small increase
- Changes in marketing loan rates for competing crops
 - Sorghum, wheat, corn loan rates increased
 - Soybean loan rate decreased

Marketing assistance loan rates, 2002 Farm Act and 2001 rates

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

Counter-cyclical Payments

Counter-cyclical Payment Effects

- 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

Direct Payments

Direct Payment Effects

- Fixed, decoupled payments
- 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

Implications for Upland Cotton Acreage in 2003

2003 upland cotton supply response factors

- Price incentives (and net returns) among competing crops
- Policy influences, particularly marketing loans
- Upland cotton acreage response elasticities

Upland cotton acreage response elasticities

Crop	Elasticity
Own-price effect:	
Upland cotton	+0.466
Competing crops:	
Sorghum	-0.103
Corn	-0.036
Wheat	-0.029
Soybeans	-0.025

2003 upland cotton planting incentives

- Current USDA price projections for 2002/03
 - Upland cotton price below \$0.52 loan rate
 - \$0.405 (August - December average)
 - Competing crop prices above loan rates
 - Sorghum, \$2.40 (\$1.98 loan rate)
 - Corn, \$2.35 (\$1.98 loan rate)
 - Wheat, \$3.60 (\$2.80 loan rate)
 - Soybeans, \$5.40 (\$5.00 loan rate)

2003 upland cotton planting implications

- 2002 plantings
 - Plantings may have been reduced by policy uncertainties
 - Adjusted “policy-uncertainty neutral” plantings of 14.2 million acres
- 2003 plantings
 - Cotton prices remain in marketing loan range
 - Stronger incentives to plant competing crops
 - Prices above loan rates
 - Implies a small reduction (160,000 acres) in upland cotton acreage from 2002’s adjusted “policy-uncertainty neutral” plantings of 14.2 million acres
 - Suggests 2003 upland plantings at 14.0-14.1 million acres

Uncertainties

- Changes in economic incentives
 - Price expectations
- Planting-time weather
 - El Niño effect in 1998 contributed to reduced plantings in Western States

Baseline Projections for Upland Cotton Acreage

Baseline acreage issues

- Same analytical framework used
 - Prices for upland cotton and competing crops
 - Policy/marketing loan effects
 - Elasticities
- Upland cotton acreage fairly flat, 13.9-14.2 million
 - Upland cotton acreage increases in 2004-06
 - Prices for competing crops fall from recent high levels
 - Upland cotton acreage declines slightly over rest of projections
 - Prices for competing crops increase more than cotton

Conclusions

- 2002 Farm Act provides income support through:
 - Marketing loans
 - Counter-cyclical payments
 - Direct payments
- Production effects of these income support measures are mostly from the marketing loan program
- 2003 upland cotton acreage likely to be about 14 million acres
 - 2002 plantings may have been reduced by policy uncertainties last spring
 - 2003 planting incentives for crops competing with upland cotton reflect prices above loan rates

USDA Web Sites for 2002 Farm Act Information

- 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>