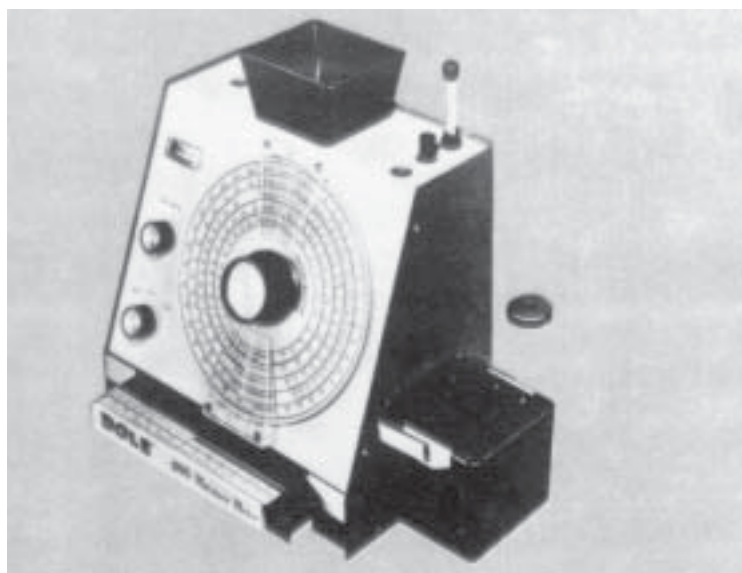


Dole 300 Moisture Tester Owner's Manual

Introduction



The Dole 300 Moisture Tester is a precision-built electronic instrument employing advanced principles of design based on years of experience as the world's leading manufacturer of grain moisture testers.

The Dole 300 Moisture Tester is designed primarily for measuring the moisture content of field grain. The percent moisture of many grains can be read directly from the dial without the use of charts. Operation is simple and rapid, providing the utmost in accuracy.

The Dole 300 Moisture Tester is operable from either an AC power supply or a standard 9-volt transistor battery. Simply plug the integrally-connected line cord into an AC convenience outlet or insert a standard Eveready #26 (or equivalent) 9 volt battery into the easily accessible holder in unit (see Maintenance section). The use of completely transistorized circuitry eliminates any need for warm up and assures lasting stability and accuracy.

To add to the speed and convenience, a grain sampling scale has been built-in and factory calibrated to the standard test sample weight. The scale cup is of an advanced design, providing maximum accessibility and ease of pouring.

All moisture percentage calibrations are based on thousands of individual tests, and compared to the official air oven test method. Our calibration laboratory continually monitors grain moisture tests and is available to evaluate specific calibration requirements that might arise.

You can help maintain the accuracy of your Dole 300 Moisture Tester by handling it carefully and avoiding exposure to rain or excessive dampness. The instrument is ruggedly constructed and protected by its own durable carrying case. It may be used in shop, office, or field.

Specifications

Electrical Power Requirements:

105-125 volts, 60 cycle ten watts, or one Eveready #216 9-volt transistor batter or equivalent (not supplied with unit).

Weight:

15 pounds

Dimensions:

Height - 11 $\frac{1}{2}$ inches, Depth - 6 $\frac{1}{4}$ inches, Width - 9 $\frac{5}{8}$ inches

Dial Calibrations:

Reads directly in percent moisture as tabulated below. An additional scale "A" is provided for use with included charts of other grains and special commodities. Additional charts for special commodities are available.

Commodities on Dial* - PB70-1

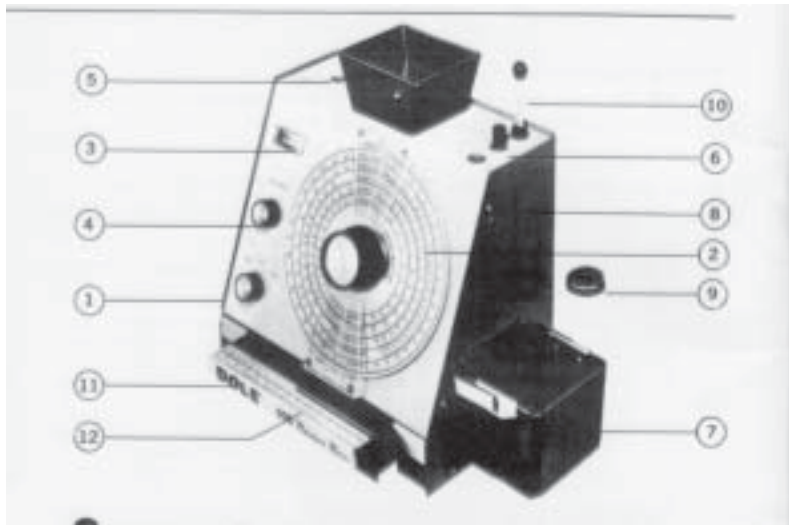
Grain	Range
Corn	6 to 26%
Corn (high moisture)	17 to 37%
Sorghum	6 to 23%
Sorghum (high moisture)	20 to 34%
Soybeans	8 to 19%
Barley	6 to 25%
Rye	6 to 25%
Wheat	6 to 25%
Oats	8 to 23%

Commodities on Dial* - PB70-2

Grain	Range
Rice (rough)	6 to 24%
Virginia runner peanuts	11 to 21%
Spanish Peanuts	9 to 26%
Coffee Oro	11 to 21%
Coffee Perg.	6 to 44%
Corn	6 to 26%
Wheat	6 to 26%
Barley	6 to 25%
Soybeans	8 to 19%

**All grains shown on the dial are calibrated for a five ounce sample except high moisture corn and high moisture sorghum which require the use of a three ounce sample.*

Identification of Parts



- 1 Power Switch.** Turning to the left turns the instrument in the balance position for standardizing the initial balance. Turning to the right turns on the power for grain moisture testing.
- 2 Main Dial.** Provides direct reading of all test results
- 3 Balance Meter.** Indicates when testing circuit is balanced. Pointer to right indicates counter-clockwise dial rotation. Pointer to left indicates clockwise dial rotation.
- 4 Balance Knob.** Provides adjustment to balance circuit before introducing grain sample.
- 5 Hopper.** Funnels the grain into the test chamber.
- 6 Dump Button.** When pressed, dumps grain from the test chamber into drawer.
- 7 Grain Cup.** Shown in position on scale for sample weighing.
- 8 Scale Indicator.** Shows balance of grain sample being weighed in cup.
- 9 Auxiliary Weight.** Attaches to bottom of cup for high moisture sample weighing. Stores on rear of unit.
- 10 Thermometer.** For determining grain temperature. Shown in storage receptacle.
- 11 Drawer.** Used to remove grain after completing test.
- 12 Temperature Correction Chart.** Shows moisture to be added or subtracted for cold or hot grain samples.

How to Make a Moisture Test

FOLLOW THESE SIMPLE STEPS:

1. If using AC, be sure to plug into 115 volt outlet. If battery, be sure battery is in place. (See Maintenance section for information on installing battery.) Operation of tester on 115 volt with battery installed will not affect tester operation.
2. Balance circuit as follows:
 - A. Turn main dial until *red line* marked BALANCE is directly under upper hairline.
 - B. Note position of balance meter needle. This position is the **mechanical zero** for this meter. *Warning: Mechanical zero may not be in the exact center of the small ball on the meter face.*
 - C. Rotate and hold *Power Switch* in the balance position and adjust balance knob until the needle of the balance meter is at the **mechanical zero** position. (See B above.)
 - D. Release *Power Switch*.
 - E. Rotate *Power Switch* to BALANCE position. Needle of meter should not move from **mechanical zero** position. If needle moves, repeat Steps C, D, and E until no movement of needle can be seen when switch is rotated to balance position. When no movement is seen in meter needle, the unit is properly balanced.
 - F. Periodic checks of balance will assure the best accuracy in your tests.
3. Weigh sample of grain in **grain cup** with cup and yoke assembled to tester. Pour grain into cup until beam swings free, as shown by scale indicator. Red line should be in center of window. *Important! Knife edges of yoke must be up when assembled to grain cup.*
4. Remove grain cup and yoke from scale hanger and pour grain into **hopper** on top of moisture tester. *Important! For consistently accurate tests, pour grain as quickly as possible without spilling.*
5. Rotate and hold *power switch* in on position and turn *main dial* until pointer of balance meter is at center position.
6. Locate proper scale on main dial for the grain being tested and read percent moisture under indicator hairline. If there is no scale on main dial for the grain being tested, use reading on scale "A" and refer to charts for moisture reading.
7. Press **dump button** and remove grain sample and drawer.
8. Make temperature correction according to procedure outlined on page 6 to achieve greatest accuracy.

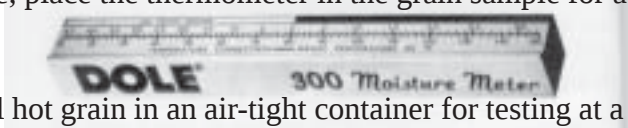
Sample Grain Wisely

Be sure that your grain sample is representative of the field or part of the field which you want to test. Because moisture content varies widely in the field, it is best to take a large sample, mix it, and weigh out the test sample from the mixed grain. Test the sample as soon as possible after it has been taken from the field, to prevent possible gain or loss of moisture in handling.

When to Make a Temperature Correction

The Dole Moisture Tester is designed to make accurate moisture tests when the temperature is 80 F. The error caused by a few degrees deviation from this temperature is small, but when the grain is^o brought in from a field where the temperature is cool or very warm, or taken from a grain dryer, a correction should be applied to the moisture reading.

To check temperature, place the thermometer in the grain sample for a few minutes before making moisture test.



Never attempt to seal hot grain in an air-tight container for testing at a later time because a chemical change could occur which might cause a change in moisture content. Cold grain, however, should be sealed air-tight if it is to be tested at a later time.

Testing Grain with High Moisture

If you cannot bring pointer of balance meter to the center position when testing a sample, the grain has a higher moisture content than can be read on the dial.

Dump grain from testing chamber, remove and weigh a three ounce sample by installing auxiliary weight (stored on back of tester) on the bottom of the grain cup. Test as before, reading corn or sorghum on the high moisture scale and other grains on scale "A". Other high moisture commodity charts for scale "A" are available.

Maintenance

Your Dole Moisture Tester is designed to give you years of trouble-free operation without special service or internal adjustments.

If you use your unit on battery power, it is suggested that the battery be changed once a year. Do not store your moisture tester without first removing the battery. The battery holder and connecting clip is located inside and under the unit and may be easily reached by removing the grain drawer. Since the battery may only be inserted in the holder one way, there is no need to worry about reversing polarities, etc.

Keep in mind, the results produced by your Dole Moisture Tester will not necessarily match those of your local grain elevator.

If internal maintenance is required, never attempt to have it done by a local radio or T.V. repairman. The electronic circuitry used in your moisture tester is very specialized and factory calibration can be destroyed if proper maintenance procedure is not followed.