

# APH and CRC Insurance: Another Way to Manage Revenue Risk for 2009

Todd D. Davis  
Extension Economist




# Why consider crop insurance?



- Goal of risk management is to protect revenue
  - Futures, options, cash forward contracts, and LDP's are effective in managing price risk
  - BUT you still need to produce a crop

# Why Consider Crop Insurance? Uncle Sam will Help Pay!

Coverage Level %	Subsidy %	You Pay %
50	67	33
55	64	36
60	64	36
65	59	41
70	59	41
75	55	45
80	48	52
85	38	62



Insurance Products: What are they  
and how do they work?

# Actual Production History (APH) Insurance



- Only protects against yield loss
- Insurance protection based on historic farm-level yields
  - Average of:
    - Minimum of four consecutive years
    - Maximum of ten consecutive years
- Varying levels of protection
  - 50%, 55%, 60%, 70%, 75% of APH Yield
  - 80%, 85% levels available for some crops and some counties

# APH Insurance (Continued)

- Indemnity when actual production is less than production guaranteed
  - Harvested yield < (APH x Coverage Level)
- Production losses are valued at prices determined by the Federal Crop Insurance Corporation (part of USDA's Risk Management Agency). For 2009, the prices are:
  - Corn = \$4.00
  - Soybeans = \$9.90
  - Cotton = \$0.63
- Choose to insure at price levels ranging from 55% to 100% of FCIC prices
  - I will use 100% price election for all of the examples.

## APH Example: Corn (NI)

- APH = 120 bu/a; 65% Coverage Level;  
APH Price \$4.00
- Guarantee = 120 bu/a x 65% = 78 bu/a
- Harvested 65 bu/a
- Indemnity = (78 – 65) x \$4.00  
= 13 x \$4.00 = \$52 per acre
- Premium = \$11.65 per acre
- Net Indemnity = \$52.00 - \$11.65 = \$40.35/a

# Crop Revenue Coverage (CRC)

- Protects Revenue -- Insures against low yields and/or prices
- Insurance protection based on historic farm-level yields
  - Average of:
    - Minimum of four consecutive years
    - Maximum of ten consecutive years
- Varying levels of protection
  - 50%, 55%, 60%, 70%, 75% of APH Yield
  - 80%, 85% levels available for some crops and counties

# CRC Insurance Vocabulary



- Minimum Guaranteed Revenue
  - Base Price x APH Yield x Coverage Level
- Base Price – Minimum price revenue is insured. Price is based on Futures Market
  - Corn: Dec 15-Jan 14 Average of Sep Corn Contract
  - Soybeans: Dec 15-Jan 14 Average of Sep Soybean Contract
  - Cotton: Jan 15-Feb 14 Average of Dec Cotton Contract

# CRC Insurance Vocabulary (continued)

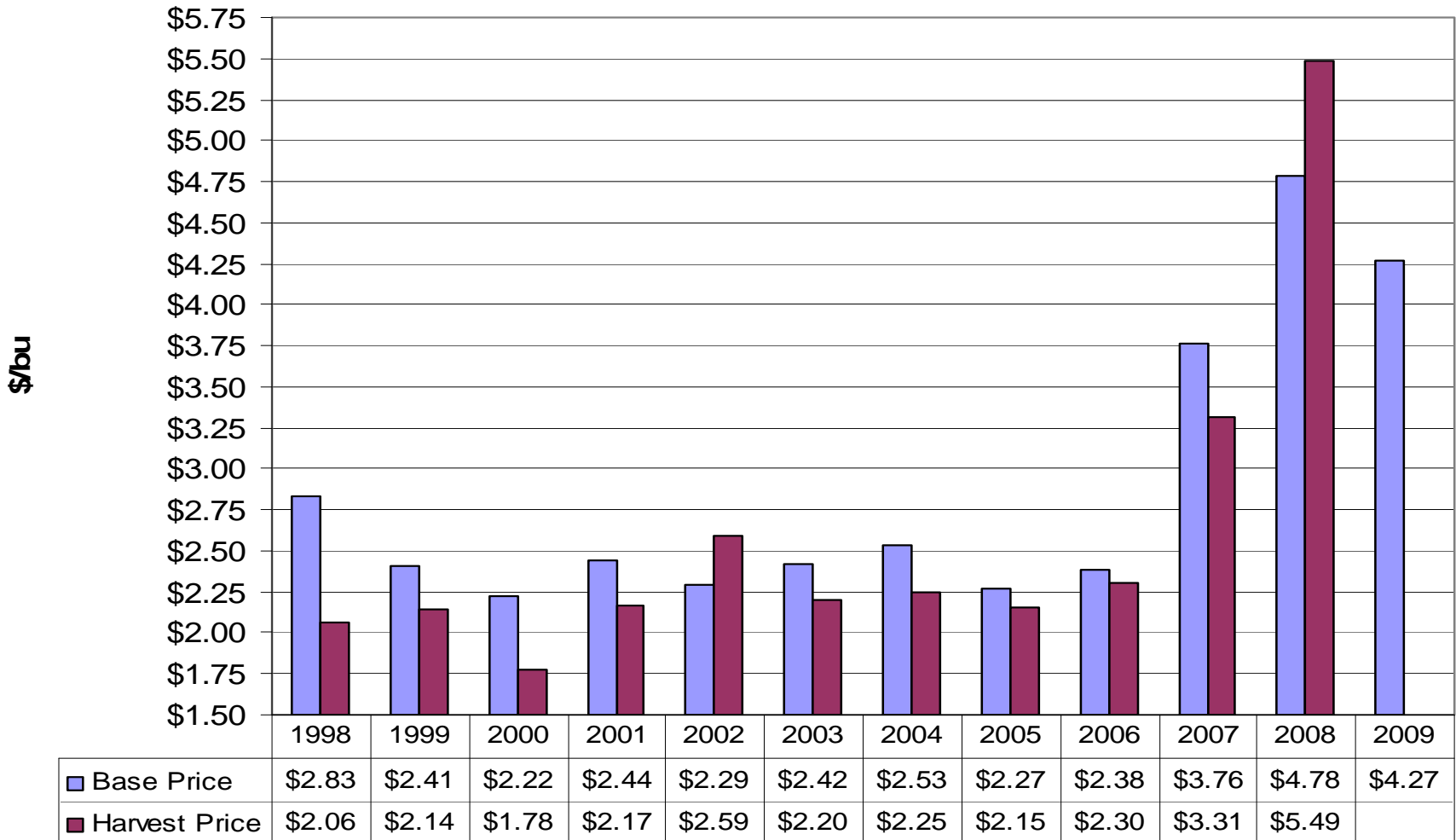
- Harvest Price – Used to determine if indemnity is paid.  
Based on Futures Market Prices
  - Corn and soybeans – Average of Sep Contracts in August
  - Cotton – Average of Dec Contract in November
- Harvest price is limited on amount differs from base price
  - +/--\$1.50/bu for corn; +/--\$3.00 for soybeans and +/--\$0.70 for cotton
- Harvest Guarantee Revenue
  - Harvest Price x APH Yield x Coverage Level
- Final Guarantee Revenue = Larger of Base or Harvest Guarantee

# CRC Insurance (continued)



- Calculated Revenue
  - Actual Yield x Harvest Price
- Indemnity paid when
  - Calculated Revenue < Final Guaranteed Revenue
- Payments can be triggered from low prices and/or low yields

# CRC Corn Base and Harvest Prices for the Southeast



Prices decreased 9 out of 11 Years! Average decrease \$0.17

# CRC Soybean Base and Harvest Prices for the Southeast



Prices decreased 7 out of 12 Years! Average decrease \$0.04

# CRC Cotton Base and Harvest Prices for the Southeast



Prices decreased 7 out of 12 Years! Average decrease is \$0.08

# CRC Example – Corn (NI) Triggered by Yield

- 120 bu/a APH; 65% Coverage;
- Base Price = \$4.27; Harvest = \$4.40
- Min. Guarantee =  $120 \times 65\% \times \$4.27 = \$333.06$
- Harvest Guarantee =  $120 \times 65\% \times \$4.40 = \$343.20$
- Final Guarantee = Larger (\$333.06 or \$343.20) = \$343.20
- Harvest = 65 bu/a
- Calc. Rev =  $65 \times \$4.40 = \$286$
- Indemnity =  $\$343.20 - \$286 = \$57.20/a$
- Premium paid = \$22.89/a
- Net Indemnity =  $\$57.20 - \$22.89 = \$34.31/a$

# CRC Example – Corn (NI) Triggered by Price

- 120 bu/a APH; 65% Coverage;
- Base Price = \$4.27; Harvest = \$3.00
- Min. Guarantee =  $120 \times 65\% \times \$4.27 = \$333.06$
- Harvest Guarantee =  $120 \times 65\% \times \$3.00 = \$234$
- Final Guarantee = Larger (\$333.06 or \$234) = \$333.06
- Harvest = 100 bu/a
- Calc. Rev =  $100 \times \$3.00 = \$300$
- Indemnity =  $\$333.06 - \$300 = \$33.06/a$
- Premium paid = \$22.89/a
- Net Indemnity =  $\$33.06 - \$22.89 = \$10.17/a$

# CRC Example – Corn (NI) Triggered by Yield and Price

- 120 bu/a APH; 65% Coverage;
- Base Price = \$4.27; Harvest = \$3.00
- Min. Guarantee =  $120 \times 65\% \times \$4.27 = \$333.06$
- Harvest Guarantee =  $120 \times 65\% \times \$3.00 = \$234$
- Final Guarantee = \$333.06
- Harvest = 65 bu/a
- Calc. Rev =  $65 \times \$3.00 = \$195$
- Indemnity =  $\$333.06 - \$195 = \$138.06/a$
- Premium paid = \$22.89/a
- Net Indemnity =  $\$138.06 - \$22.89 = \$115.17/a$

# Summary: CRC and Returns over Variable Costs for NI Corn

	Example 1	Example 2	Example 3
Harvest Futures Price	\$4.40	\$3.00	\$3.00
Expected Basis	-\$0.10	-\$0.10	-\$0.10
Harvest Cash Price	\$4.30	\$2.90	\$2.90
Harvested Yield	65	100	65
Revenue	\$279.50	290	188.5
Total Variable Costs	\$339.00	\$339.00	\$339.00
Return over Variable Costs	-\$59.50	-\$49.00	-\$150.50
Net Indemnity CRC	\$34.31	\$10.17	\$115.17
Return over Variable Costs w/CRC	-\$25.19	-\$38.83	-\$35.33

# Why Crop Insurance?



- Meant to provide some revenue when experience loss
  - Crop Insurance is not designed to enhance income
- Revenue protection should be the focus
- However, combining insurance with futures and options may provide additional revenue and additional revenue protection

# Why Crop Insurance?



- Producers **must** purchase insurance at the CAT or higher level to be eligible to participate in the new SURE disaster program created by the 2008 Farm Bill

# Additional Benefits



- Premiums subsidized
- Premiums tax deductible
- Premiums not due until harvest
- Decision to purchase or continue to use APH and CRC is February 28, 2009



Risk Management Strategies for 2009  
Corn: Combining Marketing and Crop  
Insurance to Protect Revenue

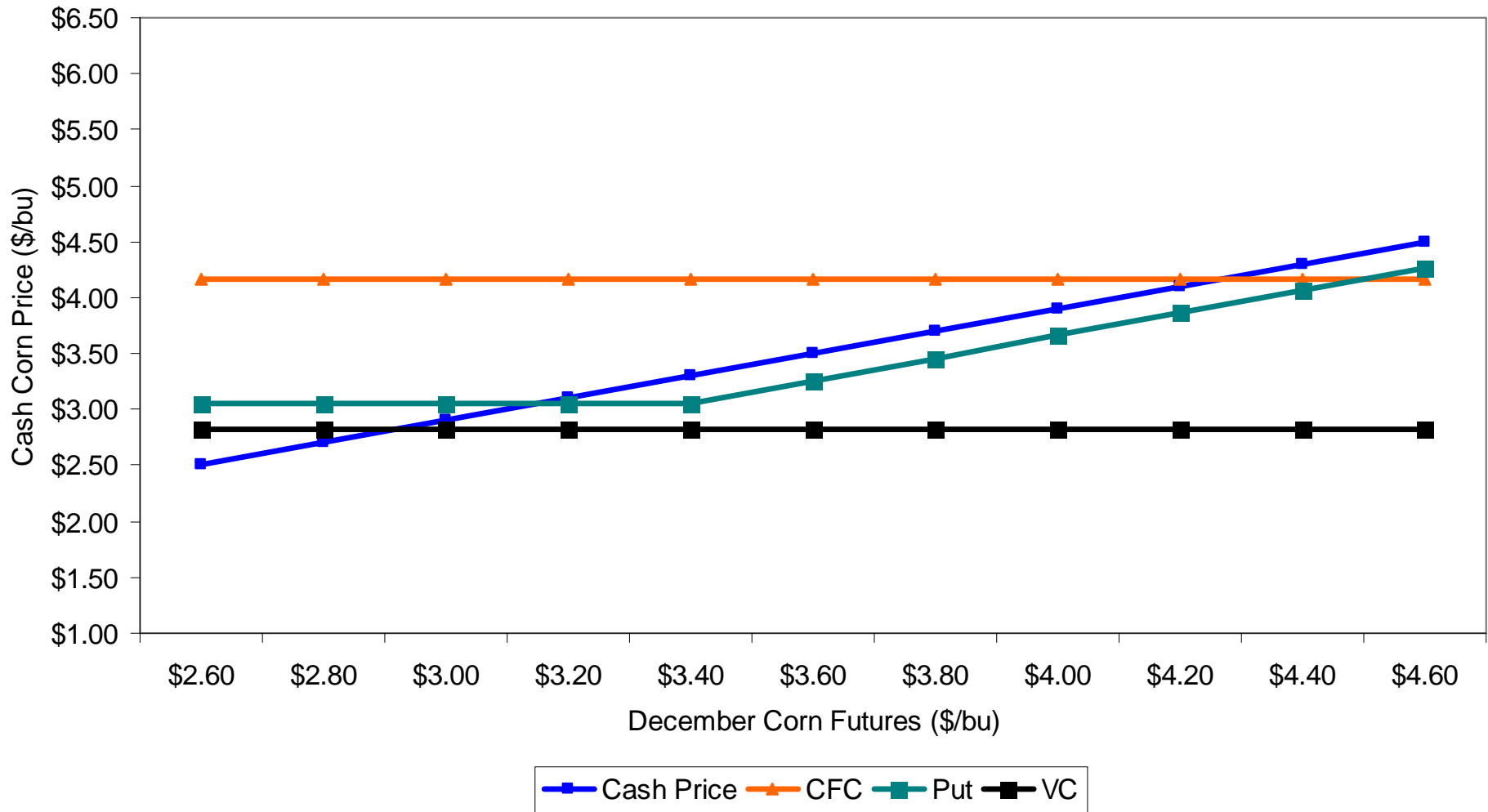
# Revenue Risk Management is Important

- It's easy to focus on managing price risk given what happened in the futures market last fall
- Revenue risk management should be your focus.
- There are products available to manage yield risk (APH) and Revenue risk (CRC)
- There are opportunities available for you to protect corn and soybean revenue before planting.


# Corn Risk Management Strategies

- Expected Yield is 120 bu/a
- Dec 2009 Corn Futures 1/29/09 = \$4.27
- Out-of-money \$3.40 Put = \$0.24
- Expected Cash Basis fall 2007 = -\$0.10
- Cash Forward Contract (CFC) = \$4.17

# Corn Price Risk Management Strategies (120 bu Yield)

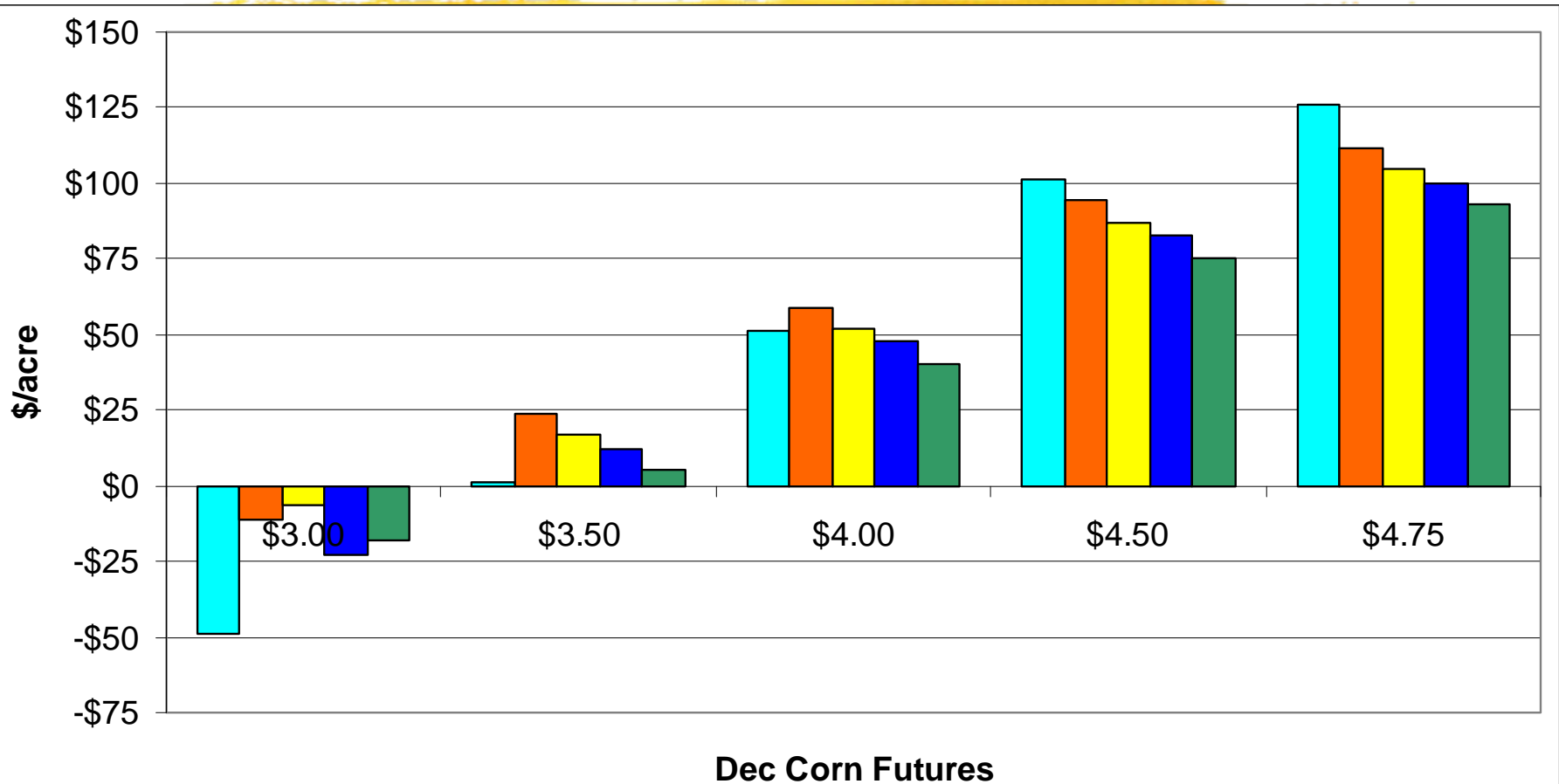


# Combining Marketing and Crop Insurance to Manage Corn Revenue with Price and Yield Risk



- Compare:
  - Do Nothing Cash Sales at Harvest
  - CFC 25% of Expected Production at \$4.17
  - CFC 25% + \$3.40 Put 25%
  - CFC 25% + APH 65% Coverage Level
  - CFC 25% + \$3.40 Put 25% + APH 65% Coverage Level
- What happens when have price **and** yield risk?

# Example Returns over Variable Costs for Risk Management Strategies for Corn with a 100 bu. Harvested Yield



Do Nothing

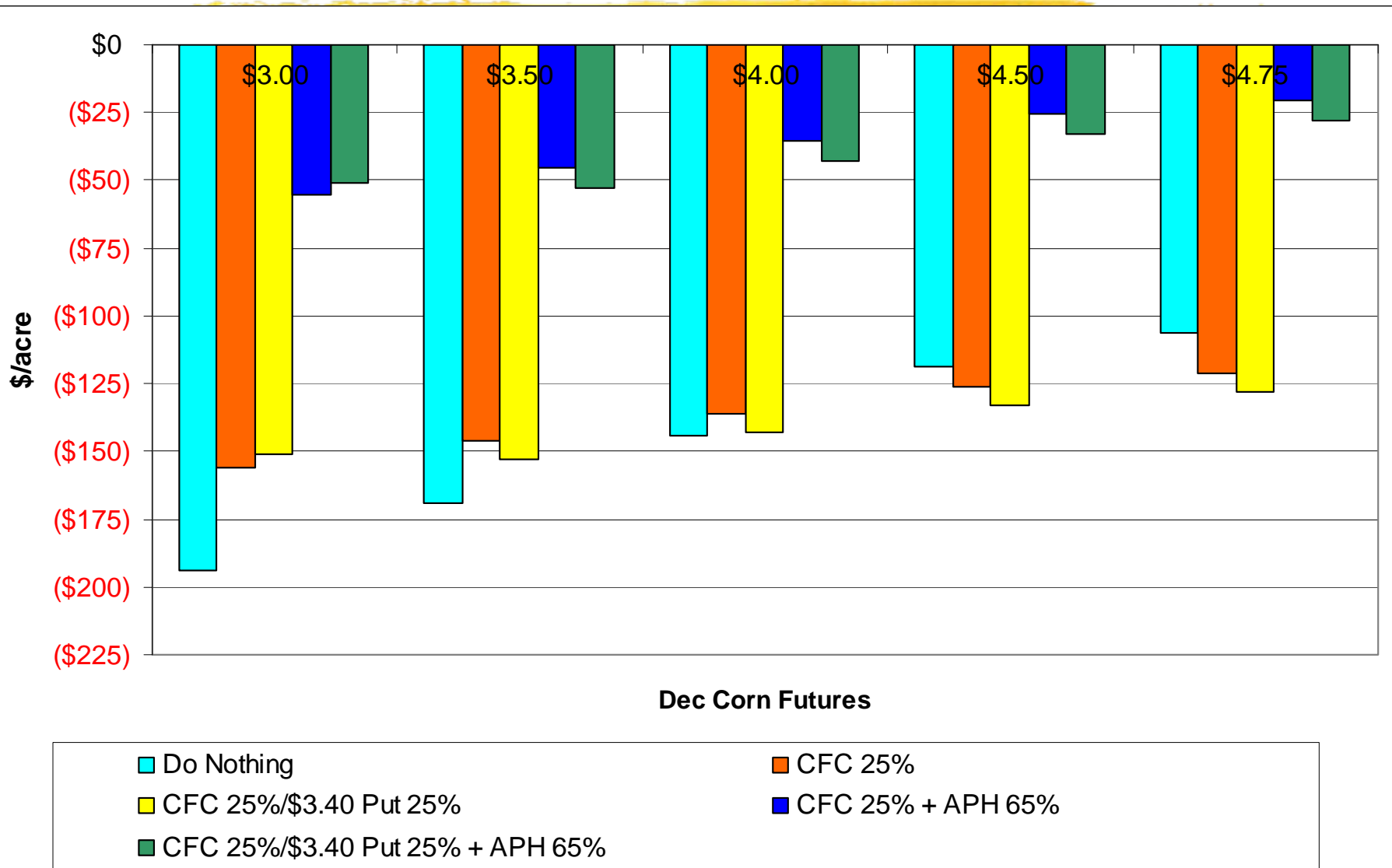
CFC 25%

CFC 25%/\$3.40 Put 25%


CFC 25% + APH 65%

CFC 25%/\$3.40 Put 25% + APH 65%

# Example Return over Variable Costs for Risk Management Strategies for Corn with a 50 bu. Harvested Yield

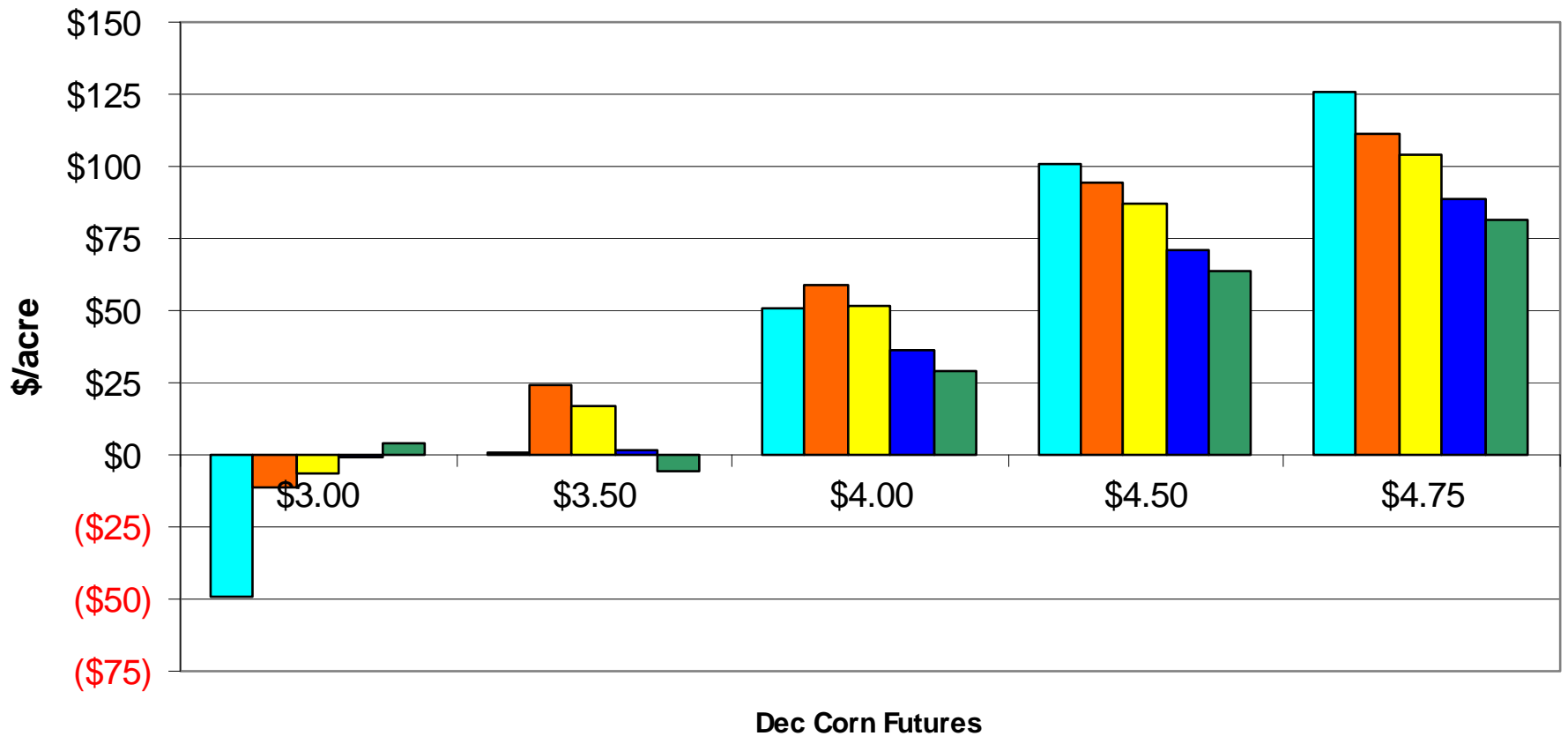


# Combining Marketing and Crop Revenue Coverage Insurance to Manage Corn Revenue with Price and Yield Risk



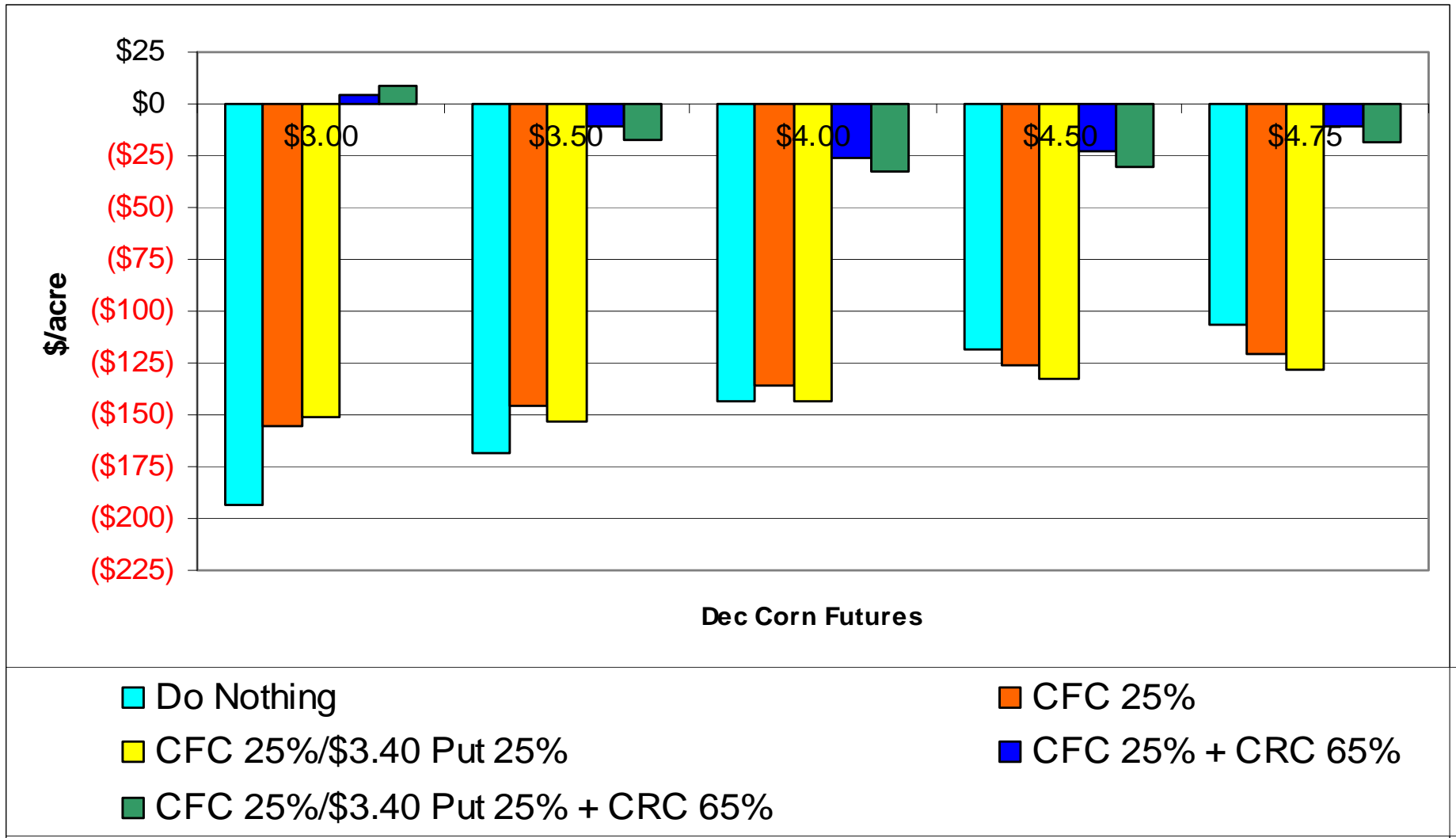
- Compare:
  - Do Nothing Cash Sales at Harvest
  - CFC 25% of Expected Production at \$4.17
  - CFC 25% + \$3.40 Put 25%
  - CFC 25% + CRC 65% Coverage Level
  - CFC 25% + \$3.40 Put 25% + CRC 65% Coverage Level
- What happens when have price **and** yield risk?

# Example Returns over Variable Costs for Risk Management Strategies for Corn with a 100 bu. Harvested Yield



- Do Nothing
- CFC 25%
- CFC 25%/\$3.40 Put 25%
- CFC 25% + CRC 65%
- CFC 25%/\$3.40 Put 25% + CRC 65%

# Example Return over Variable Costs for Risk Management Strategies for Corn with a 50 bu. Harvested Yield



# Combining Price Risk Management and Insurance for Corn and Soybeans

- Don't pass up opportunity to protect your revenue
- Returns over Variable Costs for insurance often greater than the "Do Nothing" strategy even if you don't trigger an indemnity
- Price risk management only part of the game. Insurance may be able to provide revenue to help cover production costs even with extremely low yields
- This will not be cheap ... Evaluate the risk protection provided through marketing and insurance as opposed to the *risk of not doing anything*

# Dates to Remember



- March 2, 2009 – Closing Date for Crop Insurance
- March 31, 2009 – Prospective Planting Intentions Report



*Thank You for Your Attention!*

I would be happy to answer any questions that you may have.

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