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HYBRID SEEDS LOSS ADJUSTMENT STANDARDS HANDBOOK

FCIC-25240 (11-2018)
FCIC-25240-1 (03-2020)
FCIC-25240-2 (04-2020)

2020 and Succeeding Crop Years

RISK MANAGEMENT AGENCY
KANSAS CITY, MO. 64133

TITLE: HYBRID SEEDS LOSS ADJUSTMENT STANDARDS HANDBOOK	**NUMBER: 25240 (11-2018) 25240-1 (03-2020) 25240-2 (04-2020)**
EFFECTIVE DATE: 2020 and Succeeding Crop Years	**ISSUE DATE: April 28, 2020**
SUBJECT: **Provides the procedures and instructions for administering the Hybrid Seeds crop insurance program**	**OPI: Product Administration and Standards Division** **APPROVED:** **/S:/ Richard Flournoy** **Deputy Administrator for Product Management**

REASON FOR ISSUANCE

Major changes: See changes or additions in text which have been highlighted.

1. **Exhibit 21:** Corrected the Hybrid Seed Corn moisture adjustment factors.

CONTROL CHART

Hybrid Seeds Loss Adjustment Standards Handbook							
	TP Page(s)	TC Page(s)	Text Page(s)	Exhibit Number	Exhibit Page(s)	Date	Directive Number
Remove	1-2			20 21	85 86	03-2020 03-2020	FCIC-25240-1 FCIC-25240-1
Insert	1-2			20 21	85 86	04-2020 04-2020	FCIC-25240-2 FCIC-25240-2
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FILING INSTRUCTIONS

This handbook replaces the 2020 Hybrid Seeds Loss Adjustment Standards Handbook, FCIC-25240-1 (03-2020). This handbook is effective for the 2020 and succeeding crop years and is not retroactive to any 2019 or prior crop year determinations.

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EXHIBITS

PART 1 GENERAL INFORMATION AND RESPONSIBILITIES

1 General Information

A. Purpose and Objective

The RMA-issued loss adjustment standards for this crop are the official standard requirements for adjusting losses in a uniform and timely manner. The RMA-issued standards for this crop and crop year are in effect as of the signature date for this crop handbook located at www.rma.usda.gov.

This handbook remains in effect until superseded by reissuance of either the entire handbook or selected portions (through amendments, bulletins, or FADs). If amendments are issued for a handbook, the original handbook as amended shall constitute the handbook. A bulletin or FAD can supersede either the original handbook or subsequent amendments.

B. Related Handbooks

The following table identifies handbooks that shall be used in conjunction with this handbook.

Handbook	Relation/Purpose
CIH	Provides overall general underwriting (not crop specific) process.
DSSH	Provides the form standards and procedures for use in the sales and service of crop insurance contracts.
GSH	Provides general crop insurance information.
LAM	Provides overall general loss adjustment (not crop-specific) process.

(1) Terms, abbreviations, and definitions general (not crop specific) to loss adjustment are identified in the GSH and LAM.

(2) Terms, abbreviations, and definitions specific to Hybrid Seed loss adjustment and this handbook are in exhibits 1 and 2, herein.

C. CAT Coverage

Refer to the CIH, GSH, and LAM for provisions and procedures not applicable to CAT coverage.

2 AIP Responsibilities

A. Utilization of Standards

All AIPs shall utilize these standards for both loss adjustment and loss training for the applicable crop year. These standards, which include crop appraisal methods, claims completion instructions, and form standards, supplement the general (not crop-specific) loss adjustment standards identified in the LAM.

B. Form Distribution

The following is the minimum distribution of forms completed by the adjuster and signed by the insured (or the insured's authorized representative) for the loss adjustment inspection.

(1) One legible copy to the insured; and
(2) The original and all remaining copies as instructed by the AIP.

C. Record Retention

It is the AIPs responsibility to maintain records (documents) as stated in the SRA and described in the LAM.

D. Form Standards

(1) The entry items in exhibits 6 - 10 are the minimum requirements for the Appraisal Worksheets and the PW. All entry items are "Substantive" (they are required).

(2) The Privacy Act and Non-Discrimination statements are required statements that must be printed on the form or provided to the insured as a separate document. These statements are not shown on the example form(s) in exhibits 6 - 10. The current Non-Discrimination Statement and Privacy Act Statement can be found on the RMA website at: www.rma.usda.gov.

(3) The certification statement required by the current DSSH must be included on the PW directly above the insured's signature block immediately followed by the statement below:

"I understand the certified information on this Production Worksheet will be used to determine my loss, if any, to the above unit. The insurance provider may audit and approve this information and supporting documentation. The Federal Crop Insurance Corporation, an agency of the United States, subsidizes and reinsures this crop insurance."

(4) Refer to the DSSH for other crop insurance form requirements (such as size of font). The current DSSH can be found on the RMA website at: www.rma.usda.gov.

3-10 (Reserved)

PART 2 POLICY INFORMATION

The AIP determines the insured has complied with all policy provisions of the insurance contract. The HSC CP and the HSS CP, which are to be considered in this determination include (but are not limited to):

11 Insurability

The following may not be a complete list of insurability requirements. Refer to the BP, HSC and HSS CP, and SP for a complete list.

(1) The crop insured will be all the female parent plants in the county in which the insured has a share, for which a premium rate is provided by the actuarial documents, and

(a) That are grown under an HSC or HSS contract executed before the acreage reporting date (Refer to the LAM for information on determining the insurable acreage and production guarantee when a processor contract is in force.);

(b) That are planted for harvest as commercial HSC or HSS (not experimental or grow out) in accordance with the requirements of the HSC or HSS processor contract and the production management practices of the seed company; and

(c) That are not (unless allowed by the SP or by written agreement);

(i) Planted with a mixture of female and male parent seed in the same row;

(ii) Planted for any purpose other than for commercial HSC or HSS;

(iii) Interplanted with another crop; or

(iv) Planted into an established grass or legume.

(d) An instrument in the form of a "lease" under which the insured retains control of the acreage on which the insured crop is grown and that provides for delivery of the crop under substantially the same terms as an HSC or HSS processor contract will be treated as a contract under which the insured has an insurable interest in the crop.

(e) A commercial HSC or HSS producer who is also a commercial HSC or HSS company (as defined in the policy) may be able to insure the HSC or HSS crop if the following requirements are met:

(i) The seed company has an insurable interest in the HSC or HSS crop;

(ii) Prior to the sales closing date, the Board of Directors of the seed company has executed and adopted a corporate resolution containing the same terms as an acceptable HSC or HSS processor contract;

(iii) Sales records for at least the previous year's seed production must be provided to confirm that the seed company has produced and sold seed. If such records are not available, the crop may be insured under the Coarse Grains CP with a written agreement; and

(iv) An inspection reveals that the storage and drying facilities satisfy the definition of a seed company.

(f) Any of the insured crop that is under contract with different seed companies may be insured under separate policies with different AIPs provided all acreage of the insured crop in the county is insured. If the insured elects to insure the insured crop with different AIPs, the insured agrees to pay separate administrative fees for each insurance policy.

(2) Insurance coverage is not provided on acreage:

(a) That is planted and occupied exclusively by male parent plants;

(b) Not in compliance with the rotation requirements contained in the SP or, if applicable, required by the HSC or HSS processor contract; or

(c) If either the female or male parent plants are damaged before the FPD and the AIP determines that the insured crop is practical to replant but it is not replanted.

(3) In addition to the causes of loss excluded by the BP, unless specified otherwise in the SP, insurance coverage is not provided against loss of production due to:

(a) The use of unadapted, incompatible, or genetically deficient male or female parent plant seed;

(b) Frost or freeze after the date set by the SP;

(c) Failure to follow the requirements stated in the HSC or HSS processor contract and production management practices of the seed company;

11 Insurability (Continued)

(d) Inadequate germination, even if resulting from an insured cause of loss, unless the insured has given the AIP notice of probable loss at least 15 days before the beginning of harvest if inadequate germination is anticipated on any unit; or

(e) Failure to plant the male parent plant seed at a time or in a manner sufficient to assure adequate pollination of the female parent plants, unless the insured is prevented from planting the male parent plant seed by an insured cause of loss. Should the processor contract require multiple (more than one) plantings of male plants several days apart, insurance will still attach whenever at least one planting of male plants was planted in a timely manner, only if the processor agrees to accept the production with only one planting of male plants.

(4) No indemnity will be paid on a unit if the seed company fails to provide the AIP with records requested to determine the dollar value per bushel of production for each variety within 30 days of the end of the insurance period.

(5) In certain situations, producers may be granted approval from AIPs to leave RSAs when an accurate appraisal cannot be made at the time of release. Refer to the LAM for appraisals of RSAs.

12 Unit Division

Refer to the insurance contract for unit provisions.

(1) For processor contracts that stipulate the amount of acreage, refer to the BP.

(2) For processor contracts that stipulate the amount of production to be delivered, refer to the CP:

(a) There will be no more than one basic unit for all production contracted under each processor contract; and

(b) Optional units will not be established.

(3) For HSS processor contracts that stipulate a number of acres to be planted, optional units by irrigated and non-irrigated practices are not allowed by the policy.

13 Moisture Adjustment

Moisture adjustment is applied prior to any qualifying quality adjustment factor such as test weight, kernel damage, etc. The moisture adjustment charts for HSC and HSS are found in exhibit 21 and exhibit 31, respectively.

14 Federal or State Ordered Destruction

Under section 15 (j) of the BPs, if due to insured causes, a Federal or State agency has ordered the appraised insured crop or production to be destroyed, on the PW enter the factor ".000" in column 35 for appraised production or column 65 for harvested production, as applicable. Instruct the insured to complete and submit a Certification Form stating the date the crop or production was destroyed and the method of destruction (refer to item 40 and the Narrative in the PW instructions). Also, refer to the LAM for additional information. Otherwise, make no entry.

15 Mycotoxins

(1) There is no specific "threshold" level of mycotoxin presence for hybrid seed. Price reduction due to mycotoxin presence will be allowed if the mycotoxin presence results in a reduction in value for the damaged grain and if the damage is due to an insured cause.

***

(2) Refer to the LAM for additional information

16 Replanting Payment Procedures

There is currently no replanting payment available for hybrid seeds. Refer to the BP and the CP for replanting requirements prior to the FPD.

17-30 (Reserved)

PART 3 APPRAISALS

31 General Information

Potential production for all types of inspections will be appraised in accordance with procedures specified in this handbook and the LAM.

32 Selecting Representative Samples

A. Determine Minimum Samples

Determine the minimum number of required samples for a field or subfield by the field size, the average stage of growth, age (size), general capabilities of the plants, variability of potential production, and plant damage within the field or subfield.

B. Splitting Fields

(1) Split the field into subfields when:

(a) Variable damage causes the crop potential to appear to be significantly different within the same field; or

(b) The insured wishes to destroy a portion of a field.

(2) Each field or subfield must be appraised separately.

(3) Take not less than the minimum number (count) of representative samples required in exhibit 11 (Minimum Representative Sample Requirements) for each field or subfield.

33 Measuring Row Width for Sample Selection

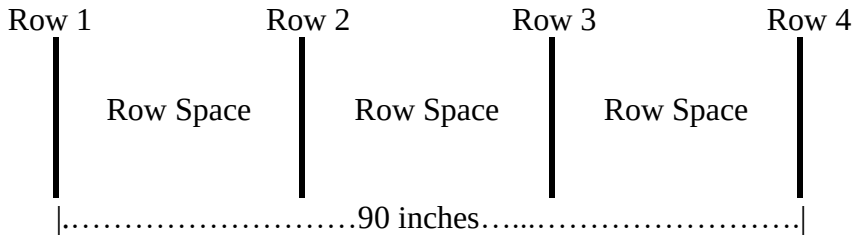
Use these instructions for all appraisal methods that require row width determinations.

(1) Use a measuring tape marked in inches or convert a tape marked in tenths, to inches, to measure row width (refer to the LAM for conversion table).

(2) Measure across three or more row spaces, from the center of the first row to the center of the fourth row (or as many rows as needed) and divide the result by the number of row spaces measured across, to determine an average row width to the nearest one-half inch.

33 Measuring Row Width for Sample Selection (Continued)

Example:



90 inches ÷ 3 = 30 in. average row width

(3) Where rows are skipped for tractor and planter tires, refer to the LAM.

(4) Apply average row width in exhibit 12 to determine the sample row length.

(5) When two or more rows are used for a required sample row when conducting crop appraisals, divide the required sample row length by the number of rows being used. The combined length of all rows must equal the single row length.

34 Sampling Procedure

(1) Determine average hybrid seed (corn and sorghum) growth stage in selected representative samples.

(2) Establish the stage of growth as the most advanced stage of development in which at least 50% of the plants in the representative sample have reached.

(3) Use the stage of growth at the date of adjustment (the date when the adjuster first appraises crop damage) when determining yield loss, except in the case of hail damage. For hail damage, use the stage of growth on the date the hail damage occurred when determining yield loss.

(4) The correct timing of crop-damage appraisals is important to establish growth stage and cause of damage before regrowth occurs.

(5) When selecting the sample, make note of the planting pattern (i.e., 2 male rows, 4 female rows, 2 male rows, etc.). The critical dependence upon the male pollinator rows for adequate pollination makes it very important that the sample be representative of all female rows in the planting pattern. Samples consist of 1/100 acre.

HSC and HSS growth stages identify time interval to next stage in relation to appraisal methods.

A. Stages of Growth for Hybrid Seed Corn:

(1) Actual leaf count is used to determine stages of growth from emergence to tasseling.

(a) Starting with the rounded tip leaf, count all leaves developed up to, and including, the stage indicator leaf. The stage indicator leaf is that leaf which is 50 percent exposed. It is usually the uppermost leaf that is pointing below a horizontal line.

(b) If the rounded tip leaf cannot be determined, the node identification system will be used as follows (refer to Hybrid Seed Corn - Plant and Kernel Characteristics, exhibit 25).

(i) Pull up the entire plant and carefully split stalk to expose stalk nodes and root whorls.

(ii) The fifth leaf attaches to the top of the first noticeable elongation between the stalk nodes (an internode).

(iii) After the fifth leaf node is identified, count upward to the stage indicator leaf.

(iv) In the early stages of the plant's development, the internodes are very compact and, therefore, difficult to distinguish. By the seventh or eighth leaf stage, the internode elongation should be easily found.

(2) Ear development is used to determine stage of growth from tassel to maturity.

(3) Stage Characteristics. The characteristics listed in exhibit 24 are based on normal or average conditions in the Corn Belt Area for 120-day or full season corn. There are approximately 7 days from planting to emergence, and 21 days from emergence to the 7th actual leaf stage.

B. Stages of Growth for Hybrid Sorghum Seed:

(1) Actual leaf count is used to determine the stage of growth until all the leaves are exposed.

(a) Starting with the rounded tip leaf, count all leaves developed up to, and including, the stage indicator leaf. The stage indicator is that leaf which is at least 50 percent exposed. It is usually the uppermost leaf tip that is pointing below a horizontal line.

B. Stages of Growth for Hybrid Sorghum Seed (continued)

(b) If the rounded tip leaf cannot be determined, the node identification system (Hybrid Sorghum Seed - Plant and Kernel Characteristics exhibit 34) will be used:

(i) Pull up the entire plant and carefully split the stalk to expose stalk nodes and root whorls.

(ii) The seventh leaf attaches to the top of the first noticeable elongation between the nodes (an internode).

(iii) After the seventh leaf node is identified, count upward to the stage indicator leaf.

(iv) In the early stages of the plant's development, the nodes are very compact and difficult to distinguish; by the ninth or tenth leaf stage, the internode elongation should be easily found.

(2) The development of the head determines the stage of growth after the boot stage. Refer to Hybrid Sorghum Seed - Stage Characteristics (Heading through Maturity), exhibit 33.

(3) Stage Definitions. The definitions listed in exhibit 33 are based on the average normal conditions for a 20-leaf, 115-day plant.

36 Hybrid Seed Corn Appraisals Methods

A. General Information

These instructions provide information on the following appraisal methods:

Appraisal Method…	**Use…**
Stand Reduction Method	for planted acreage with no emerged seed, and from emergence to the milk stage.
Hail Damage Method	for hail damaged corn beginning with the 7th leaf stage and until the corn reaches the milk stage.
Maturity Line Weight Method	for corn grain appraisals, from the milk stage until kernels are fully mature and moisture drops below 40 percent.
Weight Method	for all corn appraisals after the corn kernels are fully mature and kernel moisture drops below 40 percent.

B. Stand Reduction Method

If the reduction in stand is solely due to non-emerged seed due to insufficient soil moisture, do not complete appraisals prior to the time specified in the LAM. Refer to the section in the LAM regarding deferred appraisals and non-emerged seed.

(1) This method is based on the number of surviving plants in a designated sample row length.

(2) Surviving plant counts, at the time of appraisal, are converted to bushels per acre by multiplying the percent of potential remaining by the base yield. Base yield is the appropriate verified yield for the acreage from the "Hybrid Seed Approved Yield" form.

(3) Prior to the 11th leaf stage, the "HSC Stand Reduction Percent of Potential Remaining Chart from Emergence through 10th Leaf Stages of Growth" (exhibit 13) is used to determine the percent of potential remaining.

(4) From the 11th leaf stage to the 17th leaf stage, the "HSC Stand Reduction Percent of Potential Remaining Chart from 11th through 17th Leaf Stages of Growth" (exhibit 14) is used to determine the percent of potential remaining.

(5) From the 18th leaf stage to the milk stage, the yield and stand reductions are counted on a one-for-one basis. (Example: 80 percent stand = 80 percent potential.)

(6) Sample consists of 1/100 acre.

(7) Poor germination or crop development due to insured causes.

Use the stand reduction method of appraisal based upon the number of plants capable of reaching the milk stage prior to the frost date listed in the actuarial table.

(a) Determine normal plant population by counting all potential (living, dead, missing, or non-emerged) plants in a length of row equivalent to 1/100 acre and enter in item 11.

(b) Determine stage of growth for early-germinating corn and record in item 19.

(c) Determine the stage of growth for each late-germinating corn plant and record in item 23 ("notes and calculations" section):

The stage of each plant; and the computation of the number of days from the current stage to the milk stage for each plant and add five days (the additional five days are to account for slower plant development as the frost date approaches).

(d) Compute the number of days from the appraisal date to the frost date (as listed in the actuarial table for HSC), and show calculation in item 23.

B. Stand Reduction Method (continued)

(e) Count and record in item 12 as "surviving," those plants which will reach the milk stage before the frost date (include early germinated plants).

(f) The percent of potential, item 15, is equal to the percent of "surviving" plants ("surviving" plant number divided by original plant population).

(g) Percent of potential (item 15) multiplied by the applicable base yield is the per acre appraisal.

Example:

Some plants are in the 5th, 8th, and 10th leaf stages. Date of the appraisal is July 24. Average killing frost date is September 25, 63 days from the date of appraisal.

Late-developing plants which will not reach the milk stage prior to the frost date will not be counted as surviving plants. Refer to chart below.

Plants in the 10th leaf stage will be counted as surviving, since they will reach the milk stage in 58 days (allowing the additional five days for maturity retardation). Plants in the 8th leaf and earlier stage would not be counted as surviving, as they would not reach the milk stage prior to the frost date.

Stage	Days to Milk Stage
5th leaf	73
8th leaf	64
10th leaf	58

C. Hail Damage Method

(1) Use for hail-damaged corn appraisals beginning with the 7th leaf stage and until the corn reaches the milk stage. This method is based on the calculation of direct and indirect damage from hail to determine percent of potential remaining, converted to a bushel or ton-per-acre appraisal.

(2) For damage due to hail, inspections shall be delayed a minimum of 7 days after damage for a more accurate damage assessment.

(3) Direct damage includes loss from stand reduction, crippled plants, and damage to the ear and stalk.

(a) Stand Reduction:

C. Hail Damage Method (continued)

(i) Prior to the 11th leaf stage, the "Hail Stand Reduction Loss – HSC for 7th Leaf through 10th Leaf Stages of Growth" (exhibit 15) is used to determine percent of damage due to stand reduction.

(ii) From the 11th leaf stage through the 17th leaf stage the "Hail Stand Reduction Loss – HSC for 11th Leaf through 17th Leaf Stages of Growth", (exhibit 16) is used to determine the percent of damage due to stand reduction.

(iii) From the 18th leaf stage to the milk stage the damage due to stand reduction is counted on a one-for-one basis

(b) Crippled Plants:

(i) Cripples are plants which grow to approximately normal height or less but do not produce a normal, harvestable ear. Naturally barren stalks should not be counted as cripples.

(ii) Crippled plants must be individually evaluated to determine their contribution to potential yield. Cripples are not counted as totally destroyed plants. For example, in a particular sample it may take three ears from crippled plants to make an average ear (3-for-1). If 30 cripples were counted out of 100 remaining plants and evaluated on a 3-for-1 basis (.67 factor, since 2 of every 3 plants are considered damaged), the gross cripple damage would be 20 percent (.67 x 30).

(c) Ear Damage:

Ear damage is determined by comparing the number of damaged kernels to the number of total kernels, in a sample of all ears from 10 consecutive representative plants.

(d) Stalk Damage:

Plants having bruises on the stalk should not be counted as destroyed until such time as they actually fall over and become unharvestable. Young bruised plants usually will produce a normal (or near normal) ear. When considerable bruising is evident, the adjustment should be deferred until the actual loss can be determined.

(4) Indirect damage is caused by defoliation (the loss of leaf area) due to hail. To determine defoliation or leaf destruction:

(a) select representative plants;

(b) remove the leaves which were exposed at the time of damage;

C. Hail Damage Method (continued)

(c) determine the percent of leaf area destroyed (missing or brown areas) for each leaf;

(d) total the percentages; and

(e) divide by the number of leaves to determine the average percent. Apply the percent to the HSC - Leaf Loss Chart, (exhibit 17).

(5) Stage Modification Procedure:

Plant stages may not be accurate for leaf area determination when short season (short statured) field varieties which produce less than 19-21 actual leaves in a season are appraised. The stages used for defoliation determination are modified to reflect this lower potential leaf area. Determine the ultimate number of leaves to be produced by tearing the plant down. After the stage indicator leaf has been identified, dissect the plant and count the nodes or leaves not yet emerged to determine the ultimate number.

(a) If the actual number of leaves to be produced cannot be determined, defer the appraisal until the actual number of leaves can be determined. At the time of deferral, accurately determine percent of defoliation as of date of loss**.**

(b) When the actual leaves to be produced can be determined, refer to exhibit 18, to obtain the modified stage for use with the Leaf Loss table (exhibit 17).

(c) No further determination of defoliation should be made at the time of a later inspection unless further damage occurs.

D. Maturity Line Weight Method

(1) Use for all grain appraisals from the milk stage until kernels are fully mature and moisture drops below 40 percent. If possible, defer appraisal to the weight method.

(2) Select representative samples of 1/100 acre.

(3) This method is based on weighing ear samples which are grouped according to maturity and converting this production to bushels per acre. The ratio of corn to cob is not as accurate as with field corn.

(4) The stage of maturity is established by determining where the line separating the solids and the liquid is located in the grain kernel. The solids start to form at the end opposite the kernel tip. The five stages of maturity and the number of pounds of immature ear corn required to make a bushel of mature shelled corn are as illustrated in exhibit 25, Figure C.

D. Maturity Line Weight (Continued)

(5) Pick and husk all harvestable ears in the sample area. Discard portions of ears without kernels.

(6) Break the ears in half and with the exposed kernels on the tip end of the cob, use a pen/pencil to determine which quarter of the kernel the maturity (solids) line is located. To locate the maturity line, apply moderate pressure at the top of the kernel and draw the pencil toward the bottom of the kernel. Place both parts of each ear in an appropriate stage pile to determine the stage weights. In most samples, the ears will be in only two stages. (Refer to exhibit 25, Figure C.)

(7) Use the appropriate factor on the appraisal worksheet for converting the stage weight to bushels per acre of mature potential production.

E. Weight Method

(1) Use for all corn grain appraisals after the corn kernels are physiologically mature (some kernels have developed the black or brown abscission layer in the kernel tip, signifying the end of dry matter accumulation) and kernel moisture drops below 40 percent.

(2) This method is based on weighing the ears in a fraction of an acre, then converting this production to bushels per acre.

(3) Select representative samples of 1/100 acre.

(4) Pick and husk all harvestable ears in the sample area. Weigh production.

(5) Multiply average sample weight by 1.43 for a sample size of 1/100 acre. The results will be the bushels-per-acre of potential production (not corrected for moisture, test weight, etc.).

(6) Determine shelling percentage factor for ear corn as follows:

(a) Select and husk a five-pound representative ear corn sample, shell, and weigh grain.

(b) Divide the weight of the shelled corn by 4 and round to two decimal places; or

(c) Determine in accordance with exhibit 19.

Shelling percent (and shelling factor) is only applicable to corn in the ear such as weight-method appraisals (or stored as ear corn). The standard shelling percent assumes 70 lbs. per bushel of ear corn equals 56 lbs. per bushel of shelled corn (80 percent shell, 100 percent shelling factor). If the corn is already shelled, no shelling percent or shelling factor is used.

37 Hybrid Sorghum Seed Appraisals Methods

A. General Information

These instructions provide information on appraisal methods for:

Appraisal Method…	Use…
Stand Reduction Method	For planted acreage with no emerged seed, and from emergence to the milk stage.
Hail Damage Method	For hail-damaged sorghum appraisals beginning with the 10th leaf stage and until the sorghum reaches the milk stage.
Headed Weight Method	For all grain appraisals from milk stage through maturity.

B. Delayed Appraisals

(1) Immature HSS appraisals are counted as seed production. Producers wishing to delay appraisals until maturity by use of representative areas may do so if:

(a) Approved by the contracting seed company;

(b) Representative areas left for sampling consist of at least the planting pattern width (i.e., 2 male, 6 female, 2 male rows, or another appropriate pattern). The length of each row must be sufficient for a 1/100-acre sample if areas are chosen by an adjuster, otherwise, rows the length of the field are to be maintained;

(c) Three barrier rows or the equivalent are left around each representative area to serve as an environmental barrier; and

(d) The insured agrees to maintain representative areas and accept appraisals as representative of the field or subfield.

(2) Sample(s) of mature grain are to be submitted to the contracting seed company for determination of seed production. If such determination is not made, all grain will be considered seed.

C. Stand Reduction Method

If the reduction in stand is solely due to non-emerged seed due to insufficient soil moisture, do not complete appraisals prior to the time specified in the LAM. Refer to the section in the LAM regarding deferred appraisals and non-emerged seed.

(1) This method is based on the number of the surviving plants in a designated sample row length.

C. Stand Reduction Method (continued)

(2) Surviving plant counts are converted to bushels per acre by multiplying the percent of potential remaining by the adjusted average yield. This yield is the expected yield level for a specific variety, in bushels per acre, determined by the RMA RO (shown on the "HSS Approved Yield" form).

(3) Prior to the 20th leaf stage, the "HSS - Stand Reduction Chart" is used to determine the percent of potential remaining (exhibit 26).

(4) After the 19th leaf stage to the milk stage, the yield and stand reductions are on a one-to-one ratio. (Example: 80 percent stand = 80 percent potential.)

(5) Samples consist of 1/100 acre. Refer to the "Row Width and Length Table" (exhibit 12).

D. Hail Damage Method

(1) This method is based on the calculation of direct and indirect damage from hail to determine the percent of potential remaining, converted to a bushel-per-acre appraisal.

(2) For damage due to hail, inspections must be delayed at least 7 to 10 days after damage for a more accurate damage assessment.

(3) Direct damage includes stand reduction and damage to the stalk and head.

(a) Stand Reduction:

(i) Hail damage stand reduction prior to the 10th leaf stage is considered recoverable since the plant growing point is largely protected to this stage; and regrowth will usually show no adverse effects in grain yield.

(ii) In the 10th leaf through the 19th leaf stage, the "HSS - Hail Stand Reduction Chart" (exhibit 27) is used to determine percent of damage due to stand reduction.

(iii) After the 19th leaf stage to the milk stage, the yield and stand reduction are on a one-to-one ratio. (Example: 80% stand reduction = 80% loss of potential.)

(b) Head Damage:

The gross percent of damage to HSS heads caused by hail damage is determined by dividing the average number of destroyed kernels per head by the average total number of kernels per head in a sample of four "average" heads.

D. Hail Damage Method (continued)

To determine the gross percent of head damage:

(i) Determine the average total number of kernels and the number of kernels destroyed by hail on four "average" heads by calculating the average number of kernels per spikelet (using four spikelets - one from near the bottom of the head, one a quarter of the way up, one from half way up, and one from three-fourths of the way up). After determining the total number of kernels per spikelet, count the number of kernels that are destroyed (missing, cracked, bruised) by hail. Multiply both counts by the number of spikelets on the head (count the four or five small spikelets in the very top of the head as one average spikelet).

(ii) Total the number of all kernels (destroyed and not destroyed). Then total the number of destroyed kernels. Divide each result by the total number of heads samples. The result will be the average total number of kernels per head and the average number of kernels destroyed per-head.

(iii) Divide the average number of kernels destroyed per-head by the average total number of kernels per head to determine the GROSS percent of head damage.

Example:

	HEAD 1		HEAD 2		HEAD 3		HEAD4	
SPIKELETS	**TOTAL KERNELS**	**DESTROYED KERNELS**	**TOTAL KERNELS**	**DESTROYED KERNELS**	**TOTAL KERNELS**	**DESTROYED KERNELS**	**TOTAL KERNELS**	**DESTROYED KERNELS**
1	47	31	51	23	38	12	45	13
2	86	52	82	35	77	29	79	21
3	95	47	90	40	84	40	88	30
4	77	46	65	28	62	29	71	25
TOTAL	305	176	288	126	261	110	283	89
AVG. PER SPIKELETS	76.3	44	72	31.5	65.3	27.5	70.8	22.3
NO. OF SPIKELETS PER HEAD	70	70	73	73	59	59	62	62
AVG. KERNELS PER HEAD	5,341.0	3,080.0	5,256.0	2,299.5	3,852.7	1,622.5	4,389.6	1,382.6

Total Avg. Kernels per head (from 4 heads) ÷ number of heads = Avg. Kernels per Head
18,839.3 kernels ÷ 4 heads = 4,709.8

Total Avg. Number Destroyed Kernels per head (4 heads) ÷ number of heads = Avg. Destroyed Kernels per Head
8,384.6 kernels ÷ 4 heads = 2,096.2 average destroyed kernels per head

Avg. Destroyed Kernels per Head ÷ Avg. Kernels per Head = Gross Percent of Head Damage

D. Hail Damage Method (continued)

2,096.2 destroyed kernels ÷ 4,709.8 kernels/head = .445 (44.5% - round to nearest 5%) = 45% Gross Percent of Head Damage

Percent Damage from Stand Reduction (item 14 rounded to nearest 5%) = 30%

Apply percent Gross Percent of Head Damage and Percent Damage from Stand Reduction to exhibit 29

Percent Head Damage (item 17 entry from exhibit 29) = **32%**

(c) Stalk Damage:

Plants having bruises on the stalk should not be counted as destroyed until such time as they actually fall over and become unharvestable. Young bruised plants will usually produce a normal or near-normal head even though stalk damage is present. When considerable bruising is evident, the adjustment should be deferred until the actual loss can be determined.

(4) Indirect damage is caused by defoliation (the loss of leaf area) due to hail. To determine defoliation and subsequent yield loss:

(a) Select representative plants;

(b) Remove the leaves which were exposed at the time of hail damage;

(c) Determine the percent of leaf area destroyed (missing or brown areas) on each removed leaf;

(d) Total the leaf-area-loss percentages; and

(e) Divide the total percentage by the total number of leaves (rounded to the nearest 5%) to determine the average percent. Apply the average percent (to the nearest 5 percent) to the HHS - Leaf Loss Chart, exhibit 30.

If the damage occurred prior to boot stage (refer to exhibit 33), use top portion of the chart. Determine the ultimate number of leaves by tearing the plant down. After the stage indicator leaf has been identified, dissect the plant and count the nodes or leaves not yet emerged to determine the ultimate number. If the actual number of leaves to be produced cannot be determined, defer the appraisal until the actual number of leaves can be determined.

At the time of deferral, accurately determine the percent of defoliation as of date of hail loss. No further determination of defoliation should be made at the time of later inspection unless further damage occurs.

37 Hybrid Sorghum Seed Appraisals Methods (Continued)

D. Hail Damage Method (continued)

If the damage occurred in the boot through early milk stage, apply the average percent (determined above) to the lower portion of exhibit 30.

E. Headed Weight Method

(1) This method is based on weighing the grain heads in a fraction of an acre, then converting this production to bushels per acre.

(2) Select representative samples of:

(a) 1/100 acre if the potential appears to be less than 20 bushels per acre; or

(b) 1/1000 acre if the potential appears to be 20 or more bushels per acre.

(3) Harvest all grain heads in the sample by cutting heads from the stalks as close as possible to the lowest head branch. Weigh each sample. Calculate the average sample weight by adding the sample weights together and dividing by the number of samples taken.

(4) Multiply average sample weight by:

(a) 1.34 if the sample size selected was 1/100 acre;

(b) 13.4 if the sample size selected was 1/1000 acre; or

The result will be the bushels per acre of potential production.

(5) If grain is light and chaffy or heads are poorly filled, determine threshing percentage in accordance with exhibit 28.

(6) Determine the average moisture percentage of all samples.

(7) If the appraisal for any field or sub-field exceeds the adjusted average yield, explain the high appraisal on the reverse of the appraisal worksheet original.

38 Appraisal Deviations and Modifications

A. Deviations

Deviations in appraisal methods require RMA written authorization (as described in the LAM) prior to implementation.

B. Modifications

Modifications in appraisal methods require AIP authorization (as described in the LAM).

B. Modifications (continued)

HSC – Appraisal Modifications

When applicable, with the AIP's authorized representative's approval, use the following appraisal modifications in conjunction with the appropriate appraisal methods for damage due to insured causes.

(1) Insufficient Male Stand to Provide Adequate Pollination of Female Population:

Identify factors affecting circumstances. Defer appraisal to maturity line method.

(2) No Pollination Due to Drought, Heat, Hot Winds, and/or Insects:

Appraise HSC as "0" (for the actual acreage so affected) if, after a general survey of the crop, the adjuster finds:

(a) Ear shoots, and the pollination period:

(i) has ended. Blisters on the cob are enlarged (wart-like); or

(ii) is in progress. Blisters on the cob are not enlarged, and all the silk has been eaten off below the husk by insects.

(b) No ear shoots, and the pollination period:

(i) is in progress or has ended; or

(ii) has not begun. The tassel is exposed, and the still unexposed ear bud is less than 2 inches in length.

(3) Poor Pollination Due to Drought, Heat, Hot Winds, and/or Insects:

Appraise HSC based upon stand reduction only if the appraisal cannot be deferred. After normal silking to milk stage, stalks with partial pollination are considered surviving plants but only to the extent they contribute to the production of a normal 1/2 - pound ear of corn, i.e., if 3 ears are required to produce the grain equivalent of one normal ear, count only 1/3 of such plants. Barren stalks are not counted as surviving. Individually evaluate ears to determine total surviving plants to be entered on the appraisal worksheet. Document adjustment in the "Notes and Calculation" section of the stand reduction appraisal worksheet or on an attached Special Report.

B. Modifications (continued)

(4) Severely Drought-Stunted Hybrid Seed Corn:

(a) Defer the appraisal until the milk stage, at which time the maturity line method is used. If the insured does not wish to leave RSAs for this appraisal or it is impractical to do so, use the stand reduction method.

(b) RSAs for HSC require seed company approval as well as AIP approval, since such production is under seed company contract. Representative areas chosen by an adjuster to be left for sampling must include at least the entire planting pattern (male and female rows), with the length of each row equivalent to 1/100 acre. The sample area must also be bordered by three or more rows or their equivalent, to serve as an environmental barrier. The insured must agree to accept the determination of seed/non-seed based on such RSAs. If a determination cannot be made, all production will be counted as seed.

(c) Representative strips/sample areas must be maintained just as if all production would be harvested as seed. Such maintenance includes isolation for genetic purity as required by the seed-grower contract. Unless the plants are destroyed prior to pollination, detasselling must be performed at least within the boundaries of such required isolation.

(5) Permanently Wilted Hybrid Seed Corn:

(a) Note on appraisal worksheet "no production potential due to permanent wilt" and enter a zero appraisal for the affected acres. For acreage with no or minimal damage due to permanent wilt, but wilt conditions have been determined to be in the area, appraise in the normal manner unless the insured agrees to leave RSAs for later appraisal. Inform insured to request another appraisal within 30 days of this inspection.

(b) Permanent wilt is caused by extremely dry soil conditions and can occur at any stage of growth. Permanent wilt is a condition where plants are stressed from lack of moisture to the extent that all leaves remain tightly rolled throughout the night. Lower plant leaves become dry and brittle and will crumble when rolled between the hands. Permanently wilted plants are damaged to the extent that they will die even if supplied moisture. From the tasseled stage forward, appraisals should be deferred until the maturity line or weight method appraisals can be used because of the difficulty with the determination of whether the corn will produce grain.

B. Modifications (continued)

(6) Appraisal Modification for Early Freeze Damage:

(a) When authorized by the AIP, the Maturity Line Appraisal method may be modified to more closely reflect the actual potential remaining after freeze damage. Apply the following procedure on a case-by-case basis only as circumstances warrant. Document on a Special Report, all pertinent information regarding the loss such as the hybrid number, the maturity rating of the corn, whether the late planting provisions apply, planting (and any replanting) dates, the practicality of any late replanting, extent of freeze damage to corn in the area (whether general or isolated), date of normal freeze, date(s) of damaging freeze(s), and specifically why the corn did not escape freeze damage. Do not apply the appraisal modification for early freeze damage if you determine that the insured could have prevented the damage through proper farming practices. The modification is only applied on corn that is less than fully mature. Quality adjustment procedures do not apply when using the freeze modification.

The stage of corn on the date of final adjustment must be used when applying the modification factors. Do not backstage to the stage at the date of freeze.

(b) The conditions that determine the extent of damage are the maturity of the plant at the time of freeze and the number of leaves killed above the ear-stalk attachment. If the freeze occurs when the maturity line method of appraisal is applicable (except doughy and extended stages), adjustments to the maturity line appraisal are allowed if all the leaves above the base of the ears are killed by the freeze. For:

(i) 1/4 stage - count 25 percent of the appraisal.

(ii) 1/2 stage - count 50 percent of the appraisal.

(iii) 3/4 stage - count 75 percent of the appraisal.

(c) The adjustments do not apply if:

(i) Kernels are in the doughy or extended stage -- use normal appraisal;

(ii) Any leaves remain alive above the base of the ear (regardless of stage) -- use normal appraisal; or

(iii) Kernels are in the pre-1/4 stage -- (leaves are all killed above the base of the ear) ear has no potential. If all ears are in this category, appraise at zero.

B. Modifications (continued)

(d) Germination percentage of frost-damaged hybrid seed declines rapidly with physical damage. RSAs may be left for later appraisal if some production is likely. This would be necessary to avoid counting poorly germinating grain (non-seed) as seed (as specified for appraisals of immature HSC).

(e) For purposes of this appraisal modification, "early freeze damage" refers to a freeze which occurs early enough in the corn's growth stages to cause damage to the developing ears, without regard to its relationship to the calendar date of occurrence. The calendar date of the freeze is important, however, in determining whether the insured could have prevented the damage through proper farming practices.

HSS – Appraisal Modifications

When applicable, with the AIP's authorized representative's approval, use the following appraisal modifications in conjunction with the appropriate grain appraisal methods for damage due to insured causes.

Permanently Wilted Hybrid Sorghum (Not applicable to irrigated practice).

(1) When permanent wilt is present:

(a) Plants are damaged to the point that the leaves remain tightly rolled throughout the night; and

(b) The four lower leaves of the plant are brown and brittle, and during the day, will crumble when rolled between the hands.

(2) When all plants are permanently wilted and stand reduction appraisal is appropriate, note on appraisal sheet "no production potential due to permanent wilt," and enter zero appraisal for acreage so affected.

(3) When permanent wilt has been determined in the area, but not all (or none) of the plants in the field or subfield have been affected, appraise in the normal manner unless the insured agrees to leave representative areas for later appraisal. Inform insured to request another appraisal within 30 days of this inspection.

(4) Acreage affected by permanent wilt should be inspected in early-morning hours to confirm turgor pressure has not been restored overnight. Make observations before 9 A.M., if possible. Permanently wilted plants are damaged to the extent that they will die even if supplied moisture.

(1) Include the AIP's name in the appraisal worksheet title if not preprinted on the worksheet or when a worksheet entry is not provided.

(2) Include the claim number on the appraisal worksheet (when required by the AIP) when a worksheet entry is not provided.

(3) Separate appraisal worksheets must be completed for each unit appraised, and for each field or subfield including fields or subfields with a different APH yield or farming practice (applicable to replant, preliminary, and final claims). Refer to Part 4, paragraph 32 for sampling requirements.

(4) When a remarks section is not included on the form, document pertinent information about the appraisal, including any appropriate calculations, on a Special Report and attach to the worksheet.

(5) Standard appraisal worksheet items are numbered consecutively in exhibits 6 - 9. Example appraisal worksheets are also provided to illustrate how to complete item entries.

(6) For all zero appraisals, refer to the LAM.

40-50 (Reserved)

PART 5 PRODUCTION WORKSHEET

51 General Information for Production Worksheet Entries and Completion Procedures

(1) The PW is a progressive form containing all notices of damage for all preliminary, replant, and final inspections on a unit.

(2) If a PW has been prepared on a prior inspection, verify each entry and enter additional information as needed. If a change or correction is necessary, strike out all entries on the line and re-enter correct entries on a new line. The adjuster and insured should initial any line deletions.

(3) Refer to the LAM for instructions regarding the following:

(a) Acreage report errors.

(b) Delayed notices and delayed claims.

(c) Corrected claims or fire losses (double coverage) and cases involving uninsured causes of loss, unusual situations, controversial claims, concealment, or misrepresentation.

(d) Claims involving a Certification Form (when all the acreage on the unit has been appraised to be put to another use, when acreage is being appraised for a replanting payment and all acreage on the unit has been initially planted, or other reasons described in the LAM).

(e) "No Indemnity Due" claims (which must be verified by an appraisal or notification from the insured that the production exceeded the guarantee).

(f) Late planting.

(4) Refer to the PPSH for information on prevented planting.

(5) The adjuster is responsible for determining if any of the insured's requirements under the notice and claim provisions of the policy have not been met. If any have not, the adjuster should contact the AIP.

(6) Instructions labeled "Preliminary" apply to preliminary inspections only. Instructions labeled "Final" apply to final inspections only. Instructions not labeled apply to ALL inspections.

(7) If the AIP determines the claim is to be denied, refer to the LAM for PW completion instructions.

52-60 (Reserved)

Acronyms and Abbreviations

The following table provides the acronyms and abbreviations used in this handbook.

Approved Acronym/Abbreviation	Term
AIP	Approved Insurance Provider
APH	Actual Production History
BP	Basic Provisions
CAT	Catastrophic Risk Protection
CIH	Crop Insurance Handbook
CP	Crop Provisions
DF	Discount Factor
DSSH	Document and Supplemental Standards Handbook
FCIC	Federal Crop Insurance Corporation
FGIS	Federal Grain Inspection Service
FPD	Final Planting Date
GSH	General Standards Handbook
HSC	Hybrid Seed Corn
HSS	Hybrid Sorghum Seed
LAM	Loss Adjustment Manual
PPSH	Prevented Planting Standards Handbook
PW	Production Worksheet
RIV	Reduction in Value
RMA	Risk Management Agency
RO	RMA Regional Office
RSA	Representative Sample Area
SP	Special Provisions
SRA	Standard Reinsurance Agreement

Definitions

Adjusted Yield means an amount determined by multiplying the county yield by the coverage level factor.

Amount of Insurance Per Acre means a dollar amount determined by multiplying the adjusted yield by the price election selected by the insured and subtracting any minimum guaranteed payment, not to exceed the total compensation specified in the hybrid seed processor contract. If the insured's hybrid seed processor contract contains a minimum guaranteed payment that is stated in bushels, the AIP will convert that value to dollars by multiplying it by the price election selected by the insured.

Approved Yield (HSC) (HSS) means in lieu of the definition contained in the BP, an amount FCIC determines to be representative of the yield that the female parent plants are expected to produce when grown under a specific production practice. FCIC will establish the approved yield based upon records provided by the seed company and other information it deems appropriate.

Bushel (HSC) means fifty-six-pound avoirdupois of shelled corn, 70 pounds avoirdupois of ear corn, or the number of pounds determined under the seed company's normal conversion chart when the chart is used to determine the approved yield and the claim for indemnity.

Bushel (HSS) means fifty-six pounds avoirdupois of the insured crop.

Certified Seed Test (HSC) (HSS) means a warm germination test performed on clean seed according to specifications of the "Rules for Testing Seeds" of the Association of Official Seed Analysts.

Commercial Hybrid Seed (HSC) (HSS) means the offspring produced by crossing a male and female parent plant, each having a different genetic character. This offspring is the product intended for use by an agricultural producer to produce a commercial field corn crop for grain or a commercial field sorghum crop for grain or forage.

County Yield (HSC) (HSS) means an amount contained in the actuarial documents that is established by FCIC to represent the yield that a producer of hybrid seed would be expected to produce if the acreage had been planted to commercial field corn or commercial field sorghum.

Coverage Level Factor (HSC) (HSS) means a factor contained in the SP to adjust the county yield for commercial field corn or sorghum to reflect the higher value of HSC or HSS.

Female Parent Plants (HSC) means corn plants that are grown for the purpose of producing commercial HSC and have had the stamens removed or are otherwise male sterile.

Female Parent Plants (HSS) means sorghum plants that are grown for the purpose of producing commercial HSS and are male sterile.

Field Run (HSC) (HSS) means commercial HSC or HSS production before it has been dried, screened, or processed.

Definitions (Continued)

Grow Out (HSC) (HSS) means production from hybrid seed grown for increasing the amount of seed to be used in test plots, not for sale to producers as commercial seed.

Harvest (HSC) means combining, threshing or picking ears from the female parent plants to obtain commercial HSC.

Harvest (HSS) means combining, threshing or picking of the female parent plants to obtain commercial HSS.

Hybrid Seed Processor Contract (HSC) (HSS) means an agreement executed (in writing) between the HSC or HSS producer and a seed company containing, at a minimum:

(a) The producer's promise to plant and grow male and female parent plants, and to deliver all commercial HSC or HSS produced from such plants to the seed company;

(b) The seed company's promise to purchase the commercial HSC or HSS produced by the producer; and

(c) Either a fixed price per unit of measure (bushels, hundredweight, etc.) of the commercial HSC or HSS or a formula to determine the value of such seed. Any formula for establishing the value must be based on data provided by a public third party that establishes or provides pricing information to the general public, based on prices paid in the open market (e.g., commodity futures exchanges), to be acceptable for the purpose of the policy.

Inadequate Germination (HSC) (HSS) means germination of less than 80 percent of the commercial HSC or HSS as determined by using a certified test.

Male Parent Plants (HSC) (HSS) means corn or sorghum plants grown for the purpose of pollinating female parent plants.

Non-seed Production (HSC) (HSS) means production that does not qualify as seed production because of inadequate germination.

Planting Pattern (HSC) (HSS) means the arrangement of the rows of the male and female parent plants in a field. An example of a planting pattern is four consecutive rows of female parent plants followed by two consecutive rows of male parent plants.

Seed Company (HSC) (HSS) means a business enterprise that possesses all licenses for marketing commercial HSC or HSS required by the state in which it is domiciled or operates, and which possesses facilities with enough storage and drying capacity to accept and process the insured crop within a reasonable amount of time after harvest. If the seed company is the insured, it must also be a corporation.

Type (HSS) means grain sorghum, forage sorghum or sorghum sudan parent plants.

Exhibit 3

Hybrid Seed Corn or Hybrid Sorghum Seed Notice of Loss and Approved Yield Process

(1) In addition to the requirements in the BP, the insured must:

(a) give notice of probable loss at least 15 days before the beginning of harvest if the insured anticipates inadequate germination on any unit;

(b) leave representative samples of at least one complete planting pattern of the female and male parent plant rows of the unharvested crop that extend the entire length of each field in the unit.

(c) provide a completed copy of the current hybrid seed processor contract unless a copy already has been provided to the AIP by the seed company, and the seed company certifies that such contract is used for all its growers without any waiver or amendment.

(2) The AIP must request approved yields from the RO to determine hybrid seed corn or hybrid sorghum seed indemnities.

(3) RMA will require an approved yield from the hybrid seed company. Refer to procedure in the CIH. An annual update of actual and expected yields is required by each hybrid seed company. RMA ROs will request additional information when needed.

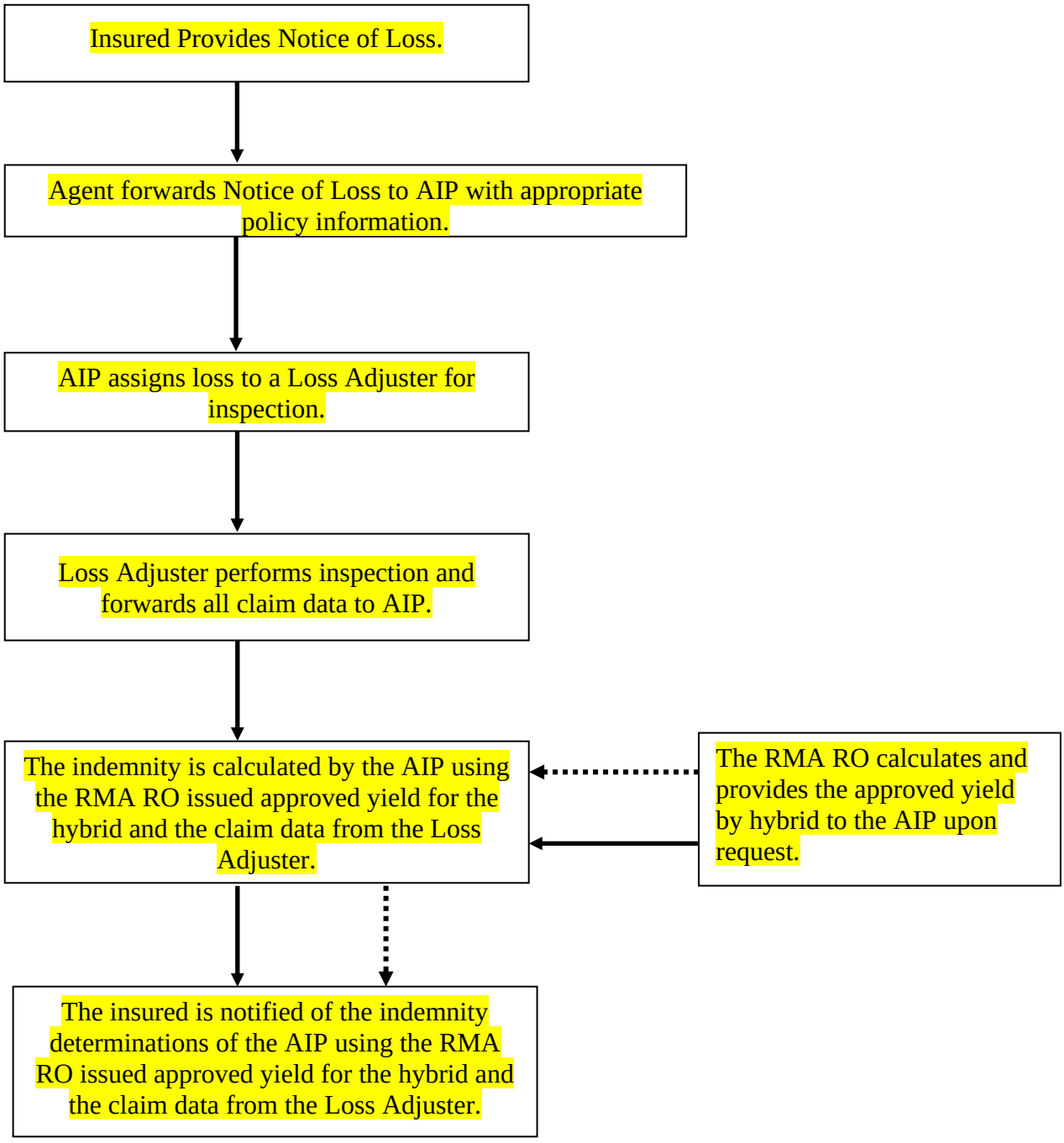
(4) RMA ROs will provide approved yields for insured hybrid crosses upon request from the AIP. These requests must be received by the applicable RMA RO no later than the calendar date for the end of the insurance period. Requests submitted to the RMA RO after the end of the insurance period may be authorized; however, the RMA RO will provide the number of late requests by each AIP to the RMA Reinsurance Services Division.

(5) Agents initiate approved yield requests by preparing and sending a Hybrid Seed Yield Request to the AIP when a Notice of Loss is submitted. The AIP forwards the request to the appropriate RMA RO. If the hybrid seed company has not already completed the HSC/HSS Yield History Report for each insured hybrid, the AIP will assist the seed company by providing blank forms if necessary. The seed company will return the completed Yield History Report (not a standardized RMA form) to the RMA RO.

(6) The RMA RO will return an Approved Yield to the AIP and the AIP will provide the information to the adjuster.

(7) Refer to the following loss notification and yield issuance processes flow diagram (from Exhibit 20 in the CIH) and the HSC Approved Yield Form in Exhibit 4 and the HSS Approved Yield Form in exhibit 5.

Hybrid Seed Corn or Hybrid Sorghum Seed Notice of Loss and Approved Yield Process (Continued)



Hybrid Seed Corn or Hybrid Sorghum Seed Notice of Loss and Approved Yield Process (Continued)

Step One: RMA RO issues a "Hybrid Seed Template" worksheet to the Hybrid Seed company to be completed by the Hybrid Seed company. The purpose of the Template is to gather actual yield data for each hybrid grown in the previous crop year and the expected yield for each hybrid to be grown in the current year.

↓

Step Two: For each hybrid, the Hybrid Seed company, or its representative, records on the Template the practice employed, location, last year's actual yield and this year's expected yield and submits the completed Template to the appropriate RO.

↓

Step Three: RMA RO calculates the Yield Base Factor (YBF) from yield data provided by the Hybrid Seed company on the "Hybrid Seed Template".

↓

Step Four: An RMA RO calculates and issues the Approved Yield through the ROE application for each Hybrid so the insuring AIP may request the Approved Yield for the current crop year prior to harvest of the hybrid.

Exhibit 4

Hybrid Seed Corn Approved Yield Form Sample

Hybrid Seed Corn Approved Yields

FOR CROP YEAR: yyyy TYPE: 210 PRACTICE: 003

BY SEED COMPANY'S INDIVIDUAL PLANT/FACILITY LOCATION

SEED COMPANY'S NAME AND IDENTIFICATION CODE NUMBER:	AGENCY OFFICE/INSURANCE COMPANY NAME:
Hybrid Seed Corn Co. (209)	Any Agency, Any Company
INDIVIDUAL PLANT/FACILITY COMPLETE ADDRESS:	ADDRESS:
Any Town Any State, xxxxx	Any Town Any State, xxxxx
	AGENCY PHONE NUMBER:
	XXX-XXX-XXXX

APPROVED HYBRID SEED CORN YIELD IS APPLICABLE ONLY FOR THE COUNTY(IES) LISTED BELOW	HYBRID IDENTIFICATION	APPROVED YIELD
Any county	10W	40

The field production data was based on determinations obtained and calculated on harvested production delivered to the plant prior to any production entering the seed conditioning process. Hence, the field production data supplied and the FCIC approved yield for the hybrid are determined from harvested production leaving the field and delivered to the seed company's plant prior to entering any of the seed conditioning process (i.e., drying, shelling, screening, etc.). The reported amount must be adjusted according to policy and/or procedural provisions for moisture and foreign material (i.e., husks, stalks, etc.).

For the purpose of determining the quantity of mature field production, the following method - as checked - was indicated and utilized by the seed company and is the basis used to compute the approved yield.

☐ (A) Shelled corn was adjusted .12 percent for each .1 percentage point of moisture to 15.0.

☐ (B) Ear corn was measured at 70 pounds of ear corn equaling 56 pounds (one bushel) of shelled corn. The weight of ear corn to equal one bushel of shelled corn was increased 1.5 pounds for each percentage point of moisture in excess of 14 percent

☒ (C) The seed company provided all records of harvested field seed production adjusted to a shelled corn basis of 15.0 percent moisture, and 56-pound test weight. The harvested field production records of the seed company will be used to determine the amount of indemnity; provided, that such harvested field production records are based on the same harvested field production criteria stated and described in the opening first paragraph and located immediately below the county name(s) and hybrid identification(s) as the criteria used to determine the approved yield.

In the event of a loss, notwithstanding the terms and conditions of the insurance policy, the insured's possible claim for indemnity will be determined/calculated according to the insurance contract and the loss adjustment procedures using the same basis for determining production as indicated by the above checked box.

As stated in the policy's provisions, the insured must establish the total production for the type and variety of the crop on the unit at the time of harvest.

Claim for indemnity and loss adjustment procedures are established by the insurance policy and related documents.

Prior to the final settlement of a claim, the final disposition of all production, appraised and harvested, must be verified and documented.

The value per bushel is determined by multiplying the approved yield by the insured's coverage level to establish the guarantee per acre and dividing the insured's amount of insurance by the guarantee/acre.

APPROVED:	DATE:
RMA RO REPRESENTATIVE	MM/DD/YYYY

Exhibit 5

Hybrid Sorghum Seed Approved Yield Form Sample

HYBRID SORGHUM SEED APPROVED YIELDS

FOR CROP YEAR:	TYPE: 210	PRACTICE: 997

BY SEED COMPANY'S INDIVIDUAL PLANT/FACILITY LOCATION

SEED COMPANY'S NAME AND IDENTIFICATION CODE	AGENCY OFFICE/INSURANCE COMPANY NAME:
Hybrid Sorghum Seed Co. (209)	Any Agency, Any Company
INDIVIDUAL PLANT/FACILITY COMPLETE ADDRESS:	ADDRESS:
Any Town Any State, xxxxx	Any Town Any State, xxxxx
	AGENCY PHONE NUMBER:
	XXX-XXX-XXXX

APPROVED HYBRID SORGHUM SEED YIELD IS APPLICABLE ONLY FOR THE COUNTY(IES) LISTED BELOW	HYBRID IDENTIFICATION	APPROVED YIELD
Any County	88g	44

The field production data was based on determinations obtained and calculated on harvested production delivered to the plant prior to any production entering the seed conditioning process. Hence, the field production data supplied and the FCIC approved yield for the hybrid are determined from harvested production leaving the field and delivered to the seed company's plant prior to entering any of the seed conditioning process (i.e., drying, shelling, screening, etc.). The reported amount must be adjusted according to policy and/or procedural provisions for moisture and foreign material (i.e., weeds, stalks, etc.).

For the purpose of determining the quantity of mature field production, the following method - as checked - was indicated and utilized by the seed company and is the basis used to compute the approved yield.

☐ (A) Grain Sorghum was adjusted .12 percent for each .1 percentage point of moisture to 13.0.

☐ (B) Hybrid seed production was measured at 56 pounds of production equaling one bushel.

☒ (C) The seed company provided all records of harvested field seed production adjusted to a grain sorghum basis of 13.0 percent moisture and 56-pound test weight. The harvested field production records of the seed company will be used to determine the amount of indemnity; provided, that such harvested field production records are based on the same harvested field production criteria stated and described in the opening first paragraph and located immediately below the county name(s) and hybrid identification(s) as the criteria used to determine the approved yield.

In the event of a loss, notwithstanding the terms and conditions of the insurance policy, the insured's possible claim for indemnity will be determined/calculated according to the insurance contract and the loss adjustment procedures using the same basis for determining production as indicated by the above checked box.

As stated in the policy's provisions, the insured must establish the total production for the type and variety of the crop on the unit at the time of harvest.

Claim for indemnity and loss adjustment procedures are established by the insurance policy and related documents.

Prior to the final settlement of a claim, the final disposition of all production, appraised and harvested, must be verified and documented.

APPROVED:	DATE:
RMA RO REPRESENTATIVE	MM/DD/YYYY

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Stand Reduction

Verify and/or make the following entries for each appraisal worksheet Item Number/Element. A completed appraisal worksheet example is at the end of this exhibit. For general form standards and other general information, see subparagraph 2D and paragraph 39.

Item Number/Element	Standard
Company	Name of AIP if not preprinted on the worksheet (Company Name).
1. Insured's Name	Name of the insured that identifies exactly the person (legal entity) to whom the policy is issued.
2. Policy Number	Insured's assigned policy number.
3. Unit No.	Unit number from the Summary of Coverage after it is verified to be correct.
Claim Number	Claim number as assigned by the AIP.
4. Crop	"HSC" or "HSS."
5. Crop Year	Four-digit crop year, as defined in the policy, for which the claim is filed.
6. FSA Farm No.	FSA farm number and hybrid identification code.
7. Field No.	Field or subfield identification symbol.
No. of Acres	Number of determined female acres, to tenths, in the field or subfield being appraised.
8. Row Width	Row width to nearest inch. Refer to Part 3, Paragraph 33 for row width determination information.
9. Base Yield	The approved yield from the "Hybrid Seed Approved Yield" form. If yield has not been established: a. Complete inspection and worksheet except yield and associated entries. Inform insured that he/she will be contacted when yield is established. Forward claim and appraisal worksheet to the AIP. b. The RO will approve a yield and send yield confirmation to the AIP, who will notify the adjuster. In critical situations, the RMA RO will phone an approved yield to the AIP and send a written confirmation. c. The adjuster will complete the appraisal worksheet and PW entries, arrange for the insured's signature on the worksheet and/or claim and distribute the documents.
10. Sample No.	Make no entry.
11. Normal Plant Population 1/100 acre	Determine by counting the potential (living, dead, missing, and non-emerged) plants in a length of row equivalent to 1/100 acre, rounded to the nearest multiple of ten.
12. No. of Surviving Plants 1/100 acre	Number of surviving plants in the same sample.

13. Percent of Stand	**HSC -** Make no entry. **HSS -** Result, rounded to tenths, of dividing number of surviving plants (item 12) by the normal plant population (item 11).
14. Round Col. 13 to nearest 5 percent	**HSC -** Make no entry. **HSS -** Percent of stand (item 13) rounded to the nearest 5 percent.
15. Percent of Potential	Enter the percent of potential as follows: a. Determine the stage at time of damage and enter in item 19. b. **HSC -** Before 11th leaf stage, use exhibit 13 – HSC Stand Reduction Chart for Emergence through 10th Leaf Stages of Growth and enter percent potential rounded to whole percent, after interpolating. c. **HSC -** From 11th leaf through 17th leaf stage, use exhibit 14 – HSC Stand Reduction Chart for 11th through 17th Leaf Stages of Growth and enter percent potential rounded to whole percent, after interpolating. d. **HSC -** After 17th leaf stage, enter result of dividing item 12 by item 11 (rounded to whole percent)." e. **HSS -** Before 20th leaf stage, apply item 14 to the Stand Reduction Chart, (exhibit 26), and enter in item 15. f. **HSS -** After 19th leaf stage, repeat entry from item 14.
16. Base Yield	Repeat entry from item 9.
17. Appraisal for Sample	Result, rounded to tenths, of multiplying percent of potential (item 15) expressed as a decimal by the base yield (item 16).
18. Total	Sum of entries in item 17 (to tenths).
19. Stage of Growth at Time of Damage	Stage of growth at time of damage (Refer to exhibit 24 for HSC or exhibit 33 for HSS).
20. Total Appraisals for all Samples	Repeat entry from item 18.
21. No. of Samples	Enter total number of samples.
22. Appraisal per Acre/Field	Result (rounded to tenths) of dividing total appraisals for all samples (item 20) by the total number of samples (item 21).
23. Notes and Calculations	Enter pertinent information about the appraisal, including any appropriate calculations, or on a Special Report and attach to the claim when remarks are needed.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Stand Reduction (Continued)

	The following required entries are not illustrated on the Appraisal Worksheet example below.	
24.	Insured's Signature and Date	Insured's (or insured's authorized representative's) signature and date. Before obtaining insured's signature, review all entries on the appraisal worksheet with the insured, (or insured's authorized representative) particularly explaining codes, etc., which may not be readily understood.
25.	Adjuster's Signature, Code No., and Date	Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. If the appraisal is performed prior to signature date, document the date of appraisal in the Remarks/Narrative section of the Appraisal Worksheet (if available); otherwise, document the appraisal date in the Narrative of the PW.
	Page Number	Page numbers - (Example: Page 1 of 1, Page 1 of 2, Page 2 of 2, etc.).

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Stand Reduction (Continued)

FOR ILLUSTRATION PURPOSES ONLY **STAND REDUCTION APPRAISAL WORKSHEET** (Corn and Grain Sorghum, HYBRID SEED CORN, HYBRID SORGHUM SEED, POPCORN)	**COMPANY** Any Company	**1. INSURED'S NAME** I.M. Insured		**2. POLICY NUMBER** XXXXXXX
	3. UNIT NO. 0001-	**CLAIM NUMBER** XXXXXX	**4. CROP** Hybrid Seed Corn	**5. CROP YEAR** YYYY
	6. FSA FARM NO. 106 Hybrid	**7. FIELD NO.** B	**NO. OF ACRES** 20.0	**8. ROW WIDTH** 36"	**9. BASE YIELD** 40

COMPUTATIONS

SAMPLE NO. 10	NORMAL PLANT POPULATION 1/100 ACRE 11	NO. OF SURVIVING PLANTS 1/100 ACRE 12	HYBRID SORGHUM SEED AND GRAIN SORGHUM ONLY: PERCENT OF STAND 13	HYBRID SORGHUM SEED AND GRAIN SORGHUM ONLY: ROUND COL. 13 TO NEAREST 5 PERCENT 14	PERCENT OF POTENTIAL 15		BASE YIELD 16		APPRAISAL FOR SAMPLE (COL. 15 X 16) 17
1	220	36			37	X	40	=	14.8
2	220	32			34	X	40	=	13.6
3	220	23			27	X	40	=	10.8
4	220	42			41	X	40	=	16.4
5	220	51			47	X	40	=	18.8
6						X		=	
7						X		=	
8	**After the 17th leaf stage, percent potential is in direct proportion to percent stand: Col.12 ÷ Col. 11**					X		=	
9						X		=	
10						X		=	
11						X		=	
12						X		=	
							18. TOTAL		74.4

19. STAGE OF GROWTH AT TIME OF DAMAGE	20. TOTAL APPRAISALS FOR ALL		21. NO. OF SAMPLES		22. APPRAISAL PER ACRE/FIELD	
8th Leaf	74.4	÷	5	=	14.9	BU.

23. NOTES AND CALCULATIONS

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Stand Reduction (Continued)

(FOR ILLUSTRATION PURPOSES ONLY)

STAND REDUCTION APPRAISAL WORKSHEET

(Corn and Grain Sorghum, **HYBRID SEED CORN, HYBRID SORGHUM SEED, POPCORN**)

COMPANY	1. INSURED'S NAME	2. POLICY NUMBER	
ANY COMPANY	I. M. INSURED	XXXXXXXX	
3. UNIT NO.	**3a. CLAIM NUMBER**	**4. CROP**	**5. CROP YEAR**
0001-0001 BU	XXXXXXX	Hybrid Sorghum Seed	YYYY
6. FSA FARM NO.	**7. FIELD NO.**	**NO. OF ACRES**	**8. ROW WIDTH**	**9. BASE YIELD**
106 Hybrid 88G	A	32.1	38"	44

COMPUTATIONS

SAMPLE NUMBER	NORMAL PLANT POPULATION 1/100 ACRE	NUMBER OF SURVIVING PLANTS 1/100 ACRE	GRAIN SORGHUM ONLY: PERCENT OF STAND	GRAIN SORGHUM ONLY: ROUND COL. 13 TO NEAREST 5 PERCENT	PERCENT OF POTENTIAL		BASE YIELD		APPRAISAL FOR SAMPLE (COL. 15 X 16)
10	11	12	13	14	15		16		17
1	320	21	6.6	5	9	X	44	=	4.0
2	320	17	5.3	5	9	X	44	=	4.0
3	320	36	11.3	10	17	X	44	=	7.5
4	320	39	12.2	10	17	X	44	=	7.5
5	320	47	14.7	15	26	X	44	=	11.4
6						X		=	
7						X		=	
8						X		=	
9						X		=	
10						X		=	
11						X		=	
								18. TOTAL	34.4

19. STAGE OF GROWTH AT TIME OF DAMAGE	20. TOTAL APPRAISALS FOR ALL SAMPLES		21. NUMBER OF SAMPLES		22. APPRAISAL PER ACRE/FIELD	
10th leaf	34.4	÷	5	=	6.9	BU

23. NOTES AND CALCULATIONS

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Hail Damage

Verify and/or make the following entries for each appraisal worksheet Item Number/Element. A completed appraisal worksheet example is at the end of this exhibit. For general form standards and other general information, see subparagraph 2D and paragraph 39.

Item Number/Element		Standard
	Company	Name of AIP if not preprinted on the worksheet (Company Name).
	Claim No.	Claim number as assigned by the AIP.
1.	Insured's Name	Name of the insured that identifies exactly the person (legal entity) to whom the policy is issued.
2.	Policy No.	Insured's assigned policy number.
3.	Unit Number	Unit number from the Summary of Coverage after it is verified to be correct.
4.	Crop	"HSC" or "HSS."
5.	Crop Year	Four-digit crop year, as defined in the policy, for which the claim is filed.
6.	FSA Farm No.	FSA farm number and hybrid identification code.
7.	Field No.	Field or subfield identification symbol.
	No. of Acres	Field identification symbol and number of female acres in field or subfield.
8.	Ultimate No. of Leaves	**HSC -** Make no entry. **HSS -** Ultimate number of leaves.
9.	Base Yield	The approved yield from the "Hybrid Seed Approved Yield" form. If yield has not been established: a. Complete inspection and worksheet except yield and associated entries. Inform insured that he/she will be contacted when yield is established. Forward claim and appraisal worksheet to the AIP. b. The RMA RO will approve a yield and send yield confirmation to the AIP, who will notify the adjuster. In critical situations, the RMA RO will phone an approved yield to the AIP and send a written confirmation. c. The adjuster will complete an appraisal worksheet and PW entries, arrange for the insured's signature on the worksheet and/or claim, and distribute the documents
10.	Sample No.	Make no entry.
11.	Normal No. of Plants 1/100 acre	Normal plant population (original stand) – determine by counting the potential (living, dead, missing or non-emerged) plants in a length of row equivalent to 1/100 acre, rounded to the nearest multiple of ten.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Hail Damage (Continued)

Item Number/Element	Standard
12. No. Plants Totally Destroyed 1/100 acre	Number of plants totally destroyed. If totally destroyed plants cannot be accurately counted, complete item 13 and enter result of subtracting remaining stand (item 13) from normal number of plants (item 11).
13. Remaining Stand No. Plants 1/100 acre	Determine the number of remaining plants or enter the result of subtracting number of plants totally destroyed (item 12) from normal number of plants (item 11).
14. % Damage from Stand Reduction	**HSC -** Determine and enter percent of damage (Rounded to whole percent). a. From 7th through 10th leaf stages, use Hail Stand Reduction Loss Chart 7th Leaf through 10th Leaf Stages of Growth (exhibit 15) based on entries in items 11 (normal number of plants) and item 13 (remaining stand). Interpolate to nearest whole percent. b. From 11th through 17th leaf stage, use Hail Stand Reduction Loss 11th Leaf through 17th Leaf Stages of Growth, (exhibit 16) to determine % damage from stand reduction based on entries in items 11 (normal number of plants) and item 13 (remaining stand). Interpolate to nearest whole percent. c. After 17th leaf stage, enter result of dividing item 12 by item 11 **HSS -** Divide item 13 by item 11. Round to the nearest 5 percent and apply results to HSS - Hail Stand Reduction Chart, exhibit 27. Enter percent of damage from table.
15. % Cripples (HSC Only)	Determine entry as follows (refer to sample on worksheet for calculations and Subparagraph 36C(3)(b) for definition): a. Count the number of cripples in 100 remaining live plants. b. Individually evaluate the ears on the crippled plants to determine the gross damage from cripples. (Percent of cripples which will not produce a normal harvestable ear.) Multiply number of cripples (a) by percent of cripples (b). c. Multiply this gross percent times the remaining crop (100 – percent damage from stand reduction (item 14)) to obtain the net percent of damage. Round to tenths. d. Show all calculations in the Remarks section of the appraisal worksheet or on a Special Report. **HSS** - Make no entry.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Hail Damage (Continued)

Item Number/Element	Standard
16. Percent Damage: HSC - % Ear Damage (Corn)	a. If no ear damage – make no entry. b. If ear damage - determine net percent of ear damage by multiplying the gross percent times the remaining crop (100 - item 14 - item 15) rounded to tenths. If there is non-seed production from hail-caused ear damage, be sure to account for it, and if possible, defer appraisals until weight method appraisal can be used or the crop is harvested. (Subtract the seed production from the appraisal to determine the non-seed production.)
HSS - % Head Damage (Grain Sorghum):	a. Determine the average total number of kernels on 4 "average" heads by calculating the average number of kernels per spikelet (using 4 spikelets - one from near the bottom of the head, one a quarter of the way up, one from half way up, and one from three-fourths of the way up). Multiply by the number of spikelets (count the 4 or 5 small spikelets in the very top of the head as one average spikelet. b. Divide the average number of kernels destroyed (missing, cracked, bruised) per-head by the average number of total kernels per head (rounded to the nearest 5 percent) to determine the gross percent of head damage. c. Apply the gross percent of head damage ("b" above) and stand reduction percent of damage (item 14, rounded to the nearest 5 percent) to exhibit 29, to obtain NET percent of head damage. Refer to paragraph 37D for an example of this calculation. d. If there is no head damage, enter zero ("0.0"). e. Show all calculations in the "Remarks" section of the appraisal worksheet or on a Special Report.
17. Total Direct Damage	**HSC** - Sum of items 14, 15, and 16, to tenths. **HSS** - Sum of items 14 and 16, to tenths.
18. Potential Remaining	Result of subtracting total direct damage (item 17) from 100, to tenths.
19. % Leaf Area Destroyed	Determine and enter percent of leaf area destroyed. Refer to paragraph 37D.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Hail Damage (Continued)

Item Number/Element	Standard
20. % Damage for Leaf Destruction	**HSC -** Percent of damage for leaf destruction based on exhibit 17, percent leaf area destroyed (items 19) and stage of plant (item 27), to nearest tenth percent. **HSS -** Percent of damage for leaf destruction based on items 19 and 27. Refer to exhibit 30 and the ultimate number of leaves, item 8.
21. Net Indirect Damage	Result (rounded to tenths) of multiplying potential remaining (item 18) by percent damage for leaf destruction (item 20).
22. % Damage from Hail	Sum of total direct damage (item 17) and net indirect damage (item 21), to tenths.
23. % Potential Production Remaining	Result of subtracting percent damage from hail (item 22) from 100 (to tenths).
24. Base Yield	Repeat entry from item 9.
25. Appraisal For Sample	Result, rounded to tenths, of multiplying percent potential production remaining (item 23) expressed as a decimal by the base yield (item 24).
26. Total	Sum of entries in item 25.
27. Stage of Plant Growth at Time of Damage	Stages of growth at time of damage. Refer to exhibit 24, Hybrid Seed Corn Stage Characteristics or exhibit 33, Hybrid Sorghum Seed Stage Characteristics.
28. Total All Samples	Repeat entry from item 26.
29. No. Samples	Enter total number of samples.
30. Per Acre Appraisal Bu.	Result, rounded to tenths, of dividing total appraisals for all samples (item 28) by the total number of samples (item 29).
31. Remarks	Enter pertinent information about the appraisal, sampling, conditions in general (e.g.: - very hot and dry), etc. Include any appropriate calculations on a Special Report and attach to the claim when more space is needed.
The following required entries are not illustrated on the Appraisal Worksheet example below.	
32. Insured's Signature and Date	Insured's (or insured's authorized representative's) signature and date. Before obtaining insured's signature, review all entries on the appraisal worksheet with the insured, (or insured's authorized representative) particularly explaining codes, etc., which may not be readily understood.
33. Adjuster's Signature, Code No. and Date	Signature of adjuster, code number, and date signed **after** the insured (or insured's authorized representative) has signed. If the appraisal is performed prior to signature date, document the date of appraisal in the Remarks/Narrative section of the Appraisal Worksheet (if available); otherwise, document the appraisal date in the Narrative of the PW.
Page Number	Page numbers - (Example: Page 1 of 1, Page 1 of 2, Page 2 of 2, etc.).

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Hail Damage (Continued)

Company: Any Company **Claim No.:** XXXXXXXX

(FOR ILLUSTRATION PURPOSES ONLY)	1. INSURED'S NAME	2. POLICY NO.	3. UNIT NUMBER	4. CROP
HAIL DAMAGE APPRAISAL WORKSHEET (Corn and Grain Sorghum)	I. M. INSURED	XXXXXXX	0002-0001BU	HSC

5. CROP YEAR	6. FSA FARM NO.	7. FIELD NO.	No. of Acres	8. ULTIMATE NO. OF LEAVES	9. BASE YIELD
YYYY	106 Hybrid 10W	C	15.0		40

COMPUTATIONS

SAMPLE NO.	NORMAL NO. OF PLANTS 1/100 ACRE	NO. PLNTS TOTALLY DESTROYED 1/100 ACRE	REMAINING STAND NO. PLANTS	% DAMAAGE FROM STAND REDUCTION (CHART)	%CRIPPLE (CORN ONLY)	% EAR DAMAGE (CORN) %HEAD DAMAGE (GRAIN SORGHUM)	TOTAL DIRECT DAMAGE (14 + 15 + 16)	POTENTIAL REMAINING (100 –17)	% LEAF AREA DESTROYED	% DAMAGE FOR LEAF DESTRUCTION (CHART)	NET INDIRECT DAMAGE (18 X 20)	% DAMAGE FROM HAIL (17 + 21)	% POTENTIAL PRODUCTION REMAINING (100 – 22)	BASE YIELD	APPRAILSAL FOR SAMPLE (23 X 24)
10	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
1	240	201	39	63	6.2		69.2	30.8	45	3.0	0.9	70.1	29.9	40	12.0
2	230	189	41	61	7.8		68.8	31.2	40	2.0	0.6	69.4	30.6	40	12.2
3	240	198	42	61	7.3		68.3	31.7	40	2.0	0.6	68.9	31.1	40	12.4
4	240	216	24	73	1.8		74.8	25.2	45	3.0	0.8	75.6	24.4	40	9.8
5	240	205	35	65	5.9		70.9	29.1	45	3.0	0.9	71.8	28.2	40	11.3
6															
7															
8															
													26. TOTAL		57.7

27. STAGE OF PLANT GROWTH AT TIME OF DAMAGE	28. TOTAL ALL SAMPLES		29. NO. SAMPLES		30. PER ACRE APPRAISAL BU.
9^{TH} leaf	57.7	÷	5	=	11.5

31. REMARKS

Net percent cripple damage

Sample Number	Percent Cripples		Percent Damage Factor		Percent Damage from cripples		Percent Remaining plants		Net Percent cripple damage
1	25	x	.67	=	16.8	x	37	=	6.2
2	30	x	.67	=	20.1	x	39	=	7.8
3	28	x	.67	=	18.8	x	39	=	7.3
4	10	x	.67	=	6.7	x	27	=	1.8
5	25	x	.67	=	16.8	x	35	=	5.9

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Hail Damage (Continued)

Company: Any Company Claim No.: XXXXXXXX

FOR ILLUSTRATION PURPOSES ONLY HAIL DAMAGE APPRAISAL WORKSHEET (Corn and Grain Sorghum)	1. INSURED'S NAME	2. POLICY NUMBER	3. UNIT NUMBER	4. CROP
	I. M. INSURED	XXXXXXXX	0001-0001 BU	HSS
	5. CROP YEAR	6. FSA FARM NO.	7. FIELD NO.	8. ULTIMATE NO. OF LEAVES	9. BASE
	YYYY	106 Hybrid 88 G	C 9.5 Acres	20	49

COMPUTATIONS

SAMPLE NO.	NORMAL NO. OF PLANTS 1/100 ACRE	NO. PLANTS TOTALLY DESTROYED 1/100 ACRE	REMAINING STAND NO. PLANTS	% DAMAGE FROM STAND REDUCTION (Chart)	% CRIPPLE (Corn Only)	% EAR DAMAGE % HEAD DAMAGE (Grain Sorghum)	TOTAL DIRECT DAMAGE (14 + 15 +16)	POTENTIAL REMAINING (100 – 17)	% LEAF AREA DESTROYED	% DAMAGE FOR LEAF DESTRUCTION (Chart)	NET INDIRECT DAMAGE (18 X 20)	% DAMAGE FROM HAIL (17 + 21)	% POTENTISL PRODUCTION REMAINING (100 - 22)	BASE YIELD	APPRAISAL FOR SAMPLE (23 X 24)
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	320	176	144	55	-	20	75	25	90	66	16.5	91.5	8.5	49	4.2
2	320	206	114	65	-	26	91	9	95	72	6.5	97.5	2.5	49	1.2
3	320	191	129	60	-	22	82	18	90	66	11.9	93.9	6.1	49	3.0
4	320	194	126	60	-	20	80	20	95	72	14.4	94.4	5.6	49	2.7
5															
6															
7															
8															

26 TOTAL 11.1

27. STAGE OF PLANT GROWTH AT TIME OF DAMAGE	28. TOTAL ALL SAMPLES		29. NO. SAMPLES		30. PER ACRE APPRAISAL
Early Milk	11.1	÷	4	=	2.8

31. REMARKS

Sample 1 - Gross % of head damage = 45%
Sample 2 - Gross % of head damage = 75%
Sample 3 - Gross % of head damage = 55%
Sample 4 - Gross % of head damage = 50%

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Verify and/or make the following entries for each appraisal worksheet Item Number/Element. A completed appraisal worksheet example is at the end of this exhibit. For general form standards and other general information, see subparagraph 2D and paragraph 39. Complete heading items 1 through 7, and PART II items 20 through 32.

Item Number/Element	Standard
Company	The AIP's name if not preprinted on the worksheet (Company Name).
Claim Number	Claim number as assigned by the AIP.
1. Insured's Name	Name of the insured that identifies exactly the person (legal entity) to whom the policy is issued.
2. Policy No.	Insured's assigned policy number.
3. Unit No.	Unit number from the Summary of Coverage after it is verified to be correct.
4. Crop	HSC.
5. Crop Year	Four-digit crop year as defined in the policy for which the claim has been filed
6. FSA Farm No.	FSA farm number and hybrid identification code.
7. Circle Appraisal Code and enter in col. 10 part 1.	Circle "EC" for ear corn.
8. – 19.	Make no entry.
PART II – Maturity Line Weight Method (from milk stage until kernels are fully mature and moisture drops below 40).	
20. Field ID	Field or subfield identification symbol.
22. Stage	Make no entry.
23. Fraction of Acre	Use "1/100"
24. Weight by Stage	Pound weight, to tenths, for each sample by stage of maturity. Determine weights by: (1) Picking and husking all harvestable ears from the sample. (2) Discarding portions of ears having no kernels. (3) Determining maturity line of each ear in order to determine its stage. (4) Sorting ears by stage and weighing all ears in stage (pounds to tenths).
25. Total Weight All Sample Plots	Total of sample weights from all sample plots for that stage (to tenths).
26. Yield Factor	Use appropriate factor for fraction of an acre used.
27. Appraisal Per Stage	Result of multiplying Total Weight All Sample Plots (item 25) by appropriate yield factor (item 26), rounded to tenths. For appraisal modifications for early freeze damage, multiply the result of appraisal per stage by the appropriate freeze damage appraisal adjustment, rounded to tenths and make a notation of adjustment in the remarks section of the appraisal worksheet. Refer to subparagraph 38B(6).

Form Standards – Hybrid Seed Corn Appraisal Worksheet for Maturity Line Weight (Continued)

Item Number/Element		Standard
28.	Total Appr. All Stages	Sum of entries in item 27 (Appraisal Per Stage), to tenths.
29.	Total No. Rep. Sample Plots	Number of sample plots.
30.	Acre Appraisal	Result of dividing Total Appraisals All Stages (item 28) by Total Number of Representative Sample Plots (item 29), rounded to tenths.
	Remarks	Remarks pertinent to the appraisal, sampling, conditions in general (e.g. – very hot and dry), etc.
	The following required entries are not illustrated on the Appraisal Worksheet example below.	
31.	Insured's Signature, and Date	Insured's (or insured's authorized representative's) signature and date. Before obtaining the insured's signature, review all entries on the Appraisal Worksheet with the insured (or insured's authorized representative), particularly explaining codes, etc., which may not be readily understood.
32.	Adjuster's Signature, Code No., and Date	Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. If the appraisal is performed prior to signature date, document the date of appraisal in the Remarks section of the Appraisal Worksheet (if available); otherwise, document the appraisal date in the Narrative of the PW.
	Page Number	Page numbers – (Example: Page 1 of 1, Page 1 of 2, etc.).

Form Standards – Hybrid Seed Corn Appraisal Worksheet for Maturity Line Weight (Continued)

COMPANY	CLAIM NUMBER	1. INSURED'S NAME	2. POLICY NO.	3. UNIT NO.		7. CIRCLE APPRAISAL CODE and enter in Col. 10 Part 1
Any Company	**xxxxxx**	**I. M. Insured**	**XXXXXXX**	**0003-0001BU**		GRAIN SORGHUM – GS EAR CORN – (EC) POPCORN – PEC CORN SILAGE – CS GRAIN SORGHUM, SILAGE – GSS

4. CROP	5. CROP YR.	6. FSA FARM NO.	YIELD FACTOR		
			POPCORN	CORN	GRAIN SORGHUM
HSC	**YYYY**	**106 Hybrid 100 W**	100 if sample size selected was 1/100 acre 1000 if sample size selected was 1/1000 acre	1.43 if sample size selected was 1/100 acre 14.3 if sample size selected was 1/1000 acre	1.34 if sample size selected was 1/100 acre 13.4 if sample size selected was 1/1000 acre

PART I – MATURE EAR CORN – POPCORN – HYBRID SEED (corn, grain sorghum) – GRAIN SORGHUM AND SILAGE WEIGHT METHOD

FIELD ID 8	ACRES IN FIELD 9	KIND OF APPR 10.	FRACTION OF ACRE 11	RECORD IN EACH BLOCK THE POUNDS PER SAMPLE PLOT TO TENTHS 12	TOTAL WEIGHT ALL SAMPLE PLOTS 13	NO. OF SAMPLE PLOTS 14	AVG. SAMPLE WEIGHT PER FIELD 15	YIELD FACTOR 16	PER ACRE YIELD (CIRCLE ONE) 17	FOR MATURE CORN POPCORN AND GRAIN SORGHUM
					= ÷ = x =				BUSHELS TONS POUNDS	PERCENT/FACTOR 18. MOISTURE 19. SHELLING
					= ÷ = x =				BUSHELS TONS POUNDS	PERCENT/FACTOR 18. MOISTURE 19. SHELLING
					= ÷ = x =				BUSHELS TONS POUNDS	PERCENT/FACTOR 18. MOISTURE 19. SHELLING

PART II – MATURITY LINE WEIGHT METHOD (For ear corn from milk stage until kernels are fully mature and moisture drops below 40%)

FIELD ID 20	STAGE 22	FRAC-TION OF ACRE 23	Record in Each Block the Pounds per Sample Plot to Tenths 24									TOTAL WEIGHT ALL SAMPLE PLOTS 25	YIELD FACTOR 26		APPRAISAL PER STAGE 27
			Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8	Plot 9		Corn	Popcorn	
C	**¼**	1/100	**6.1**	**3.3**	**3.3**	**0.0**	**0.0**					**12.7**	1.148	40.0	**14.6**
		1/1000										=	11.48	400.0	
Acreage in Field to tenths 21	**½**	1/100	**7.1**	**6.5**	**4.4**	**5.2**	**6.3**					**29.5**	1.057	42.0	**31.2**
		1/1000										=	10.57	420.0	
20.0	**¾**	1/100	**6.9**	**4.1**	**3.2**	**5.8**	**0.0**					**20.0**	1.009	45.0	**20.2**
		1/1000										=	10.09	450.0	
	Doughy	1/100	**3.5**	**0.0**	**0.0**	**0.0**	**0.0**					**3.5**	1.052	47.0	**3.7**
		1/1000										=	10.52	470.0	
	Extended	1/100											1.187	59.0	
		1/1000										=	11.87	590.0	

x = Corn

REPRESENTATIVE SAMPLES (Popcorn)

1. 1/100 acre if potential appears to be 500 lbs/acre or less.
2. 1/1000 acre if potential appears to be in excess of 500 lbs/acre.

REPRESENTATIVE SAMPLES (Corn, Grain Sorghum)

1. 1/100 acre if potential appears to be 20 bushels/acre or less.
2. 1/1000 acre if potential appears to be in excess of 20 bushels/acre.

TOTAL NO. REP. SAMPLE PLOTS 29	ACRE APPRAISAL 30

REMARKS:

The four stages shown above are for illustration purposes only. Normally, corn is in only two stages.

28 TOTAL APPR. ALL STAGES **69.7** ÷ **5** = **13.9**

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries**.**

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Weight Method

Verify and/or make the following entries for each appraisal worksheet Item Number/Element. A completed appraisal worksheet example is at the end of this exhibit. For general form standards and other general information, see subparagraph 2D and paragraph 39. Complete heading, items 1 through 7, Part I items 8 through 19, and Part II items 31 and 32.

Item Number/Element	Standard
Company	The AIP's name if not preprinted on the worksheet (Company Name).
Claim Number	Claim number as assigned by the AIP.
1. Insured's Name	Name of the insured that identifies exactly the person (legal entity) to whom the policy is issued.
2. Policy No.	Insured's assigned policy number.
3. Unit No.	Unit number from the Summary of Coverage after it is verified to be correct.
4. Crop	"HSC" or "HSS."
5. Crop Year	Four-digit crop year as defined in the policy for which the claim has been filed
6. FSA Farm No.	FSA farm number and hybrid identification code.
7. Circle Appraisal Code and enter in col. 10 part 1.	**HSC** - Circle EC for ear corn and enter in item 10, Part 1. **HSS** - Circle GS for grain sorghum and enter in item 10, Part 1.
Part I – Weight Method **HSC** - Use this method for HSC when kernels are fully mature and grain moisture is 40 percent or below. **HSS** - Use this method for HSS for all grain appraisals from the milk stage through maturity.	
8. Field ID	Field or subfield identification symbol.
9. Acres in Field	Number of determined acres, to tenths, in field or subfield being appraised
10. Kind of Appr.	**HSC** - Enter "EC" **HSS** - Enter "GS" doe grain, forage, or sudan (sorghum) seed production.
11. Fraction of Acre	**HSC** - Enter "1/100." **HSS** - Enter "1/100" if the potential appears to be 20 bushels per acre or less, or "1/1000**"** if the potential appears to be in excess of 20 bushels per acre.
12. Weight per Sample	Weight for each sample (pounds, to tenths).
13. Total Weight All Sample Plots	Sum of entries in item 12 (pounds, to tenths).
14. No. of Sample Plots	Number of sample plots.
15. Avg. Sample Weight per Field	Result, rounded to tenths, of dividing total weight of all samples (item 13) by the number of sample plots (item 14).

Item Number/Element	Standard
16. Yield Factor	**HSC -** Enter the factor (to hundredths) determined by multiplying 1.5 times the whole percentage points of moisture, in excess of 14.0; adding the result to 70; and dividing the sum into 100. Example: 20.5% moisture is 6 whole percentage points in excess of 14.0; 1.5 X 6 = 9 + 70 = 79; 100 ÷ 79 = 1.27). When moisture is 14.0% or less enter 1.43 for a sample size of 1/100 acre. **HSS -** If entry in item 11 is "1/100," enter "1.34." If entry in item 11 is "1/1000," enter "13.4."
17. Per Acre Yield	**HSC -** Result rounded to tenths, of multiplying Average Sample Weight (item 15) by Yield Factor (item 16). Circle appropriate unit of measure. **HSS -** Result, rounded to tenths, of multiplying item 15 by item 16. If threshing factor is applied (exhibit 28), line through appraisal, and enter adjusted appraisal in the space below the original appraisal. Show calculation in the remarks section of the worksheet. Circle appropriate unit of measure.
18. Moisture	**HSC -** Moisture percentage (to tenths) if in excess of 14.0 (through 40 percent). **HSS -** Moisture percentage (to tenths).
19. Shelling	**HSC -** Shelling percentage factor (to whole percent). Refer to exhibit 19. **HSS -** Make no entry.
20. - 30.	Make no entry.
Remarks	Remarks pertinent to the appraisal, sampling, conditions in general (e.g. – very hot and dry), etc.
The following required entries are not illustrated on the Appraisal Worksheet example below.	
31. Insured's Signature and Date	Insured's (or insured's authorized representative's) signature and date. Before obtaining the insured's signature, review all entries on the appraisal worksheet with the insured (or insured's authorized representative), particularly explaining codes, etc., which may not be readily understood.
32. Adjuster's Signature, Code No., and Date	Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. If the appraisal is performed prior to signature date, document the date of appraisal in the Remarks section of the Appraisal Worksheet (if available); otherwise, document the appraisal date in the Narrative of the PW.
Page Number	Page numbers – (Example: Page 1 of 1, Page 1 of 2, etc.).

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Weight Method (Continued)

(FOR ILLUSTRATION PURPOSES ONLY) **WEIGHT METHOD APPRAISAL**

COMPANY	CLAIM NUMBER	1. INSURED'S NAME	2. POLICY NO.	3. UNIT NO.		7. CIRCLE APPRAISAL CODE and enter in Col. 10 Part 1
Any Company	**xxxxxx**	**I. M. Insured**	**XXXXXXX**	**0004-0001BU**		GRAIN SORGHUM – (GS) EAR CORN – EC POPCORN – PEC CORN SILAGE – CS GRAIN SORGHUM, SILAGE – GSS

4. CROP.	5. CROP YR.	6. FSA FARM NO.	YIELD FACTOR		
			POPCORN	CORN	GRAIN SORGHUM
HSS	**YYYY**	**106 Hybrid 100 W**	100 if sample size selected was 1/100 acre 1000 if sample size selected was 1/1000 acre	1.43 if sample size selected was 1/100 acre 14.3 if sample size selected was 1/1000 acre	1.34 if sample size selected was 1/100 acre 13.4 if sample size selected was 1/1000 acre

PART I – MATURE EAR CORN – POPCORN – HYBRID SEED (corn, grain sorghum) – GRAIN SORGHUM AND SILAGE WEIGHT METHOD

FIELD ID 8	ACRES IN FIELD 9	KIND OF APPR 10	FRACTION OF ACRE 11	RECORD IN EACH BLOCK THE POUNDS PER SAMPLE PLOT TO TENTHS 12						TOTAL WEIGHT ALL SAMPLE PLOTS 13	NO. OF SAMPLE PLOTS 14	AVG. SAMPLE WEIGHT PER FIELD 15	YIELD FACTOR 16	PER ACRE YIELD (CIRCLE ONE) 17	FOR MATURE CORN POPCORN AND GRAIN SORGHUM
F	**10.1**	**GS**	**1/100**	**4.3**	**6.2**	**7.4**	**7.1**	**8.1**		= **33.1**	÷ **5**	= **6.6**	x **1.34**	= (BUSHELS) **8.8** TONS POUNDS	PERCENT/FACTOR 18. MOISTURE **20.5** 19. SHELLING
										=	÷	=	x	= **BUSHELS** TONS POUNDS	PERCENT/FACTOR 18. MOISTURE 19. SHELLING

PART II – MATURITY LINE WEIGHT METHOD (For ear corn until kernels are fully mature and moisture drops below 40%)

FIELD ID 20	STAGE 22	FRAC-TION OF ACRE 23	Record in Each Block the Pounds per Sample Plot to Tenths 24									TOTAL WEIGHT ALL SAMPLE PLOTS 25	YIELD FACTOR 26		APPRAISAL PER STAGE 27
			Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8	Plot 9		Corn	Popcorn	
	1/4	1/100										=	x 1.148	40.0	=
		1/1000											11.48	400.0	
Acreage in Field to tenths 21	½	1/100										=	x 1.057	42.0	=
		1/1000											10.57	420.0	
	¾	1/100										=	x 1.009	45.0	=
		1/1000											10.09	450.0	
	Doughy	1/100										=	x 1.052	47.0	=
		1/1000											10.52	470.0	
	Extended	1/100										=	x 1.187	59.0	=
		1/1000											11.87	590.0	

REPRESENTATIVE SAMPLES (Popcorn)

1. 1/100 acre if potential appears to be 500 lbs/acre or less.
2. 1/1000 acre if potential appears to be in excess of 500 lbs/acre.

REPRESENTATIVE SAMPLES (Corn, Grain Sorghum)

1. 1/100 acre if potential appears to be 20 bushels/acre or less.
2. 1/1000 acre if potential appears to be in excess of 20 bushels/acre.

TOTAL NO. REP. SAMPLE PLOTS 29	ACRE APPRAISAL 30

REMARKS:

28 TOTAL APPR. ALL STAGES ÷ =

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Form Standards – Hybrid Seed Corn and Hybrid Sorghum Seed Appraisal Worksheet for Weight Method (Continued)

(FOR ILLUSTRATION PURPOSES ONLY) **WEIGHT METHOD APPRAISAL**

COMPANY	CLAIM NUMBER	1. INSURED'S NAME	2. POLICY NO.	3. UNIT NO.		7. CIRCLE APPRAISAL CODE and enter in Col. 10 Part 1
Any Company	**xxxxxx**	**I. M. Insured**	**XXXXXXX**	**0002-0001BU**		GRAIN SORGHUM – GS EAR CORN – (EC) POPCORN – PEC CORN SILAGE – CS GRAIN SORGHUM, SILAGE – GSS

4. CROP.	5. CROP YR.	6. FSA FARM NO.	YIELD FACTOR		
			POPCORN	CORN	GRAIN SORGHUM
HSC	**YYYY**	**106 Hybrid 88 G**	100 if sample size selected was 1/100 acre 1000 if sample size selected was 1/1000 acre	1.43 if sample size selected was 1/100 acre 14.3 if sample size selected was 1/1000 acre	1.34 if sample size selected was 1/100 acre 13.4 if sample size selected was 1/1000 acre

PART I – MATURE EAR CORN – POPCORN – HYBRID SEED (corn, grain sorghum) – GRAIN SORGHUM AND SILAGE WEIGHT METHOD

FIELD ID 8	ACRES IN FIELD 9	KIND OF APPR 10	FRACTION OF ACRE 11	RECORD IN EACH BLOCK THE POUNDS PER SAMPLE PLOT TO TENTHS 12						TOTAL WEIGHT ALL SAMPLE PLOTS 13		NO. OF SAMPLE PLOTS 14		AVG. SAMPLE WEIGHT PER FIELD 15		YIELD FACTOR 16		PER ACRE YIELD (CIRCLE ONE) 17	FOR MATURE CORN POPCORN AND GRAIN SORGHUM	
																			PERCENT/FACTOR	
																			18. MOISTURE	19. SHELLING
D	**10.1**	**EC**	**1/100**	**4.3**	**6.2**	**5.1**	**3.9**	**7.0**		=	**26.5**	÷	**5**	=	**5.3**	x	**1.27**	=	(BUSHELS) **6.7** TONS POUNDS	**20.5**	**80**
										=		÷		=		x		=	**BUSHELS** TONS POUNDS	PERCENT/FACTOR 18. MOISTURE	PERCENT/FACTOR 19. SHELLING

PART II – MATURITY LINE WEIGHT METHOD (For ear corn until kernels are fully mature and moisture drops below 40%)

FIELD ID 20	STAGE 22	FRACTION OF ACRE 23	Record in Each Block the Pounds per Sample Plot to Tenths 24									TOTAL WEIGHT ALL SAMPLE PLOTS 25		YIELD FACTOR 26		APPRAISAL PER STAGE 27
			Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8	Plot 9			Corn	Popcorn	
	1/4	1/100										=	x	1.148	40.0	=
		1/1000												11.48	400.0	
Acreage in Field to tenths 21	½	1/100										=	x	1.057	42.0	=
		1/1000												10.57	420.0	
	¾	1/100										=	x	1.009	45.0	=
		1/1000												10.09	450.0	
	Doughy	1/100										=	x	1.052	47.0	=
		1/1000												10.52	470.0	
	Extended	1/100										=	x	1.187	59.0	=
		1/1000												11.87	590.0	

REPRESENTATIVE SAMPLES (Popcorn)

1. 1/100 acre if potential appears to be 500 lbs/acre or less.
2. 1/1000 acre if potential appears to be in excess of 500 lbs/acre.

REPRESENTATIVE SAMPLES (Corn, Grain Sorghum)

1. 1/100 acre if potential appears to be 20 bushels/acre or less.
2. 1/1000 acre if potential appears to be in excess of 20 bushels/acre.

TOTAL NO. REP. SAMPLE PLOTS 29	ACRE APPRAISAL 30

REMARKS:

28 TOTAL APPR. ALL STAGES ÷ =

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Form Standards - Production Worksheet

Verify and/or make the following entries for each PW Item Number/Element. A completed PW example is at the end of this exhibit. For general form standards and other general information, see subparagraph 2D and paragraph 51.

Item Number/Element	Standard
1. Crop/Code #	"HSC" (0062) or "HSS" (0050).
2. Unit #	Unit number from the Summary of Coverage after it is verified to be correct.
3. Location Description	Land location that identifies the legal description, if available, and the location of the unit (e.g., section, township, and range; FSA Farm Numbers; FSA Common Land Units (CLU) and tract numbers; GPS identifications; or Grid identifications) as applicable for the crop.
4. Date(s) of Damage	First three letters of the month(s) during which the determined insured damage occurred for the inspection and cause(s) of loss listed in item 5 below. If no entry in item 5 below, make no entry. For progressive damage, enter the month that identifies when the majority of the insured damage occurred. Include the specific date where applicable as in the case of hail damage (e.g., Aug 11). Enter additional dates of damage in the extra spaces, as needed. If more space is needed, document the additional dates of damage in the Narrative (or on a Special Report). Refer to the illustration in item 6 below. If there is no insurable COL, and a no indemnity due claim will be completed, make no entry.
5. Cause(s) of Damage	Name of the determined insured cause(s) of damage for this crop as listed in the LAM for the date of damage listed in item 4 above. If an insured cause(s) of damage is coded as "Other," explain in the Narrative. Enter additional causes of damage in the extra spaces, as needed. If more space is needed, document the additional determined insured causes of damage in the Narrative (or on a Special Report). Refer to the illustration in item 6 below. If it is evident that no indemnity is due, enter "NO INDEMNITY DUE" across the columns in Item 5 (refer to the LAM for more information on no indemnity due claims).

<table>
<tr><th>Item Number/Element</th><th>Standard</th></tr>
<tr><td>6. Insured Cause %</td><td>Preliminary: Make no entry.

Final: Whole percent of damage for the insured cause of damage listed in item 5 above. Enter additional “Insured Cause %” in the extra spaces, as needed. If additional space is needed, enter the additional determined “Insured Cause %” in the Narrative (or on a Special Report). The total of all “Insured Cause %” including those entered in the Narrative must equal 100%.

If there is no insurable cause of loss, and a no indemnity due claim will be completed, make no entry.

Example entries for items 4-6 and the Narrative, reflecting entries for multiple dates of damage, the corresponding insured causes of damage and insured cause percents:

<table>
<tr><td>4. Date(s) of Damage</td><td>MAY</td><td>JUN 30</td><td>AUG</td></tr>
<tr><td>5. Cause(s) of Damage</td><td>Excess Moisture</td><td>Hail</td><td>Drought</td></tr>
<tr><td>6. Insured Cause %</td><td>40</td><td>20</td><td>30</td></tr>
<tr><td colspan="4">Narrative: Additional date of damage – SEP 5; Cause of Damage – Freeze; Insured cause percent - 10%.</td></tr>
</table>
</td></tr>
<tr><td>7. Company/Agency</td><td>Name of company and agency servicing the contract.</td></tr>
<tr><td>8. Name of Insured</td><td>Name of the insured that identifies exactly the person (legal entity) to whom the policy is issued.</td></tr>
<tr><td>9. Claim #</td><td>Claim number as assigned by the AIP.</td></tr>
<tr><td>10. Policy #</td><td>Insured’s assigned policy number.</td></tr>
<tr><td>11. Crop Year</td><td>Four-digit crop year, as defined in the policy, for which the claim is filed.</td></tr>
<tr><td>12. Additional Units</td><td>Preliminary: Make no entry.

Final: Unit number(s) for all non-loss units for the crop at the time of final inspection. A non-loss unit is any unit for which a PW has not been completed. Additional non-loss units may be entered on a single PW.

If more spaces are needed for non-loss units, enter the unit numbers, identified as “Non-Loss Units,” in the Narrative or on an attached Special Report.</td></tr>
</table>

Item Number/Element	Standard
13. Est. Prod. Per Acre	**Preliminary:** Make no entry. **Final:** Estimated yield per acre, in whole bushels or of all non-loss units for the crop at the time of final inspection.
14. Date(s) Notice of Loss	**Preliminary:** a. Date the first or second notice of damage or loss was given for the unit in item 2, in the 1st or 2nd space, as applicable. Enter the complete date (MM/DD/YYYY) for each notice. b. A notice of damage or loss for a third preliminary inspection (if needed) requires an additional set of PWs. Enter the date of notice for a third preliminary inspection in the 1st space of item 14 on the second set of PWs. c. Reserve the "Final" space on the first page of the first set of PWs for the date of notice for the final inspection. d. If the inspection is initiated by the AIP, enter "Company Insp." instead of the date. e. If the notice does not require an inspection, document as directed in the Narrative instructions. **Final:** Transfer the last date (in the 1st or 2nd space from the first or second set of PWs) to the "final" space on the first page of the first set of PWs if a final inspection should be made as a result of the notice. Always enter the complete date of notice (MM/DD/YYYY) for the "final" inspection in the final space on the first set of PWs. For a delayed notice of loss or delayed claim, refer to the LAM.

Item Number/Element	Standard
15. Companion Policy(s)	a. If no other person has a share in the unit (insured has 100 percent share), make no entry. b. In all cases where the insured has less than a 100 percent share of a loss-affected unit, ask the insured if the other person sharing in the unit has a multiple-peril crop insurance contract (i.e., not crop-hail, fire, etc.). If the other person does not, enter "None." (1) If the other person has a multiple-peril crop insurance contract and it can be determined that the same AIP services it, enter the contract number. Handle these companion policies according to AIP instructions. (2) If the other person has a multiple-peril crop insurance contract and a different AIP or agent services it, enter the name of the AIP and/or agent (and contract number), if known. (3) If unable to verify the existence of a companion contract, enter "Unknown" and contact the AIP for further instructions. c. Refer to the LAM for further information regarding companion contracts.

Section I – Determined Acreage Appraised, Production and Adjustments

Make separate line entries for varying:

(1) Rate classes, types, classes, sub-classes, intended uses, irrigated practices, cropping practices, or organic practices, as applicable;

(2) APH yields;

(3) Appraisals;

(4) Adjustments to appraised mature production (moisture and/or quality adjustment factors);

(5) Stages or intended use(s) of acreage;

(6) Shares (e.g., 50 percent and 75 percent shares on the same unit); or

(7) Appraisals for damage due to hail or fire if Hail and Fire Exclusion is in effect.

Form Standards - Production Worksheet (Continued)

Item Number/Element	Standard
16. Field ID	The field or subfield identification symbol from a sketch map or an aerial photo. Refer to the Narrative.
17. Multi-Crop Code	The applicable two-digit code for first crop and second crop. Refer to the LAM for instructions regarding entry of first crop and second crop codes.
18. Reported Acres	In the event of over-reported acres, handle in accordance with the individual AIP's instructions. In the event of under-reported acres, enter the reported acres to tenths for the field or sub field. If there are no under-reported acres, make no entry.
19. Determined Acres	Refer to the LAM for definition of acceptable determined acres used herein. Enter the determined acres to tenths for the field or subfield for which consent is given for other use and/or: a. Put to other use without consent; b. Abandoned; c. Damaged by uninsured causes; or d. For which the insured failed to provide acceptable records of production. Refer to the LAM for procedures regarding when estimated acres are allowed and documentation requirements. **Final:** Determined acres to tenths. Acreage breakdowns within a unit or field may be estimated (refer to the LAM) if a determination is impractical. Account for all acreage occupied by female plants for hybrid seeds in the unit.
20. Interest or Share	Insured's interest in the crop to three decimal places as determined at the time of inspection. If shares vary on the same unit, use separate line entries.
21. Risk	Three-digit code for the correct "Rate" specified on the actuarial document maps. If a "Rate" or "High-Risk Area" is not specified on the actuarial document maps, make no entry. Verify with the Summary of Coverage and if the "Rate" is found to be incorrect, revise according to the AIP's instructions. Refer to the LAM. Unrated land is uninsurable without a written agreement.
22. Type	Three-digit code number, entered exactly as specified on the actuarial documents for the type grown by the insured. If "No Type Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If a type is not specified on the actuarial documents, make no entry.

Item Number/Element	Standard
23. Class	Three-digit code number, entered exactly as specified on the actuarial documents for the class grown by the insured. If "No Class Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If a class is not specified on the actuarial documents, make no entry.
24. Sub-Class	Three-digit code number, entered exactly as specified on the actuarial documents for the sub-class grown by the insured. If "No Sub-Class Specified," is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If a sub-class is not specified on the actuarial documents, make no entry.
25. Intended Use	Three-digit code number, entered exactly as specified on the actuarial documents for the intended use of the crop grown by the insured. If "No Intended Use Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If an intended use is not specified on the actuarial documents, make no entry.
26. Irr. Practice	Three-digit code number, entered exactly as specified on the actuarial documents for the irrigated practice carried out by the insured. If "No Irrigated Practice Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If an irrigated practice is not specified on the actuarial documents, make no entry.
27. Cropping Practice	Three-digit code number, entered exactly as specified on the actuarial documents for the cropping practice (or practice) carried out by the insured. If "No Cropping Practice" or "No Practice Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If a cropping practice is not specified on the actuarial documents, make no entry.
28. Organic Practice	Three-digit code number, entered exactly as specified on the actuarial documents for the organic practice carried out by the insured. If "No Organic Practice Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If an organic practice is not specified on the actuarial documents, make no entry.

<table>
<tr><th>Item Number/Element</th><th>Standard</th></tr>
<tr><td>29. Stage</td><td>
Preliminary: Make no entry.

Final: Stage abbreviation as shown below.

<table>
<tr><th>Stage</th><th>Explanation</th></tr>
<tr><td>“P”.....</td><td>Acreage abandoned without consent, put to other use without consent, damaged solely by uninsured causes, or for which the insured failed to provide acceptable records of production to the AIP.</td></tr>
<tr><td>“H”.....</td><td>Harvested.</td></tr>
<tr><td>“UH”.....</td><td>Unharvested or put to other use with consent.</td></tr>
<tr><td>“TZ”.....</td><td>UUF/Third Party Damage – Zero production on same acreage.</td></tr>
<tr><td>“TA”.....</td><td>UUF/ Third Party Damage – Appraised production on same acreage.</td></tr>
<tr><td>“TH”.....</td><td>UUF/Third Party Damage – Harvested production on same acreage.</td></tr>
</table>

Enter H/Grain if crop is harvested as non-seed production. Female corn or sorghum plants harvested as silage without prior written consent will be considered destroyed without consent, and the entry should read “Silage WOC.”

Prevented Planting: Refer to the PPSH for proper codes for any eligible prevented planting acreage.

Gleaned Acreage: Refer to the LAM for information on gleaning.
</td></tr>
<tr><td>30. Use of Acreage</td><td>
Use of acreage. Use the following “Intended Use” abbreviations.

<table>
<tr><th>Use</th><th>Explanation</th></tr>
<tr><td>“To Soybeans”…….</td><td>Use made of the acreage</td></tr>
<tr><td>“WOC”……..</td><td>Other use without consent</td></tr>
<tr><td>“SU”……...</td><td>Solely uninsured</td></tr>
<tr><td>“ABA”……</td><td>Abandoned without consent</td></tr>
<tr><td>“H”…….</td><td>Harvested</td></tr>
<tr><td>“UH”……</td><td>Unharvested</td></tr>
</table>

Verify any “Intended Use” entry. If the final use of the acreage was not as indicated, strike out the original line and initial it. Enter all data on a new line showing the correct “Final Use.”
</td></tr>
</table>

Item Number/Element		Standard
30.	Use of Acreage (continued)	**Prevented Planting:** Refer to the PPSH for proper codes for any eligible prevented planting acreage. **Gleaned Acreage:** Refer to the LAM for information on gleaning.
31.	Appraised Potential	Per-acre appraisal in bushels, to tenths, of potential production for the acreage appraised. Refer to paragraph 36, "HSC Appraisal Methods," or paragraph 37, "HSS Appraisal Methods," for additional instructions. If there is no potential on UH acreage, enter "0.0." Refer to the LAM for procedures for documenting zero yield appraisals.
32a.	Moisture %	Moisture percent rounded to nearest tenth (for weight method only. For all other appraisals, make no entry. (Sorghum appraised as mature grain). For corn, this entry is for documentation purposes only. Moisture correction is computed on the Weight Method Appraisal Worksheet.
32b.	Factor	**HSC:** Make no entry. **HSS:** Four-place moisture factor from exhibit 31 (HSS Moisture Factor Table)**.**
33.	Shell %, Factor, or Value	**HSS:** Make no entry. **HSC:** When a weight-method appraisal is made for mature hybrid seed ear corn, enter the shelling percentage factor rounded to whole percent (refer to exhibit 19). Otherwise, make no entry. For mycotoxin-infected production with zero market value, refer to the LAM.
34.	Production Pre QA	**PRELIMINARY AND FINAL:** Result of multiplying column 31 times column 19, and if applicable, multiplying this result times columns 32b times column 33, round result to tenths of a bushel. If no entry in column 31, make no entry.
35.	Quality Factor	**Enter the Dollar Value per bushel determined as follows:** a. For line entries showing appraised production considered as seed production, enter the applicable hybrid dollar value per bushel (in dollars and cents). Calculate the hybrid dollar value per bushel by multiplying the coverage level percent times the approved yield listed on the Hybrid Seed Approved Yield form, (refer to exhibit 4 or exhibit 5 for examples) and dividing the result into the applicable dollar amount of insurance per acre. If no entry in column 34 or column 37, make no entry.

Item Number/Element	Standard
35. Quality Factor (continued)	**Example:** The coverage level is 65%. The approved yield is 40 bushels per acre. The dollar amount of insurance is $352.00 per acre. 65% X 40 bu. per acre = 26.0 bu. per acre $352.00 ÷ 26.0 bu. = $13.54 per bushel (Dollar Value) b. For appraised production considered as non-seed production, enter the local market price of the sorghum or corn on the date of final inspection, taking into account reduction in value due to insurable causes. For appraised non-seed production which cannot be valued, enter the local market price for No. 2 grain sorghum or corn on the date of final inspection. c. If at the time of the appraisal it cannot be determined if the crop will make acceptable seed production, the appraisal shall be considered as seed production. d. Only mature HSS can qualify as non-seed production; all appraised production prior to maturity must be counted as seed. e. Refer to paragraph 14 if, due to insured causes, a Federal or State agency has ordered the appraised crop or production to be destroyed.
36. Production Post QA	**Preliminary and Final:** Result of multiplying column 34 times column 35, rounded to the nearest whole dollar. If no entry in column 34, make no entry.
37. Uninsured Cause	Result of per acre appraisal for uninsured causes (taken from appraisal worksheet or other documentation) multiplied by column 19, times column 35, rounded to whole dollars. Refer to the LAM for information on how to determine uninsured cause appraisals. If no uninsured causes, make no entry." a. Hail and Fire Exclusion not in effect. (1) Enter not less than the insured's dollar amount of insurance per acre, multiplied by column 19 entry for any "P" stage acreage.

<table>
<tr><th>Item Number/Element</th><th>Standard</th></tr>
<tr><td>37. Uninsured Cause (continued)</td><td>(2) On preliminary inspections, advise the insured to keep the harvested production from any acreage damaged solely by uninsured causes separate from other production. Refer to the LAM for information on how to determine uninsured cause appraisals.

(3) For acreage that is damaged partly by uninsured causes, enter the result of multiplying the appraised uninsured loss of production per acre, in bushels to tenths, times column 19 entry, times the column 35 entry (rounded to whole dollars) for any such acreage

b. When there is late-planted acreage, the applicable production guarantee for such acreage is the production guarantee per-acre that has been reduced for late-planted acreage, multiplied by column 19 entry, times the column 35 entry (rounded to whole dollars).

c. Refer to the LAM when a Hail and Fire Exclusion is in effect and damage is from hail or fire.

d. Enter the result of adding uninsured cause appraisals to Hail and Fire Exclusion appraisals.

e. For fire losses, if the insured also has other fire insurance (double coverage), refer to the LAM.</td></tr>
<tr><td>38. Total to Count</td><td>Result of adding item 36 and item 37.</td></tr>
<tr><td>39. Total</td><td>Preliminary: Make no entry.

Final: Total determined acres (column 19), to tenths.</td></tr>
<tr><td>40. Quality</td><td>Check all qualifying conditions that apply to the unit’s appraised and harvested production (refer to the CP and SP), otherwise check “None.”

<table>
<tr><th>Qualifying QA Condition:</th></tr>
<tr><td>Test Weight (TW)</td></tr>
<tr><td>Kernel Damage (KD) and Total Defects</td></tr>
<tr><td>Garlicky (Grade)</td></tr>
<tr><td>Aflatoxin</td></tr>
<tr><td>Vomitoxin</td></tr>
<tr><td>Fumonisin</td></tr>
<tr><td>Dark Roast (for Sunflowers only)</td></tr>
<tr><td>Sclerotinia (for Sunflowers only)</td></tr>
<tr><td>Ergoty (Grade)</td></tr>
<tr><td>COFO (commercially objectionable foreign odor) (includes Musty and Sour Odor)</td></tr>
<tr><td>Other</td></tr>
<tr><td>None</td></tr>
</table></td></tr>
</table>

Item Number/Element	Standard
40. Quality (Continued)	a. For all qualifying QA conditions checked, in the Narrative (or on a Special Report): (1) Document the level for each qualifying QA condition as indicated by approved test results, and the name and location of each testing facility that verifies the presence of the qualifying QA condition and the date of the test(s); or (2) Enter "See documentation included in the claim file" (e.g., include copy of the test facility certificate, grade certificate, summary or settlement sheet, etc., that documents the QA condition). b. If "Other" is checked, in addition to the above documentation requirements, document in the Narrative (or on a Special Report): (1) A description of the qualifying QA condition; (2) The name of the controlling authority that considers this qualifying QA condition to be injurious to human or animal health and why. c. Refer to Part 2, paragraph 14 if, due to insured causes, a Federal or State agency has ordered the appraised crop or production to be destroyed.
41. Mycotoxins exceed FDA, State, or other health organization maximum limits. Check "Yes:"	**Preliminary and Final:** Check "Yes" if any mycotoxins listed in item 40 (including any identified as "Other") exceed the FDA, state, or other health organization maximum limits, otherwise leave blank. Document in the Narrative (or on a Special Report), the disposition of the production that was: a. Sold (Document the name and address of the buyer); or b. Not sold (Document the date(s) of the disposition, how the production was used, or how it was destroyed.). Refer to the LAM and the SP for additional information on claims involving mycotoxins.
42. Totals	Total of entries in columns 34, 36, 37 and 38. If a column has no entries, make no entry.

Narrative Instructions

If more space is needed, document on a Special Report, and enter "See Special Report." Attach the Special Report to the PW.

a.	If no acreage is released on the unit, enter "No acreage released," adjuster's initials, and date.
b.	If notice of damage was given and no inspection is required, enter "No Inspection," the unit number(s), date, and adjuster's initials (do not enter unit numbers for which notice has not been given). The insured's signature is not required.
c.	Explain any uninsured causes, unusual, or controversial cases.
d.	If there is an appraisal in Section I, column 37 for uninsured causes due to a hail/fire exclusion, show the original hail/fire liability per acre and the hail/fire indemnity per acre.
e.	Document the actual appraisal date if an appraisal was performed prior to the adjuster's signature date on the appraisal worksheet, and the date of the appraisal is not recorded on the appraisal worksheet.
f.	State that there is "No other fire insurance" when fire damages or destroys the insured crop and it is determined that the insured has no other fire insurance. Also refer to the LAM.
g.	Explain any errors found on the Summary of Coverage.
h.	Explain any commingled production. Refer to the LAM.
i.	Explain any entry for "Production Not to Count" in Section II, column 62 and/or any production not included in Section II, column 56 or column 49 - 52 entries (e.g., harvested production from uninsured acreage that can be identified separately from the insured acreage in the unit).
j.	Explain a "No" checked in item 44.
k.	Attach a sketch map or aerial photo to identify the total unit: (1) If consent is or has been given to put part of the unit to another use or to replant; (2) If uninsured causes are present; or (3) For unusual or controversial cases. Indicate on the aerial photo or sketch map, the disposition of acreage destroyed or put to other use with or without consent.
l.	Explain any difference between date of inspection and signature dates. For an absentee insured, enter the date of the inspection and the date of mailing the PW for signature.
m.	When any other adjuster or supervisor accompanied the adjuster on the inspection, enter the code number of the other adjuster or supervisor and the date of inspection.
n.	Explain the reason for a "No Indemnity Due" claim. "No Indemnity Due" claims are to be distributed in accordance with the AIP's instructions.
o.	Explain any delayed notices or delayed claims as instructed in the LAM.
p.	Document any authorized estimated acres, as instructed in the LAM, shown in Section I, column 19.
q.	Document the method and calculation used to determine acres for the unit. Refer to the LAM.
r.	Specify the type of insects or disease when the insured cause of damage or loss is listed as insects or disease. List the control measures used and explain why they did not work.

s.	For conditions effecting the unit production (supporting documentation should be included in the insured's claim file): 1. Explain any ".000" quality adjustment (QA) factor entered in Section I, column 35 and Section II, column 65. 2. If mycotoxins are present, document the level based on laboratory test results. 3. If a Federal or State destruction order has been issued, attach to the PW a copy of the Federal or State destruction order and the insured's completed Certification Form. 4. Refer to the LAM for additional documentation requirements.
t.	Document field ID's, date, and method of destruction of mycotoxin-infested corn if it has no market value. For further documentation instructions, refer to the LAM.
u.	Document the name and address of the charitable organization when gleaned acreage is applicable. Refer to the LAM for more information on gleaning.
v.	For all non-seed production, explain the reason for consideration as non-seed production, and show germination percentage for mature production.
w.	Record the Hybrid Seed Company Code.
x.	Document any other pertinent information, including any data to support any factors used to calculate the production.

Section II – Determined Harvested Production

General Information

(1) Account for all harvested production (for all entities sharing in the crop) except production appraised before harvest and shown in Section I because the quantity cannot be determined later (e.g., high moisture grain going into air-tight storage, released for other uses, etc.).

(2) Columns 49 through 52 are for structure measurement entries (Rectangular, Round, Square, conical pile, etc.). If structures are a combination of shapes, break into a series of average measurements, if possible. Enter "Odd Shape" if production is stored in an odd shaped structure. Document measurements on a Special Report or other worksheet used for this purpose.

(3) If farm-stored production has been weighed prior to storage and acceptable weight tickets are available showing gross weights, enter "Weighed and Stored on Farm" in columns 49 through 52. Refer to the LAM for acceptable weight tickets.

(4) For production commercially stored, sold, etc., make entries in columns 49 through 52 as follows:

(a) Name and address of storage facility or buyer.

(b) "Seed," "Fed," etc.

(5) Non-seed production to count depends upon the market value. Determine local market price from a representative sample by contacting local grain dealers and livestock producers.

(6) If acceptable sales or weight tickets are not available, refer to the LAM.

(7) If additional lines are necessary, the data may be entered on a continuation sheet. Use separate lines for:

(a) Separate storage structures.

(b) Varying names and addresses of buyers of sold production.

(c) Varying determinations of production (varying moisture, foreign material (FM), test weight, value, etc.). Average percent of (FM) or moisture can be entered when the elevator has calculated the average on the summary sheet, and the determined average is acceptable to the adjuster. Separate line entries are not otherwise required. Refer to the LAM for instructions.

(d) Varying shares; e.g., 50 percent and 75 percent shares on same unit.

(e) Conical piles. Do not add the cone in the top or bottom of a bin to the height of other grain in the structure. For computing the production in cones and conical piles, refer to the LAM

(8) There will generally be no harvested production entries in items 47 through 66 for preliminary inspections.

(9) If there is harvested production from more than one insured practice (or type) and a separate approved APH yield has been established for each, the harvested production also must be entered on separate lines in items “47” through “66” by type or practice. If production has been commingled, refer to the LAM.

(10) Production to count (bushels per total planted female acre yield) must be based on the amount of harvested production delivered to the seed company's plant prior to any production entering the seed conditioning process (i.e. drying, shelling, screening, etc.), and adjusted for moisture, shelling factor, and foreign material (i.e. husks, stalks, etc.) as necessary.

For the purpose of determining the quantity of mature field production:

(a) Shelled commercial hybrid seed corn will be:

(i) Increased 0.12 percent for each 0.1 percentage point of moisture below 15 percent; or

(ii) Decreased 0.12 percent for each 0.1 percentage point of moisture in excess of 15 percent.

(b) Commercial hybrid sorghum seed production will be:

(i) Increased 0.12 percent for each 0.1 percentage point of moisture below 13.0 percent; or

(ii) Decreased 0.12 percent for each 0.1 percentage point of moisture in excess of 13.0 percent.

(c) Ear corn must be measured at 70 pounds of ear corn equaling 56 pounds (one bushel) of shelled corn. The weight of ear corn required to equal one bushel of shelled corn must be increased 1.5 pounds for each percentage point of moisture in excess of 14 percent.

(d) HSS must be measured at 56 pounds of production equaling one bushel.

(e) All records of harvested field seed corn production, provided by the seed company, must be adjusted to a shelled corn basis of 15.0 percent moisture, and 56-pound test weight.

(f) All records of harvested HSS production, provided by the seed company, must be adjusted to a shelled basis of 13.0 percent moisture, and 56-pound test weight.

(11) For mycotoxin damage, refer to the LAM for special instructions.

Item Number/Element	Standard
43. Date Harvest Completed: (Used to determine if there is a delayed notice or a delayed claim. Refer to the LAM.)	**Preliminary:** Make no entry. **Final:** a. The earlier of the date the entire acreage on the unit was (1) harvested, (2) totally destroyed, (3) put to other use, (4) a combination of harvested, destroyed, or put to other use, or (5) the calendar date for the end of the insurance period. b. If at the time of final inspection (if prior to the end of the insurance period), there is any unharvested insured acreage remaining on the unit that the insured does not intend to harvest; enter "Incomplete." c. If at the time of final inspection (if prior to the end of the insurance period), none of the insured acreage on the unit has been harvested, and the insured does not intend to harvest such acreage, enter "No Harvest." d. If the case involves a Certification Form, enter the date from the Certification Form when the entire unit is put to another use, et, etc. Refer to the LAM.

Form Standards - Production Worksheet (Continued)

Item Number/Element	Standard
44. Damage similar to other farms in the area?	**Preliminary:** Make no entry. **Final:** Check "Yes" or "No." Check "Yes" if the amount and cause of damage due to insurable causes is similar to the experience of other farms in the area. If "No" is checked, explain in the Narrative.
45. Assignment of Indemnity	Check "Yes" only if an assignment of indemnity is in effect for the crop year; otherwise, check "No." Refer to the LAM.
46. Transfer of Right to Indemnity	Check "Yes" only if a transfer of right to indemnity is in effect for the unit for the crop year; otherwise, check "No." Refer to the LAM.
47a. Share	Record only varying shares on same unit to three decimal places.
47b. Field ID	a. If only one practice and/or type of harvested production is listed in Section I, make no entry. b. If more than one practice and/or type of harvested production is listed in Section I, and a separate approved APH yield exists, indicate for each practice/type the corresponding Field ID (from Section I, column 16).
48. Multi-Crop Code	The applicable two-digit code for first crop and second crop. Refer to the LAM for instructions regarding entry of first crop and second crop codes.
49. Length or Diameter	Internal measurement in feet to tenths of structural space occupied by crop. a. Length if rectangular or square. b. Diameter if round or conical pile. Refer to the LAM to convert circumference to diameter if internal diameter measurement is not possible.
50. Width	Internal width measurement in feet to tenths of space occupied by crop in structure if rectangular or square. If round, enter "RND." If conical pile, enter "Cone."
51. Depth	Depth measurement in feet to tenths of space occupied by crop in rectangular or round structure. If conical pile, enter the height of the cone. If there is production in the storage structure from other units or sources, refer to the LAM.
52. Deductions	Cubic feet, to tenths, of crop space displaced by chutes, vents, studs, crossties, etc. Refer to the LAM for computation instructions.
53. Net Cubic Feet	Net cubic feet of crop in the storage structure. Refer to the LAM for computation instructions.
54. Conversion Factor	Enter Conversion Factor as follows: Shelled Corn or Sorghum 0.8 Ground Shelled Corn 0.7 Ground Ear Corn 0.6 Ear Corn 0.4

Item Number/Element	Standard
55. Gross Prod.	Multiply column 53 times column 54, rounded to tenths of a bushel. The result of this calculation represents the amount of gross bushels in the structure.
56. Bu., Ton, Lbs., Cwt.	Circle "Bu." in column heading. Production in bushels, to tenths, before deductions for grain moisture and foreign material for production: a. Weighed and stored on the farm. b. Sold and/or stored in commercial storage - Obtain gross production for the unit from the summary and/or settlement sheets. (Individual load slips only will not suffice unless the storage facility or buyer will not provide summary and/or settlement sheets to the insured, and this is documented in the Narrative.) c. Stored in odd-shaped structures. The adjuster must compute the amount of gross production. (Refer to the LAM for cubic footage and production computations). A copy of all production calculations must be left in the file folder. d. Of ground shelled corn. e. For weighed hybrid seed ear corn, to determine the gross bushels, divide the pounds by 70. Do not enter shelling percent for such corn (70 pounds assumes 80 percent shell). f. For mycotoxin presence in HSC or HSS, enter all production even if it has zero market value. All HSC or HSS delivered to and accepted by the seed company is considered seed production even if the settlement sheet shows some production bought by the seed company as seed and some as non-seed; however, when the availability of seed corn is delivered, some companies will upgrade production normally rejected by separating bad seed from viable seed. When this happens, the adjuster must follow the following steps when working the claim: a. Determine the percentage of germination from the original sample to document that this production does not meet the 80 percent requirement. b. Count as seed production that portion of the production accepted by the seed company after separating. c. Count as non-seed production that portion of production which was removed to increase the sample germination.

Item Number/Element	Standard
57. Shell/Sugar Factor	**HSC** - To determine shelling factor for hybrid seed ear corn: a. Husk 5 lbs. of hybrid seed ear corn. b. Shell all ears and weigh grain. c. Apply weight to exhibit 19 to get shelling percentage factor. d. Enter percentage factor in Column 57. **HSS** - Make no entry.
58a. FM %	Enter FM percent to tenths. Refer to the LAM for entry instructions. Refer to the LAM for FGIS definitions of "FM".
58b. Factor	Enter the three-place decimal factor determined by subtracting the percent of FM from 1.000, or subtract the entry in 58a from 100 and divide by 100. **Example**: For 4 percent, enter ".960."
59a. Moisture %	Enter moisture percent to tenths. Moisture adjustment is applied prior to applying any qualifying adjustment for quality.
59b. Factor	For shelled corn or sorghum, enter the four-place factor from the HSC or HSS Moisture Adjustment Factor Table (exhibit 21 or exhibit 31). For hybrid seed ear corn in excess of 14.0 percent moisture, any portion of a percentage point will be disregarded (e.g., 14.7 = 1.000). Refer to exhibit 20.
60a. Test Wt.	Enter test weight (only when storage structure measurements are entered) in whole pounds (or pounds to tenths if so instructed by the AIP). Refer to the LAM for instructions on determining test weight.
60b. Factor	Combination Test Weight/Pack Factor - Enter the factor from the appropriate table (exhibit 22or exhibit 32) for the square footage of floor space in the storage structure. Refer to the LAM for instructions on calculating floor space of a structure. **HSC** - Combination test weight/pack factors are applicable only to shelled corn and not ear corn, cracked corn, or ground corn. For ear corn, cracked corn, or ground corn, enter the result of dividing the actual test weight by the standard test weight (ear corn must be shelled for the sample), to three decimal places. Refer to the LAM for standard test weights. If the AIP instructs to enter test weights to the nearest tenth, use the nearest ½ pound test weight value on the combination test weight pack factor chart.

Form Standards - Production Worksheet (Continued)

Item Number/Element	Standard
60b. Factor (continued)	For test weights not shown on the chart, multiply the actual test weight by the last available combination test weight pack factor for the appropriate bin size and divide the result by the last available test weight shown on the chart. **Example for Test Weight Not Shown On The Chart:** HSC with a test weight of 65 pounds stored in a less than 255 Sq. Ft. bin 65 (actual test weight) x 1.135 (last available factor) ÷ 64 (last available test weight) = 1.153
61. Adjusted Production	Result of multiplying (column 55 or column 56) x 57 x 58b x 59b x 60b (In bushels rounded to tenths).
62. Prod. Not to Count	Net production not to count, in bushels to tenths, when acceptable records identifying such production are available, from harvested acreage which has been assessed an appraisal of not less than the guarantee per acre, or from other sources (e.g., other units or uninsured acreage) in the same storage structure (if the storage entries include such production). This entry must never exceed production shown on the same line. Explain the total storage structure contents (grain depth, etc.) and any "production not to count" in the Narrative. Make no entry if only the depth for production to count has been entered in column "51," and the depth for production not to count has been entered in the Narrative section. Refer to example in the LAM.
63. Production Pre-QA	Result of subtracting column 62 from column 61, to tenths.
64a. Value	For hybrid seed production, enter, the dollar-and-cents value per bushel for the acreage which produced the hybrid seed. Obtain this value by multiplying the approved yield from the "Hybrid Seed Approved Yield" form (refer to exhibit 4 or exhibit 5) by the coverage level percent and dividing the result INTO the dollar amount of insurance per acre. **Example:** The coverage level is 65%. The approved yield is 40 bushels per acre. The dollar amount of insurance is $352.00 per acre. 65% X 40 bu. per acre = 26.0 bu. per acre $352.00 ÷ 26.0 bu. = $13.54 per bushel (Dollar Value) If entry is made in "64a," make no entry in "64b." Make no entry for Non-Seed Production.

Form Standards - Production Worksheet (Continued)

Item Number/Element	Standard
64b. MKT Price	a. For seed production: make no entry. b. For non-seed (HSC) (HSS) production: (1) Sold, unsold, or otherwise disposed of - Enter the local market price per bushel on the earlier of the day of adjustment or the date such production is sold, taking into account reduction in value due to insurable causes (including mycotoxin). (2) For mycotoxin-infested production with no market value, refer to the LAM for guidelines. (Refer to the LAM for complete Certification Form-use instructions).
65. Quality Factor	Refer to paragraph 14 if, due to insured causes, a Federal or State agency has ordered the appraised crop or production to be destroyed, otherwise make no entry.
66. Production to Count	Enter result from multiplying: a. Column 63 times column 64a for seed production only, (times column 65 if applicable), rounded to whole dollars. b. Column 63 times column 64b for non-seed production only, (times column 65 if applicable), rounded to whole dollars.
67. Total of Column 63	Total of column 63. If no entry in column 63, make no entry.
For items 68 – 72. When separate line entries are made for varying share, stages, APH yields, projected price or harvest price, types, etc., within the unit, and totals need to be kept separate for calculating indemnities, make no entry and follow the AIP's instructions; otherwise, make the following entries.	
68. Section II Total:	**Preliminary and Replant:** Make no entry. **Final:** Total of column 66, to tenths.
69. Section I Total	**Preliminary:** Make no entry. **Final:** Enter figure from Section I, column 38 total.
70. Unit Total	**Preliminary:** Make no entry. **Final:** Total of column 68 and column 69.
71. Allocated Prod	Make no entry.
72. Total APH Prod.	Make no entry.
The following required entries are not illustrated on the PW example below.	
73. Insured's Signature and Date	Insured's (or insured's authorized representative's) signature and date. Before obtaining the signature, review all entries on the PW with the insured (or insured's authorized representative), particularly explaining codes, etc., that may not be readily understood. Final indemnity inspections should be signed on bottom line.

Form Standards - Production Worksheet (Continued)

Item Number/Element	Standard
74. Adjuster's Signature, Code #, and Date	Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. For an absentee insured, enter adjuster's code number only. The signature and date will be entered after the absentee has signed and returned the PW. Final indemnity inspections should be signed on bottom line.
75. Page	**Preliminary:** Page numbers – "1," "2," etc., at the time of inspection. **Final:** Page numbers - (Example: Page 1 of 1, Page 1 of 2, Page 2 of 2, etc.).

Form Standards – Production Worksheet (Continued)

1. Crop/Code #	2. Unit #	3. Location Description	7. Company	ANY COMPANY
Hybrid Seed Corn 0062	0003-0001 BU	SW9-4N-41W	Agency	ANY AGENCY

4. Date(s) of Damage	July
5. Cause(s) of Damage	Drought
6. Insured Cause %	100
12. Additional Units	0002-0001BU
13. Est. Prod. Per Acre	40

8. Name of Insured	I.M. INSURED		
9. Claim #	XXXXXXXX	11. Crop Year	YYYY
10. Policy #	XXXXXXX		
14. Date(s) Notice of Loss	1st MM/DD/YYYY	2nd	Final MM/DD/YYYY
15. Companion Policy(s)			

SECTION I – DETERMINED ACREAGE APPRAISED, PRODUCTION AND ADJUSTMENTS

A. ACTUARIAL

16. Field ID	17. Multi-Crop Code	18. Reported Acres	19. Determined Acres	20. Interest or Share	21. Risk	22. Type	23. Class	24. Sub-Class	25. Intended Use	26. Irr Practice	27. Cropping Practice	28. Organic Practice	29. Stage	30. Use of Acreage
A	NS		5.0	1.000	001	210					003		P	WOC
C	NS		20.0	1.000	001	210					003		UH	Silage
B	NS		75.0	1.000	001	210					003		H	H
		39. TOTAL	100.0											

B. POTENTIAL YIELD

31. Appraised Potential	32a. Moisture % / 32b. Factor	33. Shell %, Factor, or Value	34. Production Pre QA	35. Quality Factor	36. Production Post QA	37. Uninsured Causes	38. Total to Count
						1,760	
10.0			200.0	13.54	2,708		2,708
		42. TOTALS	200.0		2,708	1,760	4,468

40. Quality: TW ☐ KD ☐ Aflatoxin ☐ Vomitoxin ☐ Fumonisin ☐ Garlicky ☐ Dark Roast ☐ Sclerotinia ☐ Ergoty ☐ CoFo ☐ Other ☐ None ☒

41. Mycotoxins exceed FDA, State or other health organization maximum limits. Yes ☐

NARRATIVE (If more space is needed, attach a Special Report) HSC Company - #209 See attached aerial photo for field IDs. Acreage determined from permanent FSA field measurements.

2000 gross bu. qualified as seed. 746 gross bushels is non-seed production due to low germination (70%) caused by drought. Field A was destroyed without consent.

SECTION II – DETERMINED HARVESTED PRODUCTION

43. Date Harvest Completed	44. Damage similar to other farms in the area?	45. Assignment of Indemnity	46. Transfer of Right to Indemnity?
MM/DD/YYYY	Yes X No	Yes No X	Yes No X

A. MEASUREMENTS

47a. Share / 47b. Field ID	48. Multi-Crop Code	49. Length or Diameter	50. Width	51. Depth	52. Deduction
B	NS	ABC SEED COMPANY ANYTOWN, ANY STATE			
B	NS	ABC SEED COMPANY ANYTOWN, ANY STATE			
B	NS	16.0	8.0	8.0	9.0

B. GROSS PRODUCTION

53. Net Cubic Feet	54. Conversion Factor	55. Gross Prod.	56. (Bu) Ton Lbs. CWT
			2,000.0
			340.0
1015	.4	406.0	

C. ADJUSTMENTS TO HARVESTED PRODUCTION

57. Shell/ Sugar Factor	58a. FM% / 58b. Factor	59a. Moisture % / 59b. Factor	60a. Test WT / 60b. Factor	61. Adjusted Production	62. Prod. Not to Count	63. Production Pre-QA	64a. Value / 64b. Mkt. Price	65. Quality Factor	66. Production to Count
				2,000.0		2,000.0	13.54		27,080
				340.0		340.0	2.65		901
1.00		27.2 / .7821	56 / 1.000	317.5		317.5	2.60		826
					67. TOTAL	2657.5	68. Section II Total		28,807
							69. Section I Total		4,468
							70. Unit Total		33,275
							71. Allocated Prod.		
							72. Total APH Prod.		

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Form Standards – Production Worksheet (Continued)

1. Crop/Code #	2. Unit #	3. Location Description	7. Company	ANY COMPANY
HSS 0050	0001-0001 BU	SW1-96N-30W	Agency	ANY AGENCY

4. Date(s) of Damage	Aug 11				
5. Cause(s) of Damage	Hail				
6. Insured Cause %	100				
12. Additional Units	0002-0001BU				
13. Est. Prod. Per Acre	45				

8. Name of Insured	I.M. INSURED		
9. Claim #	XXXXXXXX	11. Crop Year	YYYY
10. Policy #	XXXXXXX		
14. Date(s) Notice of Loss	1st MM/DD/YYYY	2nd	Final MM/DD/YYYY
15. Companion Policy(s)			

SECTION I – DETERMINED ACREAGE APPRAISED, PRODUCTION AND ADJUSTMENTS

A. ACTUARIAL

16. Field ID	17. Multi-Crop Code	18. Reported Acres	19. Determined Acres	20. Interest or Share	21. Risk	22. Type	23. Class	24. Sub-Class	25. Intended Use	26. Irr Practice	27. Cropping Practice	28. Organic Practice	29. Stage	30. Use of Acreage
A	NS		32.1	1.000	001	210					003		UH	TO PASTURE
C	NS		9.5	1.000	001	210					003		UH	SILAGE
B	NS		10.5	1.000	001	210					003		H	H
		39. TOTAL	52.1											

B. POTENTIAL YIELD

31. Appraised Potential	32a. 32b. Moisture % Factor	33. Shell %, Factor, or Value	34. Production Pre QA	35. Quality Factor	36. Production Post QA	37. Uninsured Causes	38. Total to Count
6.9			221.5	9.62	2,131		2,131
2.8			26.6	9.62	256		256
		42. TOTALS	248.1		2,387		2,387

40. Quality: TW ☐ KD ☐ Aflatoxin ☐ Vomitoxin ☐ Fumonisin ☐ Garlicky ☐ Dark Roast ☐ Sclerotinia ☐ Ergoty ☐ CoFo ☐ Other ☐ None ☒

41. Mycotoxins exceed FDA, State or other health organization maximum limits. Yes ☐

NARRATIVE (If more space is needed, attach a Special Report) HSS COMPANY - #209 See attached aerial photo for field IDs. Acreage determined from permanent FSA field measurements.

868.4 gross bu. qualified as seed. 312.3 gross bushels is non-seed production due to low germination (70%) caused by hail.

SECTION II – DETERMINED HARVESTED PRODUCTION

43. Date Harvest Completed	44. Damage similar to other farms in the area?	45. Assignment of Indemnity	46. Transfer of Right to Indemnity?
MM/DD/YYYY	Yes X No	Yes No X	Yes No X

A. MEASUREMENTS

47a. 47b. Share Field ID	48. Multi-Crop Code	49. Length or Diameter	50. Width	51. Depth	52. Deduction
B	NS	ABC SEED COMPANY ANYTOWN, ANY STATE			
B	NS	ABC SEED COMPANY ANYTOWN, ANY STATE			

B. GROSS PRODUCTION

53. Net Cubic Feet	54. Conversion Factor	55. Gross Prod.	56. (Bu) Ton Lbs. CWT
			868.4
			312.3

C. ADJUSTMENTS TO HARVESTED PRODUCTION

57. Shell/ Sugar Factor	58a. 58b. FM% Factor	59a. 59b. Moisture % Factor	60a. 60b. Test WT Factor	61. Adjusted Production	62. Prod. Not to Count	63. Production Pre-QA	64a. 64b. Value Mkt. Price	65. Quality Factor	66. Production to Count
		14.7 .9796		850.7		850.7	9.62		8,184
		14.3 .9844		307.4		307.4	1.75		538
					67. TOTAL	1,158.1	68. Section II Total		8,722
							69. Section I Total		2,387
							70. Unit Total		11,109
							71. Allocated Prod.		
							72. Total APH Prod.		

This form example does not illustrate all required entry items (e.g., signature, dates, etc.). Refer to the above Appraisal Worksheet instructions for required statements and signature entries.

Exhibit 11

Minimum Representative Sample Requirements

Acres in Field or Subfield	Minimum Number of Samples*
0.1 – 10.0	3
*Add one additional sample for each additional 40.0 acres (or fraction thereof) in the field or subfield.	

Row Widths and Lengths Table

Row Width (Inches)	Row Length (Feet) For 1/100 Acre	Row Length (Feet) For 1/1000 Acre	Row Length (Feet) For 1/2000 Acre
42	124.5	12.4	6.2
40	130.7	13.1	6.5
38	137.6	13.8	6.9
36	145.2	14.5	7.3
34	153.7	15.4	7.7
32	163.4	16.3	8.2
30	174.2	17.4	8.7
28	186.7	18.7	9.3
26	201.0	20.1	10.1
24	217.8	21.8	10.9
22	237.6	23.8	11.9
20	261.4	26.1	13.1
18	290.4	29.0	14.5
16	326.7	32.7	16.3
14	373.4	37.3	18.7

For row widths not listed, use the following formula:

$$\frac{43{,}560 \text{ sq. ft./acre} \div \left[\frac{\text{row width in inches}}{12"}\right]}{\begin{array}{c}100 \text{ ft.} \\ \text{(for 1/100 acre)}\end{array} \quad \text{or} \quad \begin{array}{c}1000 \text{ ft.} \\ \text{(for 1/1000 acre)}\end{array}}$$

Example:

$$\frac{43{,}560 \text{ sq. ft./acre} \div \frac{25"}{12"}}{100 \text{ ft.}} = \frac{43{,}560 \text{ sq. ft.} \div 2.083}{100 \text{ ft.}} = \frac{20{,}912.146}{100 \text{ ft.}} = 209.121 \text{ ft. or } 209.1 \text{ ft. row length}$$

Hybrid Seed Corn - Stand Reduction Percent of Potential Remaining From Emergence through 10th Leaf Stages of Growth

Use from emergence through 10th leaf stage. Interpolate as necessary and round to the nearest whole percent. (DO NOT USE AFTER 10TH LEAF STAGE.)

Remaining Plants In Sample (1/100) Acre

ORIGINAL STAND	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	ORIGINAL STAND
400	100	100	99	98	98	97	97	97	96	95	94	92	91	89	87	86	84	82	80	78	76	74	72	69	67	64	61	58	55	52	48	43	37	31	24	19	14	10	5	400
390	100	100	100	99	98	97	97	97	96	95	94	93	91	89	87	86	84	82	80	78	76	74	72	69	67	65	62	59	56	53	49	44	38	32	25	20	15	10	5	390
380		100	100	99	99	98	98	97	96	95	94	93	91	89	87	86	84	82	80	78	76	74	72	69	67	65	62	59	56	53	49	44	39	33	26	21	16	10	5	380
370			100	100	99	99	98	97	96	95	94	93	92	90	88	86	84	82	80	78	76	74	72	69	67	65	62	59	56	53	49	44	39	34	27	22	16	11	5	370
360				100	100	99	99	98	97	96	94	93	93	91	89	87	85	83	81	78	76	74	72	69	67	65	62	59	56	53	50	46	41	35	28	22	17	11	6	360
350					100	100	99	99	98	97	96	95	94	92	90	88	86	84	81	79	77	75	73	71	69	66	64	61	58	55	51	47	42	36	29	23	17	12	6	350
340						100	100	99	99	98	97	96	95	94	92	90	88	85	83	81	79	76	74	72	69	67	64	61	58	55	51	47	42	36	30	24	18	12	6	340
330							100	100	99	98	97	96	95	94	92	91	89	86	84	82	80	78	75	73	70	68	65	62	59	55	51	47	42	37	31	25	19	12	6	330
320								100	99	98	97	96	95	94	93	92	91	89	87	84	82	79	77	74	71	68	65	62	59	55	51	47	43	38	32	26	20	14	8	320
310									100	99	98	97	96	95	94	93	92	90	88	86	84	81	79	76	73	70	67	64	61	57	53	48	44	39	33	27	21	15	9	310
300										100	99	98	97	96	95	94	93	91	89	88	86	83	80	77	75	72	69	66	63	59	55	50	45	40	34	29	23	17	11	300
290											100	99	98	97	96	95	94	92	90	89	87	85	82	79	77	74	71	68	65	61	57	52	47	42	36	31	25	19	11	290
280												100	99	98	97	95	94	93	91	90	88	86	84	81	79	76	73	70	66	63	59	54	49	43	37	33	27	21	12	280
270													100	99	97	96	95	94	93	91	90	88	86	84	82	79	76	72	69	65	60	55	50	45	39	34	28	22	13	270
260														100	99	97	96	95	94	93	91	90	88	86	84	81	78	75	71	67	62	57	52	47	41	36	30	23	14	260
250															100	99	98	97	96	94	93	92	90	88	86	83	80	77	73	69	64	59	54	49	43	37	30	23	15	250
240																100	99	98	97	96	95	94	91	90	88	85	82	78	74	71	66	60	55	50	44	38	31	24	15	240
230																	100	99	98	97	96	95	92	91	89	86	83	79	75	71	67	61	56	51	45	38	31	24	15	230
220																		100	99	98	97	96	93	92	90	87	84	80	76	72	67	62	57	52	46	40	33	25	16	220
210																			100	99	98	96	94	93	91	88	84	80	76	73	68	63	58	53	47	41	34	25	16	210
200																				100	99	97	95	94	92	89	85	81	77	73	69	64	59	54	48	42	35	26	17	200
190																					100	98	96	95	93	90	86	83	79	75	70	65	60	55	49	43	36	27	17	190
180																						100	98	96	94	91	88	85	81	77	72	67	62	57	51	45	36	27	17	180
170																							100	98	96	93	90	87	83	79	74	69	64	59	53	46	37	27	18	170
160																								100	98	95	92	89	85	81	76	71	66	61	55	46	38	28	18	160
150																									100	97	95	92	88	84	79	74	69	64	58	47	38	28	18	150
140																										100	97	94	90	86	82	77	72	67	61	48	39	29	19	140
130																											100	97	94	90	85	80	75	70	64	49	39	29	19	130
120																												100	97	93	88	83	78	73	67	50	40	30	21	120
110																													100	97	92	88	83	78	72	51	40	30	23	110
100																														100	96	92	88	83	77	52	41	31	23	100
90																															100	96	92	87	81	53	41	31	24	90
80																																100	96	91	85	54	42	32	25	80
70																																	100	96	91	55	42	32	26	70
60																																		100	95	56	43	33	27	60
50																																			100	57	43	33	28	50
	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	

EXAMPLE:
To interpolate for 39 remaining plants and 240 original plants (236 original plants, rounded to 240):
39 is .9 of difference between 30 and 40; .9 x 7 (38 - 31) = 6.3
31 plus 6.3 = 37.3 (rounded to 37)

EXAMPLE: (For Remaining Plants of 0 – 10)
To interpolate for 6 remaining plants and 240 original plants:
(236 original plants, rounded to 240)
6 is .6 of difference between 0 and 10;
.6 x 15 (15-0) = 9
0 + 9 = 9

Remaining Plants In Sample (1/100 Acre)

Hybrid Seed Corn - Stand Reduction Percent of potential remaining 11th leaf through 17th Leaf Stages of Growth

Remaining Stand In 1/100 Of An Acre

ORIGINAL STAND 1/100 OF AN ACRE

	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	
400	98	96	94	92	91	89	88	87	86	84	83	82	80	79	78	76	74	73	71	69	66	64	62	59	56	53	50	47	44	40	37	33	29	25	21	17	13	8	4	400
390	100	98	96	94	92	91	89	88	87	85	84	83	81	80	79	77	75	74	72	70	68	65	63	60	57	54	51	48	45	41	37	34	30	26	21	17	13	9	4	390
380		100	98	96	94	92	90	89	88	86	85	84	82	81	79	78	76	75	73	71	69	66	64	61	58	55	52	49	46	42	38	34	30	26	22	18	13	9	4	380
370			100	98	95	94	92	90	89	87	86	85	83	82	80	79	77	76	74	72	70	67	65	62	60	57	53	50	47	43	39	35	31	27	23	18	14	9	5	370
360				100	98	95	93	92	90	88	87	86	84	83	81	80	78	77	75	73	71	69	66	64	61	58	55	51	48	44	40	36	32	28	23	19	14	9	5	360
350					100	97	95	93	91	90	88	87	85	84	82	81	79	78	76	74	72	70	67	65	62	59	56	52	49	45	41	37	33	28	24	19	14	10	5	350
340						100	97	95	93	91	90	88	86	85	84	82	80	79	77	75	73	71	69	66	63	60	57	54	50	46	42	38	34	29	25	20	15	10	5	340
330							100	97	95	93	91	89	88	86	85	83	82	80	78	76	74	72	70	67	65	62	58	55	51	47	43	39	35	30	25	20	15	10	5	330
320								100	97	95	93	91	89	87	86	84	83	81	79	78	76	73	71	69	66	63	60	56	53	49	45	40	36	31	26	21	16	11	5	320
310									100	97	95	93	91	89	87	85	84	82	81	79	77	75	72	70	67	64	61	58	54	50	46	41	37	32	27	22	16	11	5	310
300										100	97	95	92	90	88	87	85	83	82	80	78	76	74	71	69	66	62	59	55	51	47	43	38	33	28	22	17	11	6	300
290											100	97	94	92	90	88	86	85	83	81	79	77	75	73	70	67	64	60	57	53	48	44	39	34	29	23	17	12	6	290
280												100	97	94	92	90	88	86	84	82	81	79	76	74	71	69	65	62	58	54	50	45	40	35	30	24	18	12	6	280
270													100	97	94	92	89	88	86	84	82	80	78	76	73	70	67	64	60	56	51	47	41	36	31	25	19	13	6	270
260														100	97	94	91	89	87	85	83	81	79	77	74	72	69	65	61	57	53	48	43	37	32	26	19	13	7	260
250															100	97	94	91	89	87	85	83	81	78	76	73	70	67	63	59	55	50	44	39	33	27	20	14	7	250
240																100	96	93	91	88	86	84	82	80	78	75	72	69	65	61	56	51	46	40	34	28	21	14	7	240
230																	100	96	93	90	88	86	84	82	79	77	74	70	67	63	58	53	48	42	35	29	22	15	7	230
220																		100	96	93	90	88	85	83	81	78	75	72	69	65	60	55	49	43	37	30	23	15	8	220
210																			100	96	93	90	87	85	82	80	77	74	71	67	62	57	51	45	38	31	24	16	8	210
200																				100	96	92	89	87	84	82	79	76	73	69	64	59	53	47	40	33	25	17	8	200
190																					100	96	92	89	86	84	81	78	75	71	66	61	55	49	42	34	26	18	9	190
180																						100	95	92	88	86	83	80	77	73	69	64	58	51	44	36	28	19	9	180
170																							100	95	91	88	85	82	79	75	71	66	60	54	46	38	29	20	10	170
160																								100	95	91	87	84	81	78	73	69	63	56	49	40	31	21	11	160
150																									100	95	90	87	83	80	76	71	66	59	51	43	33	22	11	150
140																										100	94	90	86	82	79	74	69	62	54	45	35	24	12	140
130																											100	94	89	85	81	77	72	65	57	48	37	26	13	130
120																												100	93	88	84	80	75	69	61	51	40	28	14	120
110																													100	93	88	83	78	72	65	55	43	30	15	110
100																														100	92	87	82	76	69	59	47	33	17	100
90																															100	92	86	80	73	64	51	36	19	90
80																																100	91	84	78	69	56	40	21	80
70																																	100	90	82	74	62	45	24	70
60																																		100	88	80	69	51	28	60
50																																			100	87	76	59	33	50
	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	

Remaining Stand In 1/100 Of An Acre

ORIGINAL STAND 1/100 OF AN ACRE

Hybrid Seed Corn - Hail Stand Reduction Loss For 7th Leaf Through 10th Leaf Stages of Growth

Use from emergence through 10th leaf stage. Interpolate as necessary and round to the nearest whole percent. (Do not use after 10th leaf stage.)

Remaining Plants In Sample (1/100) Acre

ORIGINAL STAND	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10
400	0	0	1	2	2	3	3	3	4	5	6	8	9	11	13	14	16	18	20	22	24	26	28	31	33	36	39	42	45	48	52	57	63	69	76	81	86	90	95
390	0	0	0	1	2	3	3	3	4	5	6	7	9	11	13	14	16	18	20	22	24	26	28	31	33	35	38	41	44	47	51	56	62	68	75	80	85	90	95
380		0	0	1	1	2	2	3	4	5	6	7	9	11	13	14	16	18	20	22	24	26	28	31	33	35	38	41	44	47	51	56	61	67	74	79	84	90	95
370			0	0	1	1	2	3	4	5	6	7	8	10	12	14	16	18	20	22	24	26	28	31	33	35	38	41	44	47	51	56	61	66	73	78	84	89	95
360				0	0	1	1	2	3	4	6	7	7	9	11	13	15	17	19	22	24	26	28	31	33	35	38	41	44	47	50	54	59	65	72	78	83	89	94
350					0	0	1	1	2	3	4	5	6	8	10	12	14	16	19	21	23	25	27	29	31	34	36	39	42	45	49	53	58	64	71	77	83	88	94
340						0	0	1	1	2	3	4	5	6	8	10	12	15	17	19	21	24	26	28	31	33	36	39	42	45	49	53	58	64	70	76	82	88	94
330							0	0	1	2	3	4	5	6	8	9	11	14	16	18	20	22	25	27	30	32	35	38	41	45	49	53	58	63	69	75	81	88	94
320								0	1	2	3	4	5	6	7	8	9	11	13	16	18	21	23	26	29	32	35	38	41	45	49	53	57	62	68	74	80	86	92
310									0	1	2	3	4	5	6	7	8	10	12	14	16	19	21	24	27	30	33	36	39	43	47	52	56	61	67	73	79	85	91
300										0	1	2	3	4	5	6	7	9	11	12	14	17	20	23	25	28	31	34	37	41	45	50	55	60	66	71	77	83	89
290											0	1	2	3	4	5	6	8	10	11	13	15	18	21	23	26	29	32	35	39	43	48	53	58	64	69	75	81	89
280												0	1	2	3	5	6	7	9	10	12	14	16	19	21	24	27	30	34	37	41	46	51	57	63	67	73	79	88
270													0	1	3	4	5	6	7	9	10	12	14	16	18	21	24	28	31	35	40	45	50	55	61	66	72	78	87
260														0	1	3	4	5	6	7	9	10	12	14	16	19	22	25	29	33	38	43	48	53	59	64	70	77	86
250															0	1	2	3	4	6	7	8	10	12	14	17	20	23	27	31	36	41	46	51	57	63	70	77	85
240																0	1	2	3	4	5	6	9	10	12	15	18	22	26	29	34	40	45	50	56	62	69	76	85
230																	0	1	2	3	4	5	8	9	11	14	17	21	25	29	33	39	44	49	55	62	69	76	85
220																		0	1	2	3	4	7	8	10	13	16	20	24	28	33	38	43	48	54	60	67	75	84
210																			0	1	2	4	6	7	9	12	16	20	24	27	32	37	42	47	53	59	66	75	84
200																				0	1	3	5	6	8	11	15	19	23	27	31	36	41	46	52	58	65	74	83
190																					0	2	4	5	7	10	14	17	21	25	30	35	40	45	51	57	64	73	83
180																						0	2	4	6	9	12	15	19	23	28	33	38	43	49	55	64	73	83
170																							0	2	4	7	10	13	17	21	26	31	36	41	47	54	63	73	82
160																								0	2	5	8	11	15	19	24	29	34	39	45	54	62	72	82
150																									0	3	5	8	12	16	21	26	31	36	42	53	62	72	82
140																										0	3	6	10	14	18	23	28	33	39	52	61	71	81
130																											0	3	6	10	15	20	25	30	36	51	61	71	81
120																												0	3	7	12	17	22	27	33	50	60	70	79
110																													0	3	8	12	17	22	28	49	60	70	77
100																														0	4	8	12	17	23	48	59	69	77
90																															0	4	8	13	19	47	59	69	76
80																																0	4	9	15	46	58	68	75
70																																	0	4	9	45	58	68	74
60																																		0	5	44	57	67	73
50																																			0	43	57	67	72
ORIGINAL STAND	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

EXAMPLE: To interpolate for 89 remaining plants and 240 original plants
(236 original plants rounded to 240):
89 is .9 of difference between 90 and 80;
.9 X 6(40 - 34) = 5.4
40 minus 5.4 = 34.6 (rounded to 35)

EXAMPLE: (For Remaining Plants of 0 – 10)
To interpolate for 6 remaining plants and 240 original plants:
(236 original plants rounded to 240)
6 is .6 of difference between 0 and 10;
.6 x 15 (100 – 85) = 9
100 minus 9 = 91

Remaining Plants In Sample (1/100) Acre

Hybrid Seed Corn - Hail Stand Reduction Loss For 11th Leaf Through 17th Leaf Stages of Growth

Use from 11th leaf through 17th leaf stage. Interpolate as necessary and round to the nearest whole percent. (Do not use before 11th leaf stage.)

Remaining Stand In 1/100 Of An Acre

ORIGINAL STAND 1/100 OF AN ACRE	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	ORIGINAL STAND 1/100 OF AN ACRE
400	2	4	6	8	9	11	12	13	14	16	17	18	20	21	22	24	26	27	29	31	34	36	38	41	44	47	50	53	56	60	63	67	71	75	79	83	87	92	96	400
390	0	2	4	6	8	9	11	12	13	15	16	17	19	20	21	23	25	26	28	30	32	35	37	40	43	46	49	52	55	59	63	66	70	74	79	83	87	91	96	390
380		0	2	4	6	8	10	11	12	14	15	16	18	19	21	22	24	25	27	29	31	34	36	39	42	45	48	51	54	58	62	66	70	74	78	82	87	91	96	380
370			0	2	5	6	8	10	11	13	14	15	17	18	20	21	23	24	26	28	30	33	35	38	40	43	47	50	53	57	61	65	69	73	77	82	86	91	95	370
360				0	2	5	7	8	10	12	13	14	16	17	19	20	22	23	25	27	29	31	34	36	39	42	45	49	52	56	60	64	68	72	77	81	86	91	95	360
350					0	3	5	7	9	10	12	13	15	16	18	19	21	22	24	26	28	30	33	35	38	41	44	48	51	55	59	63	67	72	76	81	86	90	95	350
340						0	3	5	7	9	10	12	14	15	16	18	20	21	23	25	27	29	31	34	37	40	43	46	50	54	58	62	66	71	75	80	85	90	95	340
330							0	3	5	7	9	11	12	14	15	17	18	20	22	24	26	28	30	33	35	38	42	45	49	53	57	61	65	70	75	80	85	90	95	330
320								0	3	5	7	9	11	13	14	16	17	19	21	22	24	27	29	31	34	37	40	44	47	51	55	60	64	69	74	79	84	89	95	320
310									0	3	5	7	9	11	13	15	16	18	19	21	23	25	28	30	33	36	39	42	46	50	54	59	63	68	73	78	84	89	95	310
300										0	3	5	8	10	12	13	15	17	18	20	22	24	26	29	31	34	38	41	45	49	53	57	62	67	72	78	83	89	94	300
290											0	3	6	8	10	12	14	15	17	19	21	23	25	27	30	33	36	40	43	47	52	56	61	66	71	77	83	88	94	290
280												0	3	6	8	10	12	14	16	18	19	21	24	26	29	31	35	38	42	46	50	55	60	65	70	76	82	88	94	280
270													0	3	6	8	11	12	14	16	18	20	22	24	27	30	33	36	40	44	49	53	59	64	69	75	81	87	94	270
260														0	3	6	9	11	13	15	17	19	21	23	26	28	31	35	39	43	47	52	57	63	68	74	81	87	93	260
250															0	3	6	9	11	13	15	17	19	22	24	27	30	33	37	41	45	50	56	61	67	73	80	86	93	250
240																0	4	7	9	12	14	16	18	20	22	25	28	31	35	39	44	49	54	60	66	72	79	86	93	240
230																	0	4	7	10	12	14	16	18	21	23	26	30	33	37	42	47	52	58	65	71	78	85	93	230
220																		0	4	7	10	12	15	17	19	22	25	28	31	35	40	45	51	57	63	70	77	85	92	220
210																			0	4	7	10	13	15	18	20	23	26	29	33	38	43	49	55	62	69	76	84	92	210
200																				0	4	8	11	13	16	18	21	24	27	31	36	41	47	53	60	67	75	83	92	200
190																					0	4	8	11	14	16	19	22	25	29	34	39	45	51	58	66	74	82	91	190
180																						0	5	8	12	14	17	20	23	27	31	36	42	49	56	64	72	81	91	180
170																							0	5	9	12	15	18	21	25	29	34	40	46	54	62	71	80	90	170
160																								0	5	9	13	16	19	22	27	31	37	44	51	60	69	79	89	160
150																									0	5	10	13	17	20	24	29	34	41	49	57	67	78	89	150
140																										0	6	10	14	18	21	26	31	38	46	55	65	76	88	140
130																											0	6	11	15	19	23	28	35	43	52	63	74	87	130
120																												0	7	12	16	20	25	31	39	49	60	72	86	120
110																													0	7	12	17	22	28	35	45	57	70	85	110
100																														0	8	13	18	24	31	41	53	67	83	100
90																															0	8	14	20	27	36	49	64	81	90
80																																0	9	16	22	31	44	60	79	80
70																																	0	10	18	26	38	55	76	70
60																																		0	12	20	31	49	72	60
50																																			0	13	24	41	67	50
	390	380	370	360	350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	

Remaining Stand In 1/100 Of An Acre

Hybrid Seed Corn - Leaf Loss Chart

Stage of Growth	Percent Leaf Area Destroyed																		
	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	Percent Production Lost																		
7-leaf	0	0	0	0	0	0	1	1	2	3	4	4	5	5	6	7	8	9	9
8-leaf	0	0	0	0	0	1	1	2	3	4	5	5	6	6	7	8	9	10	11
9-leaf	0	0	0	1	1	2	2	3	4	5	6	6	7	7	9	10	11	12	13
10-leaf	0	0	0	1	2	3	4	5	6	7	8	8	9	9	11	13	14	15	16
11-leaf	0	0	1	1	2	3	5	6	7	8	9	10	11	12	14	16	18	20	22
12-leaf	0	0	1	2	3	4	5	7	9	10	11	13	15	16	18	20	23	26	28
13-leaf	0	1	1	2	3	4	6	8	10	11	13	15	17	19	22	25	28	31	34
14-leaf	0	1	2	3	4	6	8	10	13	15	17	20	22	25	28	32	36	40	44
15-leaf	1	1	2	3	5	7	9	12	15	17	20	23	26	30	34	38	42	46	51
16-leaf	1	2	3	4	6	8	11	14	18	20	23	27	31	36	40	44	49	55	61
17-leaf	2	3	4	5	7	9	13	17	21	24	28	32	37	43	48	53	59	65	72
18-leaf	2	3	5	7	9	11	15	19	24	28	33	38	44	50	56	62	69	76	84
19-21 leaf	3	4	6	8	11	14	18	22	27	32	38	43	51	57	64	71	79	87	96
Tassel	3	5	7	9	13	17	21	26	31	36	42	48	55	62	68	75	83	91	100
Silked	3	5	7	9	12	16	20	24	29	34	39	45	51	58	65	72	80	88	97
Silks brown	2	4	6	8	11	15	18	22	27	31	36	41	47	54	60	66	74	81	90
Pre-blister	2	3	5	7	10	13	16	20	24	28	32	37	43	49	54	60	66	73	81
Blister	2	3	5	7	10	13	16	19	22	26	30	34	39	45	50	55	60	66	73
Early milk	2	3	4	6	8	11	14	17	20	24	28	32	36	41	45	50	55	60	66
Milk	1	2	3	5	7	9	12	15	18	21	24	28	32	37	41	45	49	54	59
Late milk	1	2	3	4	6	8	10	12	15	18	21	24	28	32	35	38	42	46	50
Soft dough	1	1	2	2	4	6	8	10	12	14	17	20	23	26	29	32	35	38	41
Early dent		0	1	1	2	3	5	7	9	11	13	15	18	21	23	25	27	29	32
Dent	0	0	0	1	2	3	4	6	7	8	10	12	14	15	17	19	20	21	23
Late dent	0	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Nearly mature	0	0	0	0	0	0	0	0	1	2	3	4	5	5	6	6	7	7	8
Mature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

For percentage of production loss not on the chart, interpolate as follows: Locate the percent leaf area destroyed directly below and above the actual percent of leaf area destroyed (taken from item 19 on the appraisal worksheet). Subtract the lower number from the actual percent and divide by 5. Multiply this result by the difference between the lower and higher production lost percentages. Add this amount to the percent production lost lower number, in percent to tenths.

Example: Stage is 18th leaf. Actual percent of leaf area destroyed is 42. 40 and 45 (percents directly below and above). 42 – 40 = 2
2 ÷ 5 = .4 19 – 15 = 4 4 x .4 = 1.6 1.6 + 15 = 16.6 16.6 % will be the percent damage for leaf destruction entered in item 20 on the appraisal worksheet.

Hybrid Seed Corn - Stage Modification

Actual Leaves at Date of Loss	Total Actual Leaves To Be Produced (Ultimate No. of Leaves)													
	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Modified Stage													
5	11	10	9	8	8	7	6	5	5	5				
6	13	12	11	10	9	8	7	6	6	6	5			
7	14	13	12	11	10	9	8	7	7	7	6	5		
8	15	14	13	12	11	10	9	8	8	8	7	6	5	
9	16	15	14	13	12	11	10	9	9	9	8	7	6	5
10	17	16	15	14	13	12	11	10	10	10	9	8	7	6
11	18	17	16	15	14	13	12	11	11	11	10	9	8	7
12	19/21	18	17	16	15	14	13	12	12	12	11	10	9	8
13		19/21	18	17	16	15	14	13	13	13	12	11	10	9
14			19/21	18	17	16	15	14	14	14	13	12	11	10
15				19/21	18	17	16	15	15	15	14	13	12	11
16					19/21	18	17	16	16	16	15	14	13	12
17						19/21	18	17	17	17	16	15	14	13
18							19/21	18	18	18	17	16	15	14
19								19/21	19/21	19/21	18	17	16	15
20									19/21	19/21	19/21	18	17	16
21										19/21	19/21	19/21	18	17
22											19/21	19/21	19/21	18
23												19/21	19/21	19/21
24													19/21	19/21
25														19/21

Hybrid Seed Ear Corn - Shelling Percentage Factors

Wt. Of Ear Corn Sample: (lbs.)	Wt. of Shelled Corn Sample: (lbs.)	Shelling Percentage Factor
5	4.4	1.10
5	4.3	1.08
5	4.2	1.05
5	4.1	1.03
5	4.0	1.00
5	3.9	.98
5	3.8	.95
5	3.7	.93
5	3.6	.90
5	3.5	.88
5	3.4	.85
5	3.3	.83
5	3.2	.80
5	3.1	.78
5	3.0	.75
5	2.9	.73
5	2.8	.70
5	2.7	.68
5	2.6	.65
5	2.5	.63
5	2.4	.60
5	2.3	.58
5	2.2	.55
5	2.1	.53
5	2.0	.50

Exhibit 20

Hybrid Seed Corn - Conversion Factor Table for Ear Corn to Bushels of Shelled Corn

(14 Percent Moisture and 70 Pounds per Bushel)

Percent Moisture	Factor	Percent Moisture	Factor
14.0	1.0000	28.0	.7692
15.0	.9790	29.0	.7568
16.0	.9589	30.0	.7747
17.0	.9396	31.0	.7330
18.0	.9211	32.0	.7216
19.0	.9032	33.0	.7107
20.0	.8861	34.0	.7000
21.0	.8696	35.0	.6897
22.0	.8537	36.0	.6796
23.0	.8383	37.0	.6699
24.0	.8235	38.0	.6604
25.0	.8092	39.0	.6512
26.0	.7955	40.0	.6422
27.0	.7821		

Enter the four-place factor for ear corn in excess of 14.0 percent moisture, (any portion of a percentage point will be disregarded 14.7 = 1.0000). [15 percent moisture ear corn = (70 + 1.5 = 71.5) 71.5 pounds per bushel (71.5 x .9790 = 70)].

Hybrid Seed Corn - Moisture Adjustment Factors

MOISTURE ADJUSTMENT FACTOR TABLE										
Whole Percent Moisture	**TENTHS OF PERCENT - MOISTURE**									
	.0	**.1**	**.2**	**.3**	**.4**	**.5**	**.6**	**.7**	**.8**	**.9**
10	1.0600	1.0588	1.0576	1.0564	1.0552	1.0540	1.0528	1.0516	1.0504	1.0492
11	1.0480	1.0468	1.0456	1.0444	1.0432	1.0420	1.0408	1.0396	1.0384	1.0372
12	1.0360	1.0348	1.0336	1.0324	1.0312	1.0300	1.0288	1.0276	1.0264	1.0252
13	1.0240	1.0228	1.0216	1.0204	1.0192	1.0180	1.0168	1.0156	1.0144	1.0132
14	1.0120	1.0108	1.0096	1.0084	1.0072	1.0060	1.0048	1.0036	1.0024	1.0012
15	1.000	.9988	.9976	.9964	.9952	.9940	.9928	.9916	.9904	.9892
16	.9880	.9868	.9856	.9844	.9832	.9820	.9808	.9796	.9784	.9772
17	.9760	.9748	.9736	.9724	.9712	.9700	.9688	.9676	.9664	.9652
18	.9640	.9628	.9616	.9604	.9592	.9580	.9568	.9556	.9544	.9532
19	.9520	.9508	.9496	.9484	.9472	.9460	.9448	.9436	.9424	.9412
20	.9400	.9388	.9376	.9364	.9352	.9340	.9328	.9316	.9304	.9292
21	.9280	.9268	.9256	.9244	.9232	.9220	.9208	.9196	.9184	.9172
22	.9160	.9148	.9136	.9124	.9112	.9100	.9088	.9076	.9064	.9052
23	.9040	.9028	.9016	.9004	.8992	.8980	.8968	.8956	.8944	.8932
24	.8920	.8908	.8896	.8884	.8872	.8860	.8848	.8836	.8824	.8812
25	.8800	.8788	.8776	.8764	.8752	.8740	.8728	.8716	.8704	.8692
26	.8680	.8668	.8656	.8644	.8632	.8620	.8608	.8596	.8584	.8572
27	.8560	.8548	.8536	.8524	.8512	.8500	.8488	.8476	.8464	.8452
28	.8440	.8428	.8416	.8404	.8392	.8380	.8368	.8356	.8344	.8332
29	.8320	.8308	.8296	.8284	.8272	.8260	.8248	.8236	.8224	.8212
30	.8200	.8188	.8176	.8164	.8152	.8140	.8128	.8116	.8104	.8092
31	.8080	.8068	.8056	.8044	.8032	.8020	.8008	.7996	.7984	.7972
32	.7960	.7948	.7936	.7924	.7912	.7900	.7888	.7876	.7864	.7852
33	.7840	.7828	.7816	.7804	.7792	.7780	.7768	.7756	.7744	.7732
34	.7720	.7708	.7696	.7684	.7672	.7660	.7648	.7636	.7624	.7612
35	.7600	.7588	.7576	.7564	.7552	.7540	.7528	.7516	.7504	.7492
36	.7480	.7468	.7456	.7444	.7432	.7420	.7408	.7396	.7384	.7372
37	.7360	.7348	.7336	.7324	.7312	.7300	.7288	.7276	.7264	.7252
38	.7240	.7228	.7216	.7204	.7192	.7180	.7168	.7156	.7144	.7132
39	.7120	.7108	.7096	.7084	.7072	.7060	.7048	.7036	.7024	.7012
40	.7000	.6988	.6976	.6964	.6952	.6940	.6928	.6916	.6904	.6892

Exhibit 22

Hybrid Seed Corn – Combination Test Weight and Pack Factor Table

Test Weight	Less Than 255 Sq. Ft. -	255 Sq. Ft. to 461 Sq. Ft. -	462 Sq. Ft. to 767 Sq. Ft. -	768 Sq. Ft. to 1384 Sq. Ft. -	1385 Sq. Ft. to 2289 Sq. Ft. -	2290 or Over Sq. Ft. -
30.0	0.587	0.594	0.603	0.610	0.610	0.610
30.5	0.596	0.603	0.612	0.619	0.619	0.619
31.0	0.605	0.612	0.622	0.628	0.628	0.628
31.5	0.614	0.621	0.631	0.638	0.638	0.638
32.0	0.623	0.630	0.640	0.647	0.647	0.647
32.5	0.632	0.639	0.649	0.656	0.656	0.656
33.0	0.641	0.648	0.658	0.665	0.665	0.665
33.5	0.649	0.657	0.667	0.674	0.674	0.674
34.0	0.658	0.665	0.676	0.684	0.684	0.684
34.5	0.667	0.674	0.685	0.693	0.693	0.693
35.0	0.676	0.683	0.694	0.702	0.702	0.702
35.5	0.684	0.692	0.703	0.711	0.711	0.711
36.0	0.693	0.701	0.712	0.720	0.720	0.720
36.5	0.702	0.709	0.721	0.729	0.729	0.729
37.0	0.710	0.718	0.730	0.738	0.738	0.738
37.5	0.719	0.727	0.739	0.747	0.747	0.747
38.0	0.727	0.736	0.748	0.756	0.756	0.756
38.5	0.736	0.744	0.757	0.765	0.765	0.765
39.0	0.744	0.753	0.765	0.774	0.774	0.774
39.5	0.753	0.761	0.774	0.783	0.783	0.783
40.0	0.761	0.770	0.783	0.791	0.791	0.791
40.5	0.770	0.779	0.792	0.800	0.800	0.800
41.0	0.778	0.787	0.800	0.809	0.809	0.809
41.5	0.787	0.796	0.809	0.818	0.818	0.818
42.0	0.795	0.804	0.818	0.841	0.853	0.871
42.5	0.803	0.812	0.826	0.849	0.861	0.879
43.0	0.812	0.821	0.835	0.857	0.869	0.887
43.5	0.820	0.829	0.843	0.865	0.877	0.895
44.0	0.828	0.838	0.852	0.873	0.885	0.903
44.5	0.836	0.846	0.860	0.881	0.893	0.911
45.0	0.845	0.854	0.869	0.889	0.901	0.919
45.5	0.853	0.862	0.877	0.897	0.909	0.927
46.0	0.861	0.871	0.886	0.905	0.917	0.935
46.5	0.869	0.879	0.894	0.913	0.925	0.943
47.0	0.877	0.887	0.902	0.921	0.933	0.951
47.5	0.885	0.895	0.911	0.929	0.941	0.959
48.0	0.893	0.903	0.919	0.937	0.949	0.967
48.5	0.901	0.912	0.927	0.945	0.957	0.975
49.0	0.909	0.920	0.935	0.953	0.965	0.983
49.5	0.917	0.928	0.944	0.961	0.973	0.991

Hybrid Seed Corn – Combination Test Weight and Pack Factor Table (Continued)

Test Weight	Less Than 255 Sq. Ft. -	255 Sq. Ft. to 461 Sq. Ft. -	462 Sq. Ft. to 767 Sq. Ft. -	768 Sq. Ft. to 1384 Sq. Ft. -	1385 Sq. Ft. to 2289 Sq. Ft. -	2290 or Over Sq. Ft. -
50.0	0.925	0.936	0.952	0.969	0.981	0.999
50.5	0.933	0.944	0.960	0.978	0.990	1.009
51.0	0.941	0.952	0.968	0.986	0.998	1.017
51.5	0.949	0.960	0.976	0.994	1.006	1.025
52.0	0.956	0.968	0.984	1.003	1.015	1.034
52.5	0.964	0.975	0.992	1.011	1.024	1.043
53.0	0.972	0.983	1.000	1.019	1.032	1.051
53.5	0.980	0.991	1.008	1.027	1.040	1.059
54.0	0.987	0.999	1.016	1.036	1.049	1.069
54.5	0.995	1.007	1.024	1.044	1.057	1.077
55.0	1.003	1.015	1.032	1.052	1.065	1.085
55.5	1.010	1.022	1.040	1.060	1.073	1.094
56.0	1.018	1.030	1.048	1.068	1.081	1.102
56.5	1.026	1.038	1.056	1.076	1.089	1.110
57.0	1.033	1.045	1.064	1.084	1.097	1.118
57.5	1.041	1.053	1.071	1.092	1.105	1.126
58.0	1.048	1.061	1.079	1.100	1.113	1.134
58.5	1.056	1.068	1.087	1.108	1.122	1.143
59.0	1.063	1.076	1.095	1.116	1.130	1.151
59.5	1.070	1.083	1.102	1.123	1.138	1.160
60.0	1.078	1.091	1.110	1.131	1.146	1.168
60.5	1.085	1.098	1.118	1.139	1.153	1.175
61.0	1.093	1.106	1.125	1.147	1.161	1.183
61.5	1.100	1.113	1.133	1.155	1.169	1.191
62.0	1.107	1.120	1.140	1.163	1.177	1.199
62.5	1.114	1.127	1.147	1.171	1.185	1.207
63.0	1.121	1.134	1.154	1.179	1.193	1.215
63.5	1.128	1.141	1.161	1.187	1.201	1.223
64.0	1.135	1.148	1.168	1.195	1.209	1.231

Applicable only to shelled corn. If the actual test weight is not shown on the chart, refer to exhibit 10, column 60b for instructions.

Hybrid Seed Corn - Terminology

Aspirators/Gravity Table – Air operated process which removes undesirable kernels. Method by which low germinating seed can be separated from high germinating seed.

Blending – (a) the mixing of at least 20 percent fertile with male sterile seed in order to insure pollination; (b) The mixing of not more than 25 percent reserve seed with new crop seed.

Cleaning – Process used to remove most cracked kernels and other foreign matter using round and slotted hole screens (25/64 round hole to 12/64 slotted).

Condemned – Rejection of areas found unsuitable for harvest as seed line.

Contamination – Pollination of the seed line by other than the donor male line (self or outside source pollination).

Cross, Double – Plants resulting from the crossing of 2 single crosses.

Cross, Single – Plants resulting from the crossing of 2 inbred lines.

Cross, Three Way – Plants resulting from the crossing of a single cross and an inbred line.

Detasseling – Removal of the tassel from the female (seed line) plants before pollination occurs so as to prevent self-pollination.

Drying – Process of removing moisture from the ear corn (30-40% down to 10-12%) using low heat (100-110 degrees) and forced air in a 4-5 day process.

Fast Green Test – A staining process which tests for mechanical damage done by insects or rough handling during harvest or conditioning.

Germination Cold Test – A seed evaluation process for determining potential field emergence under unfavorable conditions (7 days @ 50 then 7 days @ 77 degrees with light).

Germination Warm Test – A germination test for determining the percent germination producing normal seedlings under favorable conditions (warm, wet environment – 7 days @ 77 degrees).

Heat Units – A measurement using degree days to determine approximate dates for tasseling and maturity (100 heat units to germinate: 600 to 800 heat units to pollination).

Husking Bed – Machinery which removes husks from the ear before the corn is sorted.

Hybrid Seed Corn – Product of crosses between two unrelated genetic lines (strains) of corn.

Inbred – Self-pollinated pure genetic line.

Hybrid Seed Corn - Terminology (Continued)

Isolation – Area required to be planted to either the donor male line or some crop other than corn in order to prevent genetic contamination of the seed line from wind-born pollen from neighboring fields. (The smaller the field the larger the percent of isolation; prevailing winds require more isolation on the South and West sides.)

Male Line – The male parent, pollen donor, or pollinator (which is not insurable).

Male-Sterile Cytoplasm – Plants which have a sterile gene that prevents the production of viable pollen.

Nick – The matching of the stages of development between the male lines (pollination) and the seed line (silking) to insure proper pollination.

Non-Seed Production To Count – All corn not qualifying as seed due to insurable causes for which there is a market value.

Open Pollinated Corn – Forerunner to HSC which lacked vigor, and disease resistance, etc.

Restorer Pollinators – Plants which have a gene that will restore a male sterile seed line to fertile in the next generation.

Rogue – Off-type plant or impurity.

Scalping – A screening process used to remove cobs and dirt (normally prior to storage).

Seed Line – Female parent plants (only insurable plants).

Seed Production To Count – (Refer to the CP for details.)

Shelling – The removal of the grain from the cob. Hybrid seed requires the use of a reduced cylinder speed to minimize kernel damage.

Sister Line – Two inbred lines of similar type (family or Strain).

Sizing – Separation of seed corn by kernel sized in 2-3/64 increments and by “rounds” or “flats.”

Sorting – Removal by hand of all off-type ears (rogues) before drying.

Tetrazolium Test – A staining process that allows for a quick estimate of seed viability by identifying cell damage.

Treating – Application of a fungicide to protect seedlings during germination and emergence.

Hybrid Seed Corn - Stage Characteristics

All Stage are based on 50 percent of the plants in the sample at or beyond a given phase of development.

STAGE OF GROWTH (LEAF IS 40 TO 50 PERCENT EXPOSED AND IS USUALLY THE UPPERMOST LEAF TIP POINTING BELOW A HORIZONTAL LINE	AVERAGE TIME INTERVAL (THIS STAGE TO NEXT)	COLLAR OF THIS LEAF IS VISIBLE	TIP OF THIS LEAF IS VISIBLE	PERCENT OF LEAF AREA EXPOSED
7th Leaf	3 days	5th	9th	6
8th Leaf	3 days	6th	10th	10
9th Leaf	3 days	7th	11th	16
10th Leaf	3 days	7th	12th	23
11th Leaf	3 days	8th	13th	31
12th Leaf	3 days	9th	14th	41
13th Leaf	3 days	10th	15th	50
14th Leaf	3 days	11th	16th	60
15th Leaf	3 days	12th	17th	69
16th Leaf	3 days	13th	18th	77
17th Leaf	3 days	14th	---	84
18th Leaf	2 days	15th	----	94
19-21 Leaf	2 days	Tassel and ear shoot emerging but not fully extended. Removal of husks will show the silk to be shorter than cob. The last leaves of the plant are in the process of becoming fully extended. Elongation of upper nodes is not complete.		96

Hybrid Seed Corn - Stage Characteristics (Continued)

NAME OF STAGE	AVERAGE TIME INTERVAL (THIS STAGE TO NEXT)	CHARACTERISTICS	PERCENT OF LEAF AREA EXPOSED
Tasseled	4 days	Tassel fully extended; ear shoot exposed but no silk showing. Husks opened on the ear shoot would show the silk longer than cob. No pollen evident. Plant has reached maximum size.	99
Silked	4 days	Pollination period. Silks have emerged. Tassel is shedding pollen.	100
Silks Brown	5 days	Pollination period almost complete. Seventy-five percent of silks on ear shoot showing a purple to brown color. Silks are not dry to the touch even though the color has changed to purplish brown.	
Pre-Blister	4 days	Pollination period is complete. Silks are brown but not dry. No fluid in seed coat and kernel has appearance of a pimple.	
Blister	4 days	Kernels on cob appear as watery blisters. Kernel is white fluid is colorless. Removal of fluid from kernel would leave only hull.	
Early Milk	4 days	Beginning of roasting ear stage. Kernels changing in color from white to yellow. Kernels of seed coat starting to show slight yellow appearance. Thin chalky or milky substance in kernels.	
Milk	5 days	Prime roasting ear stage. Full yellow color. Cob has reached its maximum length. Milky fluid in kernel, no solid substance.	
Late Milk	4 days	Milky fluid thickening and solids forming at the end opposite point of kernel.	
Soft Dough	5 days	Past prime roasting ear stage. Pasty or semi-solid. First few dents are showing near butt end. Kernels still produce a milky substance when squeezed.	
Early Dent	5 days	Kernels along entire ear beginning to dent. Thick gummy substance will be evident when kernel is squeezed but kernels will squirt milk when mashed.	
Dent	5 days	Most kernels dented or denting. Kernel can be cut easily with fingernail. While most kernels will not squirt milk when squeezed, there will be evidence of milk in the top of some kernels.	
Late Dent	5 days	All kernels are dented. The kernels are drying down from the top where a small hard white layer of starch is forming.	
Nearly Mature	5 days	Hull on opposite side of embryo has a shiny hardened appearance nearly halfway to cob. Kernel is not hard or brittle.	
Fully Mature	----	Physiological maturity has been reached and the moisture level is below 40 percent on most Corn Belt hybrids. Shiny hardened appearance of hull on opposite side of embryo has extended to the cob. Dry matter accumulation has ceased.	

NOTE: See exhibit 25, Figure A, B, and C Descriptive Pictures of the Corn Plant.

Hybrid Seed Corn – Plant and Kernel Characteristics

Figure A

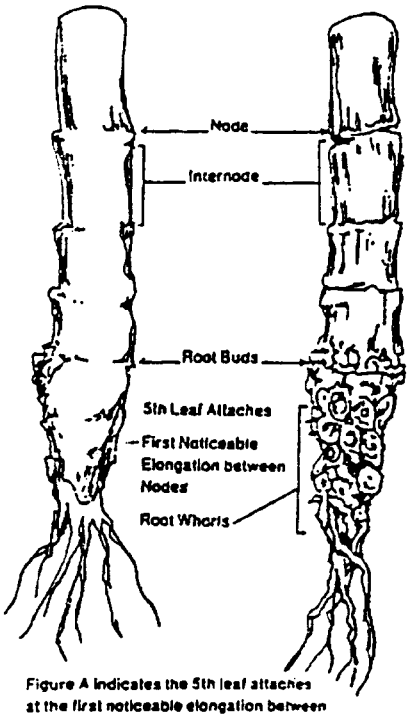


Figure A indicates the 5th leaf attaches at the first noticeable elongation between nodes starting at the root end.

Figure B

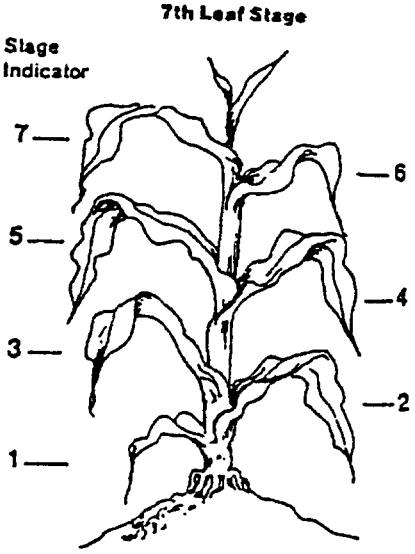


Figure B indicates that the stage indicator leaf is that leaf which is 40 to 50 percent exposed and is usually the uppermost leaf that is pointing below a horizontal line.

FIGURE C

Side Opposite Germ Area

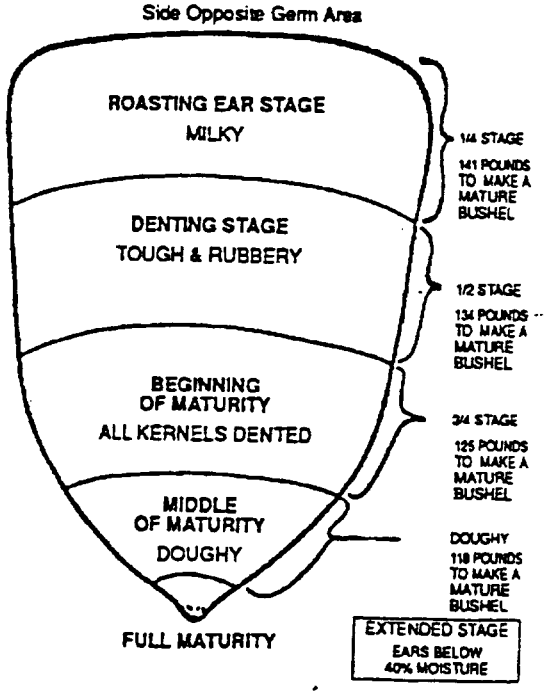


Exhibit 26

Hybrid Sorghum Seed - Stand Reduction Chart

% of Stand Remaining	Rounded Percent of Stand to the Nearest 5 Percent																			
	100	**95**	**90**	**85**	**80**	**75**	**70**	**65**	**60**	**55**	**50**	**45**	**40**	**35**	**30**	**25**	**20**	**15**	**10**	**5**
% of Potential Production Remaining Through the 19th Leaf Stage	100	98	96	93	91	88	85	82	79	76	72	68	63	57	50	44	35	26	17	9
% of Potential Production Remaining After the 19th Leaf Stage	100	95	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5

Hybrid Sorghum Seed - Hail Stand Reduction Chart

% of Stand Remaining	Rounded Percent of Stand to the Nearest 5 Percent																			
	100	**95**	**90**	**85**	**80**	**75**	**70**	**65**	**60**	**55**	**50**	**45**	**40**	**35**	**30**	**25**	**20**	**15**	**10**	**5**
% of Damage Beginning With 10th Leaf Stage Through the 19th Leaf Stage	0	2	4	7	9	12	15	18	21	24	28	32	37	43	50	56	65	74	83	91
% of Damage After the 19th Leaf Stage	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95

Hybrid Sorghum Seed - Threshing Factor Table

Weight of Grain (Whole Pounds)	Tenths of Pounds									
	0.0	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**
0	.00	.03	.05	.08	.11	.13	.16	.19	.21	.24
1	.27	.29	.32	.35	.37	.40	.43	.45	.48	.51
2	.53	.56	.59	.61	.64	.67	.69	72	.75	.77
3	.80	.83	.85	.88	.91	.93	.96	.99	---	---

Hybrid Sorghum Seed - Net Percent of Head Damage Chart

Gross Percent of Head Damage	Percent of Damage From Stand Reduction																		
	5	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**
5	5	5	4	4	4	4	3	3	3	3	3	2	2	1	1	1	1	0	0
10	10	9	9	8	8	7	7	6	6	5	4	4	3	3	2	2	1	1	0
15	14	14	13	12	11	11	10	9	8	8	7	6	5	4	4	3	2	1	1
20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
25	24	23	21	20	19	18	16	15	14	13	11	10	9	7	6	5	4	2	1
30	29	26	26	24	23	21	20	18	17	15	13	12	10	9	7	6	4	3	1
35	33	32	30	28	26	25	23	21	19	18	16	14	12	10	9	7	5	3	2
40	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2
45	43	41	38	36	34	32	29	27	25	23	20	18	16	13	11	9	7	4	2
50	48	45	43	40	38	35	33	30	28	25	22	20	17	15	12	10	7	5	2
55	52	49	46	44	41	38	36	33	30	27	25	22	19	16	14	11	8	5	3
60	57	54	51	48	45	42	39	36	33	30	27	24	21	18	15	12	9	6	3
65	62	58	55	52	49	45	42	39	36	32	29	26	23	19	16	13	10	6	3
70	66	63	59	56	52	49	45	42	38	35	31	28	24	21	17	14	10	7	3
75	71	67	64	60	56	52	49	45	41	37	34	30	26	22	19	15	11	7	4
80	76	72	68	64	60	56	52	48	44	40	36	32	28	24	20	16	12	8	4
85	81	76	72	68	64	59	55	51	47	42	38	34	30	25	21	17	13	8	4
90	85	81	76	72	67	63	58	54	49	45	40	36	31	27	22	18	13	9	4
95	90	85	81	76	71	66	62	57	52	47	43	38	33	28	24	19	14	9	5
100	95	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5

Hybrid Sorghum Seed - Leaf Loss Chart

Ultimate Number of Leaves On Plants									Percent Defoliation (Round % Of Leaf Area Destroyed To Nearest 5%)																			
15	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**	**100**
***STAGES OF GROWTH**									**PERCENT OF DAMAGE**																			
					11	11	11	12	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3
		11	11	12	12	13	13	14	0	1	1	1	1	1	1	2	2	2	2	3	3	3	4	4	4	5	5
	11	12	12	13	13	14	15	15	1	1	1	1	2	2	2	2	3	3	4	4	5	5	6	6	7	7	8
11	12	13	13	14	14	15	16	16	1	2	2	3	3	4	4	5	5	6	7	8	9	10	12	12	14	15	16
11	12	13	14	14	15	16	17	17	2	2	3	4	5	6	7	7	8	10	11	13	14	16	17	19	21	22	24
12	13	14	14	15	16	17	17	18	3	3	4	5	7	8	9	10	11	13	15	17	19	21	24	26	28	31	33
12	13	14	15	16	17	18	18	19	3	4	5	7	9	10	11	13	14	16	19	22	24	27	30	32	35	38	41
13	14	15	16	17	18	19	19	20	4	5	7	8	10	12	14	15	17	20	23	26	30	33	36	39	43	47	50
14	15	16	17	18	19	20	20	21	4	6	7	9	11	14	16	18	20	23	26	30	34	37	41	44	49	53	57
15	16	17	18	19	20	21	22	23	5	7	8	11	13	15	18	20	22	26	30	34	38	42	47	51	56	61	65
Full Leaf Development									6	8	10	13	15	18	21	24	26	31	36	41	45	50	55	60	66	72	77

*Where The Stage Of Growth Is Repeated In The Same Column, Use The Upper Line For Early And The Second Line For Later In The Stage

	Percent Of Defoliation (Round % Of Leaf Area Destroyed To Nearest 5%)																	
Stages of Growth	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Boot	4	6	10	14	18	21	25	28	31	36	42	48	53	59	65	70	78	84	90
Just Headed	4	7	12	16	20	23	27	30	34	39	45	52	58	64	71	76	85	92	98
Bloom	4	6	11	15	19	23	26	30	33	39	44	51	57	62	69	75	83	90	96
Blister	3	5	9	14	17	20	23	26	30	35	40	45	51	56	62	67	74	80	86
Early Milk	3	4	8	12	15	18	21	24	26	31	36	41	45	50	55	60	66	72	77

Hybrid Sorghum Seed - Moisture Adjustment Factors

Moisture Adjustment Factor Table										
Whole Percent Moisture	**Tenths of Percent - Moisture**									
	.0	**.1**	**.2**	**.3**	**.4**	**.5**	**.6**	**.7**	**.8**	**.9**
10	1.0360	1.0348	1.0336	1.0324	1.0312	1.0300	1.0288	1.0276	1.0264	1.0252
11	1.0240	1.0228	1.0216	1.0204	1.0192	1.0180	1.0168	1.0156	1.0144	1.0132
12	1.0120	1.0108	1.0096	1.0084	1.0072	1.0060	1.0048	1.0036	1.0024	1.0012
13	1.0000	.9988	.9976	.9964	.9952	.9940	.9928	.9916	.9904	.9892
14	.9880	.9868	.9856	.9844	.9832	.9820	.9808	.9796	.9784	.9772
15	.9760	.9748	.9736	.9724	.9712	.9700	.9688	.9676	.9664	.9652
16	.9640	.9628	.9616	.9604	.9592	.9580	.9568	.9556	.9544	.9532
17	.9520	.9508	.9496	.9484	.9472	.9460	.9448	.9436	.9424	.9412
18	.9400	.9388	.9376	.9364	.9352	.9340	.9328	.9316	.9304	.9292
19	.9280	.9268	.9256	.9244	.9232	.9220	.9208	.9196	.9184	.9172
20	.9160	.9148	.9136	.9124	.9112	.9100	.9088	.9076	.9064	.9052
21	.9040	.9028	.9016	.9004	.8992	.8980	.8968	.8956	.8944	.8932
22	.8920	.8908	.8896	.8884	.8872	.8860	.8848	.8836	.8824	.8812
23	.8800	.8788	.8776	.8764	.8752	.8740	.8728	.8716	.8704	.8692
24	.8680	.8668	.8656	.8644	.8632	.8620	.8608	.8596	.8584	.8572
25	.8560	.8548	.8536	.8524	.8512	.8500	.8488	.8476	.8464	.8452
26	.8440	.8428	.8416	.8404	.8392	.8380	.8368	.8356	.8344	.8332
27	.8320	.8308	.8296	.8284	.8272	.8260	.8248	.8236	.8224	.8212
28	.8200	.8188	.8176	.8164	.8152	.8140	.8128	.8116	.8104	.8092
29	.8080	.8068	.8056	.8044	.8032	.8020	.8008	.7996	.7984	.7972
30	.7960	.7948	.7936	.7924	.7912	.7900	.7888	.7876	.7864	.7852
31	.7840	.7828	.7816	.7804	.7792	.7780	.7768	.7756	.7744	.7732
32	.7720	.7708	.7696	.7684	.7672	.7660	.7648	.7636	.7624	.7612
33	.7600	.7588	.7576	.7564	.7552	.7540	.7528	.7516	.7504	.7492
34	.7480	.7468	.7456	.7444	.7432	.7420	.7408	.7396	.7384	.7372
35	.7360	.7348	.7336	.7324	.7312	.7300	.7288	.7276	.7264	.7252
36	.7240	.7228	.7216	.7204	.7192	.7180	.7168	.7156	.7144	.7132
37	.7120	.7108	.7096	.7084	.70-72	.7060	.7048	.7036	.7024	.7012
38	.7000	.6988	.6976	.6964	.6952	.6940	.6928	.6916	.6904	.6892
39	.6880	.6868	.6856	.6844	.6832	.6820	.6808	.6796	.6784	.6772
40	.6760	.6748	.6736	.6724	.6712	.6700	.6688	.6676	.6664	.6652

Hybrid Sorghum Seed - Combination Test Weight and Pack Factor Table

Test Weight	Less Than 255 Sq. Ft. -	255 Sq. Ft. to 461 Sq. Ft. -	462 Sq. Ft. to 767 Sq. Ft. -	768 Sq. Ft. to 1384 Sq. Ft. -	1385 Sq. Ft. to 2289 Sq. Ft. -	2290 or Over Sq. Ft. -
30.0	0.588	0.596	0.607	0.615	0.615	0.615
30.5	0.597	0.605	0.616	0.624	0.624	0.624
31.0	0.606	0.614	0.626	0.634	0.634	0.634
31.5	0.615	0.624	0.635	0.643	0.643	0.643
32.0	0.624	0.633	0.644	0.653	0.653	0.653
32.5	0.633	0.642	0.653	0.662	0.662	0.662
33.0	0.642	0.651	0.662	0.671	0.671	0.671
33.5	0.651	0.660	0.671	0.680	0.680	0.680
34.0	0.659	0.668	0.681	0.690	0.690	0.690
34.5	0.668	0.677	0.690	0.699	0.699	0.699
35.0	0.677	0.686	0.699	0.708	0.708	0.708
35.5	0.686	0.695	0.708	0.717	0.717	0.717
36.0	0.694	0.704	0.717	0.726	0.726	0.726
36.5	0.703	0.713	0.726	0.736	0.736	0.736
37.0	0.712	0.722	0.735	0.745	0.745	0.745
37.5	0.720	0.730	0.744	0.754	0.754	0.754
38.0	0.729	0.739	0.753	0.763	0.763	0.763
38.5	0.737	0.748	0.761	0.772	0.772	0.772
39.0	0.746	0.756	0.770	0.781	0.781	0.781
39.5	0.754	0.765	0.779	0.790	0.790	0.790
40.0	0.763	0.774	0.788	0.826	0.844	0.869
40.5	0.771	0.782	0.797	0.834	0.852	0.877
41.0	0.780	0.791	0.805	0.842	0.860	0.885
41.5	0.788	0.799	0.814	0.850	0.868	0.893
42.0	0.797	0.808	0.823	0.858	0.876	0.901
42.5	0.805	0.816	0.831	0.866	0.884	0.909
43.0	0.813	0.825	0.840	0.874	0.892	0.917
43.5	0.821	0.833	0.849	0.882	0.900	0.925
44.0	0.830	0.842	0.857	0.890	0.908	0.933
44.5	0.838	0.850	0.866	0.898	0.916	0.941
45.0	0.846	0.858	0.874	0.906	0.924	0.949
45.5	0.854	0.867	0.883	0.914	0.932	0.957
46.0	0.863	0.875	0.891	0.922	0.940	0.965
46.5	0.871	0.883	0.900	0.930	0.948	0.973
47.0	0.879	0.891	0.908	0.938	0.956	0.981
47.5	0.887	0.900	0.916	0.946	0.964	0.989
48.0	0.895	0.908	0.925	0.954	0.972	0.997
48.5	0.903	0.916	0.933	0.962	0.980	1.005
49.0	0.911	0.924	0.942	0.970	0.988	1.013
49.5	0.919	0.932	0.950	0.978	0.996	1.021
50.0	0.927	0.940	0.958	0.986	1.004	1.029
50.5	0.935	0.948	0.966	0.995	1.013	1.039
51.0	0.943	0.956	0.974	1.003	1.021	1.047
51.5	0.950	0.964	0.983	1.013	1.030	1.057

Hybrid Sorghum Seed - Combination Test Weight and Pack Factor Table (Continued)

Test Weight	Less Than 255 Sq. Ft. -	255 Sq. Ft. to 461 Sq. Ft. -	462 Sq. Ft. to 767 Sq. Ft. -	768 Sq. Ft. to 1384 Sq. Ft. -	1385 Sq. Ft. to 2289 Sq. Ft. -	2290 or Over Sq. Ft. -
52.0	0.958	0.972	0.991	1.021	1.038	1.065
52.5	0.966	0.980	0.999	1.029	1.047	1.074
53.0	0.974	0.988	1.007	1.038	1.055	1.082
53.5	0.982	0.996	1.015	1.046	1.065	1.092
54.0	0.989	1.004	1.023	1.054	1.073	1.100
54.5	0.997	1.012	1.031	1.063	1.081	1.108
55.0	1.005	1.019	1.039	1.071	1.089	1.117
55.5	1.012	1.027	1.047	1.079	1.098	1.127
56.0	1.020	1.035	1.055	1.087	1.105	1.133
56.5	1.028	1.043	1.063	1.095	1.114	1.143
57.0	1.035	1.050	1.071	1.103	1.122	1.151
57.5	1.043	1.058	1.079	1.111	1.132	1.161
58.0	1.050	1.066	1.086	1.119	1.140	1.169
58.5	1.058	1.073	1.094	1.127	1.148	1.178
59.0	1.065	1.081	1.102	1.135	1.156	1.186
59.5	1.073	1.089	1.110	1.143	1.164	1.194
60.0	1.080	1.096	1.118	1.152	1.172	1.203
60.5	1.087	1.104	1.125	1.160	1.180	1.211
61.0	1.095	1.111	1.133	1.168	1.188	1.219
61.5	1.102	1.119	1.140	1.176	1.196	1.227
62.0	1.109	1.126	1.148	1.184	1.204	1.235

If the actual test weight is not shown on the chart, refer to exhibit 10, item 60b for instructions.

Hybrid Sorghum Seed - Stage Characteristics

(Emergence through Boot)

Name of Stage (one-half of the actual leaf is exposed)	Average Time Interval	Collar of This Leaf is Visible	Tip of This Leaf is Visible	Percent of Total Leaf Area Exposed
Emergence to 11th Leaf	32 days	-----	-----	-----
11th Leaf	4 days	9th	13th	12
12th Leaf	4 days	10th	14th	20
13th Leaf	3 days	11th	15th	28
14th Leaf	3 days	12th	16th	39
15th Leaf	3 days	13th	17th	50
16th Leaf	3 days	14th	18th	62
17th Leaf	3 days	15th	19th	72
18th Leaf	2 days	16th	20th **(flag leaf)**	79
19th Leaf	2 days	17th	Part of 20th **(flag leaf)** is visible	85
20th Leaf	3 days	-----	-----	92
Full Leaf Development (**Early Boot)**	3 days	All leaves fully extended and exposed. Head has started to swell and is extended to just below the flag leaf.		100
Boot	2 days	Head has reached almost full size and has started to emerge from the sheath of the flag leaf.		

(Heading through Maturity)

Just Headed	2 days	50 percent of the heads emerged from the boot. No blooms showing.
Bloom	5 days	All heads emerged from the boot and 50 percent are showing yellow pollen tubes over 50 percent of each head.
Blister	4 days	Grain is in a watery form and only partially formed—no color to liquid.
Early Milk	6 days	Grain is fully formed. Substance is clear to slightly white, milky liquid. Removal of fluid would leave only the grain hull.
Milk	7 days	Substance is thick milky liquid, no solids.
Late Milk	7 days	Grain has reached a semi-solid form.
Soft Dough	6 days	Grain can be crushed, and a white substance emerges in a semi-solid form.
Dough	5 days	Grain can be crushed, and a white substance emerges in an almost solid form.
Hard Dough	6 days	Grain is firm enough that when crushed there is no emergence.
Mature	-----	Physiological maturity has been reached. Less than 40 percent moisture content.
All stages are based on 50 percent of the plants in the sample at or beyond a given phase of development.		

Hybrid Sorghum Seed - Plant and Kernel Characteristics

Figure A

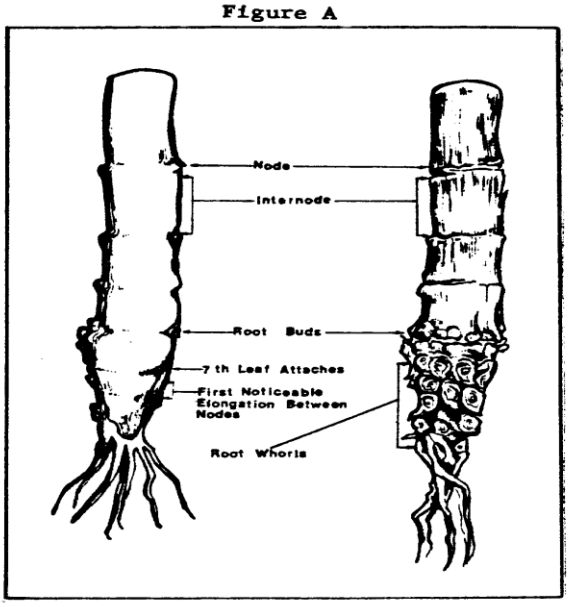


Figure B

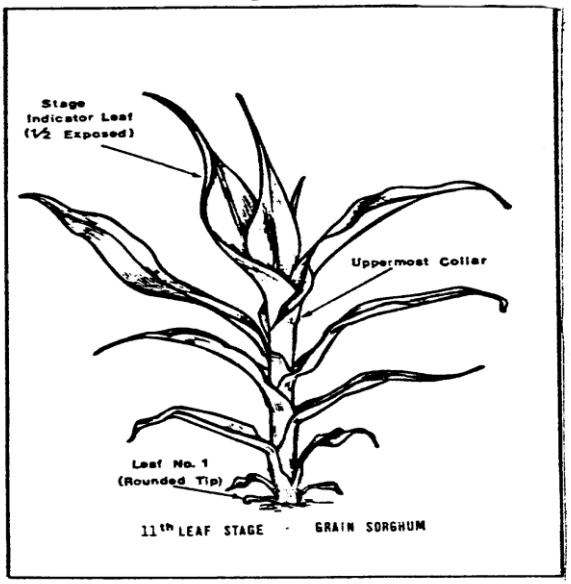


Figure C