

# Acceptable Farm Management Records and Harvested Production Records from Producers using Precision Farming Technology

**IMPORTANT NOTICE:** Failure to fully comply with the below procedures will result in the records submitted based on Precision Farming Technology to be unacceptable for crop insurance purposes.

## **EXHIBIT 1: DEFINITIONS**

**Precision Farming:** The utilization of systems' technologies and agronomic principles to manage variability within and between fields and/or over time that is associated with all aspects of agricultural production. It requires the use of technologies, such as global positioning system (GPS) and geographic information systems (GIS) management tools for the purpose of improving crop management. Precision farming may include the combination of variable seeding and fertilizer rates, minimizing seed and chemical overlaps, and the use of GPS/GIS yielding mapping technology (i.e., a producer using variable seeding, cutting planting rate from 36,000 to 18,000 seeds/acreage for non-irrigated corners, indicating a discernible break in yield with the use of GPS/GIS mapping).

## **PARAGRAPH 80: GENERAL INFORMATION AND METHODS**

### H. Measurement Methods

- (1) Acreage measurement for loss adjustment purposes must be performed by using:
  - (a) the measuring wheel, or
  - (b) FSA-accepted measuring methods or devices used with aerial photos that are to scale (such as: polar planimeter, digitizer, or scale rule).
- (2) Surveying devices, global positioning systems (GPS), remote sensing devices used in conjunction with aerial photos or satellite imagery, farm management records from producers using precision farming technology that provides yield maps and summary reports of planted acreage, etc., may be used if accuracy is comparable to the measurement methods listed above.

### I. Acceptable Farm Management Records from Producers Using Precision Farming Technology

- (1) Acceptable Precision Farming Systems must include at least the following components:
  - (a) GPS technology integrated with planter monitors, combine monitors, yield mapping software;
  - (b) Planting and harvesting summary reporting; and
  - (c) Calibrations performed per manufacturer's requirements.
- (2) Planted acreage records from precision farming technology systems used as determined acres:
  - (a) The approved insurance provider (AIP) must annually inform the insured in writing of the automated planter monitoring system record requirements prior to planting.
  - (b) For planted acreage records from automated planter monitoring systems to be acceptable as determined acres, the insured must provide the following information in conjunction with production data as stated in Paragraph 90 C:
    - 1 Insured's name;
    - 2 Unit number;
    - 3 FSA farm/tract/field ID number (optional);
    - 4 Legal description of acreage; and
    - 5 A print out from the precision farming technology system with the following information:
      - a Crop name;
      - b Acres planted; and

c Electronically produced maps of planted acreage and acreage summary records. These records must show required discernable breaks between units or practices except as stated in (3) below.

6 If the insured planted overlapping rows within the planted acreage, the AIP must determine if the automated planter monitor records adjusted for overlapping planted rows. If the system did not adjust for the overlapping planted rows, the AIP must determine the acreage in accordance with Paragraph 80 A-F, H and J, as applicable.

(3) Precision farming technology information system automated planter records may be used to separate optional units on center pivots for irrigated and non-irrigated corners (refer to Paragraph 55 C (5) (b) 3 b) without discernable breaks in the planting pattern provided the insured can:

- (a) provide records showing the variable rate planting populations;
- (b) document the automated planter monitoring system used;
- (c) provide the acres planted and practice for each optional unit;
- (d) provide production records by optional unit and practice; and
- (e) provide the required information in (1) above.

(4) If the automated planter monitor acreage records provided by the insured are not reasonable, or the AIP has reason to question the records, the insured must provide the precision farming technology, yield monitor systems raw data and any additional records requested by the AIP. **If the AIP determines the planted acreage records are not acceptable, the AIP must determine planted acreage in accordance with Paragraph 80 A-F, H and J, as applicable. The production records from the automated yield monitoring system may still be used.**

#### **PARAGRAPH 90: VERIFYING HARVESTED PRODUCTION**

A. Harvested production will be verified or determined by the following:

- (1) Acceptable evidence of third-party sales and/or commercial storage.
- (2) Measuring farm-stored harvested production (refer to Refer to Part 3, Section 6).
- (3) Comparing harvested production to appraisals made from the unharvested areas of the fields left under the terms of the policy when the amount of reported harvested production is questionable.
- (4) Comparing reported production to appraisals and production in the area when there is reason to question the reported harvested production.
- (5) Weighed and farm-stored records. Refer to Paragraph 104. Insured's records of prior year's weighed and stored production CANNOT be used.
- (6) Verifiable farm management records from producers using precision farming technology.
- (7) If the insured claims all of the unit has been harvested, verify that all fields and areas of the field (orchards or vineyards, if applicable) have been harvested. Also, verify that all of the production that could be harvested has been harvested; i.e., if only the best acreage or best fruit (cherry picked) from the trees or vines has been harvested, the remaining unharvested crop must be considered production to count unless such crop is not considered production to count in accordance with Paragraph 85 H of this handbook, with procedures in the respective crop loss adjustment handbook, crop provisions or if applicable, Special Provisions (SP).

B. Caution. DO NOT rely solely on statements or evidence of sales to represent all of the production. Review all production evidence CLOSELY when the policyholder controls the transportation (e.g., trucking or handling company); manufacturing (processing plant); farm scales; or sales (warehouse) of a particular crop. If there is evidence that suggests the insured has misrepresented production, DO NOT (adjuster) sign the claim. Notify the AIP of the situation.

C. Acceptable harvested production records from producers using precision farming technology to establish total production

(1) Acceptable Precision Farming Systems must include at least the following components:

- (a) GPS technology integrated with planter monitors, combine monitors, yield mapping software;
  - (b) Planting and harvesting summary reporting that reflects total harvested production; and
  - (c) Calibrations performed per manufacturer's requirements.
- (2) If the AIP determines the precision farming production records are not acceptable, production must be determined in accordance with Paragraph 104 and 105. The planter monitor acreage record can still be used as determined acres.
- (3) Production records from precision farming technology systems
- (a) The AIP must annually inform the insured in writing of the precision farming technology system record requirements prior to harvest.
  - (b) Production records from precision farming technology systems may be used in lieu of settlement sheets and bin measurements provided all of the requirements under Paragraph 80 I and 90 C are met.
  - (c) The insured should be advised to maintain alternate production records by unit in the event the precision farming production records are determined to be unacceptable.
- (4) For the production records to be acceptable, the insured must provide the following information, in conjunction with planting data as stated in Paragraph 80 I:
- (a) Calibration of the automated yield monitoring system.
    - 1 The insured must have calibrated the yield monitoring system for each insured crop and crop year, in accordance with the owner's manual specifications. The insured must provide documentation showing the weighed average sensor calibrations for the crop and crop year. The sensor calibrations must not exceed three percent when compared to the actual weighed production harvested from the acreage used to calibrate the sensor (refer to Paragraph 104 B for acceptable scale types). If the initial sensor calibration difference exceeds three percent when compared to the actual weighed production harvested from the acreage used to calibrate the sensor, additional calibration samples must have been taken until the results were within tolerance (see 2 below for an exception).
    - 2 If after calibrating the yield monitoring system as stated in 1 above, the average sensor calibrations for the crop and crop year still exceed three percent when compared to the actual production harvested from the acreage used to calibrate the sensor, the insured may utilize the precision farming system post-harvest calibration of yield maps created by the system. The insured must provide documentation of the actual production based on acceptable weight records used to post calibrate the system and yield maps.
    - 3 The annual calibration report, from the yield monitor system or documentation from the insured, must include all calibrations and adjustments performed, by crop, for the crop year, including the date each calibration/adjustment was performed and the difference from the previous setting. The annual calibration report must be provided to the AIP or RMA.
  - (b) Insured's name;
  - (c) Unit number;
  - (d) FSA farm/tract/field ID number;
  - (e) Legal description of acreage; and
  - (f) A print out, by unit, of the following precision farming technology information:
    - 1 Crop name;
    - 2 Acres harvested;
    - 3 Date harvested;
    - 4 Total production (unadjusted for moisture);
    - 5 Average moisture content (moisture must be adjusted in accordance with the crop provisions); and
    - 6 Yield maps and acreage/production summary records. These records, generated from the system, must show separate production records were maintained by unit and/or practice. These maps

must be reviewed to identify harvested and unharvested acreage. If the map indicates unharvested acreage, a visual inspection is required to determine if crop appraisals are needed.

- (5) If the production and yield map records provided by the insured are not reasonable or the AIP has reason to question the production and/or yield map records, the insured must provide the precision farming technology or yield monitor systems raw data and any additional production records requested by the AIP. If after reviewing the systems raw data, the precision farming production records are determined to be not acceptable, production must be determined in accordance with Paragraph 104 and 105.
- (6) All quality determinations must be made in accordance with Paragraph 96 and 102 as applicable.

**Note:** Paragraphs 104 and 105 correlate existing language in regard to farm weighed and stored grain as well as structure markings and load records to the precision farming requirements contained in Paragraph 90.

#### **PARAGRAPH 104: PRODUCTION WEIGHED AND FARM-STORED**

If the insured meets the requirements for acceptable harvested production from a precision farming technology information system as outlined in Paragraph 90 C, the following procedures do not apply. Conversely, if the insured does not meet the requirement for acceptable harvested production from a precision farming technology, but the insured has weight tickets that can be used in accordance with the following procedures, then these procedures are applicable.

#### **PARAGRAPH 105: AUTHORIZATION TO ACCEPT INSUREDS' STRUCTURE MARKINGS, LOAD RECORDS, AND COMBINE MONITOR RECORDS**

If the insured meets the requirements for acceptable harvested production from a precision farming technology information system as outlined in Paragraph 90 C, the following procedures do not apply. Conversely, if the insured does not meet the requirement for acceptable harvested production from a precision farming technology, but the insured has load records, combine monitor records, or bin markings that meet the criteria for the following procedures, then these procedures are applicable.