HUDSON INSURANCE GROUP®

PRECISION FARMING TECHNOLOGY SYSTEMS

The following information provides a summary of the requirements needed to utilize Precision Farming Technology Systems (PFTS). Refer to paragraph's 721 and 831 of the 2023 Loss Adjustment Manual (LAM) (FCIC-25010) for a complete listing of all requirements: https://www.rma.usda.gov/en/Policy-and-Procedure/Loss-Adjustment-Standards---25000 ***(The LAM sections referenced above apply when the insured has utilized PFTS from planting through harvesting.)***

Note: Insureds should be advised to maintain alternate acceptable production records by unit in the event, the PFTS production records are determined to be unacceptable.

Planted Acreage Records from PFTS used as Determined Acres

For planted acreage records from automated planter monitoring systems to be acceptable as determined acres, the insured must provide:

- Insured's name, unit number, FSA tract/field ID numbers, legal description and a print out from the PFTS with the following information:
  - Crop name, acres planted, electronically produced maps of planted acreage and acreage summary records. (These records must show required discernible breaks between units or practices.)

  NOTE: If the system does not meet these requirements and/or does not meet all of the requirements as described in the LAM, the AIP must determine the acreage in accordance with subparagraph 721 A-F and J, as applicable.

Acceptable PFTS Records - Production to Count

Insureds should be advised to maintain alternate acceptable production records by unit in the event the PFTS production records are determined as unacceptable.

Acceptable PFTS records must include at least the following components:

- GPS technology integrated with planter monitors, combine monitors and yield mapping software;
- The ability to produce summary reports that reflect planted acres, harvested acres and harvested production;
- Report of calibrations performed per manufacturer's requirements.
- The insured must provide calibration documentation as described below.
- Insured's name, unit number, FSA farm/tract/field ID number (if applicable), legal description of acreage and a printout, by unit, of the following PFTS information:
  - Crop name, acres harvested, date harvested, total production (unadjusted for moisture) (Average moisture content must be adjusted in accordance with the Crop Provisions)
  - 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 (UH) acreage. If the map indicates UH acreage, a visual inspection is required to determine if crop appraisals are needed.

ACCEPTABLE PFTS

Must include at least the following components:

- GPS technology integrated with planter monitors, combine monitors and yield mapping software;
- The ability to produce summary reports that reflect planted acres, harvested acres and harvested production; and
- Report of calibrations performed per manufacturer's requirements.

Refer to page two for "Calibration Requirements".

Calibration of the Automated Yield Monitoring System - Required Documentation

- The insured must have calibrated the yield monitoring system at the beginning of harvest for each insured crop and crop year, in accordance with the operator's manual specifications.
- The sensor calibrations must not exceed three percent (3%) when compared to the actual weighed production harvested from the acreage used to calibrate the sensor. Refer to subparagraph 902B of the 2023 LAM (Acceptable Scale Types). If the initial sensor calibration difference exceeds 3% when compared to the actual weighed production harvested from the acreage used to calibrate the sensor, additional calibration samples may be taken until the results are within tolerance.
    - This includes yield monitoring systems capable of self-calibrating. For crop insurance purposes, self-calibrating yield monitoring systems must be compared to actual weighed production harvested from the acreage at the beginning of harvest for each insured crop and crop year.
    - In the event the calibration exceeds 3% when compared to the actual production harvested from the acreage used to calibrate the sensor, **the PFTS records will not be considered acceptable as stand-alone production evidence but may be used like load records.** Post-harvest calibration of yield maps is not acceptable. The insured must provide documentation of the actual production based on acceptable production records.
    - Please refer to paragraph 831 of the 2023 LAM for additional information about additional post-harvest calibrations.
- The insured must provide documentation showing the sensor calibrations for the crop and crop year. 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.

Unacceptable or Unreasonable PFTS Records

- If the AIP determines the PFTS production records are not acceptable, production must be determined in accordance with paragraph 902 and paragraph 903. The planter monitor acreage record can still be used as determined acres.
- 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 PFTS or yield monitor system's raw data and any additional production records requested by the AIP. If after reviewing the system's raw data, the PFTS production records are determined not acceptable, production must be determined in accordance with paragraph 902 and paragraph 903 of the 2023 LAM.

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PRECISION FARMING CLAIMS

DOCUMENTATION CHECKLIST

How to prepare your data for a claim settlement with your Hudson Crop Claims Adjuster:

Click here to clear ALL entries in PFTS Bundle

☐ **Planting Map and Field Summary Report***

The report must include the following:

- ☐ Insured's Name
- ☐ Unit Number
- ☐ Legal Description
- ☐ Crop
- ☐ Plant Date
- ☐ Acres Planted
- ☐ Variable Rate

☐ **Harvest Wet-Weight Map***

Harvest wet-weight maps or the harvest field summary are required (by unit/APH database). The report must include the following:

- ☐ Crop
- ☐ Harvest Date
- ☐ Acres Harvested
- ☐ Total Wet Weight
- ☐ Average Moisture
- ☐ Farm Name

☐ **Calibration Report***

Reports must show the machine was calibrated within 3% of machine displayed weight compared to scale measured weight, per RMA/manufacturer requirements. Pre-harvest calibration must be provided, by crop, prior to harvest.

INSURED'S RESPONSIBILITIES

*Insureds should be advised to maintain alternate acceptable production records by unit in the event the PFTS production records are determined as unacceptable. Please be mindful of the record retention period of three years when retaining your production records.

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Multi-Point Calibrating Verification

Hudson Insurance Company
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P: (866)450-1445
F: (913)345-1671

This is a tool for recording calibration data according to the manufacturer specifications. It is the grower's responsibility to ensure accuracy of all data entered.

Instructions

RMA requires the monitor displayed weight be within 3% accuracy. In addition RMA requires the calibration procedures to obtain the weight accuracy be documented by the insured and provided to the AIP upon AIP request. Maintain calibration logs with your historical crop records.

This document will help you track the steps to calibrate multi-point combine yield monitor systems for insurance purposes. Please **Refer to your manufacturer specifications.**

Best practice recommendations are:

- Perform 5 to 7 calibration loads at the beginning of the season for each crop harvested. This captures a range of grain flows at different machine speeds, and better interprets non-calibration grain flow rates throughout the season.
- Ensure consistent machine speed during the calibration load, harvesting no less than 3,000 pounds. Calibration loads must be uniform in size – for best results, consider harvesting no more than 8,000 pound calibration loads.
- Recalibrate if load values indicate anomalies (example: test weight changes exceed 6-8 pounds, or moisture changes exceed 8-10 points on average).
- Complete the calibration process in a representative area of the field using a properly calibrated weigh wagon.

Acceptable Scales include non-portable on-farm scales, commercial elevator scales, and grain carts, provided the grain cart meets the specifications outlined in the Loss Adjustment Manual Standards Handbook (LAM).

Calibration Checklist

☐ **Temperature Calibration**

- Complete once annually.
- Do not perform temperature calibration when sensor is in direct sunlight.

☐ **Mass Flow Vibration Calibration**

- Calibrate to manufacturer specifications.
- Complete for each harvested crop.
- This calibration will be saved in the combine setup under the identified crop. Be sure to select the current crop.

☐ **Moisture Sensor Correction**

- Complete once per season for each harvested crop.
- Temperature calibration should be completed prior to this correction. Set the moisture correction value to 0.0 before beginning the process.

☐ **Weight Calibration**

- Complete for each harvested crop.
- Calibration loads must be uniform in size and weigh over 3,000 pounds.
- Mass Flow Vibration and Moisture Sensor Temperature calibration must be completed before Weight calibration.
- Check 5-7 calibration loads on the monitor before performing the calibration.

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Insured's Name	Person Performing Calibration	Date Calibration Completed

Crop Year	Crop Harvested	Scale Source	S-Series

Verification Date/Time	Field Name	Machine Speed	Machine-Displayed Weight	Scale-Measured Weight	Difference		Average Crop Moisture %
					Weight	%	
		+0.5 MPH					
		Normal Harvest					
		-0.5 MPH					
		-1.0 MPH					
		-1.5 MPH					
		-2.0 MPH					
		-2.5 MPH					
		MPH					
		MPH					
		MPH					

Self-Calibrating Verification

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Instructions

RMA requires the monitor displayed weight be within 3% accuracy. In addition RMA requires the calibration procedures to obtain the weight accuracy be documented by the insured and provided to the AIP upon AIP request. Maintain calibration logs with your historical crop records.

This document will help you track the information on self-calibrating monitor systems that is necessary for insurance purposes. Please **Refer to your manufacturer specifications.**

Acceptable Scales include non-portable on-farm scales, commercial elevator scales, and grain carts, provided the grain cart meets the specifications outlined in the Loss Adjustment Manual Standards Handbook (LAM).

Verification Checklist

☐ **Temperature Calibration**

- Complete once annually.
- Do not perform temperature calibration when sensor is in direct sunlight.

☐ **Mass Flow Vibration Calibration**

Calibrate to manufacturer specifications.
Complete for each harvested crop.
This calibration will be saved in the combine setup under the identified crop. Be sure to select the current crop.

☐ **Moisture Sensor Correction**

Complete once per season for each harvested crop.
Temperature calibration should be completed prior to this correction.
Set the moisture correction value to 0.0 before beginning the process.

☐ **Weight Accuracy Check**

RMA requires the monitor displayed weight be within 3% accuracy. To verify the accuracy of the monitor, check the machine displayed weight against another scale source. If the checked weight is not within 3% tolerance, continue to weigh loads and track them until the monitor is within tolerance. Once within tolerance, no further accuracy checks are required for that crop for the remainder of the year.

Difference Percentage Calculation for Weight Accuracy Check To determine accuracy, calculate the difference percentage using the following calculation:

100 x (Machine-Displayed Weight – Scale-Measured Weight) ÷ Scale-Measured Weight = Difference %

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Insured's Name	Person Performing Calibration	Date Calibration Completed

Crop Year	Crop Harvested	Scale Source	Combine Model	Monitor Type

Verification Date/Time	Field Name	Machine-Displayed Weight	Scale-Measured Weight	Difference		Average Crop Moisture %
				Weight	%	

Crop Year	Crop Harvested	Scale Source	Combine Model	Monitor Type

Verification Date/Time	Field Name	Machine-Displayed Weight	Scale-Measured Weight	Difference		Average Crop Moisture %
				Weight	%	

Single-Point Calibrating Verification

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Instructions

RMA requires the monitor displayed weight be within 3% accuracy. In addition RMA requires the calibration procedures to obtain the weight accuracy be documented by the insured and provided to the AIP upon AIP request. Maintain calibration logs with your historical crop records.

This document will help you track the steps to calibrate single-point combine yield monitor systems for insurance purposes. Please **Refer to your manufacturer specifications.**

Best practice recommendations are:

- Complete weight calibrations when you begin harvesting each new crop. Previously recorded data will not be adjusted to reflect the new calibration.
- Prior to calibrating, ensure the combine grain tank, unloading auger tube, and weigh wagon or truck are empty.
- Maintain consistent ground speed and keep the combine at full capacity during Standard Calibration. While completing this calibration (i.e. High Flow), operate the combine at the maximum speed expected in that crop and condition. Calibration loads should weigh no less than 3,000 pounds. Ensure that the scale source has also been calibrated.
- The Standard Calibration procedure must be performed for each crop harvested. In addition, the optional Low Flow Calibration procedure may be performed to improve the accuracy in situations of large variations in grain flow rate.

Acceptable Scales include non-portable on-farm scales, commercial elevator scales, and grain carts, provided the grain cart meets the specifications outlined in the Loss Adjustment Manual Standards Handbook (LAM).

Calibration Checklist

☐ **Moisture Sensor Calibration**

- Complete once per season.

☐ **Standard Yield Calibration**

- Calibrate to manufacturer specifications.
- Complete for each harvested crop.
- Calibrate at normal harvest speed in consistent conditions and uniform yields. Avoid harvesting end or point rows.

☐ **Optional - Low Flow Yield Calibration**

- Perform at approximately one-half to two-thirds of ground speed at which the Standard Calibration procedure for the crop and condition was performed, as well as in an area that is reasonably level and uniform in yield.
- Record the original and new “Flow Comp Number” found on the display (different than Standard Calibration procedure).

Insured’s Name	Person Performing Calibration	Date Calibration Completed

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Insured's Name	Person Performing Calibration	Date Calibration Completed

Crop Year	Crop Harvested	Scale Source	S-Series

Verification Date/Time	Field Name	Flow Rate *(Standard or Low)*	Machine-Displayed Weight	Scale-Measured Weight	Difference		Average Crop Moisture %
					Weight	%	

Crop Year	Crop Harvested	Scale Source	S-Series

Verification Date/Time	Field Name	Flow Rate *(Standard or Low)*	Machine-Displayed Weight	Scale-Measured Weight	Difference		Average Crop Moisture %
					Weight	%	