

# 'The Fields Are Washing Away:' Midwest Flooding Is Wreaking Havoc on Farmers

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Historic flooding this year is setting back planting season. Climate change will force farmers to adjust to similarly brutal weather events in the future.

Kate Glastetter has worked on her family farm all her life. Alongside her father, the 25-year-old farmer grows row crops—wheat, bean, and corn—and runs a cow and calf operation in Scott County, Missouri. Normally, at this time in the season, farmers would be starting to plant soybeans, and corn should already be in the ground. Instead, Glastetter says, their fields are covered in water. "It's like lakefront property," she says. "The fields are washing away."

It's a common story across the Midwest and Great Plains, where the Missouri and Mississippi River basins are still recovering from a catastrophic deluge: Since March, record flooding in the central United States has caused historic crop delays. The Mississippi River received levels of rain and snow at 200 percent above normal this spring, causing corn and some soybean farmers to wait longer to plant their crops than ever recorded in Department of Agriculture data. And as bad as this year is, climate change projections show U.S. farmers will need to adjust to similarly brutal weather events in the future.

Glastetter says her farm has been spared somewhat because it's in the hills, but many of her relatives in the state's plains have had to stop planting. "It just looks like a muddy mess everywhere in the bottoms," she says. "The guys try to prepare a seed bed for planting only for it to rain again and undo all their work."

The threat will only grow worse and more widespread in the coming months, according to the National Oceanic and Atmospheric Administration's Spring Outlook report. "This is shaping up to be a potentially unprecedented flood season, with more than 200 million people at risk for flooding in their communities," Ed Clark, director of the NOAA's National Water Center, said last month.

The floods have already wrecked homes, contaminated drinking water, and cost billions of dollars in damages. Now experts are warning that the damage to U.S. agriculture could last well beyond the spring.

Research shows the increasingly difficult conditions farmers are experiencing during this and recent years are at the mercy of more than weather: Extreme events like this one are also linked to climate change, which is projected to cut crop yields in half under worst-case climate models.

Back in 2002, researchers estimated that the damage from climate change-induced rainfall alone could total \$3 billion every year—costs that would be borne by farmers, and ultimately passed along to disaster relief programs. Many have hailed these recent floods as proof; agriculture aid for this year comes at a price of \$16 billion.

On Monday, the U.S. Department of Agriculture's National Agricultural Statistics Service estimated that farmers had planted just 67 percent of the acreage planned for corn. This time last year, they were at 96 percent. "That translates to almost 40 million acres of corn not planted," says Michael Nepveux, an economist for the American Farm Bureau Federation, the country's largest agriculture lobbying group. "When you think about where we are in terms of the planting season, that's astronomical."

Soybeans are usually planted later than corn, but they're also behind schedule. For both commodities, government reports and industry projections have grown more dire by the month. "It's the slowest time we've had going back to 1980 [when the agency began collecting the data]," says Anthony Prillaman, head of field crops at the USDA's National Agricultural Statistics Service. Prillaman says it's too early for analysts to predict losses, but "the feeling is that prevented plantings are going to be higher this year."

There's another problem exacerbating these delays: Many American farmers purchase crop insurance through the USDA's Risk Management Agency. The USDA sets planting dates for insured crops, many of which have already passed. "You can still technically plant, but you're going to start taking a 1 percent decline per day on your crop insurance," Nepveux says. "It starts to become a point of whether it's worth it to even put a crop in the ground."

Since farmers have less incentive to plant, corn has already reached its highest price in the past several years. "This is going to be the biggest crop event since the drought in 2012," Nepveux says.

USDA experts are not the only ones expecting the worst. A report released this week found that farmer sentiment hit its lowest point in almost three years—a decline that "effectively erased all of the large improvement in farmer sentiment that took place following the November 2016 election," according to Purdue University researchers James Mintert and Michael Langemeier. The survey suggests that farmers are becoming increasingly pessimistic about their futures, citing losses from both President Donald Trump's trade war and this spring's extreme weather.

With the threat of more floods on the way, Glastetter says she's worried the delays in planting will ultimately hurt her own steer sales. When there's less corn planted, the prices for feed (grains like corn, barley, oats, and sorghum) go up. "The amount of acreage not planted in corn like it should be is mind blowing," she says. "The grain elevators are already putting holds on their distributing. These corn prices are really going to negatively impact the cattle market as feed prices are sure to skyrocket."

As many farmers across the country vent their frustration on Twitter—using the hashtag "noplant19"—others are resigned to the ongoing threat. "It's just how farming is," Glastetter says. "We are at the mercy of the weather all the time."

Other farmers have seen the flood as a call to diversify planting to mitigate the inevitable effects of climate change. Elisabeth Wells Pistello, who owns and operates a small, diversified farm in Pulaski, New York (also experiencing some flash flooding), says the rain has kept her out of the fields for three weeks. But unlike farmers with larger operations that focus on one commodity, Pistello can swap out some of the hardest-hit crops for ones that might fare better in their greenhouses. "That was one of the reasons why, when we first started our farm, one of the first investments we made was buying a high-tunnel greenhouse," she says. "We really needed to help buffer ourselves from climate change."

Pistello expects that more farmers will be thinking about new approaches to farming under climate change after the stress of this spring. "This has been a record-breaking season for a lot of people," she says. "It's hard to be prepared for that."