



## *UMN Forever Green Partnership*

### **Measuring Kernza® seed moisture using a microwave**

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Last updated: July, 2020

#### **Introduction**

Growers may be accustomed to using a moisture tester in the field. However, these moisture testers have calibrations for specific grains. To the best of our knowledge, no commercially-available grain testers yet include calibrations for Kernza®. Therefore, we recommend the slightly more time-consuming “tried-and-true” method of measuring moisture using a scale and microwave.

#### **Protocol for assessing seed moisture**

Here is a protocol to measure seed moisture using a microwave.

Materials needed: Kernza seed sample (10 spikes), accurate scale, microwave, calculator

1. Cut 10 Kernza spikes off about an inch below the lowest seed, just so you have the spike and not much stem.
2. Weigh and record weight of the set of 10 spikes using a kitchen scale - switch to grams for easier calculation
3. Microwave all 10 spikes for 20 seconds
4. Re-weigh 10 spikes and record weight. The weight should have decreased a little.
5. Repeat steps 3 and 4 until the weight doesn't change after microwaving
6. Once the weight no longer changes after microwaving, record that final weight
7. Divide the final weight by the beginning weight
8. Subtract this number from 1
9. Multiply the resulting number by 100 to get a percent moisture content

This is the moisture of the whole seed heads, but we know that this moisture is highly correlated with moisture of the naked seeds. So this will be a very good indicator of grain moisture.

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#### **EXAMPLE**

First weight = 25 grams

Last weight = 21 grams

$21 \div 25 = 0.84$

$1 - (.84) = 0.16$

Please direct any questions to Colin Cureton, UMN Supply Chain Development Specialist, at [cure0012@umn.edu](mailto:cure0012@umn.edu) or call/text at 612-750-4967

$0.16 \times 100 = 16 = 16\%$  moisture content in the original sample

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