

# Crop Insurance Basics and the Use of Crop Revenue Coverage in Marketing Plans

## New Crop Insurance Subsidy Levels

Coverage Level	Previous		New Law
	APH	CRC	
50/100	55%	42%	67%
65/100	42%	32%	59%
70/100	32%	25%	59%
75/100	24%	18%	55%
85/100	13%	10%	38%

## Actual Production History (APH) Program or MPCI Program

- ✦ Based on producer records for a minimum of 4 years of actual yields, up to 10 consecutive crop years
- ✦ Can substitute a yield equivalent to 60% of the county yield (T yield) for each of the actual yields in the history that are below that level.

## Established Prices for 2003

	<u>2003*</u>		<u>2002</u>
Corn	\$2.20	per bu	\$2.00
Soybeans	\$5.30	per bu	\$5.00
Grain Sorghum	\$2.10	per bu	\$1.98

\* As updated January 16, 2003

## Crop Revenue Coverage

- ✎ Provides a revenue guarantee –  
not just a yield guarantee
- ✎ Guarantee is based on planting price  
or harvest price  
whichever is higher

## Crop Revenue Coverage(CRC)

- ✎ Provides revenue guarantee  
(yield x price x coverage level)

Yield: is based on APH

Price: is based on planting time price or  
harvest time price, whichever  
is higher

## CRC Corn Prices

- ✈ Planting: Average of daily closing prices of Dec CBOT contract during February
- ✈ Harvest: Average of daily closing prices of Dec CBOT contract during October

## ***CRC Prices for Soybeans:***

Same price discovery periods as for corn(February and October) using the NOV CBOT contract

### Calculated Revenue

$$= \text{Actual Yield} \times \text{CRC Harvest Price}$$

### Revenue Guarantee

$$= \text{Coverage Level} \times \text{APH Yield} \times \text{Price}^*$$

### Indemnity

$$= \text{Revenue Guarantee} - \text{Calculated Revenue}$$

✍️ **Price = planting or harvest whichever is higher**

## Coverage Levels

The coverage levels available in 2003  
for both APH and CRC are:

**50%, 55%, 60%, 70%, 75%, 80% and 85%**

## Example Calculations

Expected Yields (APH)	Dryland	123	bushels
	Irrigated	172	bushels
Yield Guarantees at 75% Coverage	Dryland	92	bushels
	Irrigated	129	bushels

**“ Irrigated Situation ”**

## APH-MPCI

✍ Indemnity is paid at the contracted established price if yield is less than yield guarantee.

Eg. If irrigated yield = 120 bu.

Yield loss =  $129 - 120 = 9$  bu.

Indemnity =  $9 \times \$2.20 = \$19.80$  per acre

## CRC

Example planting price: \$2.40

Irrigated Example:

Planting revenue guarantee at 75% coverage =

$.75 \times 172 \times 2.40 = \$309.60$

## Calculations

### *✂ Situation 1. Price Goes Down*

- ✂ Harvest price = \$2.00
- ✂ Price declined so revenue guarantee remains \$309.60
- ✂ Actual yield = 150 bu.
- ✂ Calculated revenue =  $150 \times 2.00 = \$300.00$
- ✂ Indemnity =  $\$309.60 - \$300 = \$9.60$  per acre

## Calculations (con't)

### *✂ Situation 2. Price Goes Up*

- ✂ Harvest price = \$2.60
- ✂ Price increased so revenue guarantee increased to:  $.75 \times 172 \times \$2.60 = \$335.40$
- ✂ Actual yield = 120 bu
- ✂ Calculated revenue =  $120 \times \$2.60 = \$312.00$
- ✂ Indemnity =  $\$335.40 - \$312 = \$23.40$  per acre

## Forward Pricing and Crop Insurance

The worst case scenario with forward pricing is that the number of bushels contracted will not be produced and the price goes up, requiring the replacement or purchase of the short bushels at a higher price than contracted.

## Marketing Situation for Irrigated Example

✂ Forward Price	129 bushels(75% of APH)
✂ Contract Price	\$2.20 (\$.20 basis)
✂ Harvest Price	Futures \$2.60, Cash \$2.40
✂ Actual Yield	100 bushels

## APH Situation:

Any production shortfall below 129 bu per acre will be replaced at the established price (\$2.20 per bushel). That is, the indemnity payment is the number of bushels below the guarantee at the price of \$2.20.

Deliver 129 bu @ 2.20 =	\$ 283.80
Less: buy 29 bu @ 2.45(.05 premium to buy)=	- 71.05
Plus: indemnity payment = 29 @ 2.20	<u>+ 63.80</u>
Net	\$ 276.55
Less insurance premium(estimated)	<u>6.00</u>
Net after insurance	\$ 270.55

## CRC Situation:

Final revenue guarantee = 129 x 2.60 =	\$ 335.40
Calculated revenue = 100 x 2.60 =	<u>260.00</u>
Indemnity =	\$ 75.40
Deliver 129 bu @ 2.20 =	\$ 283.80
Less: buy 29 bu @ 2.45 (.05 premium to buy) =	- 71.05
Plus: indemnity payment	<u>+75.40</u>
Net	\$ 288.15
Less insurance premium (estimated)	<u>8.50</u>
Net after insurance	\$ 279.65

**Sell cash at Harvest with no  
Insurance:**

$$100 \times \$2.40 = \$ 240.00$$

**Forward Pricing Advantage**

Typical(average) price decline June to harvest =  
approx \$.30

CRC at 75% protects 129 irrigated bushels

Insurance premium is \$8.50 per acre  
or \$.05 per bu of expected yield  
or \$.065 per bu insured yield

**Potential gain to forward price with CRC is a  
approximately \$.25 per bushel  
or \$32 per acre.**

**Plus yield protection.**