Vermont is the first state to ban paraquat, a weed killer linked to Parkinson's disease

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Associated Press

MONTPELIER, Vt. — Vermont has become the first U.S. state to ban paraquat, one of the most commonly used herbicides, with lawmakers citing a possible link between the weed killer and Parkinson's disease.

The ban has been widely celebrated by advocates who hope Vermont's move will prompt similar action in other states to prevent the neurologic disease that robs people of control over their movements and affects about 1 million Americans.

"Vermont took the step to be the leader in this, and that's significant because it shifts the conversation," said Dan Feehan, with The Michael J. Fox Foundation, the world's largest nonprofit funder of Parkinson's research. "Now, 'will your state be the last to ban it?' becomes the question."

However, for some farmers, the ban could potentially threaten their already slim profit margins. Attempts to prohibit paraquat's use in other states where the chemical is more heavily used have repeatedly stalled.

The U.S. Environmental Protection Agency is currently reviewing the safety of paraquat after saying there's no clear link between the herbicide and Parkinson's.

Syngenta, a Swiss chemicals company that has made paraquat for years, announced earlier this year that it would stop global manufacturing or selling of the chemical, but also defended the herbicide's safety.

Other companies continue to sell it.

"Despite decades of investigation and more than 1,200 epidemiological and laboratory studies of paraquat, no scientist or doctor has ever concluded in a peer-reviewed scientific analysis that paraquat causes Parkinson's disease," the company said.

Paraquat is used widely in the US but banned in China and Europe

First introduced in the U.S. in 1964, paraquat became a popular weed killer for farmers.

It's known as an extremely toxic chemical that is fatal if ingested and can cause chronic health problems on contact. Farmworkers are at particular risk, which has led the EPA to require special training for certified applicators of paraquat. The roughly hourlong training requires applicators to pass a 15-question quiz, and must be completed every three years.

It's commonly used for protecting soybean, cotton and corn crops, but also for apples and grapes, according to the United States Geological Survey. As of 2018, the USGS reported more than 10 million pounds (4.5 million kilograms) of paraquat was used in the U.S., largely concentrated in the South, Midwest and California.

Despite its popularity, dozens of countries have banned the substance. The European Union and the UK banned paraquat in 2007. China banned domestic use of paraquat in 2017, along with Vietnam and Malaysia. Thailand issued a similar ban in 2019.

Health risks and links to Parkinson's

Defenders of using paraquat say the chemical is quickly absorbed by weeds, meaning that if rain falls — even after 30 minutes of application — it won't wash off into the soil. Companies like Syngenta say paraquat becomes immobilized once it touches soil.

Yet there's disagreement over its harmful effects, with the Parkinson's community warning that people living near where paraquat is applied have increased risk of getting the disease.

Whether it causes Parkinson's disease has been heavily debated and studied for years.

Dr. Philip Landrigan, an epidemiologist who directs a global health program at Boston College and has campaigned against human exposure to toxic chemicals, said multiple studies have shown that environmental factors, including exposure to pesticides like paraquat, can increase the risk for Parkinson's disease.

Greg Burtt, owner of Burtt's Apple Orchard, ties tubing around an apple tree to stabilize it on June 3 in Cabot, Vermont. AMANDA SWINHART/AP

The Parkinson's community considers the Vermont ban a significant victory.

"No matter how you slice and dice it, there's no safe way to use paraquat," said Ron McConnell, a Vermonter who was diagnosed with Parkinson's after getting exposed to a different toxic substance at his work in 2017. "This law that Vermont just passed really is protecting the farmers that use it and the farmworkers that use it."

The ban goes into effect Nov. 1, but the statute gives farmers using paraquat on fruit-producing orchards, berries and small fruit crops until 2030 to transition away from using the herbicide.

Vermont farmers are bracing for changes

Greg Burtt, owner of a family apple orchard and Republican Vermont lawmaker, considers paraquat a "critical tool" in his operation.

He says he believes the ban will place farmers like him at a competitive disadvantage to growers in other states who can continue using the more budget-friendly paraquat. There are alternative herbicides, but some farmers warn that those could involve chemicals that risk killing the plant if not applied carefully.

Mechanical tilling, crop rotation and hand weeding are also options, but come with separate downsides, notably increased labor costs.

"There's a reason why it's an industry standard," said Burtt, who's used paraquat for 20 years.

He's not worried about getting Parkinson's because he interpreted the research on the herbicide to be inconclusive.

"I wanna be the first person to make sure that it's safe because I don't wanna die young over farming," Burtt said. "And so if anybody's had to wrestle with these questions, it's me."

Kruesi reported from Providence, Rhode Island.