On the western side of Oklahoma, winter wheat outcome looks devastating, according to OSU Extension experts, who say they anticipate a 50% decline in yield this year. (Photo by Todd Johnson, OSU Agricultural Communications Services)

Western Oklahoma faces wheat crop devastation

Monday, May 23, 2022

Media Contact: Alisa Boswell-Gore | Agricultural Communications Services | 405-744-7115 | alisa.gore@okstate.edu(mailto:alisa.gore@okstate.edu)

Share

On the western side of Oklahoma, early cotton acre establishment is in question, and winter wheat outcome looks devastating, according to Gary Strickland(https://extension.okstate.edu/county/jackson/profiles/gary-strickland.html), Jackson County director and southwest regional agronomist for Oklahoma State University Extension(https://extension.okstate.edu/).

With winter wheat crops being harvested as of last week, OSU Extension experts predict a nearly 50% decline in wheat yields on the western side of the state.

Strickland said about half of the wheat fields in his local area have been abandoned by producers.

“They have either turned cattle out on them or have abandoned them because they can’t get any use out of them,” Strickland said. “We’re in pretty bad shape. It’s not that we’re becoming dry; it’s that we’re dry deep into the soil profile right now.”

Strickland said when setting up 4-H land judging pits in the southwest region, there was no moisture 3 feet deep in the soil.

“When you look at the total rainfall, it looks like Jackson County had adequate rainfall, but the problem is it took 26 rainfalls for us to get approximately 5 inches,” Strickland said, adding that their largest rainfalls in 2022 have been from one-half to three-quarters of an inch.

“In these drought conditions, these are not effective crop production rainfalls,” Strickland said.

According to USDA-National Agricultural Statistics Service reports(https://www.usda.gov/oce/commodity/wasde/wasde0522.pdf), abandonment for Winter Wheat in the U.S. is the highest since 2002 with the highest levels in Texas and Oklahoma. The USDA Crop Production Report (https://downloads.usda.library.cornell.edu/usda-esmis/files/tm70mv177/w3764d11b/6q183r18c/crop0522.pdf) for May estimated 60 million bushels for the 2022 Oklahoma winter wheat harvest — a 48% decline from the 2021 harvest.

According to the Oklahoma Mesonet, despite recent rains, 65% of the state remains in the moderate drought to exceptional drought category (https://www.mesonet.org/index.php/agriculture/map/agriculture_essentials/drought/oklahoma_drought_monitor_map), and heat conditions have also been rated poor to very poor for 47% of the state. Future weather predictions show no end in sight for the extreme drought conditions of the western region, with one-week to three-month outlooks showing little hope for above average amounts of rainfall. High temperatures are also anticipated over the next two months.

The drought in the panhandle region is the worst it has been seen since 2011, according to Sumit Sharma(https://directory.okstate.edu/index.php/module/Default/action/ViewPerson?dirkey=474925&campus=1), OSU assistant Extension specialist for irrigation management.

“We had a mild summer with near normal rainfall during the active growing season from May to August last year,” Sharma said. “It was in late August that we started getting temperatures 100 plus degrees and high winds. From there, things went downhill, and the winter was very mild with little snowfall.”

In a county that already averages only about 16 inches of rainfall per year, the first week of August 2021 marked the last measurable rainfall of over .5 inches in Cimarron County. Rainfall since then has only been light showers of .3 inches or less. As of April 30, the county had received .5 inches of rain in the past 180 days.

Cimarron County dryland wheat producer J.B. Stewart said his wheat yields this year are zero.

“We had an insurance appraiser out here at the beginning of April, and he basically just zeroed everything out,” Stewart said. “I’ve been farming since I got out of college, and this is the first time I have not had a single acre to cut. It’s all gone. Thousands of acres.”

Stewart said it is highly likely that he won’t plant a spring sorghum crop this year due to no moisture in the soil.

“When you get .3 inches on soil this dry, it just evaporates,” Stewart said, adding that when he entered the fall season already in drought, he had a feeling his crops were headed for tough times.

Stewart said when researching Oklahoma rain statistics, November was the No. 1 driest November for his region in 127 years, and December was the fifth driest.

“That paints a picture of the wheat crop out here,” he said. “It’s a drought that will get your attention at this point.”

Stewart said normally, after harvesting his wheat crops, he will let fields rest for a few months to build soil moisture, but a complete lack of moisture causes soil erosion.

“It’s predicted that there’s a chance this could linger into fall, and if that’s the case, we’re going to be in a lot of trouble out here,” Stewart said.

Added to the lack of moisture in the panhandle are high-speed winds, dust storms and wildfires.

“I have lived here for five years, and I feel like I have seen more dust storms and wildfires this year than in previous years,” Sharma said.

About one third of Oklahoma panhandle crops are still dryland crops, and dryland winter wheat is likely to suffer large losses this harvest.

“It’s not only that yield will drop, but some crops may not be harvested at all,” Sharma said. “If yield drops too much, farmers won’t harvest because it won’t be worth the cost to take their machinery out there.”

To top off all the other drought concerns, wheat streak mosaic virus, which was historically more prominent in the panhandle, has now been reported in multiple counties across the state because of drought favoring cereal aphids and curl mites. Counties reporting WSM have included Payne, Blaine, Cimarron, Harper, Grady and Garfield.

“I would say almost 90% of samples we received in April this year in the Plant Disease and Insect Diagnostic Laboratory have tested positive for wheat streak mosaic virus,” said **Meriem Aoun(https://directory.okstate.edu/index.php/module/Default/action/ViewPerson?dirkey=993934&campus=1)**, OSU wheat pathologist.

Wheat samples received from Harper and Blaine counties tested positive for high plains virus in addition to wheat streak mosaic virus, and barley yellow dwarf virus has been confirmed in wheat samples from Payne, Cleveland and Grady counties. Some wheat fields in Oklahoma also tested positive for root/crown rot, which is also exacerbated by drought conditions.

According to **Brett Carver(https://experts.okstate.edu/brett.carver)**, Regents professor and wheat genetics chair at OSU, the rest of the state’s wheat crop looks better than expected. Spike size may be winter wheat’s saving grace, he said.

“Where the minimal requirement of rain was met, crop yields may benefit from longer spikes, even though the number of spikes may be reduced. Unlike 2021 and many other recent years, we didn’t have a freeze this spring that was so severe that it stunted the growth of the wheat spike,” Carver said.

Harvest predictions are more positive moving east in Oklahoma with some locations anticipating average to above average yields, including Lahoma and Okmulgee. Yields at the South Central Research Station in Chickasha appear to be slightly below average.

“We still need that rain to complete the kernel-filling stages to bring seeds to full size,” Carver said. “We’re not at the finish line, but we have a better chance of getting to the finish line in those areas that recently received rain.”

One thing for producers to understand, said Carver, is that this year’s winter wheat crops are not 2021 crops.

“You have to throw any results from 2021 crops out the window because this is a completely different environment,” Carver said, adding that even the newer wheat variety Uncharted, which was bred for drought resistance, is struggling in this year’s level of drought — a level that has not been seen in the state as a whole since 2014.

The minimal requirement of moisture either in the soil profile or by rainfall for wheat to produce the first bushel of grain is about 4 inches, and every additional inch means more added yield, Carver said.

“There’s just a certain threshold you have to meet with rain to even have a yield, and in certain places, we just didn’t meet that threshold. And it’s not because of bad farming; it’s because of bad luck,” Carver said. “In other places, we may make it, but we may not make it very well depending on the additional inches of rain we receive.”

Share

Food Land and Natural Resources (/tags/browse.html?tags=Food%20Land%20and%20Natural%20Resources) OSU Ag Research (/tags/browse.html?tags=OSU%20Ag%20Research)

OSU Agriculture (/tags/browse.html?tags=OSU%20Agriculture) OSU Extension (/tags/browse.html?tags=OSU%20Extension)