

October 28, 2021

Dr. Michal Freedhoff
Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Dicamba Herbicide

Dear Assistant Administrator Freedhoff:

As you know, the Environmental Protection Network (EPN) is an organization of over 550 U.S. Environmental Protection Agency (EPA) alumni volunteering their time to protect the integrity of EPA, public health, and the environment. We are writing to ask that EPA consider taking several actions to better understand and prevent the serious harm being caused by herbicide products containing the active ingredient dicamba. Over the last five years, EPA has registered a number of new dicamba herbicide products for “over-the-top” (OTT) use on soybeans and cotton under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). These products, along with older, more volatile formulations of dicamba, are causing significant, widespread damage to non-target crops and other plants. We are concerned specifically with dicamba products that were first registered in 2016 for OTT use on soybean and cotton crops that had been genetically engineered (GE) to be resistant to dicamba, i.e., to withstand its herbicidal effects.

Background

The first herbicide containing dicamba was registered in 1967. Dicamba herbicides can kill or damage a wide variety of broadleaf plants — not only weeds but also desirable non-target plants, including sensitive crops. Dicamba is a highly volatile chemical; after application to soil or vegetation, it can move easily and rapidly as a vapor into the air where it can be transported considerable distances by wind currents. Once a sufficient amount of this vapor contacts a sensitive plant, it may cause visible symptoms or damage that may slow growth of or kill the plant.

Dicamba was initially approved for use on a variety of food and feed crops and also for golf courses, turf, and similar-use sites. Its use on soybeans was limited to pre-plant and pre-harvest applications. Because dicamba was used primarily before sensitive non-target crops emerged, the offsite movement of volatile dicamba residues was not a significant issue.

In 2016, following the U.S. Department of Agriculture’s (USDA’s) regulatory approval of GE soybeans and cotton that are resistant to dicamba, the EPA granted two-year conditional registrations for several dicamba products that were claimed to have lower volatility. EPA allowed

these products to be applied later in the season for weed control over the canopies of soybeans and cotton that were resistant to dicamba. Following EPA's approval of these OTT uses of dicamba, State Lead Agencies and growers reported widespread and costly damage to tens of thousands of acres of non-target crops and other plants in 2017 and 2018. Despite these reports, in October 2018, EPA approved additional two-year conditional registrations for three reduced-volatility dicamba products with some modestly more stringent restrictions on use.

In January 2019, the National Family Farm Coalition, Center for Food Safety, Center for Biological Diversity, and Pesticide Action Network North America filed suit against EPA to challenge the 2018 dicamba OTT registrations. The suit requested that the United States Court of Appeals for the Ninth Circuit find that EPA's October 31, 2018, dicamba decision violated FIFRA and the Endangered Species Act. On June 3, 2020, the Court ruled that EPA's 2018 conditional new use registrations of dicamba did violate FIFRA and vacated the registrations. (Because the registrations were vacated under FIFRA, the Court did not rule on whether the agency violated the Endangered Species Act.) The Court's decision states that "EPA substantially understated the risks it acknowledged, and it entirely failed to acknowledge other risks." The Court's decision also noted that label restrictions were difficult or even impossible to follow.

The agency duly vacated the registrations and then in October 2020 issued new conditional five-year registrations for dicamba with even more stringent restrictions. Despite the newest set of restrictions on use designed to reduce dicamba damage to offsite plants, damage to non-target crops and other plants remains a problem. And, once again, environmental advocacy organizations have sought judicial review to challenge the registrations. Finally, EPA has published notice of receipt of an application to allow OTT use of dicamba on GE corn.

The agency does not appear to have an adequate understanding of either the extent of the problems dicamba is causing, how those problems affect the overall benefits of dicamba's use on GE crops, nor whether regulatory measures short of rescinding the registrations are available to address these problems effectively. Even though non-target damage attributed to dicamba has been occurring for several years over large areas of the United States, there has not been a comprehensive evaluation of the extent of the problem, including its economic impact. There is evidence, for example, that dicamba incidents have been underreported to EPA. Specifically, EPA's October 26, 2020, report titled "Dicamba Use on Genetically Modified Dicamba-Tolerant (DT) Cotton and Soybean: Incidents and Impacts to Users and Non-Users from Proposed Registrations" compared the number of off-site dicamba incidents reported to EPA with incidents reported in USDA's 2018 Soybean Agricultural Resource Management Survey. The EPA report indicated that incidents are being underreported to EPA by approximately 25-fold when compared to the USDA survey.

In addition, the currently-available scientific research is insufficient to allow EPA to predict the magnitude and extent of dicamba volatility when it is used on GE crops. This is particularly true when OTT dicamba applications are made over very large areas (thousands of geographically proximate acres) in a short period of time. Further, the herbicide's benefits for OTT use may be adversely affected by weed resistance. An October 2020 EPA analysis indicated that resistance to dicamba in three weed species has been reported in multiple states and that additional investigations of resistance were underway. Moreover, it is clear that EPA does not have an adequate understanding

of how well label restrictions on dicamba products will translate into significant reductions in volatility damage.

The lack of understanding on these points has important legal consequences under FIFRA. As you know, that statute requires EPA to find that a pesticide will not cause “unreasonable adverse effects on the environment.” To make that finding, EPA must determine that the benefits associated with the use of a pesticide justify the costs associated with that use. EPN believes that EPA may not register any dicamba products for OTT use until EPA can adequately characterize both the risks and the benefits and clearly explain how the benefits justify those risks. Unless that problem is rectified, any registration of dicamba for OTT use is not only bad public policy, but it is also almost certainly unlawful under FIFRA.

Recommendations

EPN recognizes that EPA’s future consideration of the OTT uses of dicamba may depend on the outcome of the Ninth Circuit’s review of the agency’s 2020 registration decisions. We offer several suggestions for possible EPA actions that could, however, proceed independently of the current litigation. Our suggestions address how to gather information needed to support sound decision-making, as well as possible regulatory processes and regulatory actions.

To improve the understanding of the risks and benefits of OTT uses of dicamba:

- EPA could initiate a public stakeholder effort to gather input from all parties that have been affected by off-target movement of dicamba. Key stakeholders include state regulatory agencies, extension programs, university researchers, and crop groups (i.e., both users and those whose crops have suffered damage from off-target dicamba movement).
- To gain insights into how to predict off-site damage from use of dicamba, EPA’s Office of Pesticide Programs could convene a meeting of the FIFRA Scientific Advisory Panel (SAP) to evaluate the current state of the science of dicamba volatility.
 - The SAP could address whether additional studies or data are needed to evaluate the factors that govern dicamba volatility. This should address scenarios reflecting how the products are actually used, i.e., applications over large geographic areas in a short time period.
 - The SAP could evaluate whether significant offsite movement of dicamba can be prevented, i.e., is it practical to place labeling restrictions on use that will reduce dicamba volatility damage to non-target crops and other non-target plants?
 - The SAP could address whether the biology of dicamba volatility damage across a wide range of non-target plants is adequately understood. Additional data needs should be identified.

With consideration of the advice of the SAP, EPA could then issue data call-ins to the registrants of dicamba products intended for use on GE crops that will enable a comprehensive evaluation of the biological and economic impact of damage caused by dicamba volatility to date.

- EPA could vigorously enforce the reporting requirements stated in the terms of registration

and under FIFRA. When possible, these reports could be available to the public. The 2016 registration of dicamba for OTT use on GE soybeans and cotton required registrants to report to EPA on development of resistance. The 2018 and 2020 registrations required monitoring by the registrants on resistance and “enhanced incident reporting that aggregates reports of potential damage to non-target vegetation.” Moreover, on September 9, 2021, EPA sent a letter to one of the dicamba registrants as a reminder that adverse effects, including off-target damage and weed resistance to dicamba, must be reported to the agency pursuant to section 6(a)(2) of FIFRA and its implementing regulations.

- EPA could decline to grant new and amended registrations authorizing any additional use of OTT dicamba products on any GE crops until the agency’s staff scientists and risk managers can confidently predict the extent to which any proposed use will result in volatilization of dicamba that damages non-target plants. EPA could also provide an opportunity for the public to comment on any agency assessments that would support approvals of new or amended registrations of dicamba products for OTT use.

EPA could consider the following regulatory processes and possible regulatory actions:

- EPA could consider working with State Lead Agencies to take vigorous enforcement action against growers who misuse the older dicamba products on GE crops. The EPA report on incidents and impacts cited above referenced USDA survey data indicating that older, more volatile formulations of dicamba were used on GE crops after planting. The more volatile dicamba products are not registered for OTT use on GE cotton and soybeans.
- Prior to the expiration of the current time-limited registrations, EPA could institute appropriate regulatory action if it concludes, based on stakeholders’ feedback and any other reliable information, the continued OTT uses of dicamba do not meet FIFRA’s statutory standard of no unreasonable adverse effects on the environment. Such regulatory actions could impose modifications of the terms and conditions of use (including the requirement to create a Dicamba Victims’ Compensation Fund, mentioned below) or cancellation of some or all uses. If, however, any such review is inconclusive, EPA could take any of the steps suggested above to obtain the additional data it would need to have sufficient knowledge to reach a well-informed decision that would meet the requirements of FIFRA.
- If the agency decides to grant new or amended registrations for dicamba OTT use or to allow the existing dicamba registration to continue beyond 2025, EPA could consider requiring, as a condition of registration, the registrants to create a “Dicamba Victims’ Compensation Fund.” Such a fund should easily and quickly process claims and fully compensate any person experiencing a loss due to offsite dicamba damage, regardless of whether the damage was attributable to proper use of the product. The creation of such a fund would enable EPA to conclude that neighbors whose crops were damaged by off-site movement of dicamba were “made whole,” and thus, those risks could be largely discounted. We think it highly likely that any OTT use of dicamba will cause significant damage to non-target plants. Unless the agency can ensure no such harm will occur, we recommend EPA consider a novel approach to mitigating that risk.

- EPA could explore with USDA/Animal and Plant Health Inspection Service's (APHIS's) Biotechnology Regulatory Service (BRS) ways to coordinate any BRS deregulation decision on GE crops modified to tolerate exposure to an herbicide with EPA's decision concerning the herbicide registration for use on those GE crops. Currently, BRS's decisions can be made well before EPA's registration decision on the herbicide intended for use on those GE crops. The failure to coordinate such decisions between EPA and USDA can create a situation favorable to pesticide misuse. Such misuse, e.g., the previous and ongoing use of older, more volatile dicamba formulations on GE crops, has resulted in significant non-target crop and plant damage.

Respectfully submitted,

Michelle Roos
Executive Director

This letter was prepared by Arnet Jones, William Jordan, and Robert Perlis.

Cc: Edward Messina
Director, Office of Pesticide Programs

Marietta Echeverria
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