



# BEYOND PESTICIDES

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July 5, 2024

Office of Pesticide Programs  
Environmental Protection Agency, (28221T)  
1200 Pennsylvania Ave., NW  
Washington, DC 20460-0001

**Re: Pesticide Product Registration: Dicamba; New Use on Dicamba-Tolerant Cotton and Soybeans [EPA-HQ-OPP-2024-0154-0236]**

Dear Madam/Sir,

These comments are submitted on behalf of Beyond Pesticides. Founded in 1981 as a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to bridge the interests of consumers, farmers, and farmworkers. Beyond Pesticides advances improved protections from pesticides and alternative pest management strategies that eliminate a reliance on pesticides. Our membership and network span the 50 states and the world.

BASF's application for Engenia<sup>®</sup>, which had an original label vacated earlier this year, necessitates our response as it proposes additional food use of a dicamba product on dicamba-tolerant cotton and dicamba-tolerant soybeans. This application is similar to Bayer CropScience's application for XtendiMax<sup>®</sup>, regarding which Beyond Pesticides submitted comments in June. The proposed label for Engenia<sup>®</sup> allows for application preplant, at-planting, preemergence, and postemergence (in-crop) for broadleaf weeds. In dicamba-tolerant soybeans, there is a June 12 cutoff date with applications allowed before, during, and after planting, including over-the-top through the V2 growth stage. In dicamba-tolerant cotton, similar conditions apply but with a cutoff date of July 30. This is different from the Bayer CropScience proposal where no over-the-top application was specified for soybeans. This new proposed use from BASF, since it furthers use of dicamba and subsequent harm from pesticide drift, should be denied for failure to meet the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA) requirement of no unreasonable adverse effects on the environment.<sup>1</sup>

Dicamba, a commonly used herbicide for postemergent weed control, is the focus of many court cases, as it is responsible for millions of acres of crop damage and harm to numerous organisms including endangered species. Just this February, the United States (U.S.) District Court for the District of Arizona struck down the U.S. Environmental Protection Agency's (EPA) 2021 approval of three dicamba-based herbicides.<sup>2</sup> This is the second lawsuit since 2020

<sup>[1]</sup> *Federal Insecticide, Fungicide, and Rodenticide Act* 7 U.S.C. §136 et seq. (1996).

<sup>[2]</sup> Center for Biological Diversity, et al. v. Bayer Cropscience LP, et al. (2024).

to call out EPA's violation of both the *Endangered Species Act* (ESA) and FIFRA in authorizing the use of 'over-the-top' dicamba-based herbicide products from Bayer and other petrochemical pesticide companies. The judge's ruling, deferring to EPA's interpretation of the existing stock allowance being consistent with the provisions of FIFRA, continues a pattern of "existing stock" allowances that permit hazards to continue well after a finding of harm or noncompliance.

New problems with nontarget dicamba drift, contamination, and crop damage were identified in 2016 when EPA registered a new formulation of dicamba to control weeds in cotton and soybean crops that have been genetically engineered (GE) to tolerate the chemical. In 2020, the Ninth Circuit nullified "EPA's 2018 conditional registration of three dicamba weed killer products for use on an estimated 60 million acres of DT (dicamba-tolerant through genetic modification/engineering) soybeans and cotton."<sup>3</sup> The previous court case found that EPA did not adequately consider adverse effects from 'over-the-top' dicamba in approving the conditional registration.

Numerous studies show direct negative impacts on the environment from dicamba application due to its high propensity for leaching through soil into groundwater, as it is extremely mobile and has high water solubility. Toxicity to birds and aquatic organisms has also been documented, as well as harm to plants and pollinators.<sup>4</sup> Impacts on human health have also been demonstrated. Unreasonable adverse effects that range from developmental and reproductive toxicity to skin irritation, neurotoxicity, kidney/liver damage, and potential cancer are linked to dicamba exposure.<sup>5</sup> There is a "strong association between dicamba use and an increased risk of developing various cancers, including liver and intrahepatic bile duct cancer, chronic lymphocytic leukemia, and acute myeloid leukemia."<sup>6</sup> Additional research suggests that dicamba causes DNA damage (causing DNA mutations and inducing oxidative stress – two pathways known to cause cancer) and is also linked to antibiotic resistance.<sup>7</sup>

Although pesticides are by definition harmful, what makes these adverse effects "unreasonable" is the existence of an alternative—an organic production system—that does not harm human health, other species, or ecosystems and, in addition, helps to mitigate climate change. In its registration decisions, EPA must use organic production as a yardstick, denying any use for which organic production is successful. This includes the proposed uses.

Soy crops are particularly sensitive to pesticide drift from dicamba, and chemical use of dicamba increased even after GE soy crops began being utilized. As the Center for Biological Diversity states, "Since dicamba was approved for 'over-the-top' spraying its use has increased twentyfold. The EPA estimates 65 million acres (two-thirds of soybeans and three-fourths of

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<sup>[3]</sup> National Family Farm Coalition, et al. v. EPA, et al. (2020).

<sup>[4]</sup> Mineau, P., A. Baril, B.T. Collins, J. Duffe, G. Joerman, R. Luttik (2001) Reference values for comparing the acute toxicity of pesticides to birds. *Reviews of Environmental Contamination and Toxicology* 170:13-74.

<sup>[5]</sup> Gateway on Pesticide Hazards and Safe Pest Management. Beyond Pesticides. Available at: <https://www.beyondpesticides.org/resources/pesticide-gateway?pesticideid=25>.

<sup>[6]</sup> Lerro, C.C. et al. (2020) Dicamba use and cancer incidence in the Agricultural Health Study: An updated analysis. *International Journal of Epidemiology*.

<sup>[7]</sup> González, N., Soloneski, S. and Larramendy, M. (2006) Genotoxicity analysis of the phenoxy herbicide dicamba in mammalian cells in vitro. *Toxicology in vitro*.

cotton) are dicamba-resistant, with roughly half that acreage sprayed with dicamba, an area nearly the size of Alabama. Much of the unsprayed crops are planted ‘defensively’ by farmers to avoid dicamba drift damage.”<sup>8</sup> With the documentation of drift damage for off-target crops, new formulations of dicamba were created to attempt to prevent drift damage, but still proved too drift-prone and problematic to be used without incident. Damage to habitats and food sources for various organisms, most notably birds and insects, occurs as a result of dicamba drift. Multiple studies and court filings show dicamba’s ability to drift well over a mile off-site after an application.<sup>9</sup>

Dicamba, used to control a wide spectrum of broadleaf weeds, is primarily sprayed on GE corn and soybeans. It creates “an ‘ecological disaster’ in the name of profit” and has been the focus of many lawsuits regarding damage to other crops such as fruit trees.<sup>10</sup> Despite a court ruling in 2022 that “EPA failed to account for how ‘dicamba use would tear the social fabric of farming communities’... EPA sided with moneyed interests over the well-being of average Americans in farming communities.”<sup>10</sup> Farmers rely on their crop production to make a living, and yet continued use of dicamba occurs despite “4 percent of soybean fields [being] damaged by off-target dicamba movement in 2018” and “damage from dicamba [being] reported on approximately 1 in every 13 fields [about 8%]” in some states.<sup>11</sup>

Further concern regarding increasing global temperatures needs to also be factored into the decision-making process. All dicamba formulations have the potential to volatilize since dicamba has a high vapor pressure. Increases in air temperature can cause dicamba to turn into a gas even after successful application on target surfaces.<sup>12</sup> Since volatilization increases as temperatures increase, this is more and more concerning as temperatures are rising higher each year. The length, intensity, and onset of seasons has changed, which can be attributed to climate change.<sup>13</sup> The longer and hotter summers will exacerbate dicamba volatilization, therefore any proposal that allows dicamba application in late Spring and Summer will lead to more drift--especially for postemergent and over-the-top applications.

The inadequacy of restrictions in place for dicamba provides justification for additional mitigation and grounds for rejecting the new proposed use of dicamba on dicamba-tolerant cotton and soybeans. Violations involving current products containing dicamba continue in 2024, as damage persists in this year’s growing season, as EPA ignores the well-documented and overwhelming scientific evidence of the consequences of dicamba usage.<sup>14</sup> Consistent with

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<sup>[8]</sup> Center for Biological Diversity Press Release “Federal Court Halts Spraying of Monsanto’s Dicamba Pesticide Across Millions of Acres of Cotton, Soybeans” (2024).

<sup>[9]</sup> Travlou, E.; Antonopoulos, N.; Gazoulis, I.; Kanatas, P. (2024) Chemical Weed Control and Crop Injuries Due to Spray Drift: The Case of Dicamba. *Agrochemicals*.

<sup>[10]</sup> Bader Farms et al v. Monsanto and BASF (2022).

<sup>[11]</sup> U.S. Department of Agriculture “The Use of Genetically Engineered Dicamba-Tolerant Soybean Seeds Has Increased Quickly, Benefiting Adopters but Damaging Crops in Some Fields” (2019).

<sup>[12]</sup> Brown, C. et al. An overview of dicamba and 2,4-D drift issues, *Herbicide-Drift Risk Management for Specialty Crops*.

<sup>[13]</sup> Allstadt, A. J., Vavrus, S. J., Heglund, P. J., Pidgeon, A. M., Thogmartin, W. E., & Radeloff, V. C. (2015). Spring plant phenology and false springs in the conterminous US during the 21st century. *Environmental Research Letters*.

<sup>[14]</sup> Center for Biological Diversity, et al. v. Bayer Cropscience LP, et al. (2024).

FIFRA, cancellation of dicamba is needed to prevent further harmful effects.

In summary, EPA should deny the new proposed use of dicamba on dicamba-tolerant cotton and dicamba-tolerant soybeans due to the adverse effects on the environment. Dicamba's toxicity to the environment, endangered species, and human health are unacceptable, and are not allowed under FIFRA. This new application from BASF does nothing to address concerns from the public and courts regarding the detrimental effects of dicamba and will cause further harm to farmers who use this product, but also to those who experience rampant drift, elevated adverse effects, and economic loss. EPA must consider the alternative management practices and materials that are available, such as those used in organic agriculture, to make an accurate assessment, compliant with the unreasonable adverse effects standard of FIFRA,<sup>15</sup> of the hazards associated with continued and expanded dicamba use.

Thank you for your consideration of our comments.

Respectfully,

A handwritten signature in black ink, appearing to read "Sara Grantham". The signature is fluid and cursive, with the first name "Sara" written in a smaller, more legible script, and the last name "Grantham" written in a larger, more stylized cursive font.

Sara Grantham  
Science, Regulatory, and Advocacy Manager

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<sup>[15]</sup> *Federal Insecticide, Fungicide, and Rodenticide Act* 7 U.S.C. §136 et seq. (1996).