

QUALITY ADJUSTMENT
AND
SAMPLING/GRADING
OVERVIEW

Risk Management Agency



What is Quality Adjustment?

- ☁️ Some policies/endorsements provide for a reduction in the production to count when the quality of the appraised and/or harvested production is reduced due to insurable causes.
- ☁️ The quantity of mature production is reduced when it meets the requirements stated in the crop policy/endorsement (Special Provisions if applicable). This adjusted production to count is used for indemnity and Actual Production History (APH) purposes.

Who can Determine Quality for Crop Insurance?

- ☁️ Grain grader licensed under the United States Grain Standards Act or the United States Warehouse Act (USWA).
- ☁️ Grain grader licensed under State law and employed by a warehouse operator who has a storage agreement with the Commodity Credit Corporation (CCC).
- ☁️ Grain 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.

Who can Determine Quality for Crop Insurance?

- ☁ For substances or conditions injurious to human or animal health, samples must be analyzed by a 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.

Sampling and Grading on a Per-Conveyance Basis

- ☁ Grades from blended samples, by unit, for non-mycotoxin quality adjustment from both USWA licensed warehouses and warehouses holding a storage agreement with CCC may be accepted only if all of the following apply:
 - ☁ The commodity is sold on the same basis as the blended samples used to determine the grading factors for quality adjustment.
 - ☁ Proof of the sale, sale amount and grades, or signed certification of pending sale from the buyer including the quantity and quality is provided and is acceptable to the approved insurance provider.
 - ☁ The blended sample is representative of all the loads for which it applies and it is determined acceptable by the approved insurance provider.

Pre 1995 Quality Adjustment Procedure

- ☁ Reflective of current market price
 - ⚡ Actual value of grain \div local market price = QA factor
- ☁ Subject to price manipulation, fraud, waste, and abuse
 - ⚡ Price was found to be manipulated in some cases based on supply and demand, or availability of insurance.
 - ⚡ Price not always reflective of true value or sales price of the grain.

1995 – Current Quality Adjustment Procedure:

- ☁ Easy to administer
 - ⚡ Predetermined factors published on the Special Provisions.
- ☁ Not subject to price manipulation, fraud, waste, and abuse
 - ⚡ QA factor determined from charts (unless amount of damage is off chart).
- ☁ Not always reflective of current local market price
 - ⚡ Factors are based on a ten year average. Current years value and discounts are not considered (unless amount of damage is off chart).
 - ⚡ QA factor can come from the SPOI charts even if local elevators are rejecting grain at the same level of damage.

Crops having Quality Adjustment Charts in the Special Provisions

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

How were the charts developed?

- ☛ Risk Management Agency (RMA) used Farm Service Agency (FSA) loan discount data and national average loan rates for the past 10 years.
- ☛ This data was compiled and the average of the last 10 years was used to construct the discount factors.

How is the Quality Adjustment Factor (QAF) determined?

- ☁ The QAF is determined by subtracting from 1.000, the sum of all applicable pre-established discount factors (DFs) listed in the SPOIs or DFs derived from reductions in value (RIVs) of the damaged grain.
- ☁ The 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.

Example of Determining QA factor based on DF's

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

(a) .254 (DF for kernel damage)

.065 (DF for test weight)

+ .126 (DF for Sample Grade)

.485 Total DF's

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

(c) $1,000 \text{ bushels} \times .515 = 515$ bushels to count

When Discount Factors (DFs) on the SPOI are not used

- ☁ If there are no pre-established DFs, or
- ☁ There are pre-established DFs on the SPOI, and there is at least one type/level of damage which exceeds the pre-established DFs (amount is off the chart), the pre-established DFs are not used to determine the QA factor.

How are DF's established from Reduction in Values (RIVs)

- ☁ Divide the total RIVs by the Local Market Price (LMP), rounded to three places.

Example of Determining QA factor based on Reduction in Value (RIV's)

☁ 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, RIVs are used to determine the QAF.

a) \$.65 (RIV for kernel damage)

+\$.85 (RIV for test weight)

\$1.50 Total RIV

b) $\$1.50 \text{ Total RIV} \div \$2.20 \text{ (Local Market Price)} = .682 \text{ (DF)}$

c) $1.000 - .682 = .318 \text{ QAF}$

d) $1,000 \times .318 = 318 \text{ bushels to count}$

Aflatoxin Coverage

- ☁ RMA uses three categories based on FDA advisory levels. Based upon an approved testing laboratory results:
 - ☁ 0-20 ppb – No Advisory levels. Safe for human consumption. No quality adjustment.
 - ☁ 21-300 ppb (500 ppb in Texas) – FDA advisory levels. RIV procedures apply. Claim settlement may be delayed until the grain is sold (valued), used, or destroyed.
 - ☁ Over 300 ppb (500 ppb in Texas) – FDA prohibits use. Grain must be destroyed before claim settlement.

Vomitoxin Coverage

- ☁️ No advisory levels for human consumption, just finished production.
- ☁️ Minimum level for animal use is 5 ppm.
- ☁️ For quality adjustment purposes, lab results would have to be over 5 ppm.
- ☁️ Quality adjustment for production containing in excess of 5 ppm would be determined using RIVs since there are no quality adjustment charts contained on the SPOIs.

Mycotoxin Sampling Requirements

- ☁️ Mycotoxins – especially aflatoxin – can increase in storage.
 - ☁️ Post-harvest aflatoxin contamination can increase during storage and if crop drying is delayed. Insect or rodent infestations may also facilitate mold invasion of some stored commodities.
 - ☁️ Holding grain for even a short time can allow significant mold and mycotoxin development.
 - ☁️ Insurance ends at harvest. Therefore, for crop insurance purposes, samples must be taken before grain storage.

Mycotoxin Sampling Requirements

- ☁ RMA does not prohibit or inhibit harvest.
 - ☁ Samples can be taken from harvested production. Elevators can pull samples from delivered production. The approved insurance provider can use part of the elevator's retained sample or the elevator can pull an additional sample.
 - ☁ For farm-stored production, producers should work with their approved insurance provider to:
 - ☁ Leave at least two 10' wide representative test strips in their fields from which the approved insurance provider can take representative samples, or
 - ☁ Have the approved insurance provider obtain samples from harvested production before it goes into storage.

Mycotoxin Sampling Requirements

- ☁ Sampling must be done before storage.
 - ☁ Sampling does not need to be done before harvest.
 - ☁ The approved insurance provider cannot take samples from storage but can get samples from:
 - ☁ An unharvested field,
 - ☁ Their authorized representative strips left in an otherwise harvested field,
 - ☁ Harvested production prior to storage, or
 - ☁ The elevator.

Field Sampling

☁ 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
10.1 – 40.0	4

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 an adequate number of samples:

- ☁ FGIS pulls one sample from each 50,000 bushel barge. Assume 500 acres at 100 bu/acre. This 500 acres produces 50,000 bushels. For 500 acres RMA requires 16 samples.
- ☁ The AIP and insured can agree to take as many additional samples (over the minimum) as necessary.

Milling qualities are not insured under the Crop Provisions

- ☁ Protein and falling numbers are not considered quality deficiencies under the Small Grains Crop Provisions.
- ☁ Oil is not considered a quality deficiency under the Course Grain Crop Provisions.
- ☁ Milling qualities (protein, falling numbers, oil) do not affect the commodity's grade.
- ☁ The premiums and discounts associated with these factors are very volatile and would be difficult to establish pre-determined quality factors.

Pack factors were implemented for 2005 crop year

- ☁ RMA uses same pack factors for insurance purposes as FSA uses for loan purposes for:
 - ☁ barley, corn, grain sorghum, hybrid corn seed, hybrid sorghum seed, oats, popcorn, soybeans, and wheat.
- ☁ Pack factors are located in the appropriate loss handbooks.

Conclusion of Quality Adjustment and Sampling/Grading Overview

- ☁️ Allows for insured's grain to be discounted equitably, even across state lines. Landlord and tenants grain is discounted the same.
- ☁️ Insured's know up front what the QA discounts will be.
- ☁️ Not subject to price manipulation, fraud, waste and abuse.
- ☁️ Is easy to administer within current staffing levels.
- ☁️ Enables actuarially sound policy rating.

Quality Adjustment Questions

Please direct questions to:

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