

# A New Approach to Providing an Agricultural Safety Net

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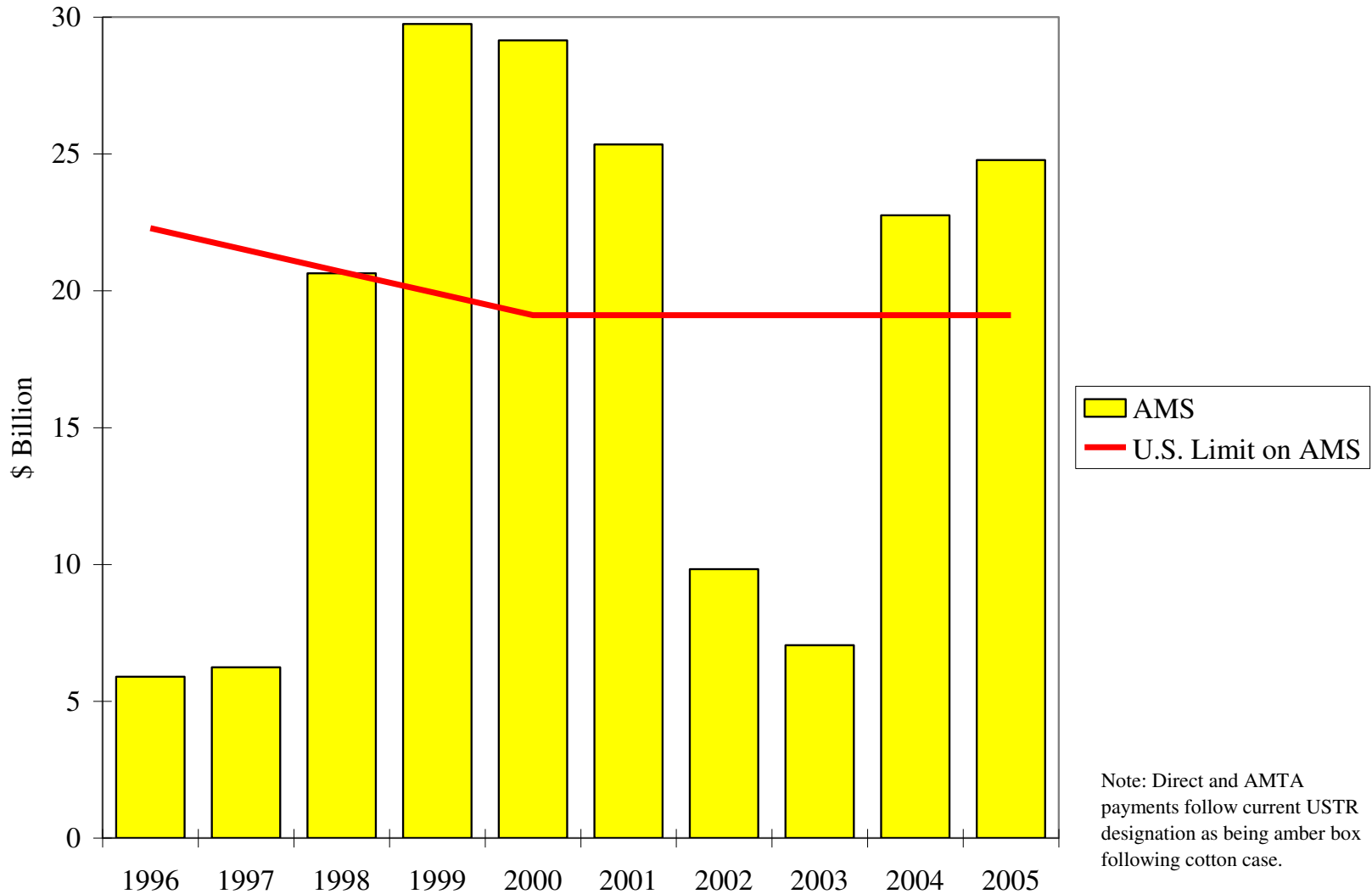
Center for Agricultural and Rural Development

Iowa State University

Presented at Informa Economics Roundtable Arlington, VA

Jan 25, 2006

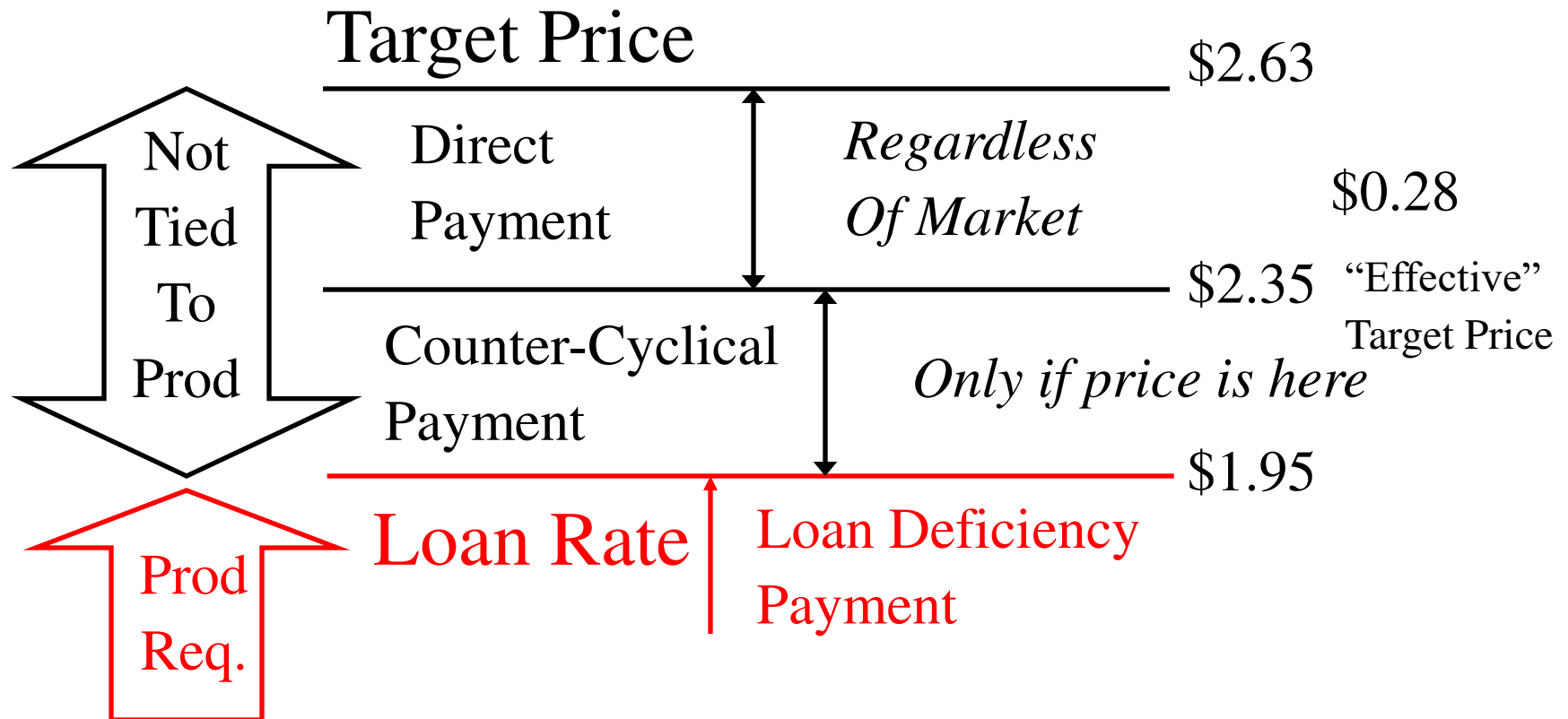
# Expenditures on Current Safety Net



# US WTO Proposal Would Require Spending Cuts

- Should cuts be made in existing programs?
  - Lower loan rates, effective target prices, proportions of production eligible for support
- Should we redesign the US safety net to
  - meet WTO and budget objectives
  - improve the effectiveness of existing program?

# Structure of Program Payments for Corn



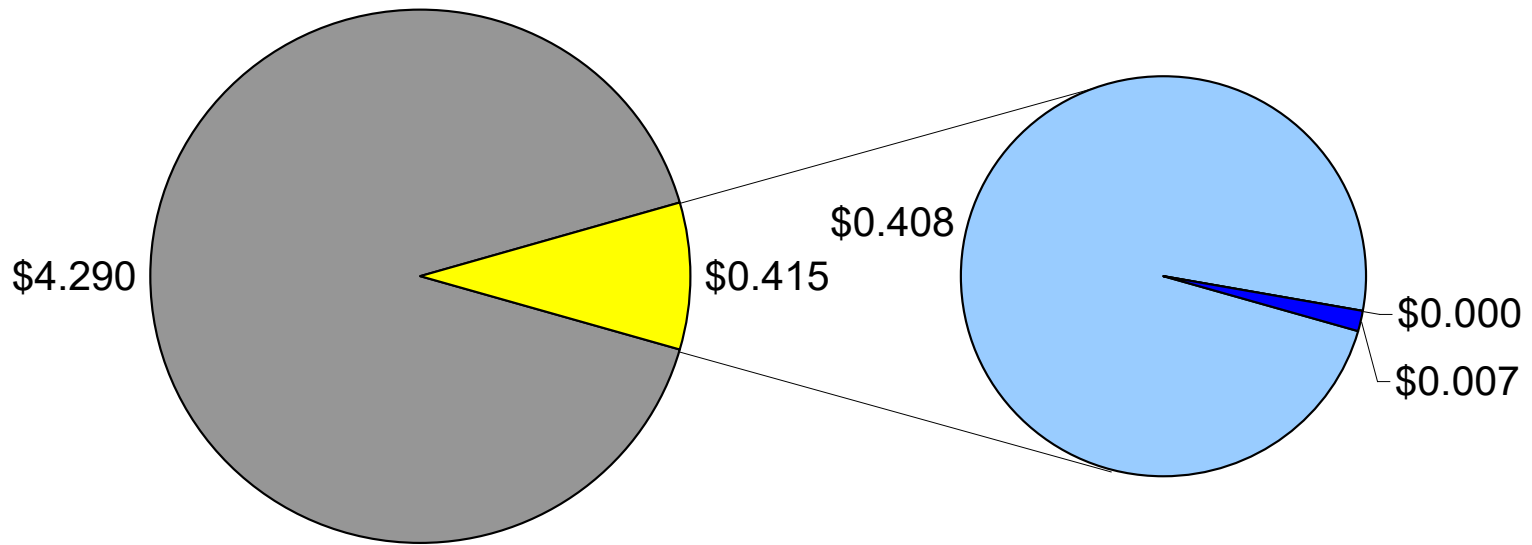
# Impact of U.S. WTO Proposal on Current Program

	Current	New	Change	
			absolute	percent
<b>Corn</b>				
Loan rate	1.95	1.74	-0.21	-11.00%
Target price	2.63	2.45	-0.18	-7.00%
<b>Soybeans</b>				
Loan rate	5.00	4.45	-0.55	-11.00%
Target price	5.80	5.39	-0.41	-7.00%
<b>Wheat</b>				
Loan rate	2.75	2.45	-0.3	-11.00%
Target price	3.92	3.65	-0.27	-7.00%
<b>Cotton</b>				
Loan rate	52.00	46.28	-5.72	-11.00%
Target price	72.40	67.33	-5.07	-7.00%
<b>Rice</b>				
Loan rate	6.50	5.79	-0.72	-11.00%
Target price	10.50	9.77	-0.73	-7.00%
<b>Raw sugar loan (\$/lb)</b>	18.00	15.12	-2.88	-16.00%
<b>Milk support price (\$/cwt)</b>	9.90	8.81	-1.09	-11.00%
<b>Sugar non-NAFTA TRQ (mmt)</b>	1,229	1,984	755	61.50%

# Does a Price Safety Net Make Sense?

- **High yield, low price:** Payment received, but payment will be excessive
- **Low yield, high price:** No payment received, but cash receipts will likely be down for some farmers
- **High yield, high price:** No payment needed and no payment received \*\*\*\*\*
- **Low yield, low price:** Payment received, but no compensation for low yields

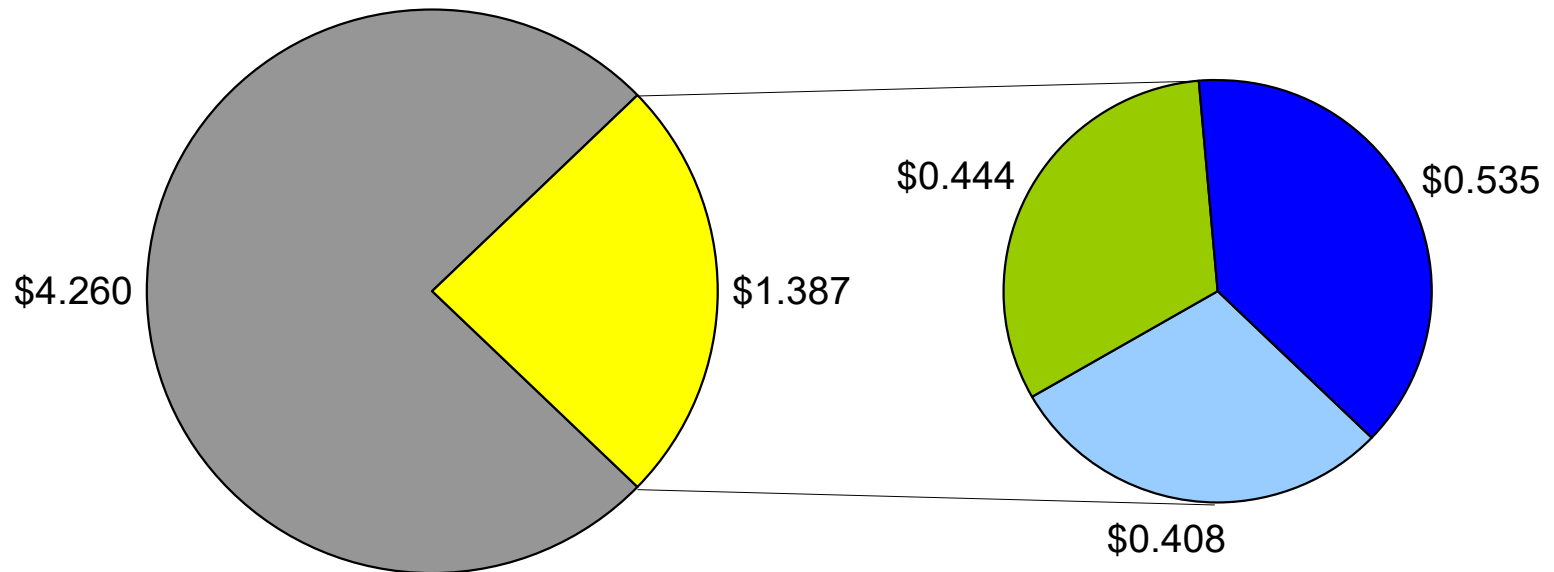
# Market Value and Payments to Iowa Corn Producers in 2002



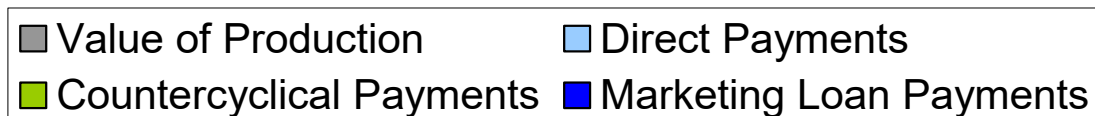
Total Value = \$4.705 Billion



# Market Value and Payments to Iowa Corn Producers in 2004



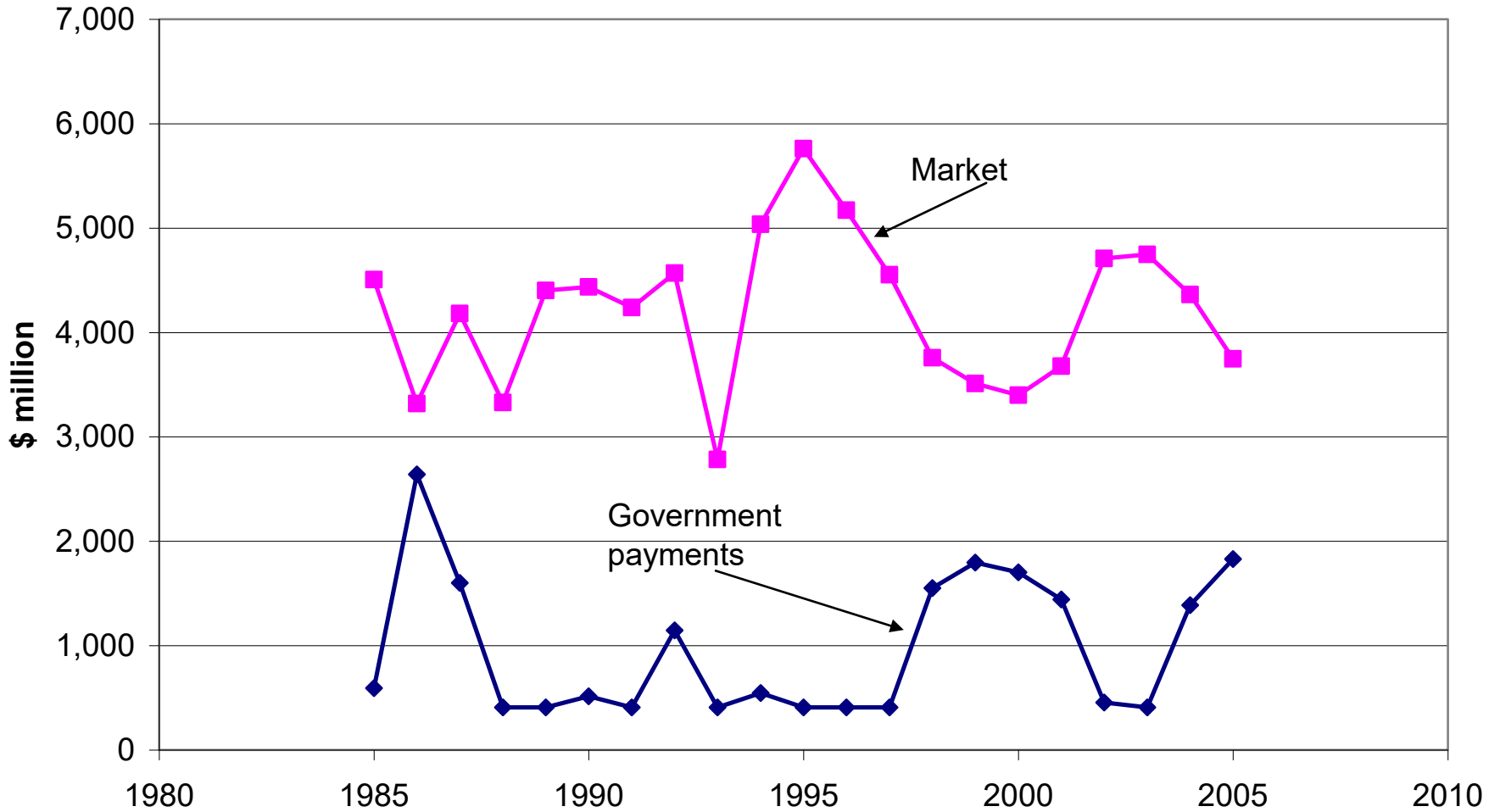
Total Value = \$5.647 Billion





# When Do Payments Arrive?

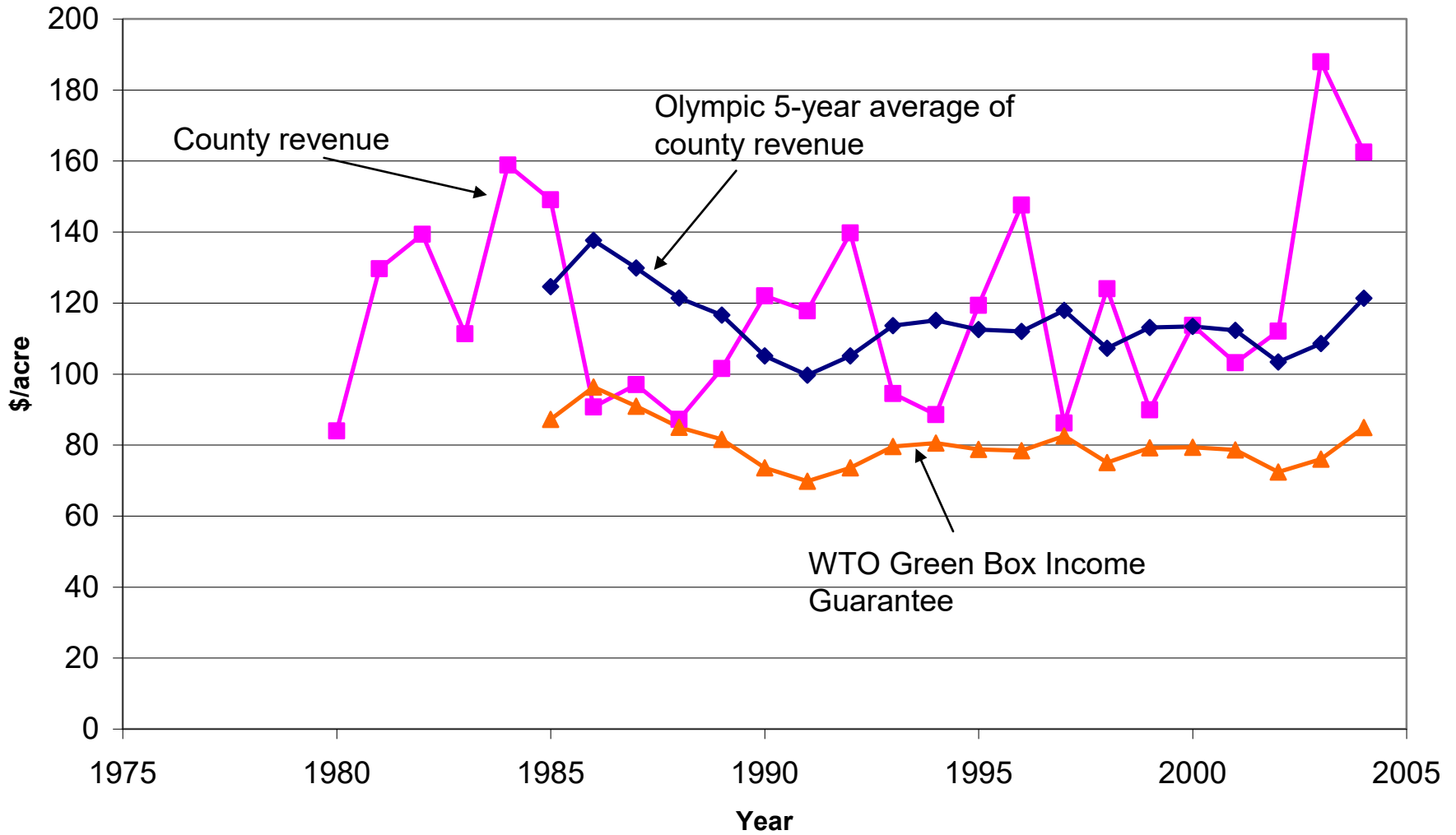
(Assuming current program in place since 1985)



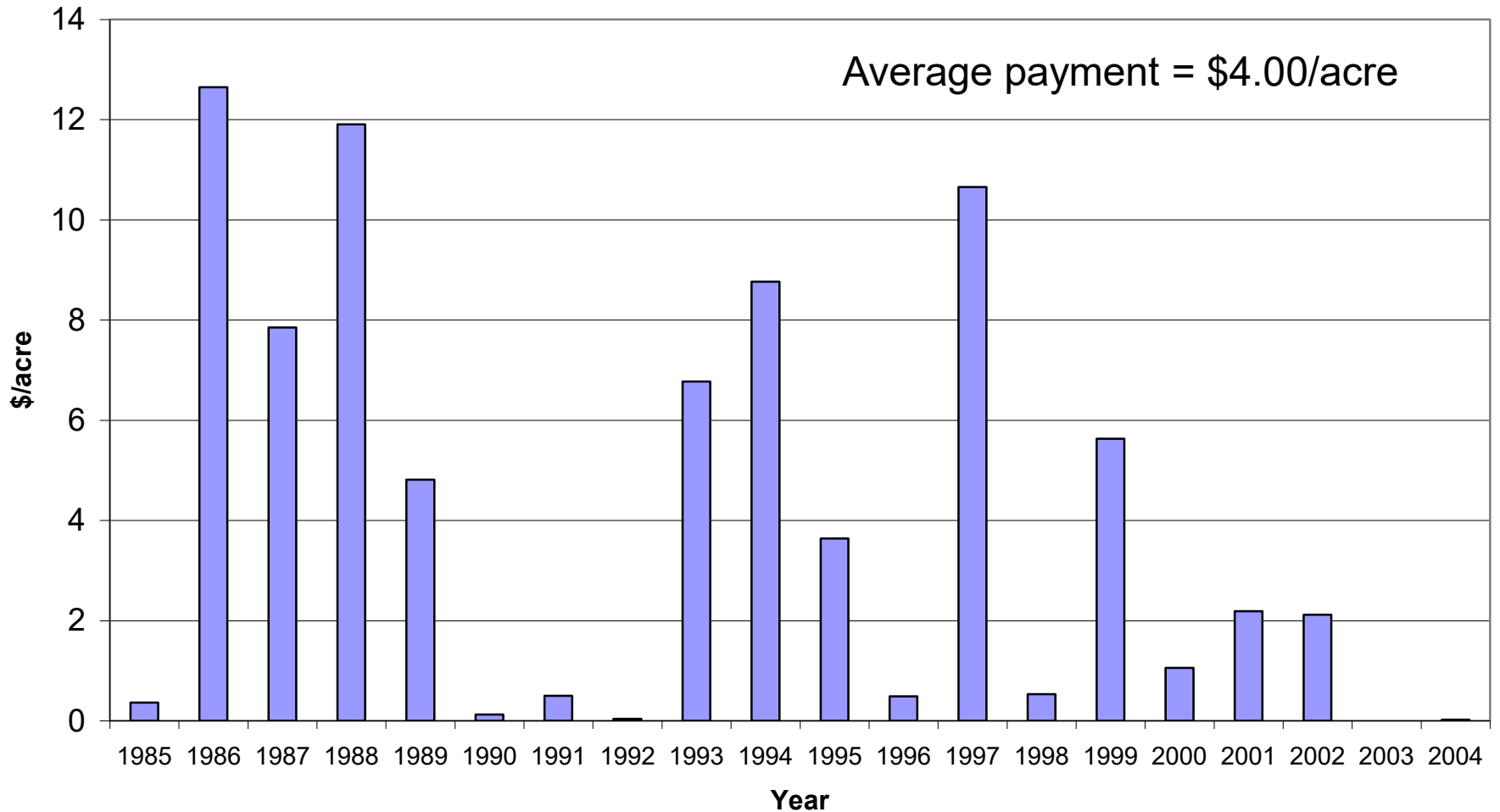
# Does a Revenue Safety Net Make Sense?

- **High yield, low price:** Payment received if revenue is below target revenue \*\*\*\*\*
- **Low yield, high price:** Payment received if revenue is below target revenue \*\*\*\*\*
- **High yield, high price:** No payment needed and no payment received \*\*\*\*\*
- **Low yield, low price:** Payment received, full compensation to target revenue \*\*\*\*\*

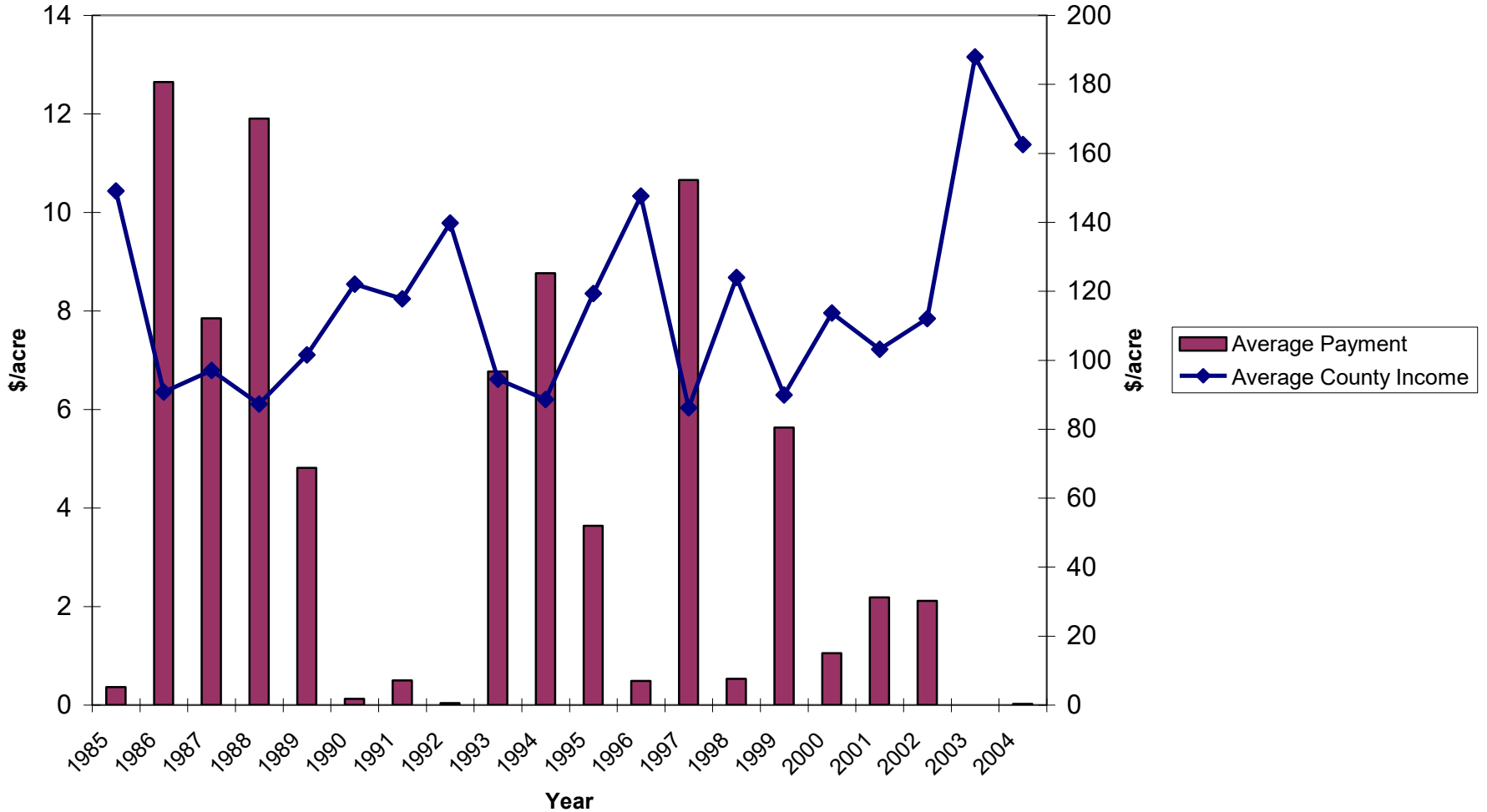
# Design of a "Green Box" Income Support Program



# Average Payment to Steele County Wheat Producers under a "Green Box" Income Insurance Program



# Green Box Support Would Arrive when Steele County Wheat Farmers Need It



# New Amber and Blue Box Programs

- Amber Box
  - Define target county revenue as the product of expected county yield and a target price
  - Define actual county revenue as the product of county average yield and national season-average price
  - Payments flow when actual county revenue is less than amber coverage level times target county revenue guarantee
  - Maximum payments reached when actual county revenue falls below 70% of target county revenue
  - Payments made on actual farmer-planted acreage

# New Amber and Blue Box Programs

- Blue Box
  - Payments flow when actual county revenue is less than blue coverage level times target county revenue
  - Maximum payments reached when actual county revenue falls below the target county revenue times the amber coverage level
  - Payments made on fixed base acreage

Y% of Effective Target Price X Expected County Yield



Z% of Effective Target Price X Expected County Yield



**Blue  
Box**

**Amber  
Box**

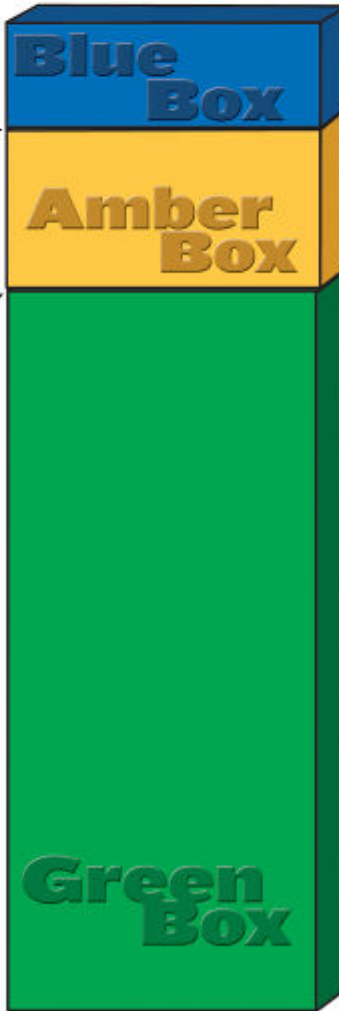
70% of Effective Target Price  
X Expected County Yield



Guarantee = 70% of past  
5-year average of  
crop-specific income



**Green  
Box**





# How Much Safety Under U.S. Proposal?

- Problem: Maximize sum of amber and blue coverage subject to spending limits on amber and blue box under the U.S. proposal
  - Use 1980 – 2004 data
- Amber box limit of \$7.64 billion
- Blue Box limit of \$5.75 billion
- Dairy gets \$750 million of amber box and \$500 million of blue box
- Sugar gets \$300 million of amber box and \$250 million of blue box
- Account for crop specific amber box limits

# What Prices to Use?

- Effective Target Prices for 2002 Farm Bill

Wheat - \$3.40/bu

Soy - \$5.36/bu

Peanuts - \$0.2295/lb

Cotton - \$0.6573/lb

Grain sorghum - \$2.22/bu

Corn - \$2.35/bu

Oats - \$1.416/bu

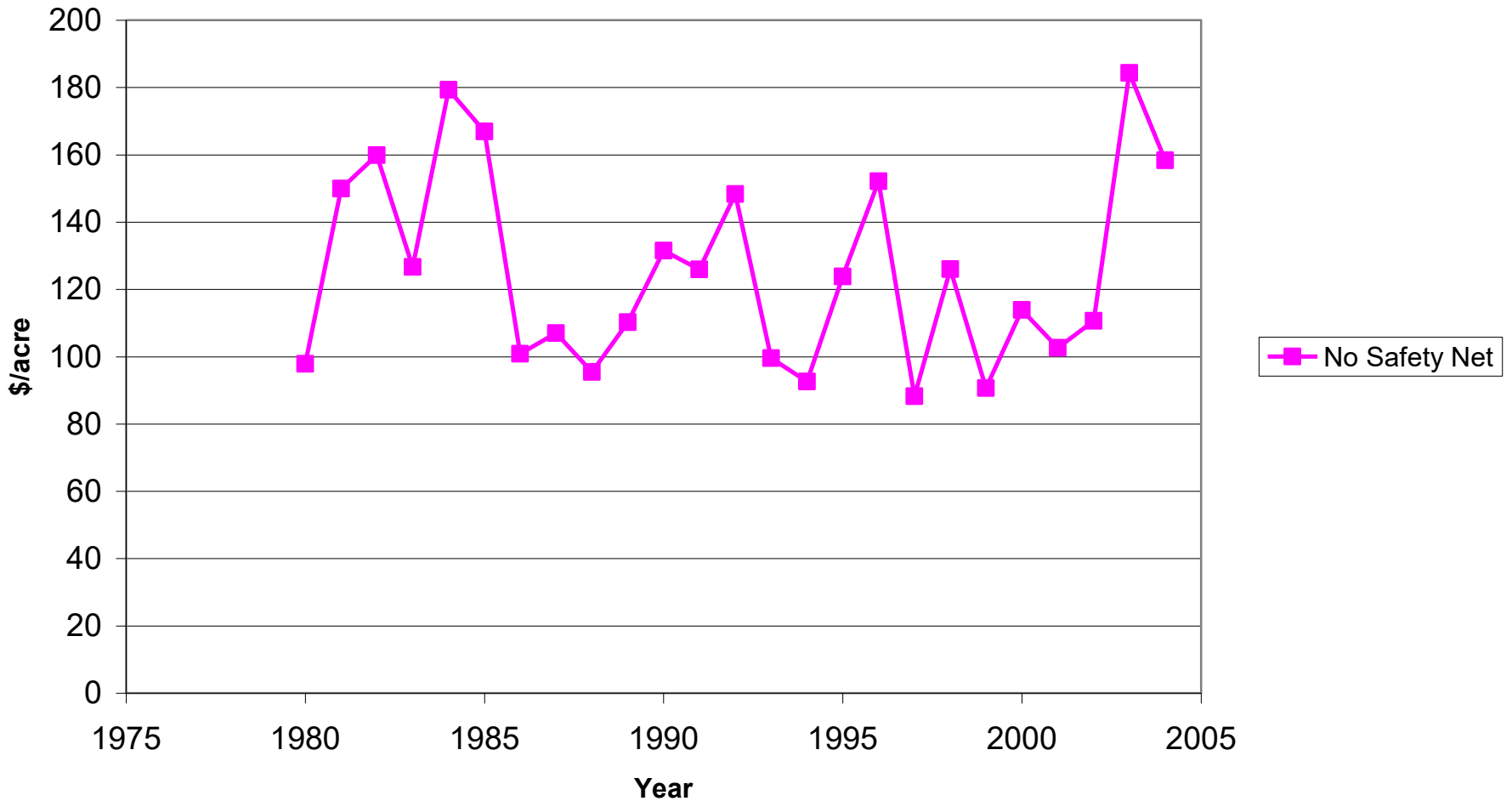
Barley - \$2.00/bu

Rice - \$8.15

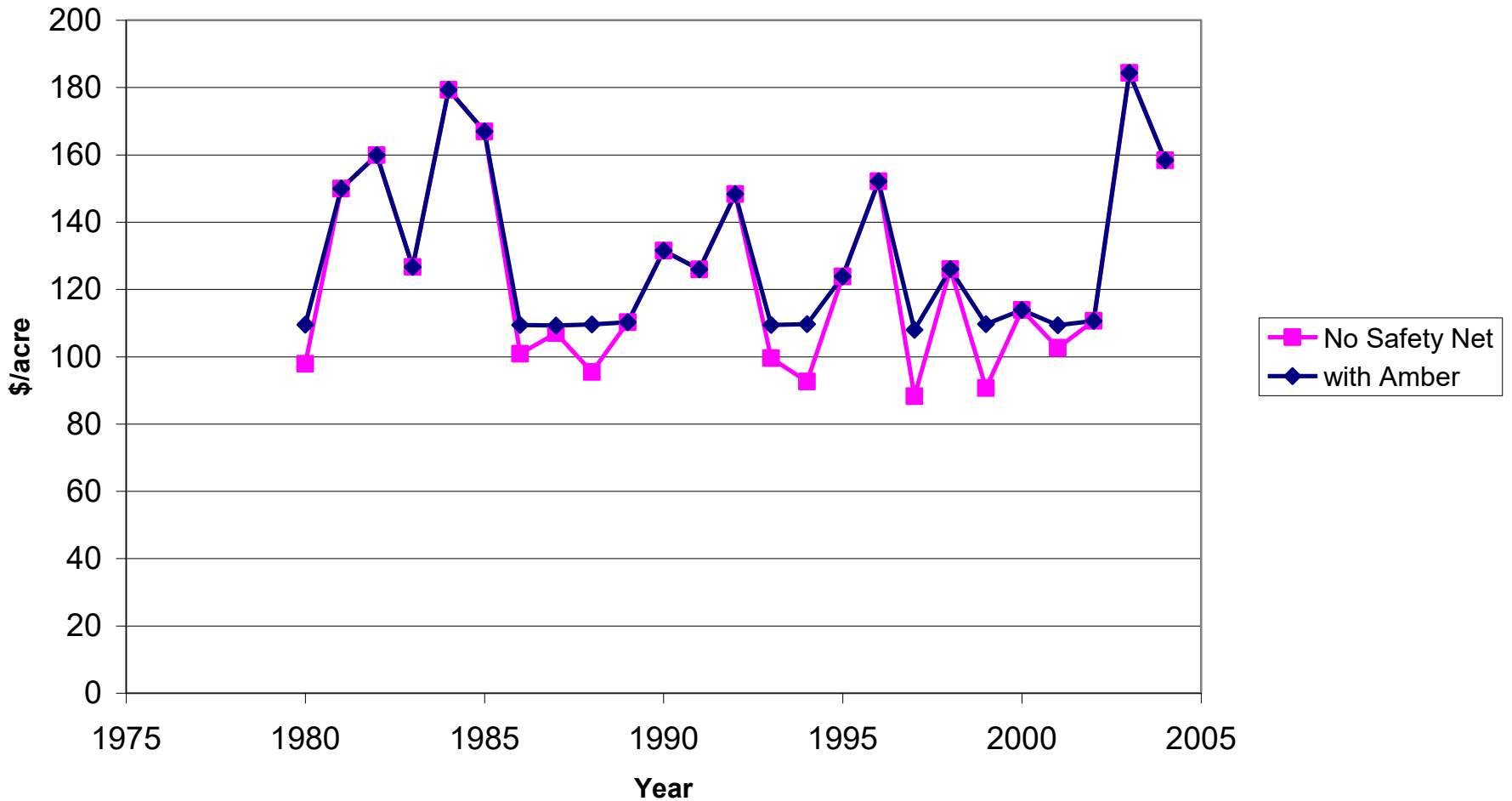
# Maximum Safety Levels

- 85% amber box coverage level for all crops and counties
  - crop specific limits start binding
- 95% blue box coverage level
  - aggregate limit begins to bind

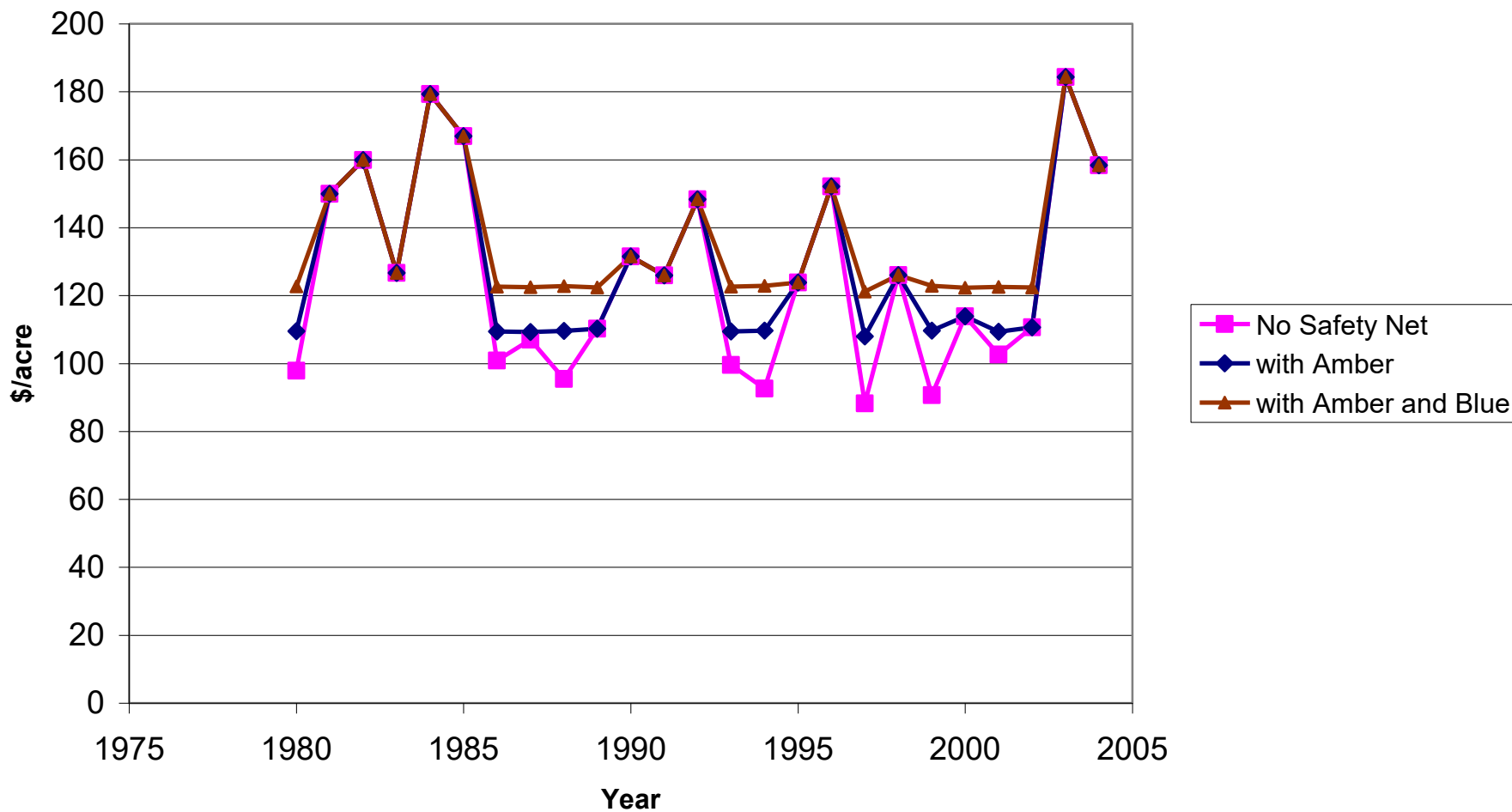
# Effect on Steele County Wheat Revenue from New Amber and Blue Box Proposals



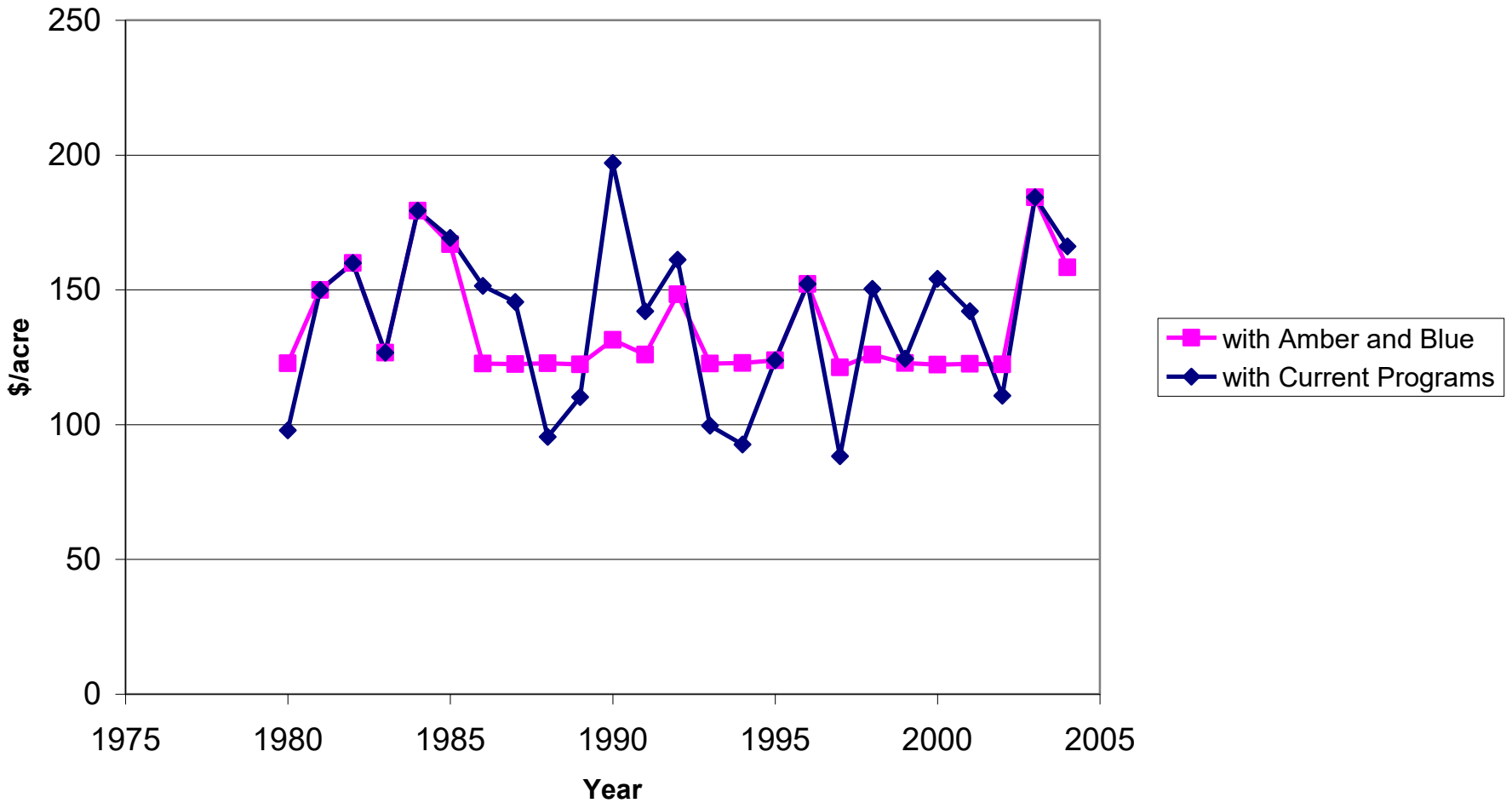
# Effect on Steele County Wheat Revenue from New Amber and Blue Box Proposals



# Effect on Steele County Wheat Revenue from New Amber and Blue Box Proposals



# County Revenue Under Current Programs and New Amber and Blue Box Proposals



# Impact of Proposed Programs

- Provides effective safety net within WTO limits as proposed by the U.S.
- Consolidates crop insurance, commodity programs, and disaster aid
- Adopts the target (revenue) that farmers prefer
- Would be a departure from 70 years of supporting prices