PIMA

Purdue Improved Moisture Assessment

Using PIMA to Assess Grain Dryness

PIMA is a device that:

- Helps farmers assess grain dryness.
- Empowers farmers to negotiate when selling their grain.

Assessing grain dryness before storage helps:

- Determine when drying is complete.
- Prevent mold growth and aflatoxins during storage.

How the PIMA works:

- When grain is put in PIMA, its moisture will equilibrate with the surrounding air.
- PIMA measures relative humidity.

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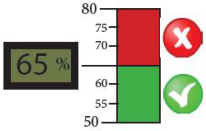
How to use PIMA:

1. Fill PIMA with grain.
2. Place on its side in the shade.
3. Wait for 20-30 minutes.
4. If relative humidity is:

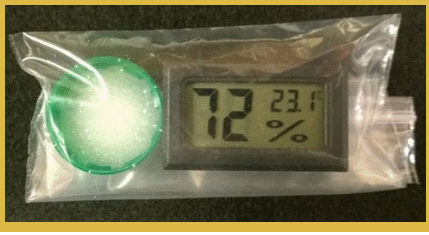


Above 65%: Continue drying
Below 65%: Ready to store

Maize Equilibrium Moisture Content

Temperature (°C)	Relative Humidity (%)						
	50	55	60	65	70	75	80
15	11.9	12.6	13.3	14.1	14.9	15.8	16.8
18	11.6	12.3	13.0	13.8	14.6	15.5	16.6
21	11.4	12.0	12.8	13.5	14.3	15.3	16.3
24	11.1	11.8	12.5	13.3	14.1	15.0	16.1
27	10.8	11.5	12.3	13.0	13.9	14.8	15.9
30	10.6	11.3	12.0	12.8	13.6	14.6	15.6
33	10.4	11.1	11.8	12.6	13.4	14.4	15.4
36	10.2	10.9	11.6	12.4	13.2	14.2	15.2

Calibration



1. Remove the hygrometer from the PIMA cover.
2. In the cap of a water bottle add salt and water.
3. Place cap inside resealable bag with hygrometer.
4. Push air out of bag and seal.
5. After 24 hours, reading should be 70-74%.

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Purdue Improved Crop Storage (PICS) Program

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