

Analysis of Agricultural Act of 2001, H.R. 2646 Farm Bill

Texas Legislature Staff Briefing
Implications for the 2002 Farm Bill
Austin, Texas
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Most Significant Factors Contributing to Current Pressures

- 1) Exchange Rate – 25% higher than 4 years ago, likely to remain strong through 2004-5
- 2) Slow recovery in foreign economies, especially the Pacific Rim, but not strong enough to overcome exchange rate gains.
- 3) Energy Prices

Most Significant Factors Contributing to Current Pressures

- 4) Global production of crop—now approaching 5 good years in a row
- 5) Policy Changes
 - Budget Pressure
 - FAIR Act
 - Budget in 2001 versus 2002/Surpluses
- 6) Potential new acreage in Brazil

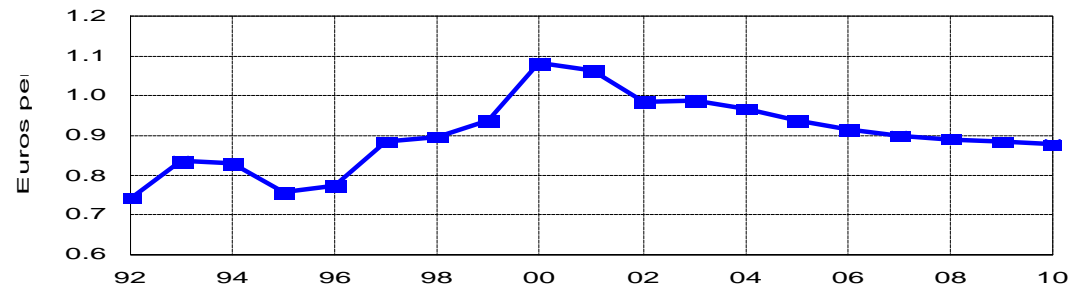
Macroeconomic Assumptions

- Macroeconomic assumptions underlying the FAPRI baseline were pulled from Standard and Poor's DRI in December 2000.

- The **Euro** is projected to strengthen relative to the dollar, reaching \$0.90 by 2007.

- All other factors equal, the **stronger Euro** makes the EU less competitive in world markets.

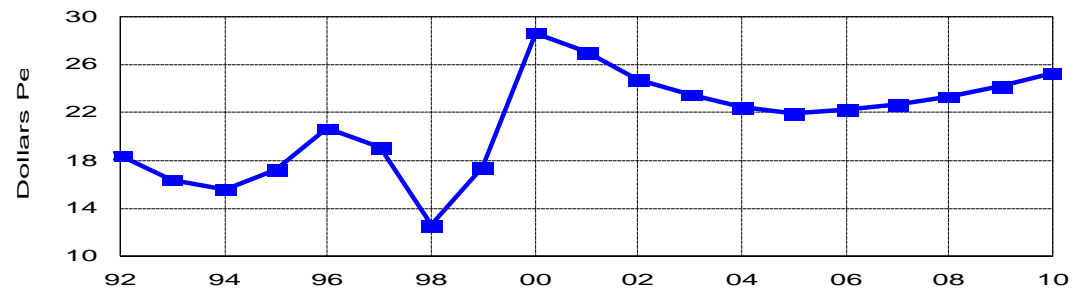
Euro vs. U.S. Dollar Exchange Rate



- **Crude oil prices** averaged \$29 per barrel in 2000, about 50% higher than the levels of the previous decade.

- Lower prices are projected over the baseline period, with a **low of \$22** projected for 2005. Although lower than 2000, prices still remain high relative to the 1990s.

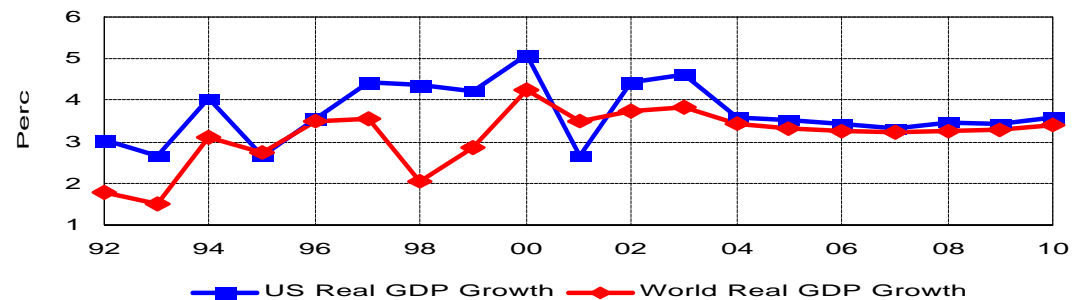
Crude Oil Price



- After expanding by 5% in 2000, growth in the **U.S. economy** is expected to slow in 2001. Longer term, U.S. real GDP growth averages 3.5% per year.

- Growth in **world real GDP** is projected to range between 3 and 4%.

Real GDP Growth



Projected Consequences--Without Additional Government Support

- Negative for the majority of the crop sector
 - **Price recovery not likely until mid-decade for all crops except soybeans**
- Positive for the majority of the livestock industry
- Positive for consumers and food prices

U.S. Beef

- **Beef production** is projected to decline by over 600 million pounds in 2001. Beef production remains below 26 billion pounds through 2003.

- **Beef cows** are projected to increase by 200 thousand head during 2001. During the next increasing phase of the cattle cycle, beef cows increase to 36 million head.

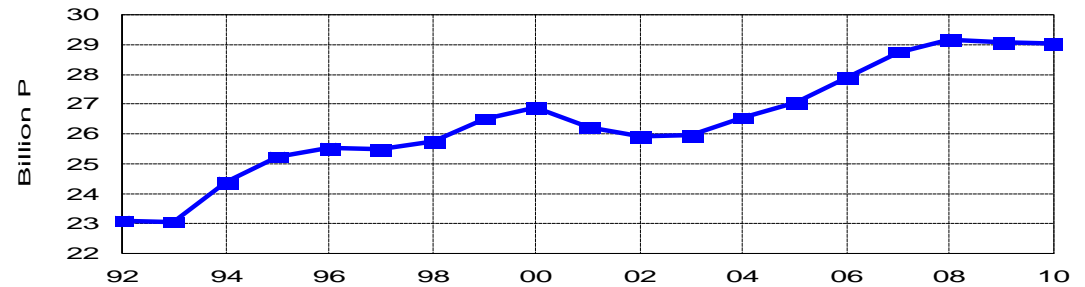
- **Cattle prices** have increased substantially since 1998. In 2001, Nebraska direct fed steer prices are project to average \$74.49 per cwt.

- **Oklahoma feeder steer prices** are projected to average over \$95 per cwt. for the next three years. These prices would be moderated if feed costs were to increase over the low levels seen in the baseline.

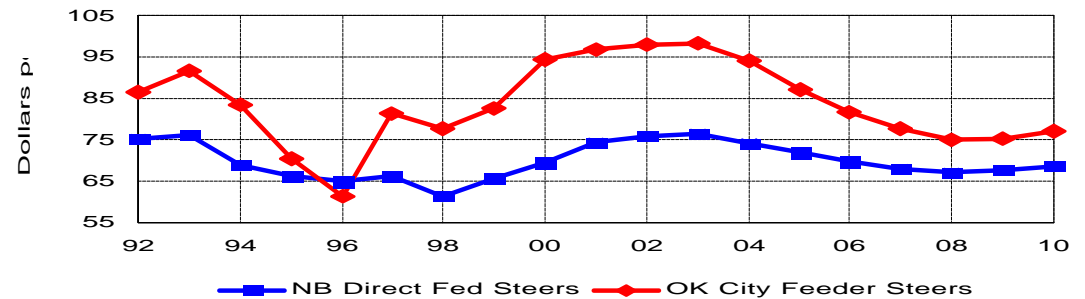
- With the decline in domestic beef supplies, **per capita beef consumption** is projected to decline by over 2 pounds per person in 2001.

- **Demand** for beef has been positive the last two years. If demand were to return to the weak levels seen during much of the 1980s and 1990s, the projections for industry growth would be muted.

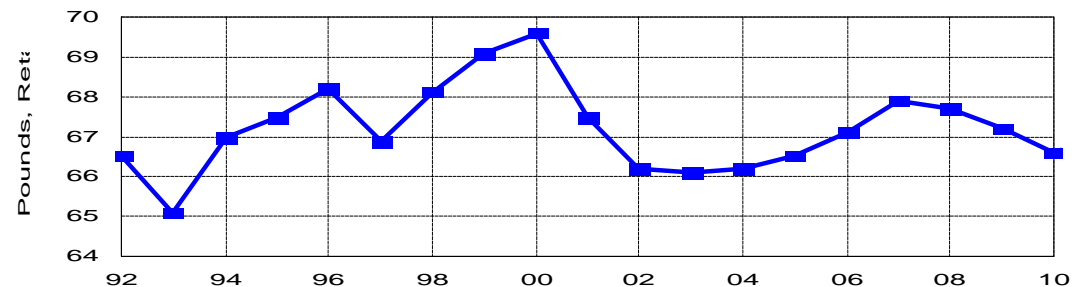
U.S. Beef Production



Cattle Prices

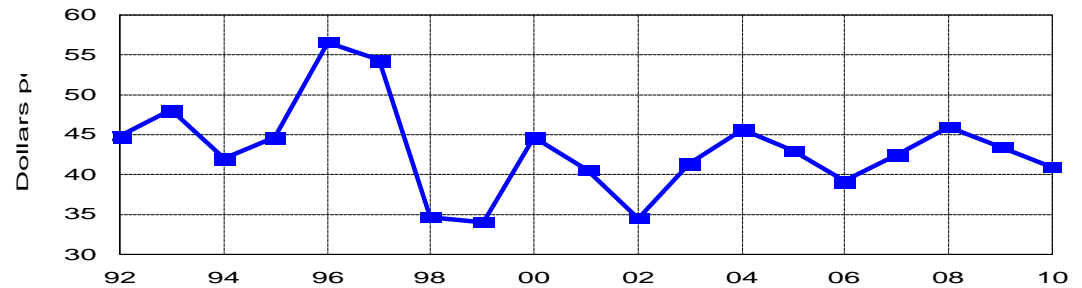


Beef Consumption per Person



U.S. Pork

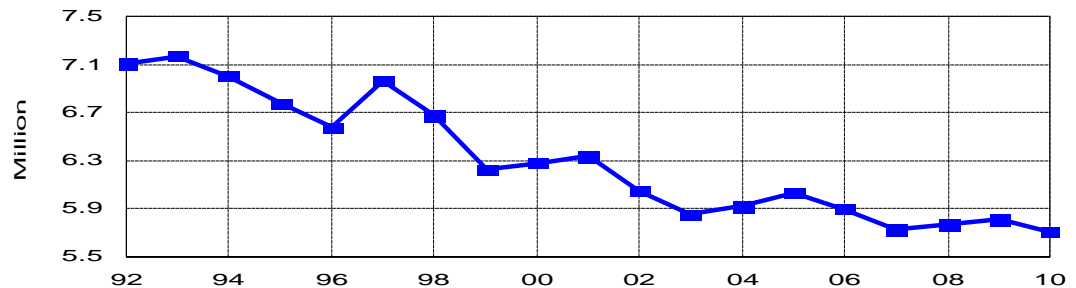
Barrow and Gilt Price, Nat'l Base, 51-52% Lean



- Barrow and gilt prices are projected to average \$40.60 per cwt. in 2001 after averaging near \$45 per cwt. in 2000. Barrow and gilt prices average between \$39 per cwt. and \$46 per cwt. over the baseline.

- Packing capacity constraints in 2002 are expected to result in barrow and gilt prices that rival those seen in 1998.

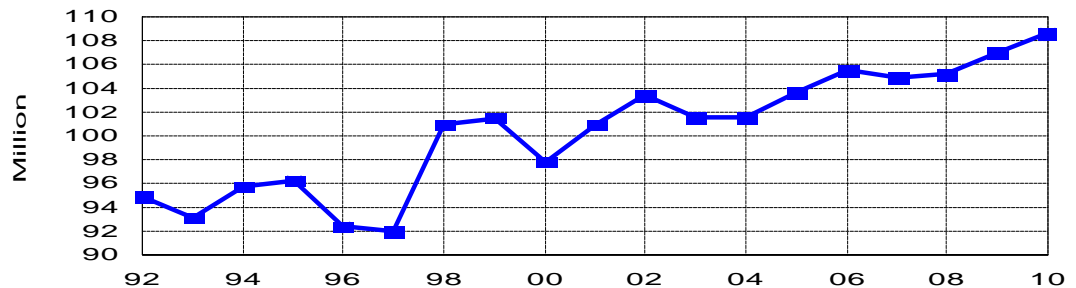
Swine Breeding Inventory, Dec. 1



- The pork breeding herd is projected to continue the long term decline as productivity increases continue to cause total pork supplies to increase.

- By the end of December 2002, pork breeding inventories are projected to fall below 6 million head.

Hog Slaughter



- Hog slaughter is projected to reach a record level in 2002 of over 103 million head.

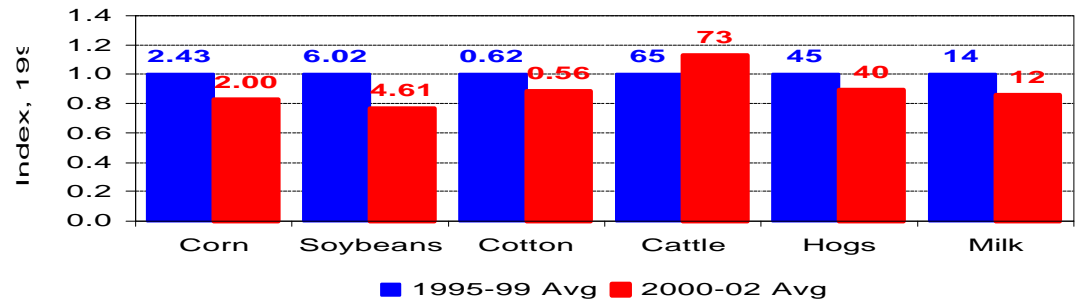
- Additional processing capacity will be necessary to slaughter the 105.5 million head projected in 2006.

Baseline Issues

- Absent weather problems, supplies will continue to pressure **crop prices** below their recent historical levels. In many cases, prices for 2000-02 will average 20% below the 1995-99 level.

- The outlook for **livestock prices** is mixed. Weakness is expected in hog and milk prices, while cattle prices will continue to show strength over the next two years.

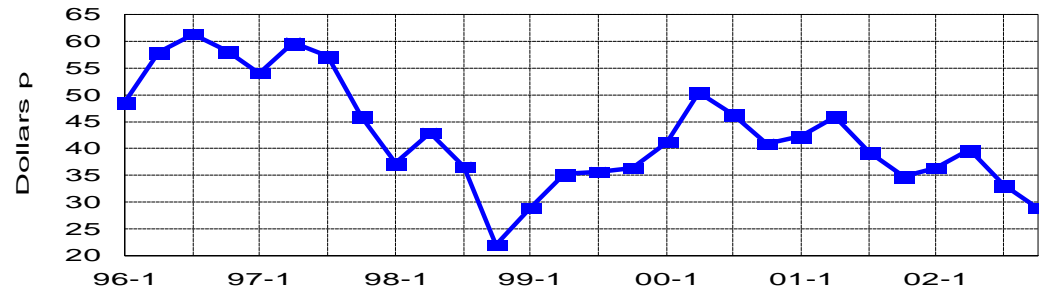
U.S. Commodity Prices



- Pork processing capacity** constraints in the hog industry will likely lead to hog prices returning to the levels seen in late 1998 by 2002.

- Longer term, additional processing capacity will need to be found to accommodate the supply of hogs projected in this baseline.

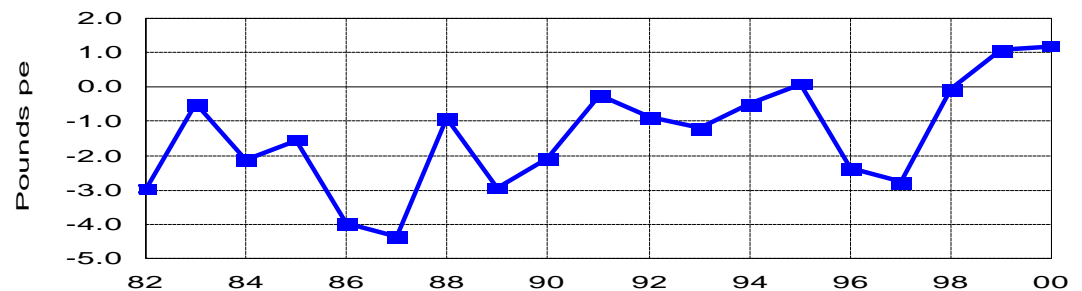
Barrow and Gilt Price, Nat'l Base, 51-52% lean



- Demand for beef** has been positive for the past two years. An additional pound of beef has been consumed above what prices and income would have suggested.

- Any events, like BSE scares in the U.S., could curtail much of the demand growth seen the last couple of years.

Change in Beef Demand Not Due to Prices or Income

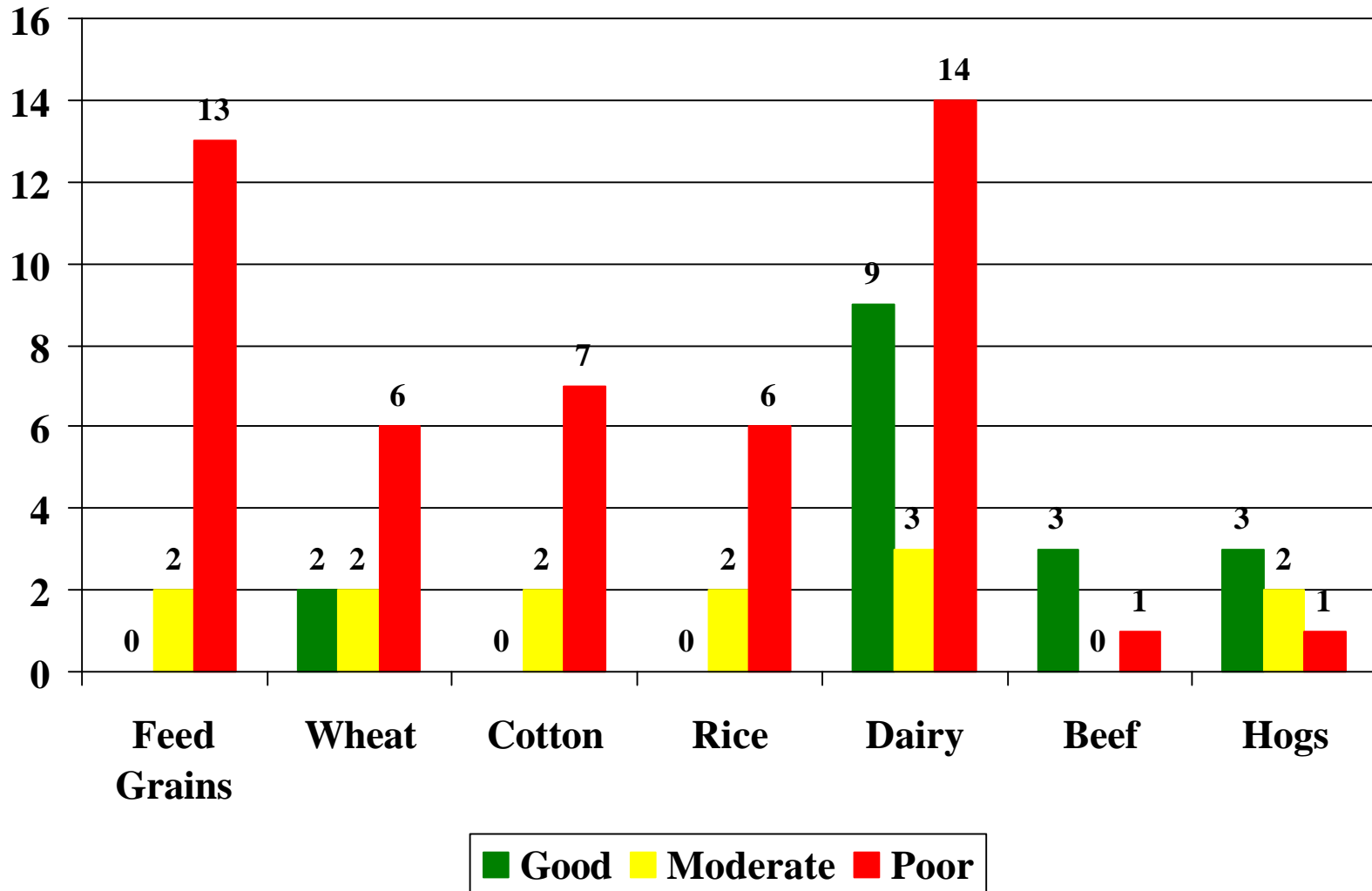


U.S. Commodity Prices

	1981-85	1986-90	1991-95	1996-98	1999	2000-02
Wheat, per Bu	\$3.42	\$3.01	\$3.50	\$3.44	\$2.48	\$2.82
Corn, per Bu	\$2.62	\$2.12	\$2.49	\$2.36	\$1.82	\$2.00
Soybeans, per Bu	\$6.10	\$5.90	\$5.95	\$6.28	\$4.63	\$4.61
Cotton, per Lb	\$0.59	\$0.60	\$0.64	\$0.65	\$0.45	\$0.56
Rice, per Cwt	\$8.02	\$6.39	\$7.48	\$9.50	\$6.11	\$6.21
Sorghum, per Bu.	\$2.34	\$1.91	\$2.35	\$1.91	\$1.57	\$1.83
NE Steers, per Cwt	\$63.99	\$69.83	\$72.20	\$64.28	\$65.56	\$73.38
B&G, per Cwt	\$51.21	\$51.97	\$46.29	\$48.52	\$34.00	\$39.95
All Milk, per Cwt	\$13.44	\$12.91	\$12.80	\$14.51	\$14.38	\$12.22

- With the exception of beef and dairy, 1999 commodity prices came in substantially lower than historical averages. Prices of the 5 major crops are all expected to average below the loan rate for the 2000 marketing year.
- Assuming normal yields, only a modest recovery is anticipated for the 2000-02 period. Soybean prices are expected to average below the 1999 level in the 2000-02 period. Loan rates will continue to play a significant role in a producer's income.
- Strengthening is expected in beef and pork prices as beef production falls and pork levels off.

Summary of Overall Economic Viability for Representative Crop, Dairy, and Livestock Farms 2001-2005



Banner Year for Farm Program Analysis

- Very much associated with Chairman Combest's request for analysis to accommodate testimony before the House Committee on Agriculture
- Commodity organization proposals

Farm Group Proposals

<u>Group</u>	<u>Keep or raise AMTA</u>	<u>Keep or raise loans</u>	<u>Counter-cyclical</u>	<u>Green payments</u>	<u>Manage supply</u>
Corn	Y	N	Y	--	N
Barley	Y+	Y+	Y	Y	--
Cotton	Y	Y	Y	--	N
Rice	Y	Y	Y	Y	N
Wheat	Y+	Y+	Y	Y	N
Soybeans	Y+	Y	Y	Y	N
AFBF	Y	Y+	Y	Y	N
NFU	N	Y+	N	Y	Y

Note: Y=yes; N=no; +=increase; cotton has an option to raise AMTA and loan rate cap

2000 Analysis Requested for Safety Net

- 1) Revenue-based--SIP
- 2) Loan rate increases
- 3) Direct payment--double AMTA
- 4) Flex-Fallow--set aside land

2001 Analysis Requested by Leadership in both Senate and House Ag. Committees

Probing to find adequate support levels

- 5) Varying levels of insurance support
set aside and storage programs
- 6) Target Price, current loans, \$30 Billion
- 7) Target Price, current loans, \$40 Billion
- 8) Target Price, modify soybeans, \$30 Billion

2001 Analysis Requested by Leadership in both Senate and House Ag. Committees

- 9) Target Price, modify soybeans, \$40 Billion
- 10) Revenue Support, current loans, \$30 Billion
- 11) Revenue Support, current loans, 40 Billion
- 12) Revenue Support, modify soybeans, \$30 Billion
- 14) Revenue Support, modify soybeans, \$40 Billion

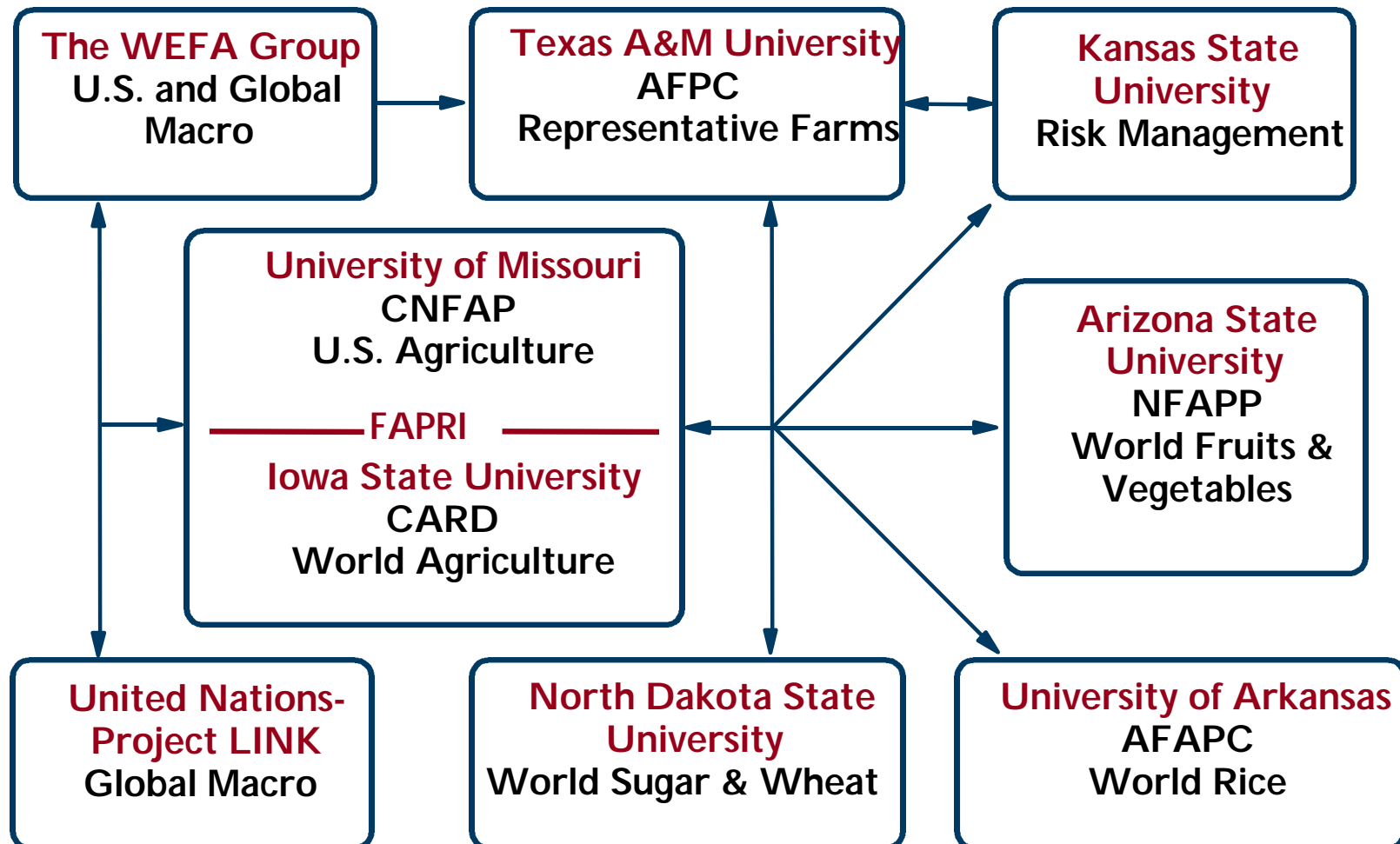
2001 Analysis Requested by Leadership in both Senate and House Ag. Committees

15) Mid-July--draft farm bill proposal

16) Late-July--H.R. 2646

How is the Analysis Accomplished?

FAPRI-AFPC - Consortium



FAPRI-AFPC Consortium

- A consortium of 7 universities with linkage to two large global economic forecasting organizations—the WEFA Group in Philadelphia and Project LINK with the United Nations
- 60 individuals at all the universities working on the global, farm level, and environmental systems
- Material presented is based on work done by the consortium
- A large portion of the FAPRI financing is directly appropriated by Congress and most of our analysis is done at the direct request of the U.S. House and Senate Committees on Agriculture.

General Assumptions

- Analysis incorporates the provisions that address loan rates and direct payments for grains, cotton and oilseeds (excluding peanuts) as well as an increase in the CRP enrollment cap.
- The analysis does *not* include any proposed changes to other conservation programs, other crops, dairy, trade programs, research, nutrition, and rural development.

Loan Rates, Fixed Payments & Target Prices

	Loan Rates		Fixed Payments	Target Prices
	Baseline	H.R. 2646		
Wheat	\$2.58	\$2.58	\$0.53	\$4.04
Corn	\$1.89	\$1.89	\$0.30	\$2.78
Sorghum	Relative market prices w/corn	\$1.89	\$0.36	\$2.64
Barley	Relative market prices w/corn	Same as baseline w/max of \$1.65	\$0.25	\$2.39
Oats	Relative market prices w/corn	Same as baseline w/max of \$1.21	\$0.025	\$1.47
Cotton	\$0.5192	\$0.5192	\$0.0667	\$0.736
Rice	\$6.50	\$6.50	\$2.35	\$10.82
Soybeans	\$5.26	\$4.92	\$0.42	\$5.86
Minor Oilseeds	\$9.30	\$8.70	\$0.74	\$10.36

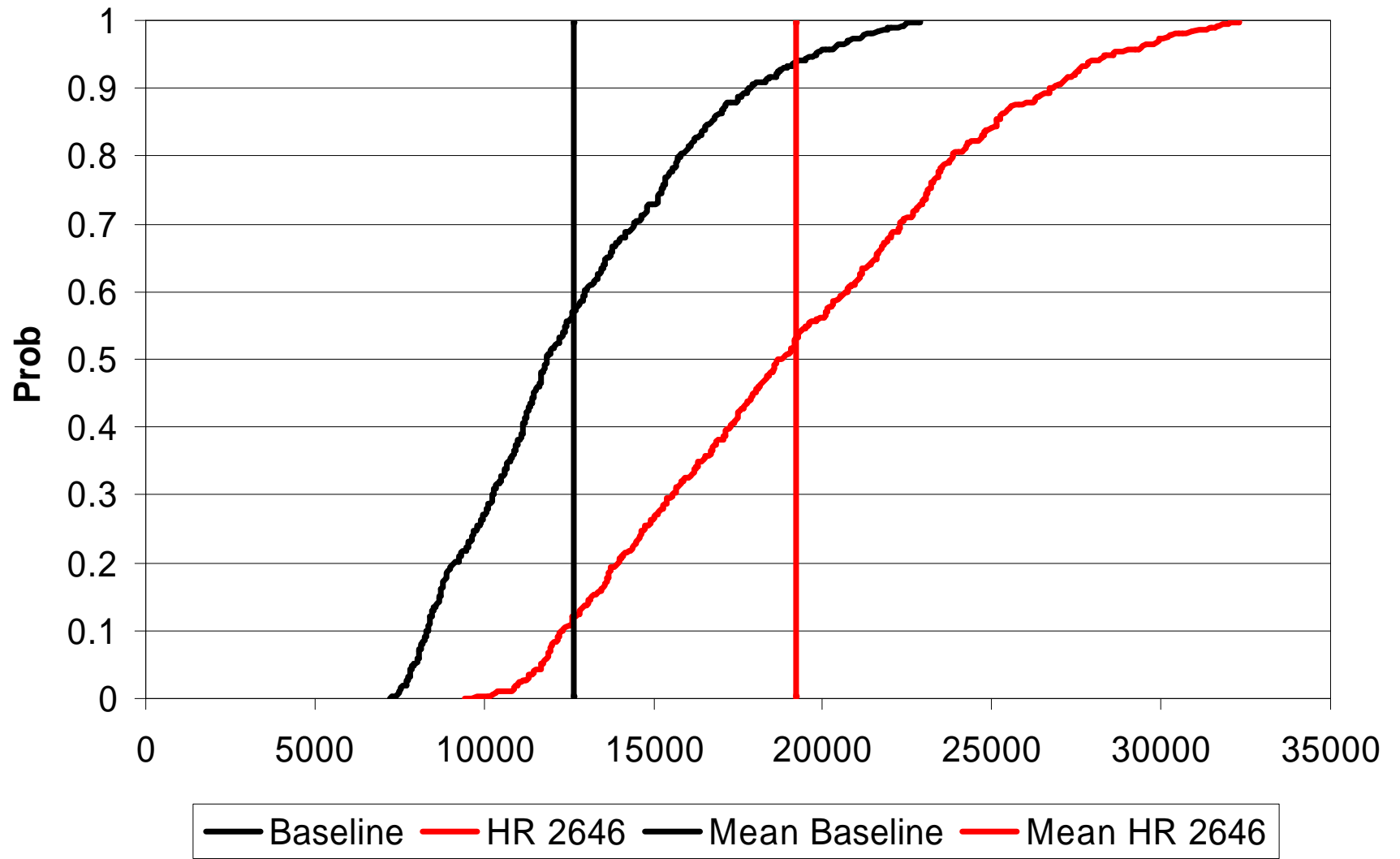
Fixed & Counter-cyclical Payments (CCPs)

- $CCPs = \text{Target Price} - \text{Fixed Payment}$
– (higher of farm price or loan rate)
- CCPs and fixed payments are paid on program yield on 85% of base acres.
- Current flexibility rules apply. **Payments are not tied to the current production decision.**
- Determining the base acreage?

Impacts on Production & Price

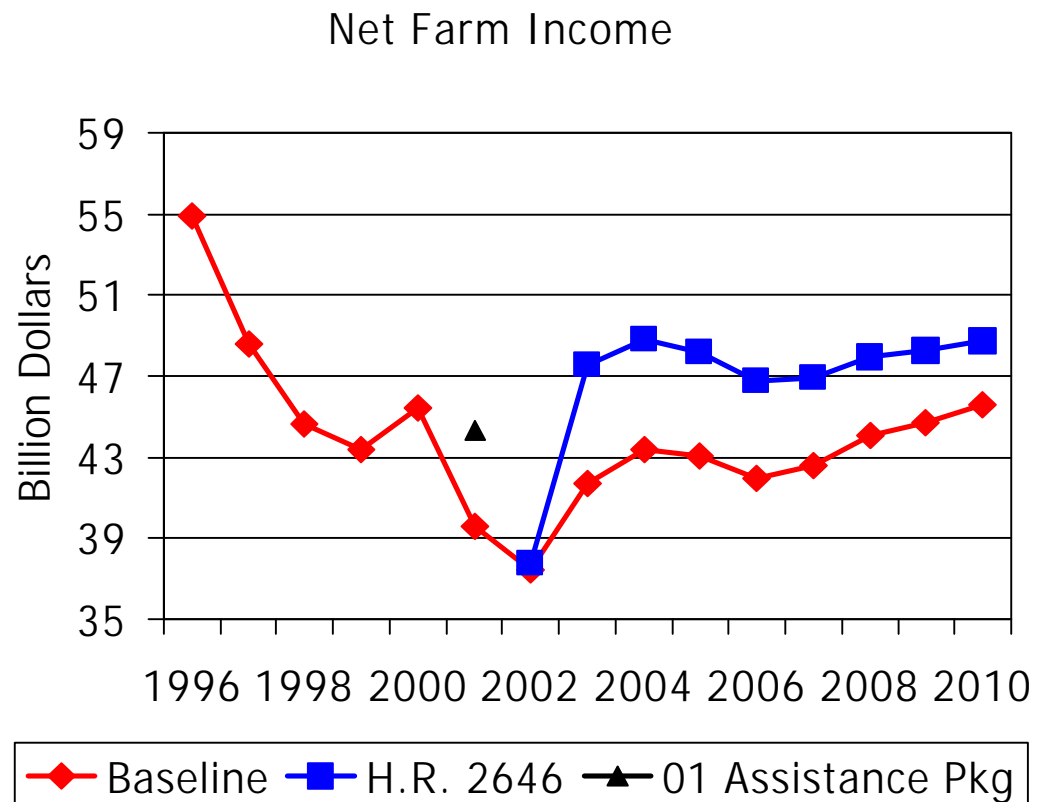
- Marginal increases in grain and cotton area with oilseed area declining from baseline levels.
- Total planted area increases by less than 1%.
- Changes in crop prices reflect shifts in acreage
 - Grain prices fall by 2-4 cents/bu
 - Soybean prices rise by 4 cents/bu
 - Cotton prices fall by less than 1 cent/lb

CDF Gov't Outlays in 2004 (Billion \$)



Impacts on Net Farm Income

- H.R. 2646 increases farm income by an average of \$4.5 billion above baseline levels.
- For the 1996-00 period, farm income averaged \$47.4 billion.
- The 2001 assistance package would add \$4.7 billion to 2001 farm income.



Possible WTO Implications?

- If the CCP is classified as “non-product-specific Amber box,” then our analysis suggests spending under H.R. 2646 has a 36.5% chance of exceeding the AMS cap of \$19.1 billion for the 2002 crop.
- As prices increase over the projection period, probability of exceeding AMS cap declines.

Table 1. Summary of How the Representative Crop Farms Would Elect to Change Base Acres Under H.R.2646 Farm Bill

	Retained 1996 Base	Updated Base to 98-01 Planted Acres
Wheat		
COW5440	X	
COW2700		X
KSNW4300		X
KSNW2325		X
KSSW1385	X	
KSSW3180	X	
NDW4850		X
NDW1760		X
WAW1500		X
WAW4250		X

Table 1. Summary of How the Representative Crop Farms Would Elect to Change Base Acres Under the H.R. 2646 Farm Bill

	Retained 1996 Base	Updated Base to 98-01 Planted Acres
Feed Grain Farms		
TXNP1600		X
TXNP6700		X
MOCG3300		X
MOCG1700		X
MONG1400		X
IAG950		X
IAG2400		X
NEG900	X	
NEG1300	X	
TNG900		X
TNG2400		X
SCG1500		X
SCG3500		X

Table 1. Summary of How the Representative Crop Farms Would Elect to Change Base Acres Under the H.R.2646 Farm Bill

	Retained 1996 Base	Updated Base to 98-01 Planted Acres
Cotton		
TXSP3697	X	
TXSP1682		X
TXRP2500		X
TXBC1400	X	
TXCB1720		X
CAC2000	X	
CAC6000	X	
TNC1675		X
TNC3800		X
ALC3000		X
LAC2640		X

Table 1. Summary of How the Representative Crop Farms Would Elect to Change Base Acres Under the H.R. 2646 Farm Bill

	Retained 1996 Base	Updated Base to 98-01 Planted Acres
Rice		
CAR424	X	
CAR2365	X	
TXR1553	X	
TXR3774	X	
LANR2500		X
LAR1200		X
MOWR4000		X
MOER4000		X
MSR4735		X
ARR3640		X

Determining Base Acreage

- Estimates are based on county data.
- Decision to update based on expected program benefits where each county is treated as a farm.

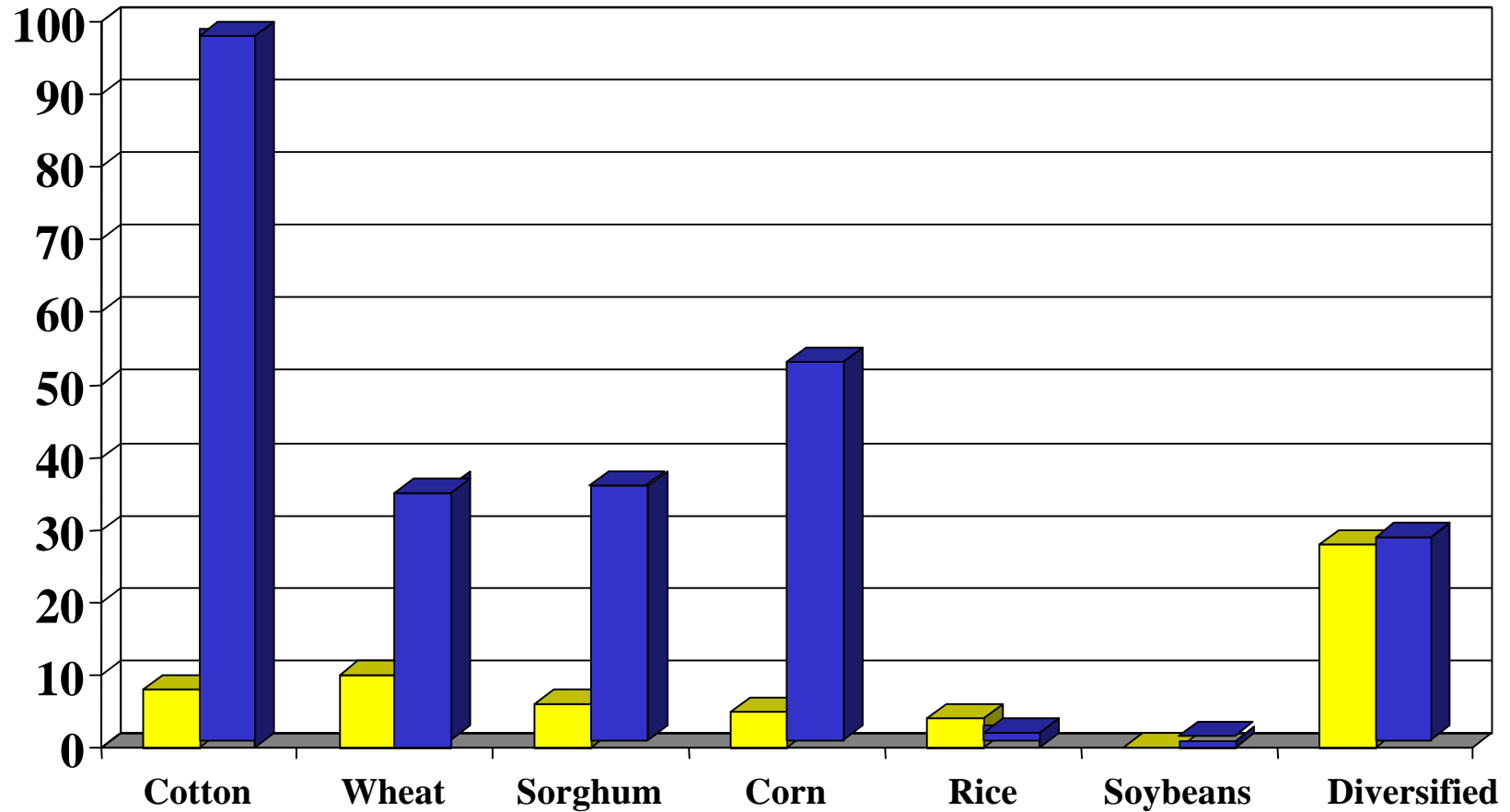
	2002 AMTA	H.R. 2646
Wheat	78.4	71.0
Corn	81.4	78.6
Sorghum	13.5	10.5
Barley	11.1	8.7
Oats	6.7	4.8
Cotton	16.4	16.9
Rice	4.2	4.2
Soybeans	NA	69.2
Sunflowers	NA	1.6
Total	211.7	265.5

FARM Assistance

- Texas Risk Management Education Program
- Individual Strategic Planning
 - Financial Planning
 - “What if” Analysis
 - Policy Alternatives
- Database, Second to None

FARM Assistance Database

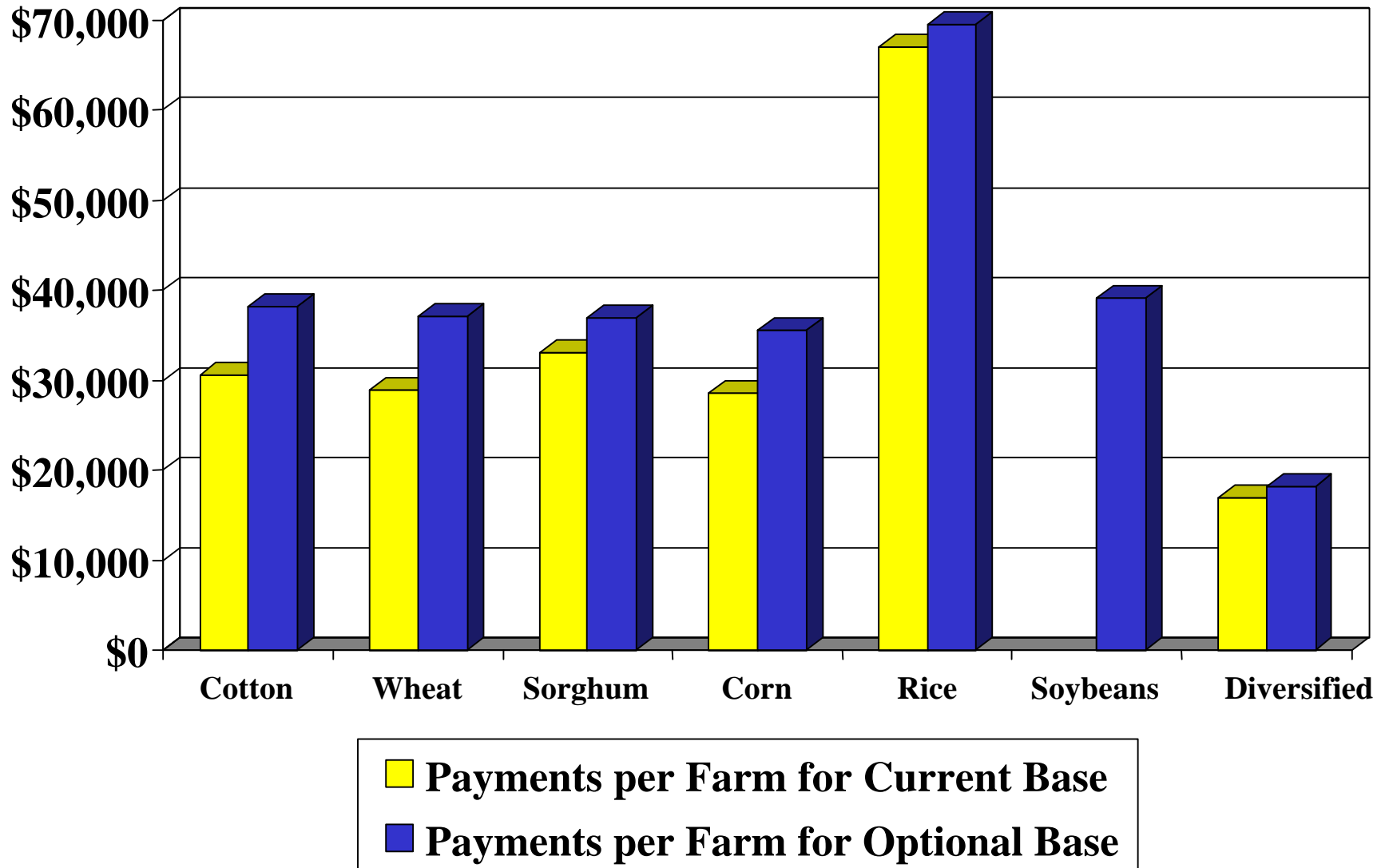
Analysis of Option to Switch Base Acres



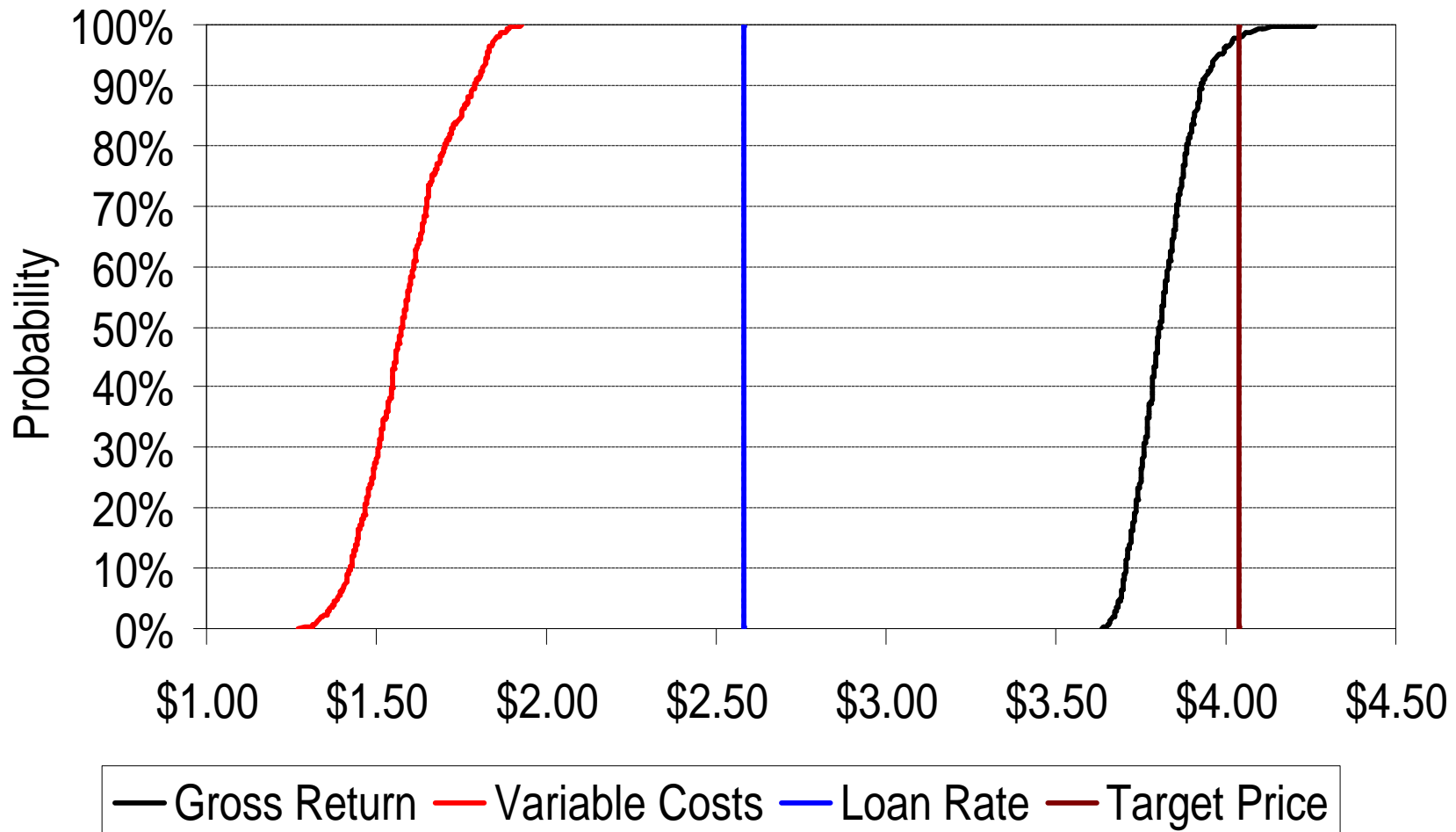
■ No. of Producers Who Would Keep Existing Base
■ No. of Producers Who Benefit from Updating Base

FARM Assistance Database

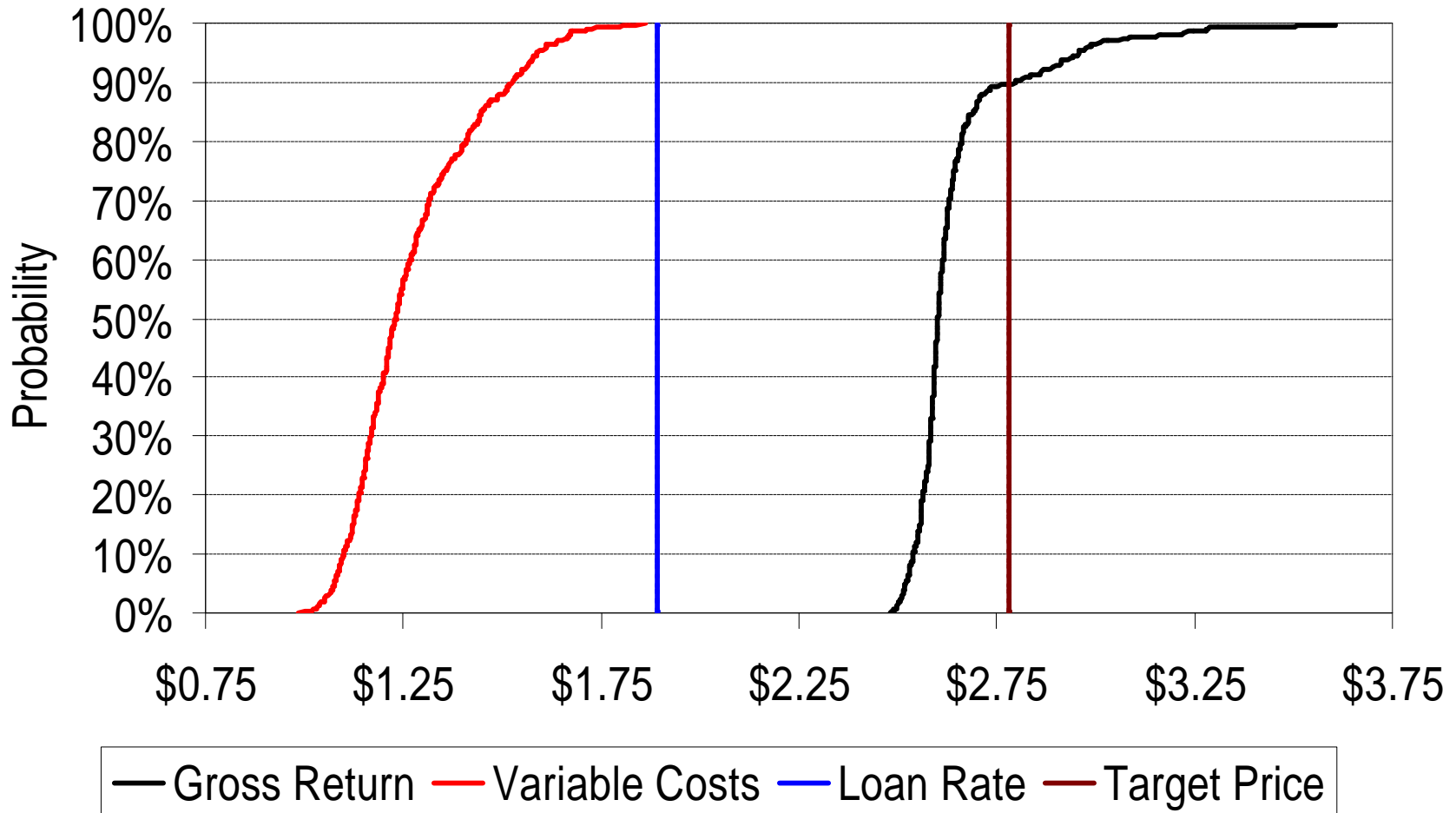
Analysis of Option to Switch Base Acres



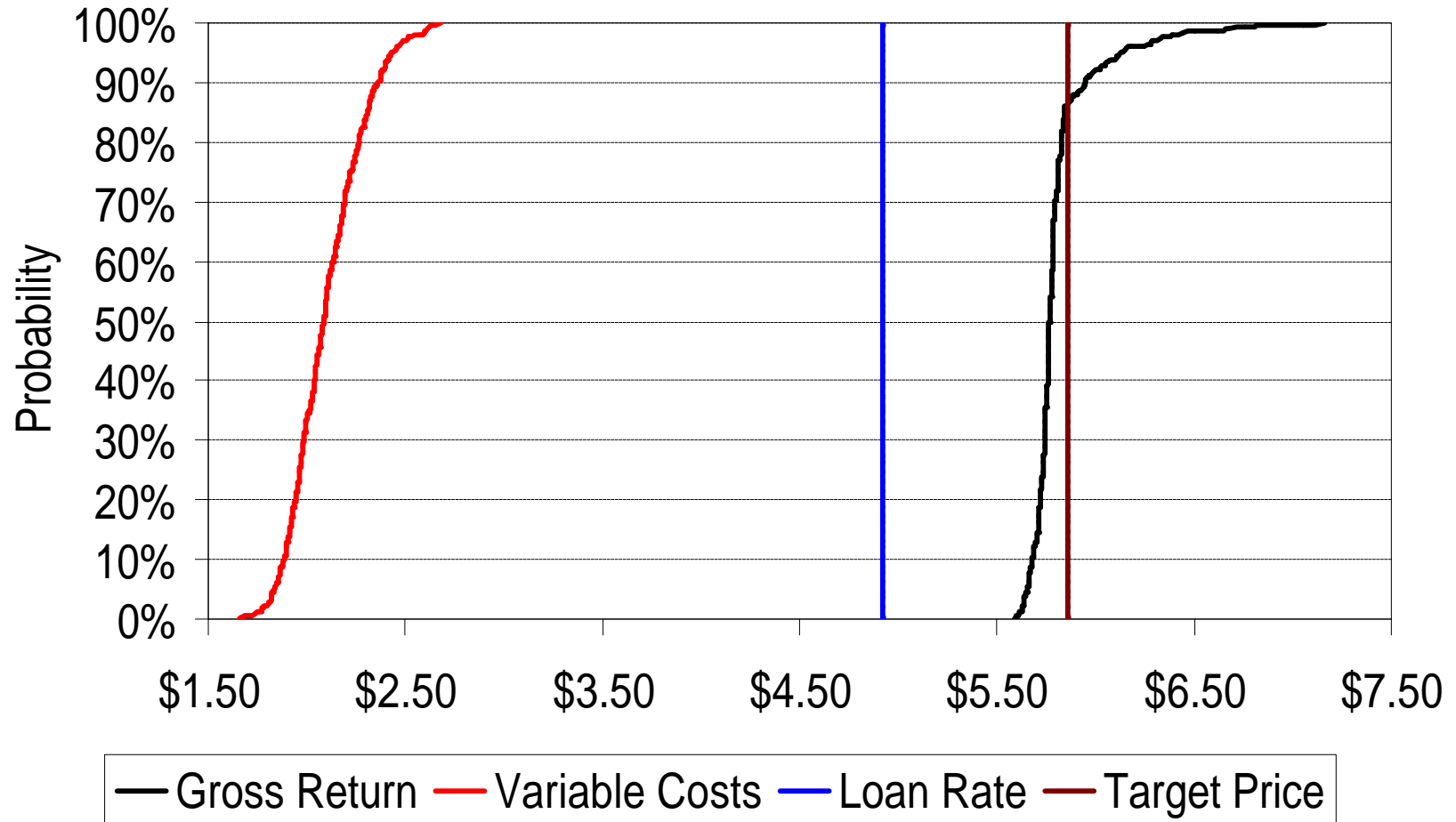
Distribution of 2003 Wheat Returns & Costs Under H.R. 2646, \$/Bu



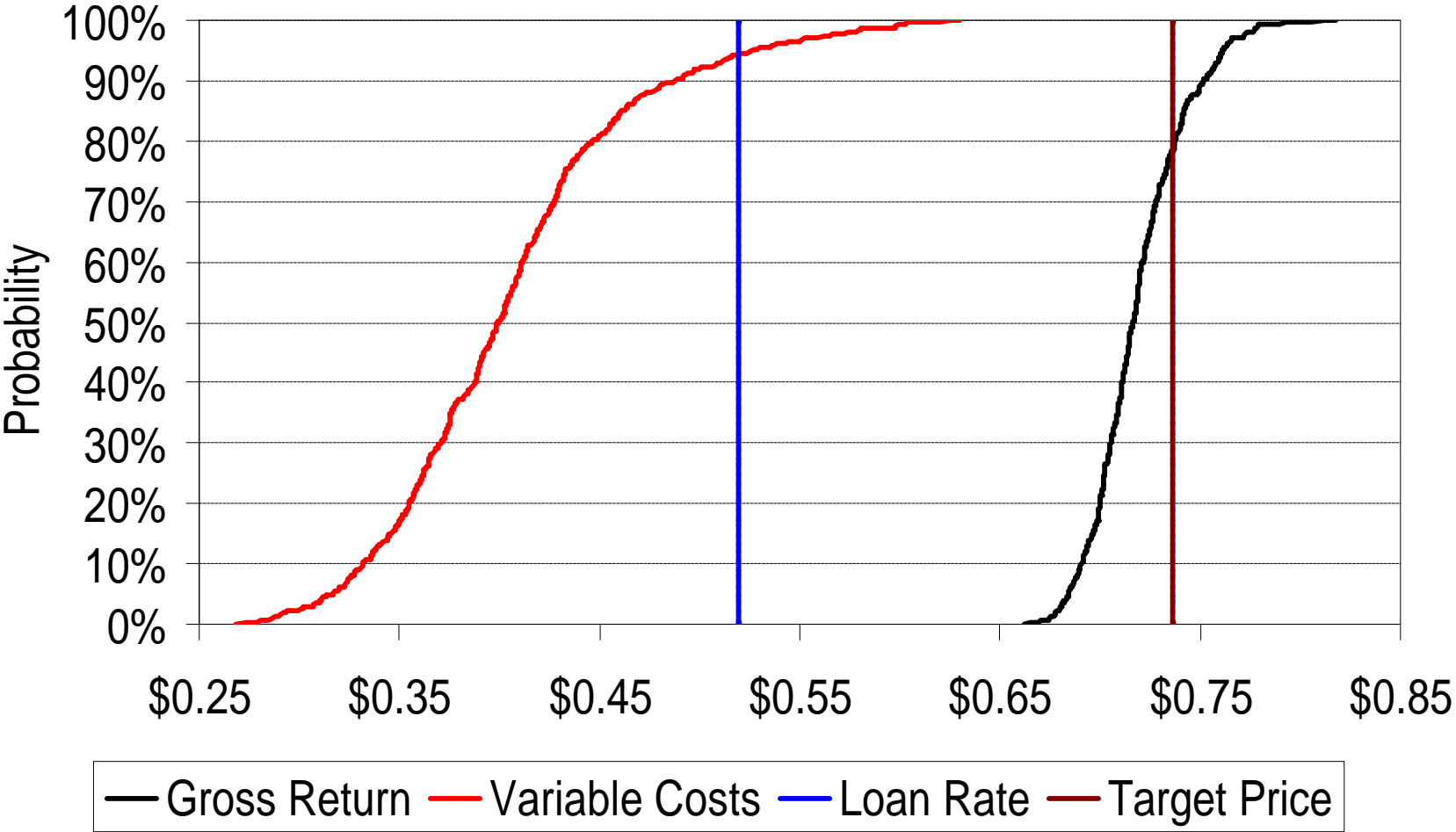
Distribution of 2003 Corn Returns & Costs Under H.R. 2646, \$/Bu



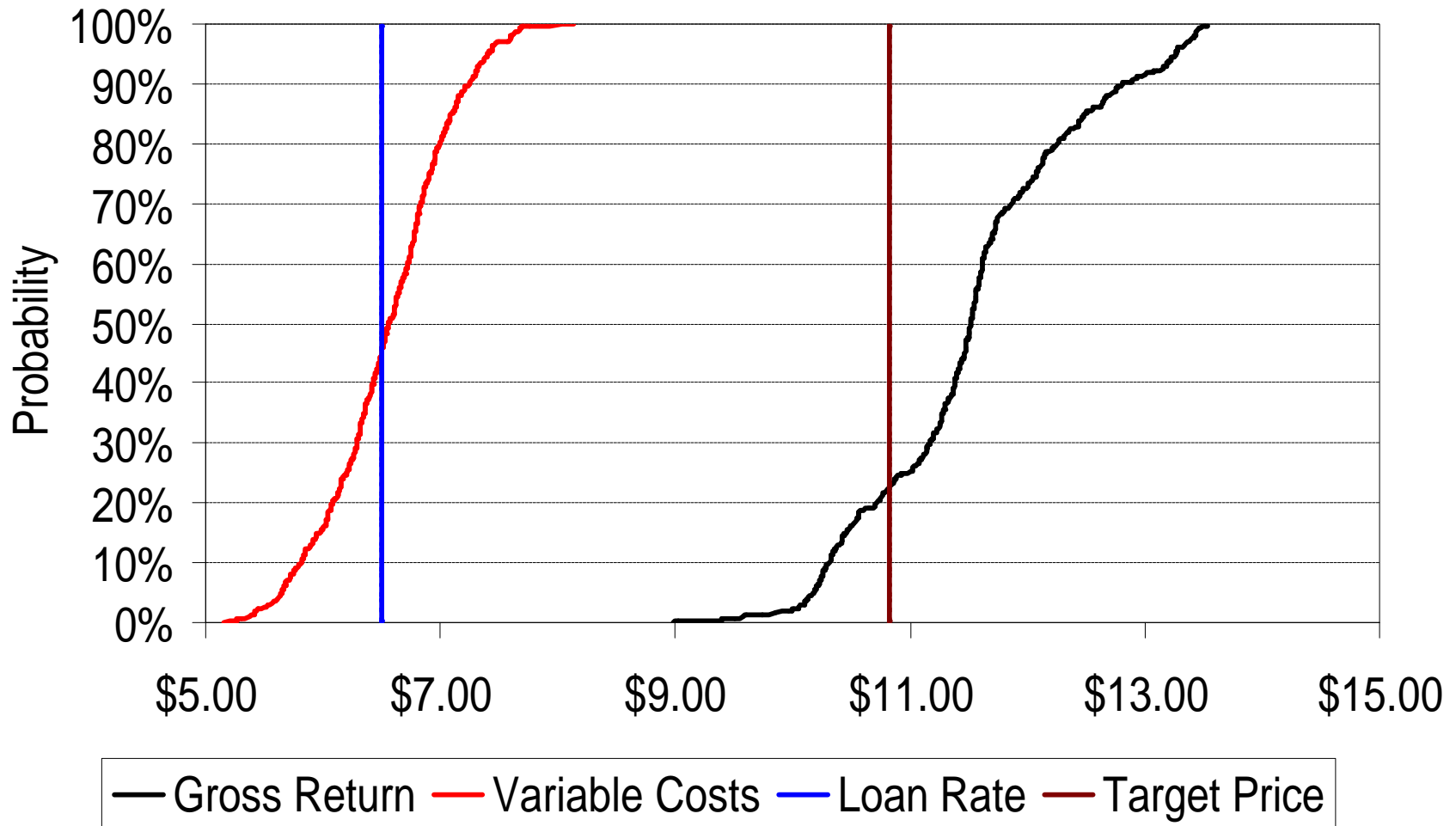
Distribution of 2003 Soybean Returns & Costs Under H.R. 2646, \$/Bu



Distribution of 2003 Cotton Returns & Costs Under H.R. 2646, \$/Lb



Distribution of 2003 Rice Returns & Costs Under H.R. 2646, \$/Cwt



Representative Farm Assumptions

- 44 Farms Analyzed under risk 2000-2006
 - 13 Feed grains/oilseeds
 - 10 Wheat
 - 11 Cotton
 - 10 Rice
- 20% term and 100% operating debt 2000
- Base acreage chosen to maximize benefit
- MPC1 50/100
- Baseline – 1996 FAIR ACT continued through 2006
 - Does not include MLA for 2001
- Provisions of H.R.2646 plus the 2001 MLA
- Payment Limits assumed nonrestrictive

Definition of Terms

- Net Cash Farm Income = Total Receipts including Govt. Payments minus all Cash Expenses
- Probability of a Cash Flow Deficit = Chance that net cash farm income is less than cash required for family living, taxes, principal payments and capital replacement
- Probability of Losing Real Net Worth = Chance that real net worth Dec 31, 2006 is less than beginning net worth Jan 1, 2000

Table 2. Comparison of the H.R. 2646 Farm Bill to a Continuation of the 1996 Farm Bill for Representative Crop Farms, 2000-2006

	Change in Net Cash Farm Income	% Change in Net Cash Farm Income	Change in Probability of a Deficit	Change in Probability of Decreasing Net Worth
	(\$1,000)		(% Points)	(% Points)
Wheat				
COW5440	36	22.0%	-12	-4
COW2700	20	28.0%	-21	-2
KSNW4300	57	1623.6%	-1	0
KSNW2325	26	255.5%	0	-2
KSSW1385	21	56.7%	-11	-67
KSSW3180	41	33.7%	-22	-18
NDW4850	62	39.1%	-27	-30
NDW1760	11	29.9%	-10	-21
WAW1500	35	598.6%	0	-6
WAW4250	98	109.1%	-11	-83

NDW1760 CDF of Average Annual Net Cash Farm Income for Base and H.R.2646 Farm Bill, 2002-2006
(\$1,000)

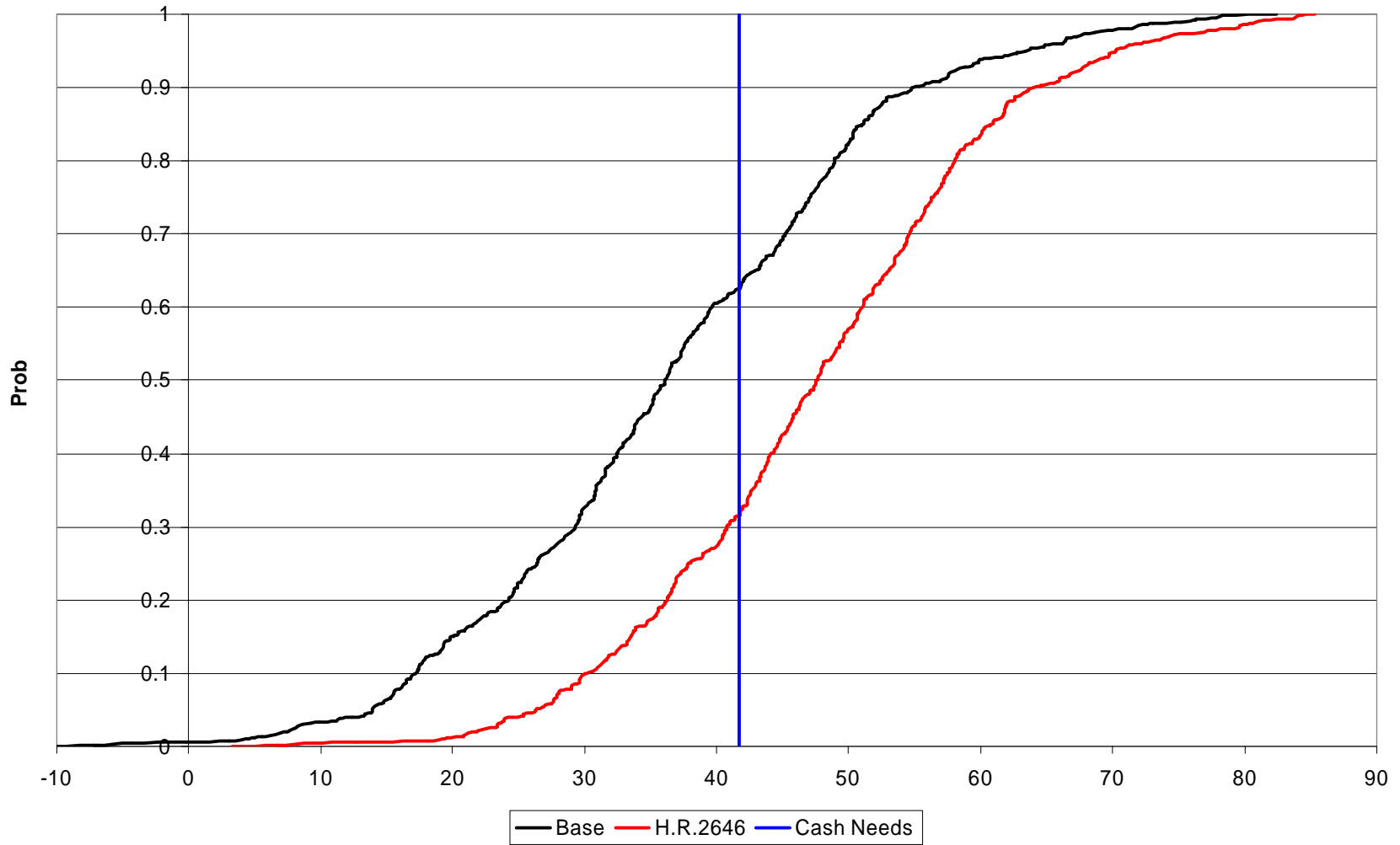


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	Change in Net Cash Farm Income	% Change in Net Cash Farm Income	Change in Probability of a Deficit	Change in Probability of Decreasing Net Worth
	(\$1,000)		(% Points)	(% Points)
Feed Grain Farms				
TXNP1600	44	80.6%	-25	-40
TXNP6700	156	127.2%	-22	-57
MOCG3300	44	23.8%	-21	-35
MOCG1700	32	29.7%	-18	-32
MONG1400	21	169.4%	0	-13
IAG950	21	34.7%	-20	-55
IAG2400	46	43.4%	-36	-33
NEG900	35	35.7%	-31	-17
NEG1300	42	31.7%	-21	-27
TNG900	16	252.0%	0	-1
TNG2400	41	80.1%	-8	0
SCG1500	39	255.0%	-7	-49
SCG3500	131	67.8%	-35	-28

TXNP1600 CDF of Average Annual Net Cash Farm Income for Base and H.R.2646 Farm Bill, 2002-2006
(\$1,000)

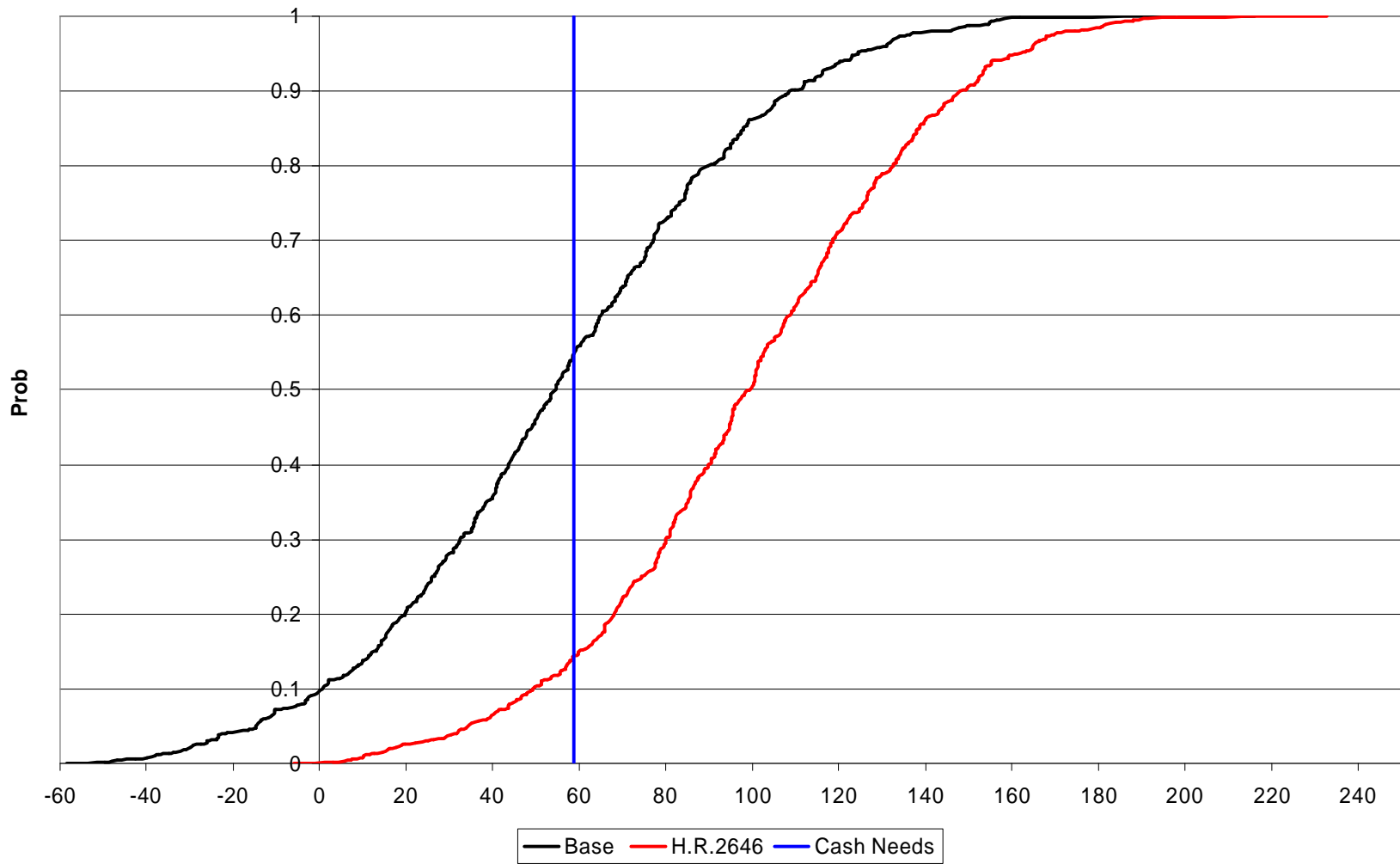
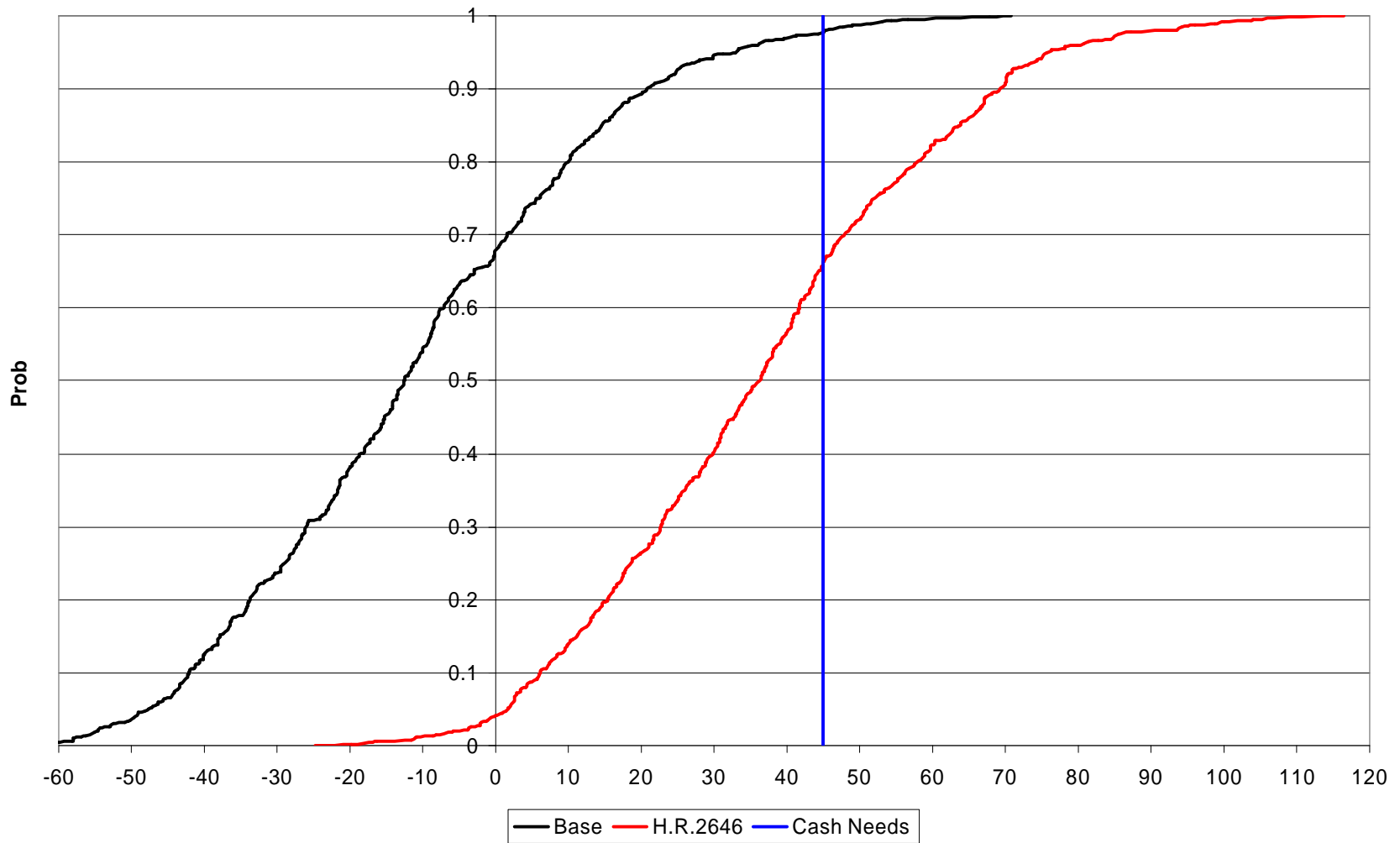


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	(\$1,000)		(% Points)	(% Points)
Cotton				
TXSP3697	93	44.7%	-19	-5
TXSP1682	40	46.0%	-30	-26
TXRP2500	48	434.2%	-8	-32
TXBC1400	30	79.8%	-44	-90
TXCB1720	50	94.8%	-22	-46
CAC2000	160	226.5%	-6	-72
CAC6000	294	29.5%	-2	-14
TNC1675	52	1185.5%	-1	-29
TNC3800	173	242.8%	-39	-79
ALC3000	143	81.5%	-19	-47
LAC2640	96	940.5%	-42	-53

TXRP2500 CDF of Average Annual Net Cash Farm Income for Base and H.R.2646 Farm Bill, 2002-2006
(\$1,000)



TXCB1720 CDF of Average Annual Net Cash Farm Income for Base and H.R.2646 Farm Bill, 2002-2006
(\$1,000)

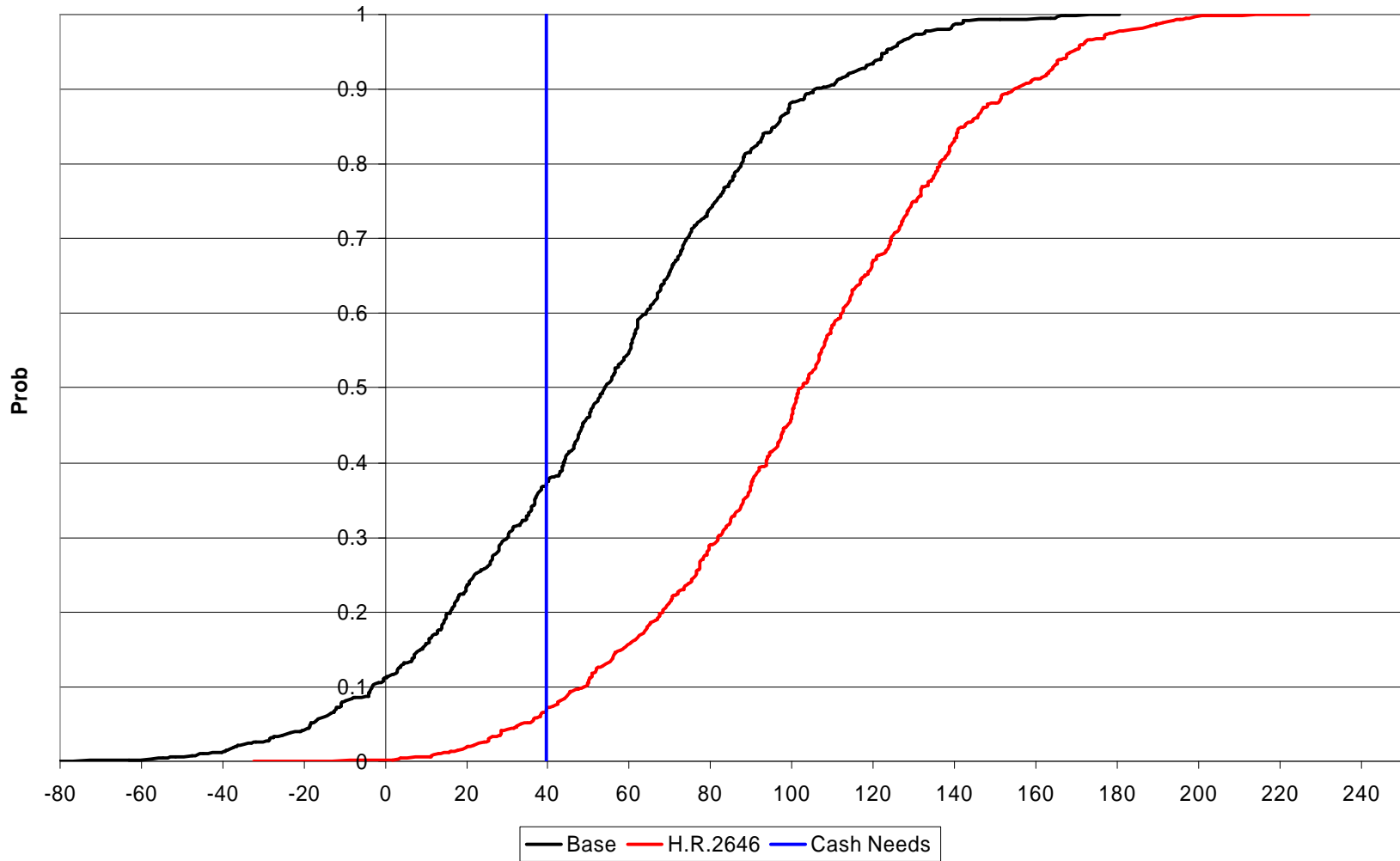
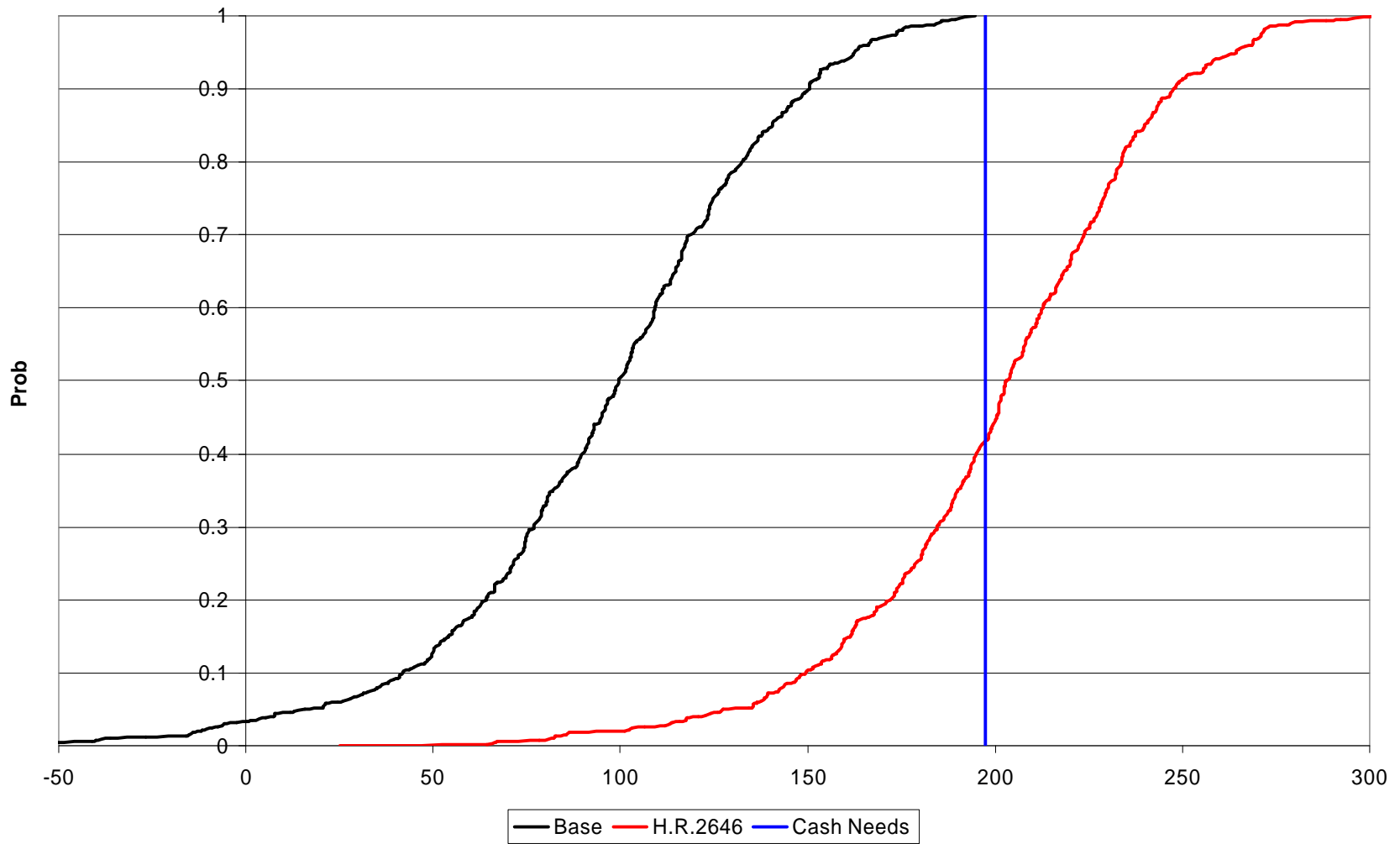


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	Change in Net Cash Farm Income	% Change in Net Cash Farm Income	Change in Probability of a Deficit	Change in Probability of Decreasing Net Worth
	(\$1,000)		(% Points)	(% Points)
Rice				
CAR424	43	1475.3%	-3	-20
CAR2365	235	1020.0%	-19	-32
TXR1553	52	569.1%	0	0
TXR3774	105	109.0%	-16	-59
LANR2500	101	405.6%	0	-5
LAR1200	44	744.7%	-2	-10
MOWR4000	178	93.0%	-11	-54
MOER4000	147	52.3%	-37	-78
MSR4735	164	407.4%	0	-14
ARR3640	131	42.5%	-26	-41

TXR3774 CDF of Average Annual Net Cash Farm Income for Base and H.R.2646 Farm Bill, 2002-2006
(\$1,000)



Summary

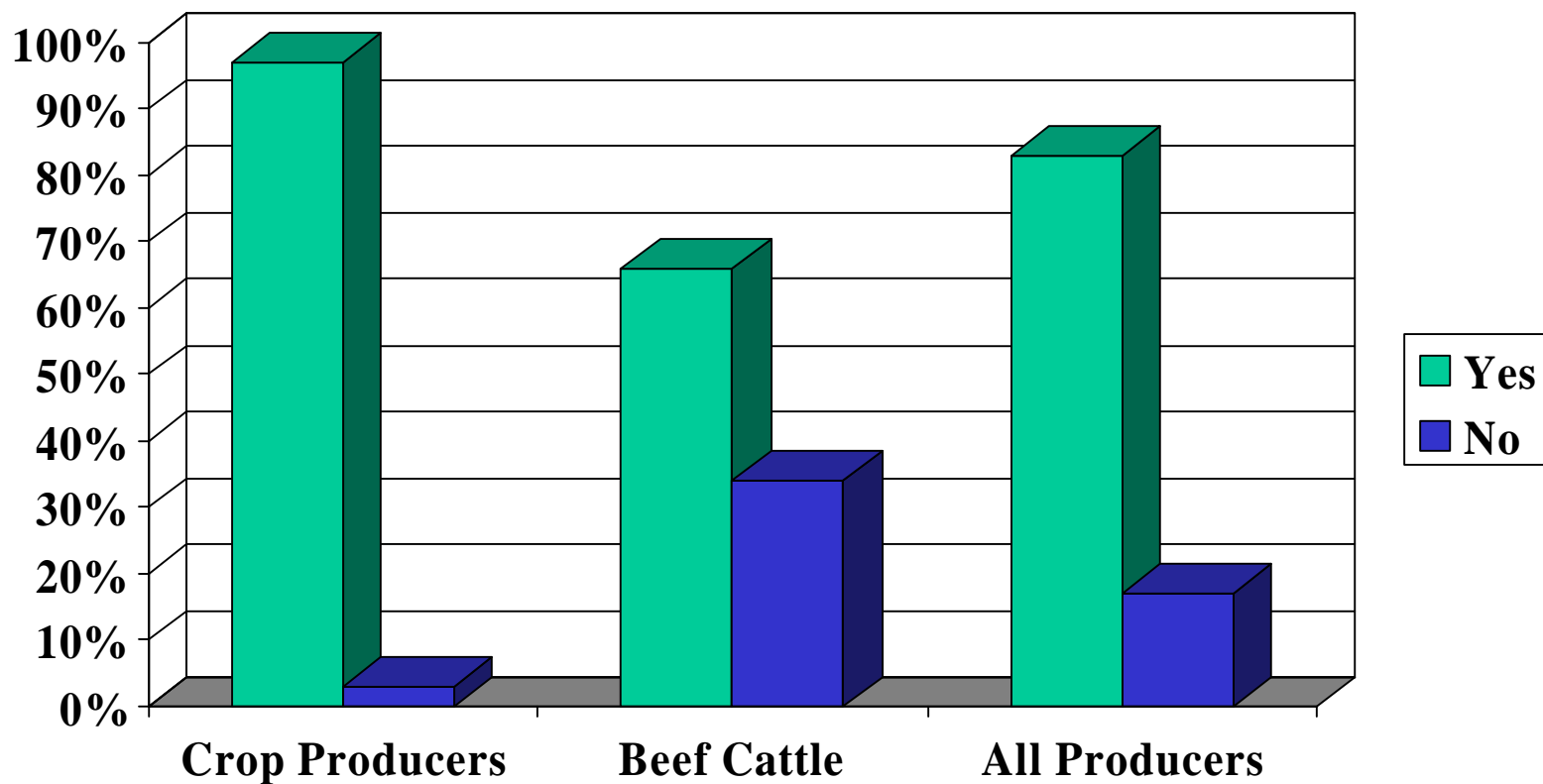
- 13 of 44 crop farms retained current Base acres while 31 farms changed Base to their 1998-2001 average planted acres
- All crop farms benefit from H.R. 2646 Farm Program, relative to continuing the 1996 Farm Bill
 - Higher net cash farm incomes (44 of 44)
 - Lower probability of cash flow deficits (37 of 44)
 - Lower probability of decreasing net worth (40 of 44)

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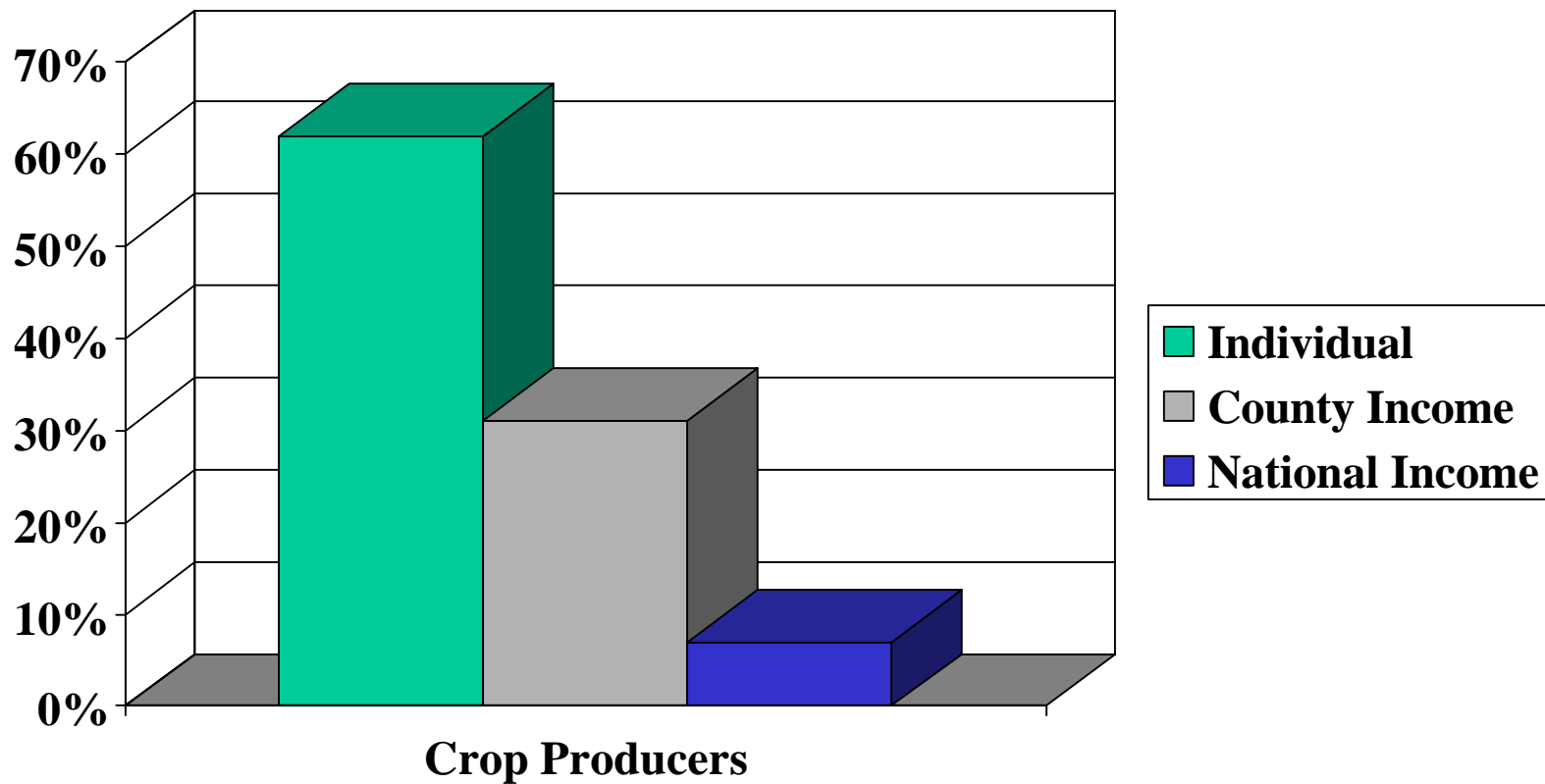
August 7, 2001
450 Surveys Returned

Income Support for Agricultural Producers?



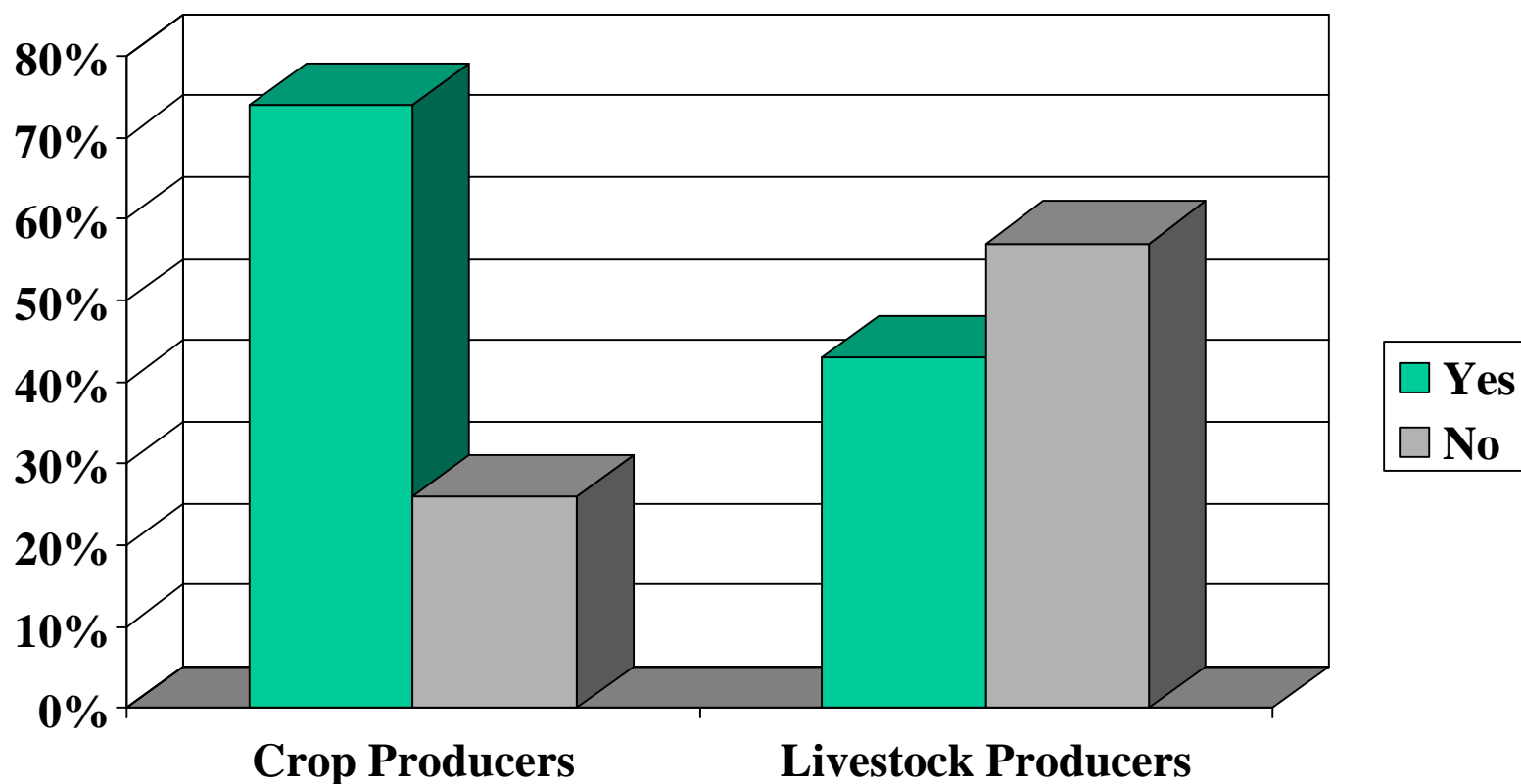
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Determining Counter-Cyclical Payments?



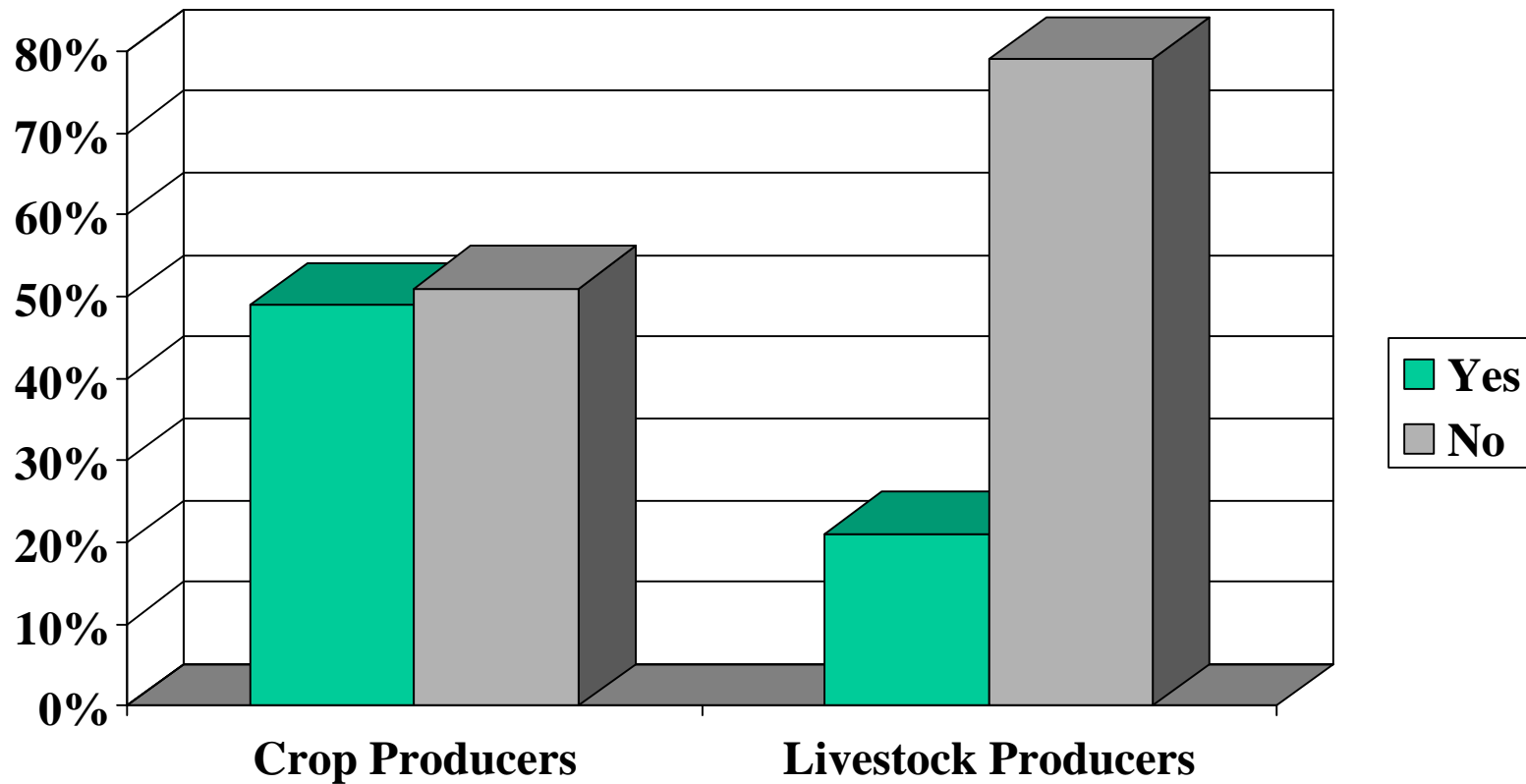
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Drawn on Personal Equity in Past 3 Years?



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Refinanced Debt in Past 3 Years?



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