L-5298
(RM4-8.0)
5-99

Texas Agricultural Extension Service
The Texas A&M University System

Crop Revenue Coverage (CRC)

Kenneth Stokes, G.A. "Art" Barnaby, Mark Waller and Joe Outlaw*

Crop Revenue Coverage is a comprehensive insurance program that guarantees a stated amount of revenue based on commodity futures prices. CRC protects a producer from loss of revenue resulting from low prices, low yields, or a combination of the two. CRC contains provisions for both yield and price risks; it also provides replacement value protection. This works because the insurance guarantee increases if the harvest price exceeds the base price. Unlike coverage in the Actual Production History (APH) program, with a CRC policy the producer does not necessarily have to experience an insurable yield loss to receive an indemnity payment.

CRC Procedures

CRC has the same acreage and production reporting dates, optional units, and quality adjustment enhancements as APH. An enterprise discount is available if basic and optional units are combined. An enterprise unit is all insurable acreage of the insured crop in the county, in which the producer has a share on the date coverage begins for the crop year. An enterprise unit must consist of two or more basic units (or two or more optional units) of the same insured crop that are located in two or more separate sections, section equivalents, or FSA farm serial numbers. With enterprise units, the producer must maintain any required production records on a basic or optional unit basis.

How is Approved Yield Defined?

CRC **approved yield** is the historical average yield per acre in the insured unit. It uses the farmer's production records or yields assigned by the Federal Crop Insurance Corporation (FCIC). At least 4 crop years of actual yields are required to obtain an approved yield without being assigned a portion of the T yield (transitional yield, assigned when there are no production records).

CRC Covered Crops

Kansas: corn, cotton, grain sorghum, soybeans and wheat

Texas: corn, cotton, grain sorghum, rice, soybeans and wheat

Risk Management Education ™

How CRC Works?

Before the sales closing, the producer and his local insurance agent establish a **minimum guarantee** per acre. This is based on the producer's approved yield, a base price (based on the appropriate harvest futures contract), and the farmer's selected coverage level. Producers can choose coverage levels from 50 to 75 percent (in 5-percent increments). In selected counties, coverage up to 85 percent is available.

A **harvest guarantee**, established at harvest, uses the approved yield (same as the Multiple Peril Crop Insurance policy), the harvest price (based on the appropriate futures contract), and the farmer's selected coverage level. Once the crop is harvested, the producer's

*Professor and Extension Economist, The Texas A&M University System; Extension Agricultural Economist, Kansas State University Agricultural Experiment Station and Cooperative Extension Service; Professor and Extension Economist, The Texas A&M University System; Assistant Professor and Extension Economist, The Texas A&M University System.

actual yield to count is multiplied by the harvest price, resulting in the **calculated revenue**. The **final guarantee** is the greater of the minimum or harvest guarantees. The calculated revenue is compared with the final guarantee; if the calculated revenue is less than the final guarantee, the farmer is paid the difference as an indemnity payment.

What is CRC's Production to Count?

Production to count equals harvested and appraised production from the insured acreage as outlined in the crop provisions. Production to count may also include quality adjustments.

Base and Harvest Price

The base price is an average of the daily settlement prices, for a month before normal planting time, of a harvest time futures contract. The harvest price is an average of the daily settlement prices, for a month near the end of normal harvest, of the harvest time futures contract. The harvest price is used to determine the harvest guarantee and calculated revenue.

The harvest price cannot exceed or fall below the base price by more than $1.50 per bushel on corn and grain sorghum, $3.00 per bushel on soybeans, $2.00 per bushel on wheat, $.05 per pound on rice, and $.70 per pound on cotton. *(The harvest price **IS NOT** the price a producer receives for his crop at the local elevator.)*

What is the CRC Price Percentage?

The farmer selects a **price percentage** that is multiplied by the relevant monthly averages for the base and harvest prices to calculate the CRC policy's final **base** and **harvest prices**. A farmer may select 100 percent or 95 percent as the price percentage for his policy. If the farmer has never selected a price percentage, then the policy's price percentage defaults to 95 percent.

EXAMPLES

Let's look at how CRC would perform under different combinations of higher or lower prices and normal or reduced yields.

EXAMPLE 1: Harvest price is higher than the base price, with a 34 percent production loss

Approved APH yield	= 70 bushels per acre
Coverage level	= 65%
Share	= 100%
Base price	= $2.20 per bushel
Harvest price	= $3.00 per bushel
Production to count	= 46 bushels per acre
Crop value	= Production to count x harvest price = $138.00
Revenue guarantee	= Approved APH yield x coverage level x the higher of the base price or harvest price x share = $136.50

Revenue guarantee ($136.50) - Crop value ($138.00) = CRC indemnity ($0.00)

In example 1, prices were higher at the time of the harvest price calculation than at the time of the base price calculation. As a result, the revenue guarantee increased from $100.10 to $136.50. However, the combination of the 46-bushel yield and the $3.00 price provided a revenue of $138 per acre, which was slightly above the guarantee of $136.50, resulting in no CRC indemnity being paid out.

CRC price determination specifics

Crop/sales closing date	Commodity exchange	Futures contract	Max %	Base price month	Harvest price month
Corn before 3/15	CBOT	Sept	100	Dec	Aug
Corn on 3/15	CBOT	Dec	100	Feb	Nov
Soybeans before 3/15	CBOT	Sep	100	Dec	Aug
Soybeans on 3/15	CBOT	Nov	100	Feb	Oct
Winter wheat on 9/30	KCBOT	Jul	95	Aug	Jun
Cotton on 1/15	NYCE	Oct	100	Dec	Sep
Cotton on 2/28 and 3/15	NYCE	Dec	100	Jan 15 to Feb 14	Nov
Grain sorghum before 3/15	CBOT	Sep	95	Dec	Aug
Grain sorghum on 3/15	CBOT	Dec	95	Feb	Nov
Rice on 1/15	CBOT	Sept	100	Dec	Aug
Rice on 2/15	CBOT	Nov	100	Jan	Oct

EXAMPLE 2: Harvest price is higher than the base price, with a 57 percent production loss

Approved APH yield	= 70 bushels per acre
Coverage level	= 65%
Share	= 100%
Base price	= $2.20 per bushel
Harvest price	= $3.00 per bushel
Production to count	= 30 bushels per acre
Crop value	= Production to count x harvest price = $90.00
Revenue guarantee	= Approved APH yield x coverage level x the higher of the base price or harvest price x share = $136.50

Revenue guarantee ($136.50) - Crop value ($90.000) = CRC indemnity ($46.50)

In example 2, prices were higher at the time of the harvest price calculation than at the time of the base price calculation. As a result, the revenue guarantee increased from $100.10 to $136.50. However, the combination of a 30-bushel yield and a $3.00 price provided a revenue of only $90 per acre, well below the guarantee of $136.50 per acre. In this case, a CRC indemnity payment of $46.50 per acre was made to the producer. In other words, the 15.5 bushels or 22 percent of the yield loss covered by the policy was replaced at the higher $3.00 level. This is what is meant when we say the policy covers replacement costs.

EXAMPLE 3: Harvest price is less than the base price, with a 34 percent production loss

Approved APH yield	= 70 bushels per acre
Coverage level	= 65%
Share	= 100%
Base price	= $2.20 per bushel
Harvest price	= $1.35 per bushel
Production to count	= 46 bushels per acre
Crop value	= Production to count x harvest price = $62.10
Revenue guarantee	= Approved APH yield x coverage level x the higher of the base price or harvest price x share = $100.10

Revenue guarantee ($100.10) - Crop value ($62.10) = CRC indemnity ($38.00)

In example 3, prices were lower at harvest than at the time of the base price calculation. As a result, the revenue guarantee stayed at the $100.10 per acre level. Even though the production loss was only 34 percent (46-bushel yield), the combination of a low yield and a low price generated a crop value of only $62.10, triggering a CRC indemnity payment of $38.00 per acre ($100.10 minus $62.10). In this case, the producer would not have received a payment if he had only 65 percent MPCI coverage, because the yield fell only 34 percent.

EXAMPLE 4: Harvest price is less than the base price, with a 57 percent production loss

Approved APH yield	= 70 bushels per acre
Coverage level	= 65%
Share	= 100%
Base price	= $2.20 per bushel
Harvest price	= $1.35 per bushel
Production to count	= 30 bushels per acre
Crop value	= Production to count x harvest price = $40.50
Revenue guarantee	= Approved APH yield x coverage level x the higher of the base price or harvest price x share = $100.10

Revenue guarantee ($100.100) - Crop value ($40.50) = CRC indemnity ($59.60)

In example 4, prices were lower at harvest than at the time of the base price calculation. As a result, the revenue guarantee stayed at the $100.10 per acre level. The combination of a low yield and a low price generated a crop value of only $40.50, triggering a CRC indemnity payment of $59.60 per acre. While both CRC and MPCI coverage at 65 percent would have paid indemnities, in this case (57 percent loss), the CRC indemnity would have been larger because the revenue calculation considered both yield loss and the price decline.

Perils Protection

CRC covers the same perils as MPCI (with an additional price peril):

- adverse weather
- fire
- hail
- wind
- diseases
- insects
- earthquake
- wildlife

CRC Features

- Protects cash value, which allows for aggressive marketing strategies
- Provides upside and downside price protection

- Is an alternative to MPCI
- Offers same subsidy as MPCI
- Establishes base and harvest prices using the national commodity exchanges
- Uses producer's own Actual Production History in establishing guarantees on a unit basis
- Protects against perils of price and yield; no yield loss needed for indemnity
- Uses the market-based guarantees before planting as the minimum at harvest time
- Discounts for combining units
- Requires higher premiums than the current MPCI program
- In some cases, pays lower indemnity payments than the current MPCI program. This could only happen if FCIC set the MPCI market price higher than the CRC base price. The MPCI program sometimes overpays losses because the loss is not based on the market value of the crop, unlike CRC which pays on the basis of market-determined prices.

Producer Subsidy

The producer premium subsidy (the portion of the premium paid by the government) is paid only on the yield risk portion of the CRC coverage. This subsidy amount is the same dollar amount as the MPCI policy.

Partial funding support has been provided by the Texas Wheat Producers Board, Texas Corn Producers Board, and the Texas Farm Bureau.

Produced by Agricultural Communications, The Texas A&M University System

Extension publications can be found on the Web at: http://agpublications.tamu.edu

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Chester P. Fehlis, Deputy Director, Texas Agricultural Extension Service, The Texas A&M University System.

1.5M, New ECO