

Farmers devastated as alarming phenomenon wipes out entire fields: 'We're talking about enough food for hundreds of millions of people'

It's a sign that even the best models could leave farmers unprepared.

by Amy Boyington May 25, 2025

In fields across the globe, crops that once thrived under predictable seasons are now struggling to survive. Hotter days and drier air are making it harder for farmers to grow the food the world depends on, and a recent [study](#) out of Stanford University suggests the problem may be worse than scientists originally thought. As heat waves intensify, farmers are wondering how to adapt.

What's happening?

[Crops are failing](#) in many parts of the world. Stanford researchers analyzed agricultural and climate conditions from the past 50 years to learn the driving factors of crop failures. They found that major crops, like barley, maize, and wheat, had an estimated 4% to 13% lower production than they'd have if not for rising temperatures and lack of moisture, Stanford's Woods Institute for the Environment [reported](#).

"I think when people hear 5%, they tend to think it's a small number," the study's lead author, David Lobell, said. "But ... we're talking about enough food for hundreds of millions of people."

The study also highlighted something researchers didn't expect: Air dryness in Europe and China was much higher than predicted, but the Midwestern U.S. had lower warming and dryness than projected. It's a sign that even the best climate models could leave farmers unprepared.

Why are these unexpected climate changes a problem?

Europe and China are major food producers, just like the U.S. However, they usually have more stable climates than what this Stanford study indicates. This shift shows that virtually no area is immune to climate disruption. It could also cause affected regions to change their typical growing seasons, which can affect the global food supply.

Crops depend on predictable conditions to grow and thrive, especially when it comes to air moisture and temperature. High temperatures and droughts can have damaging effects on crop production, potentially dropping it by [as much as 30%](#).

While some temperature fluctuations occur naturally, burning fossil fuels like oil and gas [releases heat-trapping gases](#) into the atmosphere. Over time, this can cause higher-than-normal temperatures on Earth. [These rising temperatures have caused extreme weather events](#) like [flooding](#) and [droughts](#) that can devastate the crops humans and animals rely on for food.

What's being done to protect agriculture?

Slowing and reversing [climate change](#) consequences can take years, but scientists are working on ways to protect crops from its effects. [Gene-editing technology](#) to make crops more resilient to weather is becoming more promising, and researchers are growing plants that can [survive with less water](#), potentially making them less vulnerable to drought.

Still, strong global support can help in the long term, Earth-friendly change can happen. Staying informed is one of the best things you can do. [Learn about critical climate issues](#) to understand how climate problems start and how to make choices that protect the food supply.

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