“New Crop Marketing Tools and Crop Insurance”

Econ 338C

March 29th, 2007

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Presentation Objectives

• Review Carry, Basis and Old Crop Marketing Decisions
• Discuss 2007 Acreage, Balance Sheet and Price Projections
• Highlight the Prospective Planting Report
• Discuss Weather and Crop Insurance Products and Pre-Harvest Marketing Tools
• Compare the Tools: Cash Price, Forward Cash Price, Hedging and Futures Options
## Corn Futures Price Closes

**March 28th, 2007**

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<thead>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$4.00 ¼</td>
<td>$3.97 ¾</td>
<td>$3.88 ½</td>
<td>$4.00 ¾</td>
</tr>
</tbody>
</table>

*Source: www.cbot.com*
Decision Tree for Sizing Up the Market Carrying Charge?

Large

Are Futures low?

Yes

Unpriced grain in storage (Exit plan!)

No

Basis?

Narrow

Sell the carry with forward contract

Wide

Sell the carry with HTA or futures

Are Futures high?

Yes

Harvest Sale

Re-own with options?

No

Unpriced grain in storage (Exit plan!)

Processor Corn Basis Trends

# U.S. Soybean Balance Sheet and Price Tool

## Online Version

Please enter numbers into boxes:

<table>
<thead>
<tr>
<th>Item</th>
<th>USDA Estimates</th>
<th>USDA Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006-07</td>
<td>2007-08</td>
</tr>
<tr>
<td>Planted Acreage (1000 acres)</td>
<td>75,522</td>
<td>70,500</td>
</tr>
<tr>
<td>Harvested Acreage (1000 acres)</td>
<td>74,602</td>
<td>69,400</td>
</tr>
<tr>
<td>Yield (Bushels / Acre)</td>
<td>42.7</td>
<td>41.5</td>
</tr>
<tr>
<td>Beginning Stocks (Million Bushels)</td>
<td>449</td>
<td>595</td>
</tr>
<tr>
<td>Total Production (Million Bushels)</td>
<td>3,188</td>
<td>2,880</td>
</tr>
<tr>
<td>Imports (Million Bushels)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Supply (Million Bushels)</strong></td>
<td>3,641</td>
<td>3,479</td>
</tr>
<tr>
<td>Feed, Seed, and Residual (Million Bushels)</td>
<td>166</td>
<td>164</td>
</tr>
<tr>
<td>Crush (Million Bushels)</td>
<td>1,780</td>
<td>1,820</td>
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<tr>
<td>Exports (Million Bushels)</td>
<td>1,100</td>
<td>1,125</td>
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<tr>
<td><strong>Total Consumption (Million Bushels)</strong></td>
<td>3,046</td>
<td>3,109</td>
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<tr>
<td>Ending Stock (Million Bushels)</td>
<td>595</td>
<td>370</td>
</tr>
<tr>
<td>Ending Stock / Total Consumption (%)</td>
<td>19.5</td>
<td>11.9</td>
</tr>
<tr>
<td>Average Price ($/bu)</td>
<td>$6.30</td>
<td>$7.10</td>
</tr>
</tbody>
</table>

*Source: USDA Ag Outlook Forum, 3-2-07.*
Increasing Corn Acres

U.S. Planted Acreage

Outside Rotation Comfort Zone

87 million corn acres
70.5 million soybean acres

2006 2007:

Corn  - 2.9%  +11%
Beans + 3.8%  - 7%
Wheat + 1.1%  + 2%

Source: USDA Ag Outlook Forum, 3-2-07.
Cash Soybean Price Outlook Probability
’07-’08 Marketing Year

$6.90/bu
65%

$9.80/bu
18%

$6.70/bu
17%

<table>
<thead>
<tr>
<th>Item</th>
<th>USDA Estimates 2006-07</th>
<th>USDA Estimates 2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planted Acreage (1000 acres)</td>
<td>78,327</td>
<td>87,000</td>
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<tr>
<td>Harvested Acreage (1000 acres)</td>
<td>70,648</td>
<td>79,800</td>
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<tr>
<td>Yield (Bushels / Acre)</td>
<td>149.1</td>
<td>152.8</td>
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<tr>
<td>Beginning Stocks (Million Bushels)</td>
<td>1,967</td>
<td>752</td>
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<tr>
<td>Total Production (Million Bushels)</td>
<td>10,535</td>
<td>12,195</td>
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<tr>
<td>Imports (Million Bushels)</td>
<td>10</td>
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<tr>
<td><strong>Total Supply (Million Bushels)</strong></td>
<td><strong>12,512</strong></td>
<td><strong>12,926</strong></td>
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<td>Feed and Residual (Million Bushels)</td>
<td>5,975</td>
<td>5,800</td>
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<tr>
<td>Food, Seed, and Industrial (Million Bushels)</td>
<td>3,535</td>
<td>4,600</td>
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<tr>
<td>Exports (Million Bushels)</td>
<td>2,250</td>
<td>1,925</td>
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<tr>
<td><strong>Total Consumption (Million Bushels)</strong></td>
<td><strong>11,760</strong></td>
<td><strong>12,325</strong></td>
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<tr>
<td>Ending Stock (Million Bushels)</td>
<td>752</td>
<td>637</td>
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<tr>
<td>Ending Stock / Total Consumption (%)</td>
<td>6.4</td>
<td>5.2</td>
</tr>
<tr>
<td>Average Price ($/bu)</td>
<td>$3.20</td>
<td>$3.60</td>
</tr>
</tbody>
</table>

*Source: USDA Ag Outlook Forum, 3-2-07.*
Cash Corn Price Outlook Probability
’07-’08 Marketing Year

Yield Insurance Products

– Catastrophic (CAT)

– Multi-Peril Crop Insurance (MPCI)

– Group Risk Plan (GRP)

– Hail (companion)

Source: www.rma.usda.gov
Revenue Insurance Products

– Revenue Assurance (RA) – Standard

– Revenue Assurance (RA) – w/Harvest Price Option (HPO)

– Crop Revenue Coverage (CRC)

– Group Risk Income Protection (GRIP) – Standard

– Group Risk Income Protection (GRIP) – w/Harvest Revenue Option (HPO)

Source: www.rma.usda.gov
Iowa Crop Insurance Products 2006

94% of Iowa Policies Are Revenue Insurance

Source: www.rma.usda.gov
Iowa Crop Insurance Coverage 2006

- 75% Level: 35%
- 70% Level: 24%
- 65% Level: 14%
- 50% Level: 14%
- 80% Level: 14%
- 85% Level: 4%
- 90% Level: 4%

Source: www.rma.usda.gov
2007 Insurance Base Prices

• Yield Products (CAT, MPCI, GRP and Hail)
  – Corn $3.50 /bu.
  – Soybeans $7.00 /bu.

• Revenue Products (CRC, RA and GRIP)
  Average Dec. Corn and Nov. Soybean Futures prices in the month of February
  Corn $4.06 */bu.
  Soybeans $8.09 */bu.

* Base Price determined in the month of February
Corn Coverage Comparison

Crop Year 2006

• Purchased 75% (Revenue Product CRC or RA w/HPO)
• Spring Base Price was $2.59 /bu.
• 150 bu/A APH x 75% x $2.59 /bu.
• = $291 /A in coverage

Crop Year 2007

• Continue to Purchase 75% CRC or RA w/HPO)
• CRC Spring Price is Feb. avg. of 2007 Dec CBOT corn
• 150 bu/A APH x 75% x $4.06/bu.
• = $457 /A in coverage

$166 /A Increase in Revenue

* Base Price and Guaranteed Revenue will be determined in the month of February
Soybean Coverage Comparison

Crop Year 2006

• Purchased 70% (Revenue Product: CRC or RA w/HPO)
• Spring Base Price was $6.18 /bu.
• 45 bu/A APH x 70% x $6.18 /bu. = $195 /A in coverage

Crop Year 2007

• Continue to Purchase 70% CRC or RA w/HPO)
• CRC Spring Price is Feb. avg. of 2007 Nov. CBOT corn
• 45 bu/A APH x 70% x $8.09/bu.
• = $255 */A in coverage

$60 */A Increase in Revenue

* Base Price and Guaranteed Revenue will be determined in the month of February
## 2007 Corn Acreage vs. Yield Impacts

<table>
<thead>
<tr>
<th>Additional Acres Planted</th>
<th>Planted Acres</th>
<th>Harvested Acres For Grain (91%)</th>
<th>Yields 145</th>
<th>Yields 150</th>
<th>Yields 155</th>
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<tr>
<td>In Millions</td>
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<td>In Millions</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>86.3</td>
<td>78.53</td>
<td>11.4</td>
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<td>8.5</td>
<td>86.8</td>
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<td>9</td>
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<td>80.81</td>
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<td>11</td>
<td>89.3</td>
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<td>11.5</td>
<td>89.8</td>
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<td>12</td>
<td>90.3</td>
<td>82.17</td>
<td>11.9</td>
<td>12.3</td>
<td>12.7</td>
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</table>

**Projected Demand 2007/08 12.3 In Billions**

*Source: Johnson, ISU Ext. Farm Mgt., March 2007.*
2007 Corn Yield vs. Dec. ’07 Corn Futures Price at Harvest

- 146 $4.33 (29%)
- 153 $3.82 (34%)
- 163 $3.10 (12%)
- 134 $5.19 (25%)
Dec. ’07 Futures vs. Yield Correlation

Corn $ vs yield

\[ y = -0.0722x + 14.876 \]

Pre-Harvest Marketing Tools

• Forward Cash Contract
• Hedge to Arrive Contract
• Futures Hedge
• Futures Options
• Compare the Tools: Cash Price, Forward Cash Price, Hedge and Futures Options
2007 Pre-Harvest Strategies

- Dec. Futures at $4.01
- Forward Cash Contract at Harvest is $3.60/bu.
- Expected Basis at $.35/bu.
- $3.60 Put Strike Price $ .18/bu.
- $4.00 Put Strike for $ .38/bu.
Comparing Marketing Alternatives:

- - - Farm Price + + +

<table>
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<tr>
<th>Price to Farmer:</th>
<th></th>
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<tbody>
<tr>
<td>Lower</td>
<td>Higher</td>
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- - - Market + + +

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<th>Market:</th>
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<tr>
<td>Lower</td>
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<tr>
<td>or</td>
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<tr>
<td>Higher</td>
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</tbody>
</table>
Comparing Marketing Alternatives:

- - - Market + + +

Cash Market

Farm Price

- - - Market + + +
Comparing Marketing Alternatives:

- Cash Market
- Hedge or Forward Contract

Farm Price vs. Market
Comparing Marketing Alternatives:

- Market
- Forward Contract
- Option
- Hedge or Forward Contract

Farm Price

--- Market ++ +
Futures Options on Terms

- **Put Option:** The right, but not the obligation to sell a futures contract.

- **Call Option:** The right, but not the obligation to buy a futures contract.
Why a Farmer might Buy Options

Buy a put  ---> need price protection (floor) for crops or livestock.

Buy a call  ---> need price protection (ceiling) on feed requirements.

Buy a call  ---> has crop sold and wishes to retain ownership (not IRS definition of hedging).
Assignment for April 5th

- See Econ 338C Links and Updates to Balance Sheets on Dr. Wisner’s Website
- Review March 29th Notes on Website
- Review Answers to Quiz on Website
- Update your Wednesday (April 4th) Cash Bids, Basis (Sept. Corn and Aug. Soybean Futures) and make Marketing Decisions for Your Farms