United States Department of Agriculture Agricultural Marketing Service Federal Grain Inspection Service

Report May 1, 2025

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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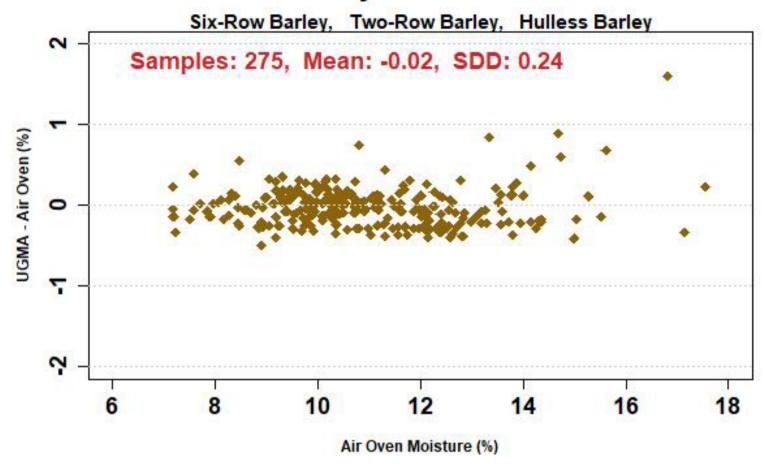
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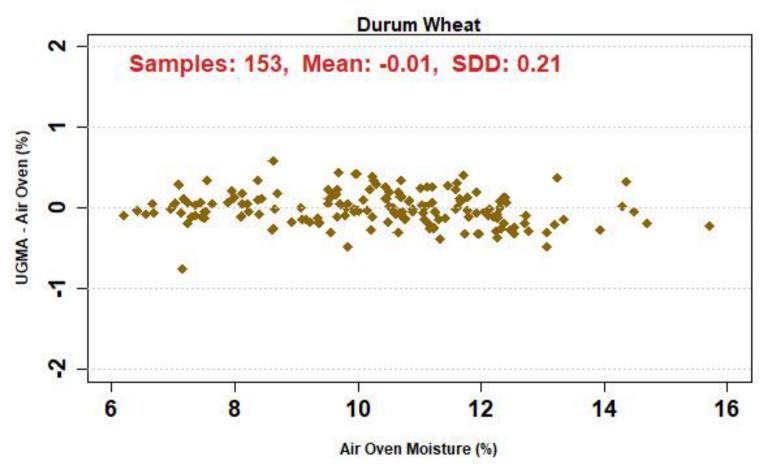
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Barley: 2012 - 2024

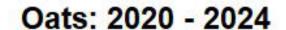


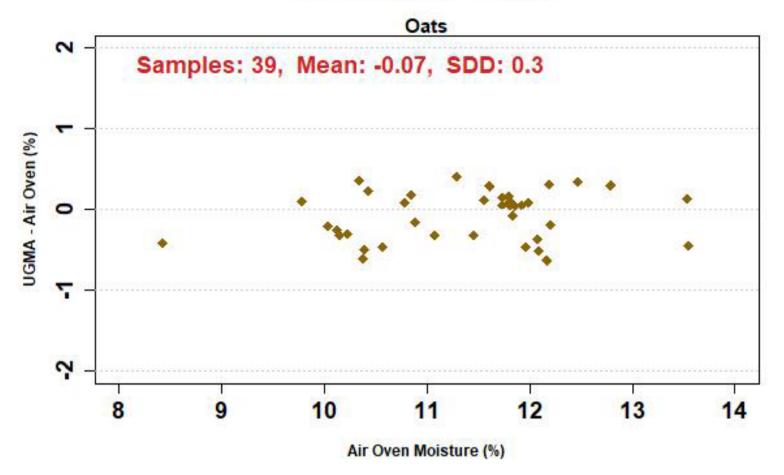
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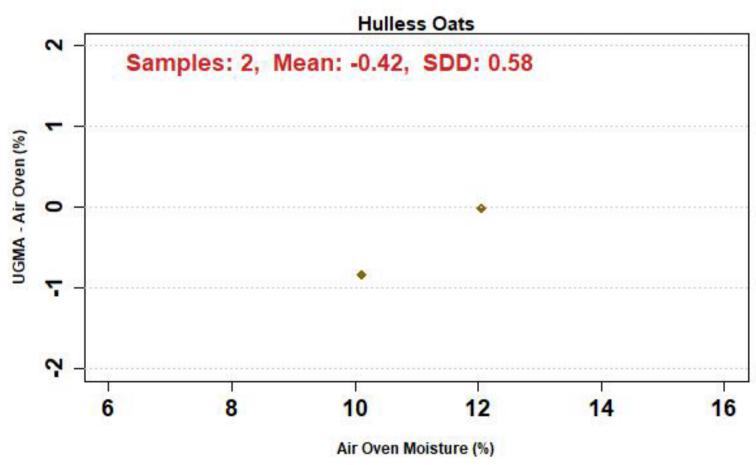
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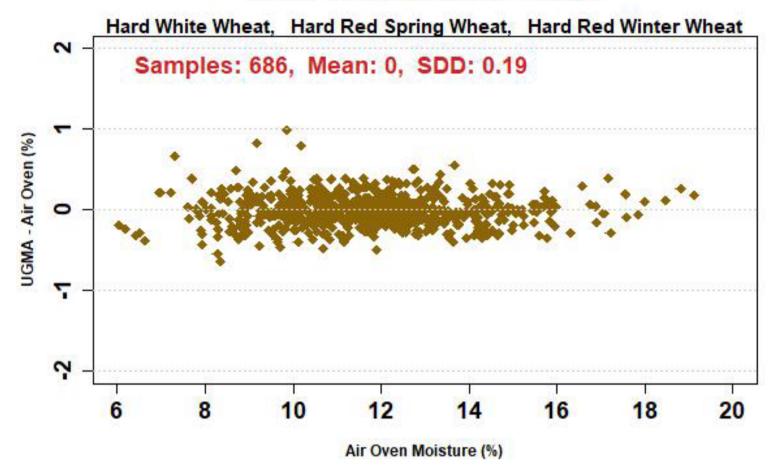
4. Hulless Oats Grain Group

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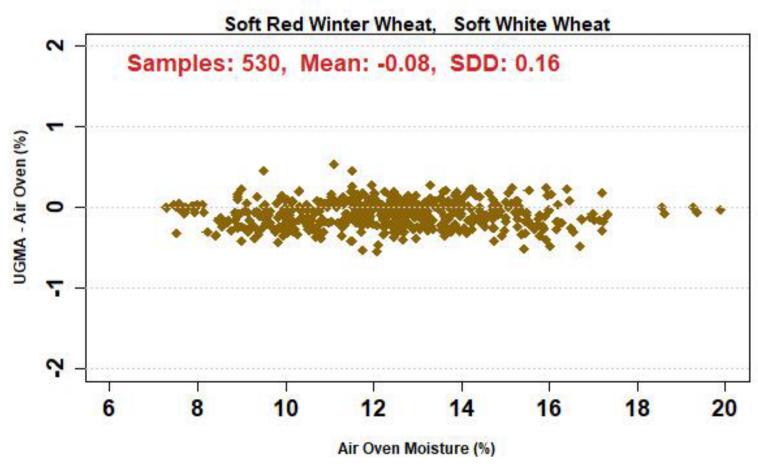
5. Hard Wheat Grain Group

Hard Wheat: 2020 - 2024



6. Soft Wheat Grain Group

Soft Wheat: 2020 - 2024



7. Triticale & Rye Group

Triticale & Rye: 2011 - 2024

