Marketing, How Does It Look For 2016?

East Tennessee Grain and Soybean Conference
March 3, 2016

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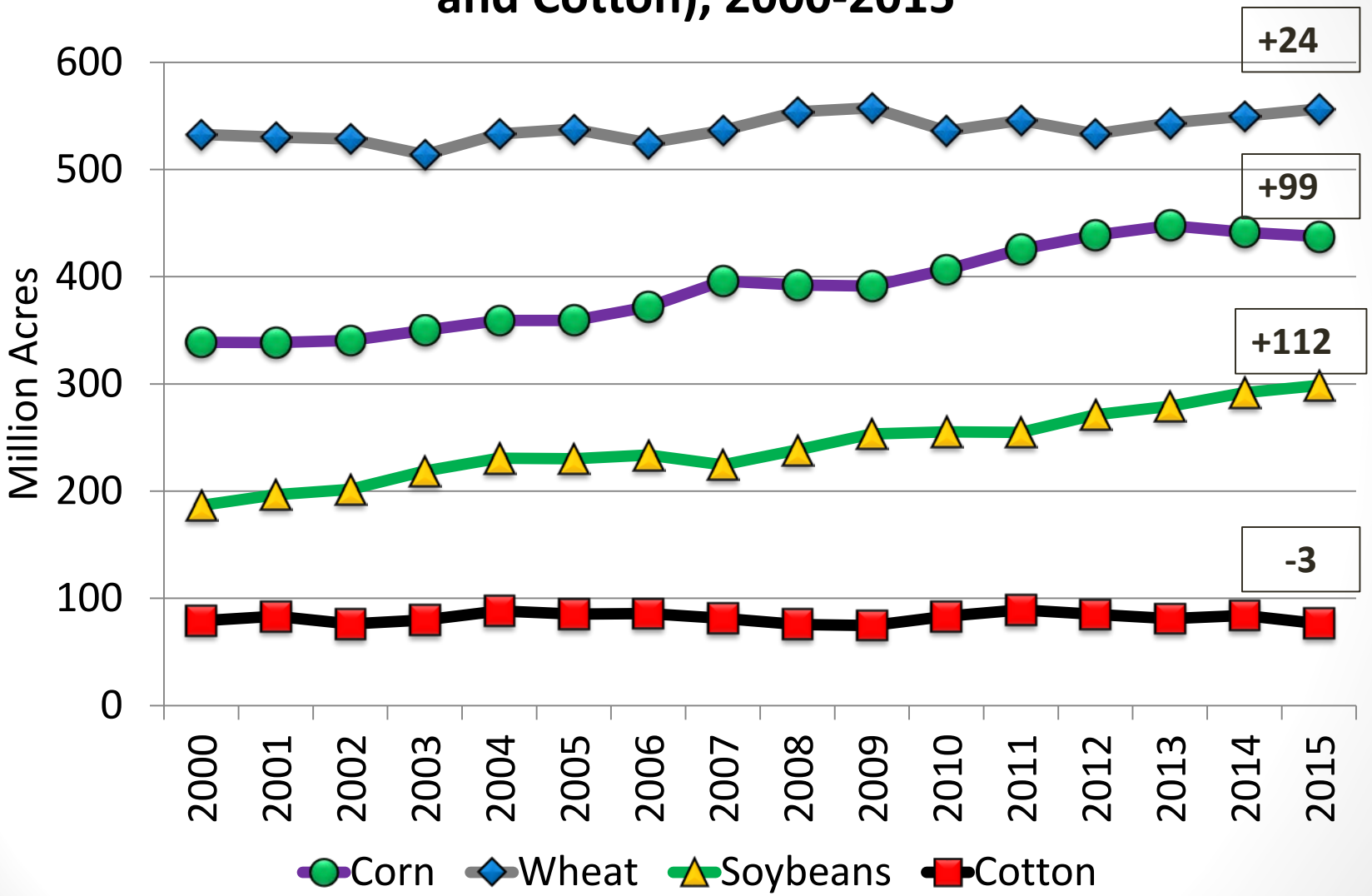
Outline

- Supply and Demand
  - Corn
  - Soybeans
  - Exchange Rates
- Marketing and Price

Global Acres Harvested (Corn, Soybeans, Wheat, and Cotton), 2000-2015



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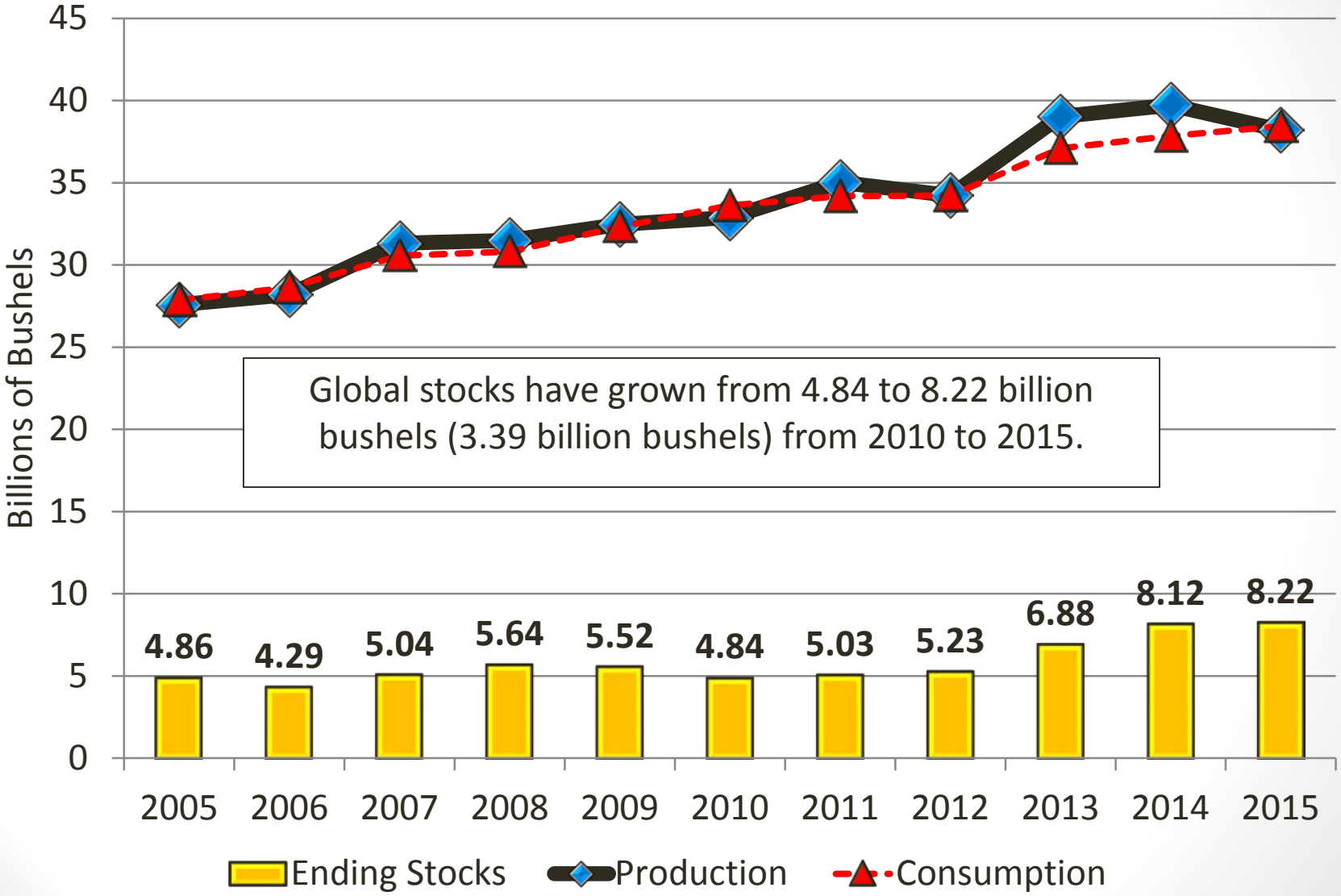
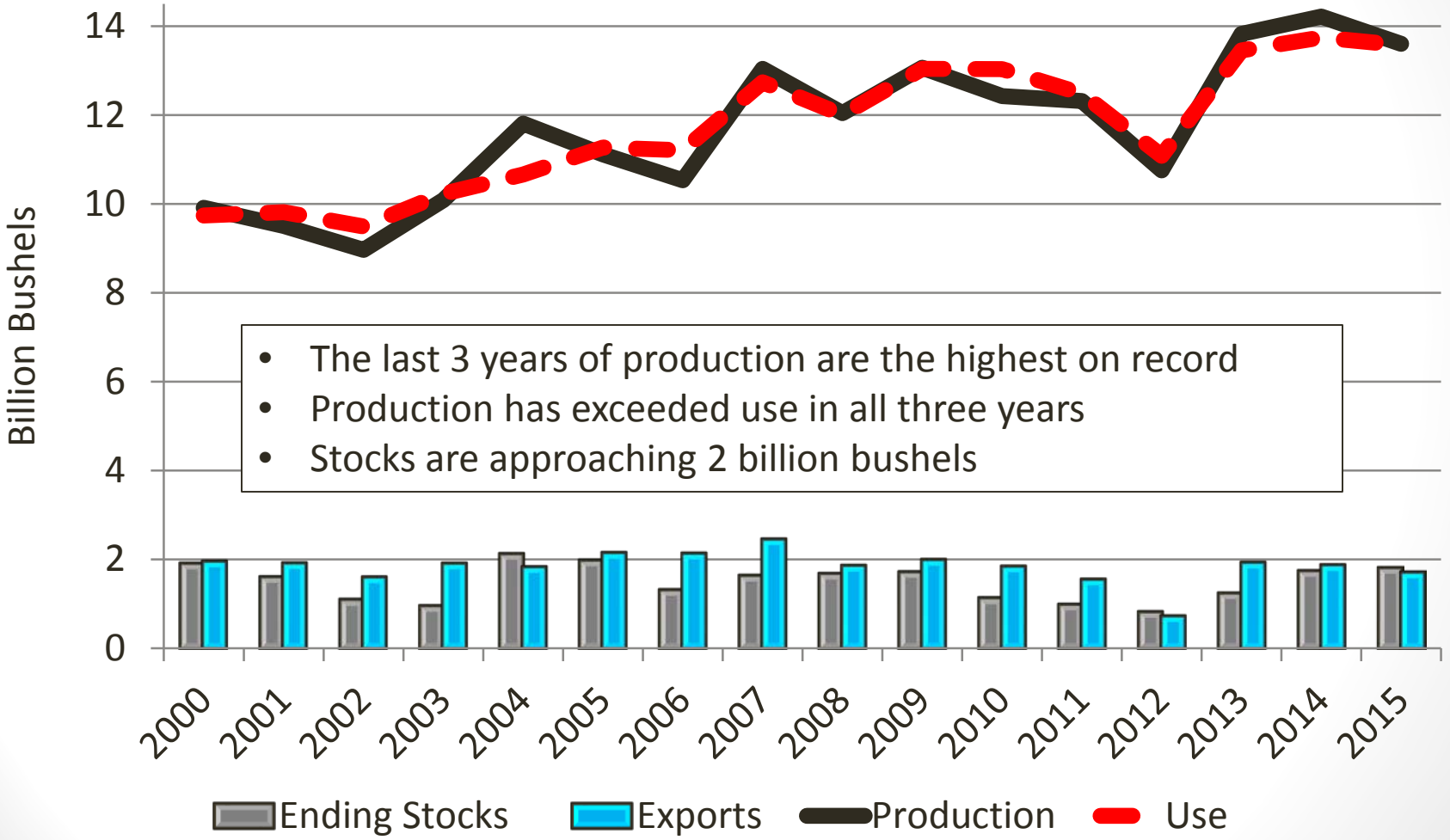
Data Source: USDA-FAS

Global Corn Production, Consumption, and Ending Stocks , 2005-2015

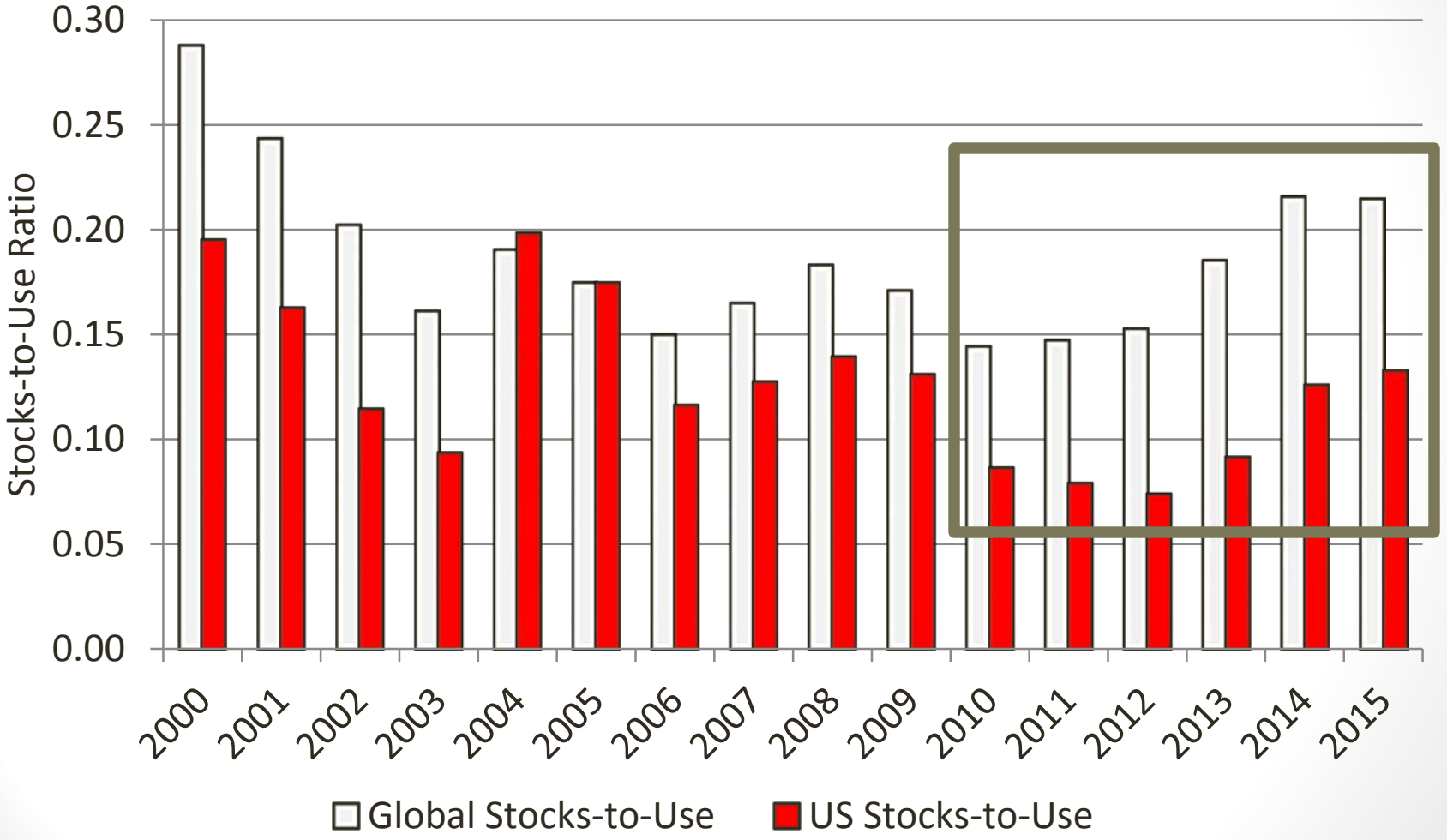


Data Source: USDA-FAS

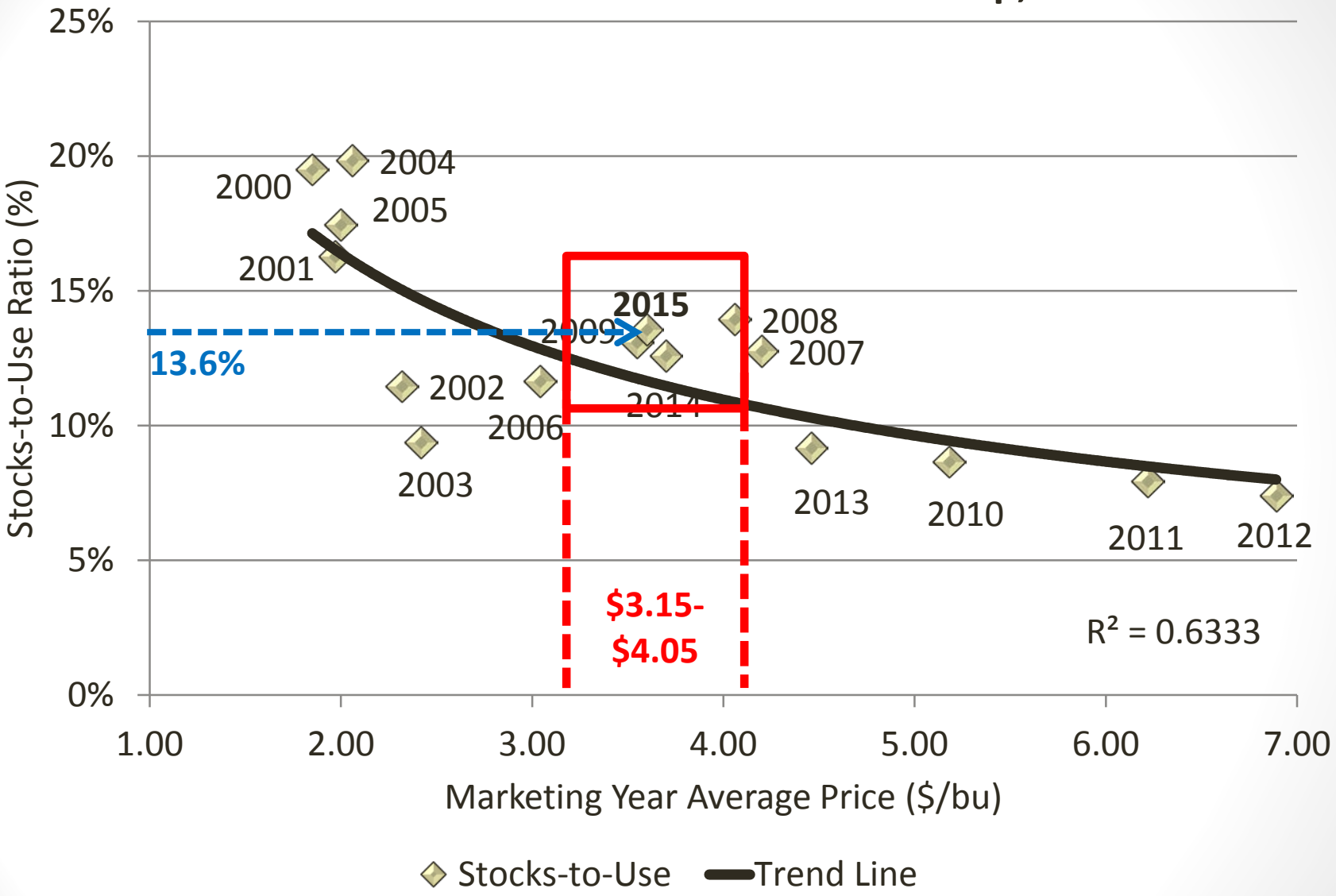
U.S. Corn Production, Use, and Ending Stocks, 2000-2015



Global and U.S. Corn Stocks-to-Use Ratios, 2000-2015



Corn U.S. Stocks-to-Use to Price Relationship, 2000-2015

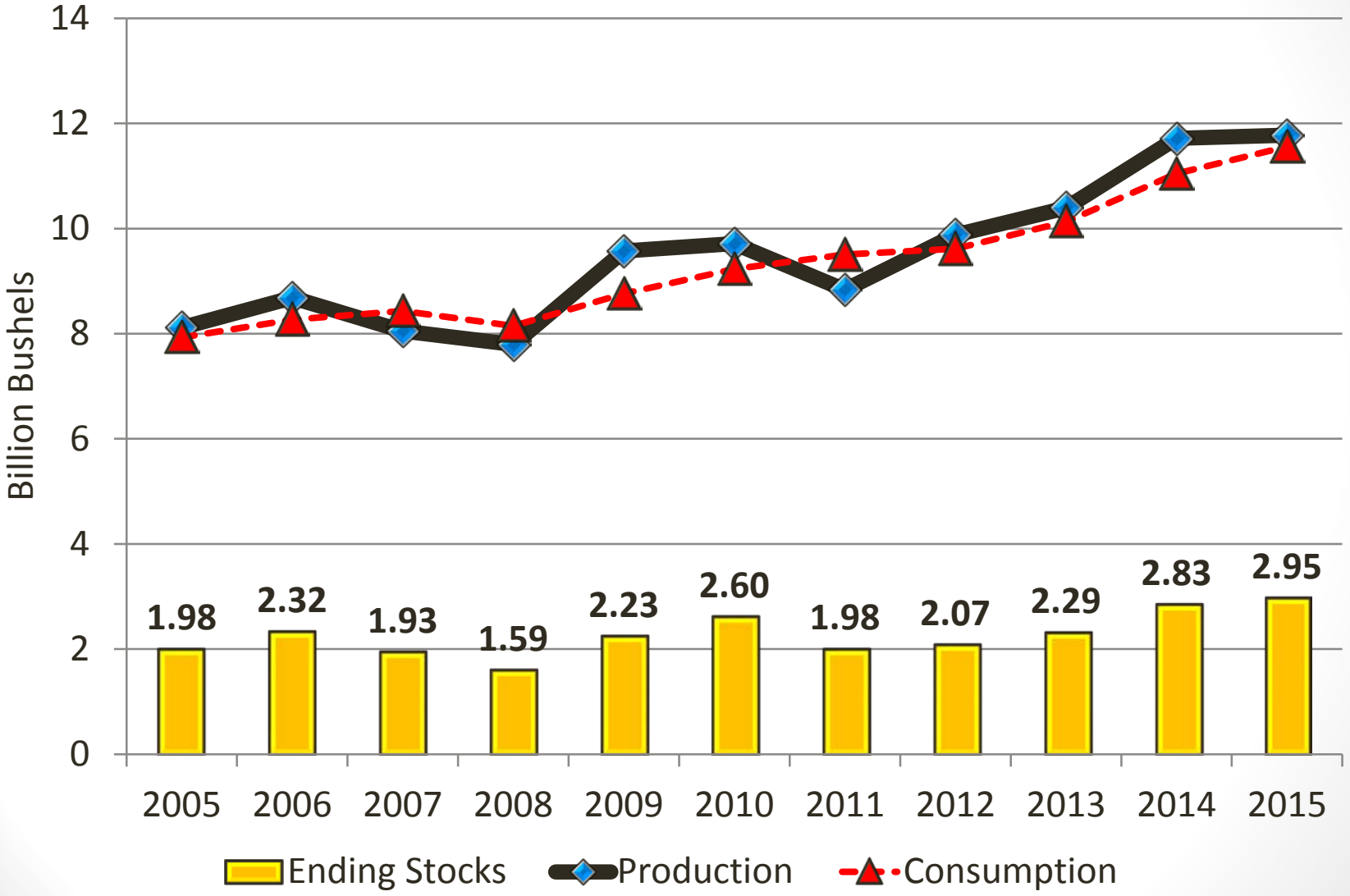


Data Source: USDA-NASS

Corn Supply and Demand

- Global
  - Global Acreage up 99 million acres in 15 years
  - Production has exceeded consumption for 5 consecutive years
  - Key producers: **U.S.**, China, **Brazil**, EU, **Argentina**, **Ukraine**, South Africa (more producers and **exporters** than soybeans)
  - Global ending stocks are at a record level
  - Global stocks-to-use are at the highest levels since 2001
  - Competition with other feed grains
- United States
  - Three years of record domestic production
  - Trend yield projects 2016 at 168 bu/acre (increasing at ~ 2 bu/acre)
  - Exports have rebounded from the 2012
  - From 2000 to 2015 U.S. share of global exports has decreased from 63% to 37%
  - Ethanol and feed use remain strong
- Current supply and demand does not support price improvements without a major weather event disrupting production

Global Soybean Production, Consumption, and Ending Stocks, 2005-2015



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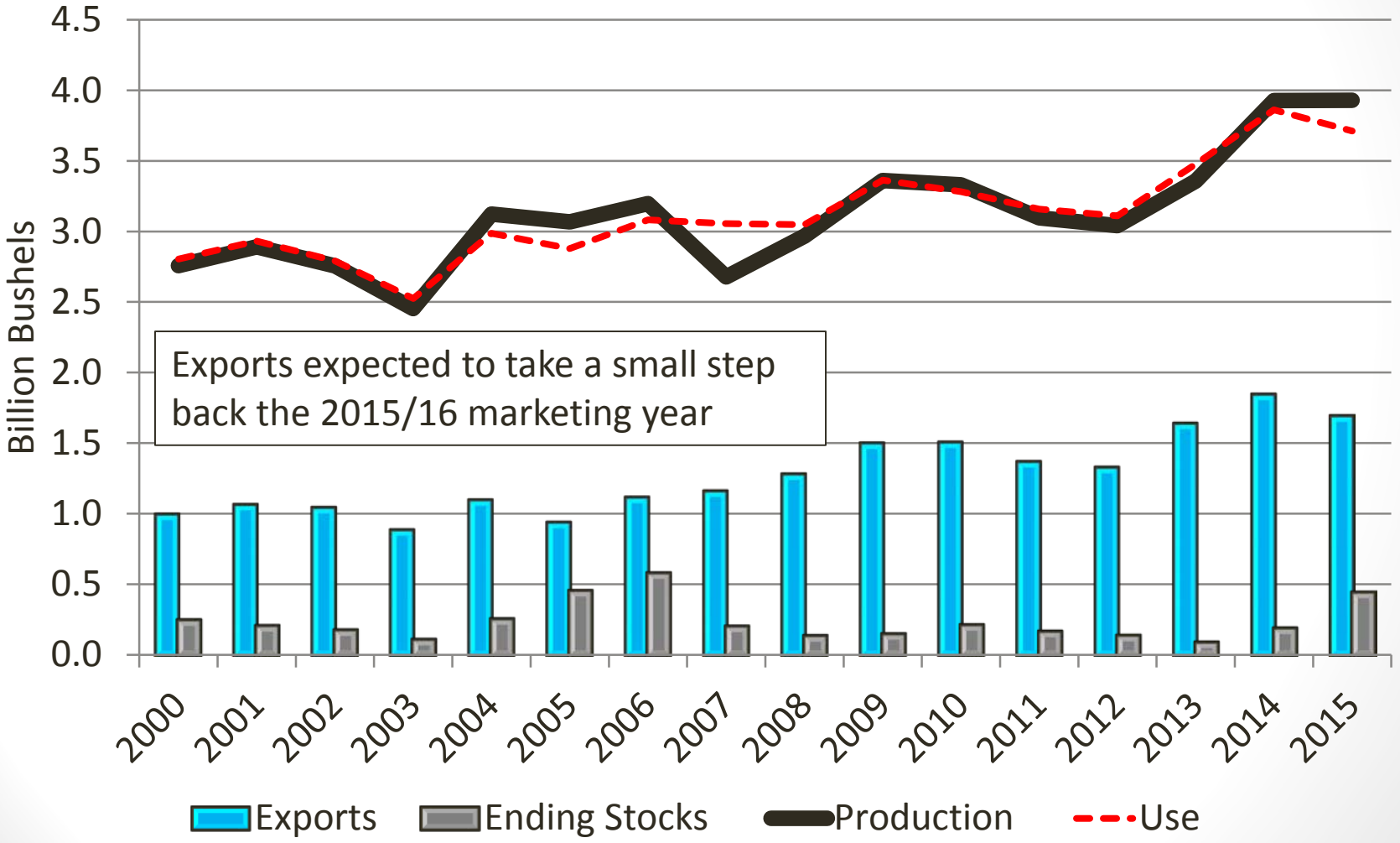
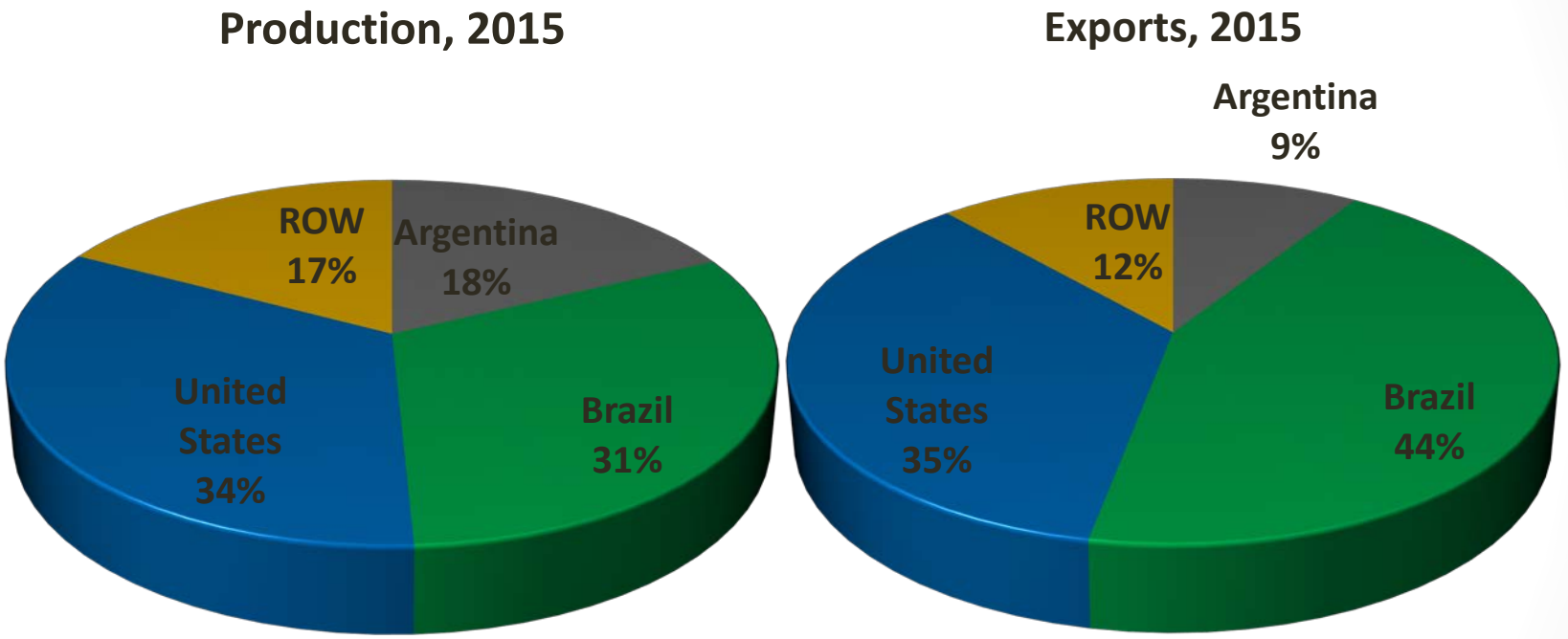
Data Source: USDA-FAS

U.S. Soybean Production, Use, and Ending Stocks, 2000-2015

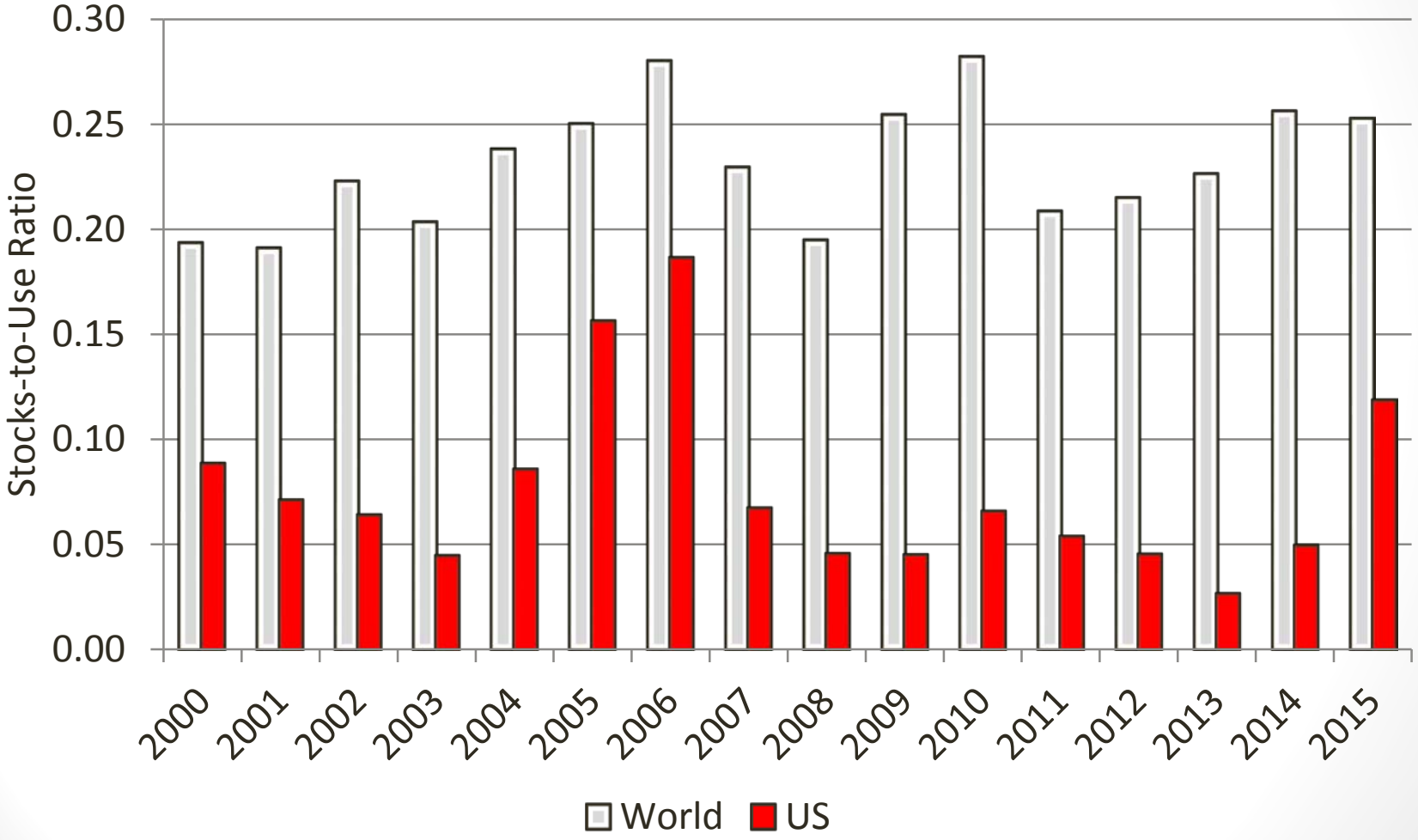


Soybean Production and Exports by Country, 2015

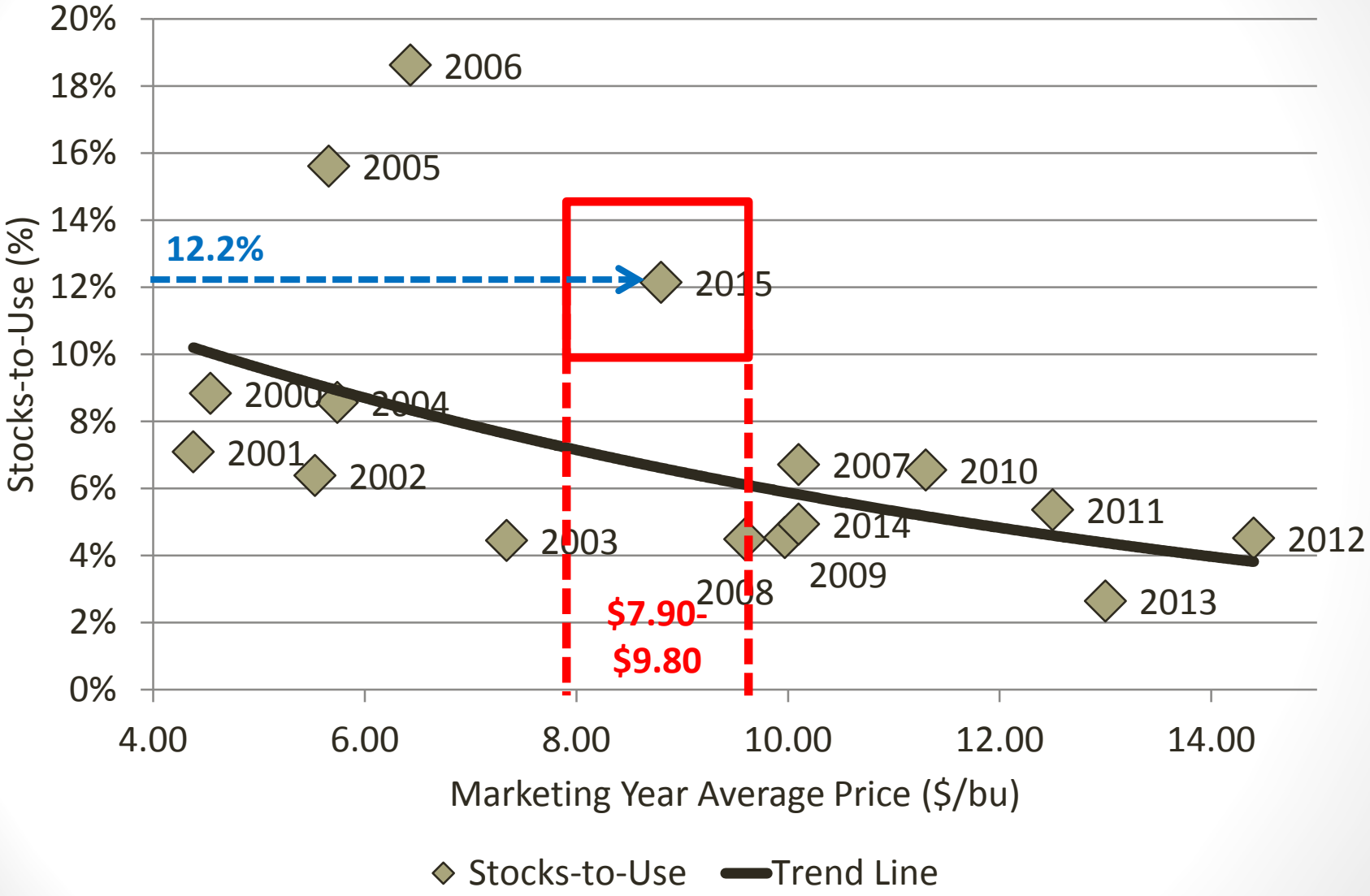


- Brazils share of global production has increased from 22% in 2000 to 31%, over the same time period U.S. share has decreased from 43% to 33%.
- From 2000 to 2015 U.S. export share has decreased from 50% to 35%
- Argentina has underwent dramatic policy changes for ag exports

Global and U.S. Soybean Stocks-to-Use Ratios, 2000-2015



Soybeans U.S. Stocks-to-Use to Price Relationship, 2000-2015



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Data Source: USDA-NASS

Soybeans Supply and Demand

- Global
  - Global acreage up 112 million acres in 15 years
  - Global supplies are at record levels
  - Brazilian production continues to expand (increasing at a decreasing rate)
  - Demand has been strong but global economic concerns and alternative country of origin for major importers is hurting US market share
  - Soybeans are primarily supplied by three countries (US, Brazil, and Argentina)
  - China will continue to import soybeans; however South America is the preferred supplier, at this time
- United States
  - US stocks have been building since the low - 92 million bushels - at the end of 2013/14 marketing year
  - U.S. trend yield for 2016 = 46 bu/acre (increasing ~ 0.4 bu/acre/year)
  - Exports and crush will likely remain strong for the upcoming market year
- Current supply and demand does not support price improvements without a major weather event disrupting production

World Inventory - Days-on-Hand [Ending Stocks/(Use/365)]

1960-2010	Cotton	Wheat	Soybeans	Corn
Average	167	108	**63**	**87**
Max	231	148	**102**	**168**
Min	105	76	**18**	**43**

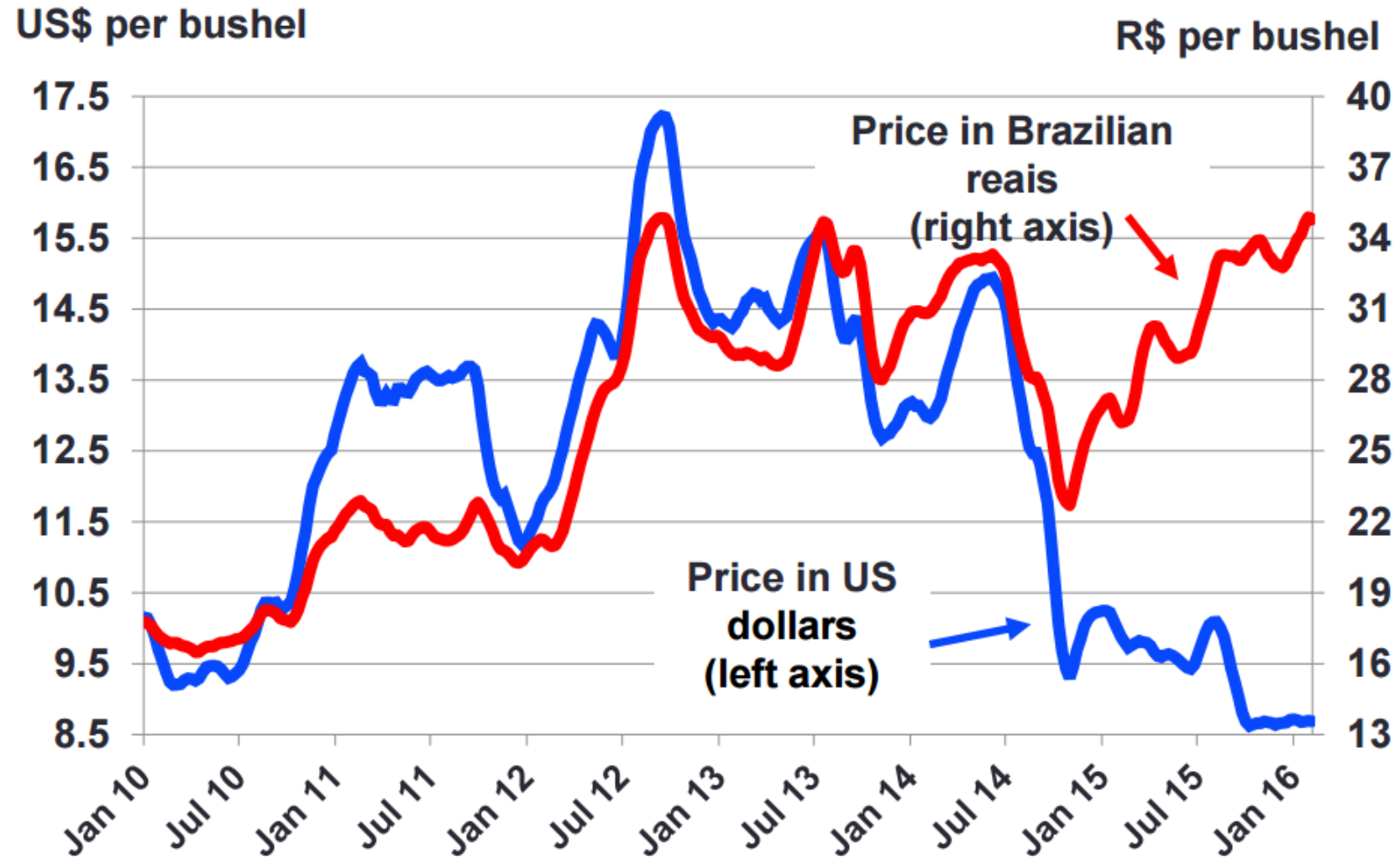
	Cotton	Wheat	Soybeans	Corn
2011	262	104	**76**	**54**
2012	311	94	**78**	**56**
2013	343	102	**82**	**68**
2014	371	111	**93**	**78**
2015	347	123	**93**	**78**

Data Source: USDA-FAS

Exchange Rates

- Providing significant headwinds for US Agricultural Exports
  - In the past two years we have seen a 23% appreciation in the USD index
- Compared to the USD in 2015 we have seen a:
  - 37% drop versus the Brazilian Real
  - 56% drop versus the Russia Ruble
  - 11% drop versus the Argentine Peso (37% drop in 2014)
  - 13% drop versus the Canadian Dollar

The price of soybeans in dollars and reais



Source: USDA –AMS.

Marketing & Price: What to do?

- Recognize the current supply and demand situation and anticipate prices accordingly
- Use budgets or develop cost of production+ estimates for crops/farms
- Determine realistic yield and price scenarios that result in profitable opportunities
- Examine pricing alternatives
  - Futures, options, cash contracts, storage
- Develop a marketing plan
- Pay attention to the markets
  - Opportunities may be short lived
- **Revisit on a regular basis**

2016 Price Projections

Source	Corn	Soybeans	Wheat	Sorghum
USDA (Feb 2016)	$3.60	$8.65	$4.40	$3.40
FAPRI (Aug 2015)	$3.71	**$9.15**	**$5.05**	**$3.73**
CBO (Jan 2016)	$3.58	$8.58	$4.65	NA
CME (Mar 1/16)	**$3.74**	$8.74	$4.56	NA
Average	**$3.66**	**$8.78**	**$4.67**	**$3.57**

2016 Corn, No-Till, Non-Irrigated Budget

	Unit	Quantity	Price	Total	Your Farm
Revenue			**Gross Revenue ($/Acre)**		
Corn [1]	Bu	150	$3.82	$573.00	_____
			Total Revenue	**$573.00**	_____
Variable Expenses					
Seed [2,3]	Thous.	32	$3.13	$100.00	_____
Fertilizer & Lime (Table 1.)	Acre	1	$140.98	$140.98	_____
Chemical (Table 2.) [3,4]	Acre	1	$48.60	$48.60	_____
Crop Scout or Consultant	Acre	1	$6.00	$6.00	_____
Repair & Maintenance (Table 3.)	Acre	1	$21.18	$21.18	_____
Fuel, Oil & Filter (Table 3.)	Acre	1	$8.72	$8.72	_____
Operator Labor (Table 3.)	Acre	1	$5.20	$5.20	_____
Machinery Rental	Acre	1	$0.00	$0.00	_____
Custom Work	Acre	1	$0.00	$0.00	_____
Drying (Fuel/Electric)	Bu	150	$0.00	$0.00	_____
Cash Rent [5]	Acre	1	$98.00	$98.00	_____
Crop Insurance [6]	Acre	1	$13.84	$13.84	_____
Operating Interest [7]	%	$442.51	6.00%	$13.28	_____
Other Variable Costs	Acre	1	$0.00	$0.00	_____
			Total Variable Expenses	**$455.79**	_____
			Return above Variable Expenses	**$117.21**	_____
Fixed Expenses					
Machinery [8]					
Capital Recovery (Table 3.)	Acre	1	$41.13	$41.13	_____
Other Fixed Machinery Costs	Acre	1	$0.00	$0.00	_____
Property Taxes	Acre	1	$0.00	$0.00	_____
Insurance (Non-Machinery)	Acre	1	$0.00	$0.00	_____
Management Labor	Acre	1	$15.00	$15.00	_____
Other Fixed Costs	Acre	1	$0.00	$0.00	_____
			Total Fixed Expenses	**$56.13**	_____
			Return Above All Specified Expenses	**$61.08**	_____

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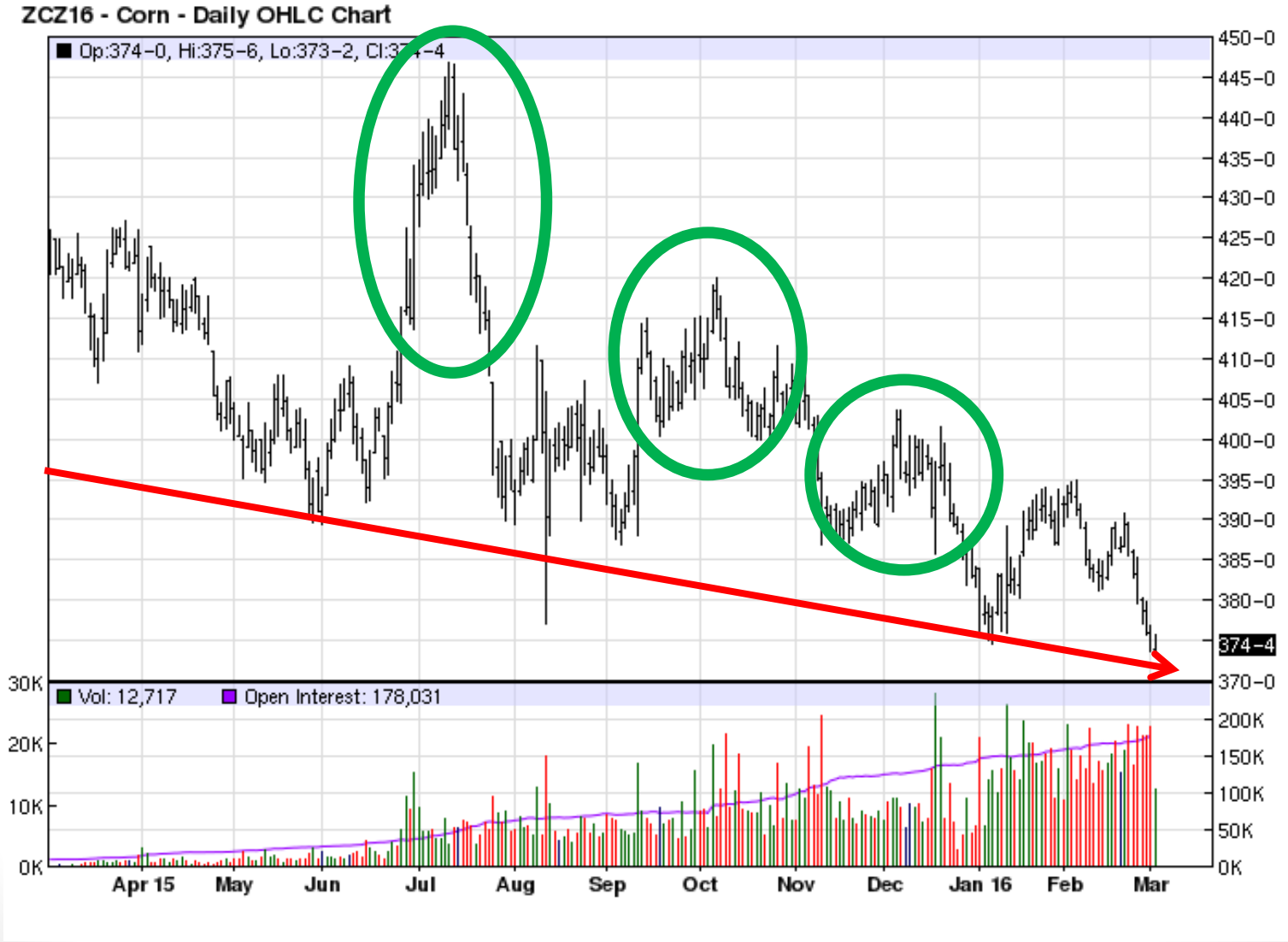
Corn - Net Return Table ($/Acre)

Price ($/bu)	Yield (bu/acre) 100	110	120	130	140	150	160	170	180	190	200
2.00	(312)	(292)	(272)	(252)	(232)	(212)	(192)	(172)	(152)	(132)	(112)
2.25	(287)	(264)	(242)	(219)	(197)	(174)	(152)	(129)	(107)	(84)	(62)
2.50	(262)	(237)	(212)	(187)	(162)	(137)	(112)	(87)	(62)	(37)	(12)
2.75	(237)	(209)	(182)	(154)	(127)	(99)	(72)	(44)	(17)	11	38
3.00	(212)	(182)	(152)	(122)	(92)	(62)	(32)	(2)	28	58	88
3.25	(187)	(154)	(122)	(89)	(57)	(24)	8	41	73	106	138
3.50	(162)	(127)	(92)	(57)	(22)	13	48	83	118	153	188
3.75	(137)	(99)	(62)	(24)	13	51	88	126	163	201	238
4.00	(112)	(72)	(32)	8	48	88	128	168	208	248	288
4.25	(87)	(44)	(2)	41	83	126	168	211	253	296	338
4.50	(62)	(17)	28	73	118	163	208	253	298	343	388
4.75	(37)	11	58	106	153	201	248	296	343	391	438
5.00	(12)	38	88	138	188	238	288	338	388	438	488
5.25	13	66	118	171	223	276	328	381	433	486	538
5.50	38	93	148	203	258	313	368	423	478	533	588
5.75	63	121	178	236	293	351	408	466	523	581	638

Cost of Production Estimated at $511.92/acre (2016 UT Crop Budgets)

Corn – Dec 2016 Contract



Dec 2016 Corn Options ($3.74)

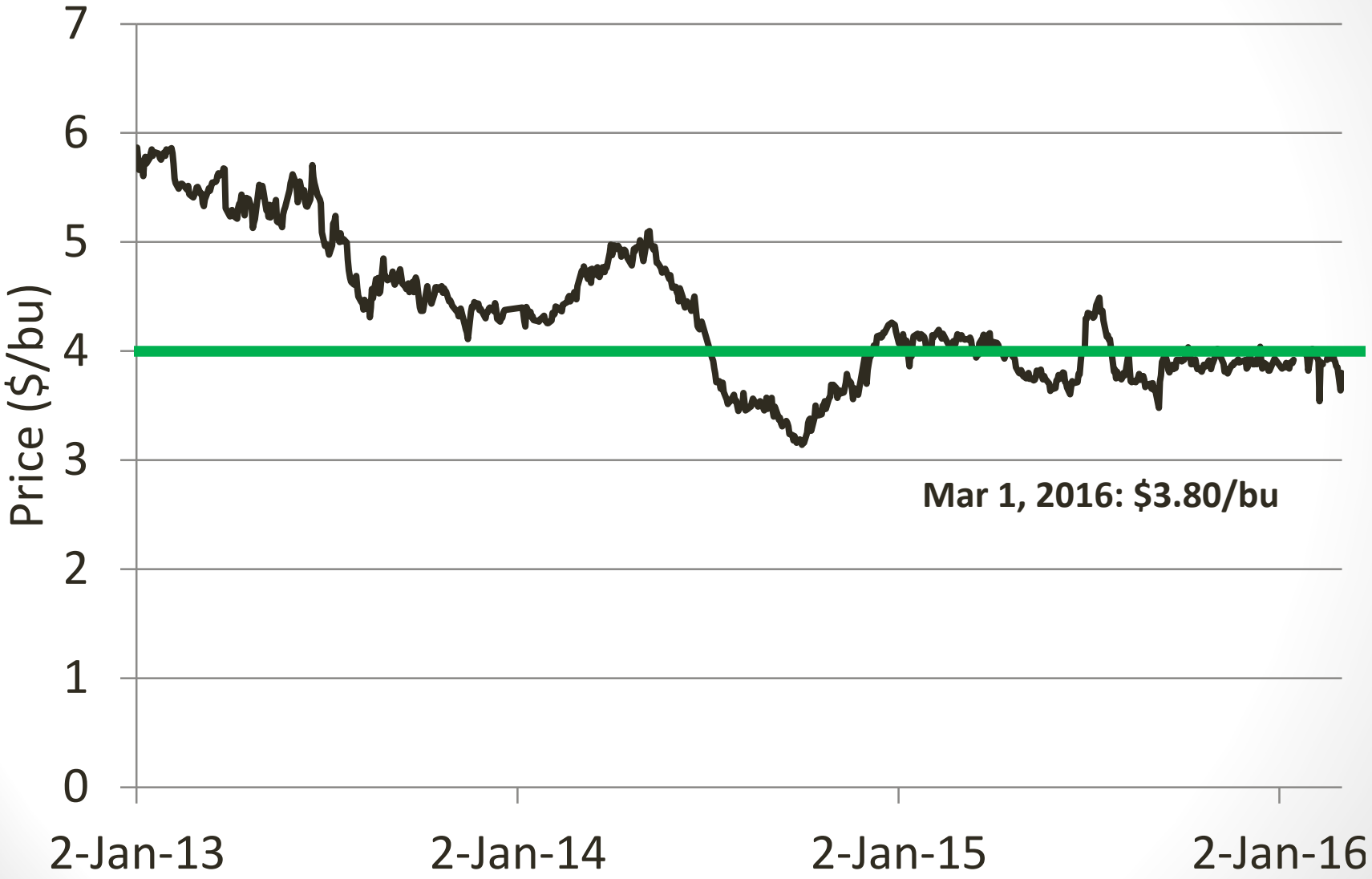
What are you protecting against and what tools are available to you?

For example: You want to protect downside price risk in the futures market:

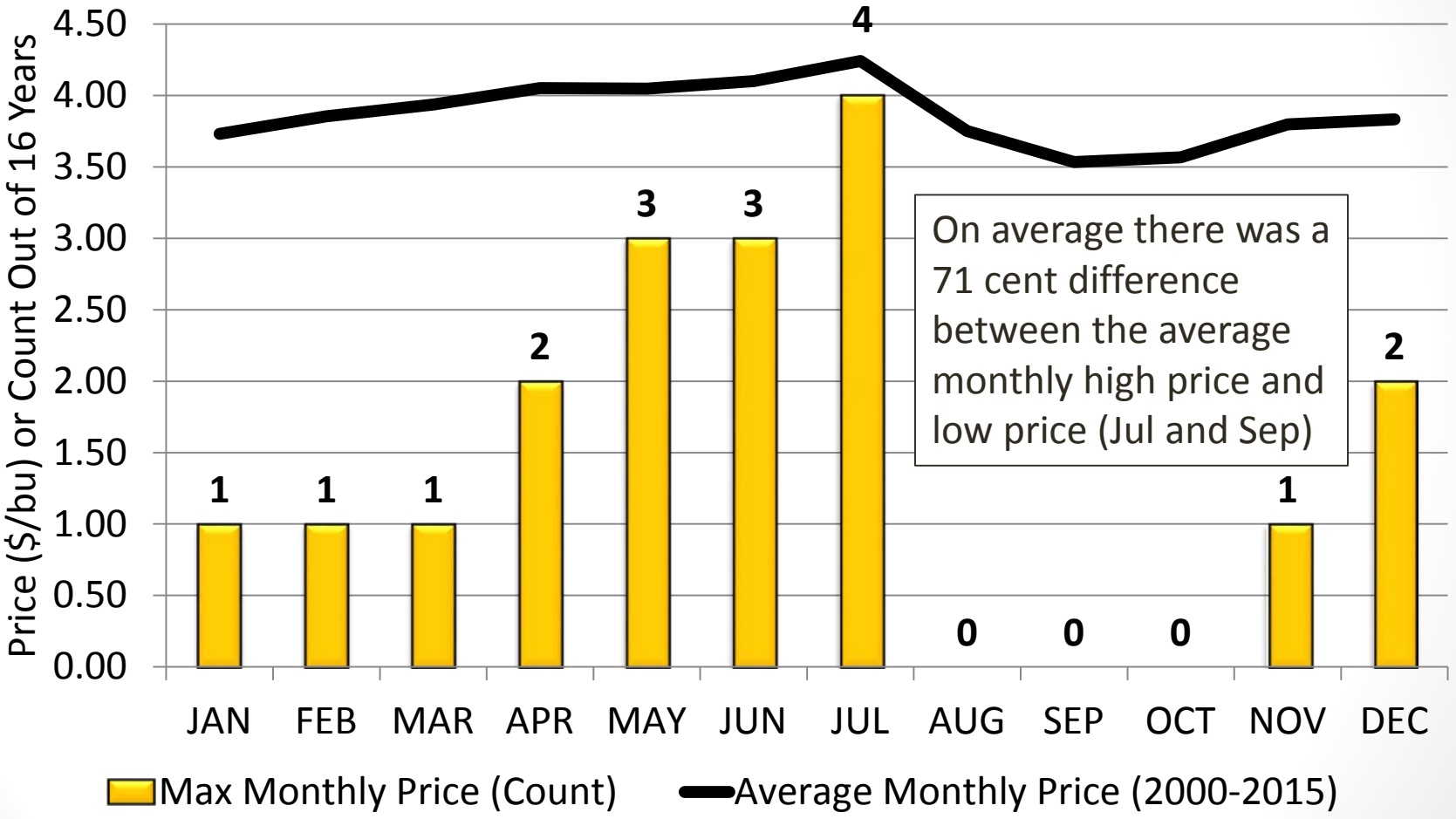
You could buy a $3.50 **Put Option** for $0.15 and remove 90% of your downside price risk in the futures market and leave the top side open

Strike	Put or Call	Premium
$3.50	C	$0.39
$3.50	**P**	**$0.15**
$3.60	C	$0.33
$3.60	P	$0.19
$3.70	**C**	**$0.29**
$3.70	**P**	**$0.25**
$3.80	**C**	**$0.25**
$3.80	**P**	**$0.31**
$3.90	C	$0.22
$3.90	P	$0.37
$4.00	C	$0.19
$4.00	P	$0.45
$4.10	C	$0.16
$4.10	P	$0.52

Corn: Sept Cash Forward Contract, Decherd/Guntersville



Average Monthly Corn Price in Tennessee, 2000-2015



* In 2015 (March and April) and 2005 (May and June) two months had the same maximum price.

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2016 Soybean, No-Till, Non-Irrigated Budget

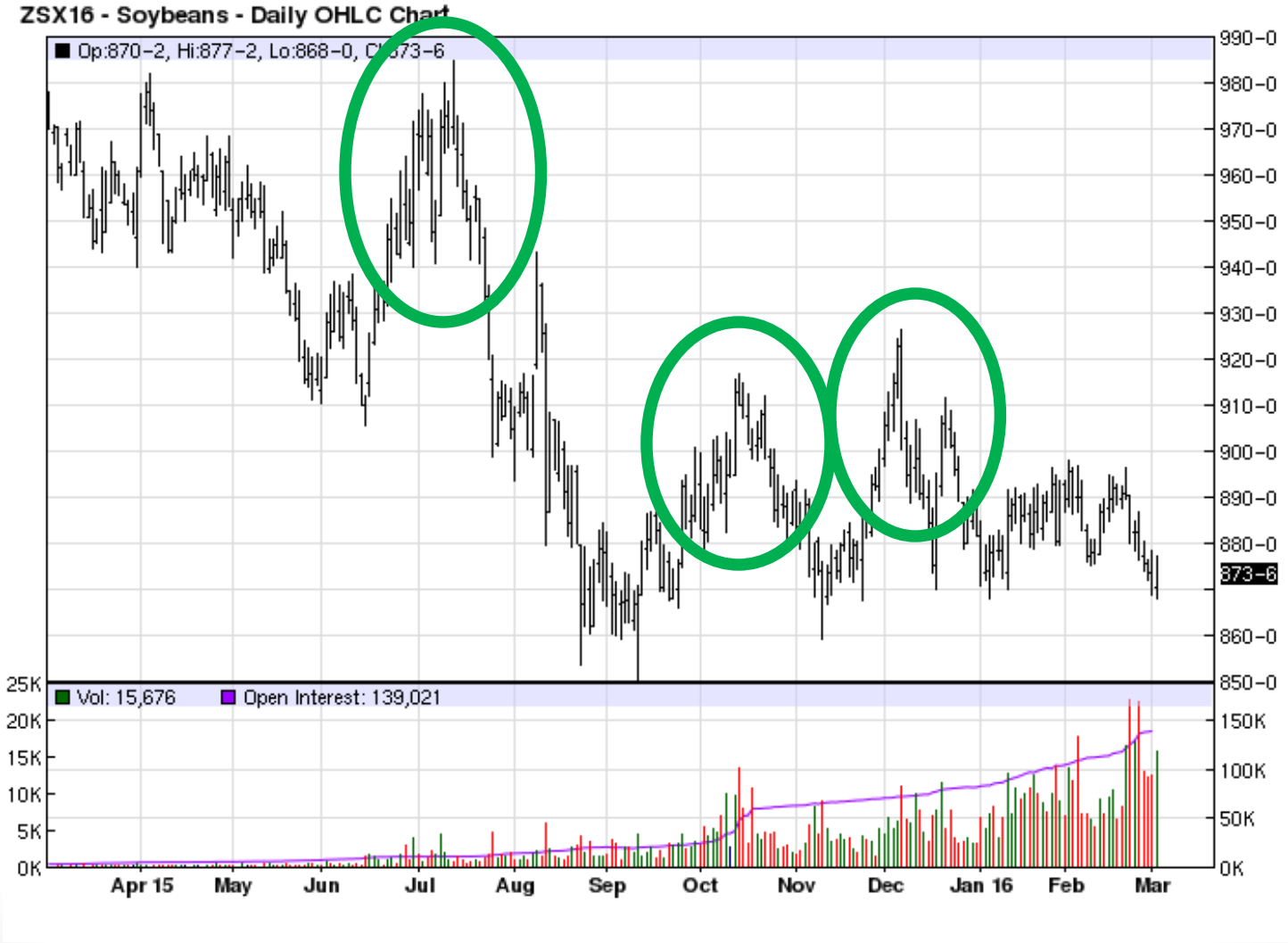
	Unit	Quantity	Price	Total	Your Farm
Revenue			**Gross Revenue ($/Acre)**		
Soybeans [1]	Bu	45	$8.99	$404.55	_____
			Total Revenue	**$404.55**	_____
Variable Expenses [2]					
Seed [3]	Thous.	140	$0.36	$50.00	_____
Fertilizer & Lime (Table 1.) [4]	Acre	1	$40.27	$40.27	_____
Chemical (Table 2.) [5,6,7,8,9,10]	Acre	1	$120.31	$120.31	_____
Crop Scout	Acre	1	$6.00	$6.00	_____
Repair & Maintenance (Table 3.) [11]	Acre	1	$18.33	$18.33	_____
Fuel, Oil & Filter (Table 3.) [11]	Acre	1	$8.02	$8.02	_____
Operator Labor (Table 3.) [11]	Acre	1	$5.10	$5.10	_____
Machinery Rental	Acre	0	$0.00	$0.00	_____
Custom Work	Acre	0	$0.00	$0.00	_____
Drying (Fuel/Electric)	Bu	45	$0.00	$0.00	_____
Cash Rent [12]	Acre	1	$98.00	$98.00	_____
Crop Insurance [13]	Acre	1	$8.97	$8.97	_____
Operating Interest [14]	%	$355.00	6.00%	$10.65	_____
Other Variable Costs	Acre	1	$0.00	$0.00	_____
			Total Variable Expenses	**$365.65**	_____
			Return Above Variable Expenses	**$38.90**	_____
Fixed Expenses					
Machinery [11]					_____
Capital Recovery (Table 3.)	Acre	1	$47.33	$47.33	_____
Other Fixed Machinery Costs	Acre	1	$0.00	$0.00	_____
Property Taxes	Acre	1	$0.00	$0.00	_____
Insurance (Non-Machinery)	Acre	1	$0.00	$0.00	_____
Management Labor	Acre	1	$15.00	$15.00	_____
Other Fixed Costs	Acre	1	$0.00	$0.00	_____
			Total Fixed Expenses	**$62.33**	_____
			Return Above All Specified Expenses	**-$23.43**	_____

Soybean-Net Return Table($/Acre)

Price ($/bu)	Yield (bu/acre) 20	25	30	35	40	45	50	55	60	65	70
7.00	(288)	(253)	(218)	(183)	(148)	(113)	(78)	(43)	(8)	27	62
7.25	(283)	(247)	(210)	(174)	(138)	(102)	(65)	(29)	7	43	80
7.50	(278)	(240)	(203)	(165)	(128)	(90)	(53)	(15)	22	60	97
7.75	(273)	(234)	(195)	(157)	(118)	(79)	(40)	(2)	37	76	115
8.00	(268)	(228)	(188)	(148)	(108)	(68)	(28)	12	52	92	132
8.25	(263)	(222)	(180)	(139)	(98)	(57)	(15)	26	67	108	150
8.50	(258)	(215)	(173)	(130)	(88)	(45)	(3)	40	82	125	167
8.75	(253)	(209)	(165)	(122)	(78)	(34)	10	53	97	141	185
9.00	(248)	(203)	(158)	(113)	(68)	(23)	22	67	112	157	202
9.25	(243)	(197)	(150)	(104)	(58)	(12)	35	81	127	173	220
9.50	(238)	(190)	(143)	(95)	(48)	(0)	47	95	142	190	237
9.75	(233)	(184)	(135)	(87)	(38)	11	60	108	157	206	255
10.00	(228)	(178)	(128)	(78)	(28)	22	72	122	172	222	272
10.25	(223)	(172)	(120)	(69)	(18)	33	85	136	187	238	290
10.50	(218)	(165)	(113)	(60)	(8)	45	97	150	202	255	307
10.75	(213)	(159)	(105)	(52)	2	56	110	163	217	271	325

Cost of Production Estimated at $427.98/acre (2016 UT Crop Budgets)

Soybeans – Nov 2016 Contract



Nov 2016 Soybean Options ($8.74)

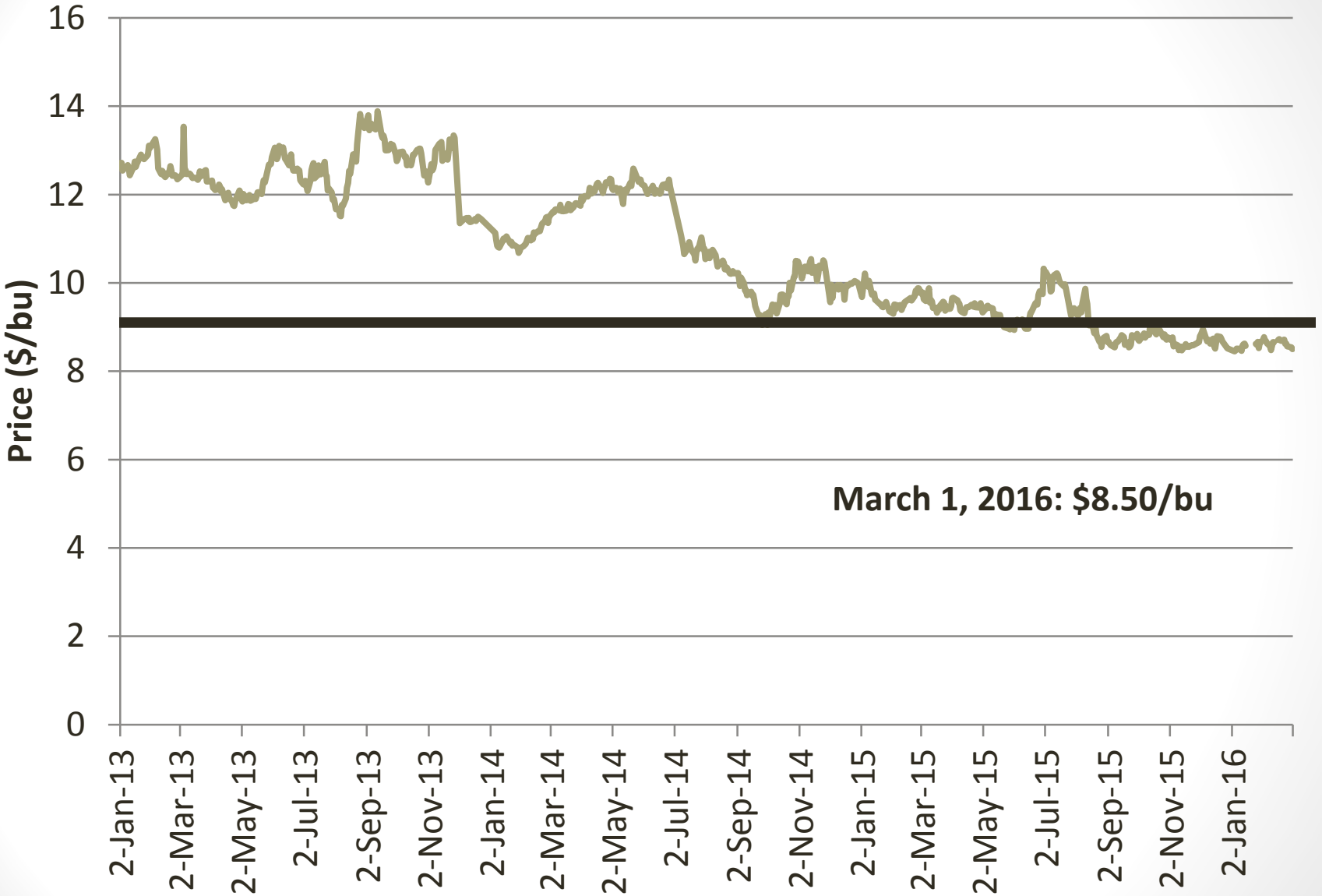
What are you protecting against and what tools are available to you?

For example: You want to protect downside price risk in the futures market:

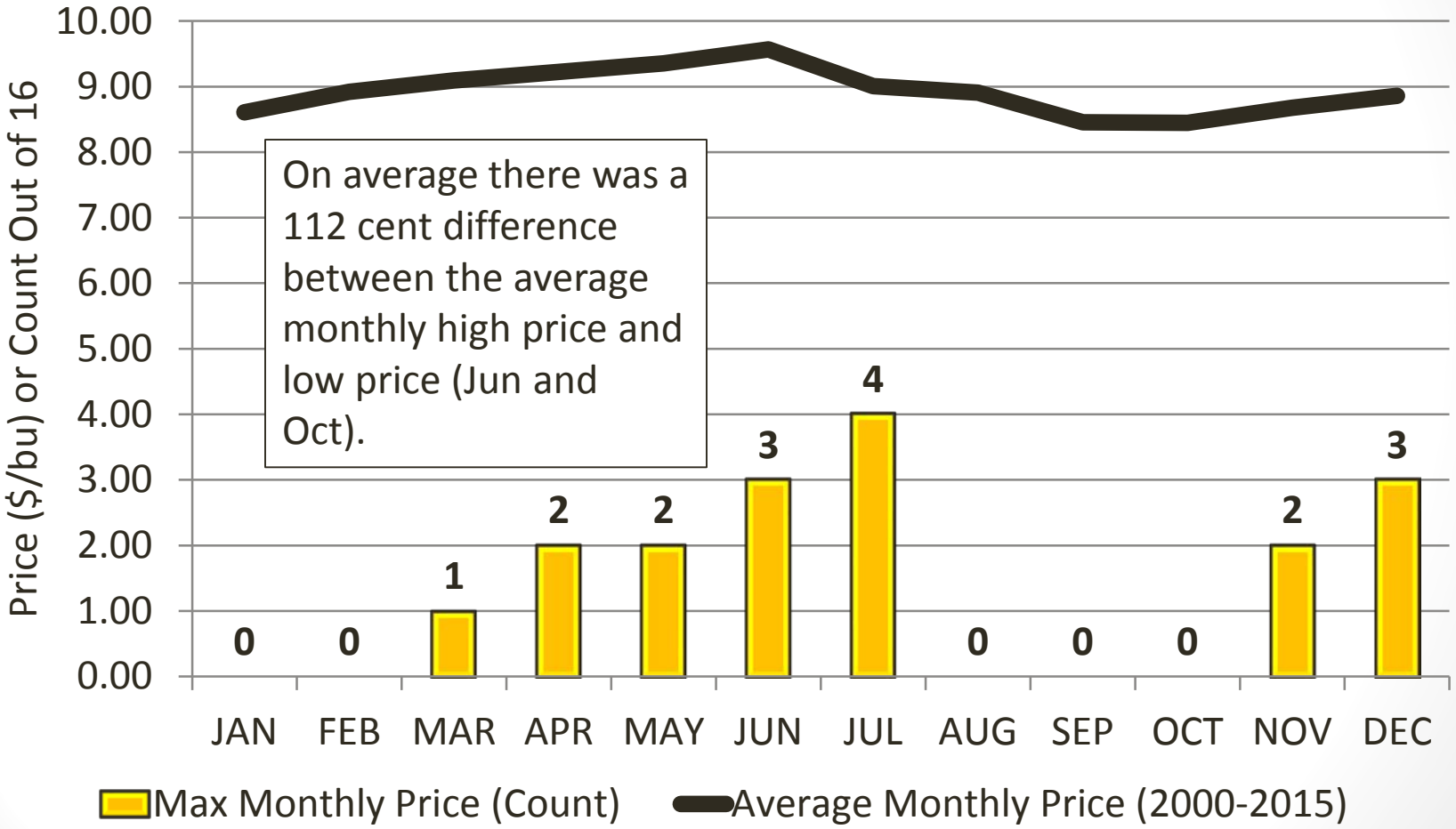
You could buy a $8.40 **Put Option** for $0.25 and remove 93% of your downside price risk in the futures market and leave the upside open

Strike	Put or Call	Premium
$8.00	C	$0.84
$8.00	P	$0.14
$8.20	C	$0.70
$8.20	P	$0.20
$8.40	C	$0.57
$8.40	**P**	**$0.25**
$8.60	**C**	**$0.48**
$8.60	**P**	**$0.34**
$8.80	**C**	**$0.40**
$8.80	**P**	**$0.45**
$9.00	C	$0.32
$9.00	P	$0.60
$9.20	C	$0.24
$9.20	P	$0.74

Oct/Nov Cash Forward Contract Decherd/Guntersville



Average Monthly Soybean Price in Tennessee, 2000-2015



* In 2014 (April and June) two months had the same maximum price.

2016 Marketing Keys

- Value of the USD relative to the Brazilian Real, Argentine Peso, and Chinese Yuan
- Global economic growth/stability, particularly in southeast Asia and South America
- Domestic and foreign ag policy
- Brazil and Argentina production
- Domestic planted acreage and weather
- Price early (don't trade price risk for production risk)
- Continue to revisit your marketing plan
- Don't let opportunities pass you by

Thank You

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http://economics.ag.utk.edu/crop.html