

Production to Count, Quality Adjustment, Sampling, and Grading Overview

Corn, Grain Sorghum, Soybeans, and Sunflowers and
Barley, Rye, Wheat, Canola, Flax, Oats, and Safflowers

Risk Management Agency



Production to Count (PTC)

- ☁ PTC is calculated for crop insurance indemnity purposes using:
 - ⚡ Appraised production and
 - ☁ Harvested production (includes sold, stored and fed production)

Calculating Yield Based Coverage

☁ Example of coverage calculation:

☁ Producer has actual production history (APH) of 50 bushels (bu) per acre

☁ Plants 100 acres

☁ Elects 75-percent coverage

☁ Has 100-percent share in the crop

☁ $50 \text{ bu per acre} \times 100 \text{ acre} \times 75 \text{ percent} \times 100 \text{ percent} = 3,750 \text{ bu coverage}$

Calculating Indemnity with No Quality Adjustment

☁ Example with no quality adjustment:

☁ Producer harvested 100 percent of the 100-acre crop

☁ Harvested 2,000 bu PTC

☁ $3,750 \text{ bu coverage} - 2,000 \text{ bu PTC} =$
1,750 bu shortfall

☁ Indemnity based upon 1,750 bu X price election X 100-percent share

Calculating Indemnity with Quality Adjustment

☁ Example with quality adjustment:

☁ Producer harvested 100 percent of the 100-acre crop

☁ Harvested 2,000 bu PTC

☁ Production is quality adjusted to 1,000 bu PTC

☁ $3,750 \text{ bu coverage} - 1,000 \text{ bu PTC} =$
2,750 bu shortfall

☁ Indemnity based upon 2,750 bu X price election X 100-percent share

Quality for Crop Insurance (excluding mycotoxins) Determined By:

- ☁ Grader licensed under the United States Grain Standards Act or the United States Warehouse Act (USWA);
- ☁ Grader licensed under State law and employed by a warehouse operator who has a storage agreement with the Commodity Credit Corporation (CCC); or
- ☁ Grader not licensed under State law, but who is employed by a warehouse operator who has a commodity storage agreement with the CCC and is in compliance with State law regarding warehouses

Determining Quality for Crop Insurance with Mycotoxins

- ☁ For substances or conditions injurious to human or animal health, samples must be analyzed by an approved laboratory that:
 - ☁ Is a disinterested third party;
 - ☁ Performs quantitative tests that are certified by Federal Grain Inspection Service (FGIS); and
 - ☁ Is a recognized commercial, governmental, or university testing laboratory

Crops Having Quality Adjustment Discount Factor (DF) Charts in the Special Provisions Of Insurance (SPOI)

Barley	Canola
Corn	Flax
Grain Sorghum	Oats
Rye	Safflowers
Soybeans	Sunflowers (Oil)
Wheat	Sunflowers (Confectionary)

Developing the Charts

- ☛ RMA generally uses Farm Service Agency (FSA) loan discount data and national average loan rates for the past 10 years
- ☛ This data is compiled and the average of the last 10 years is used to construct the discount factors (DFs)

Quality Based “on the chart” or “off the chart”

- ☁️ “On the chart” - Pre-established DFs are listed on the SPOI quality adjustment statements for types and levels of quality deficiencies allowed by the crop policies
- ☁️ “Off the chart” – No pre-established DFs are listed on the SPOI quality adjustment statements for types and levels of quality deficiencies allowed by the crop policies

Quality Adjustment Procedure

- ☁ For “on the chart” production, use chart values
- ☁ For “off the chart” production that has been sold, use:
 - ☁ Actual sale price (as opposed to bid or offer value) based upon actual Reduction in Value (RIVs) for insured causes of loss during the insurance period ÷ Local Market Price (LMP) = DF
- or**
- ☁ For “off the chart” production that has not been sold, use:
 - ☁ DF of .500

Determining the Quality Adjustment Factors (QAFs)

- ☁️ QAF is determined by subtracting from 1.000, the sum of all applicable pre-established DFs listed in the SPOIs or DFs derived from actual RIVs of the damaged production.
- ☁️ QAF is multiplied by the number of applicable bushels or pounds remaining after any reduction due to excessive moisture or foreign material (FM), in accordance with the crop provisions.

Determining QAF Based on DFs (“on the chart” and No Mycotoxins)

☛ 1,000 bu of corn with kernel damage (25 percent) and test weight (47 pounds) is designated as U.S. Sample Grade.

(a) .254 (Chart DF for kernel damage)

+ .065 (Chart DF for test weight)

+ .126 (Chart DF for Sample Grade)

.485 Total Chart DF's

(b) $1.000 - .485 = .515$ QAF

(c) $1,000 \text{ bu} \times .515 = 515 \text{ bu PTC}$

Not Using DFs on the SPOI (“off the chart” and No Mycotoxins)

- ☁ If one qualifying DF is “off the chart” and one qualifying DF is “on the chart,” then use the actual reduction in value (RIV) for sold production; or
- ☁ .500 for unsold production.

Determining QAF Based on RIVs for Sold Production ("off the chart" and No Mycotoxins)

- ☂ If production is sold prior to 60 days after the calendar date for the end of the insurance period
- ☂ 1,000 bushels of corn with 45-pound test weight and 12-percent kernel damage is designated as U.S. Sample Grade. However, since the 45 pound test weight is off the chart, the producer may elect to sell their production and use the actual RIVs to determine the DF
- ☂ Example:
 - a) \$.65 (RIV for kernel damage)
+\$.85 (RIV for test weight)
\$1.50 Total RIV
 - b) $\$1.50 \text{ Total RIV} \div \$2.20 \text{ (LMP)} = .682 \text{ (DF)}$
 - c) $1.000 - .682 = .318 \text{ QAF}$
 - d) $1,000 \times .318 = 318 \text{ bu PTC}$

Determining QAF NOT Based on RIVs (“off the chart” and No Mycotoxins)

- ☁ Assume the production is not sold prior to 60 days after the calendar date for the end of the insurance period
- ☁ 1,000 bushels of corn with 45 pound test weight and 12 percent kernel damage is designated as U.S. Sample Grade. However, since the 45-pound test weight is off the chart, the insured will receive a DF of .500 for unsold production.
 - 1,000 - .500 DF = .500 QAF
 - 1,000 bu. X .500 QAF = 500 bushels to count

Determining QAF Not Based on RIVs (“off the chart” and No Mycotoxins)

- ☁ Sold production will be quality adjusted based on the dollar value received if sold prior to 60 days after the calendar date for the end of the insurance period (using actual RIVs for insured causes of loss during the insurance period)
- ☁ Production fed prior to 60 days after the calendar date for the end of the insurance period will be adjusted based on a DF of .500
- ☁ Production remaining unsold or unfed 60 days after the calendar date for the end of the insurance period will be adjusted based on a DF of .500

Determining QAF Not Based on RIVs (“off the chart” and No Mycotoxins)

- ☛ Example (for 2009 and succeeding crop years):
 - ☛ Producer harvests soybeans on September 15
 - ☛ The calendar date of the end of the insurance period is December 10
 - ☛ Producer has from September 15 until February 8 (60 days after the calendar date of the end of the insurance period) to sell, use, or destroy their production or a DF of .500 will be used

Aflatoxin (Mycotoxin) coverage

- ☁ RMA uses three categories based on Food and Drug Administration (FDA) advisory levels using approved testing laboratory results for production prior to storage.
 - ☁ 0-20 ppb – No FDA advisory levels. Safe for human consumption. No QA
 - ☁ 21-300 ppb – FDA advisory levels.
 - ☁ Over 300 ppb – FDA prohibits use. Production must be sold, used, or destroyed before claim settlement

Vomitoxin (Mycotoxin) Coverage

- ☁ RMA uses three categories based on FDA advisory levels using approved testing laboratory results for production prior to storage.
 - ☁ 0-2.0 ppm – For wheat only. No FDA advisory levels. Safe for human consumption. No QA
 - ☁ 0-5.0 ppm – All other crops. No FDA advisory levels. Safe for human consumption. No QA
 - ☁ 2.1 - 10.0 ppm – For wheat only. FDA advisory levels
 - ☁ 5.0 - 10.0 ppm – All other crops. FDA advisory levels
 - ☁ Over 10.0 ppm – FDA prohibits use. Production must be sold, used, or destroyed before claim settlement

Fumonisin (Mycotoxin) Coverage

- ☁ RMA uses three categories based on FDA advisory levels using approved testing laboratory results for production prior to storage.
 - ☁ 0-3.0 ppm – No FDA advisory levels. Safe for human consumption. No QA
 - ☁ 3.1-100.0 ppm – FDA advisory levels.
 - ☁ Over 100.0 ppm – FDA prohibits use. Production must be sold, used, or destroyed before claim settlement

DFs for Aflatoxin (Mycotoxin)

Aflatoxin Range	DF
0.1 – 20.0 ppb	.000
20.1 - 50.0 ppb	.100
50.1 – 100.0 ppb	.200
100.1 – 200.0 ppb	.300
200.1 – 300.0 ppb	.400
> 300.0 ppb	.500

DFs for Vomitoxin (Mycotoxin)

Vomitoxin Range	DF
0.1 – 5.0 ppm	.000
5.1 - 10.0 ppm	.450
> 10.0 ppm	.500




Wheat has DFs from 2.1 – 10.0 ppm

DFs for Fumonisin (Mycotoxin)

Fumonisin Range	DF
0.1 – 3.0 ppm	.000
3.1 - 20.0 ppm	.100
20.1 – 40.0 ppm	.200
40.1 – 60.0 ppm	.300
60.1 – 100.0 ppm	.400
> 100.0 ppm	.500

Determining QAF for Mycotoxins

The DF's will be:

-  For production sold directly from the field to a disinterested third party buyer or put into commercial storage and later sold – the RIV applied by the buyer due to all allowable covered quality deficiencies and that value divided by the LMP; or
-  For production that is unharvested, in storage, fed, used or sold to other than a disinterested third party - the pre-established DFs on the mycotoxin charts plus any pre-established DFs for other quality deficiencies; or
-  1.000 for production having zero market value and is properly destroyed

Determining QAF for Mycotoxin Levels in Excess of the Maximum Amounts Shown in the SPOIs

- ☁ Adjustments will be made to PTC which contains levels of substances in excess of the maximum amounts shown in the SPOIs (300 ppb aflatoxin, 10 ppm vomitoxin, 100 ppm fumonisin, etc.)
- ☁ Claims will not be settled until such production is sold to a disinterested third party, fed, used, or destroyed
- ☁ The DFs will be:
 - ☁ .500
 - ☁ 1.000 for production that is properly destroyed

Determining QAF Based on RIVs for Sold Production Containing Mycotoxins

- ☂ Assume production is sold prior to 60 days after the calendar date for the end of the insurance period
- ☂ 1,000 bushels of corn with 45-pound test weight and 12-percent kernel damage is designated as U.S. Sample Grade and also contains 200 ppb aflatoxin
 - ☂ a) \$.18 (RIV for kernel damage)
 - + .22 (RIV for test weight)
 - + .95 (RIV for aflatoxin)
 - \$ 1.35 Total RIV
 - b) $\$1.35 \text{ Total RIV} \div \$3.25 \text{ (LMP)} = .415 \text{ DF}$
 - c) $1.000 - .415 = .585 \text{ QAF}$
 - d) $1,000 \times .585 = 585 \text{ bu PTC}$

Determining QAF Based on DFs for Unsold Production Containing Mycotoxins

- ☂ Assume production is unsold prior to 60 days after the calendar date for the end of the insurance period
- ☂ 1,000 bushels of corn with 47-pound test weight (on chart) and 12 percent kernel damage (on chart) is designated as U.S. No. 5 grade corn and contains 200 ppb aflatoxin (on chart)
 - ☂ a) .052 (DF for test weight)
 - + .068 (DF for kernel damage)
 - + .300 (DF for aflatoxin)
 - .420 Total DF's
 - b) $1.000 - .420 = .580$ QAF
 - c) $1,000 \text{ bushels} \times .580 = 580 \text{ bushels PTC}$

Determining QAF based on DFs for Unsold Production Containing Mycotoxins

- ☁ Assume production is unsold prior to 60 days after the calendar date for the end of the insurance period
- ☁ 1,000 bushels of corn with 38-pound test weight (off chart) and 22 percent kernel damage (on chart) is designated as U.S. Sample grade corn and contains 200 ppb aflatoxin (on chart)
 - ☁ a) .500 (DF for test weight and kernel damage because not sold)
+ .300 (DF for aflatoxin)
.800 Total DF's
 - b) $1.000 - .800 = .200$ QAF
 - c) $1,000 \text{ bushels} \times .200 = 200 \text{ bushels PTC}$

Determining QAF Based on DFs for Unsold Production Containing Mycotoxins

- ☂ Assume the production is unsold 60 days after the calendar date for the end of the insurance period
- ☂ 1,000 bushels of corn with 47-pound test weight (on chart) and 12 percent kernel damage (on chart) is designated as U.S. No. 5 grade corn and contains 400 ppb aflatoxin (off chart)
- ☂ Because the production contained aflatoxin in excess of the levels allowed by FDA, the claim will not be completed until the grain is sold, fed, used or destroyed. The DF will be .500 and no additional quality factors apply.
 - ☂ a) .500 (Total DF)
 - b) $1.000 - .500 = .500$ QAF
 - c) $1,000 \text{ bushels} \times .500 = 500 \text{ bushels PTC}$

Sampling Requirements for Mycotoxins

☁️ Mycotoxins, especially aflatoxin, can increase in storage and insurance coverage ends at harvest. Therefore, for crop insurance purposes, samples must be taken before storage. Samples can be taken from:

- ☁️ Authorized representative strips left in an otherwise harvested field,
- ☁️ Harvested production prior to on farm storage, or
- ☁️ Upon delivery to an elevator.

Field Sampling for Unharvested Appraised Production

☁ Requirements for minimum number of samples:

- ☁ Minimum number of samples are based upon the acreage being sampled.

<u>Acres in Field or Subfield</u>	<u>Minimum No. of Samples</u>
0.1 – 10.0	3

Add one additional sample for each 40.0 acres (or fraction thereof)

☁ Examples:

- ☁ 3 samples for a 10-acre field
- ☁ 4 samples for a 40-acre field (3 for first 10 +1)
- ☁ 16 samples for a 500-acre field (3 for first 10 + (490/40 = 12.25 or) 13)

RMA Requires Several Samples

- ⚡ The AIP and insured can agree to take as many additional samples (over the minimum) as necessary

Milling Qualities Not Insured

- ☁️ Protein and falling numbers are not considered quality deficiencies under the Small Grains Crop Provisions
- ☁️ Oil content is not considered a quality deficiency under the Coarse Grain Crop Provisions
- ☁️ Milling qualities (protein, falling numbers, oil content) do not affect the commodity's grade

Questions

Please direct questions to:

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