

Benefits of a Timely Corn Harvest

Monitoring grain moisture content is important for a timely harvest, and should begin when corn reaches physiological maturity or black layer. Scouting fields for stalk quality and lodging can help establish priority in harvesting order.

Grain Moisture

Monitoring of grain moisture content should begin as soon as corn reaches physiological maturity (black layer). To test for grain moisture content, randomly select 10 ears of corn and remove several rows of kernels from the full length of the ear. Mix the kernels thoroughly and use an accurate moisture meter to determine the moisture content. Take three moisture readings and average the results.

At harvest, target a grain moisture level that will provide a good balance between minimizing harvest losses and keeping drying costs down. Allowing all the corn to field dry could be a very costly mistake. Harvesting at lower moistures can increase mechanical losses due to ear drop, stalk lodging, and kernel shattering. Harvesting at 15% to 18% grain moisture content can minimize drying costs, but may not be the most profitable. There may be greater potential to capture the most revenue per acre when harvesting at 23% to 25% grain moisture content. Consider beginning harvest when corn grain moisture content is slightly above 25% so that harvesting can be finished before corn dries completely in the field.¹

Field drying of mature corn grain is influenced primarily by weather factors like temperature and humidity. Warmer temperatures and lower humidity encourage rapid field drying of corn grain. With high temperatures, it is extremely easy to underestimate grain drying rates. Grain that matures in late August can have an average daily drydown rate of approximately 0.8 percentage point moisture content per day, compared to 0.4 percentage point per day for grain nearing maturity in mid to late September.²

Harvesting Order

Fields should be scouted and monitored for issues that would change your field priority in harvesting order. Existing and potential stalk and root lodging, disease pressure, and moisture content can affect harvest order. Stalk cannibalization and physiological stalk lodging can be due to nitrogen loss from excessive early season rainfall. Anthracnose top die-back and stalk rot can be prevalent in certain years. With excessive cannibalization and abundant stalk rots, fields need to be monitored closely to develop a harvest schedule that can help minimize lodging and harvest loss.

The pinch test and the push test are two methods to determine stalk integrity when scouting for potential corn lodging. Conduct the pinch test by squeezing the second or third internode above the ground. If it collapses, stalk quality is compromised. The push test is performed by pushing a corn stalk to approximately a 45 degree angle. If it breaks, stalk quality has been reduced. Conduct either test on 10 plants in a row and at several locations in the field. If more than 10% of the stalks tested show poor stalk quality, or lodge at the root, the field should be scheduled for early harvest.

Harvesting and Storage Tips

In addition to harvesting at an optimum grain moisture content, achieving proper combine settings can help increase combine efficiency, maximize grain quality and minimize field losses. Always follow the manufacturer's equipment setting recommendations. Fields with considerable lodging should be harvested early to help minimize the risk of increased lodging and ear rots. Stored corn should be checked frequently. Bins should be inspected every one to two weeks in the fall and spring, and once every two to four weeks after conditions in the bin have stabilized during the winter months. Preventative practices can be implemented to help protect corn from spoilage during storage.

Sources: ¹McNeill, S. and Montross, M. Corn harvesting, handling, drying, and storage. ID-139. University of Kentucky Extension. <http://www.ca.uky.edu>. ²Nielsen, R. 2013. Field drydown of mature corn grain. Purdue University. Corny News Network. <https://www.agry.purdue.edu/ext/corn/news/timeless/graindrying.html>/ Web sources verified 8/23/2018. 130613070116

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