UGMA Moisture Meter Performance

This document contains plots that show the performance for instruments based on FGIS’s Unified Grain Moisture Algorithm (UGMA). The data were collected on the FGIS’s UGMA Master System for the crops listed on each plot. The differences are instrument moisture results minus USDA-FGIS air oven moisture results.

The plots show data for the spring harvest grain groups. The specific grain types included in each grain group are listed below the grain group title of each plot. The “mean” value is the average difference between the UGMA results and the air oven results for all samples on the plot. The Standard Deviation of Differences (SDD) value is a measure of the variability of differences between the UGMA results and the air oven results. Approximately two thirds of UGMA results were within +/- the listed SDD value for that grain group.

The y-axis range for all plots is +/- 2 % moisture difference, and the x-axis is the % moisture (air oven value).
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1. Barley Grain Group 2012-2021

**Barley: 2012 - 2021**

Six-Row Barley, Two-Row Barley, Hulless Barley

Samples: 372, Mean: -0.01, SDD: 0.21

2. Durum Grain Group 2017-2021

**Durum: 2017 - 2021**

Durum Wheat

Samples: 214, Mean: 0.12, SDD: 0.19
3. Oats Grain Group 2017-2021

Oats: 2017 - 2021

Samples: 59, Mean: -0.13, SDD: 0.36

4. Hulless Oats Grain Group Year 2012-2019

Hulless Oats: 2012 - 2019

Samples: 10, Mean: -0.19, SDD: 0.25
5. Hard Wheat Grain Group 2017-2021

Hard Wheat: 2017 - 2021


Samples: 775, Mean: 0.06, SDD: 0.2


Soft Wheat: 2017 - 2021

Soft Red Winter Wheat, Soft White Wheat

Samples: 604, Mean: -0.04, SDD: 0.2
Triticale & Rye: 2011 - 2019

Samples: 33, Mean: 0.05, SDD: 0.16