

Pricing Management/ Marketing Plan

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EXTENSION



Aims of Pricing Management Module

- ❖ **Improve your skills for developing and implementing marketing plans**
- ❖ **Discuss the characteristics of corn and soybean markets**
- ❖ **Review selected pricing tools**
- ❖ **Consider an example marketing plan**



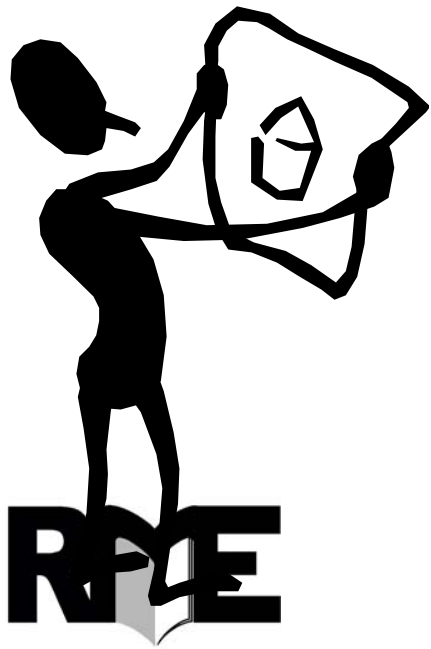
What is a Marketing Plan?

❑ Dictionary defines marketing as:

- Process of selling or purchasing in a market

❑ Dictionary defines a plan as:

- A method for achieving an end
- Formulation of a plan of action



Plans

- ❑ Consequences of strategic plan should be **DRIVE**:
 - Provide Direction
 - Reasonable (practical, obtainable)
 - Inspiring, challenging
 - Easy to Visualize, able to measure
 - Eventual (time frame for achieving goals)

- ❑ Consequences of tactical plan should be **SMART**:
 - Specific
 - Measurable
 - Attainable
 - Rewarding
 - Timed



What's The Time Frame For Your Marketing Plan

- ❖ You can price after harvest if you are willing to store (up to 10 months)
- ❖ Today you can price prior to harvest for sale at harvest or sale at post harvest for 2009, 2010, 2011, or 2012
- ❖ Suggests a planning horizon from of at least 18 months prior to harvest (30 months Preferable) to 6-10 months post harvest
- ❖ Reasonably 40-48 months for each crop year
- ❖ May have 2, 3 or even 4 years at once



Key Features of Plan

- ❖ **Goals ... that reflect the SMART criteria**
- ❖ **Written plan that lays out a general strategy and proposed actions when faced with particular opportunities and/or risks**
- ❖ **Make decisions on logic, not emotion**
- ❖ **Deals with who, when, how, how much, and follow-up**



Key Questions About Your Goals

- ❖ **How much risk are you willing to bear?**
 - **Based upon your net worth / equity in the farm business**
 - **Comfort zone**
- ❖ **How much risk are you willing to take to capitalize on potential opportunities?**
- ❖ **How do you feel about using your equity vs. using risk reducing tools to deal with risk?**



Structuring Your Plan

- ❖ **Define your goals**
- ❖ **Quantify the financial exposure you are willing to assume**
- ❖ **Describe the size of the crop that will be available for you to market:**
 - ❖ **Most likely potential bushels**
 - ❖ **Yield / Product Quality risk faced**
 - ❖ **Potential role of crop insurance to backstop pre-harvest pricing**



What is your History?

<u>Corn</u>	From Accouting		<u>Weighted</u>	<u>Planted</u>	<u>Actual</u>
	<u>Dollars</u>	<u>Production</u>			
2008 Crop	\$				
2007 Crop	\$				
2006 Crop	\$				
2005 Crop	\$				
2004 Crop	\$				
5 yr Average	\$				



	Corn	Soys	Wheat
Acres	200.0	200.0	50.0
Yield	138.2	39.3	64.2
	Expected Bushels		
100%	27,640	7,860	3,210
90%	24,876	7,074	2,889
80%	22,112	6,288	2,568
70%	19,348	5,502	2,247
60%	16,584	4,716	1,926
50%	13,820	3,930	1,605
40%	11,056	3,144	1,284
30%	8,292	2,358	963
30%	8,292	2,358	963
10%	2,764	786	321
5%	1,382	393	161



Structuring Your Plan (continued)

- ❖ Break the time period over which you can price into several periods
 - ❖ Prior to March 15
 - ❖ Late spring / early summer
 - ❖ Harvest
 - ❖ Jan-March
- ❖ Calculate targets for each period:
 - ❖ Bushels to sell
 - ❖ Target price
- ❖ Describe how you will change your targets given opportunities and risks that may arise



What Kind of Market Do You Face?

- ❖ **Degree of Volatility**

- ❖ **Patterns**

- ◆ **New Crop/s**

- **Seasonal**

- **Across years**

- ◆ **Old Crop**

- **Seasonal**

- **Across years**



There are patterns a disciplined approach can build upon

- ❖ On the average, across the last 25 years, pre-harvest priced corn & soybeans in late spring - early summer did better than pricing @ harvest.
- ❖ The late spring - early summer vs. harvest price difference has varied from year to year and is sensitive to perceived ending stock position.
- ❖ There is potential gain but additional risk is incurred to go after this gain.



Dec 2000 Corn Contract



Dec 2008 Corn Contract



•“If you think you can out guess the commodity futures market -- you are nuts!”

•Quote from a marketing consultant

•If you can out guess the market why bother to grow it?

•R. Betz



Some Evidence: Two Year Performance of Selected Cash-Only Market Advisors

- Pro-Farmer • \$349.80
- Doane • \$349.70
- Freese-Notis • \$347.40
- USDA avg. price received • \$343.30
- Ag Profit • \$340.51
- Stewart-Peterson • \$337.84
- Brock Associates • \$334.00
- Agri-Visor • \$331.20



What's Possible?



Feasibility of Pricing Goals

<u>Pricing Goal</u>	Your Skill in the Summarizing Market Information		
	Market is <u>Efficient</u>	<u>Market is In-Efficient</u>	
		Only when big shocks occur	Nearly always
Price Enhancement	Not feasible	Sometimes feasible	Feasible
Risk Control	Feasible	Feasible	Feasible



Set Price and Timing Goals

- ❖ Use your “costs of production” in setting Revenue Requirement goals:
 - Total Economic Costs
 - Maintain Net worth
 - Cash Flow Requirements
- ❖ Equity available to risk
- ❖ Drive how much you can “afford to gamble”



“Break Even Prices Needed”

<u>Medium Debt Farm</u>	CORN	SOYS
35. Total Economic Cost / Bu	\$2.75	\$6.56
51. Maintain Net Worth per Bu	\$2.21	\$4.97
61. Meet Cash Flow Demands per Bu	\$2.43	\$5.62
<u>Low Debt Farm</u>	CORN	SOYS
35. Total Economic Cost / Bu	\$2.70	\$6.41
51. Maintain Net Worth per Bu	\$2.10	\$4.64
61. Meet Cash Flow Demands per Bu	\$2.16	\$4.80
<u>High Debt Farm</u>	CORN	SOYS
35. Total Economic Cost / Bu	\$2.81	\$6.75
51. Maintain Net Worth per Bu	\$2.33	\$5.31
61. Meet Cash Flow Demands per Bu	\$2.41	\$5.55



Make Sure You Have These Values



COST OF PRODUCTION WORKSHEET		Nitrogen-N	Phos-P2O5	Potash-K2O	Fuel/Gal
Example Farm 2009	MICHIGAN STATE UNIVERSITY	\$ 0.49	\$ 0.91	\$ 0.65	\$ 1.75
	EXTENSION	<u>Corn</u>	<u>SOYS</u>	<u>SRWheat</u>	<u>Alfalfa 5yr</u>
1. Paid on Yield per Acre in Bushels		147.0	44.0	65.0	4.5
2. TIMES Cash Selling Price per Bu		<u>\$3.90</u>	<u>\$9.00</u>	<u>\$ 6.50</u>	<u>\$120.00</u>
3. EQUALS Gross Income per Acre =		\$573.30	\$396.00	\$422.50	\$540.00
DIRECT COST/AC					
4. Seed		\$ 78.00	\$ 48.00	\$ 35.00	\$ 24.00
5. Fertilizer		\$ 146.87	\$ 62.85	\$ 119.94	\$ 151.73
6. Herbicides		\$ 25.00	\$ 38.37	\$ 15.00	\$ 5.00
7. Insecticides		\$ -		\$ -	\$ 9.20
8. Drying Fuel		\$ 44.10	\$ 0.00	\$ 0.00	\$ -
9. Crop Fuel & Oil		\$ 10.55	\$ 9.50	\$ 8.44	\$ 17.50
10. Crop Repairs		\$ 14.36	\$ 12.92	\$ 11.49	\$ 37.00
12. Crop Utilities		\$ 10.00	\$ 5.00	\$ 5.00	\$ 5.00
13. Crop Haul & Truck&Hired Labor		\$ 20.58	\$ 11.00	\$ 16.25	\$ 45.00
14. Crop Marketing and Storage		\$ 36.75	\$ 6.60	\$ 6.50	\$ 25.27
15. Crop Insurance		\$ 20.00	\$ 15.00	\$ 15.00	\$ 20.00
16. Harvest/Hired Labor		<u>\$ 27.00</u>	<u>\$ 27.00</u>	<u>\$ 27.00</u>	<u>\$ 60.00</u>
17. TOTAL DIRECT COST/AC		\$ 433.22	\$ 236.24	\$ 259.62	\$ 399.70
18. GROSS MARGIN=G.I.-D.C./Ac		\$ 140.08	\$ 159.76	\$ 162.88	\$ 140.30

OVERHEAD COSTS for Farm	Column 1
19. Acres Cropped	700.0
20. Interest	20,000
21. Hired Labor	10,000
22. Land Rents	50,000
23. Machinery Leases	0
24. Real Estate Taxes	5,000
25. Farm Insurance	5,000
26. Farm Utilities	0
27. Other Expenses	2,500
28. Depreciation	20,000
29. Total Accounting Overhead Cost	112,500
30. Value of Unpaid Labor	20,000
31. Value of Unpaid Equity Capital	30,000
32. Total Economic Overhead Cost	162,500
33. Total Economic Overhead Cost/Ac	\$232.14

Economic Cost of Production

32. Total Economic Overhead Cost	162,500	ADD(lines 29, 30 and 31)		
33. Total Economic Overhead Cost/Ac	\$232.14	(line 32) DIVIDED BY (line 19)		
	<u>Corn</u>	<u>SOYS</u>	<u>SRWheat</u>	<u>alfa 5yr Rot</u>
34. Total Economic Costs/Ac (line 17 for each crop) PLUS (line33)	\$665.36	\$468.38	\$491.76	\$631.84
35. Total Economic Cost / Bu/Ton For each crop (line 34) DIVIDED BY (line 1)	\$4.53	\$10.65	\$7.57	\$140.41



Maintain Net Worth

Crop Prices and Crop Revenues Needed to Maintain Net Worth			33,094
41. Total Economic Overhead Cost (line 32)		162,500	This calculation required after government costs associated overhead, plus and income
42. Minus Gov. Program & Other Net Incomes	-	16,500	
43. Minus Value of Unpaid Equity (line 31)	-	30,000	
44. Plus Income Taxes	+	2,000	
45. Minus Value Unpaid Family Labor (line 30)	-	20,000	
46. Plus Actual Family Living & Other Draws	+	10,000	
47. "Maintain Net Worth Overhead Cost"	=	108,000	
48. "Maintain Net Worth Overhead Cost" per Acre		\$154.29	(line 47) DIV
49. Total Crop Revenues Needed to Maintain Net Worth		364,594	
	<u>Corn</u>	<u>SOYS</u>	<u>SRWheat</u>
50. Total Revenues Needed / Acre	\$587.50	\$390.52	\$413.90
(line 37 for each crop) PLUS (line 48)			
51. Maintain Net Worth per Bu/Ton	\$4.00	\$8.88	\$6.37
For each crop (line 50) DIVIDED BY (line 1)			

Cash Flow Demands

Crop Prices and Crop Revenues Required to Meet Cash Flow Demands			This calculation
52. "Maintain Net Worth Overhead Cost" (line 47)		108,000	required after
53. Minus Depreciation (line 28)	-	20,000	government
54. Minus Interest Expense (line 20)	-	20,000	all cash flow
55. Plus Scheduled Principal and Interest	+	30,000	continue wh
56. Plus Cash required for Capital Replacemen	+	25,000	service deb
57. "Meet Cash Flow Demands Overhead Cost"	=	123,000	replacemen
			e.g. machin
58. "Meet Cash Flow Overhead Cost" per Acre		\$175.71	(line 57) DI
59. Total Crop Revenues Needed to Meet Cash Flow Deman		379,594	
	Corn	SOYS	SRWheat
60. Total Crop Revenue Needed per Acre (line 37 for each crop) PLUS (line 58)	\$608.93	\$411.95	\$435.33
61. Meet Cash Flow Demands per Bu/Ton For each crop (line 60) DIVIDED BY (line 1)	\$4.14	\$9.36	\$6.70

What is your “Cost of Production”?

	<u>Corn</u>	<u>SOYS</u>	<u>SRWheat</u>	<u>lalfa 5yr R</u>
35. Total Economic Cost / Bu/Ton	\$4.53	\$10.65	\$7.57	\$140.41
51. Maintain Net Worth per Bu/Ton	\$4.00	\$8.88	\$6.37	\$123.11
61. Meet Cash Flow Demands per Bu/Ton	\$4.14	\$9.36	\$6.70	\$127.87
Price from Above in Gross Margin	\$3.90	\$9.00	\$6.50	\$120.00

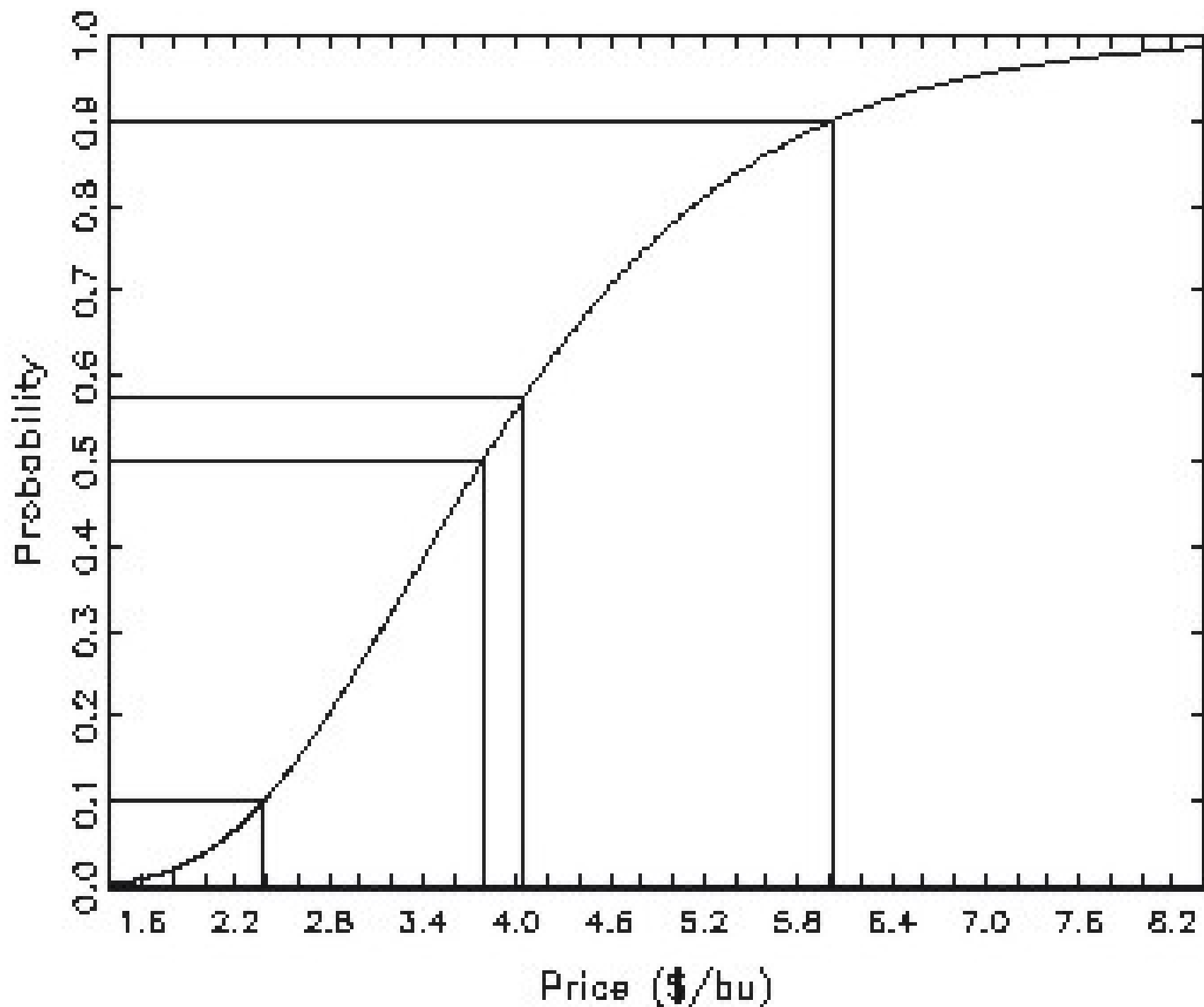


Does the Market Care?

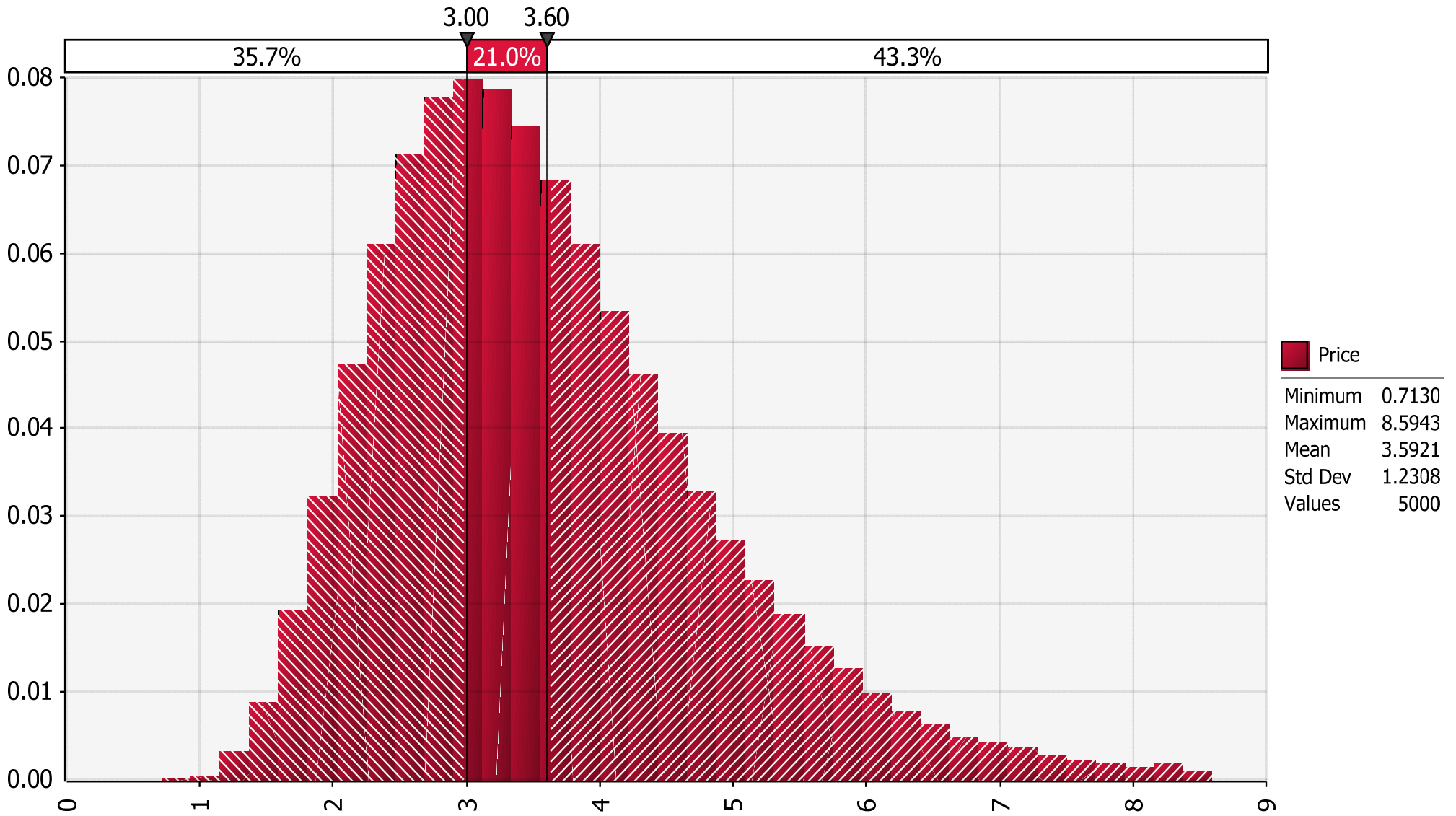
- Yes or No?
- Over Time the Market Will Be “Break Even”!
- It is always in a “State of Flux”



Cumulative Distribution Function December 2009 Corn Futures

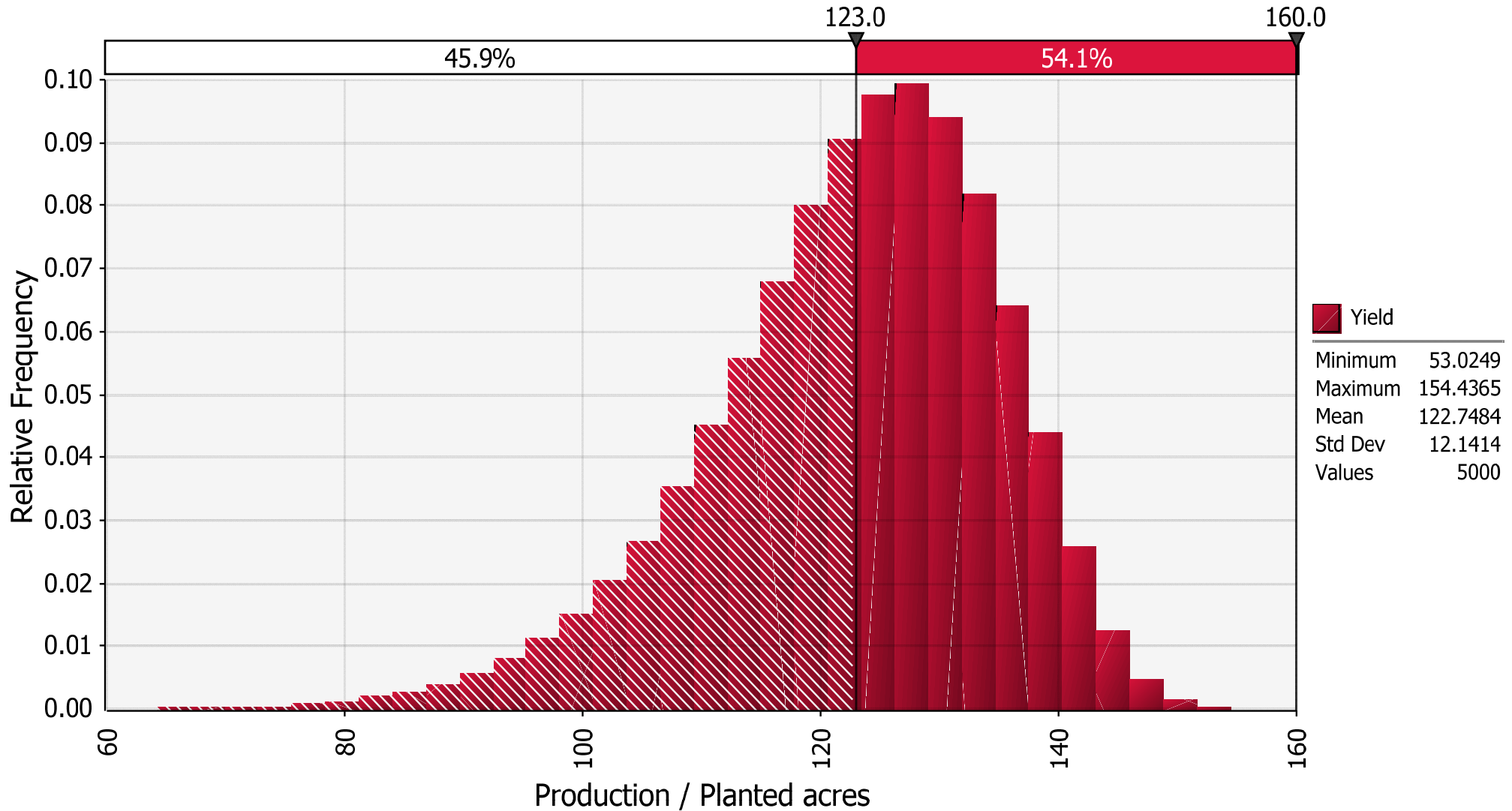


Price



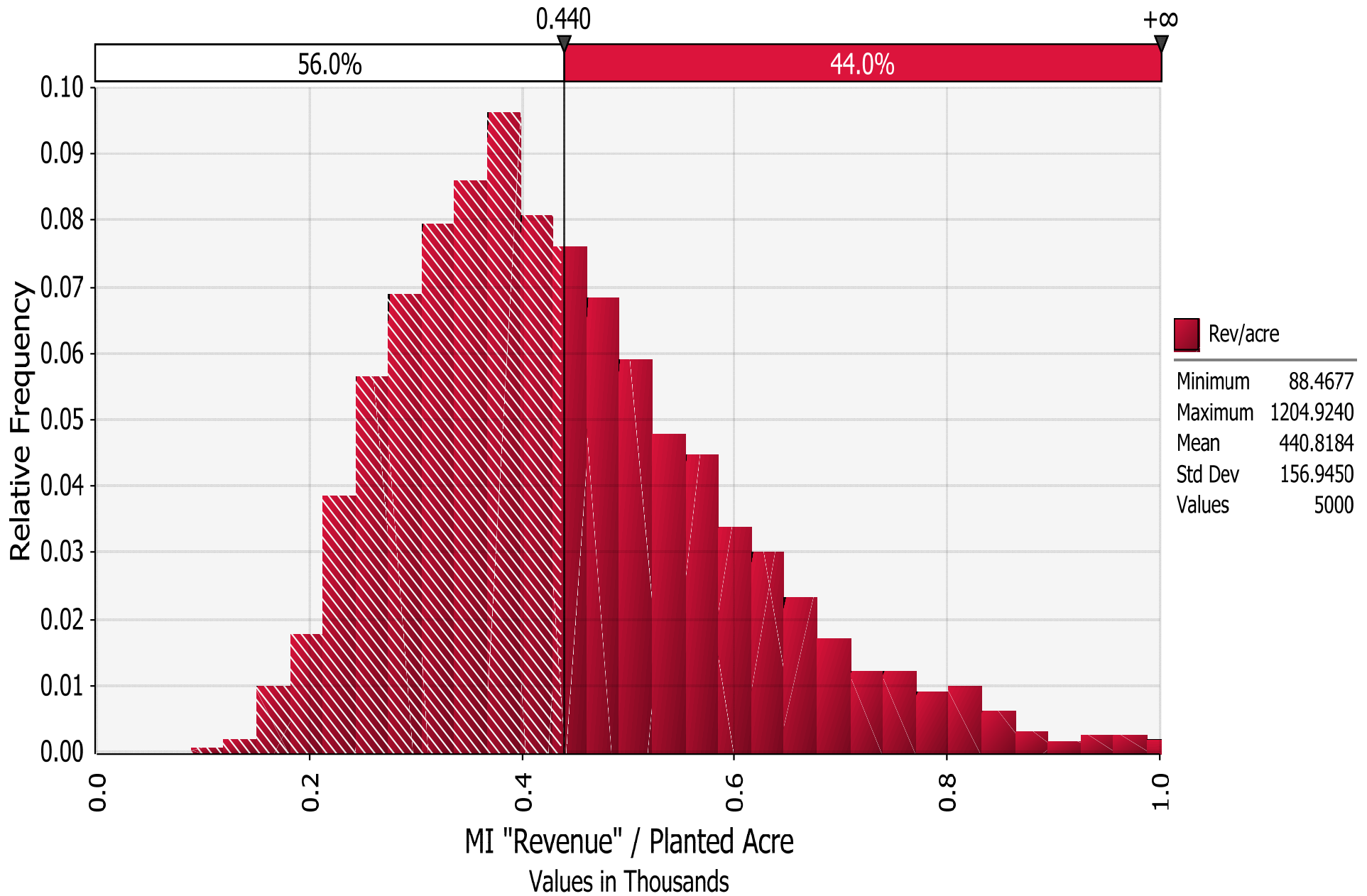
Relative Frequency of Alternative MI "Yields"

(Based on 1962 - 2008 NASS)



Relative Frequency of MI "Revenue" / Planted Acres

(Based Upon 35% Price Volatility)



Set Price and Timing Goals

- ❖ **Look at historical patterns to assess the current situation for setting both price and time targets and triggers**
- ❖ **Use commodity Supply-Demand Balance Sheets in combination with futures and options**
- ❖ **Use charts -- particularly for setting short term and daily price targets**



%C [10] - CORN (DAY)

LAST: 358'0

CHANGE: 4'4

HIGH: 362'0

LOW: 354'6

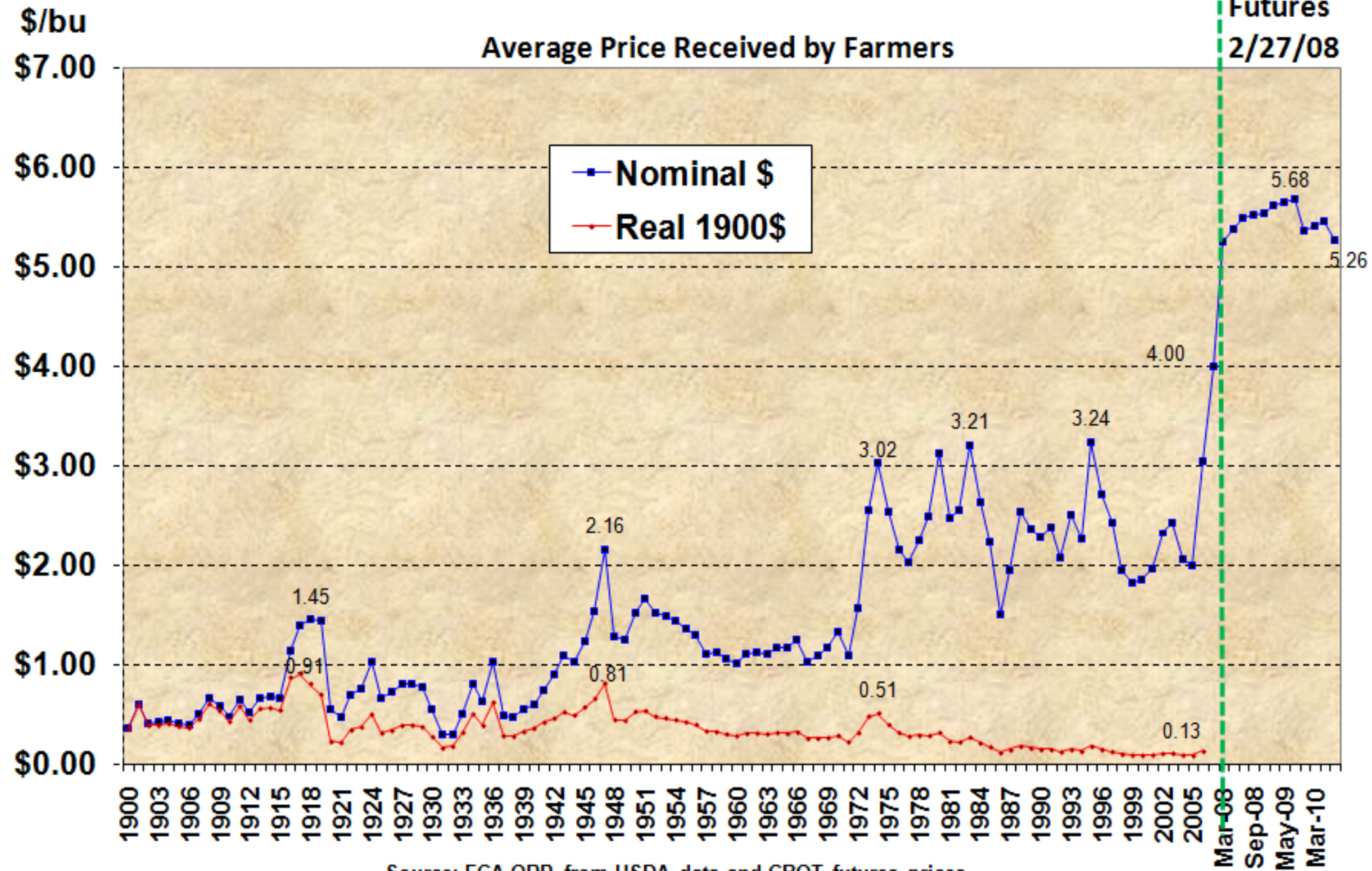
2/1/2010



Corn Prices: U.S. Farm and Futures

Average Price Received by Farmers

Futures
2/27/08



Source: FCA-ORP from USDA data and CBOT futures prices.



%W [10] - WHEAT (DAY)

LAST: 484'0

CHANGE: 10'6

HIGH: 487'2

LOW: 479'0

2/1/2010

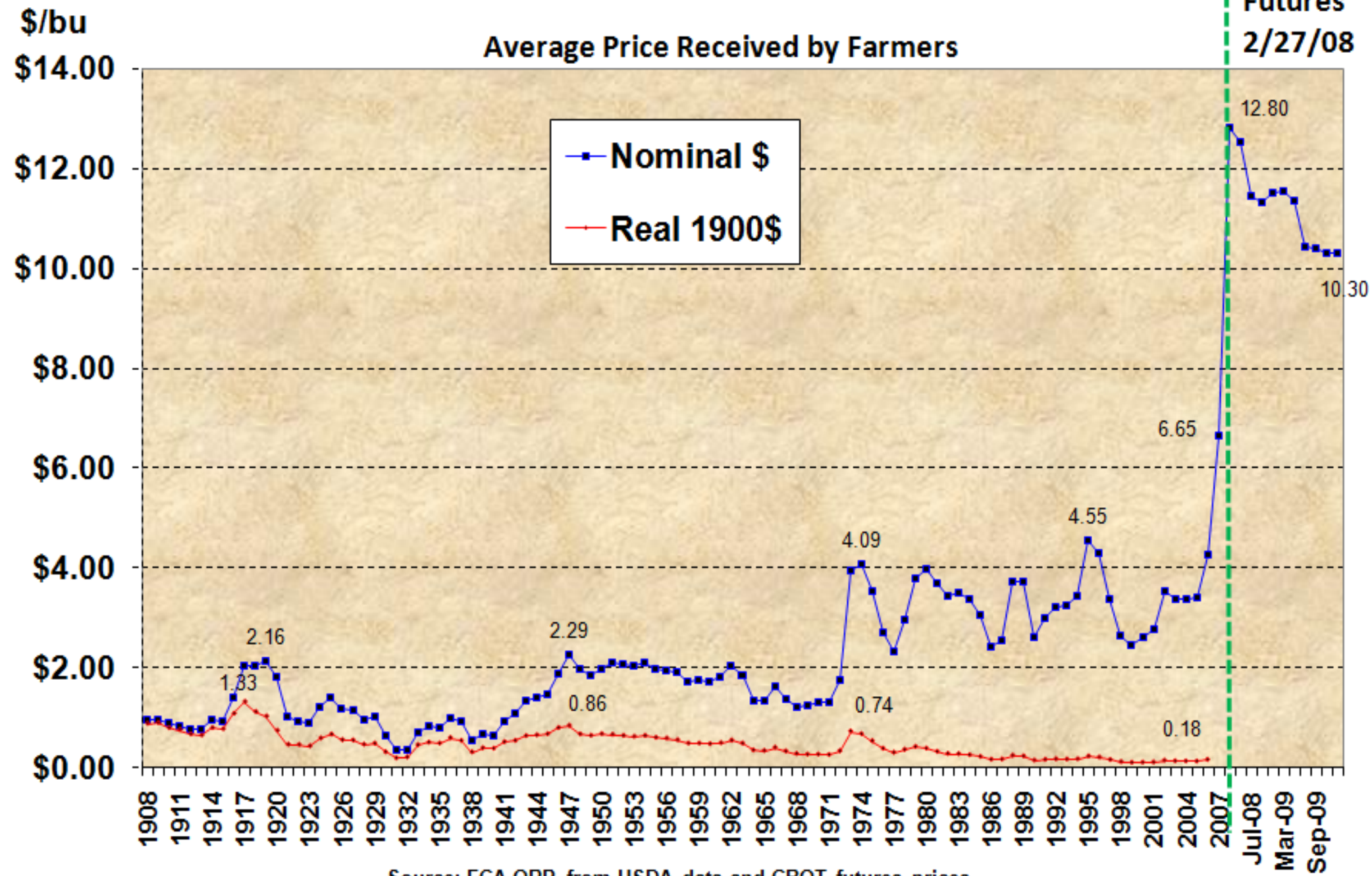
N



Wheat Prices: U.S. Farm and Futures

Average Price Received by Farmers

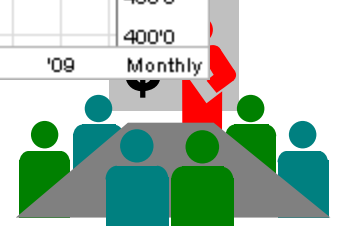
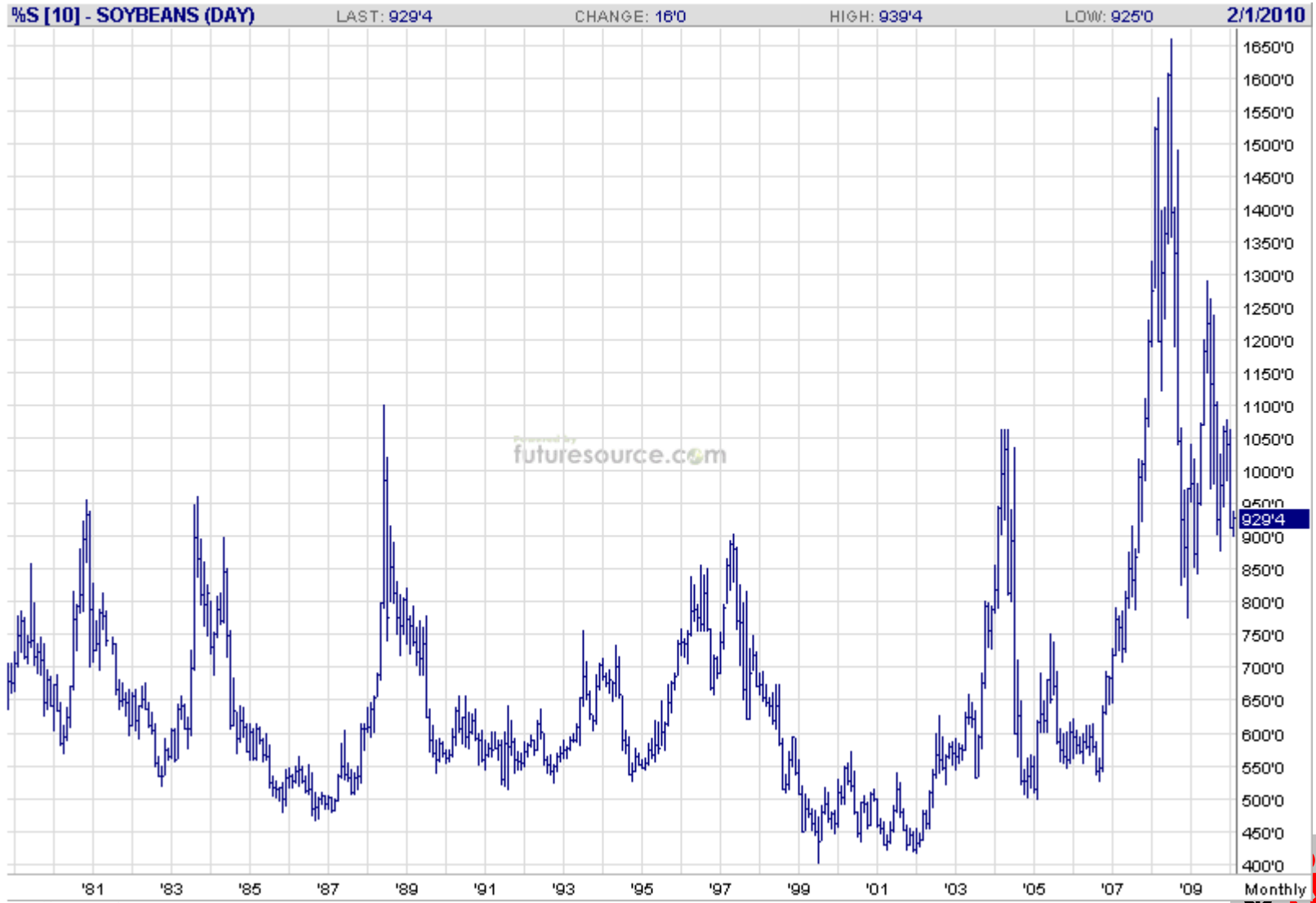
Futures
2/27/08



Source: FCA-ORP from USDA data and CBOT futures prices.



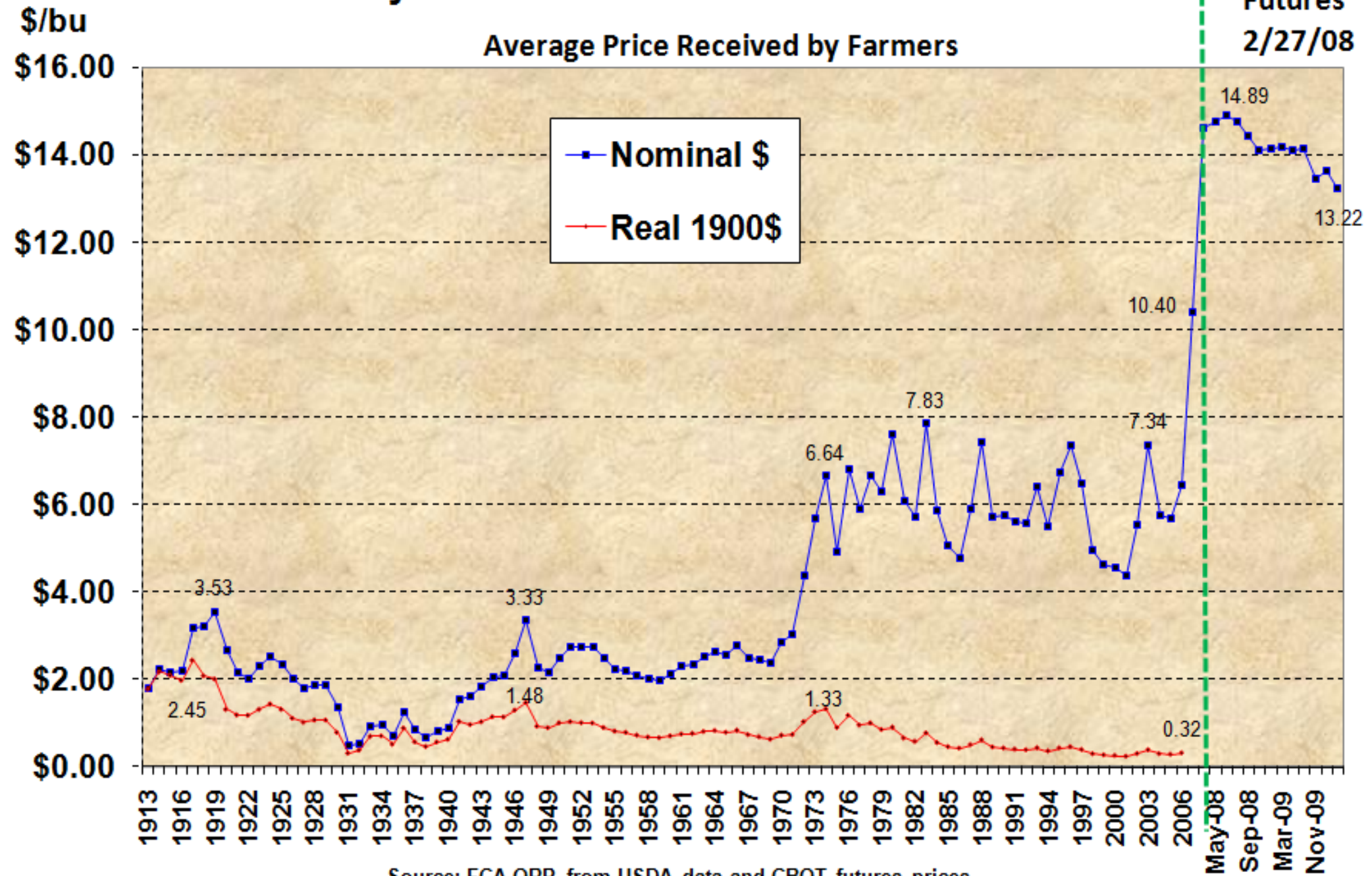
MONTHLY SOYBEAN FUTURES



Soybeans Prices: U.S. Farm and Futures

Average Price Received by Farmers

Futures
2/27/08

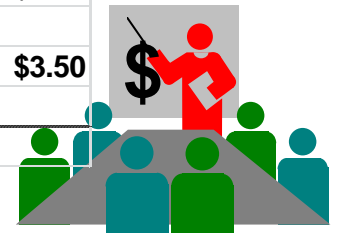
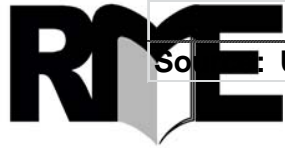


Source: FCA-ORP from USDA data and CBOT futures prices.

**TABLE 1
SUPPLY/DEMAND BALANCE SHEET FOR CORN**

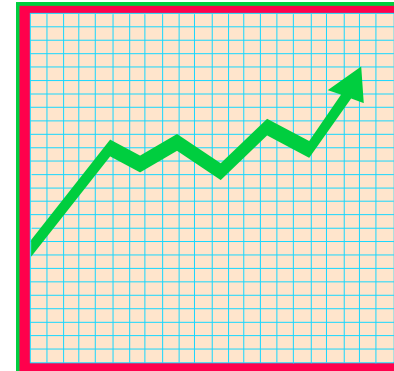
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	Hilker 2012- 2013	Hilker 2013- 2014	Hilker 2014- 2015
(million acres)													
Acres Planted	78.9	78.6	80.9	81.8	78.3	93.5	86.0	86.4	88.2	91.9	97.2	96.0	92.7
Acres Harvested	69.3	70.9	73.6	75.1	70.6	86.5	78.6	79.5	81.4	84.0	87.4	88.1	85.0
Yield/Bushels	129.3	142.2	160.4	148	149.1	150.7	153.9	164.7	152.8	147.2	123.4	155.3	157.8
(million bushels)													
Beginning Stocks	1596	1087	958	2114	1967	1304	1624	1673	1708	1128	989	824	1762
Production	8967	10089	11807	11114	10531	13038	12092	13092	12447	12360	10780	13688	13423
Imports	14	14	11	9	12	20	14	8	28	29	162	25	15
Total Supply	10578	11190	12776	13237	12510	14362	13729	14774	14182	13517	11931	14537	15201
Use:													
Feed & Residual	5563	5798	6158	6155	5591	5913	5182	5125	4795	4546	4312	5100	5250
Food, Seed & Ind	2340	2537	2686	2981	3490	4387	5025	5961	6426	6439	6060	6400	6470
Ethanol for fuel	996	1168	1323	1603	2119	3049	3709	4591	5019	5011	4665	4950	5000
Total Domestic	7903	8335	8844	9136	9081	10300	10207	11086	11221	10986	10372	11500	11720
Exports	1588	1897	1818	2134	2125	2437	1849	1980	1834	1543	735	1275	1550
Total Use	9491	10232	10662	11270	11206	12737	12056	13066	13055	12528	11107	12775	13270
Ending Stocks	1087	958	2114	1967	1304	1624	1673	1708	1128	989	824	1762	1931
Ending Stocks, %of Use	11.5	9.4	19.8	17.5	11.6	12.8	13.9	13.1	8.6	7.9	7.4	13.8	14.5
U.S. Loan Rate	\$1.98	\$1.98	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95
U.S. Season Ave Farm Price, \$/Bu.	\$2.32	\$2.42	\$2.06	\$2.00	\$3.04	\$4.20	\$4.06	\$3.55	\$5.18	\$6.22	\$6.90	\$4.20	\$3.50

Source: USDA/WASDE and Jim Hilker. (9 - 30 - 13)



What “Tools” Can I Use to Provide Information In Setting Pricing Targets:

- ❖ **Price Potential**
 - Near term
 - Longer term
- ❖ **Risk and Opportunity**
- ❖ **Use of price history**



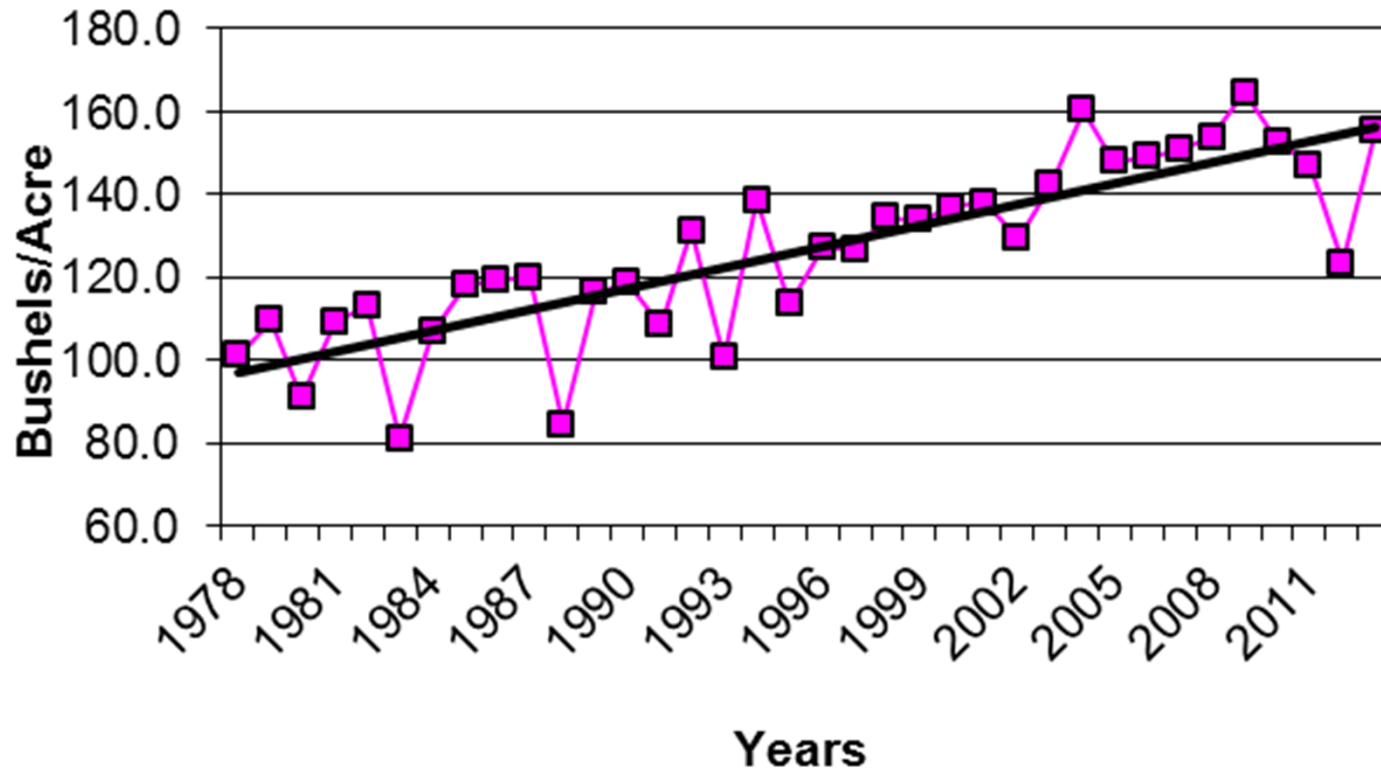
How Much do I have to sell?

Describe how much you will have to market?

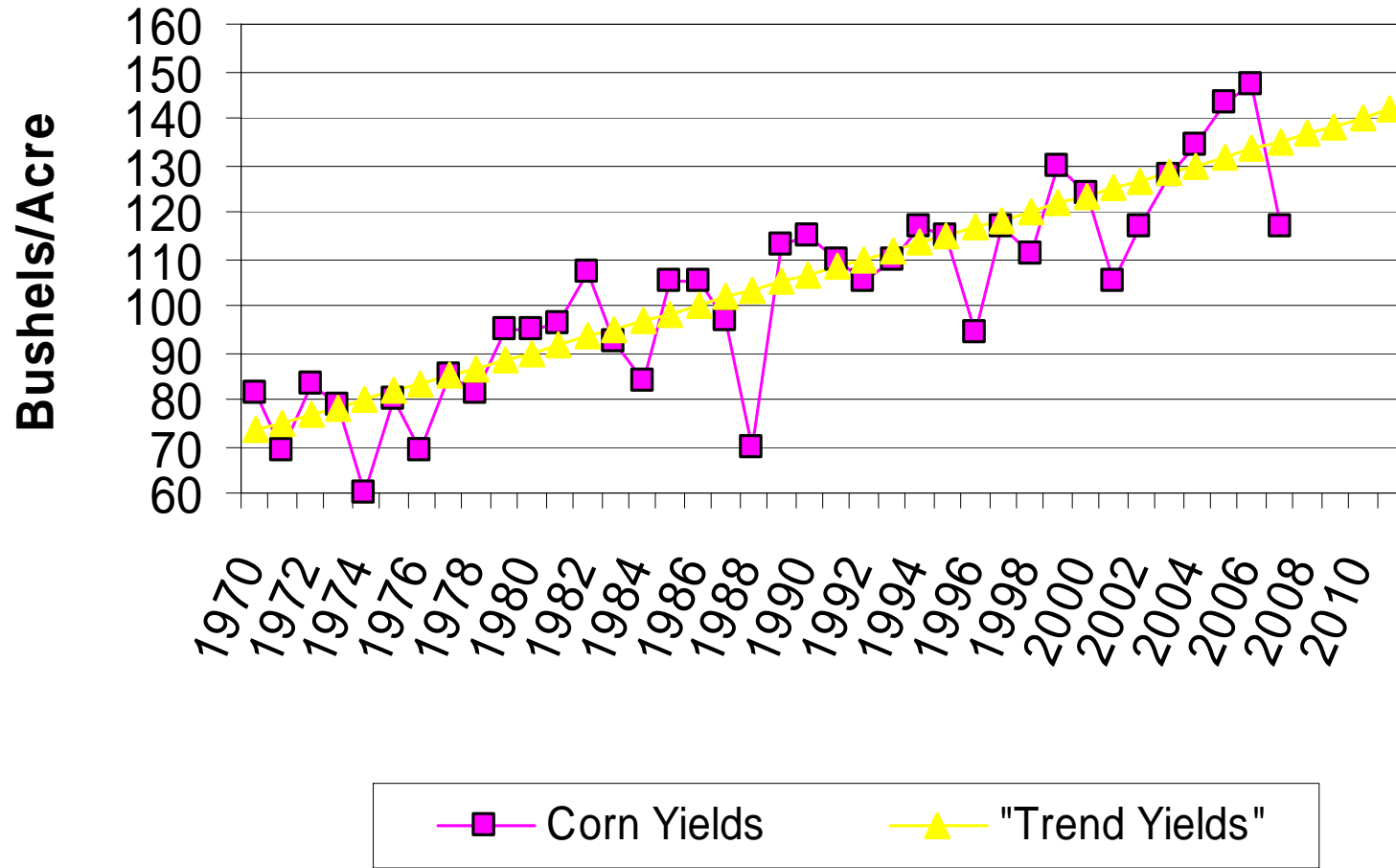
- **Planned acres**
- **Yield probability charts**
- **Prevented planting risk**
- **Harvest quality risk**

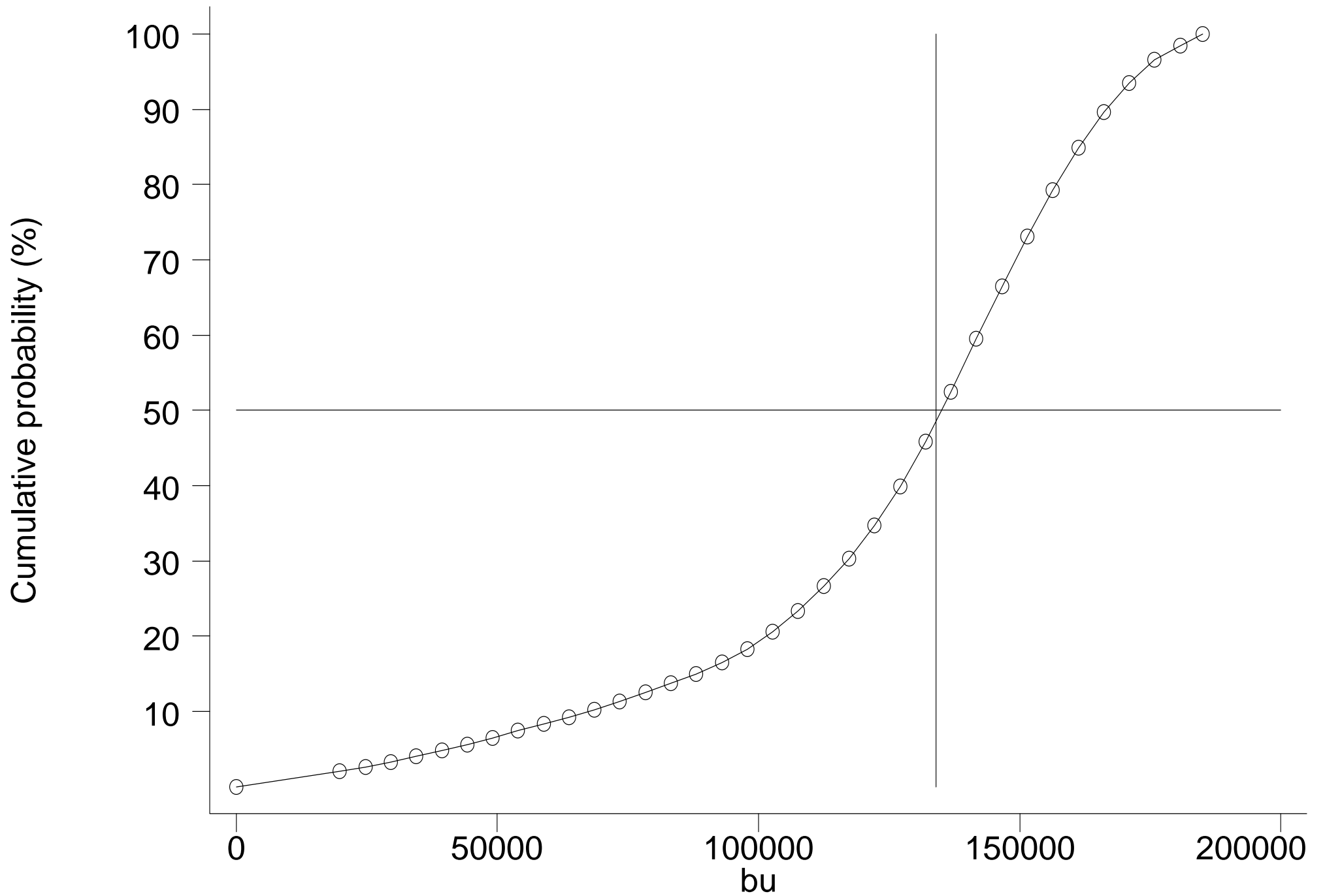


Corn Yields 1978-2013



Michigan Corn Yields 1970-2011

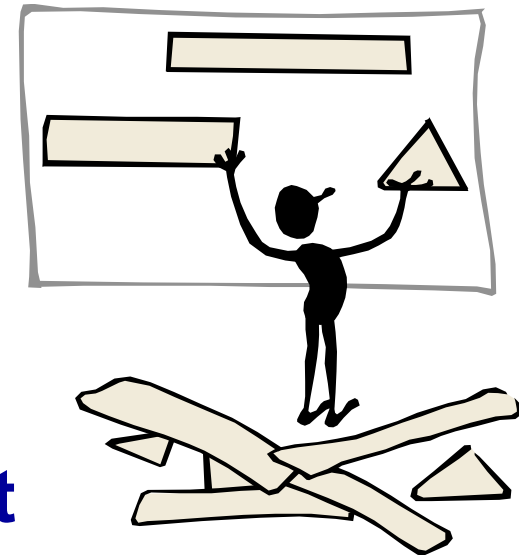




Probabilities of How Much Corn You Have To Sell

Marketing Alternatives

- ❖ Spot Sales
- ❖ Cash Forward Contract
- ❖ Short Hedge
- ❖ Basis Contract
- ❖ Minimum Price Contract
- ❖ Options on futures contract



Marketing Alternatives

- ❖ Hedge-to-Arrive
- ❖ Max-Min
- ❖ Loan and LDP's



Example Marketing Plan:

- ❖ Lets apply what we have discussed to developing an example marketing plan for the medium debt farm
- ❖ Discuss how the plan might vary with other debt structures



Marketing plan worksheet

- ❖ **Set your preliminary targets for each period:**
 - Price triggers
 - Time triggers
 - Is scaling up warranted?
- ❖ **How will the plan change in response to particular (e.g., scaling up):**
 - Opportunities
 - Risk
- ❖ **Are you likely to need to restructure debt given price prospects?**



Let's Look At a Plan

- **Relatively Simple Plan**



Example Marketing Plan for Medium Debt Farm

Timing for corn and soybeans

- Price 20% by March 15**
- Price 40% by June/July**
- Price 80% by Harvest**

If prices are at least 15 cents over the loan rate

Price Goals for corn and soybeans

- March and beyond**
 - 40% if price will Maintain Net Worth**
 - 60% if price is above Total Economic Costs**



Example Marketing Plan for Medium Debt Farm

Price Goals for corn and soybeans Con't

-July 2008

Corn

- 30% if price reaches top 40% of price dist., \$5.76
- 40% if price reaches top 30% of price dist., \$6.34
- 60% if price reaches top 20% of price dist., \$7.10

Soybeans

- 30% if price reaches top 40% of price dist., \$5.76
- 40% if price reaches top 30% of price dist., \$6.34
- 60% if price reaches top 20% of price dist., \$7.10

- Could use options to go 80% in July if yields look good



Example Marketing Plan for Medium Debt Farm

Price Goals for corn and soybeans Con't

- At harvest 2008**
 - Take LDP on the 80% priced**
 - Store 20-60% if forward contract/hedge higher than storage costs to March- July**
 - 50% under a forward contract (take LDP)**
 - 50% wait to price**
 - Use loan on unpriced stored crop**
- March-July 2009**
 - Price remainder**



Example Marketing Plan for Low Debt Farm

Price Goals for corn and soybeans Con't

- July 2002-04

- 20% if price reaches top 40% of price dist., \$2.16
- 40% if price reaches top 30% of price dist., \$2.28
- 60% if price reaches top 20% of price dist., \$2.42
- only 10-15% chance of pricing soybeans over loan rate, price 60% if the 5-10% chance of \$5.70 occurs
- Could use MPC to go 80% in July if net price 20 cents over loan



Example Marketing Plan for Low Debt Farm

Price Goals for corn and soybeans Con't

- At harvest 2001-04

- Take LDP on the 80% priced**

- Store up 20% if forward contract higher than storage costs to March**

 - 10% under a forward contract, take LDP**

 - 10% wait to price**

 - Use loan on unpriced stored crop**

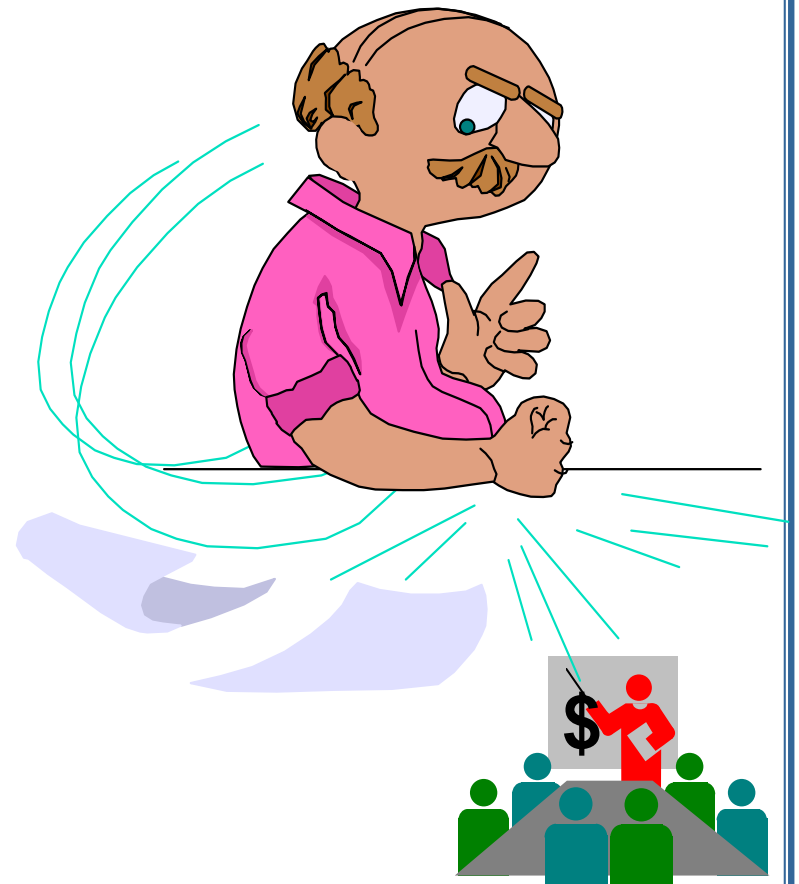
- March 2001-04

- Price remainder**



Who is responsible for developing a Marketing Plan and implementing it?

You are!



- ❖ **Write it down.**
- ❖ **Tell someone else your plan (spouse, business partner).**
- ❖ **Post your plan (in your home or office) to remind you to follow it.**
- ❖ **Stick with your plan.**



**The success of your operation
depends on YOU!**

**Take charge,
seek assistance, and
set a plan you can live
with.**



STOP

