Flash Drought Hits Northern Missouri; High Temperatures Add Crop Stress

COLUMBIA, MO.

flash drought – a drought on steroids – hit north central Missouri in the last 10 days of August, says Pat Guinan, University of Missouri Extension climatologist.

"If there is no significant rain Saturday, August will be the driest August across northern Missouri since 1984. Records will be set at some locations," Guinan says.

"Despite late summer heat, August will average cooler than normal by a couple of degrees across the state," he adds.

Much of northern Missouri was dry all month, with only a trace of precipitation at some north central and northeastern sites. What makes a flash drought is not just lack of rainfall, but high temperatures, cloudless days, low humidity and high evapotranspiration rates.

The driest area, as shown on the U.S. Drought Monitor report released Aug. 29, extends from Worth County on the Iowa border eastward beyond Kirksville. The drought extends south beyond Cameron and Macon, Mo., both on Highway 36.

Guinan toured the area Thursday, going from Bethany to Cameron to Macon. "My windshield tour showed lots of brown pastures and fired, rolled corn. There is significant crop stress."

Earlier, Guinan visited northwestern Missouri counties along the Missouri River. "They looked lush by comparison. They'd received a big rain on Aug. 15. Counties to the east missed out.

"The north central region went downhill quickly in the last 10 days of August. The drought of 2012 was quite different from the summer of 2013."

In 2012, the rain turned off in May. That lack of rain was joined by the warmest spring and the 11th-hottest summer on record. "In the 2012 growing season, we saw unusual numbers of cloudless days. Lack of rain and high heat brought low humidity, which increased evapotranspiration. Plants soon sucked water out of the soil."

There's more to the disparity story, Guinan adds. "Areas in southern Missouri had record floods. Pulaski County, in the Fort Leonard Wood area, recorded 17 inches of rain."

Just 150 miles to the north there were only traces of rain at Kirksville and Edina. Rainfall at Macon, Brookfield, Milan and Trenton were less than 1/10 of an inch. "In two hours, we can drive from areas reporting their wettest or their driest Augusts on record," Guinan says.

Most crops in the flash drought area were in fair to good condition, despite lack of rain, until the last 10 days of August.

Lower temperatures and cloudy days made the difference from June to mid-August. Evapotranspiration remained low. Some soil moisture remained from the wet spring. Then sunny days and high temperatures raised evaporation and soil moisture ran out.

"July through mid-August remained pleasant. Daytime highs hit the 70s and 80s. It was our coolest summer since 2009," Guinan says.

The flash drought extends into much of Iowa and Illinois. That's another difference from 2012, Guinan adds. "Last year the drought covered much of the central United States. And it lasted longer."

Guinan operates the Missouri Climate Center, part of the MU College of Agriculture, Food and Natural Resources and the MU Extension Commercial Agriculture Program. He oversees a network of automated weather stations across the state.

Guinan summed up 2013: "It's the year of disparity." $$\Delta$$

