ORAL ARGUMENT NOT YET SCHEDULED
No. 20-1441 (Consolidated with 20-1445, 20-1484, 22-1048, 22-1050, 22-1067)

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

AMERICAN SOYBEAN ASSOCIATION, et al.,
Petitioners,

v.

MICHAEL S. REGAN, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, et al.,
Respondents,

and

BASF CORPORATION, et al.,
Intervenors.

On Petition for Review from the United States Environmental Protection Agency

JOINT BRIEF FOR PETITIONERS AMERICAN SOYBEAN ASSOCIATION AND PLAINS COTTON GROWERS, INC.

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CERTIFICATE AS TO PARTIES, RULINGS UNDER REVIEW, AND RELATED CASES

1. Parties. The parties to this proceeding are, in Nos. 20-1441, 20-1445, 22-1048, and 22-1050, Petitioner American Soybean Association; and Respondents U.S. Environmental Protection Agency ("EPA"); Michael S. Regan, EPA Administrator; and Edward Messina, EPA Division Director, Office of Pesticide Programs, Registration Division. BASF Corporation, Bayer CropScience LP, and Syngenta Crop Protection, LLC are Intervenors in Nos. 20-1441 and 20-1445. In No. 20-1484 and 22-1067, the parties are Petitioner Plains Cotton Growers, Inc.; and Respondents EPA, EPA Administrator Regan, and Division Director Messina. Bayer CropScience LP and Syngenta Crop Protection, LLC are Intervenors in No. 20-1484.

Pursuant to Federal Rule of Appellate Procedure 26.1 and Circuit Rule 26.1, Petitioners American Soybean Association and Plains Cotton Growers, Inc. certify that they have no parent companies and no publicly held company holds a 10% or greater ownership interest in them.

2. Rulings Under Review. The petitions for review challenge aspects of EPA's registration of three dicamba pesticide products under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA")—namely, the Engenia Herbicide Registration (EPA Reg. No. 7969-472), the A21472 Plus VaporGrip Technology

Registration (EPA Reg. No. 100-1623), and the XtendiMax with VaporGrip Technology Registration (EPA Reg. No. 264-1210). EPA issued all three registrations on October 27, 2020, and published them—and supporting memoranda—to the Federal Docket Management System (Regulations.gov) under docket number EPA-HQ-2020-0492. The petitions for review also challenge aspects of EPA's March 15, 2022 amendments to the three dicamba registrations, which add product-use restrictions in two states.

3. Related Cases. The case on review has not previously been before this Court or any other court. In addition to the petitions consolidated here, Petitioners have filed a separate action in the United States District Court for the District of Columbia challenging the same EPA registration decisions. *See Am. Soybean Ass'n v. EPA*, No. 1:20-cv-03190-RCL (D.D.C.). As explained below, Petitioners contend that the District Court, not this Court, has jurisdiction to resolve Petitioners' claims in the first instance. The District Court has stayed all proceedings before it until this Court resolves this consolidated action. The Center for Biological Diversity et al. filed a separate action challenging aspects of the 2020 EPA registration decisions in the United States District Court for the District of Arizona. *See Ctr. for Biological Diversity v. U.S. EPA*, No. 4:20-cv-00555-DCB (D. Ariz.). That action has also been stayed pending the outcome of these consolidated appellate proceedings.

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GLOSSARY OF ABBREVIATIONS

APA	Administrative Procedure Act
DEC	Declaration (included in an addendum)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
USDA	United States Department of Agriculture

JURISDICTIONAL STATEMENT

Petitioners American Soybean Association and Plains Cotton Growers, Inc. do not believe this Court has subject-matter jurisdiction to hear these consolidated petitions challenging EPA's 2020 dicamba registrations and 2022 registration amendments. Under FIFRA, registration decisions that follow a "public hearing" are initially reviewable in the Circuit Court. 7 U.S.C. § 136n(b). Challenges to registration decisions that do not follow a public "hearing" are instead initially "reviewable by the district courts." *Id.* § 136n(a). Because neither FIFRA nor controlling case law defines what constitutes a "public hearing," Petitioners brought challenges to EPA's 2020 dicamba registration decisions and 2022 registration amendments in both the Circuit Court (in these consolidated cases) and in the U.S. District Court for the District of Columbia (*Am. Soybean Ass'n v. EPA*, No. 1:20-cv-03190-RCL (D.D.C.)). *Cf., e.g.*, *United Farm Workers of Am., AFL-CIO v. Adm'r, EPA*, 592 F.3d 1080, 1083 (9th Cir. 2010) (dismissing a FIFRA action incorrectly filed in the district court because "review . . . should have been sought in [the circuit] court, but "[u]nfortunately for the appellants it [was] now too late to seek it," as "[p]etitions for review must be filed 60 days after the decision").

Although an open question, Petitioners believe that the District Court has jurisdiction to consider, in the first instance, Petitioners' challenges to the 2020 registration decisions and the related 2022 registration amendments. EPA conducted

no public hearing—or any proceedings that could be considered tantamount to a public hearing—in making the 2020 dicamba registration decisions or in adopting the 2022 registration amendments. In fact, EPA did not even publish notice of—or solicit public comment on—the 2020 dicamba registration applications, EPA's proposed actions on those applications, or the 2022 registration amendments. Rather, EPA relied on unsolicited comments and other materials without giving the public any notice of or formal opportunity to be heard on the registrations, amendments, or EPA's specific use conditions, including the application buffers, cutoff dates, and temperature-based restrictions that Petitioners challenge here.

To be sure, FIFRA's "public hearing" requirement is grounded, in part, in a legislative concern that there be an adequate record for appellate review. *See Env't Def. Fund, Inc. v. Costle*, 631 F.2d 922, 930–31 (D.C. Cir. 1980). Consequently, a formal oral presentation before an administrative agency is not required to satisfy the "public hearing" requirement and trigger initial appellate review, so long as there is an adequate administrative record. *See id.* But to satisfy FIFRA's "public hearing" requirement, FIFRA always requires at least some administrative proceeding to which persons can become parties and provide specific input on proposed administrative action. Indeed, FIFRA itself specifies that immediate appellate review is only available to those "who had been *a party to the proceedings*" before the agency. 7 U.S.C. § 136n(b) (emphasis added).

For example, initial appellate review can exist where an agency conducts public notice and comment proceedings—which can generate a fully adequate record for immediate appellate review, thus constituting a "public hearing" under FIFRA. *See Ctr. for Biological Diversity v. EPA*, 861 F.3d 174, 186–88 (D.C. Cir. 2017); *Humane Society v. EPA*, 790 F.2d 106, 111–12 (D.C. Cir. 1986). But EPA conducted no such notice-and-comment proceedings here. Again, EPA issued its registration decisions and related amendments without providing any notice of the registration applications, EPA's proposed actions, or EPA's conditions of use. Without providing notice and an opportunity for meaningful comment, EPA's actions cannot be considered to have followed a "public hearing" or be grounded in an adequate record for review, no matter how many unsolicited materials are in the administrative record. *See, e.g.*, *United Farm Workers of Am., AFL-CIO*, 592 F.3d at 1082 (concluding that FIFRA's use of the term "hearing" "identifies elements essential in any fair proceeding—notice be given of a decision to be made and presentation to the decisionmaker of the positions of those to be affected by the decision").

Likewise, FIFRA's "public hearing" requirement has been satisfied where the petition raises a purely legal issue that the parties extensively briefed in quasi-judicial proceedings, resulting in a fully adequate record for immediate appellate review. *See Costle*, 631 F.2d at 932 (holding that pure legal issue of whether

petitioner was entitled to a hearing under FIFRA was immediately reviewable on appeal where issue was fully briefed before an ALJ). But again, no comparable proceedings occurred here. EPA gave no notice of its 2020 registration decision-making process, proposed registration decisions, 2022 registration amendments, or specific conditions of use. Consequently, those decisions, amendments, and use conditions were not fully and meaningfully briefed before the agency. Moreover, the petitions at issue here raise factual and scientific questions relating to EPA's application buffers, cutoff dates, and temperature-based restrictions, which are far afield from the abstract legal issue that warranted immediate appellate review in *Costle*.

In short, because the 2020 registrations and 2022 registration amendments are not orders issued "following a public hearing," this Court does not have subject-matter jurisdiction to review the registrations in the first instance. The Court should either hold these consolidated cases in abeyance or dismiss them for lack of jurisdiction and allow the District Court action to proceed.

If the Court determines that it has jurisdiction because the 2020 registrations and/or the 2022 registration amendments followed a "public hearing," the Court would have jurisdiction to consider Petitioners' claims under FIFRA and the Endangered Species Act ("ESA"). *See Ctr. for Biological Diversity*, 861 F.3d at 187

(holding that FIFRA gave Circuit Court "exclusive jurisdiction" to consider claims challenging orders under FIFRA and the ESA).

STATEMENT OF ISSUES

1. Does this Court have subject-matter jurisdiction to consider, in the first instance, Petitioners' consolidated claims challenging aspects of EPA's 2020 dicamba registrations and 2022 dicamba registration amendments?

2. EPA's 2020 dicamba registrations subject certain cotton and soybean growers to a 310-foot downwind application buffer, and a 57-foot omnidirectional buffer, nearly tripling the size of the previous downwind buffer. Are these county-wide restrictions arbitrary and capricious because they are based on flawed and incomplete data rather than the best available scientific data—namely, listed species-location information from a readily available database and actual use data from USDA and Kynetec USA, Inc. ("Kynetec")?

3. EPA's 2020 dicamba registrations impose a national application cut-off date of June 30 and July 30 for soybeans and cotton, respectively. EPA's 2022 dicamba registration amendment imposes even more stringent date and temperature restrictions on farmers in Minnesota and Iowa. Are these blanket restrictions arbitrary and capricious and unsupported by substantial evidence because they are not tailored to reflect regional climate disparities?

STATUTES AND REGULATIONS

Relevant statutes and regulations appear in the Addendum.

STATEMENT OF THE CASE

This case concerns EPA's decision to register the herbicide dicamba for over-the-top use on dicamba-tolerant soybean and cotton. Although EPA's registration decision arms U.S. soybean and cotton growers with an essential weed-management tool, critical aspects of EPA's action are legally infirm and substantially harm growers, who depend on reasonable, consistent access to dicamba in their fight against herbicide-resistant weeds and efforts to implement sustainable farming practices such as no- and low-till cultivation.

Specifically, EPA's original registration decision imposes arbitrary and capricious spatial- and temporal-use conditions that are not supported by substantial evidence. The ESA buffers are arbitrary and capricious because they: (1) are erroneously applied on a county-wide basis; and (2) are not based on the best available scientific and commercial data as required by the ESA. Indeed, in determining where the ESA buffers should apply, EPA ignored localized, sub-county species location data from the "NatureServe" database. Consideration of this data could have—indeed, should have—resulted in more narrowly tailored use restrictions. And in determining what size the ESA buffers should be, EPA relied only on field studies premised on unrealistic, overly-conservative assumptions about

grower dicamba use rather than actual grower use data from USDA and Kynetec. In addition, the application cutoff dates applied under FIFRA are overbroad and unsupported by substantial evidence.

Unless these restrictions are remanded back to EPA for reconsideration, American soybean and cotton farmers, which form the backbone of the U.S. farm economy, will be substantially harmed. So, too, will downstream consumers who rely on soy and cotton to feed and clothe their families, as well as businesses that depend on soy and cotton to stock their grocery and clothing aisles.

A. Soybean and Cotton are Cornerstones of America's Agricultural Economy.

Soybeans are an essential agricultural staple. Soybeans and soybean oil underpin myriad domestic supply chains: soybeans are an important ingredient in many food, industrial, and pharmaceutical products, in addition to a significant volume of animal feed and biodiesel fuel. According to the United States Department of Agriculture ("USDA"), soybeans are the world's largest source of animal protein feed, while soybean oil comprises almost 70% of American

household oil consumption.[1] Additionally, more than half of all U.S. biodiesel feedstock comes from soybean oil.[2]

For these reasons, soybeans are a cornerstone of America's agricultural economy. In 2018, for example, soybeans accounted for a full third of all crop area planted in the United States—more than 80 million acres.[3] And in 2019, domestic soybean crop value exceeded $34 billion.[4] American soybeans are also a major player in the global agricultural market. The United States is the world's second largest soybean producer and its second-largest exporter.[5] In the 2019–2020 period,

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[1] *See* USDA, *Monsanto Petitions (10-188-01p and 12-185-01p) for Determinations of Nonregulated Status for Dicamba-Resistant Soybean and Cotton Varieties: Final Environmental Impact Statement* ("Soybean FEIS") 93 (Dec. 2014), https://www.aphis.usda.gov/brs/aphisdocs/dicamba_feis.pdf.

[2] *See Biodiesel*, United Soybean Board (Feb. 15, 2022), https://www.unitedsoybean.org/media-center/issue-briefs/biodiesel/.

[3] *See* American Soybean Association, *2019 SoyStats: A Reference Guide to Soybean Facts and Figures* (2019), https://soygrowers.com/wp-content/uploads/2019/10/Soy-Stats-2019_FNL-Web.pdf.

[4] *See Cash receipts by commodity*, USDA Economic Research Service (Feb. 4, 2022), https://data.ers.usda.gov/reports.aspx?ID=17845.

[5] Keith Good, *Brazil Forecast to Overtake U.S. as Leading Soybean Producer, USDA-FAS Report*, Farm Policy News (Jan. 5, 2020), https://farmpolicynews.illinois.edu/2020/01/brazil-forecast-to-overtake-u-s-as-leading-soybean-producer-usda-fas-report/.

Americans exported nearly 46 million metric tons of soybeans around the world, comprising a significant share of American agricultural exports.[6]

Perhaps unsurprisingly, American soybeans are an international and domestic dietary staple. Historically, American soybeans are a key element of global diets because they are healthy (soybeans are a good source of protein, carbohydrates, fat, calcium, folic acid, iron, and dietary fiber, all while being heart-healthy), versatile (soybeans are ground into flour, made into meat alternatives like tofu and tempeh, prepared as beverages, and blended into nut butter), and affordable.[7] Simply put, American soybeans are an essential link in the domestic and international food supply chain.

Cotton, for its part, is an important cash crop, and one that underpins much of the domestic and global textile trade. As a key textile fiber, cotton accounts for a quarter of total world fiber use.[8] Cotton growers pump an average of $5.6 billion into the U.S. economy annually, through labor, fertilizer, seed, and farm equipment

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[6] *See* American Soybean Association, *International: World Soybean Exports*, SoyStats, http://soystats.com/international-world-soybean-exports/ (last visited May 18, 2022).

[7] *See Soybeans Commodity Fact Sheet*, USAID: From the American People, https://2012-2017.usaid.gov/what-we-do/agriculture-and-food-security/food-assistance/resources/soybeans-commodity-fact-sheet (last visited May 18, 2022).

[8] *See Overview*, USDA Economic Research Service https://www.ers.usda.gov/topics/crops/cotton-wool/ (last visited May 18, 2022).

inputs.[9] And the Texas High Plains, on its own, produced over four million bales of cotton in 2021. *See* DEC23–24 (Bessent Decl. ¶ 4). All told, American cotton growers stimulate almost $100 billion in annual domestic economic activity, supporting more than 125,000 jobs from field to textile mill.[10]

As with soybeans, the United States is an internationally important cotton producer and exporter. The United States singlehandedly produces some 30 percent of cotton exported around the world.[11] On top of these raw cotton exports, the U.S. also exports on average more than 3.5 million bale equivalents of processed cotton textiles annually.[12] Most of this cotton fiber ends up in apparel, while the remainder goes into home furnishing and industrial products.[13] But cotton creates cottonseed too. Every year, approximately six billion pounds of whole cottonseed and cottonseed meal makes its way into feed for livestock, dairy cattle, and poultry.[14] Like soybean farmers, cotton farmers also rely on dicamba and dicamba-tolerant seed.

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[9] *See World of Cotton*, National Cotton Council of America, http://www.cotton.org/econ/world/index.cfm (last visited May 18, 2022).

[10] *2018 National Cotton Council Report to Members*, National Cotton Council of America, https://www.cotton.org/about/report/2018/upload/2018-ncc-report-to-members.pdf (last visited May 18, 2022).

[11] *See World of Cotton*, *supra* note 9.

[12] *See id.*

[13] *Id.*

[14] *Id.*

B. The Rise of Herbicide-Resistant Weeds and Growers' Answer: Dicamba.

American soybean and cotton farmers face an ever-growing litany of financial and physical threats each growing season. Inclement weather, pests, price fluctuations, unstable global markets, uneven trade policies, and persistent weeds all threaten soybean and cotton farmers' livelihoods. But weeds pose a particularly dire threat to soybean and cotton growers. Weeds compete with crops for light, nutrients, and water; harbor insects and diseases; and undermine harvests.[15] Soybeans are a case in point. Weeds are estimated to potentially depress soybean yields 37% worldwide.[16] Experts estimate that, if left uncontrolled, weeds would cut soybean yields in half.[17] Weeds also devastate cotton crops. According to the National Cotton Council, research conducted before the availability of dicamba-tolerant cotton varieties reported a minimum of 50% yield loss due to pressure from glyphosate-resistant palmer amaranth (commonly known as "pigweed"). *See* A.R. Doc. 1 at 70; JA-820.

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[15] *See* Soybean FEIS, *supra* note 1 at 69.

[16] *Id.*

[17] *See* J. Anita Dille, et al., *Perspectives on soybean yield losses due to weeds in North America*, Weed Science Society of America, http://wssa.net/wp-content/uploads/WSSA-2016-Soybean-Yield-Loss-poster.pdf (last visited May 18, 2022).

Developed in the mid-1990s, glyphosate-tolerant crops revolutionized farming. Glyphosate-tolerant crops let farmers spray glyphosate—a broad-spectrum herbicide—"over-the-top" of soybean, cotton, and other crops during the growing season (*i.e.*, post-emergence). This technique effectively kills most weeds, while preserving soybean and cotton plants. Glyphosate-tolerant crops and similar herbicide-tolerant cropping systems were a game changer, springing weed- and farm-management into the future.

Indeed, glyphosate-tolerant crops produced a suite of benefits for farmers, consumers, and the environment. Before glyphosate-tolerant crops, growers relied on tillage-based weed management practices.[18] Yet tillage-heavy weed control increased growers' fuel and labor costs, triggered soil erosion, and required significant water use.[19] Glyphosate-tolerant seeds also facilitated crop rotation and reduced weather-related planting delays, generating significant cost savings for farmers and their customers. The advent of glyphosate-tolerant and other herbicide-tolerant crops brought environmental benefits too. For example, between 1980 and 2011, American soybean production increased by nearly 96% while yields soared by 55%.[20] At the same time, resource efficiency also skyrocketed: one bushel of

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[18] *See* Soybean FEIS, *supra* note 1 at 73–74.

[19] *See id.* at 39, 47.

[20] *See* Keystone Alliance for Sustainable Agriculture, *Environmental and Socioeconomic Indicators for Measuring Outcomes of On-Farm Agricultural*

soybeans required 35% less land, caused 66% less soil erosion, used 42% less water, and emitted 41% less greenhouse gas.[21] Given these advantages, soybean and cotton farmers invested heavily in glyphosate-tolerant and other herbicide-tolerant seeds: By 2010, approximately 90% of soybean fields and 75% of cotton farmers relied on glyphosate-tolerant and other herbicide-tolerant seeds.[22]

Around the turn of the last decade, however, glyphosate-resistant (and other hard-to-control) weeds emerged. Because glyphosate-resistant weeds undo many of the productivity, yield, economic, and environmental gains generated by glyphosate-tolerant crops, these weeds pose serious problems for soybean and cotton growers. Over time, glyphosate-resistant weeds proliferated. In 2012, for example, USDA estimated that 61 million acres of U.S. farmland suffered from glyphosate-resistant weeds.[23] These weeds are also uniquely devastating. By way of example, a single female pigweed plant can produce more than 600,000 seeds in a season, infecting

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Production in the United States (July 2012) at ix, https://ussec.org/wp-content/uploads/2015/10/Field-to-Market_Environmental-Indicator_Report_2012.pdf (last visited May 18, 2022). Yield refers to amount of crop grown per unit of land, while productivity refers to total harvest volume.

[21] *Id.* at ix–x.

[22] *See* USDA, USDA Economic Research Service, *Recent Trends in GE Adoption*, https://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us/recent-trends-in-ge-adoption.aspx (last visited May 18, 2022).

[23] *See* Soybean FEIS, *supra* note 1 at 121.

whole fields.[24] Pigweed can quickly overwhelm crops, growing two to three inches per day, reaching heights of eight feet tall, and stealing water, nutrients, and other critical resources from crops.[25] Combating these weeds requires farmers to resort to antiquated weed management technology like aggressive tillage and hand-weeding.[26] Growers often need to apply additional herbicides as well, further rolling back economic and environmental gains.[27] In short, these weeds undermine water quality, erode air quality, harm soil quality, increase greenhouse gas emissions, and undercut biodiversity.[28]

Dicamba-based herbicides and dicamba-tolerant crops are growers' answer to glyphosate-resistant and other hard-to-control weeds. Three dicamba-based herbicides are relevant here: ABN Tavium Plus VaporGrip Technology (aka, A21472 Plus VaporGrip Technology, produced by Syngenta), XtendiMax with VaporGrip Technology (produced by Bayer CropScience), and Engenia Herbicide (produced by BASF) (collectively, the "Dicamba Products"). The Dicamba

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[24] *See* Eric Sfiligoj, *The Weed Resistance Problem: A Matter of Billions*, CropLife (Apr. 1, 2014), https://www.croplife.com/crop-inputs/herbicides/the-weed-resistance-problem-a-matter-of-billions/.

[25] *See* Eric Sfiligoj, *Herbicide Resistance: The Numbing Numbers from the Weed Wars*, CropLife (Apr. 2, 2017), http://www.croplife.com/cropinputs/herbicide-resistance-the-numbing-numbers-from-the-weed-wars/.

[26] *See* Soybean FEIS, *supra* note 1 at 109, 152, 181.

[27] *See id.* at 113.

[28] *See id.* at ix.

Products fight glyphosate-resistant weeds by allowing farmers to safely use dicamba—another broad-spectrum herbicide—on dicamba-tolerant soybean and cotton. Because weeds are not generally resistant to dicamba, growers can apply the Dicamba Products over-the-top of their dicamba-tolerant crops, killing weeds (including glyphosate-resistant weeds) without harming their crops.

The Dicamba Products, paired with dicamba-tolerant crops, offer two significant benefits. First, unlike many herbicides, the Dicamba Products can be applied during the growing season, after crops and weeds emerge, without hurting the crop. Applying dicamba during the growing season kills both glyphosate-resistant weeds and glyphosate-resistant seed banks, bringing growers immediate and longer-lasting relief from those weeds. Because the Dicamba Products are available post-emergence, they also allow growers to fight late-season weeds, which can otherwise overwhelm crops. The Dicamba Products also delay the emergence of herbicide-resistant weed populations.[29] Simply put, the Dicamba Products are gamechangers in farmers' battle against glyphosate-resistant and other hard-to-control weeds.

Many growers started using this technology shortly after EPA registered it in November 2016, immediately reaping massive benefits. Because the Dicamba

[29] *See id.* at 148.

Products are so effective, growers have invested billions of dollars into dicamba-tolerant seeds and hundreds of millions more into dicamba-based herbicides. Without Dicamba Products in their arsenal, many farms would be largely defenseless in their fight against weeds. A handful of other herbicides remain available but are often only partially effective, if at all. And hand-weeding, growers' only other anti-weed weapon, is usually infeasible. The bottom line: American soybean and cotton farmers rely on the Dicamba Products to protect their fields—and keep the world fed, fueled, and clothed along the way.

C. EPA's Original Dicamba Registration, Application Restrictions, and Spray Buffers.

Dicamba, generally speaking, was first registered in the United States in 1967 and has enjoyed wide use ever since. *See* A.R. Doc. 6 at 7; JA-53. EPA issued the original registration decision at issue here on October 27, 2020, registering the Dicamba Products for a five-year period ending December 20, 2025. *See* A.R. Docs. 5, 12–13; JA-546–674. EPA did not conduct a hearing or notice-and-comment proceedings on the Dicamba registration. EPA describes its registration decision in the Memorandum Supporting Decision to Approve Registration for the Uses of Dicamba on Dicamba Tolerant Cotton and Soybean (the "Dicamba Memorandum"). *See* A.R. Doc. 4; JA-518–45. Three individual registrations are the heart of the Dicamba decision: the Engenia Herbicide Registration, *see* A.R. Doc. 12; JA-601–38, the A21472 Plus VaporGrip Technology (Tavium) Registration, *see* A.R. Doc.

5; JA-546–600, and the XtendiMax with VaporGrip Technology Registration, *see* A.R. Doc. 13; JA-639–74.

EPA further supported the original registration decision with two benefits assessments and three impact assessments, including a "2020 Ecological Assessment of Dicamba Use on Dicamba-Tolerant (DT) Cotton and Soybean Including Effects Determinations for Federally Listed Threatened and Endangered Species" (the "ESA Assessment"). *See* A.R. Doc. 9; JA-139–484. EPA also relied on the wealth of existing information on dicamba, generated by the past half-decade's worth of use on dicamba-tolerant crops. EPA's benefits assessments concluded that registering dicamba "gives many growers increased flexibility," creates "a cost-effective way to control problematic herbicide-resistant broadleaf weed species," and adds "an additional tool to delay the further development of herbicide resistance." A.R. Doc. 10 at 3; JA-487.

Yet despite these findings, the original registration decision imposed restrictive use conditions on growers, including several that limit yields, increase operational costs, and erode productivity. Two sets of conditions are particularly limiting: date-dependent application restrictions (the "Application Restrictions") and a suite of three application buffers (the "Spray Buffers"). These new conditions are significantly more restrictive than in past dicamba registrations.

1. EPA's Application Restrictions.

EPA's original registration imposes Application Restrictions limiting growers' ability to respond to weather, pestilence, and other acts of God that cut yields and hike operational costs. Specifically, the original registration prevents soybean growers from applying the Dicamba Products after June 30 each year. *See* A.R. Doc. 4 at 14; JA-531. Cotton growers are likewise blocked from using Dicamba Products after July 30. *Id.* EPA uses these cutoffs as proxies for weather and climatic conditions, asserting that warmer temperatures and other factors are correlated with higher levels of dicamba volatility. *Id.* These restrictions confine growers' flexibility, cabining their ability to respond to unpredictable conditions. Every growing season brings its own whims—severe weather, pest and weed infestations, market swings, and more—which often demand farm management flexibility. *See, e.g.*, DEC29, 31 (Robertson Decl. ¶¶ 3, 12); DEC18–20 (Meadows Decl. ¶¶ 9, 11–12, 14); DEC11–13 (Jorgenson Decl. ¶¶ 11–15); DEC2–7 (Howell Decl. at ¶¶ 3, 10–12, 15–16). For example, heavy spring rains, flooding, wind and hail from severe storms, and other acts of God can force growers into planting or replanting crops as late as June. *See, e.g.*, DEC26 (Bessent Decl. ¶ 11).

For these reasons, the Application Restrictions harm many cotton and soybean growers. Many cotton growers, for instance, rely on late planting and replanting, often during May and June. Thus, the Application Restrictions' July 30 application

cutoff date exposes many growers to potentially devastating weed pressure during the heart of cotton's growth cycle, often into late summer. *See, e.g.*, DEC26–27 (Bessent Decl. ¶ 12); DEC6 (Howell Decl. ¶ 16); DEC29–30 (Robertson Decl. ¶ 4). Texas High Plains cotton growers are especially vulnerable because that region sets forth separate final planting dates (as governed by the USDA Risk Management Agency, which oversees several federal crop insurance programs). *See* DEC26 (Bessent Decl. ¶ 11). Those independent planting dates range from May 31 to June 20. *Id.* Because the High Plains routinely experiences extreme weather during the planting period, significant volumes of High Plains cotton are planted, or replanted, up to these planting deadlines. *Id.* As a result, High Plains growers, who plant or replant cotton more often than most, are particularly impacted by the Application Restrictions. *Id.*

Soybean growers will suffer too. June 30 presents a particularly problematic cutoff for at least two reasons. First, weather, pestilence, and other acts of God often push soybean growers, like cotton growers, into late season planting and replanting. Thus, the June 30 cutoff likely leaves thousands of late season soybean growers largely defenseless against weeds. Compounding this, soybean growers annually battle late-emerging weeds, many of which are glyphosate-resistant. *See, e.g.*, DEC6 (Howell Decl. ¶ 16). For example, waterhemp routinely emerges as late as July and August, and often in glyphosate-resistant form. *See* DEC13 (Jorgenson Decl. ¶ 15).

Therefore, in any given growing season, some growers will need to make their post-emergent application(s) of dicamba after June 30 (soybean) or July 30 (cotton). Because growers are unable to make post-emergent applications, their fields suffer from weed infestations, trimming yields, and ballooning weed management costs. *See, e.g.*, DEC17–21 (Meadows Decl. ¶¶ 8, 10, 13–15); DEC11–14 (Jorgenson Decl. ¶¶ 11, 13–16); DEC4–6 (Howell Decl. ¶¶ 11, 15–16). EPA even recognizes as much, finding that "cutoff dates may prevent some growers from making applications for late season weed control," leading to "increase[d] applicator/grower costs." A.R. Doc. 4 at 18; JA-535.

2. EPA's Spray Buffers.

EPA also imposed a suite of three Spray Buffers, limiting when and where growers can apply dicamba. Growers nationwide must abide by a 240-foot, universally controlling, downwind application buffer. A.R. Doc. 4 at 13; JA-530. Many cotton and soybean growers are also subject to a 310-foot downwind application buffer, and a 57-foot omnidirectional buffer (collectively, the "ESA buffers"), depending on local conditions, including the potential presence of threatened or endangered species. *Id.* at 24; JA-541.

As to the ESA buffers, specifically, whenever there is a potential "overlap" between, on the one hand, the possible presence of a soybean or cotton field and, on the other hand, the presence of a single listed non-target plant species, in a county,

the entire county is subject to the buffers, regardless of the location of the overlap. *See id.* at 26–28; JA-543–45. When determining where these buffers should apply, EPA relied on data regarding the location of relevant listed species provided by certain government agencies. *Id.* at 26; JA-543. In doing so, it disregarded requests to use data from a database called "NatureServe," which provides more granular, sub-county information regarding the location of relevant protected species. *See infra* at 45–47. Likewise, in determining buffer size, EPA did not consider actual use data from USDA and Kynetec—"a private marketing research firm and the source of annual pesticide usage information on which registrants and EPA rely," *see* A.R. Doc. 6 at 35; JA-81—but instead relied on field studies assuming that the full label rate of dicamba would be applied in all fields, all the time. *See, e.g.*, A.R. Doc. 9 at 7, 18, 20, 25–26, 28–29; JA-145, 156, 158, 163–64, 166–67.

While some of these buffers might appear flexible, they are restrictive in reality. Because wind direction changes daily, so too do these buffers. Thus, these "downwind" buffers can transform into significant omnidirectional growing restrictions, even "requir[ing] growers to remove land from production." *See* A.R. Doc. 6 at 21–24; JA-67–70. And these buffers are unprecedented: The universally applicable 240-foot Spray Buffer, for its part, is more than twice the size of its 2018 Registration precursor. A.R. Doc. 4 at 4; JA-521. In the end, the Spray Buffers hamstring growers' weed-management efforts, leaving the buffer zones largely

defenseless against glyphosate-resistant weeds. *See, e.g.*, DEC29, 31 (Robertson Decl. ¶¶ 3, 11); DEC2 (Howell Decl. ¶ 3).

D. EPA's Dicamba Registration Amendments.

EPA recently ratcheted up its use restrictions through amendments to the Dicamba Products' registrations (the "Registration Amendments"). *See, e.g.*, Supp. A.R. Engenia Doc. 9; JA-881–913. Like the original registration, EPA adopted the Registration Amendments without a public hearing or notice-and-comment proceedings. The Registration Amendments impose more restrictive application cutoff dates and new temperature-based usage restrictions for growers in Minnesota and Iowa. *See, e.g.*, *id.* These restrictions apply on top of EPA's other usage restrictions, including the Application Restrictions and the Spray Buffers.

In relevant part, the Minnesota and Iowa restrictions prohibit use of the Dicamba Products (1) after June 20 in Iowa, (2) after June 12 in Minnesota (south of Interstate 94; the cutoff date for land north of Interstate 94 is June 30), or (3) when the air temperature is over 85 degrees Fahrenheit at the time of application or if the forecasted high temperature of the nearest available location exceeds 85 degrees in Minnesota. *See, e.g.*, *id.* at 25, 27; JA-910, 912. Because the Registration Amendments even further restrict growers' access to the Dicamba Products, the Registration Amendments amplify the harm caused by EPA's other usage conditions. *See, e.g.*, DEC13–14 (Jorgenson Decl. ¶¶ 15–16).

E. Petitioners' Challenges to EPA's Original Registration and Registration Amendments.

Petitioners American Soybean Association and Plains Cotton Growers, Inc. commenced legal proceedings seeking relief from aspects of EPA's Original Registration. Under FIFRA, only registration decisions that follow a "public hearing" are initially reviewable in the Circuit Court. 7 U.S.C. § 136n(b). Challenges to registration decisions that do not follow a public "hearing" are instead initially "reviewable by the district courts." *Id.* § 136n(a). Because the original registration decision was made without a public hearing or any proceedings tantamount to a public hearing, Petitioners filed an action in the United States District Court for the District of Columbia. *See Am. Soybean Ass'n v. EPA*, No. 1:20-cv-03190-RCL (D.D.C.).

Out of an abundance of caution, Petitioners also commenced appellate proceedings. Because FIFRA requires petitioners to seek appellate relief in the Circuit where they reside or have their place of business, 7 U.S.C. § 136n(b), The American Soybean Association filed its petition for review in this Court, *see Am. Soybean Ass'n v. EPA*, No. 20-1441, ECF No. 1870257 (D.C. Cir. Nov. 5, 2020); *Am. Soybean Ass'n v. EPA*, No. 20-1445, ECF No. 1871621 (D.C. Cir. Nov. 10, 2020). Petitioner Plains Cotton Growers, Inc. filed its petition for review in the U.S.

Court of Appeals for the Fifth Circuit.[30] *See Plains Cotton Growers, Inc. v. EPA*, No. 20-1484, ECF No. 1874435 (D.C. Cir. Dec. 4, 2020) (petition filed November 10, 2020). Roughly two months later, the Judicial Panel on Multidistrict Litigation consolidated Petitioners' appellate proceedings in this Court. *See Am. Soybean Ass'n v. EPA*, No. 20-1441, ECF No. 1874319 (Dec. 3, 2020).

Later, several environmental interest groups filed their own petitions challenging EPA's dicamba registration in both the U.S. District Court for the District of Arizona and in the U.S. Court of Appeals for the Ninth Circuit. The Ninth Circuit transferred their appellate petition here, which this Court then consolidated with Petitioners' cases. *See id.*, ECF No. 1883240 (Feb. 2, 2021).

Recognizing that this Court likely lacks jurisdiction to consider their claims in the first instance, Petitioners filed a motion to stay these appellate proceedings pending resolution of their action in the U.S. District Court for the District of Columbia. EPA agreed that this Court lacks jurisdiction, and filed a motion seeking dismissal on that ground. This Court denied Petitioners' motion to stay, referred EPA's motion to dismiss to the merits panel, and set a merits briefing schedule.

[30] Petitioners also filed identical, later petitions in each court (all now consolidated here), to account for potential ambiguity around the "effective date" of the Dicamba Decision. *See* 40 C.F.R. § 23.6.

This Court also denied the environmental interest groups' motion to transfer these consolidated cases to the Ninth Circuit. *See id.*, ECF No. 1906276 (July 14, 2021). Subsequently, the environmental interest groups successfully moved to voluntarily dismiss their appellate petition given their view that jurisdiction lies in the District Court. *See id.*, ECF No. 1910890 (Aug. 19, 2021); ECF No. 1913270 (Sept. 8, 2021).

At the end of last year, EPA filed a "notice of regulatory action," suggesting that EPA was considering modifying the challenged registrations. *Id.*, ECF No. 1927851 (Dec. 22, 2021). EPA then did just that, issuing the Registration Amendments discussed above and filing a "notice of regulatory action." *See id.*, ECF No. 1939375 (Mar. 16, 2022). Shortly afterward, growers moved to amend their consolidated appellate petitions to include challenges to the Registration Amendments. *See id.*, ECF No. 1941211 (Mar. 30, 2022). This Court granted that motion. *See id.*, ECF No. 1941355 (Mar. 31, 2022). The American Soybean Association also filed new protective petitions in this Court challenging aspects of the Registration Amendment, and this Court consolidated those petitions into these proceedings. *See id.*, ECF No. 1941105 (Mar. 20, 2022); ECF No. 1941714 (Apr. 4, 2022). Likewise, Plains Cotton Growers filed separate protective petitions over the Registration Amendments in the Fifth Circuit, which were also transferred and consolidated here. *See id.*, ECF No. 1943658 (Apr. 20, 2022).

SUMMARY OF THE ARGUMENT

This Court should, without vacatur, remand for further consideration certain aspects of EPA's 2020 dicamba registrations, and the amended registrations, because they are arbitrary and capricious and are not founded on substantial evidence.

EPA's 2020 dicamba registration imposed stifling, substantially overbroad ESA buffers on cotton and soybean growers—specifically, a 310-foot downwind application buffer and a 57-foot omnidirectional buffer. These buffers—nearly three times the size of past dicamba buffers—are imposed on a county-wide basis, meaning they apply to all growers in counties where there is any overlap in the presence of a soybean or cotton field and the presence of a single listed non-target plant species. Because EPA did not take the sub-county location of the overlap into consideration in imposing these restrictions, all growers in a given county are subject to the buffers, regardless of their actual proximity to any listed species. These county-level regulations are grossly overinclusive, applying to vast geographic areas where no listed species are present. EPA could have—and should have—adopted a more tailored, sub-county approach to establishing ESA buffers, which would have preserved growers' ability to effectively use dicamba without compromising the safety of any listed species.

EPA also failed to heed the ESA's statutory directive to rely on the best available scientific and commercial data when determining the *size* of the buffers.

EPA first failed to consider superior data in the NatureServe database regarding the sub-county location of the non-target plant species at issue. Bayer made this sub-county data available to EPA for this purpose, and it explicitly asked EPA to use it. EPA, however, inexplicably failed to do so, even though the U.S. Fish and Wildlife Service commonly relies on the same data and EPA itself has acknowledged elsewhere that sub-county data is optimal when reaching effects determinations for pesticide registrations.

Second, EPA based the buffer sizes on the results of field studies where the full label rate of dicamba was applied, disregarding—without explanation—actual use data provided by USDA and Kynetec. The actual use data demonstrates that, unlike in the field studies, growers typically do not apply the full-label rate of dicamba. EPA's failure to consider NatureServe's more accurate sub-county species location data, and its reliance on erroneously inflated assumptions based on field studies in lieu of actual use data from USDA and Kynetec, is arbitrary and capricious.

EPA also imposed arbitrary nationwide application cutoffs for soybean and cotton growers. These cutoffs are essentially proxies for temperature, as, according to EPA, warmer temperatures are correlated to greater dicamba volatility. But the imposition of nationwide cutoffs is arbitrary and not supported by substantial evidence. EPA itself has conceded that temperatures vary dramatically nationwide,

and as a result, so too does the effectiveness of the cutoffs. And in adopting these cutoffs, EPA rejected more localized frameworks, including regional cutoff dates (like those now applicable in Iowa and Minnesota) and temperature thresholds (like those now applicable in Minnesota). These blanket nationwide cutoffs are therefore unsupported by substantial evidence. EPA should have adopted a narrower proposed cutoff method, to account for differences in climate nationwide.

STANDING

Petitioners American Soybean Association and Plains Cotton Growers, Inc. have associational standing to challenge the 2020 dicamba registrations and the related 2022 registration amendments. Organizations have associational standing (also known as representational standing) to "bring suit on behalf of their members[if] they . . . demonstrate [1] that at least one of their members would otherwise have standing to sue in his or her own right; [2] that the interests they seek to protect are germane to their organizations' purposes; and [3] that neither the claim asserted nor the relief requested requires the participation of individual members." *Sierra Club v. EPA*, 755 F.3d 968, 973 (D.C. Cir. 2014). To establish associational standing, Petitioners need not prove that their members have in fact suffered harm as a result of the challenged agency actions. Rather, they need only show that there is a "substantial probability" of suffering such harm. *Id.* at 973 (quotation omitted). And "[w]hen more than one association brings suit," the Court "need only find one

party with standing to satisfy the requirement." *Ctr. for Biological Diversity*, 861 F.3d at 182 (internal quotation marks and citation omitted); *accord Growth Energy v. EPA*, 5 F.4th 1, 26 (D.C. Cir. 2021).

Both the American Soybean Association and Plains Cotton Growers, Inc. satisfy all three associational-standing elements. The first element is met if "'any one' of the association's members can 'make out a justiciable case'" under Article III. *Nat'l Lime Ass'n v. EPA*, 233 F.3d 625, 636 (D.C. Cir. 2000) (quoting *Warth v. Seldin*, 422 U.S. 490, 511 (1975)). Here, the American Soybean Association and Plains Cotton Growers, Inc. have submitted member declarations, attached as an addendum to this brief, confirming that individual American Soybean Association and Plains Cotton Growers, Inc. members satisfy Article III's requirements—*i.e.*, (i) they are "injured in fact," (ii) those injuries are "caused by the challenged rule," and (iii) their "injur[ies] would likely be redressed by a favorable decision of the court." *Id.*

Specifically, American Soybean Association members Forrest Howell, Jeff Jorgenson, and Alan Meadows use dicamba and have been significantly harmed by the application buffers and cutoff dates. *See* DEC1–7 (Howell Decl.); DEC8–14 (Jorgenson Decl.); DEC15–21 (Meadows Decl.). For example, because they cannot apply dicamba in buffer zones, they have to manually monitor these areas and remove weeds in them by hand, which increases both time and labor costs. *See*

DEC5, 7 (Howell Decl. ¶¶ 13, 17); DEC19 (Meadows Decl. ¶ 11). This impact is particularly critical for farmers who maintain numerous smaller fields, as the buffers take up greater proportions of their farmable land. *See* DEC6–7 (Howell Decl. ¶¶ 14, 17); DEC19–21 (Meadows Decl. ¶¶ 12, 15). Similarly, the cutoff dates prevent these members from accounting for changes in weather during growing seasons, *see* DEC12 (Jorgenson Decl. ¶ 13); DEC20 (Meadows Decl. ¶ 14), as well as implementing helpful farming practices like double cropping, which would otherwise increase their yield, and consequently, income, *see* DEC3–4, 6–7 (Howell Decl. ¶¶ 5, 11, 15–18); DEC17–18, 20–21 (Meadows Decl. ¶¶ 8, 13, 15–16). All of these restrictions on dicamba further prevent these American Soybean Association members from effectively combating herbicide-resistance, *see* DEC2, 4–7 (Howell Decl. ¶¶ 3, 10, 12–14, 16–17); DEC17–21 (Meadows Decl. ¶¶ 8–9, 11–12, 14–16), and preclude them from engaging in conservation practices like no-till and reduced tillage, which minimize soil erosion, reduce nutrient loss to watersheds, and cut greenhouse gas emissions, *see* DEC11 (Jorgenson Decl. ¶ 10); DEC17–18 (Meadows Decl. ¶ 8). And for Mr. Jorgenson, who owns and operates a family farm in Iowa, these challenges are amplified by the recent registration amendment that moves the cutoff date for Iowa up to June 20, further limiting his ability to combat weeds emerging later in the growing season. *See* DEC13–14 (Jorgenson Decl. ¶¶ 15–16).

Likewise, Plains Cotton Growers, Inc. member Toby Robertson uses dicamba and has been significantly harmed by the application buffers and cutoff dates. *See* DEC22–27 (Bessent Decl.); DEC28–32 (Robertson Decl.). For example, the buffers allow herbicide-resistant weeds to flourish in the buffer zones and reduce crop yield. *See* DEC30 (Robertson Decl. at 5). The cutoff dates are also onerous. *See, e.g.*, DEC31 (Robertson Decl. ¶ 12). The Texas High Plains regularly experiences severe weather during peak planting season, and the cutoff dates make it difficult—in some instances impossible—to replant after instances of severe weather destroy growers' crops. *See* DEC26 (Bessent Decl. ¶ 11). And, in addition, the combined effect of the restrictions precludes growers from adopting better agronomic practices such as no-till or minimum-till standards, which would enhance conservation of the soil, as well as water resources. *See* DEC24–25 (Bessent Decl. ¶¶ 7–8); DEC30–32 (Robertson Decl. ¶¶ 9, 13).

Petitioners' declarations therefore readily show that there is a "substantial probability" of their members suffering harm as a result of the application buffers, cutoff dates, and temperature restrictions, and that less restrictive use restrictions implemented after remand would redress their injuries. The administrative record further demonstrates the threat that the challenged restrictions pose to Petitioners. *See, e.g.*, A.R. Doc. 4 at 10–11, 15–18; JA-527–28, 532–35; A.R. Doc. 6 at 3–4, 7, 9–13, 21–23; JA-49–50, 53, 55–59, 67–69.

The second element of associational standing is satisfied because the American Soybean Association and Plains Cotton Growers, Inc. "seek to protect [interests that] are germane to their organizations' purposes." *Sierra Club*, 755 F.3d at 973. "The germaneness requirement mandates pertinence between litigation subject and organizational purpose." *Nat'l Lifeline Ass'n v. FCC*, 983 F.3d 498, 508 (D.C. Cir. 2020) (internal quotation marks and citation omitted). The administrative record here establishes that advocating and advising on herbicide regulation is a core tenant of both the American Soybean Association's and Plains Cotton Growers, Inc.'s missions. Both groups wrote unsolicited letters to EPA about the importance of flexible, reasonable access to the Dicamba Products for their members, reinforcing their members' concrete interests in—and injury resulting from—EPA's overly-restrictive registration conditions. *See* A.R. Doc. 1 at 21–24 (American Soybean Association Sept. 15, 2020 Ltr.), 81–82 (Plains Cotton Growers, Inc. Sept. 15, 2020 Ltr.); JA-771–74, 831–32; A.R. Doc. 2 at 1–5 (American Soybean Association Aug. 10, 2020 Ltr); JA-841–45.

Indeed, one of the American Soybean Association's core purposes is to advocate and advise on herbicide regulation. *See* DEC16 (Meadows Decl. ¶ 4). Likewise, "PCG's mission is to provide premier service, communications, and support to cotton producers on federal and state legislative matters, [and] environmental and regulatory issues." *See* DEC23 (Bessent Decl. ¶ 2). And

Petitioners have an "obvious interest in challenging a rule detrimental to the financial wellbeing of [their] members." *Am. Fuel & Petrochemical Mfrs. v. EPA*, 3 F.4th 373, 380 (D.C. Cir. 2021) (internal quotation marks and citation omitted). Because "this is not a case in which an organization seeks to litigate an issue about which it has little expertise and does not much care," the germaneness requirement is readily met. *Nat'l Lifeline Ass'n*, 983 F.3d at 508 (alteration adopted) (quotation omitted).

Finally, because "neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit," Petitioners satisfy the third element. *Id.* at 508 (quotation omitted). Petitioners' claims raise legal questions under familiar statutory protections and seek "invalidation of agency action, rather than any remedy particularized to individual members." *Id.* (internal quotation marks and citation omitted). Because the "petition turns entirely on whether [EPA] complied with its statutory obligations, and the relief [Petitioners] seek[] is invalidation of agency action[,] [n]either [their] claims nor [their requested] relief require the participation of [their] members." *Ctr. for Sustainable Econ. v. Jewell*, 779 F.3d 588, 597–98 (D.C. Cir. 2015).

STANDARD OF REVIEW

These consolidated petitions assert claims involving FIFRA and the ESA. FIFRA, on the one hand, sets out a specific standard of review for actions reviewed in the first instance in the court of appeals: "The order of the Administrator shall be

sustained if it is supported by substantial evidence when considered on the record as a whole." 7 U.S.C. § 136n(b). Substantial evidence is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Pierce v. Underwood*, 487 U.S. 552, 564–65 (1988) (quoting *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938)); *accord Env't Def. Fund, Inc. v. EPA*, 489 F.2d 1247, 1250–51 (D.C. Cir. 1973). But EPA's actions "must be upheld, if at all, on the basis articulated by the agency itself." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 50 (1983).

The ESA, on the other hand, "does not specify a standard of review." *Cabinet Mountains Wilderness v. Peterson*, 685 F.2d 678, 685 (D.C. Cir. 1982). Thus, "judicial review is governed by section 706 of the Administrative Procedure Act (APA)." *Id.* This Court has therefore concluded "that the appropriate standard of review under the ESA is the arbitrary and capricious standard provided by the APA." *Id.* at 686 (citing 5 U.S.C. § 706(2)(A)); *accord Gerber v. Norton*, 294 F.3d 173, 178 (D.C. Cir. 2002). "Under the arbitrary and capricious standard, the reviewing court determines whether the agency 'considered the factors relevant to its decision and articulated a rational connection between the facts found and the choice made.'" *In re Polar Bear Endangered Species Act & Section 4(d) Rule Litig.*, 709 F.3d 1, 8 (D.C. Cir. 2013) (quoting *Keating v. FERC*, 569 F.3d 427, 433 (D.C. Cir. 2009)). This Circuit has long held that "[t]here is no *substantive* difference between what

arbitrary and capricious requires and what would be required by the substantial evidence test." *Jackson v. Mabus*, 56 F. Supp. 3d 1, 7 (D.C. Cir. 2014) (alteration adopted) (quoting *Ass'n of Data Processing Serv. Org., Inc. v. Bd. of Governors of Fed. Rsrv. Sys.*, 745 F.2d 677, 683–84 (D.C. Cir. 1984)).

Although "[d]eference is especially warranted where the decision at issue 'requires a high level of technical expertise,'" *id.* (quoting *Marsh v. Or. Nat'l Res. Council*, 490 U.S. 360, 377 (1989)), EPA must nevertheless "examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made,'" *Motor Vehicle Mfrs. Ass'n of U.S., Inc.*, 463 U.S. at 43 (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)). The arbitrary and capricious standard is not an invitation to "rubber-stamp the agency decision." *Ethyl Corp v. EPA*, 541 F.2d 1, 34 (D.C. Cir. 1976) (en banc). "Rather, the reviewing court . . . must engage in a substantial inquiry into the facts . . . that is searching and careful." *Id.* at 34–35 (internal quotation marks and citation omitted). "The Supreme Court has explained that an agency acts arbitrarily or capriciously if it:" (1) "has relied on factors which Congress has not intended it to consider"; (2) "entirely failed to consider an important aspect of the problem"; (3) "offered an explanation for its decision that runs counter to the evidence before the agency"; or (4) "is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."

Am. Wildlands v. Kempthorne, 530 F.3d 991, 997–98 (D.C. Cir. 2008) (quoting *Motor Vehicle Mfrs. Ass'n of U.S., Inc.*, 463 U.S. at 43).

ARGUMENT

I. The ESA Buffers are Unreasonably Restrictive and Untethered From the Best Available Scientific Data.

EPA's 2020 dicamba registration imposed ESA buffers on cotton and soybean growers planting in the nearly 300 counties potentially inhabited by certain listed plant species. These ESA buffers include 310-foot downwind application buffers and a 57-foot omnidirectional buffer, each ostensibly designed to comply with the ESA. A.R. Doc. 4 at 24; JA-541. The downwind application buffer is nearly three times larger than the downwind buffer implemented in the 2018 registration. *Id.* at 4; JA-521. And because wind direction can change daily, so too can these buffers, potentially resulting in growers taking significant acreage of farmland out of production for fear of violating the buffer rules.

For example, were an average soybean grower farming a 54-acre field to plant somewhere subject to all applicable spray buffers, that grower could lose almost *one-third* of her farmable land as a direct consequence of these three buffers. *See* A.R. Doc. 6 at 22–23; JA-68–69. In other words, that grower—and potentially thousands like her—could be forced to either leave 15 acres fallow every year, sacrificing almost one-third of her soybean harvest. *Id.* In addition, growers who choose to plant in buffer zones (knowing they cannot apply dicamba there) face significant

farm management challenges as a result of the buffers—not the least of which is managing herbicide resistant weeds *in the buffer zones* themselves. *See, e.g.*, DEC19 (Meadows Decl. ¶ 11); DEC5 (Howell Decl. ¶ 13).

The ESA buffers are arbitrary and capricious for two primary reasons: First, the county-based method for establishing the buffers is unreasonably restrictive and overinclusive. Second, in deciding to nearly triple the size of the downwind buffers, EPA ignored the best available scientific data—namely, listed species-location "Pre-Serve" information from the NatureServe database and actual use data from USDA and Kynetec. This Court should order that EPA's implementation of the ESA buffers was arbitrary and capricious and remand the dicamba decision without vacatur for further consideration.

A. EPA's county-wide ESA buffers violate the ESA.

The ESA requires EPA to ensure that most agency actions, including FIFRA registrations, account for endangered or threatened species and critical habitats. EPA, however, must carry out this mandate without imposing arbitrary and capricious rules and use restrictions, and any agency action must be based on the best available scientific or commercial data. Here, in applying ESA buffers on a county-by-county basis, EPA violated the ESA in two ways. First, the overinclusive, county-based imposition of the ESA buffers is arbitrary and capricious. Second, EPA failed to properly account for two critical sources of data when establishing the

ESA buffers: (1) the NatureServe database and (2) actual use data from USDA and Kynetec. As a result, this Court should remand the dicamba registrations without vacatur, for further consideration.

1. EPA must carry out its ESA obligations based on the best available data, without imposing arbitrary, undue restrictions.

The ESA "instructs the Secretary of the Interior and the Secretary of Commerce to make a list of all species that are either 'endangered' or 'threatened.'" *Shafer & Freeman Lakes Env't Conservation Corp. v. FERC*, 992 F.3d 1071, 1078 (D.C. Cir. 2021) (alteration adopted) (quoting 16 U.S.C. § 1533). Under the ESA, it is forbidden "to 'harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect'" these listed species. *Id.* (quoting 16 U.S.C. §§ 1532(19), 1538(a)(1)(B)). The ESA also "imposes specific responsibilities on . . . federal agencies" to account for threatened or endangered species and critical habitat in connection with any agency action. *Id.* at 1079.

Specifically, the ESA mandates that "[e]ach Federal agency shall . . . insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined . . . to be critical, unless such agency has been granted an exemption for such action." 16 U.S.C. § 1536(a)(2); *accord Growth Energy*, 5 F.4th at 30 (same). "In fulfilling the requirements of this paragraph," the ESA requires that

agencies "use the best scientific and commercial data available." 16 U.S.C. § 1536(a)(2); *see also* A.R. Doc. 4 at 26; JA-543.

The ESA and its implementing regulations hold that "[e]ach Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat." 50 C.F.R. § 402.14(a). If the proposed action "may affect listed species or critical habitat," the agency must then determine whether the action is "not likely to adversely affect" or "likely to adversely affect" species. *See id.* § 402.14(a)–(b)(1). Although in some instances consultation with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service is appropriate, *see id.* §§ 402.02, 402.14(a), no formal consultation is required when, "as a result of the preparation of a biological assessment . . . or as a result of informal consultation with the Service[,] . . . the Federal agency determines . . . that the proposed action is not likely to adversely affect any listed species or critical habitat," *id.* § 402.14(b)(1). Furthermore, the ESA's implementing regulations limit EPA's review of the "effects of the action" to those "consequences to listed species or critical habitat" that are "reasonably certain to occur." *Id.* § 402.02.

Importantly, EPA must carry out these responsibilities under the ESA without adopting arbitrary and capricious restrictions. *See, e.g.*, *Cabinet Mountains*, 685 F.2d at 686 (holding "that the appropriate standard of review under the ESA is the arbitrary and capricious standard provided by the APA"); *In re Polar Bear*

Endangered Species Act & Section 4(d) Rule Litig., 709 F.3d at 8 (D.C. Cir. 2013) ("Under the arbitrary and capricious standard, the reviewing court determines whether the agency 'considered the factors relevant to its decision and articulated a rational connection between the facts found and the choice made.'" (quoting *Keating*, 569 F.3d at 433). EPA exceeds its authority under the ESA if it "relie[s] on factors which Congress has not intended it to consider, entirely fail[s] to consider an important aspect of the problem, offer[s] an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.'" *Am. Wildlands*, 530 F.3d at 997–98 (quoting *Motor Vehicle Mfrs. Ass'n of U.S., Inc.*, 463 U.S. at 43).

2. EPA's imposition of county-wide application buffers was arbitrary and capricious.

Here, EPA has adopted arbitrary and capricious county-wide application buffers that far exceed what the ESA permits. In registering the Dicamba Products, EPA conducted an ESA Assessment: EPA's analysis is documented in a report titled "2020 Ecological Assessment of Dicamba Use on Dicamba-Tolerant (DT) Cotton and Soybean Including Effects Determinations for Federally Listed Threatened and Endangered Species." *See* A.R. Doc. 4 at 26–28; JA-543–45; A.R. Doc. 9 at 2, 63–112; JA-140, 201–50. EPA's analysis relied on information provided by the U.S. Fish and Wildlife Service and National Marine Fisheries Service—*not* the

NatureServe database (data from which was provided by the registrants during the registration process), *see infra* at 45–47—yet EPA contends that it "ma[de] use of the best available scientific information and considered both direct and indirect effects." A.R. Doc. 4 at 26; JA-543.

Based on its ESA Effects Determination, EPA established ESA county-by-county buffer requirements based, in part, on the potential "overlap" between, on the one hand, the possible presence of a soybean or cotton field and, on the other hand, the presence of a single listed non-target (i.e., off-farmland) plant species. *See id.* at 26–28; JA-543–45. Those buffers relied on species-location data provided by the U.S. Fish and Wildlife Service and National Marine Fisheries Service. *Id.* If both a potential soybean or cotton field and a listed plant species overlap in the same county, EPA imposed the more onerous ESA buffers for all dicamba-tolerant soybean and cotton cultivation in that *entire county*. *See* A.R. Doc. 9 at 68–69, Table 2.1 (listing counties where ESA buffers have been implemented); JA-206–07; *see also, e.g.*, *id.* at 67 (noting that ESA buffers are applicable "for all application sites in identified counties with listed species"); JA-205. EPA used this county-based application system despite the fact that it had the NatureServe database at its disposal, which provides more granular (sub-county) breakdowns of the locations of relevant listed plant species. *See infra* at 45–47. By establishing these ESA buffers,

EPA is purportedly preventing any listed plant species from being affected by over-the-top dicamba use.

Because entire counties are subject to ESA buffers, regardless of the location of the overlap within the county, this results in the overinclusion of geographic areas—particularly in large counties—which are far removed from any listed species. For example, Baldwin County, Alabama covers a 2,027 square mile area, Presque Isle County Michigan covers a 2,572 square mile area, and Graham and Yuma Counties in Arizona cover 4,640 and 5,518 square miles, respectively.[31] Under EPA's county-based buffer system, the presence of a listed species *hundreds*—or even *thousands*—of miles away can therefore result in the application of a practically unnecessary buffer.

Applying ESA buffers on a blanket county-wide basis—without taking the sub-county location of the overlap into consideration—is an arbitrary decision unsupported by the record. As discussed *infra* at 45–47, EPA had sub-county data

[31] *See State Statistics: A Service of the Rand Corporation*, Rand, https://randstatestats.org/us/stats/land---water-area.html#sthash.j3bZGZF0.O9LCUGDx.dpbs (last visited May 18, 2022) (compiling data from U.S. Bureau of the Census). This Court may take judicial notice of "a fact that is not subject to reasonable dispute because it[] . . . can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned." Fed. R. Evid. 201(b). This Court routinely takes judicial notice of geographical facts. *See, e.g.*, *United States v. Burroughs*, 810 F.3d 833, 835 n.1 (D.C. Cir. 2016).

at its disposal through the NatureServe database, which it disregarded without explanation. Instead, it chose a county-based method that results in the unnecessary implementation of ESA buffers in vast geographic areas (like Graham and Yuma Counties in Arizona, for instance), simply due to the overlapping presence of species somewhere in the same county potentially hundreds of miles away. And given the potential for these nominally "downwind" buffers to morph into omnidirectional ones as the wind blows, the ramifications of these overinclusive buffers are significant and they complicate farm management. EPA's decision therefore "runs counter to the evidence before the agency" in this case. *Am. Wildlands*, 530 F.3d at 998 (quoting *Motor Vehicle Mfrs. Ass'n of U.S., Inc.*, 463 U.S. at 43). EPA could—and should—have adopted a more tailored (e.g., sub-county) approach to establishing ESA buffers. A more localized approach would prevent the overinclusion problem, without compromising any protection for listed species or their critical habitat.

B. EPA ignored the best available scientific data when determining the appropriate ESA buffer size.

EPA's actions are also arbitrary and capricious because EPA violated the ESA's express statutory directive to use the best available scientific data when determining the appropriate ESA buffer size. Specifically, as part of its obligation under the ESA to "insure that any [agency] action . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the

destruction or adverse modification of habitat of such species," the EPA is statutorily required to "use the best scientific and commercial data available." 16 U.S.C. § 1536(a)(2).

This Circuit has held that this best-available-evidence directive prohibits EPA from "bas[ing] its decisions on speculation or surmise or [from] disregard[ing] superior data." *Shafer*, 992 F.3d at 1090 (alteration adopted) (quoting *Bldg. Indus. Ass'n of Superior Cal. v. Norton*, 247 F.3d 1241, 1246–47 (D.C. Cir. 2001)); *Friends of Blackwater v. Salazar*, 691 F.3d 428, 435 (D.C. Cir. 2012) (noting that the best-available-data standard "prohibits the Secretary from disregarding available scientific evidence that is in some way better than the evidence he relies on" (quotation omitted)); *see also, e.g.*, *Defs. of Wildlife v. U.S. Dep't of the Interior*, 931 F.3d 339, 346 (4th Cir. 2019) (explaining that to comply with the best-available-science standard, an agency must "seek out and consider all existing scientific data relevant to the decision it is tasked with making").

Here, however, EPA failed to consider two critical sources of scientific data. First, despite the fact that the data was available to it at the time of its decision, EPA failed to consider the NatureServe database in determining the sub-county location of listed plant species. Second, EPA ignored actual use data from USDA and Kynetec, and instead relied on unrealistic field studies that incorrectly assume growers apply the full label rate of dicamba. Because EPA "disregard[ed] available

scientific evidence that [wa]s in some way better than the evidence [it] relie[d] on," *Friends of Blackwater*, 691 F.3d at 435 (quotation omitted), this Court should remand these registrations without vacatur, for further consideration.

1. EPA ignored NatureServe data when establishing the ESA buffers.

First, EPA ignored superior data in the NatureServe database regarding the sub-county location of Listed Species. In 2000, EPA issued a Pesticide Registration Notice ordering pesticide registrants to assist in gathering data in support of ESA effects analyses. *See* EPA, NOTICE TO MANUFACTURERS, PRODUCERS, FORMULATORS AND REGISTRANTS OF PESTICIDE PRODUCTS, PR Notice 2000-2 (Apr. 17, 2020). As a result, pesticide registrants have since spent significant resources gathering such data, including contracting with NatureServe in 2003 "to provide . . . listed species location data necessary to comply with EPA's data requirements." Bayer CropScience LP, *Comments of Bayer CropScience LP on the U.S. Environmental Protection Agency Draft Biological Evaluation for Glyphosate Registration Review* ("*Comments of Bayer*"), at 15–16 (Mar. 12, 2021), available at https://www.regulations.gov/comment/EPA-HQ-OPP-2020-0585-0890.

"NatureServe provides highly refined, sub-county-level species location data, based upon data regarding known occurrences of the species within the range." *Id.* at 16. NatureServe's "information is far more precise than the maps often relied upon by EPA," and "FWS commonly relies upon the refined data from NatureServe

in its ESA-related proceedings, in both ESA listing and consultation contexts." *Id.* Notably, EPA itself has suggested that this kind of sub-county data should be used to reach effects determinations for pesticide registrations. *See id.*[32] Here, EPA was requested to consider and use NatureServe data to evaluate "further potential approaches in the counties where endangered plants are present." A.R. Doc. B.16 at 4 n.9; JA-10. Indeed, "Bayer continue[d] to believe that it [wa]s most appropriate to utilize that specific information in EPA's Endangered Species Act assessments." *Id.*

Nevertheless, even though FWS regularly uses NatureServe data, *see Comments of Bayer* at 16, and Bayer asked EPA to use NatureServe data here, *see* A.R. Doc. B.16 at 4 n.9; JA-10, EPA inexplicably chose not to even *consider* NatureServe data *at all*, *see generally, e.g.*, A.R. Doc. 9 at 63–123 (explaining "ESA Effects Determination"); JA-201–61. Regarding listed plant species locations, EPA instead based its analyses on location data provided by the U.S. Fish and Wildlife Service. *Id.* at 74; JA-212. This was an error, as NatureServe's sub-county data is concededly superior to county-based endangered species data. *See, e.g.*, *Shafer*, 992

[32] *See also* EPA, *Interim Approaches for National-Level Pesticide Endangered Species Act Assessments Based on the Recommendations of the National Academy of Sciences April 2013 Report*, at 5, available at https://www.epa.gov/sites/default/files/2015-07/documents/interagency.pdf (last visited May 16, 2022).

F.3d at 1090; *see also, e.g.*, *Comments of Bayer* at 16 (arguing that by "declining to utilize the sub-county species location data provided by NatureServe . . . EPA not only fails its statutory mandate to use the 'best scientific and commercial data available,' but the agency also vastly overreaches in its effects determinations").

2. The ESA buffers are arbitrarily based on field studies in which dicamba was applied at the full label rate.

In addition, EPA, in establishing the ESA buffers, failed to account for the best available science when it relied solely on field studies in which dicamba was applied at the full label rate and ignored real-world dicamba-use data provided by USDA and Kynetec. When conducting its ESA Effects Determination, "EPA structured [its] assessment of [dicamba] products to address the potential risks to non-target organisms that are located in three areas: on the treated field, in near-field areas (areas adjacent to the treatment site), and in the surrounding broader landscape (wide-area)." A.R. Doc. 9 at 9; JA-147. Its "assessment considered whether spray drift, volatility, and runoff control measures [would be] adequate to address any potential risks in each of these areas." *Id.* EPA stated that it relied on a "review of a significant amount of scientific data including data obtained from the applicants/registrants, academia, and open literature as well as information provided by other stakeholders" in conducting its analysis. *Id.*

As a key portion of its determination, EPA relied on a number of field studies, which it used, for example, to gauge the potential spray drift, volatility, and runoff

risks posed to threatened or endangered species by over-the-top dicamba use. These field studies were all conducted using the *full label rate* of dicamba—0.5 lbs/acre. *See, e.g.*, *id.* at 7, 18, 20, 25–26, 28–29; JA-145, 156, 158, 163–64, 166–67. USDA and Kynetec, however, supplied EPA with *actual use data* demonstrating how growers *actually* apply dicamba in real world conditions. *See, e.g.*, A.R. Doc. 7 at 11; JA-120; A.R. Doc. 10 at 10–11, Tables 3a–3c; JA-494–95. For cotton, the average application rate for over-the-top dicamba ranged from 0.32 lbs/acre (pre-emergence use) to 0.44 lbs/acre (post-emergence use). A.R. Doc. 7 at 11, Table 3c; JA-120. For soybean, the average application rate for over-the-top dicamba ranged from 0.35 lbs/acre (pre-emergence use) to 0.48 lbs/acre (post-emergence use). A.R. Doc. 10 at 11, Table 3c; JA-495. Thus, in reality—unlike the field studies on which EPA based its analysis—growers use far *less* product per acre than the maximum 0.5 lbs/acre cap on the label. But EPA chose to ignore this data in establishing the ESA buffers, and relied solely on field studies conducted using assumed application rates.

EPA should have considered actual use data from USDA and Kynetec in determining the appropriate ESA buffer, as it more accurately reflects the quantities of dicamba that growers use. By relying on the field studies, which present an overly-conservative—and unrealistic—estimate of dicamba applications, EPA

"disregard[ed] superior [actual use] data." *Shafer*, 992 F.3d at 1090 (alteration omitted) (quotation omitted).

In similar cases, courts have held that federal agencies' failure to consider relevant data—particularly relevant data contrary to their ultimate conclusion—is arbitrary and capricious. For example, in *Center for Biological Diversity v. Zinke*, 900 F.3d 1053 (9th Cir. 2018), plaintiffs challenged the U.S. Fish and Wildlife Service's "decision not to list the arctic grayling as an endangered or threatened species under the ESA." *Id.* at 1058. The Ninth Circuit held that "FWS acted in an arbitrary and capricious manner by ignoring [certain] available biological data showing that the arctic grayling population in the Big Hole River was declining." *Id.* at 1068. Specifically, "FWS failed to account for a 2014 report ("DeHaan study") by four [FWS] scientists[,] . . . which found that the number of effective breeders in the Big Hole River was declining." *Id.* The U.S. Fish and Wildlife Service cited to a portion of the DeHaan Study in its findings, but it did not mention the above-referenced data on the declining number of effective breeders, which contradicted another study it cited. *Id.* "Although FWS [wa]s free to choose among experts," the court held that it nevertheless "must acknowledge that it is doing so." *Id.* Because the U.S. Fish and Wildlife Service "clearly stated . . . that the number of breeding artic grayling increased in the Big Hole River, and omitted the DeHaan study's evidence to the contrary," the court concluded that the U.S. Fish and Wildlife

Service's findings were arbitrary and capricious. *Id.*; *see also, e.g.*, *Conner v. Burford*, 848 F.2d 1441, 1453–54 (9th Cir. 1988) (agreeing "that the FWS failed to prepare biological opinions based on the best data available" where it "took the position that there was insufficient information [available] to prepare comprehensive biological opinions" but "ignore[d] available biological information" at its disposal); c*f. also, e.g.*, *Oceana, Inc. v. Nat'l Marine Fisheries Serv.*, 705 F. App'x 577, 580–81 (9th Cir. 2017) (noting that "[w]hen better information exists, the Service must use that information *or explain why it did not use it*" (emphasis added)); *City of Las Vegas v. Lujan*, 891 F.2d 927, 932–33 (D.C. Cir. 1989) (rejecting argument that agency had not relied on best available scientific or commercial data were "there [wa]s no allegation that the Secretary *disregarded* scientifically superior evidence that was available").

Here, despite having data documenting the actual rates of dicamba use among farmers, EPA "failed to account for" that information without "acknowledg[ing] that it [wa]s doing so," *see Zinke*, 900 F.3d at 1068, and chose instead to rely on field studies with erroneously inflated dicamba application rates. And, similar to how the U.S. Fish and Wildlife Service in *Zinke* relied on certain aspects of the DeHaan Report in its decision making, EPA likewise relied on other USDA- and Kynetec-supplied data in its report. *See, e.g.*, A.R. Doc. 4 at 7, 15–16, 22; JA-524, 532–33, 539; A.R. Doc. 6 at 8, 26, 35, 44; JA-54, 72, 81, 90; A.R. Doc. 7 at 4, 9–13, 16, 18–

21; JA-113, 118–22, 125, 127–30. As a result, EPA failed to satisfy the ESA's requirement to "use the best scientific and commercial data available" by ignoring actual use data. 16 U.S.C. § 1536(a)(2).

* * *

In sum, EPA failed to comply with the ESA's mandate to rely on the "the best scientific and commercial data available." *Id*. EPA did not consider NatureServe's superior sub-county data when determining the location of relevant listed species. Likewise, it did not consider actual use data when evaluating the consequences of over-the-top dicamba use, instead relying on artificial field studies with inflated application rates. EPA's failure to consider—or even acknowledge—this data is arbitrary and capricious. This Court should remand the registrations at issue without vacatur for reconsideration using the best data available.

II. EPA's Application Cutoffs Prioritize Simplicity Over Science.

In addition to the trebled downwind ESA buffers, EPA exercised its authority under FIFRA to regulate applications of dicamba by introducing "a national application cut-off date of June 30 and July 30 for soybeans and cotton, respectively." A.R. Doc. 4 at 3; JA-520. Subsequently, EPA amended the dicamba registrations to include more stringent product-use restrictions applicable to farmers in Minnesota and Iowa. These registration amendments prohibit the use of dicamba: (1) after June 20 in Iowa; (2) after June 12 south of Interstate 94 in Minnesota; (3)

after June 30 north of Interstate 94 in Minnesota; and (4) when the air temperature is over 85 degrees Fahrenheit at the time of application or if the forecasted high temperature of the nearest available location exceeds 85 degrees in Minnesota. *See, e.g.*, Supp. A.R. Engenia Doc. 9 at 25, 27; JA-910, 912.

Although FIFRA authorizes EPA to place use conditions on pesticide registrations, its decision to apply these cutoffs and temperature-based restrictions were not founded on substantial scientific evidence, but rather mere ease of application. Consequently, the Court should remand the cutoffs without vacatur for further consideration.

A. EPA's implementation of pesticide application restrictions under FIFRA must be supported by substantial evidence.

FIFRA is the core federal statute regulating the distribution, sale, and use of pesticides in the United States, and it generally requires EPA to register (or license) a pesticide before it can be sold or distributed. *See* 7 U.S.C. § 136 *et seq.* EPA, however, "shall register a pesticide" only if it "will perform its intended function without unreasonable adverse effects on the environment." *Id.* § 136a(c)(5). FIFRA also empowers EPA to establish rules for pesticide use, including how and when a pesticide may be used, to carry out this mandate. *See id.* § 136a.

Importantly, however, EPA must support any FIFRA-based application restrictions with substantial evidence. Substantial evidence is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion."

Pierce, 487 U.S. at 564–65 (quotation omitted). Courts conduct a "searching and careful inquiry" under this standard, *see New York v. U.S. EPA*, 413 F.3d 3, 18 (D.C. Cir. 2005) (quotation omitted), and EPA's actions must only "be upheld, if at all, on the basis articulated by the agency itself," *Motor Vehicle Mfrs. Ass'n of U.S., Inc.*, 463 U.S. at 50.

B. EPA's chosen application cutoffs are unsupported by substantial evidence.

EPA's application cutoffs are not supported by substantial evidence. EPA initially imposed national application cutoff dates of June 30 and July 30 for soybeans and cotton, respectively. *See* A.R. Doc. 4 at 3; JA-520. The "dates represent a hard cut-off of applications of the dicamba products associated with this regulatory action with the window extending from a start time at crop planting (regionally and environmentally dictated) to the cut-off date." A.R. Doc. 9 at 310; JA-448. The aim of "[t]he imposition of mandatory application cut-off dates . . . on the product labels" is to "reduce[] the probability of dicamba application on days more favorable for dicamba volatilization," A.R. Doc. 4 at 14; JA-531, as contemplated by FIFRA's requirement that pesticides only be approved if they "will perform [their] intended function[s] without unreasonable adverse effects on the environment," 7 U.S.C. § 136a(c)(5)(C). The amended cutoffs in Minnesota and Iowa were subsequently adopted "[i]n response to dicamba-related incident reports received by EPA from the 2021 growing season." Supp. A.R. Engenia Doc. 9 at 1;

JA-881. Like the nationwide cutoffs, these narrower restrictions were "intended to further reduce volatility to minimize off-field movement of the active ingredient dicamba." *Id.*

EPA uses the cutoffs as essentially proxies for weather—EPA noted that "[t]he June 30 and July 30 dates were informed by data on the effect of temperature on volatility." A.R. Doc. 4 at 14; JA-531. "EPA utilized historical incident information and meteorological data to conduct its analysis," asserting that warmer temperatures were correlated to greater volatility. *Id.* Indeed, "EPA compared the maximum temperature data on the day of each reported [volatility] incident and determined that over 94% and 82% of the incidents occurred at temperatures above 75 °F and 80 °F, respectively." *Id.* Thus, EPA selected these mid-summer cutoff dates because they would purportedly "reduce applications coinciding with temperatures favoring dicamba volatility." *Id.* Similarly, the Minnesota and Iowa cutoffs relied on the same ecological risk assessment, again asserting that "ambient temperature has been demonstrated to be directly related to the volatility of dicamba, with higher temperatures leading to increased volatility." Supp. A.R. Engenia Doc. 9 at 1–2; JA-881–82.

Unlike the cutoffs, however, temperatures are not uniform between or even within the 34 states where dicamba is registered for over-the-top use on soybeans and cotton. Indeed, EPA's own findings confirm this—it notes that "[b]ased on [its]

analysis, the soybean cut-off of June 30th would mean that application temperatures will be below 80 °F between 12% (Texas) to 89% (Minnesota) of the time, and below 75 °F between 3.2% (Texas) to 72% (Minnesota) of the time." A.R. Doc. 4 at 14; JA-531. And similarly, "[t]he cotton cut-off of July 30th would mean that application temperatures will be below 80 °F, between 8% (Florida) to 66% (Virginia) of the time, and below 75 °F between 0.3% (Florida) and 36% (Virginia) of the time." *Id.* Thus, according to EPA's data, the purported effectiveness of the cutoffs varies significantly by region. EPA itself conceded as to the nationwide cutoffs that "[b]ecause the dates are the same in all 34 states and the meteorological data vary across these geographies, the magnitude of the protective certainty of cut-off dates is not uniform across the 34 states." *Id.* But it defended the original national cutoffs by contending that despite nationwide temperature differences, "in no state was the probability of avoiding a threshold temperature on the day of application zero." *Id.* Although the amended registrations are slightly narrower than the otherwise applicable nationwide cutoffs, aspects of those registrations could also be more localized.

By adopting these admittedly imperfect cutoffs, EPA rejected proposed "regional cutoff dates as well as temperature thresholds as alternatives." *Id.* at 20 n.18. Its justification for opting against these more localized—and by extension, potentially more effective—cutoffs was simply "that a nationwide cutoff offers the

greatest label clarity." *Id.* But this "explanation for its decision"—that it is easier to implement and ensure compliance with a nationwide cutoff—"runs counter to the evidence before the agency" regarding regional climate differences. *Am. Wildlands*, 530 F.3d at 998 (quotation omitted). And, in any event, this rationale is effectively undercut by EPA's own registration amendments, which demonstrate that it is possible to implement more narrowly-tailored restrictions.

Thus, the cutoffs are arbitrary and capricious (and by extension, unsupported by substantial evidence), as contemplated by this Court. *Id.* at 997–98. EPA should have adopted narrower cutoff dates. If the aforementioned ESA buffers can be determined on a county-by-county basis, then it is also possible to set and enforce more tailored application cutoff dates that accurately reflect regional climate discrepancies. Accordingly, this Court should order that EPA's implementation of the national application cutoffs was arbitrary and capricious and unsupported by substantial evidence, and remand the Dicamba decision without vacatur for further consideration.

CONCLUSION

For these reasons, this Court should remand EPA's 2020 Dicamba registration decision and 2022 registration amendments without vacatur for further consideration.

Respectfully submitted,

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September 28, 2022

CERTIFICATE OF COMPLIANCE

Pursuant to Federal Rules of Appellate Procedure 32(a)(7)(B), I certify that this brief complies with the applicable type-volume limitation. According to the word count in Microsoft Word, there are 12,665 words in this brief.

/s/ Edmund S. Sauer
Counsel for Petitioners

ADDENDUM OF STANDING DECLARATIONS

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IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

AMERICAN SOYBEAN ASSOCIATION, ET AL., *Petitioners*, vs. MICHAEL S. REGAN, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and BASF CORPORATION, *et al.*, *Intervenors*.	Case No. 20-1441 (Consolidated with 20-1445, 20-1484, 22-1048, 22-1050, 22-1067)

Declaration of Forrest Howell

I, Forrest Howell, declare and state as follows:

1. I co-own and operate Howell Farms Partnership, which is a family farm located in Pinetown, North Carolina. I am authorized to make this declaration on behalf of Howell Farms Partnership, based upon my personal knowledge.

2. I submit this declaration in support of the American Soybean Association's ("ASA") petitions for review challenging registrations of dicamba

products (the "dicamba products") issued by the United States Environmental Protection Agency ("EPA") on October 27, 2020: the Engenia Herbicide Registration, *see* A.R. Doc. 12, the A21472 Plus VaporGrip Technology Registration, *see* A.R. Doc. 5, and the XtendiMax with VaporGrip Technology Registration, *see* A.R. Doc. 13 (collectively the "original registrations"). This declaration also supports petitions for review challenging final actions amending the original registrations (the "registration amendments") taken by EPA on March 15, 2022. *See, e.g.*, Supp. A.R. Engenia Doc. 9. The registration amendments include more stringent product use restrictions applicable to farmers in Minnesota and Iowa than those set forth in the original registrations. *Id.*

3. The original and amended registrations authorized the sale, distribution, and use of the dicamba products for over-the-top ("OTT") use on dicamba-tolerant ("DT") soybeans and cotton. The dicamba products[1] are a critical tool for my farm and are necessary to combat herbicide-resistant ("HR") weeds (including glyphosate-resistant weeds). HR-palmer amaranth, a particularly noxious weed that is swift to evolve resistance to herbicides and can spread 100,000–500,000 HR seeds if allowed to reach maturity, is present on my farm.[2] Dicamba is one of

[1] Our farm uses both XtendiMax with VaporGrip Technology and A21472 (Tavium) Plus VaporGrip Technology.

[2] *Palmer Amaranth: Amaranthus palmeri S. Watson*, USDA (Mar. 2017), https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mtpmcfs13130.pdf.

very few remaining tools that can effectively control HR palmer amaranth which, if left uncontrolled, is documented to inflict yield losses as great as 80 percent in soybeans.[3]

4. The original and amended registrations include onerous conditions that significantly limit the efficacy of the dicamba tool on my farm. First, the Registrations prevent me from using dicamba after June 30 each year (the "cut off date"). Second, I must abide by a 310-foot downwind application buffer (the "ESA buffer") and a 57-foot omnidirectional buffer.

5. If the Registrations are remanded to EPA for further consideration and the Agency extends the cut off date and shortens the ESA buffer, my farm could use dicamba more predictably and efficiently, the costs that the cut off date and ESA buffers impose on our farm would be reduced, and we could resume certain farming practices, such as double cropping, that these onerous conditions have prevented.

6. I have personally been farming full-time since 2016. I am a third-generation farmer and work on Howell Farms with my father, uncles, and cousins. Our farm has been in operation for approximately 65 years and we grow approximately 6,500 acres of soybeans, corn, and wheat.

[3] Aaron Hager, *Remain Vigilant for Palmer Amaranth*, farmdoc daily (July 18, 2018), https://farmdocdaily.illinois.edu/2018/07/remain-vigilant-for-palmer-amaranth.html.

7. Howell Farms is located and operated in Beaufort County, North Carolina, a county which is subject to ESA requirements under the dicamba product registrations.

8. I am and have been a member of ASA for four years. I am also an Executive Committee member of the North Carolina Soybean Producers Association ("NCSPA") and have been a member for four years. I have served on the NCSPA Executive Committee for three years.

9. On my farm, we typically grow 2,800 acres of soybeans, and we rely on OTT dicamba to protect those acres. Soybean production is a vital part of our operation, which we rotate with corn and wheat to better manage pests, diversify our crop production, promote conservation practices, among other benefits.

10. As noted above, dicamba is critically important for protecting our soybean crops from weeds. Palmer amaranth and other HR weed varieties can devastate a crop without sufficient management tools. Not only does dicamba protect crop yields so our operation can remain economically viable, but it allows us to maintain important conservation practices, such as reduced tillage, which helps reduce soil erosion and nutrient loss to watersheds, among other benefits.

11. On our farm, we use dicamba to control weeds, but we only make applications when prudent and necessary. If certain weed pressures are not present in a field, we may not make applications there to save costs and time. However, it is

essential we have the option to make applications to protect the crop should weeds emerge. We typically make one preemergent dicamba application near planting and a second OTT application in June before soybean crop canopies close to control weeds before they are inaccessible under soybean leaves. In double cropping situations, if the label permitted, we would normally make applications later in the summer.

12. We have been using OTT dicamba on soybeans since it first became commercially available in 2016. As discussed above, it helps us control HR weeds that are otherwise difficult to control and maintain important conservation practices. Dicamba is a central tool in our farm's herbicide program which we mix and rotate with other herbicides that have different biochemical modes of action ("MOA"). This is important for providing layers of protection, as different MOAs act in different ways to terminate weeds. If we lose the ability to meaningfully use dicamba, HR weeds will more quickly evolve resistance to the few remaining control tools with other MOAs we have available.

13. ESA buffers have been economically harmful for our operation. Since we cannot apply dicamba in the mandated ESA buffers, we must go back to monitor ESA buffer areas and hand remove any HR weeds that emerge in those areas. This greatly increases time and labor costs for our farm.

14. Also, unlike other states that have large, continuous fields, our farm and many others in North Carolina have numerous smaller fields. When we are required to maintain 310-foot downwind ESA buffers in addition to 57-foot omnidirectional buffers in a small field, it can prevent dicamba applications to significant portions of the field. At this point, it may no longer be economically viable to use dicamba on that field. This greatly undermines our ability to control economically-damaging HR weeds in small fields.

15. Cut off dates have also harmed our farm's income by impairing our ability to double crop wheat with soybeans. Double cropping is when a farm plants a crop in the fall, like wheat, which is usually harvested in June. After the wheat harvest, soybeans are planted in the same field, which are then harvested in the fall. This allows farms to maximize the land and farm income with two crops in a field per year instead of one.

16. The June 30 cut off date prevents us from using dicamba on double cropped DT soybeans in July or August when herbicide applications would be necessary to protect the soybean crop from HR weeds. As a result, EPA's action has forced our farm to abandon double cropping in many fields so we can continue to manage HR weeds with dicamba, for which there are otherwise very few effective control options. This has caused our farm's income to suffer since we have fewer crops to harvest and sell.

17. For all these reasons, Howell Farms is suffering immediate, concrete, and irreparable harm as a result of EPA's overly-conservative imposition of the cut off date and the ESA buffers. A later cut off and smaller ESA buffers would allow our family farm to resume the use of double cropping; avoid costly, laborious hand weeding of large buffer areas; regain meaningful use of dicamba control options in smaller fields; and better retain the ability to manage HR weeds with multiple MOAs to prevent weeds from gaining resistance to other control options.

18. Instead of inflicting irreparable harm on farmers, EPA should follow the science (including its own science) and modify the original registrations and amended registrations to allow for dicamba applications later than June 30 and shorter or no ESA buffers. These remedies would redress the harms above by restoring the ability of growers to control economically-damaging, HR weeds and practices, like double cropping, needed to support a farm's economic viability.

I certify under penalty of perjury that the foregoing is true and correct.

Dated this 19 day of May, 2022.

Forrest Howell

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

AMERICAN SOYBEAN ASSOCIATION, ET AL., *Petitioners*, vs. MICHAEL S. REGAN, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and BASF CORPORATION, *et al.*, *Intervenors*.	Case No. 20-1441 (Consolidated with 20-1445, 20-1484, 22-1048, 22-1050, 22-1067)

Declaration of Jeff Jorgenson

I, Jeff Jorgenson, declare and state as follows:

1. I own and operate Canyon Creek Family Farm, which is a family farm located in Sidney, Iowa. I am authorized to make this declaration on behalf of Canyon Creek Family Farm, based upon my personal knowledge.

2. I submit this declaration in support of the American Soybean Association's ("ASA") petitions for review challenging registrations of dicamba

products (the "dicamba products") issued by the United States Environmental Protection Agency ("EPA") on October 27, 2020: the Engenia Herbicide Registration, *see* A.R. Doc. 12, the A21472 Plus VaporGrip Technology Registration, *see* A.R. Doc. 5, and the XtendiMax with VaporGrip Technology Registration, *see* A.R. Doc. 13 (collectively the "original registrations"). This declaration also supports petitions for review challenging final actions amending the original registrations (the "registration amendments") taken by EPA on March 15, 2022. *See, e.g.*, Supp. A.R. Engenia Doc. 9. The registration amendments include more stringent product use restrictions applicable to farmers in Iowa and Minnesota than those set forth in the original registrations.

3. The original and amended registrations authorized the sale, distribution, and use of the dicamba products for over-the-top ("OTT") use on dicamba-tolerant ("DT") soybeans and cotton. The dicamba products[1] are a critical tool for my farm and are necessary to combat herbicide-resistant ("HR") weeds (including glyphosate-resistant weeds). On our farm, we have HR marestail and HR waterhemp, which are particularly noxious weeds quick to evolve resistance to herbicides and are currently resistant to many other commercially available herbicides. HR marestail can reduce soybean yields up to 80 percent if left uncontrolled and can spread up to 200,000 HR seeds per weed, making it essential

[1] Our farm uses Engenia herbicide.

to control to protect our operation.[2] Similarly, HR waterhemp can spread 500,000 to 1 million seeds and cause significant yield loss if left uncontrolled.[3]

4. We must be especially thoughtful with our farm's herbicide program since we contend with two significant HR weed varieties. Some options may control one weed variety but not the other. OTT dicamba serves as an effective tool to control both varieties at a critical point in the growing season where few other control options exist.

5. The original and amended registrations include onerous conditions that significantly limit the efficacy of the dicamba tool on my farm. Particularly, the amended registrations prevent me from using dicamba after June 20 each year (the "Cut Off Date"), which is uniquely damaging for my operation.

6. If the registrations are remanded to EPA for further consideration and the Agency extends the Cut Off Date, my farm will have much greater certainty to use this tool when it is needed to protect our operation from economic damage.

7. I have been farming since 2002. I farm with my wife, Jennifer, and our three children on a third-generation farm. We raise 3,600 acres of soybeans and

[2] Prashant Jha, *2020 Summary of Herbicide Evaluations for Marestail (Horseweed) Control in Soybean*, Iowa State University: Extension & Outreach (Feb. 11, 2021), https://crops.extension.iastate.edu/cropnews/2021/02/2020-summary-herbicide-evaluations-marestail-horseweed-control-soybean.

[3] Jeff Beach, *As waterhemp and ragweed shows herbicide resistance, Minnesota researchers want farm samples*, Agweek (Oct. 14, 2021), https://www.agweek.com/business/as-waterhemp-and-ragweed-shows-herbicide-resistance-minnesota-researchers-want-farm-samples.

corn, and we run a cow-calf livestock operation. I hope to someday pass my farm down to my children for continued operation.

8. I have been a member of ASA for 12 years, and I currently serve as an ASA Board Director. I am also a member of the Iowa Soybean Association ("ISA") and served as ISA President from 2020–2021.

9. On my farm, we typically grow 1,800 acres of soybeans, and we rely on dicamba to treat those acres. Soybean production is a vital part of our operation, which we rotate with corn to better manage pests, diversify our crop production, promote conservation practices, among other benefits.

10. As noted above, dicamba is critically important to our farm to protect our soybean crops from HR weeds. HR marestail and HR waterhemp can devastate a crop without sufficient management tools. Not only does dicamba protect crop yields so our operation can remain economically viable, but it allows us to maintain important conservation practices, such as no-till and reduced tillage, which help to minimize soil erosion, reduce nutrient loss to watersheds, cut greenhouse gas emissions, among other benefits.

11. On our farm, we almost always make preemergent applications of dicamba to our DT soybeans to control weeds. As necessary, we also make a second, post-emergent OTT application in June before soybean crop canopies close to control weeds before they are inaccessible under soybean leaves. However, as noted

below, the Cut Off Date restrictions often risk our ability to make a second post-emergent application.

12. We have been using OTT dicamba on soybeans since it first became commercially available in 2016. As discussed, it helps us control HR weeds that are otherwise difficult to control and maintain important conservation practices. Dicamba is a central tool in our farm's herbicide program, which we mix and rotate with other herbicides that have different biochemical modes of action ("MOA"). This is important for providing layers of protection, as different MOAs act in different ways to terminate weeds. If we lose the ability to meaningfully use dicamba, HR weeds will more quickly evolve resistance to the few remaining control tools with other MOAs we have available.

13. The Cut Off Date from the dicamba product registrations have proved particularly challenging for our farm. In growing seasons with very wet springs, like the one in which we currently find ourselves, we cannot plant until the soil is sufficiently dry. Since delayed planting also delays soybean emergence and maturity, the Cut Off Date forces us to make the difficult decision to apply dicamba earlier in the crop's lifecycle than we otherwise would to ensure our soybean crop is protected from HR weeds. Delayed planting or poor weather can prevent us from making post-emergent applications entirely if we run up against the Cut Off Date, greatly harming our ability to protect our operation from HR weeds.

14. If we are forced to apply dicamba too early in the soybean lifecycle before the crop canopy is nearing close, it allows more HR weed seeds to emerge post-application between soybean rows, resulting in greater HR weed presence in fields than would otherwise occur if we could apply later. This not only impacts our yields for one growing season but can result in greater spread of economically-damaging HR weed seeds which we will be forced to contend with in future growing seasons. The damage is far worse if the cut off entirely prevents us from making a needed second application.

15. These challenges are amplified by the location of our farm, the specific HR weeds we face, and the recent registration amendment made by EPA to move up the Cut Off Date for Iowa. We have river bottoms on our farm, which are slow to dry out during wet springs and thus require even later planting than other areas on our land. Also, HR waterhemp is notorious for emerging later in the season, often during July or later.[4] The original registration's June 30 Cut Off Date made managing HR waterhemp difficult—EPA's recent decision to move the Cut Off Date for Iowa to June 20 will only worsen these difficulties and result in greater harm to our operation.

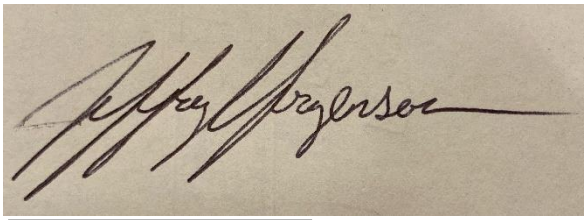
[4] Bob Hartzler & Meghan Anderson, *Achieving Full-season Waterhemp Control in Soybean*, Iowa State University: Extension & Outreach (Feb. 1, 2019), https://crops.extension.iastate.edu/cropnews/2019/02/achieving-full-season-waterhemp-control-soybean.

16. For all these reasons, Canyon Creek Family Farm is suffering immediate, concrete, and irreparable harm as a result of EPA's overly-conservative imposition of the Cut Off Date. A later Cut Off Date would ensure our farm can use OTT dicamba, one of very few tools we have to treat both HR marestail and HR waterhemp, without the risk of delayed planting due to wet spring conditions. It will also ensure we can protect against late emerging HR weeds that may otherwise not be possible to treat with a June 20 Iowa Cut Off Date.

17. Instead of inflicting irreparable harm on farmers, EPA should follow the science (including its own science) and modify the original registrations and amended registrations to allow for dicamba applications later than June 30. This would redress the harms above by allowing growers the needed flexibility to use OTT dicamba to protect their crop from economically-damaging, HR weeds for which there are very few other control alternatives, especially later in the growing season when control options are even fewer.

I certify under penalty of perjury that the foregoing is true and correct.

Dated this 19 day of May, 2022.



Jeff Jorgenson

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

AMERICAN SOYBEAN ASSOCIATION, ET AL., *Petitioners*, vs. MICHAEL S. REGAN, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and BASF CORPORATION, *et al.*, *Intervenors*.	Case No. 20-1441 (Consolidated with 20-1445, 20-1484, 22-1048, 22-1050, 22-1067)

Declaration of Alan Meadows

I, Alan Meadows, declare and state as follows:

1. I serve as Chair of the Regulatory Advocacy Team of the American Soybean Association ("ASA"). I have served on ASA's Board of Directors since 2017. I also previously served in several leadership positions in the Tennessee Soybean Association, including President, which I joined in 2004. I am authorized to make this declaration on behalf of ASA, based upon my personal knowledge.

2. In addition to my leadership role within ASA, I also own and operate Meadows Farms, which is a fourth-generation family farm located in Halls, Tennessee. On my farm, which I run with my wife and three children, I raise 4,000 acres of soybeans and corn, including using dicamba on dicamba-tolerant ("DT") soybean varieties.[1] I hope to someday pass my farm down to my children for continued operation.

3. ASA was founded in 1920 and includes 26 state member associations that represent 500,000 soybean farmers in 30 soybean-producing states. ASA has two offices, one in Washington, DC, and the other in St. Louis, Missouri. ASA's mission is to advocate for U.S. soy farmers on policy and trade.

4. A primary focus of ASA is policy development and implementation. ASA works to further the policy goals established by its membership. ASA does this by testifying before Congress, engaging in lobbying efforts, contacting members, communicating to relevant audiences, meeting with the media, and defending our members' legal interests, including on pesticide registration decisions.

5. I submit this declaration in support of the American Soybean Association's ("ASA") petitions for review challenging registrations of dicamba products (the "dicamba products") issued by the United States Environmental Protection Agency ("EPA") on October 27, 2020: the Engenia Herbicide

[1] Our farm primarily uses Engenia herbicide.

Registration, *see* A.R. Doc. 12, the A21472 Plus VaporGrip Technology Registration, *see* A.R. Doc. 5, and the XtendiMax with VaporGrip Technology Registration, *see* A.R. Doc. 13 (collectively the "original registrations"). This declaration also supports petitions for review challenging final actions amending the original registrations (the "registration amendments") taken by EPA on March 15, 2022. *See, e.g.*, Supp. A.R. Engenia Doc. 9. The registration amendments include more stringent product use restrictions applicable to farmers in Iowa and Minnesota than those set forth in the original registrations. *Id.*

6. The original and amended registrations authorized the sale, distribution, and use of the dicamba products for over-the-top ("OTT") use on DT soybeans and cotton. ASA represents members who use all three dicamba products authorized by this action. The original and amended registrations also include onerous conditions that limit the efficacy of the dicamba tool and significantly harm my farm and many others represented by ASA.

7. First, the registrations prevent ASA members from using dicamba after June 30 each year (the "cut off date"). Second, many growers must abide by a 310-foot downwind application buffer (the "ESA buffer") and a 57-foot omnidirectional buffer.

8. If the registrations are remanded to EPA for further consideration and the Agency extends the cut off date and shortens the ESA buffer growers, it would

allow growers to better control economically-damaging, herbicide resistant ("HR") weeds on their farms; restore the use of important sources of farm income, like double cropping, that have been effectively prohibited under the existing registration; help better prevent the emergence and spread of HR weeds, which are greatly damaging to grower operations and harm the use of conservation practices; and reduce onerous labor, fuel, and other costs imposed by registration restrictions.

9. OTT dicamba is a valuable tool soybean growers use to control HR weeds, which have developed resistance to one or more alternative herbicides. Some weeds, such as HR palmer amaranth, can rapidly evolve resistance to herbicides and spread hundreds of thousands of HR seeds per plant if not controlled.[2] Weeds are a threat because they can quickly spread and compete with a crop for nutrients, soil moisture, sunlight, and other resources, cutting crop yields by half or more. While some herbicides face significant resistance in some weed populations, dicamba remains very effective for controlling most weed populations in the United States.

10. Many growers make one preemergent application of dicamba near spring planting, and a second, post-emergent OTT application in the late spring or summer before soybean canopies close and weeds are inaccessible under crop

[2] Sarah Lancaster, Mithila Jugulam & Bob Hartzler, *Metabolism-based herbicide resistance in a 6-way resistant Palmer amaranth*, Agronomy eUpdates (2021), http://eupdate.agronomy.ksu.edu/article_new/metabolism-based-herbicide-resistance-in-a-6-way-resistant-palmer-amaranth-425-5

leaves. The post-emergent application is important to terminate later emerging weeds or weeds sprouted from seeds deposited in the soil after the first dicamba application. Growers will mix or rotate dicamba with herbicides with other biochemical modes of action ("MOA") to provide layers of protection and prevent weeds from developing resistance to any one herbicide or MOA.

11. ESA buffers are significantly damaging to soybean growers living in counties where they are required. 310-foot downwind buffers require growers to either make a second, non-dicamba application in these buffer areas to control weeds, or hand weed ESA buffers. If a grower makes a second application, they must run a second sprayer, significantly increasing their fuel, labor, and herbicide costs. Hand weeding also significantly increases time commitments and labor costs, especially when applied over dozens or hundreds of acres. Additionally, the inability to spray dicamba in buffer areas increases the likelihood HR weeds will emerge and spread in those buffers, damaging yields for immediate and future growing seasons.

12. Many soybean growers in areas with smaller field sizes are disproportionately harmed, as the 310-foot downwind buffers require them to put more land into buffers than growers in areas with larger field sizes. This imposes even greater labor, spraying, and other cost burdens on these growers and further diminishes their ability to control economically-damaging, HR weeds, to the point where use of DT soybeans may not be feasible in some fields.

13. Cut off dates also greatly harm soybean grower operations. Many growers double crop to support their farm incomes. Double cropping involves planting wheat or another over-winter crop in the fall, harvesting around June, and thereafter planting soybeans to be harvested in the fall. This allows growers to annually raise two crops on a field instead of just one. However, with a June 30 cut off date, double cropped soybeans may not have even been planted or emerged from the soil yet, effectively prohibiting the use of OTT dicamba on these crops.

14. The cut off can also harm growers who are delayed from planting due to wet spring weather. Growers cannot drive planters into wet fields for risk of getting stuck. There also is also a greater risk of soil fungus damage to soybean seedlings in wet soil. In especially rainy springs, like we are currently experiencing in the U.S., growers will be delayed from planting which in turn delays crop maturity. If delayed soybean crops are not close to having canopies close when the cut off date approaches, growers must consider making dicamba applications earlier than is necessary to protect their crops from HR weeds. Also, poor weather ahead of the cut off may entirely prevent a grower from making a post-emergent dicamba application, which can inflict serious economic damage from HR weeds.

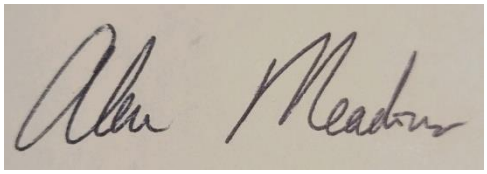
15. For all these reasons, growers represented by ASA are suffering immediate, concrete, and irreparable harm as a result of EPA's overly-conservative imposition of the cut off date and the ESA buffers. A later cut off date and smaller

ESA buffers would allow growers to make dicamba applications more reliably at times needed to protect their crop from HR weeds; restore grower use of double cropping needed to support the economic viability of farms; allow growers with smaller fields to reclaim meaningful dicamba use on their land; and reduce labor, fuel, time, and other cost burdens imposed by these onerous registration restrictions.

16. Instead of inflicting irreparable harm on farmers, EPA should follow the science (including its own science) and modify the original registrations and amended registrations to allow for dicamba applications later than June 30 and shorter or no ESA buffers. This would redress the harms above by restoring to harmed growers the meaningful use of dicamba and protection from HR weeds, as well as reducing the onerous costs of implementing label restrictions, and restoring important sources of farm revenue, such as double cropping.

I certify under penalty of perjury that the foregoing is true and correct.

Dated this 19 day of May, 2022.



Alan Meadows

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

AMERICAN SOYBEAN ASSOCIATION, ET AL., *Petitioners*, vs. MICHAEL S. REGAN, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and BASF CORPORATION, *et al.*, *Intervenors*.	Case No. 20-1441 (Consolidated with 20-1445, 20-1484, 22-1048, 22-1050, 22-1067)

Declaration of Kody Bessent

I, Kody Bessent declare and state as follows:

1. I serve as Chief Executive of Plains Cotton Growers, Inc. ("PCG"). I previously served as Vice President of Legislative Affairs. I am authorized to make this declaration on behalf of Plains Cotton Growers, based on my personal knowledge.

2. Established in 1956 by cotton producers from across the Texas High Plains production region, PCG is a non-profit producer organization composed of regional cotton producers. PCG's mission is to provide premier service, communications, and support to cotton producers on federal and state legislative matters, environmental and regulatory issues, cotton research and market development. PCG members annually plant between 3.5–4.5 million acres of cotton. The Texas High Plains region represents the largest cotton production region in the United States and accounts for approximately one third of all planted domestic cotton acreage. PCG serves 42 counties on the Texas High Plains and approximately 9,000 members.

3. On behalf of its membership, PCG focuses on legislative programs as well as policy development and implementation. PCG works to further the policy goals established by its membership. Plains Cotton Growers does this by continuously advocating and engaging with policy makers at the state and federal level, participating in agency hearings and rulemakings on issues important to the PCG membership to ensure our voice is heard and communicating extensively about the importance and value of the cotton industry in Texas and the U.S.

4. In 2021, the United States produced 17,191,000 bales of cotton. Texas growers, specifically, were responsible for 7,700,000 of those bales. And of those,

over half—4,593,931—were produced by growers in the Texas High Plains production region.

5. I submit this declaration in support of PCG's petitions for review challenging registrations of dicamba products (the "dicamba products") issued by the United States Environmental Protection Agency ("EPA") on October 27, 2020: the Engenia Herbicide Registration, *see* A.R. Doc. 12, the A21472 Plus VaporGrip Technology Registration, *see* A.R. Doc. 5, and the XtendiMax with VaporGrip Technology Registration, *see* A.R. Doc. 13 (collectively the "original registrations"). This declaration also supports petitions for review challenging final actions amending the original registrations (the "registration amendments") taken by EPA on March 15, 2022. *See, e.g.*, Supp. A.R. Engenia Doc. 9.

6. As a result of these two registrations, PCG members, and cotton growers throughout the U.S., were and are able to purchase and use the dicamba products on dicamba tolerant ("DT") cotton. The dicamba products are critical tools for PCG members in their fight against glyphosate-tolerant and other hard to control weeds.

7. Weed control is vastly important as it relates to best management and agronomic practices in a producer's operation. Producers in the PCG region are continuously adopting better agronomic practices such as no-till or minimum-till standards, which in turn enhances conservation of the soil and preserves organic

matter that can be readily used in a growing season.

8. Additionally, the adoption of better agronomic practices help conserve our regions' water resources which are primarily derived from groundwater from the Ogallala aquifer. With less tillage and more prevalent soil matter and crop residue, the PCG regions producers can capture more rainwater and preserve it in the soil profile which helps mitigate the impact of groundwater use in a growing season. Adoption or enhancement of better agronomic practices such as these are only practically feasible if a producer has common weed control through the use of weed control technology such as dicamba. However, the registrations include burdensome conditions that make the dicamba products difficult to use and present significant farm management challenges.

9. Among the challenges presented by PCG members by the registrations are a 310-foot downwind application buffer (the "ESA buffer") and a 57-foot omnidirectional buffer, as well as a prohibition on the use of the dicamba product after July 31 of each year (the "cut off date").

10. Complying with the ESA buffers on the product label could require a producer to take productive land out of operation, which in turn would hinder the overall economic and financial success of an operation. Producers are trained, certified, and held accountable through state inspection services for applying herbicide product on target to the crop at hand so as to avoid harmful impact to

neighboring producers or other sensitive surrounding crops or vegetation, and while a 310-foot downwind application buffer and a 57-foot omnidirectional buffer may seem innocuous, it could remove from production a portion of land as a matter of personal property that can actively produce crops, impacting a producer's ultimate profitability. The application buffers also create weed management challenges, particularly with respect to herbicide resistant weeds. This is especially important with crop production margins being very minimal.

11. Additionally, Plains Cotton Growers members are particularly impacted by EPA's cut off dates of July 31. The Texas High Plains experience significant severe weather during planting season, which ranges from May 31 to June 20 (based on dates established by USDA Risk Management). Entire crops are routinely destroyed (for example by hail storms), and replanting must occur. Replanting can be done as late as 15 days after the final planting date occurs—in the case of the latest final planting date of June 20, a producer can practically replant up to July 4.

12. The July 31 cut off dates make it difficult, if not impossible, for growers who replant late to make post-emergence dicamba applications, which can result in significant weed problems and pressures. The July 31 cut off date not only creates challenges for producers in the PCG region in the event they enter into a late planting period past their final plant date for post application, but if the region

receives late but timely rain in August, it can create weed thresholds that cannot be controlled through a timely herbicide application to finish out the growing season prior to harvest aids being applied for defoliation.

I certify under penalty of perjury that the foregoing is true and correct.

Dated this 18 day of May, 2022.

Kody Bessent

Kody Bessent

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

AMERICAN SOYBEAN ASSOCIATION, ET AL., *Petitioners*, vs. MICHAEL S. REGAN, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and BASF CORPORATION, *et al.*, *Intervenors*.	Case No. 20-1441 (Consolidated with 20-1445, 20-1484, 22-1048, 22-1050, 22-1067)

Declaration of Toby Robertson

I, Toby Robertson, declare and state as follows:

1. I own and operate Triple-T Farms & Cattle Co., which is a family farm located in Robstown, TX. I am authorized to make this declaration on behalf of Triple-T Farms & Cattle Co., based upon my personal knowledge.

2. I submit this declaration in support of the American Soybean Association's ("ASA") petitions for review challenging registrations of dicamba

products (the "dicamba products") issued by the United States Environmental Protection Agency ("EPA") on October 27, 2020: the Engenia Herbicide Registration, *see* A.R. Doc. 12, the A21472 Plus VaporGrip Technology Registration, *see* A.R. Doc. 5, and the XtendiMax with VaporGrip Technology Registration, *see* A.R. Doc. 13 (collectively the "original registrations"). This declaration also supports petitions for review challenging final actions amending the original registrations (the "registration amendments") taken by EPA on March 15, 2022. *See*, *e.g.*, Supp. A.R. Engenia Doc. 9.

3. The Original and Amended Registrations authorized the sale, distribution, and use of the Dicamba Products for over-the-top ("OTT") use on dicamba-tolerant ("DT") cotton and soybeans. The Dicamba Products[1] are a critical tool for my farm and are necessary to combat herbicide-resistant weeds (including glyphosate-resistant weeds). We have several glyphosate resistant weeds in our area along with some very hard to kill weeds with glyphosate alone. The ability to spray multiple modes of action allows us to avoid expanding glyphosate tolerant weeds and do a better job of keeping our fields clean from moisture robbing weeds that we cannot control otherwise.

4. The Original and Amended Registrations include onerous conditions that significantly limit the efficacy of the dicamba tool on my farm. First, the

[1] Our farm uses Engenia herbicide.

Registrations prevent me from using dicamba after July 31 each year (the "Cut Off Date"). Second, I must abide by a 310-foot downwind application buffer (the "ESA Buffer") and a 57-foot omnidirectional buffer.

5. If the Registrations are remanded to EPA for further consideration and the Agency extends the Cut Off Date and shortens the ESA Buffer it would allow us to kill weeds that otherwise would go to seed and extend the growing problem of herbicide tolerance.

6. I have been farming since 1998. Our farming operation is a fourth generation partnership, which I operate along with my wife and brother and sister-in-law. We grow cotton, corn, sorghum, and wheat over approximately 11,500 acres in Nueces and Kleberg County in south Texas

7. I am a member of the Plains Cotton Growers, Inc., as well as a member of the National Cotton Council and South Texas Cotton and Grain Association.

8. On my farm, we typically grow 5000+ acres of cotton, and we rely on dicamba to treat those acres. Cotton is what we considered our most valuable crop year in and year out. It is by far the most important crop we grow.

9. As noted above, dicamba is critically important to our farm in protecting our cotton crops from herbicide resistant weeds. With no-till and minimum till becoming more prevalent the need for Dicamba is critical to control weeds that we are no longer able to control without tilling the land. As we try to

become more environmentally friendly it makes little sense to take Dicamba out of our toolkit that allows us to do so.

10. Dicamba is used as a post emerge application on our farm. We apply early season as weeds have emerged while they are very small. We always apply it with an approved Roundup product. We scout our fields and spray according to the type and growth stage of the weeds present. As for application conditions, we always follow the label.

11. We have been using the DT cropping system since its inception. It has allowed us to control glyphosate resistant weeds and stop the spread of more resistance with the dual modes being used.

12. The Cut Off Date makes it very hard to control weeds season long and allows for the spread of weeds late in the season. Also, the restrictive nature of the buffers allows resistant weeds to grow and produce seed yearlong which robs yield from the crop and causes problem for next year's crop. To me this restriction completely undermines what this system is trying to accomplish.

13. For all these reasons, Triple-T Farms & Cattle Co. is suffering immediate, concrete, and irreparable harm as a result of EPA's overly-conservative imposition of the Cut Off Date and the ESA Buffers. Having more time and less buffer would allow us to control weeds longer and more effectively, which in turn would lead to less herbicide tolerant seed reproduction. It would also allow us to

continue the minimum till concept to be more environmentally friendly and help with restoring soil health.

14. Instead of inflicting irreparable harm on farmers, EPA should follow the science (including its own science) and modify the Original Registrations and Amended Registrations to allow for dicamba applications later than July 31 and shorter or no ESA buffers. These would redress the harms above by restoring to harmed growers the meaningful use of dicamba and protection from herbicide-resistant weeds, as well as restoring important sources of farm revenue.

I certify under penalty of perjury that the foregoing is true and correct.

Dated this 19th day of May, 2022.

Toby Robertson

CERTIFICATE OF SERVICE

I hereby certify that on September 28, 2022, I filed the foregoing document using the CM/ECF filing system, which will send notification to the attorneys of record in this matter, who are registered with the Court's CM/ECF system.

/s/ Edmund S. Sauer
Counsel for Petitioners