

GIPSA's Implementation of UGMA-Compatible Moisture Meters – Frequently Asked Questions

Updated text 4/23/2015

Q1: Did GIPSA seek input from external stakeholders during development of the UGMA-Compatible moisture meters?

A: Yes. GIPSA sought input from external stakeholders throughout all phases of the UGMA development process. GIPSA partnered with USDA's Agricultural Research Service during the initial developmental stages of the UGMA. GIPSA has worked closely with all interested manufacturers in developing commercially viable instruments. GIPSA kept the Advisory Committee apprised of its progress.

Q2: What are the differences between the two UGMA-Compatible moisture meters results?

A: UGMA-Compatible moisture meters are required to measure the same physical grain parameters to a very high level of accuracy, so the different meters can use the same mathematical calibrations and provide equivalent moisture results for all grain types at all moisture levels. The agreement between instruments is excellent – not only on the average but on individual samples. It would be impossible to achieve this consistency among instrument models that used different measurement technologies. GIPSA established [UGMA Criteria](#) that each UGMA-Compatible moisture meter must meet in order to be certified as UGMA-Compatible. There are several criteria that the meters must meet in order to ensure the results achieved are equivalent, but a key criterion is that the variability in results among different meter models must be smaller than the variability between the individual moisture meter model and the air oven reference method, which is the standard reference method.

Q3: Does GIPSA have any information that it can share comparing performance, accuracy, reliability and pros/cons of each machine that have been officially approved as UGMA-Compatible moisture meters?

A: GIPSA has subjected both of the instruments to laboratory testing and extensive engineering reviews to establish their suitability for use in the Official system and to determine that they will be able to provide accurate and consistent moisture results. The details of these engineering reviews are proprietary information that cannot be divulged. The [UGMA Criteria](#) document provides considerable information on the level of performance and reliability demanded of UGMA-Compatible instruments.

Q4: Will GIPSA provide calibrations for the new UGMA-Compatible moisture meters?

A: Yes. GIPSA will develop and provide updated calibrations as necessary, as we have done for previous Official moisture meters. The current official calibration files are available for download from the GIPSA website.

Q5: Can the UGMA-Compatible moisture meter be used to determine test weight within the Official inspection system?

A: No. Although both UGMA-Compatible moisture meters are able to measure test weight, they are not currently approved as Official equipment for that purpose. GIPSA is studying the potential for using UGMA-Compatible moisture meters as Official equipment for measuring test weight, and will report its findings to the Grain Inspection Advisory Committee.

Q6: Are the UGMA-Compatible moisture meters certified by the National Conference on Weights and Measures' National Type Evaluation Program (NTEP)?

A: Yes, the DICKEY-john GAC 2500UGMA, DICKEY-john GAC 2500UGMA Plus, and the Perten AM 5200-A are NTEP-certified. NTEP certification is one of the criteria for achieving GIPSA's certification as UGMA-Compatible.

Q7: Will every elevator need to convert to using a UGMA-Compatible moisture meter?

A: No. Only Official Service Providers who provide Official inspection services are required to use the Official moisture meter. It is likely that many elevators will choose to obtain a UGMA-Compatible moisture meter, but it will be at their own discretion.

Q8: Which of the two UGMA-Compatible moisture meters is GIPSA using?

A: GIPSA purchased a total of 105 UGMA-Compatible moisture meters for its use in 2012. GIPSA purchased 30 of each of the two types of the UGMA-Compatible moisture meters, and then purchased the remaining forty-five instruments per contract specifications. Both of the UGMA-Compatible moisture meters are being used throughout GIPSA's field offices and inspection points.

Q9: Is each Official Service Providers required to have the same UGMA-Compatible moisture meter as that used by the GIPSA Field Office that will be supervising their work?

A: No. The UGMA-Compatible moisture machine models provide equivalent results so there is no reason for an Official Service Provider to have the same UGMA-Compatible moisture meters as the GIPSA Field Office that is performing supervision.

Q10: Are Appeals and Board of Appeals and Review (BAR) Appeals moisture analysis done on the same UGMA-Compatible moisture meter as the original inspection results under appeal?

A: Not necessarily. The UGMA-Compatible moisture machine meters provide equivalent results so there is no reason for an appeal to be performed on the same model as that used for the original inspection. BAR Appeals are performed interchangeably on the two different UGMA-Compatible models.

Q11: Are warehouses licensed under the Warehouse Act of 1916 required to use UGMA-Compatible moisture meters?

A: No. Warehouses licensed under the United States Warehouse Act of 1916 are not required to convert to use UGMA-Compatible moisture meters. According to the Farm Service Agency, in the Licensing Agreement for Grain and Rice Warehouse Operators the warehouse operator agrees to “equip the warehouse with grading and quality-evaluation equipment necessary to determine the kind, grade, and quality of each class, subclass, and specialty grain received, handled, or accepted for storage; ensure that all grading and quality-evaluation equipment is inspected and certified annually by an applicable regulatory or independent authority.” Moisture is not a grade determining factor but is only related to storability of grain. As a result, the warehouse operators licensed under the United States Warehouse Act of 1916 are not required to use UGMA-Compatible moisture meters.

Q12: Will GIPSA’s decision to adopt UGMA-Compatible moisture meters affect the States’ regulations regarding moisture meters?

A: No. The designation of Official moisture meters applies to moisture meters used within the Official inspection system. All Official service providers, including all state agencies that are Official Service Providers, are required to use UGMA-Compatible moisture meters. Each State regulates the commercially used moisture meters within its jurisdiction and may require NTEP-Certification, but not Official approval. State jurisdiction of moisture meters does not extend to those moisture meters used exclusively for Official inspection.

Q13: Will other UGMA-Compatible moisture meters be approved in the future in addition to the DICKEY-john GAC 2500UGMA, DICKEY-john GAC 2500UGMA Plus, and Perten AM-5200-A?

A: Possibly. GIPSA has publically shared the [UGMA Criteria](#) and the [UGMA Recipe Book](#), as well as much of the GIPSA’s research information expressly for the purpose of encouraging and assisting manufacturers to develop UGMA-Compatible instruments that could be used in the Official system. GIPSA plans to continue to share information and assist manufacturers, while rigorously protecting manufacturers’ proprietary information, to develop additional UGMA-Compatible moisture meter models. However, at the current time, only the DICKEY-john GAC 2500UGMA, DICKEY-john GAC 2500UGMA Plus, and Perten AM-5200-A are certified by GIPSA as UGMA-Compatible.

Q14: How will GIPSA ensure that commercial users will be authorized to use Official calibrations for commercial purposes?

A: GIPSA is coordinating with the National Conference on Weights and Measures’ National Type Evaluation Program (NTEP) to minimize the discrepancies between the implementation dates of Official calibrations and NTEP calibrations for commercial use. Currently, NTEP allows for two calibration implementation dates within a year—typically May 1 and August 1 for the GIPSA Official moisture meters. These implementation dates generally coincide with the lowest grain stocks, and provide sufficient time for the previous year’s data to be analyzed for updating calibrations - while minimizing the number of times that each moisture meter’s

calibrations must be updated each year.

Q15: What moisture meters can be used for what grains for Official Commercial Inspection Service (OCIS) for moisture and test weight?

A: See [Directive 9180.55 Section 5.b\(2\)](#) regarding OCIS. Any meter that is legal for trade within the State can be used for moisture and/or test weight under OCIS—provided that a specific OCIS agreement including that equipment has been approved.

Q16: When must official users start using the new UGMA-Compatible moisture meters for official inspection for the updated (5/1/2015) calibrations?

A: Official inspections performed on any grain or commodity with an updated (5/1/2015) calibration after midnight April 30, 2015 must utilize approved UGMA-Compatible moisture meters—except any grain lot for which official inspection commenced prior to midnight April 30, 2015 shall be completed using the instrument and/or calibration that was approved for official use when inspection of the lot commenced.

Q17: After downloading the calibrations, I was unable to complete the update process. What should I do?

A: For the DICKEY-john GAC2500-UGMA, you must first open the zip file by double clicking on it, select all and then copy and paste the files to the root directory (e.g. E:\). When you click on the root directory (e.g. E:\), you should have 72 files including the zip file. Once the files are on the root directory, turn off your meter, insert the flash drive and then turn the meter back on to start the installation process. The meter may look like it is just booting up but after about a minute it will show “UPDATE IN PROGRESS—do not remove USB or cycle power”.

For the Perten AM5200-A, **do not double click on the zip file.** Insert the flash drive in the meter and follow the instructions posted on the [GIPSA website](#). If you double clicked on the zip file, you will need to delete it and download the zip file again from the [GIPSA website](#).

If you have additional questions, please refer the instructions on the [GIPSA website](#) or contact Patricia Emick, Moisture Group Leader, at (816) 891-0450 or patricia.j.emick@usda.gov.

Q18: Should I keep the flash drive provided by GIPSA?

A: Yes. You will need this flash drive or an equivalent flash drive in the future to update the calibrations on the official meters.

Q19: How frequently are calibrations updated?

A: The calibrations for the fifteen major grains that are used in the NTEP calibration program are reviewed each year. The remaining forty-eight grains are reviewed on an as needed basis. Any grain that requires a calibration update will be implemented either May 1 or August 1 to coincide when stocks for that grain should be at its lowest. All calibration updates will be posted in the GIPSA [Official Moisture Calibration Directive](#).

Q20: How can I find out more information about UGMA-Compatible Moisture Meters?

A: Substantial technical information on Unified Grain Moisture Algorithm is available on GIPSA's Equipment webpage: <http://www.gipsa.usda.gov/fgis/equipment.html> GIPSA has established a dedicated e-mail account UGMA-QA@usda.gov to request answers to other questions regarding UGMA-Compatible moisture meters.

Additional information about the two UGMA-Compatible moisture meter models can be found at: www.dickey-john.com/gac-land/ for the DICKEY-john GAC 2500-UGMA and at: www.perten.com/ for the Perten AM 5200-A.

Updated: 4/23/2015