Mo.'s cool summer may crack top 10 on record

University of Missouri Extension Climatologist Pat Guinan says the season will rank among the 15 coolest on record, and possibly among the top 10.

Guinan attributes the temperatures to a northwest-flow upper-air pattern that dominated the Midwest for much of July and part of August. That flow led to frequent cool-air intrusions from Canada and extended periods of below-normal temperatures across Missouri.

Meanwhile, average rainfall statewide was higher than normal in June, July and August.

The summer conditions were mostly helpful for farmers. The Missouri Agricultural Statistics Service says most of the corn and soybean crops are in good to excellent condition.

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Cold, wet summer affects Missouri crop quality

By Rebecca Berg  
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JEFFERSON CITY — Tomatoes will be a little less tasty this year thanks to a cold, wet mid-Missouri summer.

The summer season presented a challenge to farmers across the state, who were forced to contend with above-average rainfall and below-average temperatures. For some of the region’s farmers, the unusual weather has resulted in the delayed harvest of some crops and in altered taste profiles for others.

Deanna Pickering, who runs Pick and Pick Farm with her husband, Sam, grows a variety of produce on ten acres in Columbia. Some of her crops, such as water-loving strawberries and blackberries, have reaped the benefits of the uncommon climate. Meanwhile, crops like tomatoes and cucumbers have suffered.

"The cucumbers got a blight, which happens in wet years," Pickering said. "And the tomatoes aren't quite as tasty as they should be because of the cold weather. The cool nights, I think, affect the taste of the tomatoes."

Randy Miles, associate professor of soil science at MU, said that such quality concerns may have more to do with higher-than-normal precipitation.

With more rain this summer, Miles said, absorption increased in fruits with high water content, such as tomatoes and watermelons. But as the produce's size increased, the sugar content remained static, resulting in larger fruits with lesser taste.

"The crops were bigger, but not better," Miles said.

According to Benjamin Sipprell, a meteorologist for the National Weather Service in St. Louis, this summer was Columbia's ninth coldest and 22nd rainiest since record keeping
began in 1890. Sipprell said the conditions leading to the summer's temperatures were abnormal.

He said cold air masses from the Central Plains prevented summer heat waves.

As some Missouri farmers have struggled to fight the forecast, winemakers at Les Bourgeois Vineyards in Columbia celebrated the summer's weather.

One winemaker, Jacob Holman, says traffic greatly increased at the winery over the summer because potential customers were not discouraged by the oppressive heat that is typical of the season. Furthermore, Holman said, the taste of the vineyard's grapes and, thus, its wines, might actually have been improved by the weather.

"It could mean that the flavor development will have a little more time," Holman said. "We saw some of that in 2008 where, because of the cooler climate, it actually helped with the flavor. With reds, being as they do come in later, we're hoping for a better flavor profile with this longer ripening season."

Though the rain may have brought more flavor to the winery's grapes, however, it also required an increase in the use of fungicides to prevent rot.

"There was a cost there that we wouldn't have in a dry year. If your crop were to get infected and rot off, then you would lose money there for sure," Holman said.

The yield of one of Missouri's most significant crops, soybeans, was also significantly affected by the summer's high precipitation and cooler temperatures. The cold weather led directly to the arrival of insects, such as the soybean aphid, to the region.

Tim Reinbott, superintendent of MU's Bradford Research and Extension Center, said the aphids, which are common in Iowa, are new to the mid-Missouri region and have lowered the overall yield of soybean plants.

Low temperatures have also wreaked havoc on another major Missouri crop, corn, which has had its harvest date delayed as a result of the cooler summer.

"If it doesn't get to 86 degrees, the corn doesn't mature very fast," Reinbott said. "There just haven't been enough days this summer where the temperature has exceeded that."
Additionally, Reinbott explained, the quality of corn has been jeopardized by low nitrogen levels resulting from the excessive rainfall. Without nitrogen, some cornfields turned yellow prematurely and the quality of the crop was lowered significantly.

Although farmers have incurred higher costs in harvesting late crops and spraying insecticides, Reinbott said food prices are not at risk of rising because farmers pay the extra costs themselves. Nevertheless, other effects have been felt at the local level.

At the Columbia Farmers' Market, farmers gather from across mid-Missouri to sell products to local buyers. The scene is a familiar one to Columbia residents; however, subtle changes could be noticed this year in the foods being offered, said Caroline Todd, the market’s manager.

"The sweet corn has been coming in later," Todd said, "but because of the wet spring and summer, we’ve had a lot of eggplants this year."

Increased eggplant production was only one benefit of a rainier summer. According to Miles, the moisture that has been added to the soil will carry over into next summer, creating a surplus of water that will ultimately promote crop growth early on.

As a result of more rain, "there's a larger glimmer of hope that we'll have better crop growth next year," Miles said.

For farmers like Deanna Pickering, though, one cold, wet summer is enough.

"We're doing fine, but I just have no clue if the summers are going to continue this way," Pickering said. "It's just been the oddest summer."