

- (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 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 Par. 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 Par 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 PAR. 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 Par 80 A-F, H and J, as applicable. The production records from the automated yield monitoring system may still be used.**

J When Measurement Estimates Are Allowed

Acreage breakdowns WITHIN a UNIT or field may be estimated if a determination is impractical. (Some situations where acreage might be considered impractical to measure (but not limited to) are the following: flooded portion of a field; numerous potholes within a field; a levy breaking and resulting in removal/destruction of border(s) of the field or delineation of portion of the field planted and portion prevented from planting.) Document why acreages could not be measured, and also explain how the estimated acres were determined in the Narrative of the claim form or on a, Special Report. Total acreage for the field or unit however, must be determined in accordance with the procedures in subparagraph A-H above.

K Documentation. Document, in the narrative of the claim or on a Special Report, the method of acreage determination and any calculations used to arrive at the determined acres; e.g., "Acreage wheel measured - Field A - 215.0 W X 180.0 W = 38.7 acres; Field C - 220.0 W X 185.0 W = 40.7 acres; Total unit acreage - 38.7 + 40.7 = 79.4 acres, or in the case of determined acres via the acreage the insured certified to on his/her MPC1 acreage report; "Determined acres using MPC1 acreage report-would measure within 5 percent."

81 WHEEL MEASURING METHOD AND FORMULAS

A When measuring with a measuring wheel:

- (1) Determine the basic lines of linear measurements needed to calculate the acreage. Refer to subparagraph **C** below for examples of basic measurements (and Combinations) required.
- (2) Begin each linear measurement with the revolution counter turned to indicate all "0's." If the wheel has a white spoke, start with the white spoke on the ground and the counter at "0."

paid from the amount that would have been paid before the price reduction. Divide this amount by the contract price and enter the result in the column on the claim form for uninsured cause appraisals.

- J Processor Payments For “Bypassed Acreage”- Do NOT include such payments in any appraisal OR as production to count.

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 PAR. 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 PAR 85 H of this handbook, with procedures in the respective crop loss adjustment handbook, crop provisions or if applicable, **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 Par. 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 Par. 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 Par. 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 Par. 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