Crop Insurance Home
Insurance Products
CAT
APH
GRP
IP
RA
CRC
GRIP

Crop Revenue Coverage (CRC) Insurance

CRC is revenue insurance protecting against low yields, low prices, or a combinatic of low yields and low prices. CRC pays an indemnity when actual gross revenue fal below a revenue guarantee. CRC's revenue guarantee increases between planting a harvest when futures price rise between spring and fall.

Revenue guarantee under CRC

CRC's revenue guarantee equals the APH yield, times the higher of the base price c harvest price, times the coverage level. Each factor determining the revenue guaran is described below:

1. APH yield. The APH yield is specific to a farm or a unit. It is usually based o the yield history from an insured unit

2. Base and harvest prices.

   Base and harvest prices are determined using Chicago Board of Trade (CBOT) futures contracts (see Figure 1).

   Base prices are determined by averaging settlement prices during the month of February. The December futures contract is used for corn and the October contract is used for soybeans. Base prices are released in early March prior to the deadline for purchasing crop insurance. Base prices vary from year to year. The base price for corn was $2.84 in 1998 and $2.40 in 1999.

Figure 1. Base and Harvest Prices for Revenue Insurance.

Base Prices:

Corn – the average of December futures contract prices during February

Soybeans – the average of November's futures contract prices during February

Harvest Prices:

Corn – the average of December futures contract prices during November

Soybeans – the average of November's futures contract prices during October

Harvest prices are determined by averaging settlement prices during the fall. For corn, the settlement prices for the December contract are averaged during November. For soybeans, the settlement prices for the November contract are averaged during October. These prices reflect market conditions during harvest.

The higher of the base or harvest price is used to calculate the revenue guarantee.

3. Coverage level. The farmer selects the coverage level. In most Illinois counti the coverage level can be between 50 and 75 percent of expected gross rever In some Illinois counties, the coverage level can be up to 85 percent of expec gross revenue.

The process of calculating the revenue guarantee is a two step process: 1) Determining the base guarantee and 2) Updating the base guarantee.

Determining the base guarantee: Prior to the deadline for signing up for insuranc base prices are released. These base prices are then used to calculate a "base reven guarantee." This base revenue provides a floor. The final revenue guarantee will ne be below the base revenue guarantee.

Figure 2 shows an example base revenue guarantee. The crop is corn having a 150 APH yield. The base price is the 1999 price of $2.40. For the example, a 75% coverage level is selected. The revenue guarantee is $270 per acre (150 bu. APH yi x $2.40 base price x 75% coverage level).

Figure 2. Per Acre Base Revenue Guarantee under CRC Insurance.

Situation:

Crop	Corn
APH yield	150 bu.
Base price	$2.40
Farmer election:	
Coverage level	75%
Base revenue guarantee:	$270 = 150 bu. APH yield x $2.40 price x 75% coverage level

Updating the guarantee: The base revenue guarantee will increase if the harvest price is greater than the base price. In these cases, the harvest price is used in calculating the revenue guarantee.

In the example in Figure 1, the $270 base revenue guarantee reflects a $2.40 base price. If the harvest price, which is released in December, is below $2.40 the revenu guarantee will equal the $270 base revenue guarantee. If the harvest price is higher, the revenue guarantee will be updated. If the harvest price is $3.00, the revenue guarantee is $338 (150 bu. APH yield x $3.00 corn price x 74% coverage level).

There are limits to price increases in recomputing CRC revenue guarantees. Limits $1.50 for corn and $3.00 for soybeans. For example, if the base price of corn is $2. and the harvest price is $4.00, a $3.90 price is used to calculate the CRC revenue guarantee. The $3.90 equals the $2.40 base price plus the $1.50 price increase limit corn.

Gross revenue under CRC

Gross revenue is used to calculate indemnity payments. Gross revenue equals actua yield times the harvest price (see Figure 1 for price definitions).

In most cases, gross revenue does not equal the revenue a farmer receives for the crop. Prices used to calculate revenue under CRC are based on CBOT futures contracts. In most cases, cash prices at harvest time do not equal futures prices. Moreover, CRC does not require sales of crop at harvest-time. Prior to harvest, a farmer also could hedge grain production using forward or futures contracts. A far also is free to store grain for later sale.

Indemnity payments under CRC

An indemnity payment occurs when gross revenue is below the revenue guarantee. a $270 revenue guarantee, an indemnity payment equal to $50 occurs when actual gross revenue is $220 ($50 = $270 revenue guarantee - $220 gross revenue).

Indemnity payments occur because of low prices, low yields, or a combination of lc yields and low prices. Figure 4 shows indemnity payments for different actual yields and harvest prices.

Figure 4. Examples of CRC Indemnity Payments[1].

Low Yield	Low Yield	Low Yield	Avg. Yield	Avg. Yield	
Low Price	Same Price	High Price	Low Price	Same Price	
Actual Yield	100 bu.	100 bu.	100 bu.	150 bu.	150 bu.
Harvest Price	$1.70	$2.40	$3.00	$1.70	$2.40
Revenue Guarantee[2]	$270	$270	$338	$270	$270
Gross Revenue[3]	$170	$240	$300	$255	$360
Indemnity Payment[4]	$100	$30	$0	$15	$0

[1] Based on a 150 bu. APH yield, a $2.40 base price, and a 75 percent coverage level.

[2] The revenue guarantee equals the APH yield, times the higher of the base or harvest price, times the coverage level.

[3] Gross revenue equal actual yield x harvest price

[4] Indemnity payment equals revenue guarantee minus gross revenue when gross revenue is greater tha revenue guarantee, zero otherwise.

Choices under CRC

For a unit, the farmer chooses the coverage level. A higher coverage level results in higher revenue guarantee. When indemnity payments occur, the indemnity payment will be greater with a higher coverage level than a lower coverage level.

Insurable units under CRC

Insurance units available under CRC are basic, optional, and enterprise units

For a complete discussion of units, see Iowa State University Extension, *Actual Production History and Insured Units*, March 1999, http://www.exnet.iastate.edu/Publications/FM1860.pdf.

CRC premiums

Per acres premiums will depend on the county of the insured crop, units insured, the crop's APH yield, and the selected coverage level. Higher coverage levels result in higher premiums.

Insurance Similar to CRC

CRC and Revenue Assurance with a Harvest Price option (RA-HP) are very similar insurance products. Differences between the products are:

1. CRC can be used to insure basic, optional, and enterprise units. RA-HP has these units along with a whole farm unit.
2. Under CRC, there are price increase limits when updating the revenue guarantee. Limits are $1.50 for corn and $3.00 for soybeans. RA-HP does not have these limits.
3. Premiums may differ between CRC and RA-HP.

Other information

Iowa State University Extension, *Crop Revenue Insurance*, March 1999, http://www.exnet.iastate.edu/Publications/FM1853.pdf

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Information Provided by: Gary Schnitkey

Web Site Maintained by: John Nwoha

For suggestions, comments, and questions, send e-mail to: nwoha@uiuc.edu
Crop Insurance is produced at the University of Illinois, Urbana-Champaign Related sites include: