

## **Corn Growing Season May Be Too Short**

North Dakota farmers may not have enough growing season left for corn to mature this season, cautions Adnan Akyuz, state climatologist and assistant professor of climatology in North Dakota State University's Soil Science Department.

The growing season for crops depends on the number of growing degree units between the crop's emergence date and physiological maturity. Growing degree units are calculated on accumulated temperatures above a base temperature. For corn, the base temperature is 50 degrees Fahrenheit.

For example, corn needs 2,050 to 2,150 growing degree units to mature in 85 days, according to Hans Kandel, an NDSU Extension Service agronomist and associate professor in the Department of Plant Sciences.

Akyuz says the last day a spring frost normally occurs is between May 14 in south-central North Dakota and May 17 in northern North Dakota. However, this spring, the last time temperatures plummeted below the freezing point statewide was on May 27.

"We are still not out of the woods," he adds, noting that Fargo recorded frost as late as June 20 in 1969, which left only 109 days of a continuous frost-free growing period.

Using Fargo as an example, this year's May 27 frost was the 16th latest last frost day in the city's recorded history. When frost occurred later than May 27, growing seasons were shorter than 106 days 93 percent of the time, according to Akyuz. He calculated that growing season based on temperatures above 32 F.

He is forecasting cooler than normal temperatures in North Dakota during the 2008 growing season because of colder than normal sea surface temperatures in the eastern Pacific Ocean, also known as La Nina, during the past winter.

"La Nina is weakening, but we will continue to feel its impact throughout the summer," he says.

Akyuz did find some encouraging signs, however, when he tabulated sea surface temperature patterns over the eastern Pacific Ocean from 1890 to the current time.

"There are lots of similarities between the current conditions and the conditions in 1971," he says.

In 1971, the last day of frost also occurred late in the season, on May 20. Nevertheless, farmers were able to use 85 days of the growing season suitable for corn growth that year, giving them a chance to accumulate 2,450 corn growing degree units, which was well below the 1971-2000 average yet still enough for corn to reach the needed accumulated growing degree units. So far North Dakota accumulated between 300 corn

degree units in south east and 250 corn degree units in north east North Dakota since May 1. Both numbers are 40 and 90 corn degree units below normal respectively.

“It is too early to talk about the adverse effects of the upcoming growing season, which is expected to be short,” Akyuz says. “One of the positive impacts of the remaining La Nina is that it is associated with above-normal precipitation, especially in the eastern half of the state.

“As for western North Dakota, there still is a chance to come out of extreme drought,” he says. “We need more frequent and persistent storms.”

###

NDSU Agriculture Communication

Source: Adnan Akyuz, (701) 231-6577, [adnan.akyuz@ndsu.edu](mailto:adnan.akyuz@ndsu.edu)

Editor: Ellen Crawford, (701) 231-5391, [ellen.crawford@ndsu.edu](mailto:ellen.crawford@ndsu.edu)