

2007 Corn, Milo, Soybean & Wheat Risk Management & Marketing Opportunities

Daniel O'Brien
Extension Agricultural Economist
K-State Research & Extension

2007-06 Smith County Grain Marketing Loan Rates

- Corn: \$1.94 /bu (2007)
- Milo: \$1.85 /bu (\$3.31 /cwt) (2007)
- Soybeans \$4.86 /bu (2007)
- Wheat \$2.78 /bu (2006)
- Smith County Marketing Loan Rates are at least \$2.00 /bu below expected 2007 harvest prices for the 4 major crops.
 - *They are likely to be ineffective at managing grain price and farm financial risk in 2007.*

Current Options-Based \$ Probability Forecasts for 2007 Crops

	DEC Corn	NOV Soybeans	KC JULY Wheat
High 80%	\$4.79	\$9.05	\$5.88
Middle 50%	\$3.85	\$7.77	\$4.97
Low 20%	\$2.67*	\$6.88*	\$4.60*
Feb. 16 Futures \$	\$4.13	\$8.16	\$5.08
% Probability of \$↓	63%↓	62%↓	57%↓

Risk Management Tools Available for 2007's High Risk Conditions

- Crop Revenue Insurance
 - Grain Marketing Tools
- Financial Management / Cost Control

Crop Insurance Tools for Risk Management

- Multi-peril Crop Insurance (*MPCI*)
- Revenue Assurance (*RA*)
- Revenue Assurance – Harvest Price Option (*RA-HPO*)
- Crop Revenue Coverage (*CRC*)
- Group Risk Income Protection (*GRIP*)
 - GRIP – Harvest Revenue Option (*GRIP-HRO*)

Multi-peril Crop Insurance (MPCI)

- MPCI protects against **crop yield losses**
- APH (Actual Production History) &/or “T” yields are used in the coverage calculation
 - Yield coverage: 5% increments from 50% to 85%
- **2007 MPCI Market Price Elections**
 - Corn: \$3.50 /bu
 - Milo: \$3.30 /bu
 - Soybeans: \$7.00 /bu
 - Wheat: \$3.90 /bu

MPCI Calculations

APH Proven Yield X Coverage Level %

= Guaranteed Bushels / Acre

X Market Price Election

= \$Coverage Level / Acre

Compared to Actual Production Value\$:

APV\$ = Actual Production X Harvest\$

MPCI Calculations

APH Proven Yield X Coverage Level %

= Guaranteed Bushels / Acre

X **MPCI Market Price Election**

= MPCI \$Coverage Level / Acre

**Guaranteed Bushels Compared to Actual
Crop Production (bu/acre)**

Revenue Assurance – Harvest Price Option (RA-HPO)

- RA-HPO protects against revenue loss due to yield losses &/or price fluctuation
- Yield coverage: 65%-85% (5% increments)
- **2007 RA-HPO Market Price Elections**
 - No limit on either higher or lower Price moves from the Base\$ (early\$) to the final Harvest\$
 - Crop Revenue Coverage (CRC) has \$ limits

Crop Revenue Coverage (CRC)

- CRC is nearly identical to RA-HPO coverage
- Protects against revenue loss due to yield losses &/or price fluctuation
- Yield coverage: 50%-85% (5% increments)
- **CRC Limits [Base\$ +/- Final\$] Changes**
 - Corn & Milo: +/- \$1.50 /bu
 - Wheat: +/- \$2.00 /bu
 - Soybeans: +/- \$3.00 /bu

RA-HPO & CRC Price Elections

- **Corn: \$3.97* /bu Base \$ Estimate**
 - Base \$: CBOT DEC Ave: February 2007
 - Final Harvest \$: CBOT DEC, November 2007
 - October 2007 for CRC

- **Milo: \$3.74* /bu Base \$ Est (CRC only)**
 - Base \$: 92-93% CBOT DEC Ave: Feb. 2007
 - Final Harvest \$: CBOT DEC, October 2007

RA-HPO & CRC Price Elections

- **Wheat: \$4.52 /bu Base \$**
 - Base \$: KCBT JULY Ave: 8/15-9/14, 2006
 - Final Harvest \$: KCBT JULY, June 2007
 - July 15-August 14 for CRC

- **Soybeans: \$7.96* /bu Base \$ Estimate**
 - Base \$: CBOT NOV Ave: February 2007
 - Final Harvest \$: CBOT NOV, October 2007

RA-HPO & CRC Revenue Calculations

APH Proven Yield X Coverage Level %
= Guaranteed Bushels / Acre

X **Higher of** (Early Base\$ OR Harvest\$)
= \$Coverage Level / Acre

**“\$Coverage Level” Compared to “Actual
Production Value\$”:**

APV\$ = Actual Production X Harvest\$

Revenue Assurance (RA)

- RA protects **Minimum Revenue Guarantee**, but not against rising harvest \$s
- **Crop Yield Coverage**: 65%-85% (5% increments)
- **2007 RA Market \$ Elections**
(Same as RA-HPO & CRC)
 - Corn: \$3.97* /bu
 - Milo: \$3.74* /bu
 - Soybeans: \$7.96* /bu
 - Wheat: \$4.52 /bu

RA Calculations

APH Proven Yield X Coverage Level %

= Guaranteed Bushels / Acre

X Early Base\$

= RA Minimum Level Guarantee\$ / Acre

Compared to Actual Production Value\$:

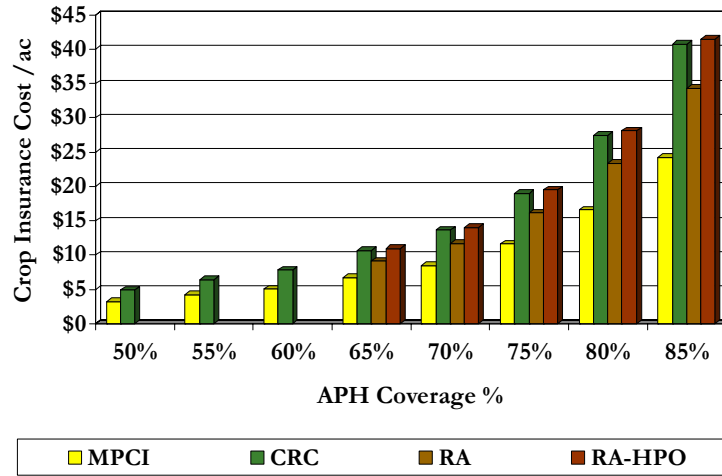
APV\$ = Actual Production X Harvest\$

Group Risk Income Protection (GRIP & GRIP-HRO)

- GRIP insures against widespread loss of revenue for an insured crop **by County** rather than **by Individual**
- ***Unit structure is the **County*****
 - No individual farm unit APH yield needed
- Coverage levels: 70%-90% (5% steps)
- Select Protection Level & Trigger Revenue
- Most often used to insure forage crops

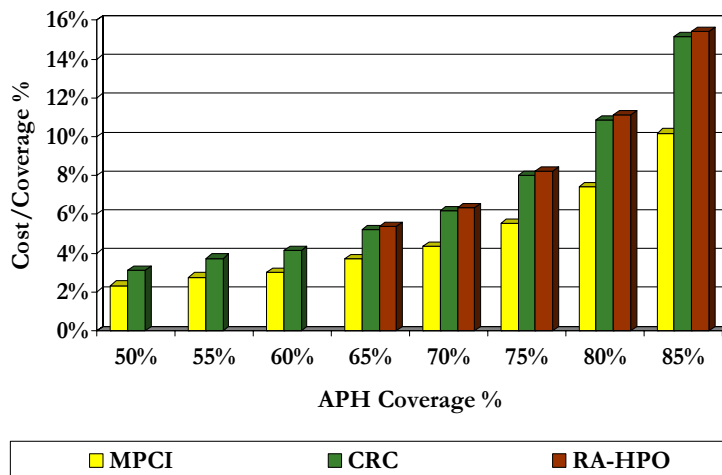
Corn Crop Insurance Costs

2007 Smith County, KS (general assumptions)

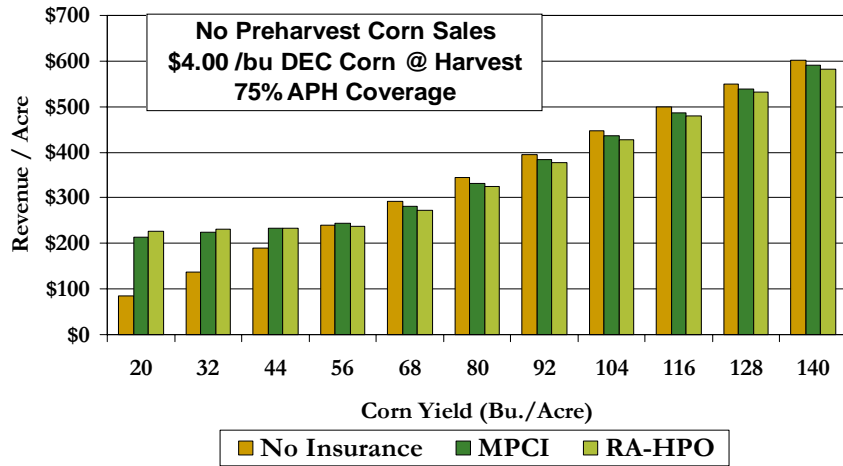


Corn “Cost/Coverage” (%)

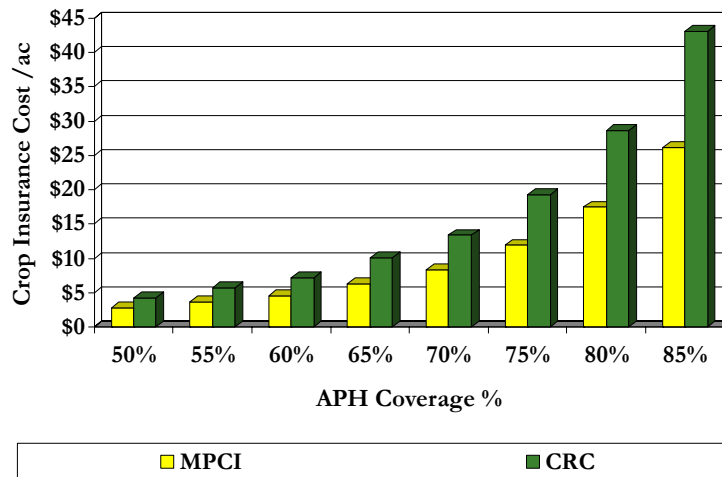
2007 Smith County, KS (MPCI, CRC, RA-HPO)



\$4.00 DEC Corn @ Harvest No Insurance vs MPC, RA-HPO

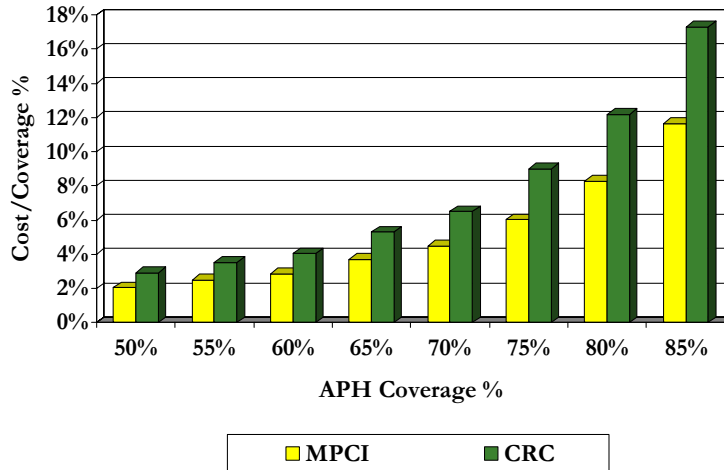


Milo Crop Insurance Costs 2007 Smith County, KS (general assumptions)



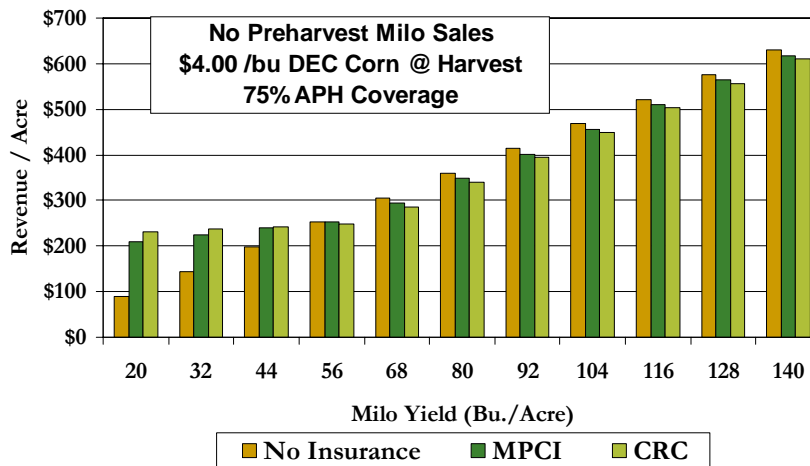
Milo "Cost/Coverage" (%)

2007 Smith County, KS (MPCI, CRC, RA-HPO)

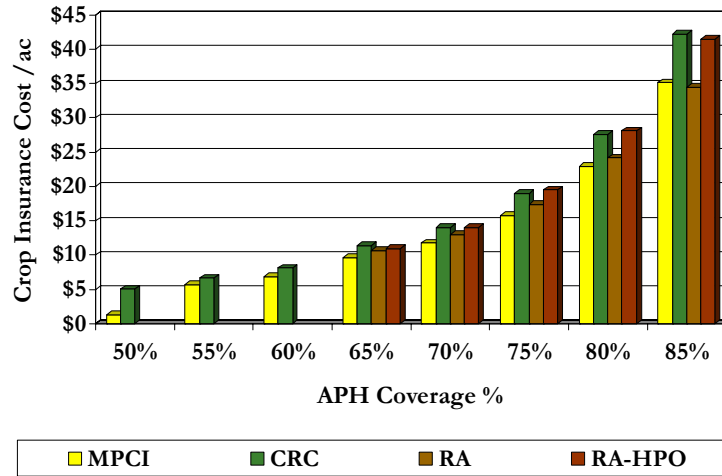


(MILO) \$4.00 DEC Corn @ Harvest

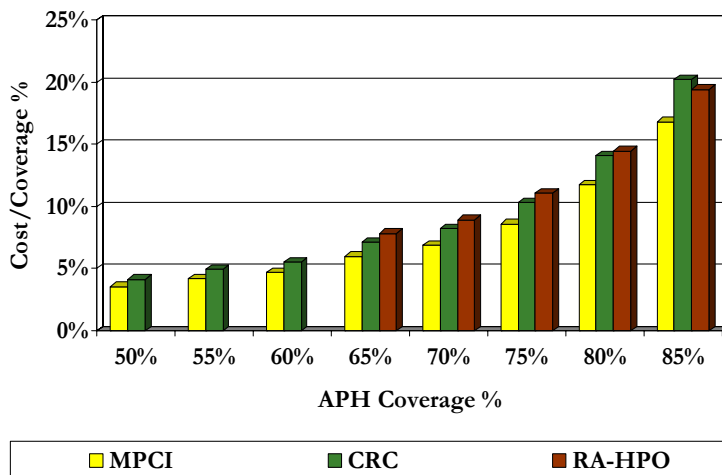
No Insurance vs MPCI, RA-HPO



Soybeans Crop Insurance \$ 2007 Smith County, KS (general assumptions)

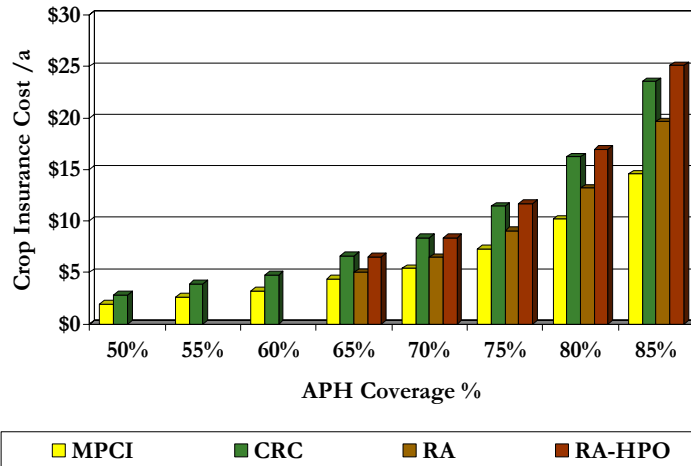


Soybean “Cost/Coverage” (%) 2007 Smith County, KS (MPCI, CRC, RA-HPO)



Wheat Crop Insurance Costs

2007 Smith County, KS (general assumptions)



Marketing Opportunities for 2007 Corn, Milo, Soybeans & Wheat

- Forward Contract
- Hedge Futures
- Minimum Price Contract
- Put Option Price Floor
- Harvest Cash Sales

Forward Contracts - Futures Hedges

■ Forward Contracts

- Commit XXXX bushels of corn for harvest / postharvest delivery
- Cash basis **is** predetermined
 - Compared to expected Harvest time Cash Basis???
- Regional bids.....

■ Futures Hedges

- Sell Futures now, offset/buy back later
- Cash basis **is not** predetermined
 - What is expected Harvest time Cash Basis???

Put Options Price Floors & Minimum Price Contracts

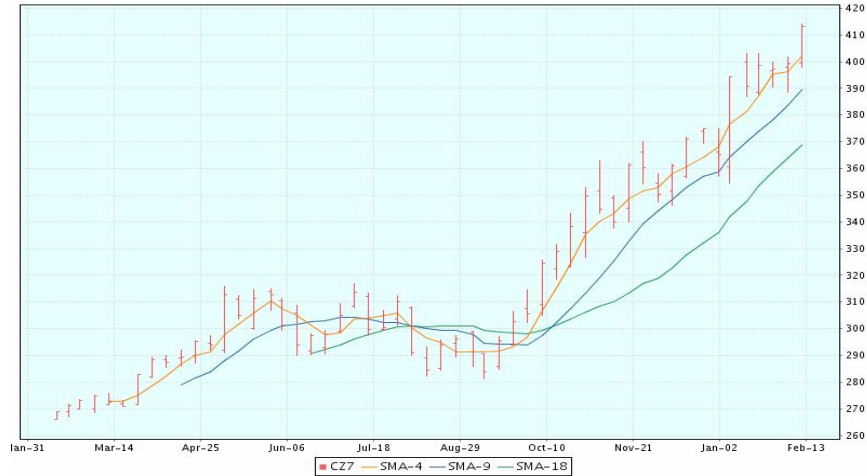
■ Put Option Price Floors

- Buy Put Option now; sell back, exercise or let expire later
- Cash basis is **NOT** determined

■ Minimum Price Contracts

- Commit XXXX bushels for Harvest or Postharvest Delivery
- \approx Forward Contract\$ less cost of Put Option
- Cash basis **IS** determined

2007 DEC Corn Futures (Weekly) Mid Feb 2006 thru Present (CBOT)



CORN: Hedge DEC Corn Futures or Forward Contract (Harvest Delivery)

■ Hedge Futures (2/16/07)

- Sell 2007 DEC Corn: \$4.13
- Less Harvest Basis: - \$0.35 (?????)
- Less Broker Fees: - \$0.01
- Hedge Price (w. Basis risk) **\$3.77 / bu**

■ Forward Contract Bids (2/15/07)

- Midland COOP, Franklin, NE: \$3.69 / bu
- AgMark, Glen Elder, KS: \$3.65 / bu
- AgMark, Tipton, KS: \$3.69 / bu

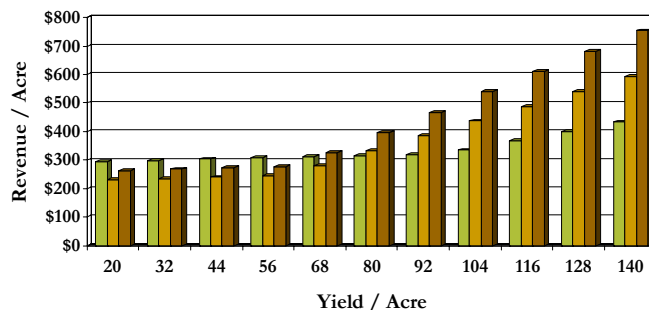
CORN: Put Option Price Floor for 2007 New Crop Corn

- **Buy \$4.20 Strike Price Put Option**
 - DEC Corn Put Strike Price: \$4.20
 - Less Put Premium Cost: -\$0.47
 - Less Harvest Basis: - \$0.35 (?????)
 - Less Broker Fees: - \$0.02
 - Put Option Price Floor **\$3.36 / bu**
 - (with Basis risk)

- Contact Area Elevators for **Minimum Price Contract Bids** for new crop 2007 Corn

CORN: RA-HPO + 50% Hedge

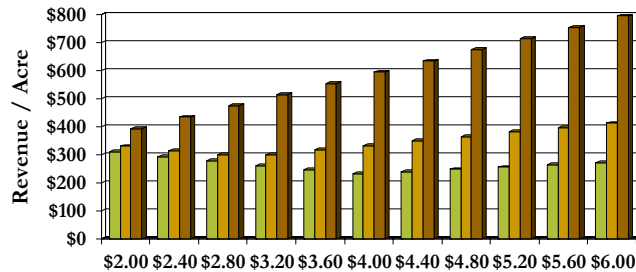
Sell 50% Expected Crop in DEC Futures



- 50% Hedge @ \$4.13 / \$2.40 DEC Corn @ Harvest
- 50% Hedge @ \$4.13 / \$4.00 DEC Corn @ Harvest
- 50% Hedge @ \$4.13 / \$5.60 DEC Corn @ Harvest

CORN: RA-HPO + 50% Hedge

Sell 50% Expected Crop in DEC Futures



DEC Corn Futures \$ @ Harvest

- 50%(40 bu per acre) hedged / 20 bu per acre produced
- 50%(40 bu per acre) hedged / 80 bu per acre produced
- 50%(40 bu per acre) hedged / 140 bu per acre produced

MILO: Hedge DEC Corn Futures or Forward Contract (Harvest Delivery)

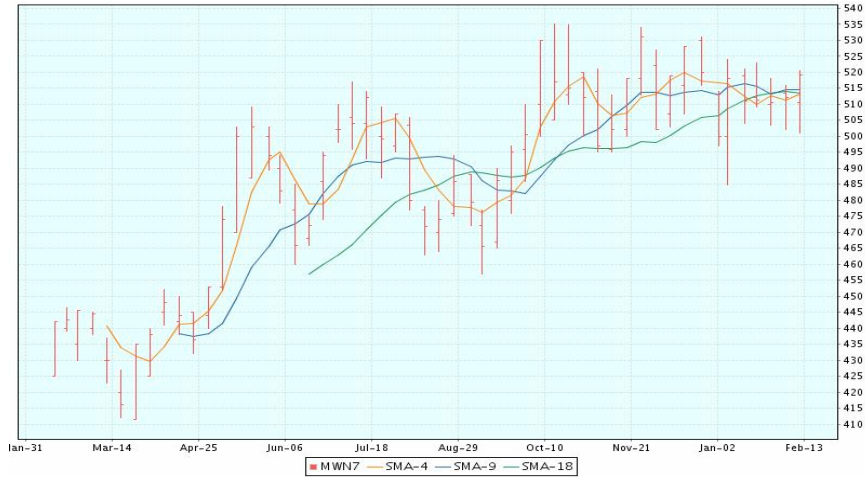
■ Hedge Futures (2/16/07)

- Sell 2007 DEC Corn: \$4.13
- Less Harvest Basis: - \$0.50 (?????)
- Less Broker Fees: - \$0.01
- Hedge Price (w. Basis risk) **\$3.62 / bu**

■ Forward Contract Bids (2/15/07)

- Midland COOP, Franklin, NE: \$3.51 / bu
- AgMark, Cawker City, KS: \$3.57 / bu
- AgMark, Randal, KS: \$3.57 / bu

2007 July Wheat Futures (Weekly) Mid Feb 2006 thru Present (KCBT)



WHEAT: Hedge JULY KC Wheat or Forward Contract (Harvest delivery)

■ Hedge Futures (2/16/07)

- Sell 2007 JULY Wheat: \$5.08
- Less Harvest Basis: - \$0.35 (?????)
- Less Broker Fees: - \$0.01
- Hedge Price (w. Basis risk) **\$4.72 / bu**

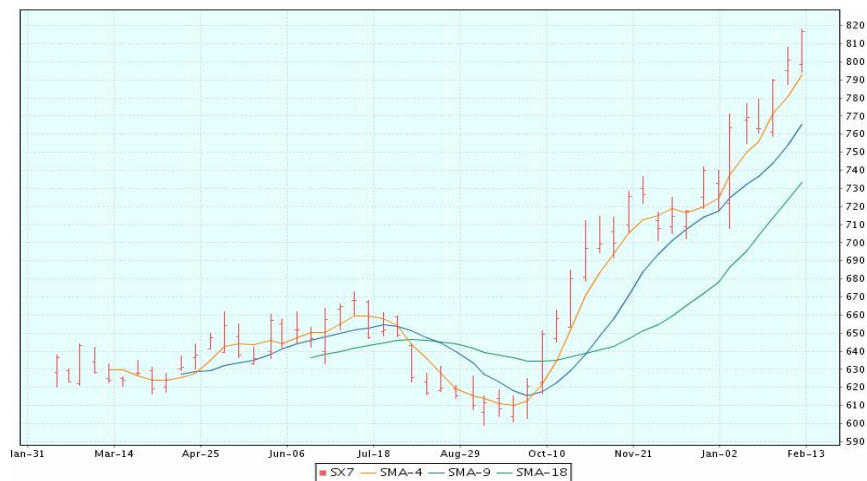
■ Forward Contract Bids (2/15/07)

- Midland COOP, Franklin, NE: \$4.60 / bu
- AgMark, Cawker City, KS: \$4.65 / bu
- AgMark, Tipton, KS: \$4.65 / bu

WHEAT: Put Option Price Floor for 2007 New Crop Wheat

- **Buy \$5.00 Strike Price Put Options**
 - JULY Wheat Put Strike Price: \$5.00
 - Less Put Premium Cost: -\$0.24
 - Less Harvest Basis: - \$0.35 (?????)
 - Less Broker Fees: - \$0.02
 - Put Option Price Floor **\$4.39 / bu**
 - (with Basis risk)
- Contact Area Elevators for **Minimum Price Contract Bids** for new crop 2007 Wheat

2007 NOV Soybean Futures (Weekly) Mid Feb 2006 thru Present (KCBT)



SOYBEANS: Hedge NOV Futures or Forward Contract (Harvest delivery)

■ Hedge Futures (2/16/07)

- Sell 2007 NOV Soybeans: \$8.16
- Less Harvest Basis: - \$0.70 (?????)
- Less Broker Fees: - \$0.01
- Hedge Price (w. Basis risk) **\$7.45 / bu**

■ Forward Contract Bids (2/16/07)

- Midland COOP, Franklin, NE: \$7.41 / bu
- AgMark, Glen Elder, KS: \$7.37 / bu
- AgMark, Tipton, KS: \$7.37 / bu

SOYBEANS: Put Option Price Floor for 2007 New Crop Soybeans

■ Buy \$8.00 Strike Price Put Option

- NOV Soybean Put Strike Price: \$8.00
- Less Put Premium Cost: -\$0.52
- Less Harvest Basis: - \$0.70 (?????)
- Less Broker Fees: - \$0.02
- Put Option Price Floor **\$6.76 / bu**
 - (with Basis risk)

■ Contact Area Elevators for **Minimum Price Contract Bids** for new crop 2007 Corn

Other Options Based Tools....

■ Options “Fence”

- Buy Put option + Sell Call option
 - Means to lower the cost of a Put Option Price Floor
 - Sacrificing upward price move opportunities
- Setting futures price “ceiling” & “floor”
- Use in highly volatile markets???

Final Thoughts & Observations....

- Use of RA-HPO (vs CRC, MPCl, RA, etc.)
- Market Uncertainty & Potential Price Volatility for 2007 Crops
 - With these of historically high grain market prices, Grain Marketing Plans will likely be oriented toward managing price risk than toward “maximizing selling price.”
 - Grain prices are currently high enough that traditional grain price risk management tools (marketing loans / government program income support mechanisms) are nearly “irrelevant.”

Comments or Questions?

- Email: dobrien@ksu.edu
- KSU Ag Economics Website:
<http://www.agmanager.info>
- Northwest Research Extension Center
Website:
<http://www.oznet.ksu.edu/nwao/>