

Cool Weather Delays Corn Maturity

The weather will play a big role in whether corn matures and dries adequately this year.

Corn growth is behind schedule in North Dakota, according to Adnan Akyuz, North Dakota's state climatologist and assistant professor of climatology in North Dakota State University's Soil Science Department.

"Corn growing degree units across the state are ranging from 900 to 1250," he says. That is about 150 growing degree units behind what the level should be on July 30.

"North Dakota is currently between 5 and 100 growing degree units behind last year," Akyuz says. "Compared with 2004, one of the worst corn years that farmers can remember, this year started to catch up with 2004. In fact, southwestern North Dakota started to fall behind 2004 records by about 20 growing degree units."

While doing research to see if and when corn would reach maturity and whether it would have enough time to dry to its acceptable moisture level, he found that if the weather during the rest of the growing season progresses on the average, the corn with 90-day maturity that requires at least 2,150 growing degree units would reach maturity on Oct. 1.

"At this time, corn would have 30 percent moisture," says Joel Ransom, NDSU Extension agronomist. He adds that cool weather is not necessarily bad news for corn yield. It is the excessive moisture at the end of the season that is the problem.

Akyuz says based on the assumption that corn with 90-day maturity reaches maturity Oct. 1, it would have 25 percent moisture on Oct. 15 and 23.4 percent moisture on Oct. 25.

In Fargo, for example, the accumulation of growing degree units after Oct. 25 historically is zero.

"Therefore, the lowest corn moisture that could be attained at the end of the season would remain at 23.4 percent under the above assumptions in Fargo," Akyuz says.

"However, it is a hopeful assumption to think the temperatures will be near average for the remaining of the growing season," he adds. "If the temperatures are only one degree below average every day for the remainder of the growing season, it would push the maturity day to Oct. 16 and the driest corn moisture for the season to 25 percent, barely dry enough to be able to combine."

Corn needs to be at 14 percent moisture for long-term storage, Ransom says.

"If the temperatures are one degree above normal every day on the average during the remainder of the growing season, Sept. 24 is when this type of corn would reach

maturity,” Akyuz says. “It would then dry down to 21.8 percent moisture content on Oct. 25.”

Producers can access dates of freeze and hard freeze with different probabilities of occurrences on the North Dakota State Climate Office Web site at <http://www.ndsu.edu/ndsu/ndsco/frost/index.html>.

Akyuz is willing to determine maturity dates and moisture content for different types of corn, planting dates and different climate scenarios. Producers can reach him at (701) 231-6577 or adnan.akyuz@ndsu.edu.

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