Summer has just begun, but some areas across the state already resemble those of late summer—and the problem isn't just in Nebraska. All across the Great Plains, drought is starting to take hold just as corn crops are about to come into pollination ñ a critical time for water.

The latest U.S. Drought Monitor shows the western two-thirds of the state in a moderate drought, and even though the northeastern quarter of the state is not in a drought, Al Dutcher, state climatologist at the University of Nebraska-Lincoln, said, "If it doesn't rain, things are going to get ugly."

So far in eastern Nebraska, based on the indicators used in the Drought Monitor, precipitation has been sufficient enough to keep crop stress at minimum so far.

"If we keep getting precipitation, I don't expect any deterioration of conditions. However, we are entering a high water use period for corn and subsoil moisture levels are below normal in this region because of our dry fall and spring."

This means eastern Nebraska could easily be moved from normal to a severe drought in a couple of weeks.

Dutcher said a big problem is high evapotranspiration rates across the state. ET rates are determined by temperature, wind, relative humidity and solar radiation.

With temperatures above normal, high winds, high solar radiation and low relative humidity earlier this week, the combination makes it hard to keep up with corn's moisture demands, even with irrigation.

Dutcher said the biggest factor has been the wind. Wind demands moisture, causing corn plans to start rolling their leaves to conserve moisture.

"A 10-mile-per-hour wind usually can be offset by the corn's canopy," Dutcher said. "But anything faster than that increases the airflow through the full canopy and subsequently increases surface evaporation and transpiration. When ET values get above .40 of an inch, it is difficult for corn to physically move that much water through its leaves.

"Everything is working to conspire against vegetation this year and plants are using water quicker than normal."

He said alfalfa, wheat, pasture grass and even trees that vegetated out in March of this year are a whole month ahead in the growing season and have been using water for an additional month this year.

"We are seeing July type conditions in June pastures," he said.

Dewey Lienemann, extension educator in Webster County, said most prairie hay fields in south central Nebraska did not develop sufficiently to allow for a cutting at this time, and those that did cut the hay found a dramatic drop from last year.

In addition, alfalfa fields in dryland conditions provided from half to two-thirds of normal first cuttings and second cuttings were non-existent.

Dutcher said in corn, "We have not seen too early of development because it essentially got planted when it was supposed to." The crop insurance deadline of April 11 made it so many farmers did not start planting until after that date.

"If we would have seen a lot of early planted corn, the situation right now would be much more extreme on the corn crop," he said.

Dutcher said the part of Nebraska experiencing the worst of the drought is the Panhandle, especially the central Panhandle and Scottsbluff area. In addition, the Sandhills were upgraded to a moderate drought by the U.S. Drought Monitor this week.

The Climate Prediction Center's 30-day forecast indicates all of Nebraska should experience above normal temperatures. They also are indicating below normal precipitation for the eastern two-thirds of Nebraska, east/southeastward through central Illinois, Dutcher said.

The highest probability of below normal precipitation has been assigned to the eastern one-third of the state. Even though, Western Nebraska has not been assigned a precipitation tendency for July, the U.S. Drought Monitor outlook for the next three months shows little relief. It also indicates areas currently depicted as experiencing normal conditions, will likely experience drought conditions within the next three months.

Dutcher said a big factor in the forecast is the winds.

"The worst case scenario will be 100 degree temperatures and 30-mile-per-hour winds," he said.

He said this dry weather also means an increased risk of dry lightning strikes, which were responsible for fires in Colorado. He said there already have been some dry lightning strikes in the Panhandle.

"With dry, burnt pastures, those strikes can rapidly build a significant fire," he said. "It is important to be aware of fire danger, especially as we go into the Fourth of July holiday."