



Harvesting Dry Soybeans

Harvesting dry soybeans can be a challenge. Gathering losses, including shattering, are responsible for a large percentage of harvest loss in soybeans. Harvesting excessively dry soybeans can add to this problem because when pods are too dry the risk of shattering increases. Also, when soybean seed becomes very dry (10% moisture or less), seed damage can occur. Several steps can be taken to minimize harvest losses when dealing with dry soybeans.

Harvest when moisture is available. Soybeans re-absorb moisture more easily than other crops. Take advantage of this by harvesting soybeans after a rain or whenever relative humidity is high, but pods are dry enough to thresh. It may be beneficial to harvest in the early morning or evening hours when dew is present. Shatter losses can be higher after several wet-dry cycles of the pods, so in some cases there may be no advantage to waiting for additional moisture. Avoid harvesting during hot, dry afternoons when pods tend to be brittle and seed has lost additional moisture.

Wet plants and pods can be tough and may require combine adjustments. Cylinder speed may have to be increased and changes to the cylinder concave clearance may be required. When harvest begins in the morning, combine adjustments may be needed as soybean seeds lose moisture content during midday.

Pay attention to combine settings. Dry soybeans need to be handled carefully. Consult equipment operator's manuals to make sure the correct settings are being used to minimize harvest losses. Keep these points in mind:

- Improper reel speed and position can lead to large losses due to shattering. Slowing down the reel tip speed allows a more uniform feed rate to the combine which can decrease separator loss.
- Over-threshing is a common problem. Selecting a slower thresher speed decreases the threshing severity and can minimize damage such as splits. This is an important consideration in seed production fields because soybean germination decreases at about the same rate as damage increases when threshing is too aggressive.
- Slowing down the combine forward speed can reduce shatter and stubble losses. At high speeds, soybean



Figure 1. When soybean seeds are overly dry the risk of seed injury and shattering occurring during harvest increases (*Image K4389-11, USDA ARS. Online: <http://www.ars.usda.gov>*)

Pods can be stripped from the stalk, shatter, and drop to the ground. Limiting forward speed to 2.5 to 3 miles per hour can help decrease these losses.

In summary: Excessively dry soybeans can lead to increased harvest losses due to shattering and pod drop. Taking advantage of available moisture in the form of dew and rain, and using the proper combine settings can help minimize these losses.

Sources: Soybean harvest. North Dakota State Extension Service. Online: <http://www.ag.ndsu.edu>. (Verified 10/10/10)

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