



## **TESTING THE MOISTURE CONTENT OF HAY:**

Accurately Testing Your Hay Before, During and After Baling  
Using Electronic Moisture Testers

**AgraTronix  
Mission Statement**

We believe in providing the best possible quality products and customer service for cultivators, agriculturalists and weekend farmers. We strive to be the leading provider of hay, grain and wood moisture sensing equipment so that our customers can consistently protect their crops, harvest, horses and livestock without worrying about their investments.

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*“Testing the Moisture Content of Hay: Accurately Testing Your Hay Before, During and After Baling Using Electronic Moisture Testers”* is brought to you by AgraTronix, the worldwide industry standard for grain, hay and wood moisture testers.

For more information about AgraTronix Moisture Testers, visit [www.AgraTronix.com](http://www.AgraTronix.com) or call customer service at 1-800-821-9542.



**“According to agricultural nutrition experts, the single most important factor influencing the quality of grain, hay and wood is moisture.”**



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## WINDROW™ Portable Hay Moisture Tester

The WINDROW™ is the only portable hay moisture tester available for use in the field before baling. It is designed to quickly measure loose hay and forage from a windrow without committing the time and expense of using baling or chopping equipment before your hay is at the correct moisture level. It is simple to use - add loose hay to a five-gallon bucket, insert tester probe and press a button.



## WHY IS IT IMPORTANT TO TEST HAY MOISTURE PRIOR TO BALING?

Testing the moisture content of hay prior to the baling process is essential to both seller and buyer. Moisture in hay is considered in three different forms, free water, physically trapped water, and bound water. The free and physically trapped water can be evaporated given proper conditions which include solar radiation, relative humidity, and time.

At the time of baling the ideal moisture level is between 18 and 22 percent. Hay baled with higher moisture percentages can foster mold, resulting in loss, and in severe cases, damage as the accompanying heat can cause spontaneous combustion. Due to its importance, testing hay for moisture content is essential to the success for both the buyer and seller.

Prior to the invent of electronic testers, farmers would visually inspect the hay for moisture by picking up and subsequently breaking the stem to examine the moisture level in the stem to determine if it was ready for the baling process. Having the technology of electronic testers allows the farmers to pin point the ideal time for baling resulting in a higher overall yield from their fields. With the introduction of hand-held electronic testers, farmers not only have the benefit of accuracy they also have the benefit of efficiency.

Instead of sending samples into a laboratory, drying and testing in the house with the microwave, using a large convention oven, testing using a field drier, or even twisting the hay by hand to test, you simply take the samples from the windrow; place them in a designated bucket, and test for moisture using a probe style tester such as the AgraTronix WINDROW™ Hay Moisture Tester. Simple, clean, efficient.



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## BHT-2™ Baler-mounted Hay Moisture Tester

The BHT-2™ Baler-mounted Hay Moisture Tester has advanced multi-sensor technology for greater overall accuracy while baling hay with small square or round hay balers. The sturdy display module mounts in the tractor cab and displays readings from sensor pads mounted in the baler chamber. Moisture reading averages are updated and displayed every three seconds.



## BHT-1™ Baler-mounted Hay Moisture Tester

The BHT-1™ Baler-mounted Hay Moisture Tester has a testing range from 8% - 40% moisture while baling hay with square or round hay balers. It is easily calibrated with its built in calibration button. Similar to the BHT-2™, the sturdy display module mounts in the tractor cab

and displays readings from its sensor pad mounted in the baler chamber. Moisture reading averages are updated and displayed every three seconds.



## BALING YOUR HAY AT THE CORRECT MOISTURE LEVELS SAVES TIME AND MONEY

Testing for moisture does not end with the bale; testing occurs during and after baling. During the baling process the use of baler-mounted hay moisture testers, such as the AgraTronix BHT-1™ or BHT-2™, assures the producer that the hay is at the correct levels as it is being baled. Installation is simple and the results are displayed to the operator every two seconds or so.

The one thing to keep in mind about baler-mounted testers is that the levels can read from 2 to 3 percent higher than a hand held or portable tester. This is not to say that the testers are inaccurate just that there is a variable when using a baler-mounted style moisture tester throughout the baling process. You will develop a feel for the difference in equipment and again can be assured that the hay being processed is at its ideal condition for production.

Hay that has been baled too wet will produce mold and can heat up to fire producing levels. A bale of hay with mold is typically not a bale that can be sold; if it is sold the sale price is drastically reduced as the hay is no longer safe for food matter where livestock is concerned. If the hay is baled too wet and results in a fire, the loss can be catastrophic in product sales, property damage, and loss of life.

**Proper moisture levels during baling is essential to produce better quality hay and reduce economic losses. Baling hay at the correct moisture levels reduces mold development, and helps to preserve the color and feed value of hay.**

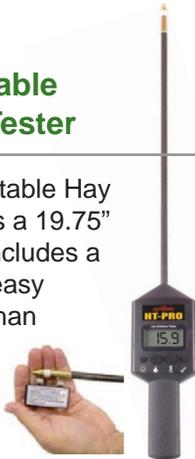


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### HT-PRO™ Portable Hay Moisture Tester

The HT-PRO™ Portable Hay Moisture Tester has a 19.75" probe length and includes a calibration clip for easy calibration in less than 20 seconds.



### DHT-1™ Portable Hay Moisture Tester

The DHT-1™ Portable Hay Moisture Tester gives a direct readout for moisture percentage. It has a sturdy pistol-grip handle with an extra-rugged probe shaft made from aircraft aluminum. Three versions of this model is available with probe shafts ranging between 18" - 32" in length.



## TESTING THE MOISTURE LEVELS OF STORED HAY

After the baling process, hay is stacked and awaits sale. Testing at this stage is vital for the same reasons that stood prior to the baling process. With a hand-held electronic probe tester, such as the AgraTronix HT-PRO™ or DHT-1™, you are able to simply insert the probe into the bale and determine its moisture level. Probes come in a variety of lengths, 18", 20", 24", and 32", giving you flexibility along with reliability.

As with hay that is in process, hay that has been baled is subject to a variety of conditions and/or circumstances that can affect the test results. Bale density should be considered when testing; a tighter bale will produce higher moisture levels which will be reflected in the results. The shape, the size, and the baler being used all have an effect on the test results. For example small, rectangular bales tend to be denser toward the bottom whereas large rectangular bales tend to be densest in their upper corners.

The "sweating" process which occurs naturally, and passes, can alter the results of a moisture test as can the use of preservatives. Preservatives will become absorbed in approximately 1 to 2 days however prior to that a result that is 2 to 4 percent higher is not unheard of. Even the type of hay tested can alter the results, if your tester is calibrated for alfalfa however the hay being tested is a grass, alfalfa mix the moisture level can vary. A simple matter of including conditions into your test results will result in better hay production.



**To avoid barn fires resulting from internal heating, hay bales should be tested for the correct moisture levels before placed inside a barn for storage.**

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**Northeast Ohio  
Business, An Industry  
Leader Since 1975**

AgraTronix has been a leader in the electronic moisture sensing instrumentation industry for more than 37 years. They are renowned as the worldwide industry standard for Grain, Hay & Wood Moisture Testers. Always incorporating the latest technology, AgraTronix offers a wide range of high-quality, competitively priced products with specifications to meet the everyday farmer's needs. They have built a reputation of quality, reliability, service and state-of-the-art technology. They private label their moisture meters for several major tractor, combine and baler companies across the globe. AgraTronix Grain, Hay and Wood Moisture Meters are designed and assembled in the U.S.A. and used reliably by farmers around the world.

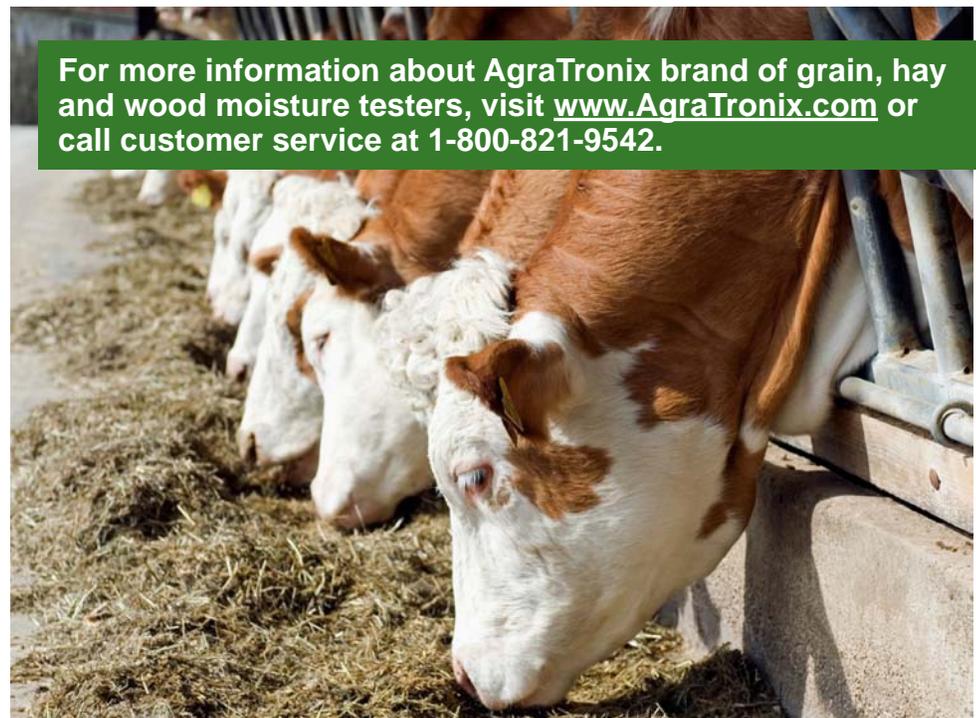


**ELECTRONIC MOISTURE TESTERS TAKE THE GUESSWORK OUT OF HAY PRODUCTION**

Testing hay throughout the process is, as stated, vital to the proper and profitable production of hay. Without testing hay production relies on luck and experience; whereas experience needed is vast and luck is just not practical. Hand-held electronic testing equipment takes the guess work out of production and allows farmers to produce and bring to market hay ready to sell with little to no waste.

The electronic moisture testing devices available by AgraTronix also save valuable time, the production of hay does not happen in a factory neither can a wasted bale be "fixed". Making sure the hay is ready for baling and subsequently ready for sale with hand-held electronic testing equipment used throughout the process, removes any doubt where quality is concerned, provides convenience to the farm staff, and assures the buyer that they are purchasing a quality product.

Hay buyers are very particular customers; your hay is feeding their livestock, their livestock provides for their family. If the hay purchased is riddled with mold not only is it dangerous to store it is unable to be fed. Wasted hay due to poor conditions during production can lead to a myriad of problems for livestock owners, from sickness to disposal of the unusable hay. If a ranch purchases hay that results in sick livestock chances are they are going to shop around for another supplier, if a ranch purchases hay that catches and causes fire damage, you can be sure they will shop around. The price of hay in today's market is high, livestock owners, ranchers, and the like are looking for well priced quality hay; testing assures them of that. Hand-held electronic testing equipment allows the farmer confidence in his crop, convenience for staff, not to mention happy, and returning, customers.



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