

Two weeks ago, the Supreme Court granted cert in an important case involving a preemption question under the Federal Insecticide, Fungicide, and Rodenticide Act (aka FIFRA). The question presented: *"Whether the Federal Insecticide, Fungicide, and Rodenticide Act preempts a label-based failure-to-warn claim where EPA has not required the warning?"*

The case involves glyphosate, which is the active ingredient in *Roundup*, the most popular weedkiller in the world. Since 2015, when the World Health Organization's International Agency for Research on Cancer (IARC) concluded that glyphosate is "probably carcinogenic to humans," and with evidence mounting that glyphosate exposure is linked to non-Hodgkins lymphoma (among other health effects), tens of thousands of plaintiffs have sued the manufacturer Monsanto (now owned by the German chemical company Bayer).

To date, Monsanto and now Bayer have paid out around $11 billion to settle some 100,000 claims, but the company's litigation woes are from over given more than 60,000 additional pending claims. Not surprisingly, Bayer's stock price has been hammered (down more than 50% since the Monsanto acquisition) and the company, which stopped selling *Roundup* for consumer use in 2021, has signaled that it may stop selling its number one agricultural chemical altogether if it can't contain the costs of ongoing litigation.

While the various state lawsuits against Monsanto/Bayer have proceeded under a range of tort doctrines, many of the cases have included failure-to-warn claims. The basic argument is that given the IARC conclusion on cancer, Monsanto/Bayer should have warned the many thousands of consumers, farmers, and others who used its product of the potential link to cancer. But because EPA has never required such a warning as part of its registration of *Roundup* under FIFRA, Bayer has argued that these state failure-to-warn claims are preempted by FIFRA's labeling regime. In 2021, the Ninth Circuit rejected the preemption argument and upheld a jury award of more than $5 million in compensatory damages and $20 million in punitive damages against Monsanto/Bayer. More recently, the Third Circuit held in 2024 that state failure-to-warn claims in a Pennsylvania case against Monsanto were preempted. With a clear circuit split now in place, the matter is ripe for resolution by the Supreme Court.

Adding to the Justices' decision to the take the case, the Trump Administration also weighed in on behalf of Bayer, urging the Court to take the case and put an end to the ongoing litigation—even though the previous administration opposed certiorari in an appeal of the aforementioned Ninth Circuit case. This is hardly surprising, but there is some irony here with the Trump Administration defending the commercial interests of a German multinational chemical company. How, exactly, does this make American great again? Certain segments of the MAHA movement are also unhappy, given their longstanding concerns about glyphosate and the influence of the pesticide industry on EPA, and after they successfully blocked a recent effort by Republicans to include a liability shield for Bayer in an appropriations rider.

Given the pro-business leanings of the Robert's Court together with its general preference for giving the Trump administration virtually everything it asks for, there are ample grounds here for Bayer to feel good about its prospects. But the backstory and larger context of the case are important and ugly and the implications for public health (not to mention justice for those who have suffered as a result of glyphosate exposure) are huge.

FIFRA Matters!

While far too few environmental law students seem to get much exposure to FIFRA in the standard environmental law class, especially in an era that seems preoccupied with climate change, the statute has a significant impact on all of our lives for the simple and obvious reason that it regulates the pesticide industry.

FIFRA was first enacted in 1947, in the wake of the explosive growth in sales of synthetic organic pesticides after World War II—the most famous of which was DDT. The original FIFRA charged the Department of Agriculture with licensing pesticides (known as "economic poisons") and gave the Department some modest authority to convene hearings if there were questions about the safety of a particular pesticide. But there was no requirement that industry provide any information or do any testing to assess the safety of its pesticides. If USDA failed to grant the license within a certain amount of time, moreover, the license would issue automatically. The result: a massive increase in pesticide registrations and pesticide use with little or no information about their effects on human health and the environment. As one FDA official stated in 1949, "[t]o commercialize a poison before its potentialities are known is to use the public as guinea pigs." (For more on the history of these early efforts to regulate pesticides and the pervasive problem of ignorance about the effects of pesticides, see here).

Public concerns with chemicals in the food supply increased throughout the 1950s, leading to the famous 1958 Delaney amendments to the Federal Food, Drug, and Cosmetics Act (FFDCA), which treated pesticide residues on foods as food additives under the FFDCA and banned them if there was any evidence that they caused cancer in animals or humans. (More on that story here if you are interested.)

Four years after Delaney, of course, Rachel Carson published *Silent Spring*, which documented widespread harms to human health and the environment from several widely used organochlorine pesticides (with DDT as the main culprit) and did as much as any single book to ignite the modern environmental movement.

Given these widespread and growing concerns with pesticides, Congress substantially amended FIFRA in 1972, transferring its regulatory authorities to the newly created EPA, which EPA's first administrator William Ruckelshaus used to ban or severely restrict DDT and a number of other pesticides that were the subject of *Silent Spring*. Under the new FIFRA regime, the basic standard governing pesticide registrations was "unreasonable risk" and manufacturers now had the burden of producing the information necessary for EPA to make a determination that the benefits of the pesticide outweighed its risks as a condition for registering the pesticide. Of particular relevance to the upcoming Supreme Court case, FIFRA includes specific requirements for pesticide labels that contain a preemption provision. Specifically, and as elaborated by the Supreme Court in a 2005 case, a state labeling requirement for a pesticide is preempted if that labeling requirement is "in addition to or different from" those required under FIFRA.

The Political Economy of *Roundup*

Monsanto first registered glyphosate in 1974 and began selling *Roundup* that same year. But glyphosate was such an effective herbicide that it killed the crops it was supposed to protect in addition to the weeds (funny how that works), which limited its overall use. This all changed in the mid-1990s, however, when Monsanto commercialized its new genetically modified seeds for soy and various other crops that were resistant to glyphosate. By engineering glyphosate resistance into the DNA of the seeds of soy and other crops, Monsanto was thus able to ensure that farmers could spray as much *Roundup* as they wanted to without hurting their crops. It was a brilliant technological solution to a legal and economic problem given that the original patent for glyphosate was scheduled to expire in 2000, which would have resulted in a massive loss of market share.

This is also why, just as an aside, Monsanto and other agro-chemical giants bought up many of the world's leading seed companies in the 1980s and 1990s. Once you control the valuable germplasm for the major commercial crops, the seed becomes a vehicle for your genetically engineered traits, which in turn becomes a vehicle for the sale of pesticides. You can read more about that whole story and the new contractual relationships with farmers that Monsanto created to hold on to its market share here.

As a result of the new *Roundup* ready products, sales of the herbicide soared. One study estimated that between 1974 and 2014, some 3 billion pounds of glyphosate were applied to U.S. crops, with the vast majority of this coming after 1996. The same study found that global application of glyphosate during the same time period was close to19 billion pounds, making it the most heavily used herbicide in history. By the early 2000s, half of Monsanto's revenues came from *Roundup* sales. Although *Roundup's* overall market share declined as more generics came on the market after the patent expired, when Bayer bought Monsanto for $63 billion in 2018, it was basically buying the *Roundup* franchise along with a few other chemical and GMO products. Clearly, Bayer was well aware that it would be subject to ongoing litigation, but it seems to have underestimated the extent of its liability. Since acquiring Monsanto, as noted above, its overall market capitalization has declined by more than 50%, and is now below the $63 billion it paid for Monsanto.

State Failure-to-Warn Claims and FIFRA

John Durnell used Roundup for more than two decades to control weeds in the parks

around St Louis's historic Soulard neighborhood. He was "the spray guy" for the local neighborhood association. Durnell did not use protective equipment because he believed that the product was safe based on Monsanto's marketing and labeling. But in 2018, Durnell was diagnosed with non-Hodgkins lymphoma. Along with a growing number of people exposed to glyphosate who are also suffering from non-Hodgkins lymphoma, Durnell sued Monsanto (now Bayer) in 2019 under various state law claims in Missouri, including failure-to-warn. The jury awarded him $1.25 million in damages. The Missouri Court of Appeals affirmed the jury's decision, holding that Missouri's strict-liability failure-to-warn standard parallels FIFRA's misbranding prohibition and therefore is not "in addition to or different from" federal labeling requirements. In doing so, it expressly declined to follow the contrary decision of the U.S. Court of Appeals for the Third Circuit, which (as noted above) held that FIFRA preempts similar failure-to-warn claims under Pennsylvania law. The Missouri Supreme Court denied Monsanto's appeal. Bayer then petitioned successfully to the U.S. Supreme Court, urging the Court to find that Durnell's state failure-to-warn claims are preempted by FIFRA.

The case will likely turn on whether the Justices agree with Bayer that the various state failure-to-warn claims that have been successful in multiple state courts are tantamount to imposing "on-label" warnings that "are in addition to or different from" the EPA approved label. This could include, for example, California's own Proposition 65 warnings for *Roundup,* which have already been the subject of extensive litigation, as well as Durnell's claims that Monsanto had a duty to warn him and other users of *Roundup* once the company knew that there was at least some evidence that glyphosate caused cancer.

But the case is further complicated by the fact that Monsanto manipulated the science on glyphosate's cancer risk, while EPA failed to follow its own internal procedures in assessing that risk, leading to a 2022 decision by the Ninth Circuit to vacate EPA's conclusion that glyphosate is "not likely to cause cancer."

Monsanto's Long History of Corporate Malfeasance

There is a large and growing body of evidence on Monsanto's efforts to hide the truth about its products and manipulate science. While this kind of behavior is hardly unique to the chemical industry (and various other industries), Monsanto seems to have distinguished itself as an especially bad actor. In a case involving PCB contamination associated with its chemical plant in Anniston, Alabama, to take one example, litigation on behalf of the primarily Black residents (who had some of

the highest body burdens of PCBs ever recorded) revealed that Monsanto knew as early as 1937 that PCBs posed "systemic toxic effects"—evidence that the company actively suppressed. In 2002, after decades of contamination and exposure from the Anniston plant, an Alabama jury found Monsanto and its corporate partners liable for PCB contamination of the land and the bodies of people who lived near the plant on multiple grounds including suppression of the truth, negligence, trespass, nuisance, wantonness and outrage, which Alabama law defines as conduct "beyond all possible bounds of decency … atrocious and utterly intolerable in civilized society." After the verdict, Monsanto and its partners entered into a $600 million settlement with the Anniston plaintiffs in one of the largest such awards for industrial pollution at a single site in U.S. history.

With glyphosate, the company seems to have focused more on ghost writing bogus scientific studies and trotting out its paid experts to advance the claim that glyphosate is safe. We know this in large part because of discovery in the various state law cases against Monsanto—another reason these companies are so eager to use preemption to shut down these lawsuits. But even if they succeed with their preemption claim here, there is a substantial amount of material already in the public domain (see here and here), which suggests a largely unaccountable corporation deliberately manipulating facts about a product that independent experts have concluded is likely to cause cancer.

There is a lot more to say here, but one of the most troubling aspects of this whole affair concerns a widely cited paper on glyphosate safety that was published in 2000. As documented in a recent study by Alexander Kaurov and Naomi Oreskes, this paper has long been one of the most widely cited studies on glyphosate—even after internal Monsanto documents revealed that the paper was essentially ghost written by Monsanto employees. The situation finally came to a head late last year in the wake of the Kaurov and Oreskes study, which led the editor of the journal *Regulatory Toxicology and Pharmacology*—a journal that has long been viewed as a pro-industry venue—to issue a scathing retraction of the paper based on "serious ethical concerns" (see also here). Better late than never I suppose, but this was almost a decade after evidence surfaced that Monsanto had ghost written much of the paper. As the analysis by Kaurov and Oreskes pointed out, moreover, the paper continued to be widely cited even after the evidence of Monsanto's misconduct had been widely reported upon. When pushed on what this all means for EPA's ongoing re-assessment of glyphosate's health risks, EPA stated that it has always relied upon a wide range of studies and that it remains committed to President Trump's

vision of gold standard science. How much more bullshit can they sling?

There is surely more work to be done here, following the lead of Kaurov and Oreskes, to trace forensically the various ways that these sorts of fraudulent studies have rippled through the scientific literature, amplified in various ways by unsuspecting scientists or perhaps by others who were on the corporate payroll. It's sort of like the problem with persistent pollutants once they are released into the environment. Who knows what kind of damage they will do as they insinuate themselves into living systems.

Given Monsanto's record in actively manipulating the "science" on glyphosate, together with the EPA's own failure to follow its established procedures in assessing the cancer risk of glyphosate during the first Trump administration, one has to wonder what else it would take to conclude that the EPA-approved label for glyphosate is fraudulent. If ever there were a case of a pesticide that was "misbranded" because of corporate and agency malfeasance this would seem to be that case.

Which brings us back to the case at hand and the need to be clear about what is happening: Bayer is asking the Supreme Court to rule that EPA has exclusive jurisdiction under FIFRA regarding the appropriate warnings that Bayer should be required to provide to users of *Roundup* in order to reduce or eliminate its liabilities under state tort law for a product that multiple juries have found is causing cancer—even though the international agency responsible for cancer assessment concluded more than a decade ago that glyphosate is likely carcinogenic to humans, even though EPA's flawed safety assessment of glyphosate has relied upon questionable science, including at least one widely cited study that was ghost written by Monsanto and that has since been retracted, and even though internal EPA review of the pesticide office's recent 2020 review of the glyphosate registration concluded that the office's health assessment was also flawed. Indeed, as the Ninth Circuit made clear in its recent decision vacating EPA's human health assessment for glyphosate, the EPA pesticide office under the first Trump administration did not follow its own hazard assessment procedures and ignored evidence from both epidemiological and animal studies suggesting a link between glyphosate and cancer. This is a damning indictment to say the least and it raises serious concerns about the integrity of the glyphosate registration and the EPA-approved label that is included within that registration.

All that said, if I were a betting man, I would bet that the Roberts Court will find

preemption here and avoid saying anything about the larger context of the case. I hope I am wrong about that, and I will be sure to provide an update after the oral arguments and, of course, once the opinion is issued. But even if the Court does find preemption here, we should recognize that behind the highly constrained, formalist reading of the statute that the Justices will surely invoke, there is a long and sordid story of industry manipulation of science, agency capture, and, most tragically, the long slow violence of cancer and other harms inflicted by corporate actors on real people living real lives in real places.

Why We Need to Pay Attention to Pesticides

Sadly, the *Roundup* story is hardly an anomaly. The multi-decade saga over chlorpyrifos is another tragic example of EPA's unwillingness to regulate in the face of clear evidence of potential harm; in the case of chlorpyrifos: neurodevelopmental impacts on children, which is the precise class of harms that the 1996 Food Quality Protection Act singled out as deserving special attention. Chlorpyrifos is an organophosphate that operates on the central nervous system by inhibiting a key enzyme—not unlike the dreaded Nazi nerve gas Sarin developed in World War II. Chlorpyrifos was first registered as a commercial pesticide in 1965 by Dow Chemical and became one of the most widely used insecticides in the decades that followed. Needless to say, one does not need a PhD in neurophysiology to suspect that a pesctide that operates as a potent nerve agent and that has been widely deployed on multiple food crops for decades might have detrimental impacts on the brains of children (and adults!).

After a 2006 study from Columbia University researchers documented neurodevelopmental impacts from chlorpyrifos exposure in young, inner-city children, environmental groups petitioned EPA to revoke all of the tolerances for chlorpyrifos residues on food and cancel all chlorpyrifos registrations. But EPA refused to act, sitting on its hands for almost two decades (under both Democratic and Republican administrations—and the Obama EPA did more than its share of foot-dragging here), leading states such as California to end sales of the pesticide 2020. Hell, even the largest manufacturer of chlorpyrifos (Corteva Agriscience, which had spun out of Dow Chemical) finally agreed to phase out production by the end of 2020. And, yet, EPA has still not finalized its ongoing review of the chlorpyrifos registration, after multiple orders from multiple courts and even though more recent studies have confirmed earlier concerns and demonstrated brain abnormalities in children exposed prenatally to the pesticide. WTF.

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It would not be too much of an exaggeration to say that the pesticide problem gave rise to the modern environmental movement, with roots that stretch back into the middle decades of the 20th century. Indeed, even before *Silent Spring* put DDT and other persistent organochlorine pesticides at the very top of the public agenda (in a way that arguably has never happened since with any other environmental issue), the problem of pesticide residues in food had been a source of growing concern. No doubt this consumer-focused approach to environmental harm marginalized the widespread and terrible impacts of pesticides on farmworkers and farmworker communities—an environmental injustice that deserves far more attention as a matter of historical record and accountability as well as prospectively as we work to protect all people from the dangers of pesticides.

But as long as we keep eating food that is produced from crops and animals exposed to pesticides, these dangers will persist. This is where the MAHA movement's concerns about industry capture and the long-term human health effects of pesticides and industrial chemicals provide at least some possible common ground to fight back against the industry and their cronies in the Trump administration. While there is no reason to think that Lee Zeldin and the other Trump apparatchiks will change course on their toxics first agenda, let us hope that Glyphosate Girl and the other MAHA influencers who are upset about pesticides and chemicals will continue to pressure the very administration they did so much to put in power and call out their blatant disregard for public health and the environment. Who knows, maybe one day these same influencers will start to care about fine particulates or air toxics or maybe even climate change. One can hope.

On a more serious note, it is worth remembering Carson's own injunctions in *Silent Spring* about the public's "right to know" what kinds of poisons it is being subjected to by an industry that cares only about profits and has proved itself more than willing (and all too able) to manipulate science, entrench toxic ignorance, and expose all of us to ongoing acts of slow violence. As she noted at the end *Silent Spring's* second chapter, *The Obligation to Endure*:

> *When the public protests, confronted with some evidence of damaging results of pesticide applications, it is fed little tranquilizing pills of half truth. We urgently need an end to these false assurances, to the sugar coating of unpalatable facts. It is the public that is being asked to assume*

the risks that the insect controllers calculate. The public must decide whether it wishes to continue on the present road, and it can do so only when in full position of the facts.