

## Drying Soybeans in 2009

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The cool and wet fall coupled with a desire to get into the field as soon as possible following rainy weather has many producers throughout the state harvesting soybeans at higher than normal moisture contents. Harvest moistures have been ranging from 10% - 20%. With this wide variation in moisture many growers are questioning what to do, particularly with the soybeans that are above the "safe" storage moisture of 13%. Producers should approach the issue of drying beans with caution. High drying temperatures of 160 – 180°F can lead to excessive seed coat cracking, thus resulting in more splits. Drying will produce fewer splits if the air relative humidity is kept above 40%. For example, if outside air is 60°F with a relative humidity of 80%, it should not be heated above 80°F because when heated to that temperature air relative humidity will be 40%.

**Medium Temperature Drying:** In situations where continuous flow dryers or bin dryers are utilized, higher temperatures may be used on high moisture beans. However, soybean exposure should be limited. If seed quality or splits are not a major consideration soybeans may be dried in continuous flow driers at temperatures ranging from 120 -140°F. Exposure to these temperatures should be limited to no more than one-half hour, depending on the initial moisture of the beans. When heat is added to bin dryers, it should be intermittent so that the beans are not exposed to high heat for an extended period of time.

**Low Temperature Drying:** Natural air drying is another acceptable means by which to dry soybeans. With adequate ambient temperatures, and lower humidity, 2 -3 points of moisture can easily be removed in a bin. This assumes that the bin is equipped with a drying floor that will produce uniform airflow. Typically 1 to 2 cfm/bu is desirable for natural air drying. Growers should be aware that this process may take up to several weeks to complete depending on the depth of the grain mass. The natural air drying process can be speeded by placing a layer in the bin and drying that layer before the next is added. Another option is to use a bin equipped with stirrers that thoroughly mixes the grain within the bin during drying. Here again, careful monitoring of the bin is important to make sure excessive splits are not occurring, particularly during stirring.

**Further Considerations:** If high moisture beans were added to a bin early and then lower moisture beans were added to the same bin over the next several days, operators should expect the drier beans to eventually pick up moisture. As the air moves through the wet beans at the bottom of the bin it will dry them but then carry the moisture to the grain above. Given enough time, the moisture will be pushed completely through the grain mass.

For more information regarding handling and storage of high moisture soybeans see "Grain Quality Fact Sheet #27 Harvesting, Drying, and Storage of Frost Damaged Corn and Soybeans" at [www.grainquality.org](http://www.grainquality.org) Click on "Extension Publications" tab and then go to "Drying, Conditioning and Aeration"