

# 2013 Market Outlook to Support Crop Insurance Purchase Decisions March 4, 2013

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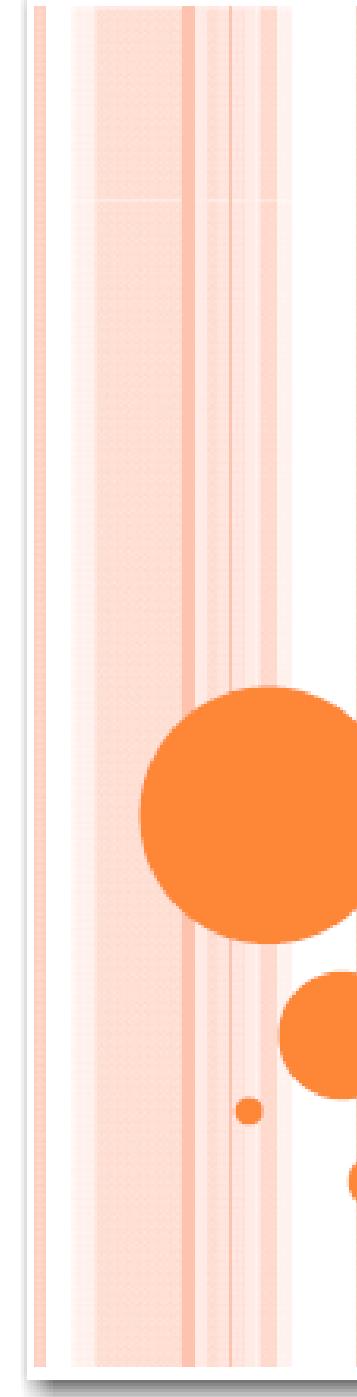
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EXTENSION



# Today's Topics



- Corn & Soybean Price Outlook
- Integrate information from several sources including Dan O'Brien @ Kansas State University, Pete Riley @ USDA, and Projections Implied by Current Futures Market
- Includes thoughtful scenario development to price prospects, particularly by O'Brien, based on potential crop size.
- Captures differences in trend yield projections across analysts



# **CORN & SOYBEAN SUPPLY-DEMAND, PRICES & INCOME RISK**

**DECATUR, ILLINOIS**

**FEBRUARY 28, 2013**



**Daniel O'Brien, Extension Ag Economist**

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# CORN MARKET



# 2013 GRAIN MARKET “DRIVERS”

## ○ Corn



- “*Tight*” U.S. Supply/Use in “old crop” 2012/13
- 2013 U.S. & So. American crops to drive fall markets
- USDA: *LARGE* 2013 U.S. corn crop – *LOW* fall \$’s

## ○ Soybeans



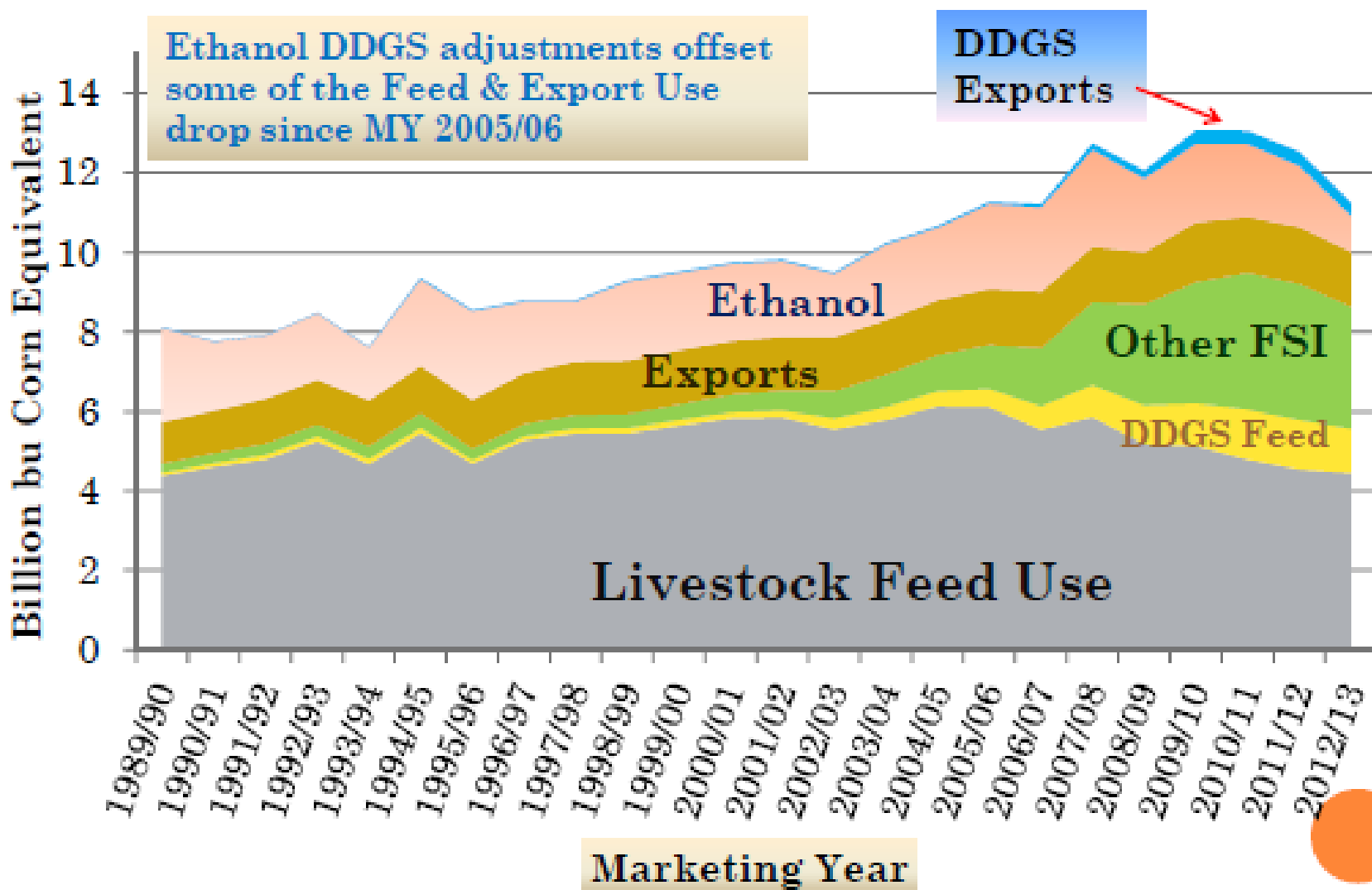
- “*Tight*” U.S. S/D & “*Strong*” Chinese/World imports
- How will So. America crop affect U.S. exports-acres?
- USDA: *LARGE* 2013 U.S. soy crop – *LOW* fall \$’s

# 2013 U.S. CORN SUPPLIES

- **Planted Area** (record high?)
  - 96 - 100 million acres (USDA: 96.5)
- **Harvested Area**
  - 87 - 91 million acres (USDA: 88.8)
- **Yield** (hot-dry summer or not?)
  - 135 (low) – 157.4 (trend) – 164.7 bu/ac
  - USDA: 163.6 bu/ac
- **Production** (record high?)
  - 12.0 – 14.7 billion bushels (USDA: 14.530 bb)
- **Total Supply** (record high?)
  - 12.7 – 15.3 billion bushels (USDA: 15.187 bb)



# U.S. CORN USE WITH DDGS #S





# KSU U.S. CORN S-D FOR MY 2013/14

	Low Yield 25% prob.	Trend Yield 65% prob.	High Yield 10% prob.
Planted Ac. (mln.)	97.5	97.5	97.5
Harvested Ac (mln.)	88.8	88.8	88.8
Yield (bu./ac.)	135.0	157.4	164.7
Beginning Stocks	632	632	632
<b>Production</b>	<u>11,988</u>	<u>13,977</u>	<u>14,625</u>
<b>Total Supplies</b>	<b>12,720</b>	<b>14,619</b>	<b>15,265</b>
<b>Ethanol</b>	4,750	5,000	5,150
Other Food, Seed,	1,380	1,420	1,440
Exports	1,250	1,450	1,500
Feed & Residual	4,500	5,100	5,400
<b>Total Use</b>	<b>11,880</b>	<b>12,970</b>	<b>13,490</b>
<b>End Stocks (%S/U)</b>	(7.0%) 840	(12.7%) 1,649	(13.1%) 1,775
<b>U.S. Avg. Farm \$</b>	<b>\$6.10-\$7.10</b>	<b>\$3.90-\$4.90</b>	<b>\$3.50-\$4.50</b>



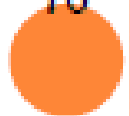
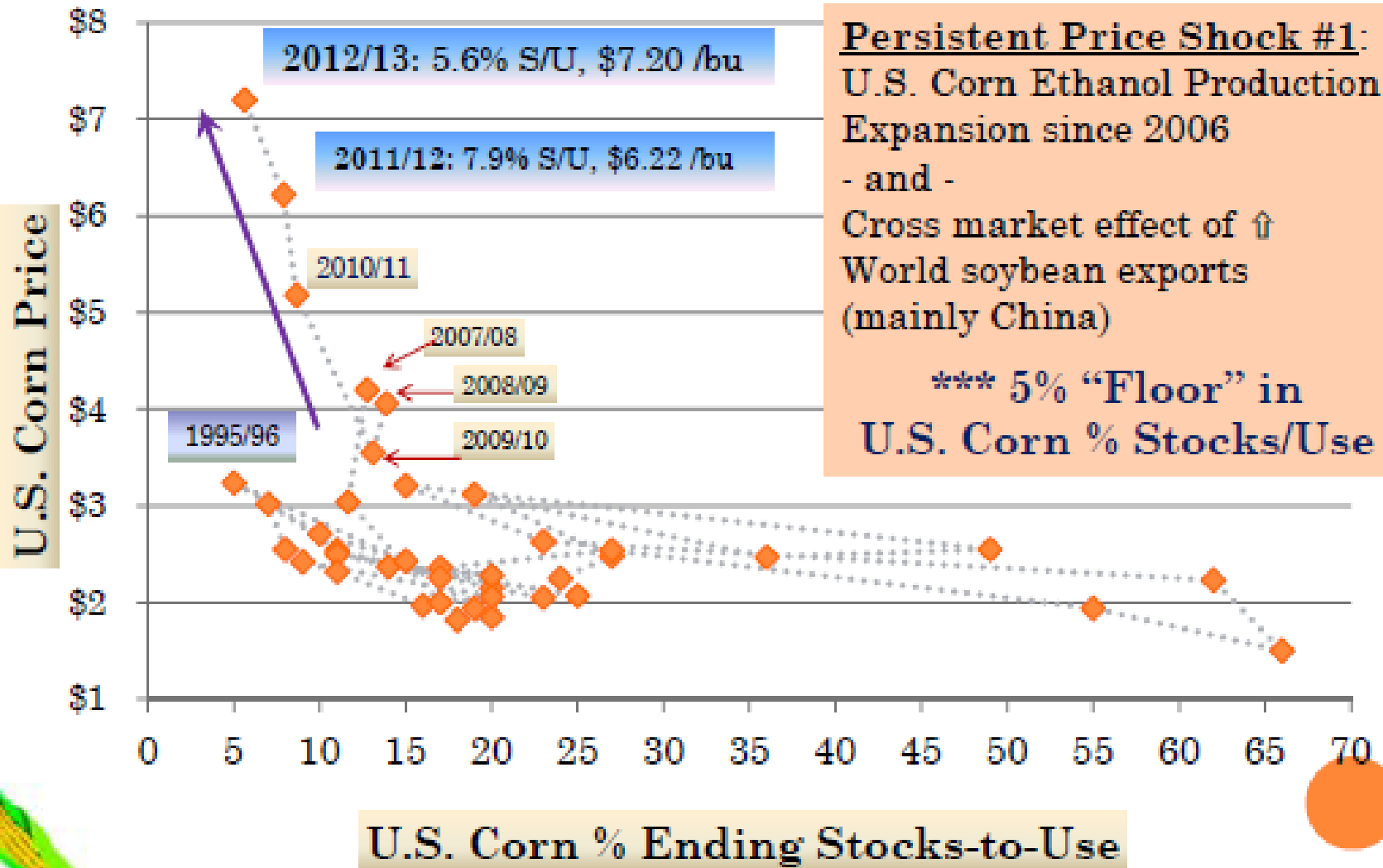


# USDA & KSU U.S. CORN S-D (2013/14)

	*USDA*	KSU Trend 65% prob.	KSU High 10% prob.
Planted Ac. (mln.)	96.5	97.5	97.5
Harvested Ac (mln.)	88.8	88.8	88.8
Yield (bu./ac.)	163.6	157.4	164.7
Beginning Stocks	632	632	632
Production	<u>14,530</u>	<u>13,977</u>	<u>14,625</u>
<b>Total Supplies</b>	<b>15,187</b>	<b>14,619</b>	<b>15,265</b>
Ethanol	4,675	5,000	5,150
Other FSI	1,435	1,420	1,440
Exports	1,500	1,450	1,500
Feed & Residual	5,400	5,100	5,400
<b>Total Use</b>	<b>13,010</b>	<b>12,970</b>	<b>13,490</b>
<b>End Stocks (%S/U)</b>	<i>(16.7%) 2,177</i>	<i>(12.7%) 1,649</i>	<i>(13.1%) 1,775</i>
<b>U.S. Avg. Farm \$</b>	<b>\$4.80</b>	<b>\$3.90-\$4.90</b>	<b>\$3.50-\$4.50</b>

# U.S. CORN \$ VS % STOCKS-TO-USE

MY 1973/74 - 2012/13 FEBRUARY 8, 2013 USDA WASDE



# FEEDGRAIN MARKET PROSPECTS

- **\$ Rationing of Use**
  - Tight basis  $\Rightarrow$  Spring-Summer
- **Competition for U.S. Crop Acreage in Spring**
  - Corn vs Soybeans vs other crops
- **U.S. 2013 Crop Prospects?**
  - **IF** have a normal – trend yield U.S. corn crop in 2013...  
**THEN** will have  $\downarrow P_{\text{corn}}$  later in 2013
  - **But IF** have Crop problems in 2013 –  
**THEN** U.S. corn prices to remain  $\uparrow$ ,
    - **BUT** will see more economic damage to the demand base for U.S. corn



# WHAT “SURPRISES” COULD OCCUR?

## A. “Short” 2013 South American Corn crop?

- Less likely to occur as growing season advances

## B. “Short” 2013 U.S. Corn crop

- Consecutive years of major drought (Taylor – ISU)

## C. ↓ RFS2 Mandate / ↓ Corn Ethanol Use

- ↓ 2012/13 U.S. Corn Use ⇒ 4.0-4.4 billion bu
- ↓ 2012/13 U.S. Corn \$'s ⇒ \$5.00 - \$6.00 bu/ac

## D. Financial, Energy, & consequently Commodity Market Volatility



# SOYBEAN MARKETS



SOYBEANS

# U.S. SOYBEAN SUPPLY-DEMAND

USDA WASDE REPORT – FEBRUARY 8, 2013

	2010/11	2011/12	2012/13
Planted Acres (mln.)	77.4	75.0	77.2
Harvested Acres	76.6	73.8	76.1
Yield (bu./ac.)	43.5	41.9	39.6
Beginning Stocks	151	215	169
Production	<u>3,329</u>	<u>3,094</u>	<u>3,015</u>
<b>Total Supplies</b>	<b>3,495</b>	<b>3,325</b>	<b>3,204</b>
Crushings	1,648	1,703	1,615
Exports	1,501	1,362	1,345
Seed & Residual	130	91	119
<b>Total Use</b>	<b>3,280</b>	<b>3,155</b>	<b>3,080</b>
Ending Stocks	(6.6%) 215	(5.4%) 169	(4.05%) 125
U.S. Avg. Farm \$	\$11.30	\$12.50	\$13.55-\$15.05



# U.S. SOYBEAN S/D - MY 2013/14

	Low Yield 20% prob.	Trend Yield 65% prob.	High Yield 15% prob.
Planted Acres (mln.)	78.0	78.0	78.0
Harvested Ac. (mln.)	77.0	77.0	77.0
Yield (bu./ac.)	38.0	43.5	45.0
Beginning Stocks	125	125	125
<b>Production</b>	<u>2,926</u>	<u>3,350</u>	<u>3,465</u>
<b>Total Supplies</b>	3,071	3,495	3,610
Crushings	1,560	1,720	1,775
<b>Exports *Wildcard*</b>	1,285	1,425	1,470
Seed & Residual	100	110	110
<b>Total Use</b>	2,945	3,255	3,359
<b>Ending Stocks</b>	(4.3%) 126	(7.4%) 240	(7.5%) 251
<b>U.S. Avg. Farm \$</b>	\$13.50-\$14.50	\$10.50-\$11.50	\$10.25-\$11.25



# USDA & KSU U.S. SOYBEAN S-D (2013/14)

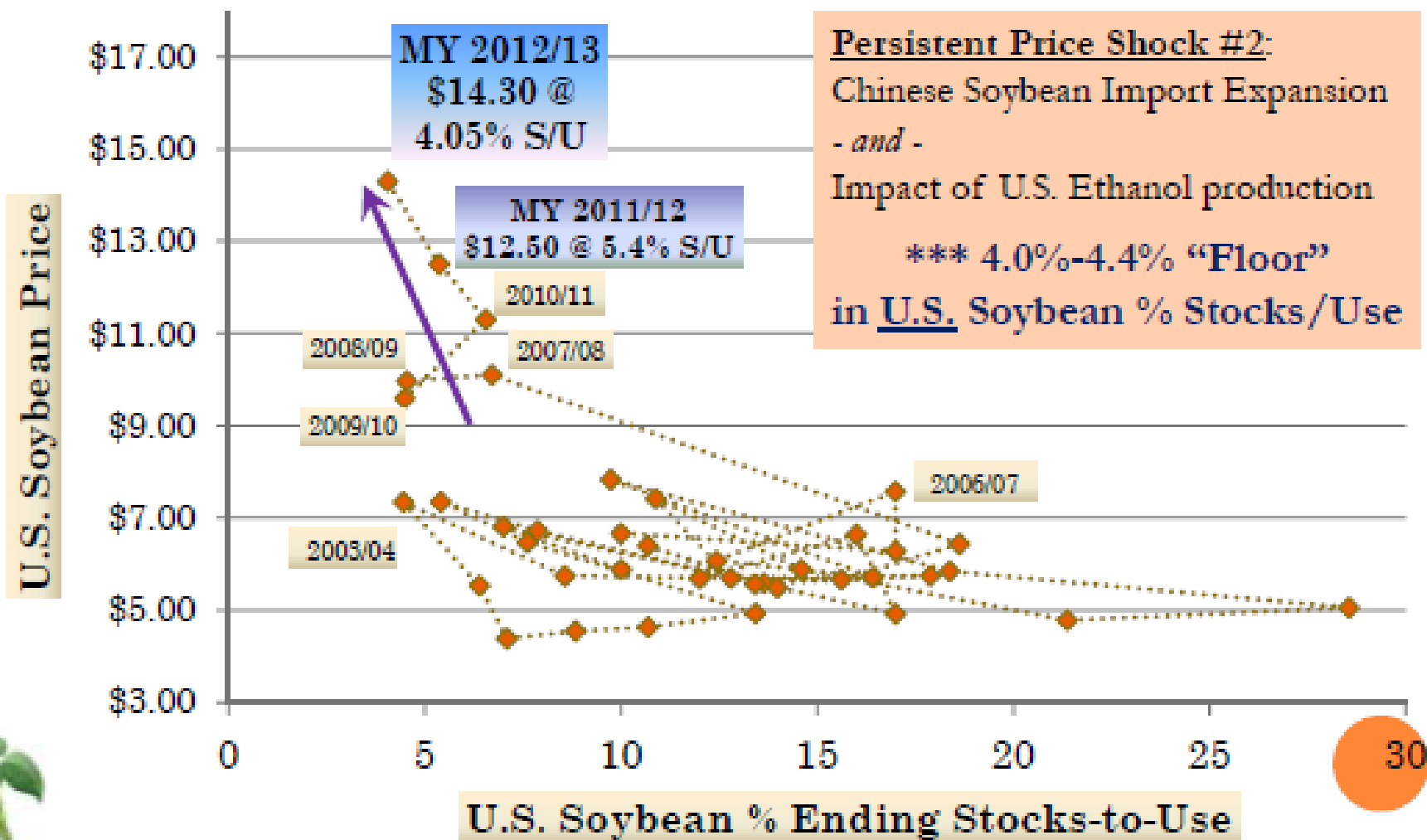
	<b>*USDA*</b>	<b>KSU Trend 65% prob.</b>	<b>KSU High 15% prob.</b>
Planted Acres (mln.)	77.5	78.0	78.0
Harvested Ac. (mln.)	76.6	77.0	77.0
Yield (bu./ac.)	44.5	43.5	45.0
Beginning Stocks	125	125	125
<b>Production</b>	<u>3,405</u>	<u>3,350</u>	<u>3,465</u>
<b>Total Supplies</b>	3,545	3,495	3,610
Crushings	1,660	1,720	1,775
<b>Exports</b>	1,500	1,425	1,470
Seed & Residual	135	110	110
<b>Total Use</b>	3,295	3,255	3,359
<b>Ending Stocks</b>	(7.6%) 250	(7.4%) 240	(7.5%) 251
<b>U.S. Avg. Farm \$</b>	\$10.50	\$10.50-\$11.50	\$10.25-\$11.25





# U.S. SOYBEAN \$ VS STX-TO-USE

MY 1973/74 – 2012/13 FEBRUARY 8, 2013 USDA REPORTS



# SOYBEAN MARKET PROSPECTS

## ○ South America Crop Size

- To drive U.S. exports & prices in Spring
- Major decline in U.S. exports expected

## ○ U.S. Soybean Acres

- Competing with U.S. Corn, other crops
- IF Spring prices ↓ – may lower U.S. farmers incentive to plant soybeans

## ○ 2013 U.S. Crop Prospects

- IF normal 2013 U.S. crop,  
THEN prices may decline sharply into fall
- BUT IF U.S. soybean crop problems occur –  
THEN soybean prices will likely rise to record highs, etc.



# WHAT “SURPRISES” COULD OCCUR?

## A. “Short” 2013 So. American soybean crop

- Diminishing likelihood of occurring

## B. “Short” 2013 U.S. Soybean crop

- Consecutive years of major drought (Taylor – ISU)

## C. Unexpected “Weakness” in Chinese Imports in 2013

- Seemingly unlikely due to continuing strength in Chinese soybean & soybean product imports



# **GRAINS AND OILSEEDS OUTLOOK**

**2013 Agricultural Outlook Forum**

**Pete Riley**

**Economic and Policy Analysis Staff**

**USDA/Farm Service Agency**

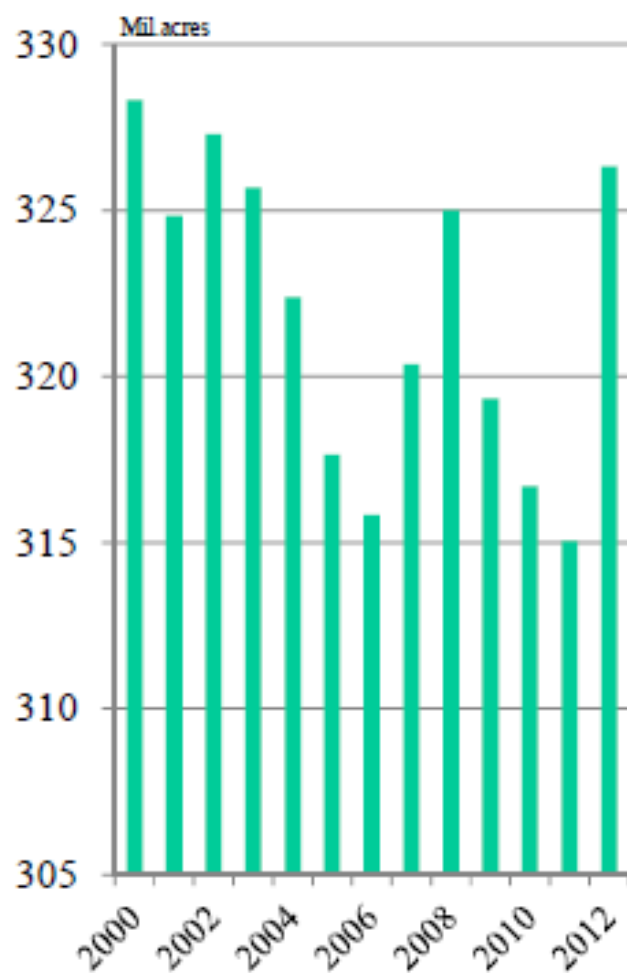
**Washington, DC 20250**

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**February 22, 2013**

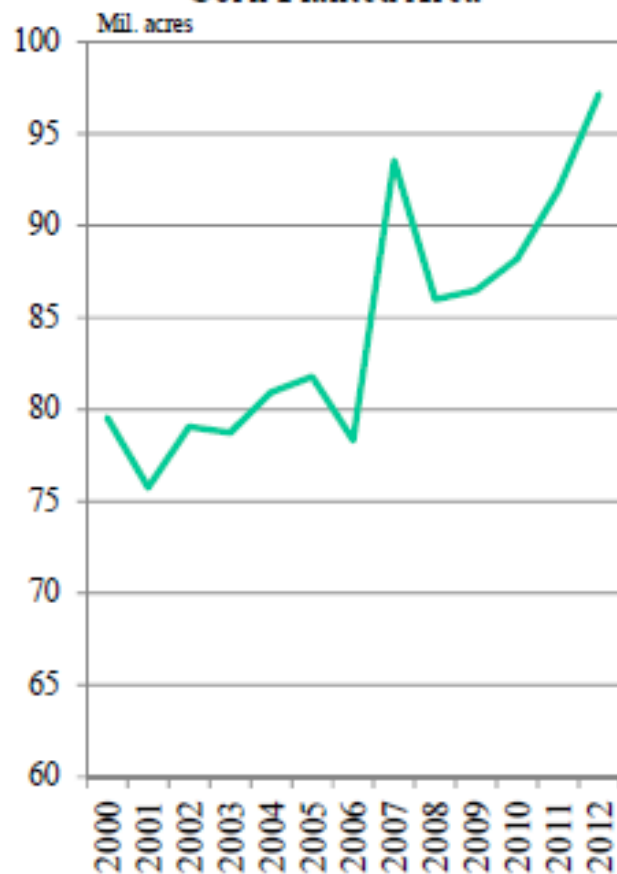
## 2012 Principal Crop Plantings were 326.3 million Acres, the Highest Since 2002



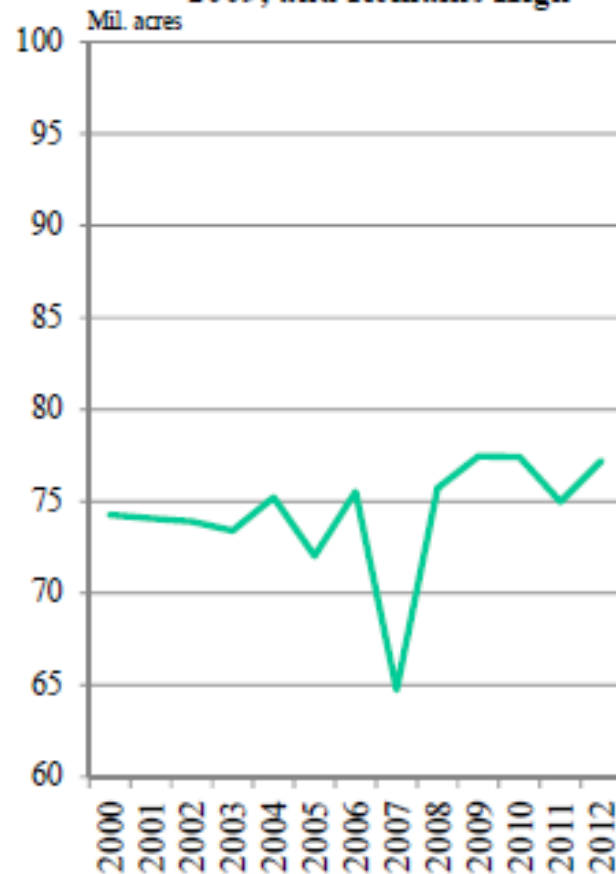
- Year to year increase was 11.2 million acres, the largest since 1996.
- Very strong price incentives and favorable (dry) planting conditions account for the large gain.
- Acreage for every principal crop except cotton showed an increase over 2011.
- Principal crops include all major field crops, hay, minor oilseeds, potatoes, dry beans, tobacco, sugarcane and beets, peas and lentils, millet, and rye.

# Since 2008, Corn and Soybeans Have Accounted for More than Half of Principal Acres

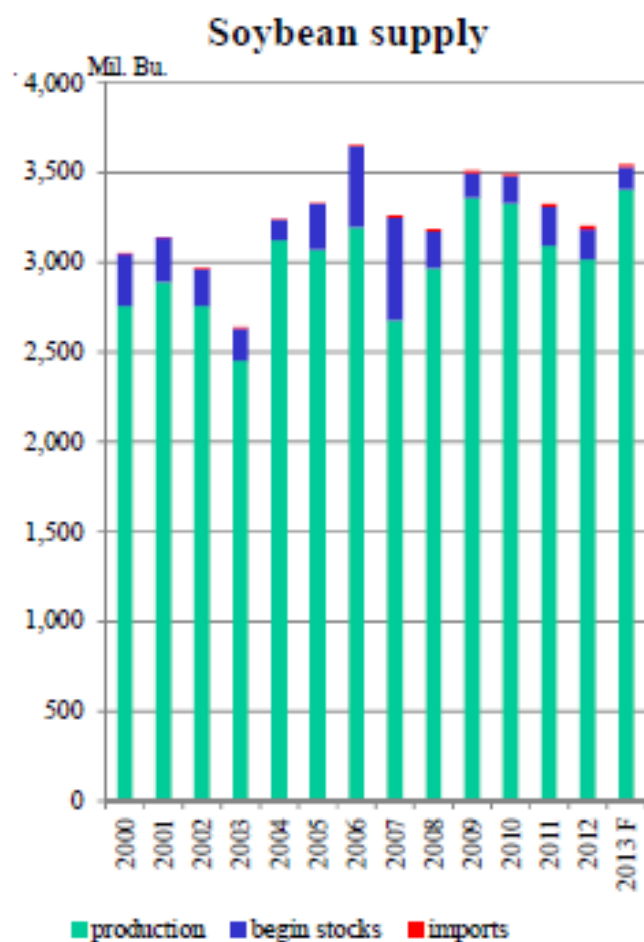
The Big Story is the Increase in Corn Planted Area



Soybean Area Set Record in 2009, and Remains High

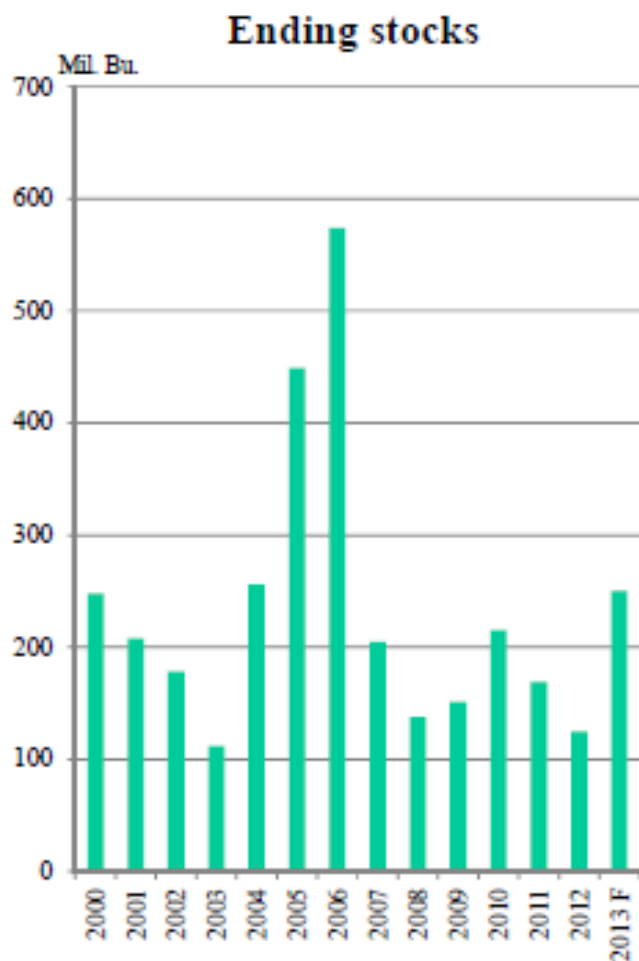


## Soybean Supply Expected to be the Highest in 7 Years



- Despite very low beginning stocks, bigger crop will raise supply 11 percent and would be the second highest ever.
- 2013 production projected to slightly eclipse prior record high of 2009.

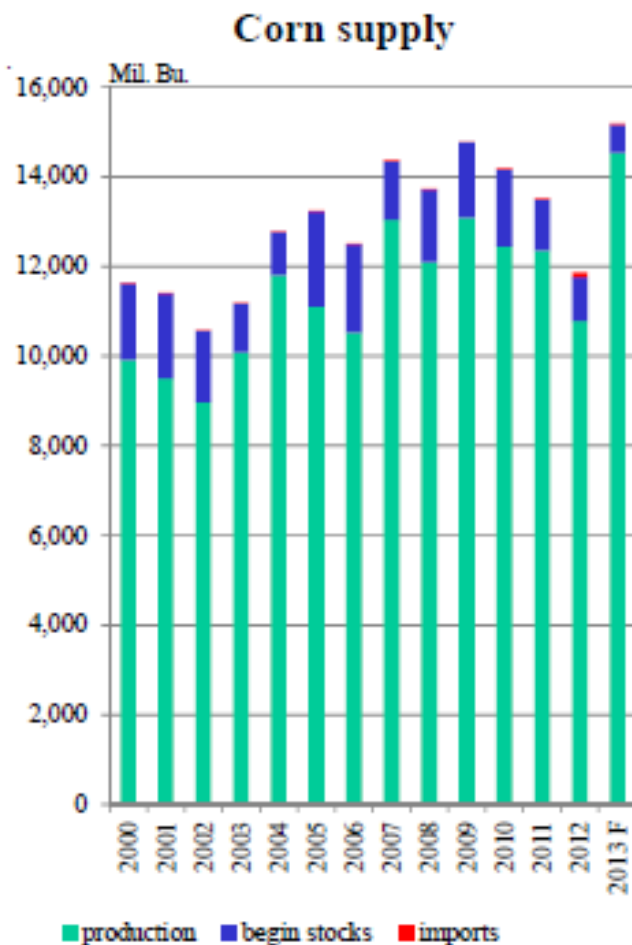
## Soybean Ending Stocks Projected to Double in 2013/14



- Soybean ending stocks are projected at 250 million bushels, double the level forecast for 2012/13, and the highest since 2006/07.
- The stocks-to-use ratio would rise to 7.6 percent, compared with the historically low level of 4.1 percent forecast for 2012/13.



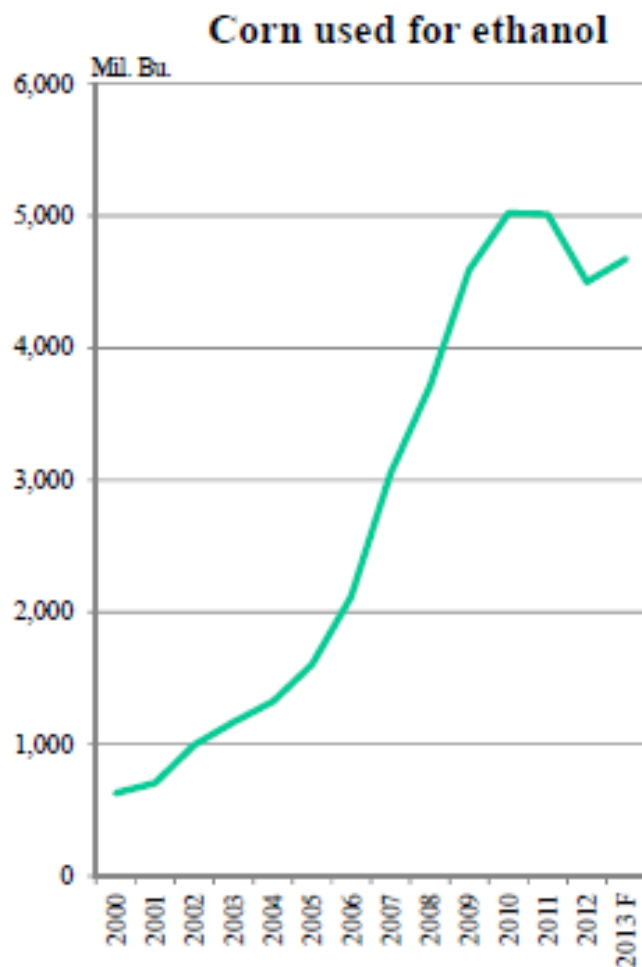
## 2013 Corn Supply Expected to be Record Large



- Despite the lowest forecast carryin stocks since 1995/96, corn supply projected up 28 percent to 15.2 billion bushels.
- Although planted area is expected to fall slightly, harvested area is expected to be the highest since 1933.
- Area of corn cut for silage or abandoned will decrease with better growing conditions.

# Only Modest Rebound in Ethanol in 2013/14

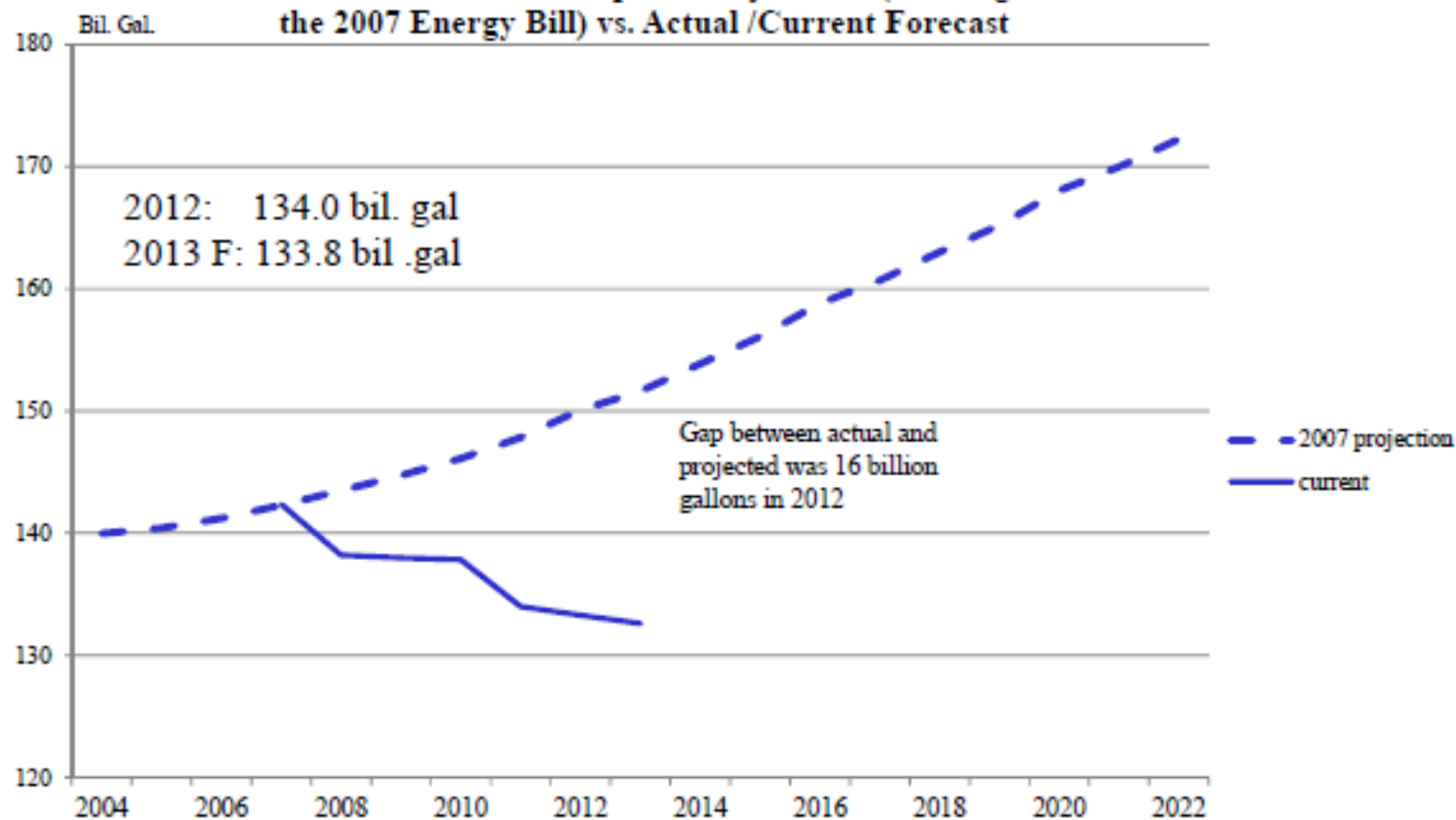
## Reflects Decline in Gasoline Use and “Blend Wall”



- Potential market for ethanol constrained by declining gasoline consumption.
- The “blend wall” refers to a market saturated at the 10-percent blend (E10).
- Ethanol exports are not expected to recover to 2011 highs, with higher production in Brazil and EU trade barriers.
- Imports of sugarcane ethanol from Brazil are increasing.
- No significant expansion expected for E15 or E85.

# Falling Gasoline Use Constrains Ethanol Expansion

2007 Gasoline Consumption Projections (Guiding the 2007 Energy Bill) vs. Actual /Current Forecast



# What Accounts for Declining Gasoline Consumption?

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## Fewer Miles Driven

- Vehicle miles driven peaked in 2007.
- Recession explains initial decline, but there are other factors:
  - High gasoline prices.
  - Aging baby boomers.
  - Teenagers delaying driving.
  - Population shifts to urban areas.

## Efficiency Gains

- Virtually all new vehicles get more miles per gallon.

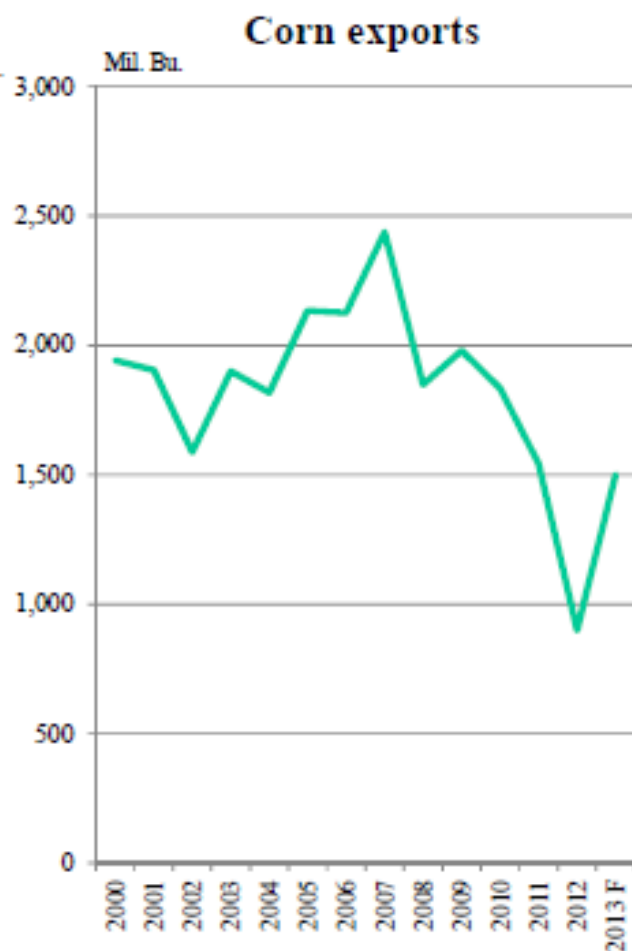
© Ford Motor Company



- For example, the Ford 150 series pick up (the top selling vehicle over the last decade), gets 18 mpg for 2013, up from 16 in 2003, a 12.5 percent improvement.\*

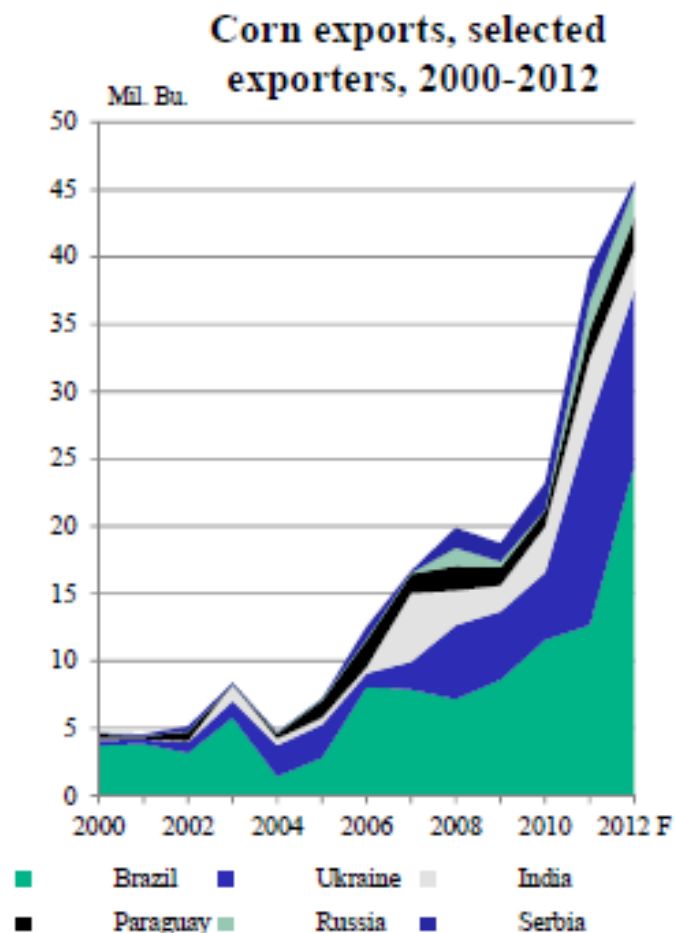
\*Example of 6-cylinder automatic

# Corn Export Recovery Limited As Competition Remains Strong



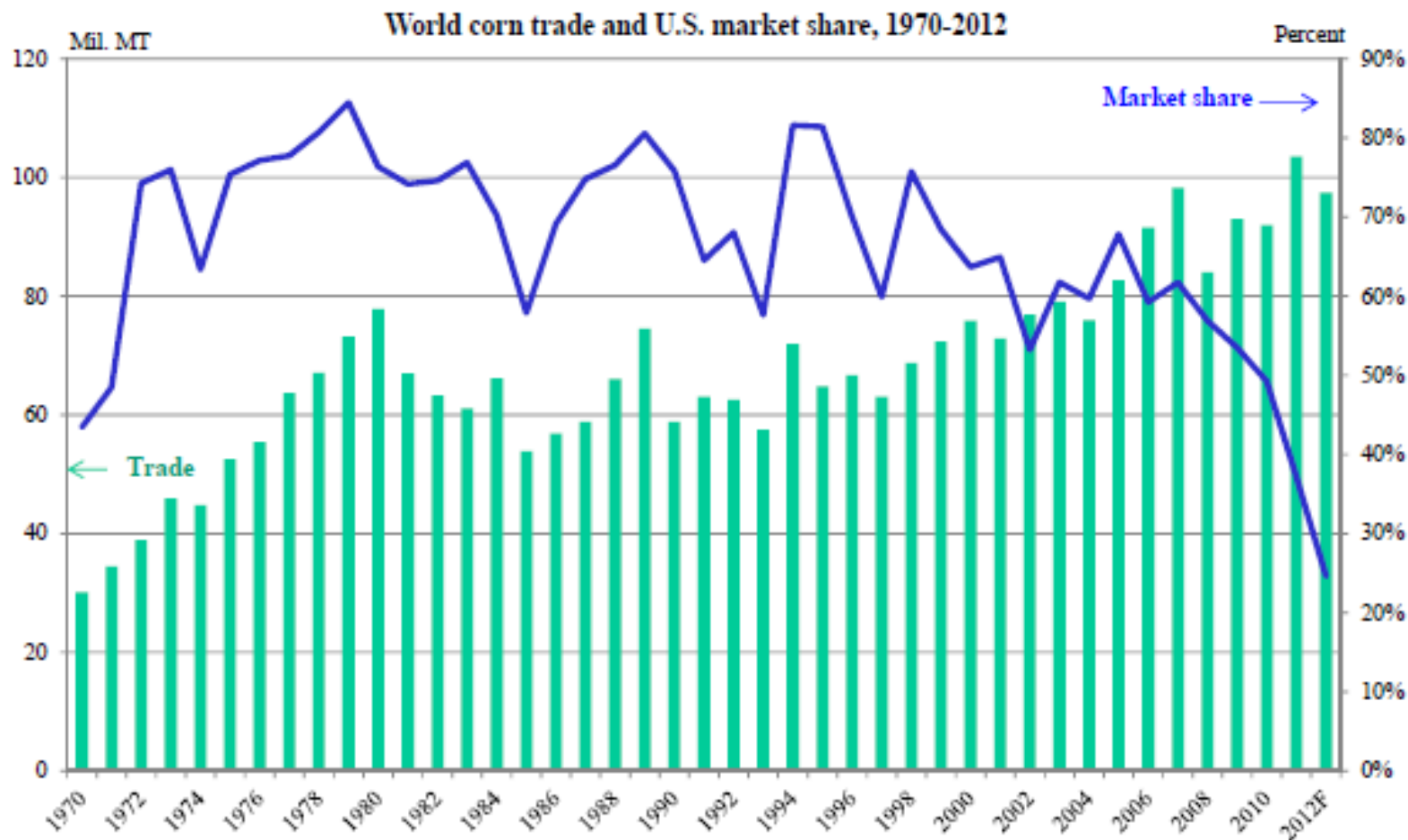
- Exports for the current 2012/13 year are forecast at just 900 million bushels, the lowest since 1971/72.
- U.S. shipments are projected to rise, but stay relatively low at 1,500 million bushels.
- The recent downtrend reflects very high U.S. prices and loss of market share, as farmers worldwide have responded to high price signals.

# High Prices Trigger Sharp Increase in Corn Exports by Non-Traditional Exporters

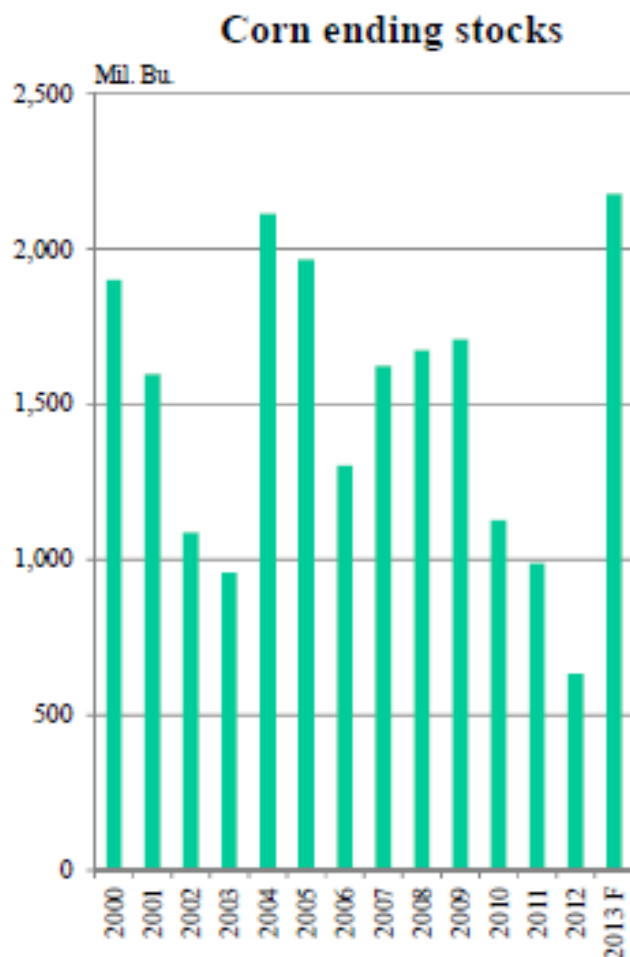


- Record high corn prices have triggered a strong production response in the rest of the world.
- Foreign export gains have been led by Brazil and Ukraine.
- Much of Brazil's gains reflect winter corn production that does not directly compete with soybeans.
- Some countries normally not competitive due to high prices and/or quality concerns have stepped up shipments.

# U.S. Market Share Plummetes While Global Corn Trade is Near Record High



# Corn Ending Stocks to Build as Supply Gain Outpaces Increase in Use



- Stocks projected to more than triple from 2012/13, to nearly 2.2 billion bushels, slightly higher than 1992/93 and 2004/05.
- Total use is projected at 13 billion bushels, up 16 percent from sharply curtailed use in 2012/13, but still slightly below record use of earlier years.
- Stocks build as sharp export competition, the plateau in ethanol, and the declining cattle herd limit a full rebound in use.



## 2013 Prices Will Decline with Record Corn Supply and Increase in Soybean Crop

Prices received by farmers  
\$ per bushel

	2011	2012	2013 F
Wheat	\$7.24	\$7.90	\$7.00
Soybeans	\$12.50	\$14.30	\$10.50
Corn	\$6.22	\$7.20	\$4.80

- Wheat price decline moderated by large share marketed during the summer months when corn prices will still be high.
- The soybean price expected to be the lowest since 2009/10, under heavy pressure from the corn market.
- Corn prices expected to fall sharply from the 2012/13 record, given the dramatic production increase.
- While harvest-time cash corn prices could fall toward \$4.00, some forward sales will support the farm price at a higher level.

## Risks Around the Forecasts

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- Uncertain transition from the very tight old crop situation:
  - South American crop production.
  - Brazil export logistics.
  - Degree and duration of the new crop risk premium.
  - Timing/availability of new-crop supplies.
- Actual planted acreage for 2013.
- Volatility in oil and energy markets.
- Foreign producers' response to falling prices.
- China:
  - Will it continue to increase soybean buying?
  - Will China ramp up corn imports as prices become more attractive?
- Weather.

# Yield Scenarios From Weather Models

Assume Plus or Minus One Standard Deviation\* for Rainfall  
and Temperature in Most Critical Growing Period

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## Corn

- Average July rain = 3.87 in.
- Average July temp. = 73.9 F.

Low Yield: 154.0 bu./ac.

- Rain 2.67 in.
- Temp. 76.4 F.

High yield: 170.1 bu./ac.

- Rain 5.08 in.
- Temp. 71.4 F.

\* Standard deviation = 1.21 in. (rain), 2.5 degrees (temp).

## Soybeans

- Average July-Aug. rain = 3.80 in./month.
- Average July-Aug. temp. = 73.1 F.

Low yield: 42.9 bu./ac.

- Rain 3.08 in.
- Temp. 75.2 F.

High yield: 45.6 bu./ac.

- Rain 4.52 in.
- Temp. 71.1 F.

\* Standard deviation = 0.72 in. (rain), 2.0 degrees (temp)

## Corn Yield Scenario Balance Sheets

	Low	Trend	High
Yield (bu./ac.)	154.0	163.6	170.1
		-----mil. bu.-----	
Production	13,630	14,530	15,140
Feed and residual	5,100	5,400	5,600
Ethanol	4,575	4,675	4,725
Exports	1,350	1,500	1,600
Total use	12,460	13,010	13,360
Ending stocks	1,827	2,177	2,437
Price (\$/bu.)	\$5.80	\$4.80	\$4.20

# Corn Yield Scenarios

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## Supply

- Low yield production of 13.6 billion bu. would still beat 2009 record high of 13.1 billion bu. by 500 million.
- High yield case pushes production to 15.1 billion bu., 2 billion bu. higher than the old record.

## Utilization

- Most response seen in feed and residual in either case.
- In the low case, there would also be little or no pasture recovery.
- Ethanol expansion constrained by blend wall.
- Export potential similarly constrained by large foreign supplies.

## Ending Stocks and Price

- Big stocks increase even in low yield scenario will push price down sharply.

## Soybean Yield Scenario Balance Sheets

	Low	Trend	High
Yield (bu./ac.)	42.9	44.5	45.6
		-----mil. bu.-----	
Production	3,285	3,405	3,495
Crush	1,635	1,660	1,680
Exports	1,435	1,500	1,545
Total use	3,205	3,295	3,360
Ending stocks	220	250	275
Price (\$/bu.)	\$11.60	\$10.50	\$9.75

# Soybean Yield Scenarios

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## Supply

- Low yield production of 3.3 billion bu. would still result in a year to year increase of 270 million bu.
- The high yield scenario would increase the potential record size of the crop by 90 million bu. from the trend yield.

## Utilization

- Strong domestic demand for protein limits adjustment in crush.
- Crush also supported by mandated biodiesel use.
- Export effects muffled by strong demand by China.

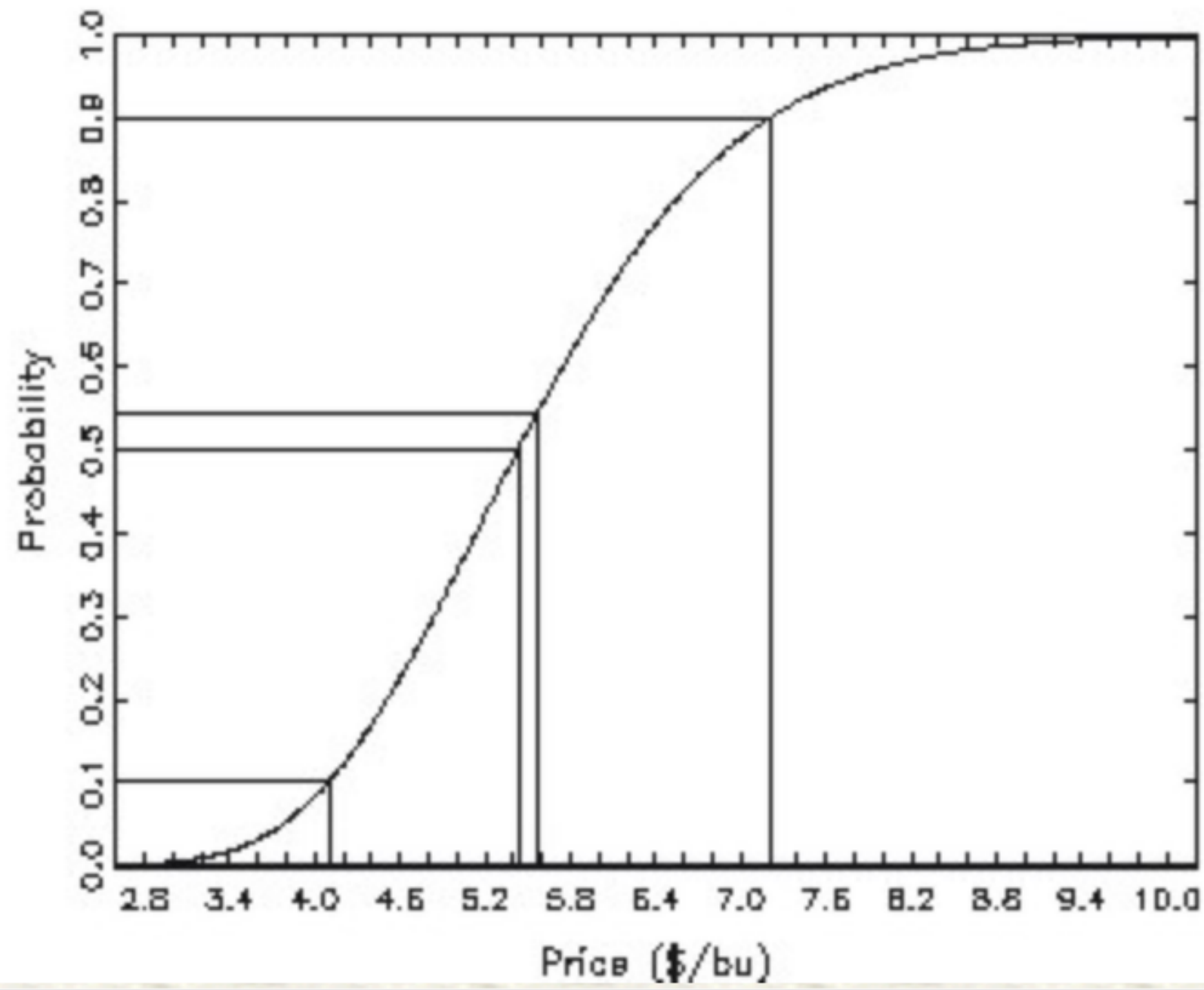
## Ending Stocks and Price

- Impact is modest in both cases, with much of the price effect driven by corn.

# *Dec '13 Corn Futures Probabilities*

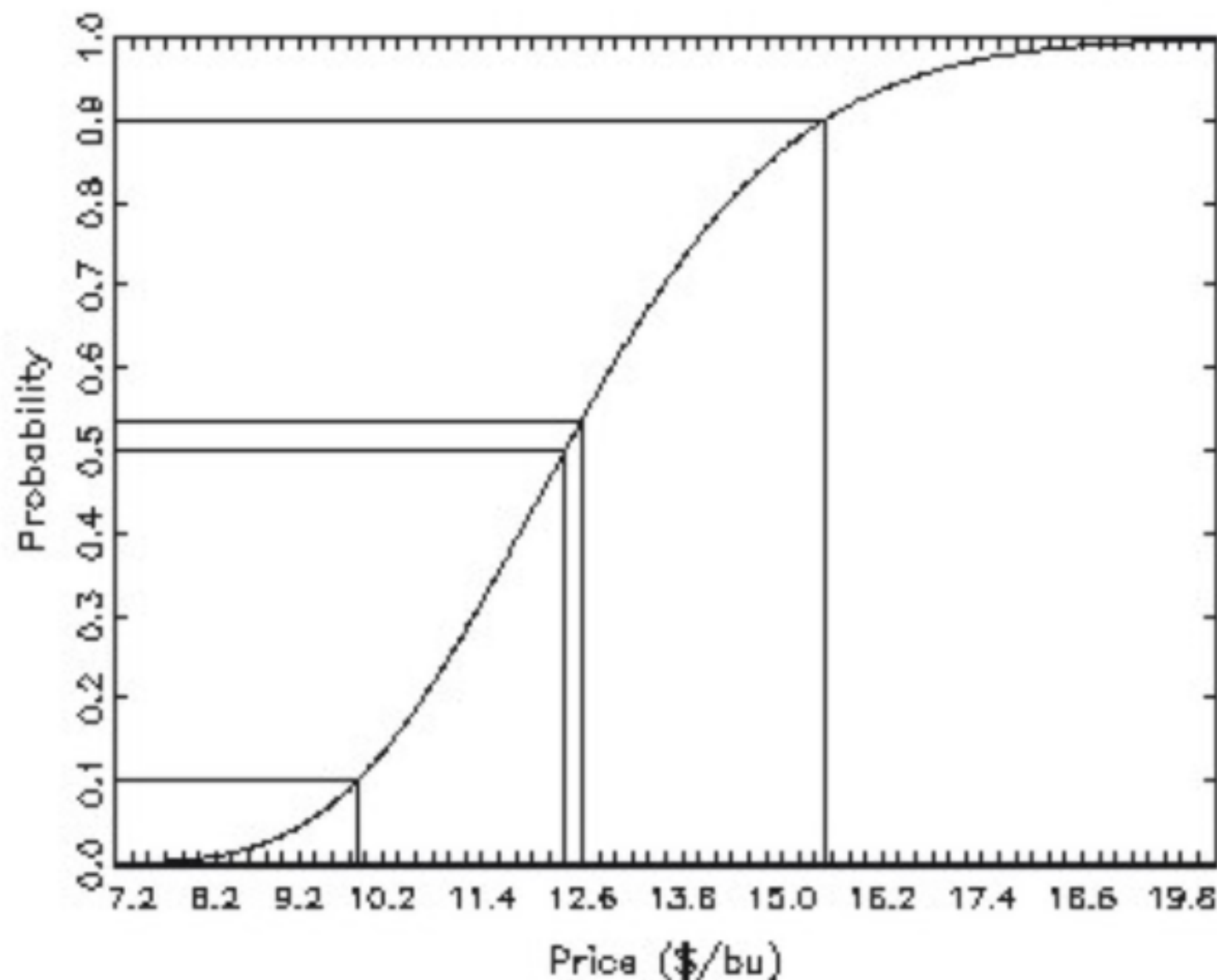
Price	Probability that the realized price at maturity will be less than this price
4.10	10%
4.51	20%
4.84	30%
5.14	40%
5.43	50%
5.75	60%
6.10	70%
6.55	80%
7.21	90%





# Nov 13 Soybean Futures

Price	Probability that the realized price at maturity will be less than this price
9.90	10%
10.69	20%
11.31	30%
11.86	40%
12.39	50%
12.96	60%
13.59	70%
14.37	80%
15.53	90%



# *What Questions Do You Have?*

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