

The weed killer Roundup on sale in California. // Mike Blake/Reuters

JEN MONNIER OCT 10, 2019

Seattle has joined Miami, Austin, and other cities in restricting the use of herbicides with glyphosate, such as Roundup.

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When invasive Himalayan blackberry creeps into one of Seattle's wooded parks, it takes over, conquering native plants. In the past, Seattle park managers may have sprayed the noxious plant with the weed killer Roundup. But Seattle is the most recent in a wave of U.S. cities turning away from Roundup because of growing concern that it could be giving people cancer.

Roundup's active ingredient, glyphosate, has helped grow food and stamp out weeds since it was introduced by Monsanto in 1974. Its popularity swelled in the 1990s, when Monsanto began also to sell specially designed crop seeds, including soybeans, canola, and corn, that could withstand the herbicide when it was sprayed on surrounding weeds. The company's patent on glyphosate expired in 2000, and then other companies entered the market; today, several hundred products for sale in the U.S. contain glyphosate.

Public concerns about glyphosate's safety grew in the years that followed, so the World Health Organization's International Agency for Research on Cancer reviewed the scientific evidence. In a 2015

report, it classified glyphosate as "probably carcinogenic to humans," based on the most reliable studies at the time, which were carried out on animals. Since then, people diagnosed with the cancer non-Hodgkin's lymphoma sued Monsanto (now owned by Bayer), blaming their disease on their exposure to glyphosate.

Juries <u>have sided with plaintiffs</u>, forcing Bayer to pay millions of dollars in damages each time. (Bayer <u>maintains</u> that the chemical "can be used safely and [is] not carcinogenic," but recently announced it <u>will spend \$5.6 billion</u> to develop glyphosate-free alternatives to Roundup.)

While the court cases emerged, the U.S. Environmental Protection Agency carried out its own review of the evidence. In April, the agency announced its conclusion that the chemical does not cause cancer in people.

In the wake of mixed evidence and court rulings, cities including Seattle are taking a defensive stance against glyphosate.

"The concern was mainly for the people who are applying it," says Patricia Bakker, natural resources manager at Seattle's Parks and Recreation Department. The department stopped using glyphosate last fall, Bakker said, because parks managers worried they were putting employees in harm's way. It became official policy on August 23, 2019, when Mayor Jenny Durkan signed an executive order restricting Seattle city departments' use of glyphosate-containing pesticides.

The executive order designates glyphosate as a last-resort option, to be used only to battle the worst weeds—weeds the state requires the city to remove—after other methods have been exhausted. Mowing, mulching, and a plant-killing fungus called rust are some of the first lines of defense. Other herbicides, like those containing the active ingredients triclopyr and imazapyr, can also be used.

Without the power of Roundup, Bakker expects her staff won't be able to tame non-native plants with the same vigor. "There are just going to be some areas that look a little weedy," Bakker says.

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However, Seattle's native plants may have a better chance of survival because of the glyphosate restriction, according to one expert. Viktoria Wagner, a plant ecologist at the University of Alberta in Canada, says that because glyphosate is non-selective, it can hurt native plants when it's targeted at nearby weeds. Hurting native plants deprives them of their ability to compete, and "this gives an opportunity to fast competitors to get a head start and take over," Wagner says.

When Seattle officials were considering cutting back on glyphosate, they sought advice from San Francisco, which began rolling out restrictions on chemical pesticides in 1997. Seattle's not alone—tens of cities across the U.S. have recently cracked down on glyphosate use. In 2018, Portland, Maine, banned the chemical, and Austin, Texas, restricted it. This year, Miami and Los Angeles County approved their own bans on city property. Some cities, like Boston, avoid glyphosate on an unofficial basis. Others, like New York City, may be poised to ban it in the near future.

New York City Council Member Ben Kallos first introduced legislation to ban glyphosate (and all chemical pesticides) from city parks in 2015, shortly after the World Health Organization's verdict that it's unsafe. During the legislation's hearing in September 2017, dozens of elementary-school children crowded City Hall to testify their support. The legislation failed, but Kallos and Carlina Rivera reintroduced it in April, just before the EPA classified the chemical as safe. The bill has 24 sponsors; it needs 34 to guarantee a hearing.

Whereas Seattle's city managers restricted glyphosate out of an abundance of caution amid conflicting opinions from scientific agencies, Kallos said he introduced his legislation with confidence that the science is settled—that glyphosate is endangering park-goers. When he and his toddler daughter want to play outside, they sometimes take a ferry to pesticide-free Battery Park.

"I will not let her play in city parks unless I see dandelions and other weeds that glyphosate would otherwise kill," he says.



