

Artificial turf turns up the heat on Faurot Field

By [Beth Castle](#)

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COLUMBIA — Faurot Field had a high of 151 degrees during Saturday's Missouri football opener.

A team of turf experts used an infrared thermometer to measure the heat coming off of the field in Memorial Stadium.

The National Weather Service in St. Louis reported Saturday's high temperature in Columbia as 100 degrees, but that reading was on a natural grass surface about 6 feet above the ground — standard practice for a thermometer reading, weather service hydrologist Mark Fuchs said.

On an artificial-turf surface, the temperatures jump, Fuchs said.

The weather service predicts another hot game day when the Tigers and Toledo Rockets kick off at 2:30 p.m. Saturday, with temperatures in the mid-90s and little cloud cover to provide shade. Division of Plant Sciences professor Brad Fresenburg, however, doesn't believe the slightly lower temperature will change the field temperature because sunlight plays such a vital role in turf temperature.

"If we've got the sun in the air and there's a clear blue sky, we're easily going to be in the 150s. It could even be in the 160s," Fresenburg said. Last week, kickoff was at 6 p.m. This week, it is at 2:30 p.m, around the hottest time of day.

"We know that the fibers in a synthetic field control the heat," Fresenburg said.

Artificial fields are made of petroleum-based fibers that absorb heat as weather conditions change. Mid- to late afternoon, when direct sunlight has had its greatest effect on temperature, is usually when turf fields reach high temperatures. Much like vinyl in cars, the fibers capture and hold heat until the field has time to cool. Often, the fields get so hot that the heat can be felt through the soles of shoes, Fresenburg said.

Temperature readings vary depending on the kind of surface, amount of cloud cover, humidity, wind speed and thermometer height during the time of the reading. A slight breeze, for instance, can change temperatures by 20 or 30 degrees.

"The clarity of the sky and the time of day — that makes a huge difference in what reflects off of that field as far as heat. The sky, if it's more clear blue, that's going to allow the field to absorb more heat," Fresenburg said.

Faurot Field transitioned from natural grass to artificial turf in 2003. In 2012, the 97,865-square-foot field was resurfaced to prepare the stadium for its Southeastern Conference debut. This year, university staff members continue to monitor the field temperature throughout games for research and safety purposes.

"The football team routinely practices on the synthetic field. With them being on it more often than other teams, they're going to be accustomed to the heat," Fresenburg said.

Extreme heat can cause fatigue and cramping, but trainers keep players hydrated. Cooling fans are also placed on the

field in accordance with safety guidelines.

Though the weather service has yet to issue a heat advisory for Saturday, high temperatures on game day mean that everyone, even fans, at this week's game should take precautions. Despite efforts by the Missouri athletics department to provide water, ice and mist stations, some fans at Memorial Stadium last week [had problems finding free water in the 100-degree heat.](#)

"Hot's going to be hot no matter what. Fans and players on the field need to be well aware of the fact that they need to go in there hydrated," Fresenburg said.

Supervising editor is [John Schneller.](#)