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18 **THE UNITED STATES DISTRICT COURT**
19 **OF ARIZONA**

20 CENTER FOR BIOLOGICAL)
21 DIVERSITY, NATIONAL)
22 FAMILY FARM COALITION,)
23 CENTER FOR FOOD SAFETY,) Case No.
24 and PESTICIDE ACTION)
25 NETWORK NORTH AMERICA,)

26 *Plaintiffs,*)

27 v.)

28 UNITED STATES)
ENVIRONMENTAL)
PROTECTION AGENCY,)
ANDREW WHEELER, in his)
official capacity as Administrator,)
and EDWARD MESSINA, in his)
official capacity as Director of the)
Office of Pesticide Programs)

Defendants.)

COMPLAINT FOR
DECLARATORY AND
EQUITABLE RELIEF

TABLE OF CONTENTS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

INTRODUCTION AND NATURE OF ACTION.....3

JURISDICTION AND VENUE..... 10

PARTIES 11

STATUTORY BACKGROUND 14

 Federal Insecticide, Fungicide, and Rodenticide Act..... 14

 Administrative Procedure Act..... 20

STATEMENT OF FACTS 21

 Dicamba..... 21

 Chronological History and Procedural Background 25

 The Ninth Circuit 2020 Decision in *NFFC v. EPA*, 960 F.3d
 1120 (9th Cir. 2020) 46

 The Fall 2020 Registration..... 58

 EPA’s Reversal Regarding FIFRA Section 24(c) 77

 Plaintiffs’ Injuries 81

FIRST CAUSE OF ACTION 87

SECOND CAUSE OF ACTION 90

THIRD CAUSE OF ACTION 92

FOURTH CAUSE OF ACTION 93

PRAYER FOR RELIEF 95

INTRODUCTION AND NATURE OF ACTION

1
2 1. This is a civil action for equitable and declaratory relief.
3 Plaintiffs National Family Farm Coalition, Center for Biological Diversity,
4 Pesticide Action Network, and Center for Food Safety (Plaintiffs) challenge
5 the October 27, 2020 decision to approve new use registrations for three
6 dicamba products, *see* Ex. A,¹ and the Notices of Registrations, *see* Exs. B-D²
7 (collectively, the Registration Actions). Defendants Environmental Protection
8 Agency (EPA), Edward Messina, Director of the Office of Pesticide Programs,
9 and Andrew Wheeler, Acting Administrator of EPA (collectively EPA or
10 Defendants) authorized these Registration Actions in violation of the Federal
11 Insecticide, Fungicide and Rodenticide Act (FIFRA), 7 U.S.C. § 136 *et seq.*,
12 and the Administrative Procedure Act (APA), 5 U.S.C. § 701 *et seq.*

13 2. This is an administrative law case, about a federal agency
14 stubbornly doubling down on a prior approval that the Ninth Circuit just held
15 unlawful and vacated in June 2020. In its rush to re-approve this novel
16 dicamba spraying again, EPA failed to follow the Court's order and more
17 generally to comply with FIFRA's mandates. Instead, it tried to paper over
18 the problems the Court found and in the process created new ones.

19 3. Dicamba (3,6-dichloro-2-methoxybenzoic acid) is a broad-
20 spectrum herbicide, a type of pesticide, a toxic substance intended to harm or
21

22 ¹ EPA, *Memorandum Supporting Decision to Approve Registration for*
23 *the Uses of Dicamba on Dicamba Tolerant Cotton and Soybean* (Oct. 27,
2020) (attached as Exhibit A).

24 ² EPA, *Engenia Regulatory Notice and Label* (Oct. 27, 2020) (attached
25 as Exhibit B); EPA, *Tavium Regulatory Notice and Label* (Oct. 27, 2020)
26 (attached as Exhibit C); EPA, *XtendiMax Regulatory Notice and Label* (Oct.
27 27, 2020) (attached as Exhibit D).
28

1 kill. It is an effective weed-killer, but its toxicity is not limited to weeds. It
2 can also kill many desirable broadleaf plants, bushes, and trees.

3 4. It also has a well-known drawback: dicamba is volatile, moving
4 easily off a field on which a farmer has sprayed it. It can drift if the wind
5 blows during application; it can drift if applied during temperature
6 inversions; it can drift after application when it volatilizes, or turns to vapor,
7 during hot weather. Dicamba is well known to cause widespread damage to
8 conventional crops and wild plants and significantly injure farmers' crops and
9 the environment. As a result of its toxicity and its tendency to drift, dicamba
10 has historically been limited to clearing fields of weeds, either before crops
11 were planted or before newly planted crops emerged.

12 5. This changed in 2016. The agrichemical company Monsanto
13 Company (Monsanto) had previously licensed a patented gene from the
14 University of Nebraska that it then proceeded to genetically engineer into
15 soybean and cotton plants, to make them resistant to dicamba. In a vast and
16 extremely risky new experiment, in 2016, EPA for the first time registered a
17 "new use" of these dicamba products: to be sprayed during the 2017 summer
18 growing season, over-the-top of soybean and cotton crops that Monsanto
19 genetically engineered with resistance to the pesticide.

20 6. That approval led to over 25 million more pounds of dicamba
21 sprayed annually, increases of 8-12 fold in pounds, across nearly 100 million
22 acres, at new times of the year and in novel ways. The approval created a
23 debacle that agronomists say is unprecedented in the history of U.S.
24 agriculture: the spraying of massive amounts of dicamba, resulting in
25 millions of acres of crops damaged and sometimes destroyed by dicamba
26 spray droplets drifting off-field during application; dicamba vapor clouds
27 damaging vast fields from fencerow to fencerow; dicamba-laced water
28

1 running off sprayed fields; and even dicamba-contaminated rainfall in areas
2 of intensive use. Millions of acres of off-field dicamba drift and runoff resulted
3 in widespread destruction of crops, economic losses, social upheaval to rural
4 communities, and harm to endangered species and other wildlife.

5 7. This is the third case in a series since 2016 regarding EPA's
6 approvals of these dicamba products for this new and novel spraying. The
7 Ninth Circuit heard each of the prior cases directly under 7 U.S.C. § 136n(b).
8 In the first suit, Petition for Review, *Nat'l Family Farm Coalition v. EPA*, No.
9 17-70196 (9th Cir. Jan. 20, 2017), the same four nonprofits that are the
10 Plaintiffs here challenged EPA's original November 2016 registration of the
11 dicamba products. That initial registration was for 2 years. After completing
12 briefing and an August 2018 oral argument, but before the Court issued a
13 decision, EPA issued a second 2-year continuation of the registrations, this
14 time until December 2020. The Court held the 2016 case moot and required
15 petitioners to refile an expedited case. *Nat'l Family Farm Coalition v. EPA*,
16 747 F. App'x 646 (9th Cir. 2019).

17 8. The Plaintiffs did so, then challenging the November 2018
18 decision. Petition for Review, *Nat'l Family Farm Coalition v. EPA (NFFC I)*,
19 No. 19-70115 (9th Cir. Jan. 11, 2019). The Ninth Circuit heard oral argument
20 again in April 2020 and in June 2020 issued its decision, granting Plaintiffs'
21 petition for review and holding that EPA had violated FIFRA in issuing the
22 registration decision. *Nat'l Family Farm Coalition v. EPA (NFFC II)*, 960
23 F.3d 1120, 1144 (9th Cir. 2020).

24 9. Among other holdings, the Ninth Circuit concluded that EPA
25 violated FIFRA by substantially underestimating several important risks and
26 costs, including the amount of dicamba sprayed, the number of injury reports,
27 and the amount and costs of crop damage from spraying. The Court also
28

1 found that EPA completely failed to consider and account for several other
2 costs, such as economic losses ensuing from anti-competitive effects of the
3 registrations, as well as the social costs of strife and dissension in farming
4 communities triggered by rampant off-target dicamba damage to neighbors'
5 crops. Finally, it also held that EPA violated FIFRA by predicating its
6 conclusion that its approval would have no adverse economic and
7 environmental effects on label mitigation—in the form of weather-related
8 label use restrictions—that substantial record evidence demonstrated were so
9 extreme that farmers could not both follow them and have any hope of
10 controlling weeds. EPA failed to consider and analyze whether following
11 those directions was possible in real world farming conditions. *NFFC II*, 960
12 F.3d at 1144.

13 10. In light of the “substantial” flaws in EPA’s decision, the Ninth
14 Circuit vacated the registrations *Id.* at 1145.

15 11. The registrant companies again applied for new registrations just
16 weeks after the Ninth Circuit’s decision, on July 2. EPA then approved those
17 registrations just days before the presidential election, On October 27,
18 announcing it at a press conference in a Georgia cotton field.

19 12. The Registration Actions challenged here have many of the same
20 fundamental flaws as the prior approval vacated in June 2020 as well as
21 some new ones.

22 13. First, the Registration Actions again either underestimate or
23 ignore risks and costs to farmers and the environment from its decision.
24 These include: damage to crops and wild plants resulting from off-field drift
25 and run-off of dicamba; economic harm from crop damage; anti-competitive
26 effects resulting in economic losses from forced purchase of dicamba-resistant
27 seeds for defense against drift damage; social strife in farming communities
28

1 between dicamba users and those whose crops are damaged by dicamba drift;
2 and reliance on an impossible label without analyzing whether it can actually
3 be followed in real world conditions.

4 14. Among other violations, EPA again failed to study and account
5 for the substantial likelihood that even trained pesticide applicators, despite
6 their best efforts, cannot both follow the use directions and control weeds.
7 The Registration Actions provide many of the same highly restrictive use
8 directions as the 2017 label discussed and found deficient in *NFFC II*, and
9 several additional, complicated restrictions that the Ninth Circuit warned
10 would likely result in increased non-compliance in future growing seasons.
11 EPA's failure to consider this aspect of the registrations will result in further
12 destruction of crops and environmental harm in violation of FIFRA. 7 U.S.C.
13 § 136a(C)(5).

14 15. EPA also trumped up the benefits of dicamba over-the-top
15 spraying but again left out any assessment of its true economic costs to
16 farmers, as FIFRA requires. 7 U.S.C. § 136(bb). These products resulted in
17 the destruction of crops and significant economic losses from off-field drift
18 and runoff. And, as the Ninth Circuit explained, harm from drift also caused
19 "defensive adoption"; that is, farmers with no choice but to buy and plant soy
20 and cotton seeds genetically engineered with resistance in order to protect
21 against the otherwise inevitable drift damage. That impact had
22 monopolizing, anti-competitive effects on agricultural markets: for instance
23 small seed companies losing sales of non-dicamba-resistant seeds and
24 farmers losing their right to plant what they choose (and in terms of forced
25 purchase of more expensive seeds). *NFFC II*, 960 F.3d at 1142. EPA *again*
26 failed to analyze and consider these economic impacts in its approval.

1 16. EPA also failed to take into account the social costs of the
2 registrations on farming communities. The unprecedented drift crisis during
3 past growing seasons resulted in “severe strain on social relations in farming
4 communities,” *id.* at 1143, as farmers began threatening farmers; destroying
5 their neighbors’ crops, trees, ornamentals, and gardens; and even resorting to
6 acts of violence. *Id.* These substantial impacts are nowhere accounted for in
7 this decision, let alone rigorously analyzed, in violation of FIFRA. 7 U.S.C. §
8 136(bb).

9 17. Second, the decision also found separate ways to violate FIFRA
10 beyond the substantive errors in the registrations. For example, the prior
11 registration was a “conditional” registration, because EPA admitted it lacked
12 all the necessary studies in order to register the products “unconditionally.”
13 Instead, it ordered the manufacturers to submit more studies on numerous
14 important issues, such as off-field drift harm to trees.

15 18. This time EPA issued an “unconditional” registration for these
16 products. Unconditional registration requires that EPA assess and find that a
17 pesticide will not cause unreasonable adverse effects when used “in
18 accordance with widespread and commonly recognized practice.” 7 U.S.C. §
19 136a(C)(5). It also requires EPA to find that the pesticide “will perform its
20 intended function” without causing unreasonable adverse effects on the
21 environment.” 7 U.S.C. § 136a(C)(5). EPA’s byzantine, unrealistic use
22 requirements for the products are *not* common practice nor do they permit
23 farmers to use the product for its intended function effectively: to kill weeds,
24 and still follow them. To register a pesticide unconditionally, EPA must find
25 that it can be sprayed and accomplish its intended purpose in the real world
26 of farming, using common and accepted methods and *still* not cause
27
28

1 unreasonable adverse effects, not according to whatever hypothetically EPA
2 can think up to put on a label.

3 19. Third, EPA also violated FIFRA and the APA by failing to
4 provide a formal notice and comment period despite approval a new use of
5 these products. EPA's failure forced Plaintiffs to file protectively also in this
6 court, rather than only in the Ninth Circuit directly, like the case's
7 predecessors. A new use approval requires notice and comment, and FIFRA
8 decisions with notice and comment proceed directly to the Court of Appeals.
9 Because there was no prior *lawful* new use, this attempt is still EPA's first
10 attempt at a lawful new use, which under FIFRA should require notice and
11 comment. Yet EPA did not provide notice and an opportunity to comment
12 before issuing the challenged Registration Actions in 2020.

13 20. Fourth, EPA took the occasion of issuing the Registration Actions
14 approving three specific dicamba products also to make a sweeping rule
15 change for not just those pesticides, but also *all* pesticides, and in a footnote
16 no less. The last few seasons of rampant dicamba drift, coupled with EPA's
17 failure to contain it, has forced states to step into the regulatory breach and
18 install their own state-specific restrictions, using a provision under FIFRA
19 section 24(c) that permits states to take quick action to address special local
20 needs in their states. In the footnote, EPA now has declared for the first time
21 that states can no longer use this authority and can only undertake any
22 restrictive action using much more time-consuming measures, such as state
23 legislative action or formal agency rulemaking. This was a reversal of a
24 decades-old rule. EPA made this rule change without any notice and
25 comment, despite earlier promises that it would have notice and comment if
26 it ever did alter states' rights in this way. EPA's failure to hold notice and
27

1 comment prior to its removal of states' authority under FIFRA section 24(c)
2 violated the APA.

3 21. The Registration Actions also violate the Endangered Species
4 Act. Plaintiffs submitted a 60-day notice letter³ on December 14, 2020 to
5 exhaust those claims before amending this complaint to include them.

6 22. Accordingly, for the reasons stated above, Plaintiffs ask the Court
7 to hold and declare that EPA substantially and procedurally violated FIFRA
8 and the APA in issuing the Registration Actions registering these dicamba
9 products without substantial evidence and without holding notice and
10 comment. Plaintiffs also ask that the Court vacate these registrations and
11 grant relief as necessary and appropriate to halt the use and sale of dicamba
12 products authorized by this decision. Plaintiffs also ask the Court to hold that
13 EPA violated FIFRA and the APA with regard to its new restriction of states'
14 FIFRA 24(c) authority without holding notice and comment and to vacate
15 that decision.

16 JURISDICTION AND VENUE

17
18 23. This Court has jurisdiction pursuant to 7 U.S.C. § 136n(a) of
19 FIFRA because EPA issued the Registration Actions without a public
20 hearing. *See infra* ¶¶ 60, 199. Jurisdiction is also proper under 28 U.S.C. §
21
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23
24 ³ *Notice of Intent to Sue for Violations of the Endangered Species Act*
25 *Concerning EPA's Authorized Uses of Dicamba on Genetically Engineered*
26 *Cotton and Soybean* (Dec. 14, 2020), available at
[https://www.centerforfoodsafety.org/files/noi-letter-dicamba_12_14_2020-](https://www.centerforfoodsafety.org/files/noi-letter-dicamba_12_14_2020-final_90779.pdf)
27 [final_90779.pdf](https://www.centerforfoodsafety.org/files/noi-letter-dicamba_12_14_2020-final_90779.pdf).

1 1331 (federal question), 28 U.S.C. § 1346 (United States as defendant), 28
2 U.S.C. §§ 2201-02 (declaratory relief), and 5 U.S.C. § 702 (APA).

3 24. Venue properly lies in this Court pursuant to 28 U.S.C. §
4 1391(e)(1)(c) because one or more Plaintiffs reside in this district, and
5 pursuant to 28 U.S.C. § 1391(e)(1)(b), because a substantial part of the events
6 or omissions giving rise to the claim occurred, or a substantial part of
7 property that is the subject of the action is situated, in this district.

8 25. Arizona is among the 34 states authorized by the Registration
9 Actions for application of the three registered dicamba products. Numerous
10 farmer and gardener members of Plaintiff organizations reside in Arizona
11 and are thus exposed to the threat of dicamba drift on their property in
12 Arizona. Others are conservationists that reside in Arizona whose
13 professional and personal interests in Arizona wildlife are injured.

14 **PARTIES**

15
16 26. The Plaintiffs in this case are the same for nonprofit
17 organizations that were the plaintiff/petitioners in the prior cases.

18 **National Family Farm Coalition**

19 27. National Family Farm Coalition (NFFC) is a nationwide
20 nonprofit corporation that serves as a national link for a coalition of family
21 farm and rural groups on the challenges facing family farms and rural
22 communities. Founded in 1986, NFFC today represents farmers and ranchers
23 from 30 grassroots member organizations in 42 states, including where the
24 EPA has approved the registrations challenged here. NFFC's combined
25 grassroots strength and national level experience enables a unique role in
26 securing a sustainable, economically just, healthy, safe, and secure food and
27 farm system. Most relevant here, since the mid-1990s, NFFC has devoted
28

1 significant resources to addressing the harms stemming from the use of
2 pesticides on genetically engineered, pesticide-resistant crops. NFFC has also
3 published reports and worked to address problems farmers have faced
4 through concentration in the seed industry, including diminished options,
5 higher costs, and the increased use of toxic herbicides.

6 28. NFFC and its members are being, and will be, adversely affected
7 by EPA's Registration Actions. *See infra* ¶¶ 275-303.

8 **Center for Biological Diversity**

9 29. The Center for Biological Diversity (CBD) is a nonprofit
10 membership organization headquartered in Arizona. CBD was founded in
11 1989 to fight the growing number of threats to biodiversity. CBD's mission is
12 to secure a future for all species, great and small, hovering on the brink of
13 extinction through science, policy, education, and environmental law. The
14 Center has a full-time staff of scientists, lawyers, and other professionals who
15 work exclusively on campaigns to save species and their habitats. One of
16 CBD's flagship programs is its environmental health program, which focuses
17 on, among other things, the adverse impacts of pesticides, such as those
18 approved by EPA here. CBD's members rely on CBD to represent their
19 interests in protecting biodiversity and conserving threatened and
20 endangered species and their habitats.

21 30. CBD and its members are being, and will be, adversely affected
22 by EPA's Registration Actions. *See infra* ¶¶ 275-303.

23 **Pesticide Action Network North America**

24 31. Pesticide Action Network North America (PANNA) is a
25 California-based, nonprofit corporation founded in 1982 to combat the
26 proliferation of pesticide-intensive, monocrop agriculture. PANNA's mission
27 is to advance a vision of agriculture that replaces the use of hazardous
28

1 pesticides with healthier, ecologically-sound pest management. In addition to
2 having thousands of members who are conservationists, many of PANNA's
3 members are also farmers, who live, farm, and recreate in many locations
4 where the approved dicamba use has been sprayed or will be sprayed. Since
5 the outset of the dicamba controversy, PANNA has worked to reduce the
6 negative health and livelihood impacts of pesticide drift in the states where
7 over-the-top dicamba has been approved for use.

8 32. PANNA and its members are being, and will be, adversely
9 affected by the Registration Actions. *See infra* ¶¶ 275-303.

10 **Center for Food Safety**

11 33. CFS is a nonprofit membership organization with its
12 headquarters in in San Francisco, California and offices in Portland, Oregon
13 and Washington, D.C. Since its inception in 1997, CFS's mission has been to
14 empower people, support farmers, and protect the environment from the
15 harmful impacts of industrial agriculture. This mission includes a flagship
16 CFS program on the adverse environmental and socioeconomic impacts of
17 pesticides. CFS has specifically worked on the dicamba controversy since its
18 inception. CFS represents more than 970,000 farmer and consumer members,
19 in every state throughout the country, including over 300,000 in the 34 states
20 covered by the over-the-top dicamba approval challenged in this case.

21 34. CFS and its members are being, and will be, adversely affected
22 by EPA's Registration Actions. *See infra* ¶¶ 275-303.

23 **Defendants**

24 35. Defendant Edward Messina is the Director of the Office of
25 Pesticide Programs of EPA and is being sued in his official capacity.

26 36. Defendant Andrew Wheeler is the Acting Administrator and
27 Deputy Administrator of EPA and is being sued in his official capacity.

1 37. Defendant EPA is an agency of the United States federal
2 government. FIFRA vests EPA with responsibility for registering pesticides
3 and ensuring that pesticide registrations comply with all applicable law.

4 38. Defendants Messina, Wheeler, and EPA are collectively referred
5 to as EPA or Defendants.

6 STATUTORY BACKGROUND

7 **Federal Insecticide, Fungicide, and Rodenticide Act**

8 39. FIFRA is the comprehensive federal statutory scheme regulating
9 pesticides (including herbicides like dicamba, one subcategory of pesticides),
10 including their use, sales, and labeling. 7 U.S.C. § 136 *et seq.* The statute is
11 administered by EPA at a federal level, *id.* § 136a(a), with robust roles for
12 states in regulation and enforcement, *id.* § 136w-1.

13 40. The main mechanism used to regulate pesticides is known as
14 registration. 7 U.S.C. § 136a(a). Before any pesticide can be sold or used in
15 the United States, EPA must register the pesticide: provide a license that
16 establishes the terms and conditions under which the pesticide may be
17 lawfully sold, distributed, and used within the United States. *Id.* § 136a(c).
18 The terms and conditions of the registration include exactly what product can
19 be sold and used, and for what specific uses, and how it can be used (*e.g.*,
20 what crops it can be sprayed on and how). 40 C.F.R. §§ 152.115, 156.10.

21 *Unreasonable Adverse Effects on the Environment*

22 41. In registering pesticides, the core baseline statutory standard
23 EPA applies is the “unreasonable adverse effects” standard. That is, FIFRA
24 applies a cost-benefit analysis “to ensure that there is no unreasonable risk
25 created for people or the environment from a pesticide.” *Pollinator*
26 *Stewardship Council v. EPA*, 806 F.3d 520, 522-23 (9th Cir. 2015). EPA may
27

1 deny an application for registration when “necessary to prevent unreasonable
2 adverse effects on the environment.” *Id.*; 7 U.S.C. § 136a(a).

3 42. FIFRA defines “unreasonable adverse effects on the
4 environment” to mean “any unreasonable risk to man or the environment,
5 taking into account the economic, social, and environmental costs and
6 benefits of the use of any pesticide.” 7 U.S.C. § 136(bb).

7 43. Congress anticipated EPA’s careful balancing of costs and
8 benefits would “take *every* relevant factor [the agency] can conceive into
9 account.” S. Rep. 838, 92d Cong. 2d Sess., *reprinted in* 1972 U.S.C.C.A.N.
10 3993, 4032-33.

11 44. Congress intended for EPA, among other relevant factors, to
12 carefully consider “hazards to farmworkers, hazards to birds and animals and
13 children yet unborn . . . the need for food and clothing and forest products,
14 forest and grassland cover to keep the rain where it falls, prevent floods,
15 provide clear water . . . aesthetic values, the beauty and inspiration of nature,
16 the comfort and health of man.” *Id.*

17 45. In order to register a new pesticide, a manufacturer must submit
18 an application for registration, describing how the pesticide will be used, the
19 claims made of its benefits, the ingredients, and a description of all tests and
20 studies done and their results, concerning the product’s health, safety, and
21 environmental effects. 7 U.S.C. § 136a(c).

22 *New Uses of an Existing Pesticide*

23 46. FIFRA also provides for the registration not just of a pesticide
24 active ingredient, but also any “new uses” of an already registered pesticide,
25 such as here, over-the-top spraying of dicamba products on soy and cotton
26 engineered with resistance to the pesticide.

1 47. EPA must hold notice and comment for new use registrations.
2 FIFRA requires that EPA “shall publish” in the Federal Register a “notice of
3 receipt of application” and a “notice of issuance” for every pesticide product
4 registration that utilizes a “new active ingredient” or that entails a “changed
5 use pattern.” 7 U.S.C. § 136a(c)(4); 40 C.F.R. § 152.102.

6 48. A “new use” is defined to include, among other things, “any
7 additional use pattern that would result in a significant increase in the level
8 of exposure, or a change in the route of exposure, to the active ingredient of
9 man or other organisms.” 40 C.F.R. § 152.3. New uses include uses of “new
10 active ingredients, first food use, first outdoor use, first residential use, or
11 other actions of significant interest.”⁴

12 *Conditional Registration of New Uses*

13 49. In order to obtain registration, an applicant must submit
14 sufficient data concerning the pesticide’s health, safety, and environmental
15 effects, in order to ensure that EPA prohibits pesticides that would cause
16 unreasonable adverse effects on the environment. *Pollinator Stewardship*
17 *Council*, 806 F.3d at 523; 7 U.S.C § 136a(c)(5).

18 50. Sometimes, however, EPA may receive sufficient data to
19 determine that short-term use of a pesticide is reasonable, but that there is
20 not sufficient data supporting its long-term use. In these “special
21 circumstances,” EPA can grant a conditional registration of the pesticide or
22 pesticide new use. *See* 7 U.S.C. § 136a(c)(7).

23
24
25 ⁴ EPA, *Public Participation Process for Registration Actions*,
26 [https://www.epa.gov/pesticide-registration/public-participation-process-](https://www.epa.gov/pesticide-registration/public-participation-process-registration-actions)
27 [registration-actions](https://www.epa.gov/pesticide-registration/public-participation-process-registration-actions) (last visited Dec. 16, 2020).

1 51. For new uses like those at issue here, in the situation where
2 there are insufficient data for unconditional registration, Section 3(c)(7)(B)
3 authorizes EPA to “conditionally amend” the existing registration of a
4 pesticide to allow for new uses, while the missing data are prepared and
5 submitted. This is the type of action EPA took previously in the 2018
6 registration decision with regards to the dicamba pesticide products, the
7 decision vacated by the Ninth Circuit. *NFFC II*, 960 F.3d at 1133.

8 52. For such a conditional new use registration, EPA must find that,
9 notwithstanding the lack of data for unconditional registration, there are still
10 “satisfactory data pertaining to the proposed additional use.” 7 U.S.C.
11 § 136a(c)(7)(B). And EPA must find that the conditional new use amendment
12 will not “significantly increase the risk of any unreasonable adverse effect on
13 the environment.” *Id.*⁵

14 *Unconditional Registration*

15 53. On the other hand, unconditional registration is the type of
16 registration EPA granted in the challenged Registration Actions.

17 54. In contrast to conditional registration, unconditional registration
18 necessarily requires all data to evaluate the environmental risks. EPA must
19 “review[] all relevant data in [its] possession” and “determine[] that no
20 additional data are necessary” to its decision. 40 C.F.R. §§ 152.112(b), (c).

21
22 ⁵ There are two other types of conditional registrations which require
23 different findings from EPA: for “me too” pesticides, 7 U.S.C. § 136a(c)(7)(A),
24 which are substantially similar to existing registered pesticides; and
25 conditional registration for new active ingredients, 7 U.S.C. § 136a(c)(7)(C).
26 *See NRDC v. EPA*, 857 F.3d 1030 (9th Cir. 2017) (judicial review of a
27 conditional new active ingredient registration). Neither of these are at issue
28 here.

1 55. EPA can unconditionally register the pesticide only if it will “not
2 generally cause unreasonable adverse effects on the environment” and not do
3 so “when used in accordance with widespread and commonly recognized
4 practice.” *Id.* § 152.112(e).

5 56. In FIFRA’s legislative history, Congress stated that “[i]f a
6 pesticide is such that when used in accordance with its label or common
7 practice it is injurious to man, other vertebrates, or useful plants, it cannot be
8 registered under the Act and cannot be sold or distributed in interstate
9 commerce.” S. Rep. 838, 92d Cong. 2d Sess., *reprinted in* 1972 U.S.C.C.A.N.
10 3993, 3996.

11 57. As compared to conditional registration, unconditional
12 registration imposes a higher standard, both in terms of the data it requires
13 as well as its risk standard. Whereas for conditional only “satisfactory data”
14 are required, 7 U.S.C. § 136a(c)(7)(B), for unconditional, EPA must determine
15 that “no additional data are necessary.” 40 C.F.R. § 152.112(c).

16 58. Thus the required unconditional registration finding of no
17 “unreasonable adverse effects” is tied to two prerequisites: (1) that the
18 pesticide when used as approved will perform its intended function and that
19 (2) that its use in common and widespread practice will not cause
20 unreasonable adverse effects.

21 59. Whereas for conditional, EPA must only determine that the
22 conditional new use will not “significantly increase the risk of any
23 unreasonable adverse effect” beyond the already existing registration, 7
24 U.S.C. § 136a(c)(7)(B), an unconditional registration requires that EPA must
25 find the pesticide “will perform its intended function without unreasonable
26 adverse effects on the environment.” *Id.* § 136a(c)(5)(C). EPA must also find
27 that “when used in accordance with widespread and commonly recognized
28

1 practice [the pesticide] will not generally cause unreasonable adverse effects
2 on the environment.” *Id.* § 136a(c)(5)(D).

3 *Judicial Review*

4 60. Under FIFRA, final actions of EPA “not following a hearing,”
5 such as the Registration Actions at issue here, are “judicially reviewable by
6 the district courts of the United States. 7 U.S.C. § 136n(a). This Circuit has
7 explained that a “hearing” or “public hearing” within the meaning of FIFRA’s
8 judicial review provision is a “quasi-judicial” process to for fact-finding and
9 development of a complete record, a process that is not met by the submission
10 of written comments to the agency alone. *See United Farm Workers of Am. V.*
11 *EPA*, 592 F.3d 1080, 1087 (9th Cir. 2010). Judicial review must be “searching
12 and careful, subjecting the agency decision to close judicial scrutiny.”

13 *Containerfreight Corp. v. United States*, 752 F.2d 419, 422 (9th Cir. 1985).
14 EPA’s decision can only be upheld only if it is supported with “substantial
15 evidence” in the record. 7 U.S.C. § 136n(b); *see Pollinator Stewardship*
16 *Council*, 806 F.3d at 533 (stating that the standard of review under FIFRA is
17 whether the registration “is supported by substantial evidence when
18 considered on the record as a whole,” and that “[t]he substantial evidence
19 standard affords an agency less deference than the arbitrary and capricious
20 standard.”). The agency’s action may be upheld only on the “basis articulated
21 by the agency itself.” *Pollinator Stewardship Council*, 806 F.3d at 532
22 (quoting *Motor Vehicle Mfrs. Ass’n of the U.S., Inc. v. State Farm Mut. Auto.*
23 *Ins. Co.*, 463 U.S. 29, 50 (1983)).

24 *State Regulation of New Uses under FIFRA 24(c)*

25 61. Until the current decision, for several decades, EPA has
26 interpreted Section 24(c), 7 U.S.C. § 136v(c), as permitting states to take
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1 prompt action to address local agricultural, environmental, or public health
2 needs by adding further restrictions to federal pesticide labels.⁶

3 FIFRA Section 24(c) further provides: “A State may provide registration for
4 additional uses of federally registered pesticides formulated for distribution
5 and use within that State to meet special local needs in accord with the
6 purposes of this Act and if registration for such use has not previously been
7 denied, disapproved, or canceled by the Administrator.” 7 U.S.C § 136v(c)(1).

8 9 **Administrative Procedure Act**

10 62. The APA provides for judicial review of final agency actions.
11 “Agency action” is defined to include “the whole or a part of an agency rule,
12 order, license, sanction, relief, or the equivalent or denial thereof, or failure to
13 act.” 5 U.S.C. § 551(13). The APA provides that “[a] person suffering legal
14 wrong because of agency action, or adversely affected or aggrieved by agency
15 action within the meaning of a relevant statute, is entitled to judicial review
16 thereof.” *Id.* § 702.

17 63. Under the APA, a reviewing court shall “hold unlawful and set
18 aside agency action, findings, and conclusions” that it finds to be “arbitrary,
19 capricious, an abuse of discretion, or otherwise not in accordance with the
20 law” or “without observance of procedure required by law.” *Id.* §§ 706(2)(A),
21 (D).

22
23
24
25 ⁶ See EPA, *Guidance on FIFRA 24(c) Registrations*,
26 <https://www.epa.gov/pesticide-registration/guidance-fifra-24c-registrations>
27 (last visited Dec. 16, 2020)
28

1 64. Under the APA, an agency must publish notice of a proposed rule
2 in the Federal Register and provide comment opportunities to the public
3 before adopting a rule. *Id.* § 553(b), (c).

4 65. The APA defines “rule” as “the whole or a part of an agency
5 statement of general or particular applicability and future effect designed to
6 implement, interpret, or prescribe law or policy.” *Id.* § 551(4).

7 66. An agency must follow the procedures of the APA for a
8 substantive amendment of a prior regulation and cannot avoid the
9 procedures of the APA by taking action and calling that action a mere
10 guidance that interprets the existing regulation.

11 STATEMENT OF FACTS

12 **Dicamba**

13 67. Dicamba is an herbicide in the Benzoic Acid family used for
14 selective control of emerged broadleaf weeds. It is extremely toxic to all
15 broadleaf plants, including conventional cotton and soybean.
16

17 68. It can also damage or kill fruiting vegetables, fruit trees, grapes,
18 beans, peas, potatoes, tobacco, flowers, and ornamental plants. It can also
19 damage or kill many species of large trees, including oaks, elms, and maples.
20 Dicamba damage is easily identified by its signature marker: “leaf cupping.”

21 69. Consequently, EPA previously restricted dicamba’s soybean and
22 cotton uses to before planting (preplant) to clear a field of early-season weeds
23 and to season’s end to control late-season weeds (preharvest in soybeans,
24 postharvest in cotton); however, EPA had never allowed direct, over-the-top
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1 application to these crops during the critical growing seasons of spring and
2 summer.⁷

3 70. Monsanto licensed the gene that, when genetically engineered
4 into soybean and cotton crops, made them resistant to dicamba.
5 Concurrently, Monsanto and several other pesticide companies reformulated
6 dicamba herbicides for use on these engineered crops.

7 71. The challenged Registration Actions approve three dicamba
8 products for over-the-top spraying: XtendiMax (Monsanto/Bayer); Engenia
9 (BASF); and Tavium (Syngenta). These pesticide products are part of a crop
10 system, sold and used with genetically engineered, dicamba-resistant cotton
11 and soy seeds.

12 *Dicamba and Drift Harm*

13 72. Several dicamba properties render it much more likely than other
14 herbicides to cause widespread damage to plants and other organisms, both
15 on treated fields and in surrounding areas. First, as an auxin-mimicking
16 herbicide, dicamba is highly toxic to an extremely broad range of flowering
17 plants, including trees, shrubs, soybeans and cotton, as well as nearly all
18 vegetables and fruit crops.

19 73. Second, dicamba is also very potent, such that vanishingly small
20 amounts can cause considerable damage.

21 74. And third, while the majority of herbicides pose a drift threat
22 only when they are being applied, dicamba is extremely volatile and is known
23

24 ⁷ Post-emergent use of dicamba is limited to cereal crops that are
25 naturally tolerant of dicamba, such as corn or wheat, but even with these
26 crops applications must be made early in the growing season to avoid injury
27 that occurs when larger seedlings are sprayed.
28

1 to volatilize from soil and plant surfaces days after the initial application,
2 forming vapor clouds that drift and damage plants at great distances from
3 the application site.

4 75. Dicamba contaminates the environment via spray drift, vapor
5 drift, in rainfall, and in runoff from dicamba-treated fields. Such pollution
6 has ramped up dramatically with the over-the-top spraying dicamba
7 registrations. *See infra* ¶¶ 88-157.

8 76. Spray drift occurs during application. As dicamba spray solution
9 is forced under pressure through a nozzle, spray droplets are formed. Small
10 droplets remain aloft for considerable periods, and are carried by even
11 moderate winds to damage crops or wild plants in neighboring fields. Spray
12 drift damage increases with wind speed and is characterized by injury that
13 declines in severity with distance from the treated field.

14 77. Vapor drift arises from volatilization of dicamba, that is, its
15 conversion from liquid or solid form to vapor. Dicamba volatilizes during
16 spray operations, but also up to several days after an application, as dicamba
17 residues left on treated soil and plant surfaces evaporate. Vapor drift
18 increases with temperature, and thus is far more common with late spring
19 and summer over-the-top spraying of dicamba than with traditional preplant
20 use. Vapor drift is also worse under still conditions, with little or no wind,
21 which promote vapor accumulation. Finally, vapor drift is characterized by
22 broad-scale injury that is uniform in severity, fencerow to fencerow.

23 78. The damaging effects of spray and vapor drift increase
24 dramatically during a temperature inversion, an extremely common
25 atmospheric condition in which cool air at the earth's surface is trapped by
26 warmer air above it. The trapped cool air accumulates a concentrated cloud of
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1 dicamba spray droplets and vapor, which is then easily moved by light winds
2 to cause broad-scale injury to crops and plants near and far from areas of use.

3 79. Dicamba is also subject to atmospheric loading, where intensive
4 spraying by many farmers in a localized area results in substantial clouds of
5 airborne dicamba that can then, as with temperature inversions, move off-
6 field to cause widespread damage.

7 80. Dicamba can also damage off-field plants when rainfall washes it
8 out of the atmosphere and brings it down to earth.

9 81. Moreover, rainfall washes dicamba from the plant surfaces and
10 soil of a treated field into receiving streams and other water bodies, where it
11 can damage plants as a water contaminant.

12 82. The environmental risks from dicamba use are numerous.
13 Animals and plants, including threatened and endangered species, those in
14 danger of extinction, may be exposed to dicamba via atmospheric loading
15 (spray drift, volatilization), contamination of soils, and runoff from treated
16 fields.

17 83. Spray drift and volatilization of dicamba impacts vegetation near
18 crop fields, and also at a distance, impacting plants in many different
19 habitats as well as the animals that consume them and the larger ecosystem.

20 84. Mammals, birds, and insects are directly exposed to dicamba and
21 its far more toxic breakdown product, 3,6-dichlorosalicylic acid (DCSA),
22 through ingesting it in treated fields, through ingesting crop material that
23 leaves the field via wind or runoff, and through consuming insects that have
24 fed on crops contaminated with dicamba products.

25 85. Bees and other pollinators are at risk from direct exposure to
26 dicamba spray or vapor drift and by feeding on dicamba-sprayed crops and
27 other plants exposed to dicamba. Importantly, dicamba spray and vapor drift
28

1 can also impact pollinators indirectly, far beyond the treated field, by
2 suppressing the flowering plants they require for pollen and nectar.

3 86. Dicamba enters water bodies via runoff and drift, where it has
4 been frequently detected. Dicamba-laced runoff water can impact off-field
5 plants for weeks after application.

6 87. Dicamba also harms plants through its presence in rainwater.⁸ A
7 recent study of twelve sites in Missouri during the 2019 season revealed that,
8 at some sites, dicamba remained detectable throughout the season. The
9 detection of dicamba in rainwater directly correlated with adoption rates of
10 dicamba-resistant crops; areas with higher adoption had more dicamba in
11 rainwater. University of Missouri weed scientists determined that, in the
12 sites located in the southeastern corner of Missouri, the amounts in
13 rainwater were high enough to harm sensitive crops, especially with repeated
14 exposure.

15 16 **Chronological History and Procedural Background**

17 88. While dicamba has been sold in other forms since 1967, prior to
18 the 2016 new use registration actions for dicamba, dicamba uses on soybeans
19 and cotton were limited to pre-plant and pre-harvest applications in soybeans
20 and pre-plant and post-harvest applications in cotton. Monsanto (now Bayer)
21 first sought registrations for new uses of dicamba on genetically engineered
22

23
24 ⁸ Emily Unglesbee, *New 2,4-D and Dicamba Data: Four Things*
25 *Missouri Scientists Learned About 2,4-D and Dicamba in 2020*, Progressive
26 Farmer (Dec. 7, 2020),
[https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/12/07/four-
27 things-missouri-scientists-2-4.](https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/12/07/four-things-missouri-scientists-2-4)
28

1 soy and cotton in 2010 and 2012, originally seeking registration of a different
2 dicamba pesticide, M1691.

3 89. Monsanto and BASF developed new dicamba products, while
4 DuPont/Corteva obtained a license to market Monsanto's product under a
5 different name.

6 *Dramatic Dicamba Increases*

7 90. As shown in the graph below, from 2012-2016, farmers applied,
8 on average, 768,000 pounds of dicamba to soybeans and cotton, combined,
9 each year. In just the first year of dicamba's registration for over-the-top
10 spraying, dicamba usage on these crops rose to nearly 10 million pounds per
11 year. 2018-2020 saw further substantial increases. The 13 million pounds
12 applied to soybeans and nearly 5 million pounds sprayed on cotton
13 represented a more than 23-fold increase in the amount of dicamba sprayed
14 on these crops in just the second year over-the-top spraying was permitted.
15 The large volume of dicamba sprayed, and the spraying later in the season
16 when hot conditions exacerbated drift, had devastating consequences.

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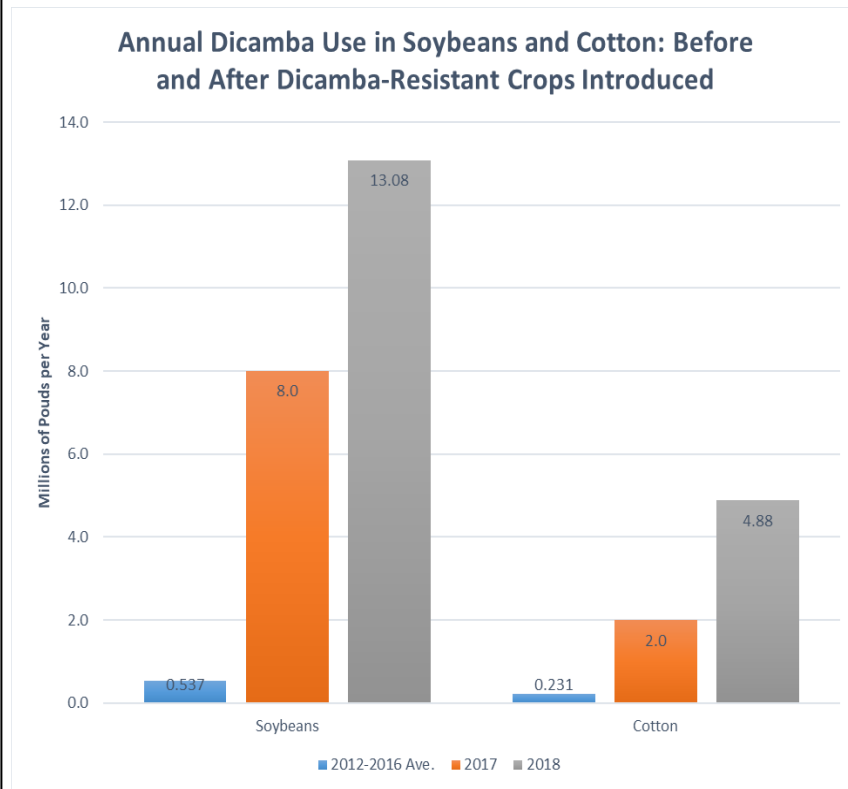
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13 Figure 1: Annual dicamba use for soybeans and cotton before dicamba-
14 resistant crops were introduced (average figure for 2012-2016) and the two
15 years after broad introduction (2017, 2018). Based on EPA figures.

16 *Dicamba Drift*

17 91. Monsanto knew of the serious drift threat posed by its dicamba-
18 resistant crop system for more than a decade, as it was extensively discussed
19 in meetings of the company's Dicamba Advisory Council as long ago as 2009.
20 Monsanto and its advisors not only foresaw drift damage, but anticipated
21 lawsuits ("neighbors suing each other"), and discussed possible measures to
22 address it, such as an "indemnity fund for crop loss." Rather than reconsider
23 its dicamba project, however, Monsanto decided that the threat of dicamba
24 drift damage could be exploited to market its seeds to soybean farmers "who
25 do not see value in [the dicamba-resistance] trait" for their own purposes.
26 These farmers would be "educated" into buying dicamba-resistant soybean
27
28

1 seeds to avoid drift damage arising from a neighbor's use of dicamba (*i.e.*
2 "Protection from your neighbor.")

3 92. In 2010, Monsanto officer John Soteres was developing
4 arguments to "defend[] dicamba relative to drift and volatilization to nearby
5 crops," noting that Monsanto would need to address these issues not only
6 with regulators, "but also potentially in the courts."

7 93. Agronomists studying dicamba drift informed EPA that
8 Monsanto's system would likely harm off-field plants, affecting organisms
9 that rely on those plants, including pollinators, via habitat loss. EPA was also
10 aware that dicamba use would increase with resistant crops and that
11 neighbors of dicamba users would plant resistant crops for self-defense.

12 94. Monsanto received further warnings of the damaging effects its
13 dicamba crop system would have in 2011. One of its employees wrote in a
14 summary of academic surveys the company commissioned, "DON'T DO IT;
15 expect lawsuits," while Del Monte Foods called the new system a "potential
16 disaster" in a 2011 letter.

17 95. Unsurprisingly Monsanto observed extensive dicamba drift
18 damage in its own field trials. From 2012-2014, the company reported to EPA
19 73 off-target incidents that occurred during its testing of M1691, the
20 precursor to XtendiMax that Monsanto first sought to register for over-the-
21 top use. Significant dicamba damage happened again in 2014 at a training
22 facility in Missouri. The Missouri Dept. of Agriculture informed EPA of two
23 incidents in 2013 and 2014, in which M1691 dicamba vapor caused drift
24 damage to non-resistant soybeans at 2,800 feet and 2.2 miles, respectively,
25 from treated fields of dicamba-resistant soy.

26 96. Instead of studying the issue further, Monsanto responded to
27 EPA's growing concern by halting its own field-testing of XtendiMax with
28 VaporGrip Technology in 2015. Monsanto also prohibited trials by

1 independent academics and expressed concerns to BASF about “how tightly
2 BASF controls the release of data by third parties.” EPA proposed a small
3 omnidirectional vapor drift buffer zone far smaller in width than the
4 distances it knew dicamba vapor could travel, but subsequently dropped even
5 this proposal.

6 97. In 2016, Monsanto elaborated upon its 2009 scheme of using
7 protection from drift damage as a marketing strategy. The company
8 conducted a careful analysis to project the number of dicamba damage
9 episodes—from 1,300 to over 3,200—that would occur in each of the first five
10 years of its system’s use and calculated the staff budget that would be
11 required for investigation of these complaints.

12 98. Similarly, in a September 2016 meeting, BASF also identified
13 “defensive planting” as a marketing strategy. That following January, BASF
14 had a market research document that confirmed the role of defensive
15 planting in contributing to sales.

16 *2016 Registration*

17 99. In November 2016, EPA conditionally registered three dicamba
18 products for new use under FIFRA section 3(c)(7)(B). The 2016 registration
19 greatly extended permissible times to spray dicamba deep into the hot
20 summer months, for the first time allowing a new use for post-emergent,
21 over-the-top applications to cotton and soybean crops genetically engineered
22 with resistance to the pesticide. *Id.* The registration covered millions of acres
23 in 34 states.

24 100. EPA based its 2016 registration on the supposition that the three
25 dicamba products were less volatile than prior dicamba formulations. Even
26 so, EPA found it necessary to impose a host of use instructions, a form of
27 mitigation, contained on a lengthy label. These instructions restricted
28

1 applications to a narrow range of wind speeds, required a downwind buffer,
2 stipulated a maximum spray boom height, and specified temperature and
3 humidity adjustments, among other instructions. EPA claimed these
4 instructions would “effectively limit” any impacts if followed.

5 101. These registrations were time-limited with two-year automatic
6 expiration dates “because of the concerns about resistance and off-target
7 movement,” unless EPA determined before that date that off-site incidents
8 were not occurring at “unacceptable frequencies or levels.”

9 102. At this time, Monsanto recognized its research left many
10 unanswered questions about the real-world risks posed by dicamba’s
11 volatility. In a February 2016 email to coworkers, a Monsanto researcher
12 wrote: “We don’t know how long a sensitive plant needs in a natural setting
13 to show volatility damage. We don’t know what concentration in the air
14 causes a response, either . . . There is a big difference for plants exposed to
15 dicamba vapor for 24 vs. 48 hours. Be careful using this externally.”⁹

16 103. BASF also knew dicamba still posed risks. A BASF executive
17 admitted that “from a practical standpoint” Engenia was not different from
18 older dicamba versions, and the company privately told applicators that drift
19 could harm farmers’ harvests.¹⁰ Monsanto responded to BASF’s admission
20 that volatility was an issue with an email from a Monsanto salesmen to
21
22

23 ⁹ Johnathan Hettinger, *‘Buy it or else’: Inside Monsanto and BASF’s*
24 *moves to force dicamba on farmers*, Midwest Center for Investigative
25 Reporting (Dec. 4, 2020), <https://investigatamidwest.org/2020/12/04/buy-it-or-else-inside-monsanto-and-basfs-moves-to-force-dicamba-on-farmers/>.

26 ¹⁰ *Id.*
27
28

1 coworkers stating: “We need to get on this right now . . . Deny! Deny!
2 DENY!”¹¹

3 104. In response to the registrations, Plaintiffs (then petitioners) filed
4 a petition for review to the Ninth Circuit in January 2017. That petition for
5 review, along with subsequent filings, argued that Defendants disregarded
6 environmental and crop harms from foreseeable off-field drift, failed to
7 consider socioeconomic impacts, and lacked substantial evidence to support
8 the registrations.

9 *The 2017 Growing Season*

10 105. Farmers began using the dicamba products for the first time
11 during the 2017 planting season under the new use registration. The events
12 that transpired were unprecedented in the history of U.S. agriculture.

13 106. In the registration decision, EPA had concluded that its label
14 mitigation was “expected to eliminate any offsite exposures.” But complaints
15 skyrocketed. By the end of the season Professor Kevin Bradley of the
16 University of Missouri issued a report finding 2,708 formal complaints
17 nationwide.

18 107. Based on estimates by university weed scientists, 2.5 million
19 acres of soybean were damaged by dicamba drift by mid-July, a figure rising
20 to 3.6 million acres by the end of the summer. This was about 4% of all
21 soybean acreage nationwide. And these numbers substantially under-
22 reported the total damage, since the majority of injured farmers do not report
23 drift incidents. In addition, a still higher percentage of susceptible soybeans
24

25
26 ¹¹ *Id.*

1 were injured: an astounding fifty percent of non-dicamba-resistant soybeans
2 in Illinois.

3 108. And this was just the soybean damage; many other crops were
4 also damaged, including tomatoes, melons, fruit and nut trees, and
5 vegetables, as well as residential gardens, shrubs, and trees. According to
6 Missouri weed science expert, Dr. Kevin Bradley, “[*w*]e have never seen
7 anything like this before . . . in our agricultural history.”

8 109. Numerous state agricultural departments also reported to EPA
9 extensive damage. University scientists expressed unanimous concern that
10 the dicamba products were more volatile than manufacturers admitted. One
11 of the key messages from state and academic experts was that the EPA label
12 restrictions were not working because they did not address volatility.

13 110. During this time, university scientists affirmed volatility, or
14 vapor drift, as one of the major routes of dicamba drift injury, based on air
15 sampling data, field volatility studies, and field visits. EPA received
16 extensive test results showing that, contrary to Monsanto’s claims, the
17 products volatilized for as many as 3 or 4 days following the application.

18 111. By late summer 2017, Monsanto and BASF began responding to
19 these damage reports by taking measures to shield themselves from
20 lawsuits.¹² Among other pretexts, Monsanto began to blame the damage on a
21 different BASF weed killer, glufosinate.¹³

22 112. Monsanto designed a form for investigators to use in looking into
23 farmer complaints, which would “gather data that could defend Monsanto.”¹⁴

24 ¹² *Id.*

25 ¹³ *Id.*

26 ¹⁴ *Id.*

1 BASF drafted a script for its investigators that directed them to deny liability
2 for drift damage and to assure the complainant that even severe damage
3 would not result in yield loss.

4 113. In internal communications in summer 2017, Monsanto made
5 clear it would only investigate a dicamba drift complaint if it came from a
6 Monsanto customer. It treated its employees' investigative visits to such
7 "driftees" as an opportunity to sell them dicamba-resistant seeds to avoid
8 crop injury from future drift.¹⁵ A Monsanto sales employee emailed: "I think
9 we can significantly grow business and have a positive effect on the outcome
10 of 2017 if we reach out to all the driftee people."¹⁶

11 *Minor Federal Label Adjustments for the 2018 Season*

12 114. Faced with the unprecedented 2017 summer of drift, and
13 pressured to take some action to stop it, in October 2017, EPA and Monsanto
14 amended the 2016 registration and added further new mitigation, use
15 instructions, and requirements. These label amendments included a
16 restricted use pesticide designation for the dicamba products, a lower
17 application wind speed limit, applicator training, greater record-keeping
18 burdens, and a ban on spraying from dusk to dawn.

19 115. However, EPA declared that the revised document "did not affect
20 the conclusions in the supporting assessment of risk," and that, rather than
21 provide any new data or analysis supporting the new measures' efficacy, EPA
22 "continue[d] to rely on all the assessments" supporting the original
23 registration." *NFFC II*, 960 F.3d at 1128. In other words, EPA continued to
24 rely on its 2016 conclusions and risk assessments.

25 ¹⁵ *Id.*

26 ¹⁶ *Id.*

1 116. Plaintiffs amended their petition for review to encompass these
2 new revisions to the registration.

3 117. In an October 19, 2017 email to officers of Monsanto, BASF, and
4 DuPont, Iowa State University weed scientist Micheal Owen explained that
5 the label amendments did not address volatility, which remained a
6 “significant risk.” He recommended only pre-emergence use of dicamba
7 products and concluded that “the risks attributable to the off-target
8 movement of dicamba applied postemergence are greater than the benefits,”
9 a viewpoint he said was shared by most academics and state regulatory
10 agencies.

11 *The 2018 Growing Season*

12 118. The 2017 label amendments failed to prevent continuing massive
13 dicamba drift damage in 2018. By July, Dr. Bradley reported an estimated
14 1.1 million acres of soybean damage in 18 states. The number of official
15 dicamba damage reports rose even higher than 2017 in the leading soybean-
16 production states of Iowa, Illinois, Indiana, Ohio, Nebraska, and North
17 Dakota. *NFFC II*, 960 F.3d at 1127-28.

18 119. Dicamba drift slowed the growth of affected soybeans and often
19 slashed yields, costing farmers many millions of dollars in lost revenue. The
20 damage was so severe that by late July 2018, the U.S.’s fourth largest
21 soybean seed seller wrote to EPA urging prohibition of over-the-top
22 applications of dicamba. Another university expert told EPA that the 2018
23 season demonstrated “*that minimizing the off target movement of dicamba to*
24 *a reasonable level is NOT possible.*” *NFFC II*, 960 F.3d at 1139 (emphasis
25 added).

26 120. Just as Monsanto and BASF had anticipated years before, the
27 widespread damage placed pressure on farmers to purchase dicamba-
28

1 resistant soybean seeds, not out of choice, but defensively, to protect
2 themselves from rampant dicamba drift damage. *NFFC II*, 960 F.3d at 1142.

3 121. However, growers of other crops, who lacked a dicamba-resistant
4 alternative, were left defenseless. As in 2017, dicamba caused extensive
5 damage to specialty crops, vegetables, tobacco, and fruit trees. For example, a
6 North Dakota vegetable farmer had his crops destroyed by successive waves
7 of dicamba drift. An Arkansas beekeeping operation experienced sharp
8 declines in honey production in areas hard-hit by dicamba drift, which
9 deprived his bees of sufficient flowering plants for their nectar needs, causing
10 him to move his operation out of state.

11 122. A second year of massive atmospheric loading of dicamba also
12 took a toll on residential and shade trees as well as other ornamental plants
13 throughout rural America.

14 123. Dicamba drift damage also provoked disputes between dicamba
15 users and those affected by drift, turning farmer against farmer, family
16 against family, tearing apart the fabric of rural communities. In at least one
17 case, a dicamba drift dispute resulted in a gunshot death.

18 124. Overall, two years of dicamba use in 2017 and 2018 resulted in
19 4,200 official complaints and more than 4.7 million acres of soybeans injured,
20 as well as scores of other plants and crops, including valuable specialty crops.

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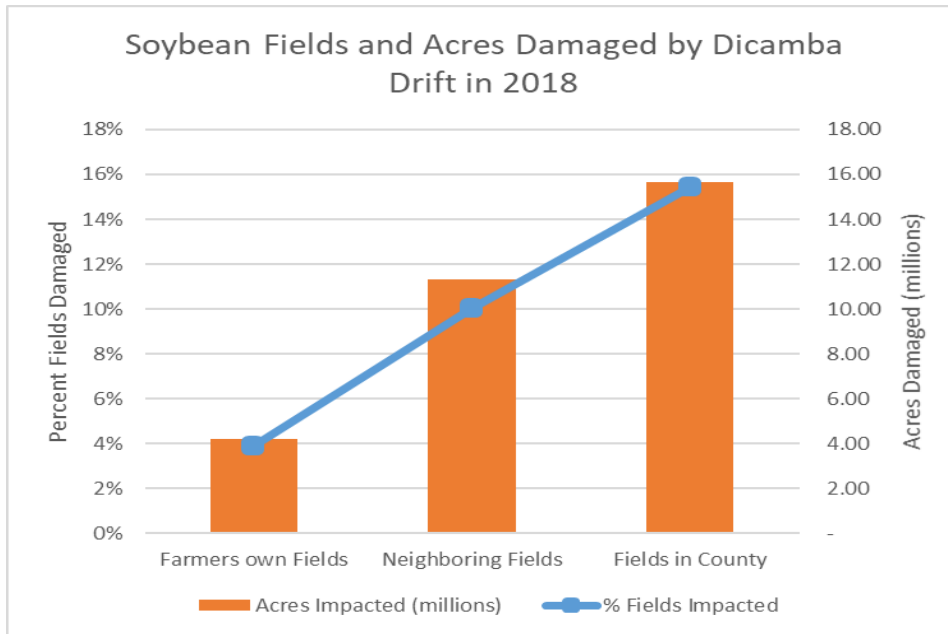
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11 Figure 2: Farmers in 19 major soybean states were surveyed by USDA and
12 reported dicamba damaged fields of their own, their neighbors', and in their
13 counties. Source: USDA Agricultural Resource Management Survey (2018),
14 as reported in EPA, *Dicamba Use on Genetically Modified Dicamba-Tolerant
(DT) Cotton and Soybean: Incidents and Impacts to Users and Non-Users
from Proposed Registrations 31, tbl. 8 (Oct. 26, 2020).*

15 125. These figures are substantial underestimates, however, since
16 only a small fraction of injured farmers report drift damage episodes. *NFFC*
17 *II*, 960 F.3d at 1138. Indeed, as shown in Figure 2, a USDA survey in 2018
18 found that soybean growers alone suffered at least 65,000 adverse effect
19 incidents to their own fields from dicamba drift, “25 times the number of
20 dicamba incidents reported to EPA for all crops.” Farmers reported still more
21 injury when queried about dicamba damage to their neighbors’ fields and in
22 their county, with damage rising to an astounding 10% and nearly 16% of
23 soybean fields, representing over 11 million and *nearly 16 million damaged*
24 *acres*, respectively. *See supra* fig. 2.

25 126. Some of the states that imposed restrictions over and above the
26 EPA label experienced substantial decreases in the number of complaints.
27 For example, in Minnesota in 2017, there were 250 complaints of dicamba
28

1 crop damage but in 2018 only 29. By contrast, other states that did not so
2 impose additional requirements had their complaints of dicamba injury rise.
3 Illinois, which did not impose any conditions, had 245 complaints in 2017, but
4 that number increased to 330 in 2018.

5 127. Despite these two years of unprecedented widespread drift
6 damage, in late October 2018, EPA continued the 2016 new use registration
7 for another 2 years. EPA continued the registration even though it did not
8 make a finding that drift damage episodes were not occurring at
9 “unacceptable frequencies or levels” – the condition that EPA had stipulated
10 for continuing the registration.

11 128. EPA for the first time assessed field studies of dicamba spray and
12 vapor drift conducted by university scientists from 2016 to 2018. These
13 twelve studies collectively revealed dicamba drift damage to susceptible off-
14 field plants at far greater distances than the registrant studies and modeling
15 EPA had relied upon for prior registrations. More than half of the studies
16 identified injury to plants at distances greater than 130 feet (39.6 m).

17 129. Based on these studies, EPA scientists provisionally
18 recommended expansion of the action area to 196 feet (60 meters) on all sides
19 of fields where overlap would be possible with endangered species’ range.
20 Once EPA scientists had confirmed the validity of an additional 2018 study,
21 which revealed injury to dicamba-sensitive soybeans 136 meters from the
22 edge of a treated field, they then recommended expansion of the action area
23 to 443 feet (135 meters) beyond the fields. Yet EPA added only a 57-foot
24 buffer, a buffer eight times smaller than recommended by the EPA’s
25 scientists, which is only required in the minority of counties with listed
26 species (8% of counties).

27 130. EPA also again added detailed use mitigation instructions, such
28 as further limiting the time of day when application could be made, limiting

1 the number of applications and the length of time after planting the
2 application could be made, and allowing only certified applicators to make
3 applications. *NFFC II*, 960 F.3d at 1130.

4 *The 2019 and 2020 Growing Seasons*

5 131. The 2019 and 2020 summer growing seasons followed the same
6 damaging drift patterns as those prior: drift damage to crops, trees, gardens,
7 and the environment generally; real world farming conditions making it
8 impossible to effectively and lawfully spray; state regulators overwhelmed
9 with injury complaints even as farmers stopped filing them feeling them
10 futile; and more farmers forced to defensively adopt dicamba-resistant
11 soybeans.

12 *2019 Reported Injuries*

13 132. Nearly 5,600 farmers reported dicamba damage to Bayer and
14 BASF, makers of dicamba, from 2017-2019.¹⁷ EPA estimates this could be as
15 much as a 25-fold underreporting of incidents. In 2019, nearly 3,000 drift
16 incidents were reported to EPA. Ex. A, at 9.

17 133. According to AAPCO, there was approximately a *10% increase* in
18 reported incidents as compared to 2018. *Id.*

19 134. Compared to prior years, 2019 was “*as bad, if not worse, than last*
20 *year*,” according to Leo Reed, president-elect of the Association of American
21
22

23 ¹⁷ Johnathan Hettinger, *EPA documents show dicamba damage worse*
24 *than previously thought*, Midwest Center for Investigative Reporting (Oct.
25 30, 2020), [https://www.stltoday.com/news/local/state-and-regional/epa-](https://www.stltoday.com/news/local/state-and-regional/epa-documents-show-dicamba-damage-worse-than-previously-thought/article_36f21c52-7459-5ee0-8bae-21bf5e9f89d2.html)
26 [documents-show-dicamba-damage-worse-than-previously-](https://www.stltoday.com/news/local/state-and-regional/epa-documents-show-dicamba-damage-worse-than-previously-thought/article_36f21c52-7459-5ee0-8bae-21bf5e9f89d2.html)
27 [thought/article_36f21c52-7459-5ee0-8bae-21bf5e9f89d2.html](https://www.stltoday.com/news/local/state-and-regional/epa-documents-show-dicamba-damage-worse-than-previously-thought/article_36f21c52-7459-5ee0-8bae-21bf5e9f89d2.html).
28

1 Pesticide Control Officials (AAPCO) and pesticide licensing manager for the
2 Office of Indiana State Chemist.¹⁸

3 135. In Illinois, the number of complaints soared from about 120 in
4 the pre-dicamba era to more than 700. In Indiana, it went from 60 to 200.¹⁹

5 136. Illinois led the country in dicamba injury, with regulators
6 actively investigating 724 cases of alleged dicamba injury, a record for the
7 state.²⁰ Illinois regulators mentioned that you would be hard-pressed to find
8 a non-dicamba-resistant soybean field in some counties that was not
9 damaged because there were whole counties that appeared to be damaged.

10 137. With the exception of Missouri, most of the states in EPA Region
11 7 (Iowa, Kansas, Missouri, and Nebraska) investigated as many or more
12 injury cases in 2019 than 2018.²¹ In Indiana, dicamba drift complaints rose
13 from 135 in 2018 to 178 in 2019.²²

14
15 ¹⁸ Emily Unglesbee, *EPA Gets Limited Dicamba Data*, Progressive
16 Farmer (Aug. 20, 2019),
17 [https://www.dtnpf.com/agriculture/web/ag/crops/article/2019/08/20/dicamba-](https://www.dtnpf.com/agriculture/web/ag/crops/article/2019/08/20/dicamba-injury-complaints-rise-epa)
[injury-complaints-rise-epa.](https://www.dtnpf.com/agriculture/web/ag/crops/article/2019/08/20/dicamba-injury-complaints-rise-epa)

18 ¹⁹ Dan Charles, *Pesticide Police, Overwhelmed By Dicamba*
19 *Complaints, Ask EPA For Help*, NPR (Feb. 6, 2020),
20 [https://www.npr.org/sections/thesalt/2020/02/06/800397488/pesticide-police-](https://www.npr.org/sections/thesalt/2020/02/06/800397488/pesticide-police-overwhelmed-by-dicamba-complaints-ask-epa-for-help)
[overwhelmed-by-dicamba-complaints-ask-epa-for-help.](https://www.npr.org/sections/thesalt/2020/02/06/800397488/pesticide-police-overwhelmed-by-dicamba-complaints-ask-epa-for-help)

21 ²⁰ Emily Unglesbee, *Dicamba Fatigue*, Progressive Farmer (Dec. 9,
22 2019),
23 [https://www.dtnpf.com/agriculture/web/ag/crops/article/2019/12/10/states-](https://www.dtnpf.com/agriculture/web/ag/crops/article/2019/12/10/states-report-another-year-dicamba)
[report-another-year-dicamba.](https://www.dtnpf.com/agriculture/web/ag/crops/article/2019/12/10/states-report-another-year-dicamba)

24 ²¹ *Id.*

25 ²² Robert D. Waltz, *Analysis of Off-Target Movement of Dicamba*
26 *Herbicides in Indiana*, The Office of Indiana State Chemist (Oct. 30, 2019),
27 [https://www.oisc.purdue.edu/pesticide/iprb/iprb_159_dicamba_24c_analysis.p](https://www.oisc.purdue.edu/pesticide/iprb/iprb_159_dicamba_24c_analysis.pdf)
28 [df.](https://www.oisc.purdue.edu/pesticide/iprb/iprb_159_dicamba_24c_analysis.pdf)

1 138. Despite the exponential numbers of reported injuries, these
2 numbers nonetheless discount the actual drift incidents dramatically.²³ In
3 states like Missouri, complaint numbers went down, but almost certainly not
4 because drift stopped. Rather, according to a 2019 survey of farmers in
5 Missouri, 80% of them are not bothering to file formal complaints anymore, in
6 large part because they do not think it does any good.²⁴ All but one of
7 Missouri's eight pesticide inspectors left their jobs in 2018-2019, with heavy
8 workload and burnout as contributing factors.

9 139. A survey of farmers across 60 counties in Nebraska found that
10 only 7% of farmers who saw dicamba injury filed an official complaint with
11 the Nebraska Department of Agriculture.²⁵

12 140. Similarly, in a survey conducted by AAPCO, 19 states reported
13 nearly 1,400 cases of alleged dicamba injury in 2019.²⁶ The regulators from
14 these states acknowledged that these numbers are likely far lower than the
15 actual cases of injury. "We're hearing the same thing as other regulators—
16 people are just not reporting," said Ryan Williams, an Oklahoma pesticide
17 regulator who represented the EPA Region 6 states of Arkansas, Louisiana,

18
19 ²³ Kevin Bradley, *Your Dicamba Report Card*, University of Missouri
20 (2019), [https://plantsciencesweb.missouri.edu/cmc/pdf/2019/bradley-](https://plantsciencesweb.missouri.edu/cmc/pdf/2019/bradley-dicamba.pdf)
21 [dicamba.pdf](https://plantsciencesweb.missouri.edu/cmc/pdf/2019/bradley-dicamba.pdf).

22 ²⁴ Charles, *supra* n. 19.

23 ²⁵ Rodrigo Werle et al., *Survey of Nebraska Farmers' Adoption of*
24 *Dicamba-Resistant Soybean Technology and Dicamba Off-Target Movement*,
25 *32 Weed Technology* 754 (Dec. 2018),
26 [https://www.cambridge.org/core/journals/weed-technology/article/abs/survey-](https://www.cambridge.org/core/journals/weed-technology/article/abs/survey-of-nebraska-farmers-adoption-of-dicambaresistant-soybean-technology-and-dicamba-offtarget-movement/7BBA31C5FB37C66E6E413EA025098812)
27 [of-nebraska-farmers-adoption-of-dicambaresistant-soybean-technology-and-](https://www.cambridge.org/core/journals/weed-technology/article/abs/survey-of-nebraska-farmers-adoption-of-dicambaresistant-soybean-technology-and-dicamba-offtarget-movement/7BBA31C5FB37C66E6E413EA025098812)
28 [dicamba-offtarget-movement/7BBA31C5FB37C66E6E413EA025098812](https://www.cambridge.org/core/journals/weed-technology/article/abs/survey-of-nebraska-farmers-adoption-of-dicambaresistant-soybean-technology-and-dicamba-offtarget-movement/7BBA31C5FB37C66E6E413EA025098812).

²⁶ Unglesbee, *supra* n. 20.

1 New Mexico, Oklahoma, and Texas at the meeting. “*They’re tired of reporting*
2 *and not getting any results.*”

3 141. The extraordinary costs from dicamba injury was felt upon state
4 agencies as well. Indiana regulators investigated 178 injury cases in 2019,
5 another state record.²⁷ Investigations of dicamba injury in the past few years
6 have caused a ballooning budget for the Office of the Indiana State Chemist,
7 but have produced few clear-cut answers for the state’s farmers. The EPA
8 spent \$2.2 million investigating dicamba injury.

9 142. The Missouri Department of Agriculture has indicated it will add
10 six new positions to get a handle on its dicamba backlog, expected to cost over
11 \$600,000 a year.²⁸

12 143. Communication with EPA over dicamba problems hit an all-time
13 low in 2019.²⁹ Unlike the weekly conference calls and data reporting of 2018,
14 very little regular communication between state regulators and EPA occurred
15 in 2019.

16 144. States have also reported environmental harm beyond crop fields
17 from 2018-2020.³⁰ Illinois reported that their Department of Natural
18 Resources noticed a decline in tree health and was investigating. Nebraska
19 state foresters saw an increase in damage to the state’s trees. South Dakota
20 State University Extension scientists analyzed samples from injured trees as

21 ²⁷ *Id.*

22 ²⁸ Brendan Crowley, *Hundreds seeking dicamba complaint resolutions;*
23 *regulators say they need help* (Mar. 3, 2020),
24 [https://www.joplinglobe.com/news/local_news/hundreds-seeking-dicamba-](https://www.joplinglobe.com/news/local_news/hundreds-seeking-dicamba-complaint-resolutions-regulators-say-they-need-help/article_a123cc30-caa7-5c7b-bc7b-d6f7f6274304.html)
25 [complaint-resolutions-regulators-say-they-need-help/article_a123cc30-caa7-](https://www.joplinglobe.com/news/local_news/hundreds-seeking-dicamba-complaint-resolutions-regulators-say-they-need-help/article_a123cc30-caa7-5c7b-bc7b-d6f7f6274304.html)
26 [5c7b-bc7b-d6f7f6274304.html](https://www.joplinglobe.com/news/local_news/hundreds-seeking-dicamba-complaint-resolutions-regulators-say-they-need-help/article_a123cc30-caa7-5c7b-bc7b-d6f7f6274304.html).

27 ²⁹ Unglesbee, *supra* n.20.

28 ³⁰ *Id.*

1 part of a multi-state study on the long-term effects of herbicide injury on
2 trees.

3 145. In some areas, the damage is so severe that tree mortality is
4 higher than from the Emerald Ash Borer, an insect that has killed tens of
5 millions of trees across 25 states, experts said.³¹ “Our No. 1 problem on our
6 trees is herbicide damage,” said Laurie Stepanek, forest health specialist
7 with the Nebraska Forest Service. Stepanek said the damage has no
8 boundaries, ranging from urban communities to native forests to tree
9 nurseries. “We’ve got it everywhere, unfortunately. It’s so widespread and
10 affecting so many trees.”

11 146. Lou Nelms, a retired biologist and former nursery owner who has
12 documented tree injury in central Illinois for five straight years, has been
13 finding injured sycamore trees in the middle of downtown areas across
14 central Illinois, as far as a mile and a half from the closest crops.³² Lab
15 samples confirmed that dicamba was present.

16 147. Research out of the University of Missouri found that 1/200th of
17 the current dicamba application concentration can injure trees, with apple,
18 red maple, peach, and pin oak being the most sensitive.³³ Pecan trees were

19 ³¹ Johnathan Hettinger, *‘We’ve got it everywhere’: Dicamba damaging*
20 *trees across Midwest and South*, Midwest Center for Investigative Reporting
21 (June 16, 2020), <https://investigatamidwest.org/2020/06/16/weve-got-it-everywhere-dicamba-damaging-trees-across-midwest-and-south/>.

22 ³² *Id.*

23 ³³ Brian R. Dintelmann et al, *Investigations of the sensitivity of*
24 *ornamental, fruit, and nut plant species to driftable rates of 2,4-D and*
25 *dicamba*, 34 *Weed Technology* 331 (June 2020),
26 [https://www.cambridge.org/core/journals/weed-](https://www.cambridge.org/core/journals/weed-technology/article/abs/investigations-of-the-sensitivity-of-ornamental-fruit-and-nut-plant-species-to-driftable-rates-of-24d-and-dicamba/73EACCF936DD92308C28D0AFD62EA2E1)
27 [technology/article/abs/investigations-of-the-sensitivity-of-ornamental-fruit-](https://www.cambridge.org/core/journals/weed-technology/article/abs/investigations-of-the-sensitivity-of-ornamental-fruit-and-nut-plant-species-to-driftable-rates-of-24d-and-dicamba/73EACCF936DD92308C28D0AFD62EA2E1)
28 [and-nut-plant-species-to-driftable-rates-of-24d-and-](https://www.cambridge.org/core/journals/weed-technology/article/abs/investigations-of-the-sensitivity-of-ornamental-fruit-and-nut-plant-species-to-driftable-rates-of-24d-and-dicamba/73EACCF936DD92308C28D0AFD62EA2E1)
[dicamba/73EACCF936DD92308C28D0AFD62EA2E1.](https://www.cambridge.org/core/journals/weed-technology/article/abs/investigations-of-the-sensitivity-of-ornamental-fruit-and-nut-plant-species-to-driftable-rates-of-24d-and-dicamba/73EACCF936DD92308C28D0AFD62EA2E1)

1 found to be similarly sensitive,³⁴ and the University of Georgia extension
2 office estimates that synthetic auxins (dicamba, 2,4-D) score an 8 out of 10 for
3 their potential to contribute to long-term injury to pecan trees.³⁵

4 148. Monitoring by the Arkansas Audubon Society identified 243
5 instances of possible or probable dicamba damage on a wide variety of plants
6 across 17 eastern Arkansas counties in 2019.³⁶ Similar monitoring in 2020
7 identified 116 instances of probable dicamba damage and 4 instances of
8 possible dicamba damage. Eleven monitored sites where damage was
9 documented in 2019 had signs of damage in 2020 as well, indicating that
10 damage to species was occurring in multiple years. The most frequently
11 reported species of plant with probable damage was the sycamore tree.

12 149. Another 2019 monitoring study across 21 Illinois counties found
13 that 59 out of the 83 locations analyzed had dicamba damage that was rated
14 as moderate, severe, or extreme.³⁷ Trees were the type of plant that most
15 often showed symptoms of damage.

16 ³⁴ M. Lenny Wells et al., *Simulated Single Drift Events of 2,4-D and*
17 *Dicamba on Pecan Trees*, 29 HortTechnology 360 (Apr. 2, 2019),
18 [https://journals.ashs.org/horttech/view/journals/horttech/29/3/article-](https://journals.ashs.org/horttech/view/journals/horttech/29/3/article-p360.xml)
19 [p360.xml](https://journals.ashs.org/horttech/view/journals/horttech/29/3/article-p360.xml).

20 ³⁵ Lenny Wells, *Herbicide Injury of Pecan Trees*, UGA Cooperative
21 Extension Circular (Apr. 2019),
22 https://secure.caes.uga.edu/extension/publications/files/pdf/C%201146_1.PDF.

23 ³⁶ Dan Scheiman, *Dicamba Symptomology Community Science*
24 *Monitoring Report*, Audubon Arkansas (Nov. 9, 2020),
25 https://ar.audubon.org/sites/default/files/static_pages/attachments/community
26 [_science_monitoring_report_1920.pdf](https://ar.audubon.org/sites/default/files/static_pages/attachments/community).

27 ³⁷ Kim Erndt-Pitcher & Martin Kemper, *Tree and Plant Health*
28 *Monitoring Report*, Prairie Rivers Network (2018-2019),
[https://prairierivers.org/wp-content/uploads/2020/07/Tree-and-Plant-Health-](https://prairierivers.org/wp-content/uploads/2020/07/Tree-and-Plant-Health-Monitoring-Report.pdf)
[Monitoring-Report.pdf](https://prairierivers.org/wp-content/uploads/2020/07/Tree-and-Plant-Health-Monitoring-Report.pdf).

1 150. Ohio State University extension states that “For woody plants
2 and other perennial species, the potential for long-term or accumulating
3 effects is a concern. Herbicide drift may reduce winter hardiness and long-
4 term vigor, which can result in high replacement costs and years of lost
5 revenue waiting for new plants to produce.”³⁸

6 151. More than 60 areas managed by the Illinois Department of
7 Natural Resource, including state parks and nature preserves, reported
8 herbicide damage in 2018 or 2019.³⁹

9 *2020 Injuries*

10 152. By July 2020, scientists said weather conditions had made a
11 “perfect storm” leading to drift from June spraying. “*It’s far worse than past*
12 *years,*” said Meaghan Anderson, a field agronomist for Iowa State University,
13 based in central Iowa.⁴⁰ “You can tell pretty quickly which soybean fields are
14 not Xtend soybeans in my area, because they are all cupped and puckered
15 up.”⁴¹

16 153. States continued to struggle with dicamba damage in 2020. For
17 example, Iowa recorded a record-high 215 investigations into auxin injury
18

19 ³⁸ Cassandra Brown et al., *Frequently Asked Questions*, Ohio State
20 University College of Food, Agricultural, and Environmental Sciences,
21 [https://ipm-drift.cfaes.ohio-state.edu/dicamba-and-24-d-fact-sheet-](https://ipm-drift.cfaes.ohio-state.edu/dicamba-and-24-d-fact-sheet-series/frequently-asked-questions)
22 [series/frequently-asked-questions](https://ipm-drift.cfaes.ohio-state.edu/dicamba-and-24-d-fact-sheet-series/frequently-asked-questions).

23 ³⁹ Hettinger, *supra* n. 31.

24 ⁴⁰ Emily Unglesbee, *Off-Target, Once Again*, Progressive Farmer (July
25 9, 2020),
[https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/07/09/amid-](https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/07/09/amid-legal-limbo-dicamba-injury-rise)
26 [legal-limbo-dicamba-injury-rise](https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/07/09/amid-legal-limbo-dicamba-injury-rise).

27 ⁴¹ *Id.*

1 (potentially dicamba), up from a confirmed 83 dicamba injury cases in the
2 state in 2019.⁴²

3 154. In 2020, complaints increased in Minnesota as compared to 2018
4 and 2019 to over 9,000 acres, most related to soybeans, but also involving
5 trees and specialty crops.⁴³

6 155. Bayer/Monsanto received more complaints in 2020 from Iowa and
7 Minnesota than in prior years.⁴⁴

8 156. In Indiana, the number of 2020 dicamba complaints still
9 exceeded the state's overall average of 13 annual pesticide investigations
10 before dicamba-resistant crops were commercialized.⁴⁵

11 157. The label remained impossible to follow in real world farming
12 conditions. For example, data compiled by the University of Minnesota
13 showed that central Minnesota farmers had fewer than 40 hours when they
14 could legally apply dicamba from June 1 to June 15.⁴⁶ During the ideal two-
15 week window for spraying dicamba in North Central Iowa in 2020, there
16

17 ⁴² Emily Unglesbee, *EPA Registers Dicamba Again*, Progressive Farmer
18 (Oct. 27, 2020),
19 [https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/10/27/epa-
20 approves-three-dicamba-federal](https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/10/27/epa-approves-three-dicamba-federal)

21 ⁴³ Gil Gullickson, *Dicamba: Sunrise or Sunset?*, Successful Farming
22 (October 7, 2020), [https://www.agriculture.com/news/crops/dicamba-sunrise-
23 or-sunset](https://www.agriculture.com/news/crops/dicamba-sunrise-or-sunset).

24 ⁴⁴ *Id.*

25 ⁴⁵ Emily Unglesbee, *States Mull 2021 Dicamba Limits*, Progressive
26 Farmer (Dec. 8, 2020),
27 [https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/12/08/states-
28 working-restrict-dicamba-2021](https://www.dtnpf.com/agriculture/web/ag/crops/article/2020/12/08/states-working-restrict-dicamba-2021).

⁴⁶ Gullickson, *supra* n. 43.

1 were *only a total of 40 hours that dicamba could legally be sprayed*, “resulting
2 in large quantities of dicamba being applied in a small time period.”⁴⁷

3
4 **The Ninth Circuit 2020 Decision in *NFFC v. EPA*, 960 F.3d 1120 (9th Cir.
5 2020)**

6 158. The 2017 case completed briefing, and the Court heard oral
7 argument in August 2018. However, before the Court could issue a decision
8 EPA continued the registration in fall 2018. The Court subsequently
9 dismissed Plaintiffs’ petition for review as moot. Plaintiffs then filed their
10 petition for review of the October 2018 registration, which the Court
11 expedited. *NFFC II*, 960 F.3d at 1130.

12 159. The Court held oral argument in April 2020 and in June 2020
13 handed down its opinion, holding that EPA violated FIFRA in granting the
14 prior dicamba product registrations and vacating them. *NFFC II*, 960 F.3d at
15 1120-1145.⁴⁸

16 *Conditional Registration Standard*

17 160. Because it was a conditional new use registration, the Court
18 explained that EPA had to make two determinations: a determination that
19 the applicant had submitted satisfactory data and a determination that the
20 registration would not “significantly increase the risk of any unreasonable
21

22 ⁴⁷ Bob Hartzler & Prashant Jha, *Dicamba 2020: What went wrong in*
23 *Iowa?*, Iowa State University (July 8, 2020),
24 <https://crops.extension.iastate.edu/blog/bob-hartzler-prashant-jha/dicamba-2020-what-went-wrong-iowa>.

25 ⁴⁸ Because the Court ruled in Plaintiffs’ favor on the FIFRA arguments,
26 it did not need to reach the question of whether the registration also violated
27 the ESA. *NFFC II*, 960 F.3d at 1125.
28

1 adverse effect on the environment.” *Id.* at 1124 (citing 7 U.S.C.
2 § 136a(c)(7)(B)); *id.* at 1133 (“We conclude that substantial evidence does not
3 support the EPA’s conclusion that both statutory prerequisites were
4 satisfied.”).

5 *Flawed Data*

6 161. On the “satisfactory data” finding, and studies on the herbicide
7 products, the Court noted that Monsanto, prior to the 2016 registration, did
8 not permit its herbicide formulation or its volatility to be available for
9 independent study, so the few small field trials were all done by Monsanto.
10 *NFFC II*, 960 F.3d at 1134. Based on these studies, EPA had concluded in
11 2016 that the dicamba products would “eliminate any offsite exposures and
12 effectively prevent risk potential to people and non-target species” and that
13 the products “created minimal risks, if they existed at all.” *Id.* However the
14 Court explained “EPA’s conclusion was incorrect” as the record of massive
15 drift damage in 2017 and 2018 showed and “EPA later acknowledged.” *Id.*

16 162. Later, Monsanto and EPA added other studies it characterized as
17 “confirmatory,” that is, confirming the data used to support the 2016
18 registration; but, as explained above, that 2016 data, far from being
19 satisfactory, had instead “of course, resulted in millions of acres of reported
20 dicamba damage.” *Id.* at 1135.

21 163. EPA also relied on hundreds of telephone reports of injury to
22 Monsanto, for which Monsanto almost entirely “absolved” its product and
23 instead blamed the drift damage on older formulations of dicamba used on
24 adjacent post-emergent corn fields. *Id.* The Court concluded that explanation
25 “however is not supported by the data,” because those older varieties had
26 been in use for a number of years and neither EPA nor Monsanto explained
27 why “*the number of herbicide drift complaints had skyrocketed* in 2017 and
28

1 2018, after XtendiMax, Engenia, and FeXapan were registered for post-
2 emergent use.” *Id.* (emphasis added). In fact, record evidence showed that the
3 use of older dicamba formulations on corn had been falling, not rising and
4 was only used on about 12% of corn acreage. *Id.* Finally, the record data also
5 included research conducted by various universities such as Arkansas,
6 Purdue, Wisconsin-Madison, Michigan State, and Nebraska in 2018 when
7 Monsanto finally permitted them to undertake independent studies of
8 volatility. However, rather than support EPA’s conclusions, that data showed
9 that the over-the-top dicamba formulations actually “could volatize and drift,
10 resulting in visual injury to plants.” *Id.*

11 164. While the Court held that EPA’s data had “several flaws,” *id.* at
12 1124, it ultimately did not need to determine whether substantial evidence
13 supported that finding, because it held that EPA did not support with
14 substantial evidence the no “unreasonable adverse effect” finding, for
15 multiple reasons. *Id.*

16 *Failure to Support Registration with Substantial Evidence*

17 165. The Court made 6 different FIFRA holdings with supporting
18 factual findings, separated into 2 parts of 3 each. First, EPA “substantially
19 understated three risks it acknowledged.” *Id.* Second, EPA “also entirely
20 failed to acknowledge three other risks.” *Id.*

21 *Substantially Understated Risks*

22 166. As to the first trio of violations—those risks EPA at least
23 acknowledged but failed to support with substantial evidence—first, the
24 Court held that EPA “substantially understated” the amount of dicamba-
25 resistant seed acreage that would be planted, correspondingly “the amount of
26 dicamba herbicide that had been sprayed on post-emergent crops.” *Id.*

27 Specifically the Court held that EPA relied on a Monsanto prediction and
28

1 that “reliance was improper” because the record showed it was at least a 25%
2 underestimate of the actual dicamba-resistant seed acreage and
3 commensurately the amount of dicamba herbicide applied. *Id.* at 1136.

4 167. Second, the Court held that EPA’s conclusion that state dicamba
5 drift injury reports “could have either under-reported or over-reported” the
6 actual amount of damage was not supported by substantial evidence because
7 “the record clearly shows that complaints understated the amount of dicamba
8 damage.” *Id.* at 1137. According to EPA’s own documents, drift injury
9 complaints spiked in 2017 and 2018, and EPA had “no explanation for the
10 spike other than” the new over-the-top products. *Id.*

11 168. EPA improperly attempted to minimize “the significance of the
12 increase in complaints” by crediting a view that injuries could be being over-
13 reported. EPA admitted that many stakeholders—the Association of
14 American Pesticide Control Officials, university researchers, and some
15 growers—said the complaints were under-reported, but EPA declared that
16 “others” instead believed injuries were being over-reported. *Id.* at 1137.
17 However, the Court examined the record, which showed that “Monsanto, and
18 only Monsanto, was the ‘others’” on which EPA opaquely relied. *Id.* Monsanto
19 speculated that the damage was caused by older dicamba or other herbicides
20 used on nearby corn fields, but the Court determined, as explained above,
21 that corn use was decreasing, and dicamba damage is easily detected from
22 other herbicides by a signature “leaf cupping” on affected plants. *Id.*

23 169. The Court held that EPA’s “purported agnosticism” as to the
24 damage being over or under reported was “contradicted by *overwhelming*
25 *record evidence that dicamba damage was substantially under-reported.*” *Id.*
26 (emphasis added).

1 170. For example, the Court pointed to the conclusion of an Iowa State
2 professor, Robert Hartzler, who surveyed university field agronomists and
3 sent EPA his conclusion that “We know the reported incidences represent a
4 very small fraction of total drift cases. As farmers are reluctant to involve
5 regulatory agencies.” *Id.* at 1138 (concluding that less than 25% were
6 reported). Similarly, an Indiana state chemist estimated that only 1 out of 10
7 farmers damaged by dicamba drift actually filed complaints. *Id.* In record
8 documents, EPA itself had even admitted that “not all reports of crop damage
9 were reported.” *Id.* If complaints to state departments of agriculture were
10 under-reported, then “the amount of actual dicamba damage was, of course,
11 even greater” than what EPA’s 2018 decision document admitted. *Id.*

12 171. Third, EPA “refused to quantify or estimate the amount of
13 damage caused” or “even to admit that there was any damage at all.” *Id.* EPA
14 claimed that non-dicamba-resistant soybean crop damage was merely
15 “potential” and that it did “not have information” to quantify the damages. *Id.*
16 With regards to all other crops, damage to specialty crops, vegetable, and
17 ornamental, fruit, and shade trees, EPA referred to them generally as only
18 “alleged” damage to the “landscape.” *Id.*

19 172. The Court held that EPA in fact did have “information from
20 which it could have quantified dicamba damage, even if it could not have
21 calculated with precision the reduction in yield caused by the damage.” *Id.*
22 EPA officials *themselves* had given a September 2018 PowerPoint
23 presentation that showed in 2017 that more than 3.6 million acres of
24 soybeans were damaged by dicamba, and in the registration decision EPA
25 again used the 3.6 million figure. The same source, Professor Bradley of the
26 University of Missouri, had reported that by mid-July 2018, already another
27 1.1 million acres had been damaged. *Id.*

1 173. The Court held that EPA also actually had a “great deal of
2 quantitative information about extensive dicamba damage during both 2017
3 and 2018.” *Id.* The Court again held that EPA’s decision was contrary to the
4 record. EPA did have sufficient information to quantify the damage,
5 including a number of studies, presentations, articles, and other
6 documentation which included acreage totals and significant numbers of
7 complaints. *Id.*

8 174. Among them, the Court pointed to emails to EPA officials from
9 university weed scientists and state department of agriculture
10 representatives reporting injury to “specialty crops, vegetables, and
11 ornamental, fruit, and shade trees.” *Id.* The Court recounted numerous
12 transmittals from state experts to EPA on damage, including Dr. Ford
13 Baldwin of Arkansas and Dr. Bradley of Missouri. *Id.* at 1138-39. From the
14 Kansas Department of Agriculture: “we have been over run with dicamba
15 complaints.” *Id.* at 1139. From the North Dakota State University pesticide
16 program specialist: “what we now know, in 2018, is that minimizing off target
17 movement of dicamba to a reasonable level is NOT possible . . . this level of
18 movement is completely unacceptable.” *Id.* Tennessee: “wave after wave of
19 dicamba exposure.” Professor Larry Steckel of the University of Tennessee:
20 stated that the drift crisis “is like nothing I have ever seen before . . .
21 Dicamba drift for the past three years has often travelled a half mile to three-
22 quarters of a mile and all too frequently, well beyond that.” *Id.* (estimating
23 40% of Tennessee non-DT soybean acres damaged).

24 175. Accordingly, based on this record evidence, the Court held that
25 EPA’s refusal to quantify the amount of damage caused was contrary to
26 FIFRA and not supported by substantial evidence.

1 *Risks EPA Unlawfully Failed to Acknowledge and Consider*

2 176. In addition to the ways in which EPA substantially understated
3 the risks it acknowledged, the Court held that the second trio of FIFRA
4 violations, risks that EPA “entirely failed to acknowledge,” were risks that
5 EPA was “statutorily required to consider.” *Id.* at 1139.

6 177. First, EPA failed to acknowledge and consider problems of users’
7 inability to follow the label instructions, despite EPA’s heavy reliance on
8 these instructions as mitigation. *Id.* at 1139-40. The Court held that
9 “extensive evidence in the record” indicated there was a risk of “substantial
10 non-compliance” with the EPA label. *Id.* at 1139. The product use
11 instructions are mitigation: EPA’s “no unreasonable adverse effect”
12 determination was predicated on the label being followed. Thus the inability
13 to follow it would result in dicamba drift damage.

14 178. As the Court explained, the term “label” is a misnomer here “as
15 that term is normally understood.” *Id.* at 1140. Rather, the product use
16 directions were 40 pages long and had gone through several iterations (2016,
17 2017 revisions, and 2018 revisions). There were myriad instructions and
18 restrictions, including: time of day; wind speed (between 3-10 mph);
19 temperature inversions; rain within 24 hours, wind direction; in-field
20 downwind buffer; spraying equipment ground speed; spraying equipment
21 length and height above ground; number of applications per season and per
22 crop; certification and training; and others. *Id.*

23 179. The record evidence was “substantial” that “even conscientious
24 applicators had not been able to consistently adhere” to the use directions in
25 real world farming conditions. *Id.* Rather, the record evidence showed that
26 the instructions were “*difficult if not impossible*” to follow. *Id.* at 1124
27 (emphasis added).

1 180. The dicamba use “label” was “probably the most complex label I
2 have ever seen in my 40-year career,” according to one agricultural company
3 executive. *Id.* at 1140 (estimating that over the course of the entire 2017
4 summer, his operation only had 44 hours of application time that would have
5 been allowed under the label). Other users told EPA that “there doesn’t
6 appear to be any way for an applicator to be 100% legal in their application”
7 and “there is no legal way to spray the field,” putting applicators in a “no
8 win” situation. *Id.* at 1140. Still others called trying to follow the instructions
9 in real world farming conditions in their locations—such as blustery west
10 Texas—“*basically a fairy tale. You can’t do it. Your fairy godmother has to*
11 *pull out a wand, tap a pumpkin and turn it into a carriage.*” *Id.* at 1141
12 (emphasis added).

13 181. Nor was the evidence merely experiential. The Court explained
14 that Purdue professors calculated the difficulty in complying with the label
15 using actual rainfall events in 2018, taking into account the restrictions
16 based on wind speed and temperature inversions and calculated that there
17 were *only 47 hours during the entire month of June* in which spraying the
18 dicamba products would have been legal. *Id.* And of those total monthly
19 hours, there were only 2 (24 hour) days where, during an 8-hour day,
20 application would have been possible (11 hours one day, 8 hours another); the
21 remaining hours were scattered throughout the rest of the month in smaller
22 stray increments. *Id.* The data underscored that, “in the real world,” there
23 are not “very many hours” where applicators can be “completely compliant.”
24 *Id.*

25 182. A state survey of Illinois commercial applicators showed that only
26 66% believed they were able to follow the label effectively and included
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1 comments like “I believe it is *impossible to make an on-label application* as
2 the label is written” *Id.* at 1141 (emphasis added).

3 183. The Court noted that much of the record evidence dealt with the
4 impossibility of the earlier 2016 and 2017 use directions, but in fall 2018 EPA
5 added even more directions, such as reducing further the time of day when
6 application can occur and total days after planting. *Id.* at 1141. Thus the
7 record evidence of substantial non-compliance with the prior label showed
8 that compliance with the 2018 label “[would] be even more difficult.” *Id.* Yet
9 EPA “nowhere acknowledged the evidence in the record showing there had
10 been substantial difficulty complying with the mitigation requirements of the
11 earlier labels.” *Id.* at 1142.

12 184. Second, the Court explained that FIFRA requires EPA to
13 consider as part of the cost-benefit analysis, “any unreasonable adverse
14 effects to man or the environment, taking into account the economic, social,
15 and environmental costs” of the pesticide. *Id.* (quoting 7 U.S.C. § 136(bb)).
16 Yet the Court held that EPA had nonetheless “entirely failed to acknowledge
17 risks of economic and social costs.” *Id.*

18 185. As to economic costs, the Court held that EPA “entirely failed to
19 acknowledge an economic cost that is *virtually certain to result*” from the
20 registrations: namely, anti-competitive, monopolistic effects to the seed and
21 related agricultural markets. *Id.* at 1142 (emphasis added).

22 186. The predecessor to the dicamba-resistant crop system was the
23 glyphosate-resistant crop system, with the seeds and pesticide (Roundup)
24 sold together as a crop system. These crop systems already had become a
25 near monopoly, with 90% of soybeans in 2008 being Roundup ready. *Id.* Then,
26 because of that overuse, the resistant weed problem led to Monsanto’s
27 “solution” to the crisis it created: dicamba-resistant crops.

1 187. Dicamba-resistant crops were quickly “well on their way to the
2 same degree of market dominance.” *Id.* By 2017, dicamba-resistant crops
3 constituted 25% of soybeans, and by 2018, 50%. *Id.*

4 188. The record evidence showed that farmers felt compelled by the
5 increased planting of dicamba-resistant crops and the accompanying and
6 increasing off-field drift damage to change from conventional soybeans to
7 dicamba-resistant soybeans as a defensive measure. Seed company
8 executives wrote to EPA in 2017 and 2018, warning them about this
9 anticompetitive economic cost. *Id.* at 1142 (“Even more alarming is the
10 number of my customers who have told me they will plant all Xtend varieties,
11 instead of my [conventional] seed, as a defensive measure against damage
12 from [drift]”); *id.* (“over and over again from our farmer customers” we are
13 hearing “I guess I will have to plant dicamba resistant soybeans next year to
14 avoid the off target injury. I cannot afford to keep getting my soybeans
15 damaged from dicamba.”).

16 189. Professors and weed scientists from North Dakota, Tennessee,
17 and Arkansas told EPA similarly. *Id.* at 1143. Dr. Baldwin told EPA
18 “dicamba has a chemistry problem that likely cannot be fixed, or at least no
19 evidence has been provided that it can be successfully applied . . . renewing
20 the cotton and soybean registrations will leave the industry no choice but to
21 plant 100% of the soybean acreage [with] this technology.” *Id.*

22 190. Accordingly, the Court held that the over-the-top registrations
23 “create[] a substantial risk that DT soybeans, and possibly DT cotton, will
24 achieve a monopoly or near-monopoly.” This “anti-competitive effect” of the
25 registrations would “impose a clear economic cost,” but EPA failed to even
26 identify it, let alone take it into account. *Id.*

1 191. Third, the Court held that EPA had also “entirely failed to
2 acknowledge the social cost that farming communities had already been
3 experiencing and was likely to increase.” *Id.* There was “extensive evidence”
4 in the record that the dicamba herbicides had “torn apart the social fabric of
5 many farming communities.” *Id.* Letters to EPA from stakeholders told them
6 of the high, unprecedented cost, “pitting neighbor against neighbor; farmers
7 threatening other farmers.” *Id.* Responses to an Illinois survey included “in
8 43 years of business I have never seen a more divisive product among
9 neighbors both farm and non-farm.” *Id.* (“This technology cannot continue as
10 is if we ever wish to raise a susceptible crop or maintain healthy
11 relationships with our residential and environmental neighbors.”). An
12 Arkansas farmer was shot and killed in an argument over dicamba drift
13 damage.

14 192. Not just farmers but homeowners and gardeners suffered damage
15 as well: severe damage to trees, ornamental plants, shrubs, and vegetables.
16 *Id.* at 1143 (*e.g.*, “These are 100-year old oaks. We’re senior citizens and we
17 don’t have time to plant new trees and watch them get even halfway to
18 maturity.”).

19 193. Accordingly, the Court held that the “severe strain on social
20 relations in farming communities” where the dicamba products were being
21 sprayed was a “clear social cost,” but that EPA failed to identify and take it
22 into account. *Id.*

23 *Summary of Holdings*

24 194. For all these reasons and considering the record as a whole, the
25 Court then concluded that substantial evidence did not support the new use
26 registration decision. *Id.* at 1144; *see also id.* at 1124. While EPA had found
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1 two benefits from the uses, it had “failed to perform a proper analysis of the
2 risks and the resulting costs of those uses.” *Id.* at 1144.

3 195. First, EPA “substantially understated the costs it acknowledged.”
4 *Id.* These included the total acreage planted with dicamba-resistant soybeans
5 and the resulting use of dicamba. EPA relied on a Monsanto prediction when
6 the record evidence before EPA showed the actual acreage was “much higher”
7 and the combined soybean and cotton acreage “higher still.” *Id.* Further, EPA
8 recognized there had been an “enormous increase” in dicamba drift
9 complaints in 2017 and 2018, but it purported not to know whether those
10 complaints under-reported or over-reported the damage. In fact, the record
11 evidence showed the complaints “substantially under-reported the actual
12 amount of damage.” *Id.* Finally, EPA “substantially understated the amount
13 of dicamba damage,” characterizing it as only “potential” or “alleged” and
14 claiming there was insufficient data from which to estimate the amount of
15 damage. In fact, the record evidenced showed that dicamba drift damage
16 from the over-the-top new use registrations in 2017 and 2018 had “caused
17 *enormous and unprecedented* damage.” *Id.* at 1144 (emphasis added).

18 196. Second, EPA also entirely failed to acknowledge and consider
19 other costs. *Id.* EPA entirely failed to account for the substantial degree of
20 non-compliance with the label mitigation, given the impossibility of following
21 it in real world farming conditions, and what that would mean for increased
22 drift damage. *Id.* at 1144. That is, EPA based its registration decision on the
23 premise that the label’s mitigation would be followed and thus limit off-field
24 drift, when the evidence was that label instructions were “difficult if not
25 impossible” to follow. *Id.* at 1124. Further, EPA failed to recognize and
26 consider the economic costs of drift damage coercing farmers to defensively
27 adopt dicamba-resistant crops, and the anti-competitive, monopolistic results
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1 on the soybean and cotton industries. *Id.* at 1144. Finally, EPA failed to
2 recognize and consider the “*enormous social cost to farming communities of*
3 the new use registrations, where the products had “turned farmer against
4 farmer, neighbor against neighbor.” *Id.* (emphasis added).

5 *Remedy*

6 197. Applying the Ninth Circuit’s criteria for vacatur, the Court
7 vacated the registrations. *Id.* at 1144-45. EPA made “multiple errors,” and its
8 “fundamental flaws” were “substantial.” *Id.* The Court found it “exceedingly
9 unlikely” that EPA could (lawfully) issue the same registration again for the
10 new uses. The Court carefully weighed the practical effects of the decision on
11 farmers’ current use and any difficulty finding alternative pesticide options,
12 but concluded that the absence of substantial evidence to support the
13 registrations compelled vacatur all the same. *Id.*

14 15 **The Fall 2020 Registration**

16 198. On July 2, 2020, less than one month after the Ninth Circuit held
17 the prior registrations of these products unlawful for multiple violations of
18 FIFRA and vacated them, Bayer and BASF submitted registration
19 applications for the same products (XtendiMax and Engenia) for use on
20 cotton and soybeans. Similarly, Syngenta submitted an application to amend
21 its Tavium registration on August 12, 2020, including a request that the
22 upcoming expiration date be extended.

23 199. EPA responded by assigning fifty staff members to work on the
24 2020 Registration Actions in a rush to issue them before Election Day. On
25 October 27, 2020, just six days before the presidential election and without
26 providing an opportunity for public notice and comment, EPA again
27 registered the same products that had been vacated fewer than five months
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1 prior in the decision challenged here. *See* Ex. A, at 3 (“EPA did not hold a
2 public comment opportunity for these registration actions.”). EPA made the
3 announcement not in Washington, D.C. but during an event on a farm in
4 Georgia, to a crowd including the American Farm Bureau Federation
5 president Zippy Duvall, the National Cotton Council of America Chairman
6 Kent Fountain, two Georgia congressmen, and the Georgia Commissioner of
7 Agriculture.⁴⁹

8 200. As noted above, the prior approvals were limited to 2 years, due
9 to concerns about excessive drift damage and weed resistance and had been
10 only conditional registrations.

11 201. This time, EPA *unconditionally* registered the Xtendimax,
12 Engenia, and Tavium products and did it for the next *five* years.

13 202. Just as the prior 2016 and 2018 registration decisions allowed,
14 the 2020 Registration Actions allow for the use of these three dicamba
15 products in 34 states, including Arizona, totaling 90 to over 100 million acres
16 of U.S. farmland.

17 203. EPA mainly based the 2020 Registration Actions on past studies,
18 previously available to EPA for its prior 2016 and 2018 registration decisions.
19 It relied on only a handful of further assessments of the risks to human
20 health and the environment put together in fewer than four months following
21 Bayer and BASF’s applications on July 2.

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24 ⁴⁹ EPA, *Administrator Wheeler Meets with Agricultural Stakeholders*
25 *in Florida, Georgia* (Oct. 27, 2020),
26 [https://www.epa.gov/newsreleases/administrator-wheeler-meets-agricultural-
27 stakeholders-florida-georgia](https://www.epa.gov/newsreleases/administrator-wheeler-meets-agricultural-stakeholders-florida-georgia).

1 204. Numerous deficiencies identified by the Ninth Circuit remain
2 unaddressed in the Registration Actions as detailed below.

3 *Seed Acreage*

4 205. The Ninth Circuit determined that EPA “substantially
5 understated the amount of dicamba-resistant seed acreage that had been
6 planted in 2018, and, correspondingly, the amount of dicamba herbicide that
7 had been sprayed on post-emergent crops,” and improperly relied on
8 Monsanto’s April 5th, 2018 prediction for acreage in 2018, rather than the
9 substantially higher figure cited in Monsanto’s October 2018 white paper.

10 *NFFC II*, 960 F.3d at 1124.

11 206. In issuing the Registration Actions, EPA provides no estimate of
12 dicamba-resistant seed acreage planted in 2019 and 2020 and instead reports
13 only the annual average acres planted for cotton and soy from 2017-18.⁵⁰
14 Numerous reports however indicate that the number of acres planted with
15 dicamba-resistant seeds have increased since then. These earlier numbers,
16 again, lead to an understatement of the amount of dicamba used.

17 207. Accordingly to 2020 Registration Decisions are based on similar
18 under-estimates of dicamba-resistant acreage (and consequential harm).

19 *Under-reporting*

20 208. The Ninth Circuit also held that EPA’s conclusion that state
21 dicamba drift injury reports “could have either under-reported or over-
22 reported” the actual amount of damage was not supported by substantial
23 evidence because “the record clearly show[ed] that complaints understated
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25 ⁵⁰ EPA, *Assessment of the Benefits of Dicamba Use in Genetically*
26 *Modified, Dicamba-Tolerant Cotton Production* 9 (Oct. 26, 2020).

1 the amount of dicamba damage.” *NFFC II*, 960 F.3d at 1137. While EPA
2 insisted that “others” claimed over-reporting occurred, the Court determined
3 that the “others” were only Monsanto. *Id.*

4 209. EPA’s “purported agnosticism” as to the damage being over or
5 under reported was “contradicted by overwhelming record evidence that
6 dicamba damage was substantially under-reported,” and the EPA’s assertion
7 of over-reporting was not supported by substantial evidence. *Id.*

8 210. As in 2018, the 2020 registration decision minimizes the
9 significance of the increase in complaints from 2017-2019 by suggesting that
10 injuries could have been over-reported. *See* Ex. A, at 8. While EPA again
11 admitted that many stakeholders—the Association of American Pesticide
12 Control Officials, university researchers, and some growers—determined the
13 complaints were under-reported, it declared that “there may have been issues
14 of over-reporting.” *Id.* EPA speculates that over-reporting may have occurred
15 due to damage from older, more volatile formulations and due to damage
16 reports given in terms of acreage that reflects the size of an entire crop field,
17 not just the damaged portion. *Id.*

18 211. However, a 2018 Agricultural Resource Management Survey
19 (ARMS) found that soybean growers alone suffered 65,000 adverse effect
20 incidents to their own fields, which is approximately *25 times the number of*
21 *dicamba incidents reported to EPA for all crops.*⁵¹ Farmers reported still
22 more injury when queried about dicamba damage to their neighbors’ fields

24 ⁵¹ EPA, *Dicamba Use on Genetically Modified Dicamba-Tolerant (DT)*
25 *Cotton and Soybean: Incidents and Impacts to Users and Non-Users from*
26 *Proposed Registrations* 31-32 (Oct. 26, 2020) (hereafter *Dicamba Incident*
27 *Report*).

1 and in their county, with damage rising to an astounding 10% and nearly
2 16% of soybean fields, representing over 11 and nearly 16 million damaged
3 acres, respectively. This survey provides ample evidence that dicamba
4 damage has been vastly under-, not over-reported.

5 212. EPA provides numerous reasons why under-reporting may occur.
6 If damage occurs on a neighboring field, the two parties may resolve the
7 incident amongst themselves and choose not to report it. Others, including
8 non-farmers, may accept dicamba damage “as the price of living in an
9 agricultural community,” or believe nothing would be done even if they did
10 report.⁵² Indeed, the press has reported “dicamba fatigue” in farming
11 communities as dicamba-injured parties stop reporting because they have
12 learned their complaints have no effect. Further, the fear of retaliation may
13 prevent reporting because some growers have been targets of vandalism and
14 intimidation (*e.g.*, burning hay bales and destroying tractor engines).⁵³
15 Additionally, the lack of knowledge of how to report incidents may prevent
16 reporting.⁵⁴

17 213. Further, dicamba registrants may under-report due to concerns
18 over regulatory action, damage claims, and litigation from the reports of
19 adverse effect incidents.⁵⁵ The EPA acknowledged evidence indicating that
20 dicamba registrants were aware that illegal applications occurred in 2015 on
21 dicamba-resistant cotton but failed to report these incidents to the EPA.⁵⁶

22
23 ⁵² *Id.* at 33.

24 ⁵³ *Id.*

25 ⁵⁴ *Id.*

26 ⁵⁵ *Id.*

27 ⁵⁶ *Id.*

1 214. Accordingly the 2020 Registration Actions are based on the same
2 and similar erroneous reporting assumptions as previous years.

3 *Estimations of Damage*

4 215. The Court held that for the 2018 registrations, EPA did have
5 “information from which it could have quantified dicamba damage, even if it
6 could not have calculated with precision the reduction in yield caused by the
7 damage.” *NFFC II*, 960 F.3d at 1138. For these Registration Actions, EPA
8 acknowledges that in 2017, over 2,700 official cases of crop damage were
9 reported to state departments of agriculture, estimated to be over 3.6 million
10 acres of soybeans. Ex. A, at 7.

11 216. EPA also summarized data from an ARMS survey of soybean
12 growers, which included questions about the occurrence of visual signs of
13 injury (VSI) related to dicamba.⁵⁷ Nearly four percent of surveyed soybean
14 growers have seen VSI on their own fields consistent with dicamba exposure,
15 which indicates VSI on 4.1 million acres. *Id.* About 10% of the total soybean
16 growers in the survey were aware of dicamba VSI on neighboring fields,
17 which adds up to 11.3 million injured acres, and about 15% of the growers
18 were aware of dicamba VSI on soybean in their county, which adds up to 15.6
19 million acres of dicamba-injured soybeans. *Id.*

20 217. The total number of dicamba incidents reported to EPA’s Incident
21 Data System went up from zero reported in 2014 through 2016 to a total of
22 approximately 1,400 in 2017, 3,000 in 2018, and 3,300 in 2019. *Id.* at 28.
23 These data from USDA ARMS and EPA’s Incident Data System demonstrate
24 that off-target movement of dicamba has caused far more damage than EPA
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26 ⁵⁷ EPA, *Dicamba Incident Report*, *supra* n. 51, at 31.
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1 has previously acknowledged in its prior registration and label amendment
2 decisions, and could have been used in combination with other data to arrive
3 at credible estimates of yield and associated revenue loss.

4 218. As in the past registrations, in the 2020 Registration Actions
5 EPA had sufficient data to quantify past and likely future harm from drift
6 damage, but failed to so inform its decision before registering the products.

7 *Users' Inability to Follow Label Instructions*

8 219. EPA again relies on mitigation in the form of use instructions for
9 its conclusion that the Registration Actions will not cause “adverse effects on
10 the environment,” yet the use instructions for all three products repeat many
11 of the same instructions as the vacated 2018 decision. These include:
12 requirements that certified applicators apply the dicamba products; a 57-foot
13 omni-directional buffer in areas with endangered species; a prohibition on
14 applying when sensitive crops or certain plants are immediately downwind; a
15 limit of two over-the-top applications of dicamba per field per year for both
16 dicamba-resistant cotton and dicamba-resistant soybeans; a requirement to
17 apply only during wind speeds of 3-10 miles per hour; a restriction on the
18 time of day for spraying between one hour after sunrise and two hours before
19 sunset; and mandatory applicator training.

20 220. These same conditions, previously relied upon as mitigation in
21 prior growing seasons proved “difficult if not impossible to follow” in real
22 world farming conditions. *NFFC II*, 960 F.3d at 1124, 1140-41. EPA then
23 relied on these measures’ effectiveness to support its no “unreasonable
24 adverse effects” determination and has done so again. Yet the EPA has again
25 improperly failed to account for the risk of users’ inability to follow these
26 instructions despite their best efforts.

1 221. Farmers, farming associations, and commercial applicators have
2 repeatedly reported difficulties in following these same restrictions. *See*
3 *supra* ¶¶177-183. For example, a Kentucky grain producer told EPA, in
4 describing a conventional soybean field surrounded by dicamba-resistant
5 crops: “[T]here is no legal way to spray this field. You can’t apply dicamba
6 with a wind speed of 0 MPH (must be 3-10 MPH) and you can’t apply it when
7 the wind is blowing towards a sensitive crop. So there is really no way to use
8 the products.” *NFFC II*, 960 F.3d at 1140 (emphasis added). Further, the
9 Illinois Fertilizer and Chemical Association conducted a survey of its
10 members in July and August 2018 and found that 34 percent of professional
11 applicators felt they failed to follow the dicamba product label effectively in
12 2018, despite their mandatory training. *Id.* at 1141. Numerous responses
13 centered on difficulties in following the wind requirements, which remain in
14 the 2020 registration. *Id.* (“Weather is never right. Too windy, too hot, to[o]
15 humid—we can’t win”); (“Very light, shifting winds made it impossible to
16 ‘always be right’ during the time when we needed to spray”).

17 222. These 2018 comments were made even before EPA had added
18 further use instructions in October 2018, additions which as the Court noted,
19 would only make compliance even more difficult. *Id.* at 1141. First, EPA’s
20 2018 (and now 2020) registrations reduced the previous sunrise to sunset
21 application period by three hours every day, by restricting applications to a
22 time period from one hour after sunrise to two hours before sunset. *Id.*
23 Second, the 2018 registration mandated that farmers spray over-the-top with
24 the dicamba products within sixty days of planting DT cotton, and within
25 forty-five days of planting DT soybeans. *Id.* As the Court noted: “Many
26 applicators found it difficult or impossible to comply with the 2017 label
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1 during the 2018 growing season. Compliance with the 2018 label during the
2 2019 and 2020 growing seasons will be even more difficult.” *Id.*

3 223. EPA now concedes the difficulty of complying with the many
4 instructions on the 2018 and new 2020 labels. For instance, compliance with
5 the prohibition against spraying during temperature inversions is hindered
6 by the fact that the labels provide “no information . . . on how to measure
7 temperatures to determine if [a temperature inversion] is present.”⁵⁸
8 Likewise, compliance with the narrow 3-10 mph wind speed application
9 window “may be situational based on varying wind speeds during
10 application.”⁵⁹ The combination of certain restrictions, EPA now admits, can
11 put applicators in impossible dilemmas: “For instance, if winds increase to 12
12 MPH during application and the weather forecast predicts rain for the next
13 four days, a grower would have to choose between making applications in a
14 timely fashion (albeit in violation of the label) or following the label and not
15 finishing the application.”⁶⁰

16 224. Based on these surveys, comments, and additional restrictions,
17 the Ninth Circuit determined that extensive record evidence indicated a
18 serious risk that farmers would be unable to comply with the mandatory
19 label for the 2019 and 2020 growing seasons. *NFFC II*, 960 F.3d at 1139.
20 That same evidence of noncompliance applies with still greater force to the
21 2020 registrations, compliance with which EPA has made still more difficult
22 by further reducing the application window: farmers must now avoid
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24 ⁵⁸ EPA, *Dicamba Incident Report*, *supra* n. 51, at 39.

25 ⁵⁹ *Id.*

26 ⁶⁰ *Id.*

1 application (under certain soil conditions) when rainfall is expected within 48
2 hours, rather than when expected within 24 hours, as stipulated on the 2018
3 label.

4 225. Jean Payne, president of the Illinois Fertilizer and Chemical
5 Association, agreed the new label is not much better than the 2018 label.⁶¹
6 “It’s not easy to follow,” Payne said, specifically because the large downwind
7 buffers mean sprayers will often have to spray one day and then come back a
8 different day when the wind is blowing a different direction.

9 226. The Registration Actions’ only attempt to address users’ inability
10 to follow label instructions is claiming that the simpler label format will be
11 easier to understand and follow. Ex. A, at 21. EPA claims that having
12 separate product labels for use on only DT soybean and DT cotton (as opposed
13 to other uses, not over-the-top uses on other crops pre-emergence and post-
14 planting) will simplify the use instructions and improve compliance. *Id.* at 18.
15 However, several of these control measures admittedly still “involve more
16 elaborate user practices than similar herbicides.” *Id.* And more importantly,
17 EPA falsely assumes the crux of the issue is applicators’ inability to properly
18 *understand* a complex label, when the real issue is weather-related usage
19 instructions that are so numerous and restrictive as to make it *impossible*, on
20 a consistent basis in the real world, to successfully use the products for their
21 intended purpose – weed control – while still complying with the label.

22 *Economic Costs*

23 227. Despite the Ninth Circuit’s decision, the 2020 Registration
24 Actions and supporting documents also still fail to consider, assess, account

26 ⁶¹ Hettinger, *supra* n. 17.

1 for, and quantify, or even estimate, economic costs to farmers, seed
2 companies, or other stakeholders resulting from dicamba drift.

3 *Harm from Drift*

4 228. While EPA acknowledges that “non-users may experience
5 impacts from crop injury or increased costs resulting from offsite movement
6 of dicamba,” nowhere in the 2020 supporting documents, including the two
7 Benefits Assessments, does the EPA critically assess, quantify, or even
8 provide rough estimates of farmers’ financial losses as a result of off-target
9 drift.

10 229. The record before EPA in its 2018 and now 2020 Registration
11 Actions is replete with credible accounts of crop destruction, as well as
12 damage to fruit tree orchards and vineyards, and non-agricultural trees and
13 plants ensuing from dicamba damage. Such damages have resulted in
14 significant yield losses for the season, and in the case of perennial plants
15 such as fruit and ornamental trees, the damaged tree would have to
16 replanted and re-cultivated to commercial productivity, resulting in economic
17 losses for multiple years.⁶²

18 230. Between 2017 and 2019, 5,600 farmers filed complaints with
19 Bayer and BASF about their crops being damaged.⁶³ These farmers reported
20 damage to peaches, cotton, tobacco, tomatoes, trees, sunflowers, and many
21 other crops.

22 231. The dicamba drift crisis has produced hundreds of damages
23 cases. The first to go to trial, *Bader Farms, Inc. v. Monsanto Co.*, No. 1:16-

25 ⁶² See, e.g., EPA, *Dicamba Incident Report*, *supra* n. 51, at 46-47.

26 ⁶³ Hettinger, *supra* n. 17.

1 CV-00299-SNLJ, 2020 WL 1503395 (E.D. Mo. Feb. 28, 2020), involved a
2 Missouri peach orchard, which experienced significant drift damage from
3 neighboring crop fields.

4 232. Nearly two hundred company documents presented in the case
5 showed that Monsanto knew XtendiMax would move off-field and cause
6 harm. Monsanto projected thousands of drift incidents, and prohibited testing
7 of drift properties to more easily obtain EPA registration. Documents
8 conceded drift despite label-compliant application, and drift-caused yield loss.

9 233. The jury rejected Monsanto's defense that damage was because of
10 farmer misapplication, not their pesticide, and found in Bader's favor on all
11 counts, awarding \$15 million in actual damages and \$250 million in punitive
12 damages. It found Monsanto and BASF liable for negligent design of their
13 products and failure to warn. The jury also found the companies conspired to
14 create an "ecological disaster" of off-target pesticide movement and damage to
15 increase profits.

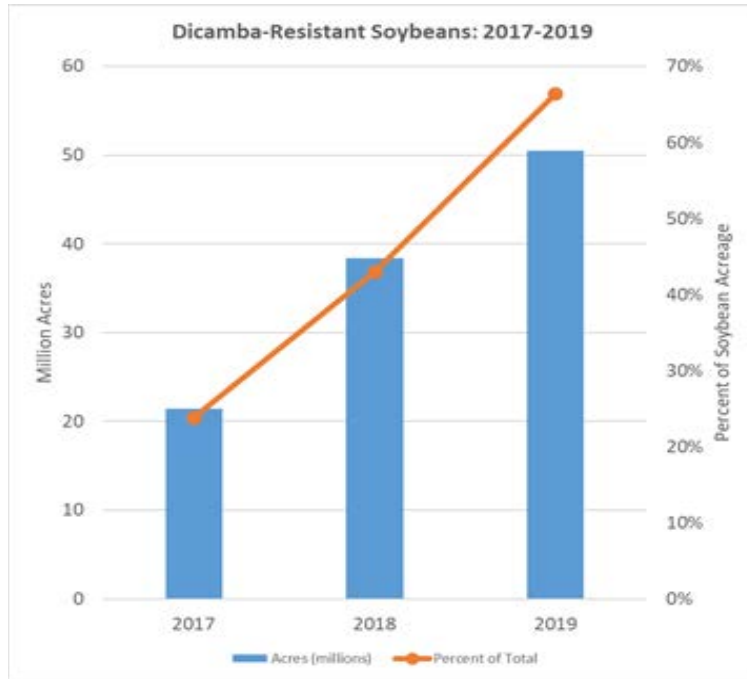
16 234. Consolidated cases of thousands of other farmers have followed.
17 *See, e.g.*, Master Antitrust Class Action Complaint, *In Re Dicamba*
18 *Herbicides Litigation*, No. 1:18-md-02820-SNLJ (E.D. Mo. Aug. 1, 2018),
19 www.moed.uscourts.gov/sites/moed/files/documents/118md2820-0138.pdf.

20 235. In June 2020, Monsanto reached a \$400 million settlement with
21 farmers whose crops have been damaged by drift from dicamba. Monsanto
22 agreed to pay up to \$300 million to soybean producers who suffered from
23 dicamba drift damage. Another \$100 million was allocated for non-soybean
24 injury claims.

25 *Harm from Market Consolidation or Economic Costs from Defensive Adoption*

26 236. Nor does the EPA sufficiently account for the economic harm
27 from market consolidation. Soybean and cotton are susceptible to injury from
28

1 dicamba, which has led to the practice of defensive planting: “growers
2 planting dicamba-tolerant varieties of soybean not to use dicamba after crop
3 emergence, but to protect their crops from the risk of exposure due to off-field
4 movement of dicamba from neighboring fields.”⁶⁴



16 237. EPA confirms the existence of anecdotes regarding defensive
17 planting but asserts that “no systematic study to determine how common it
18 may be.”⁶⁵ If it were common, EPA admits “there could be concerns about
19 companies providing DT technology to obtain monopoly power and extract
20 excessive profits at the expense of growers.”⁶⁶

21 238. Yet EPA has far more than anecdotal evidence. Survey data
22 collected and analyzed by USDA shows that only about half (51%) of
23

24 ⁶⁴ EPA, *Dicamba Incident Report*, *supra* n. 51, at 43.

25 ⁶⁵ EPA, *Dicamba Incident Report*, *supra* n. 51, at 43.

26 ⁶⁶ *Id.*

1 dicamba-resistant soybean acreage is subsequently sprayed with dicamba
2 post-emergence, while fully 40% of dicamba-resistant cotton does not receive
3 post-emergence treatments.⁶⁷ Based on these numbers, the EPA concluded
4 that data “supports anecdotal reports that some soybean growers may be
5 planting dicamba-tolerant soybean as an insurance against off-field
6 movement of dicamba from neighboring fields.”⁶⁸ If farmers defensively
7 planted even three percent of the 29.9 million acres of dicamba-resistant
8 soybean, it would represent almost one million acres of soybean.⁶⁹

9 239. In 2018, only 51% percent of farmers sprayed dicamba on
10 dicamba-resistant crops.⁷⁰ By comparison, more than 90% of farmers sprayed
11 the associated herbicides on the crop’s two largest competitors, glyphosate-
12 resistant crops and glufosinate-resistant crops.

13 240. Further both Monsanto and BASF planned defensive adoption as
14 a marketing strategy well before the 2016 registrations. Monsanto told its
15 sales teams to pitch dicamba-resistant crops as products that would protect
16 farmers – including especially “driftees” who had previously experienced
17 dicamba injury - from dicamba drifting from their neighbors’ fields, while
18 BASF presented this marketing strategy in a September 2016 meeting.

19 241. In April 2017, a market research document prepared by Bank of
20 America determined that defensive adoption drove sales. A Monsanto
21 executive acknowledged these findings: “Interesting assessment that much of
22 the Xtend acreage was planted to protect themselves from neighbors who

23 ⁶⁷ *Id.* at 43-44.

24 ⁶⁸ *Id.* at 45.

25 ⁶⁹ *Id.*

26 ⁷⁰ Hettinger, *supra* n. 17.

1 might be using dicamba? Gotta admit I would not have expected this in a
2 market research document.”⁷¹

3 242. In 2018, numerous seed companies reported to EPA that their
4 farmer-customers felt forced to switch from conventional seeds to dicamba-
5 resistant seeds, to avoid further off-target injury to their crops and economic
6 losses. Thus, the imperative to avoid dicamba drift injury entailed economic
7 losses to the seed companies selling conventional cotton and soy seeds. *NFFC*
8 *II*, 960 F.3d at 1142. The Court explained that “Many farmers have felt, and
9 will continue to feel, compelled by the increased planting of DT soybeans, and
10 the accompanying increased use of over-the-top dicamba, to change from non-
11 DT to DT soybeans.” *NFFC II*, 960 F.3d at 1142.

12 243. While EPA concedes that such “defensive planting” could entail
13 “increased cost and/or reduced yields,” it provides no assessment of these
14 costs to either farmers or seed dealers.⁷² Nor does EPA make any attempt to
15 weigh these costs against the putative benefits of the registration. In fact, the
16 dozens of references to “costs” in the Impacts Assessment refer almost
17 exclusively to putative costs associated with dicamba-resistant crop growers’
18 compliance with control measures, or to costs of alternative herbicide systems
19 in the absence of over-the-top dicamba.

20 244. EPA speculates that defensive planting would continue with or
21 without the 2020 registrations and dismisses the impact on farmers. *Id.* at
22 45.

23 245. The Ninth Circuit determined that EPA had “entirely failed to
24 recognize the economic cost imposed by the coercion of non-DT farmers to

25 ⁷¹ Hettinger, *supra* n. 9.

26 ⁷² EPA, *Dicamba Incident Report*, *supra* n. 51, at 45.

1 convert to DT crops, and the resulting anti-competitive effect of that
2 coercion.” *NFFC II*, 960 F.3d at 1144. EPA has done so again here.

3 *Social Cost to Farming Communities*

4 246. The Ninth Circuit found that over-the-top uses of dicamba had
5 “torn apart the social fabric of many farming communities”: an impact which
6 the EPA had entirely failed to take into account. *Id.* at 1143. Farmers began
7 threatening farmers; destroying their neighbors’ crops, trees, ornamentals,
8 and gardens; and even resorting to acts of violence. *Id.*

9 247. EPA’s failure to mention anything regarding this “severe strain
10 on social relations in farming communities,” *id.* at 1143, constituted a
11 violation of its FIFRA mandate to consider “social costs” in deciding whether
12 to grant a pesticide registration.

13 248. The 2020 Registration Actions and supporting documents again
14 fail to account for social costs to farming communities. Rather, EPA only
15 provides a pro forma description of how, theoretically, “[t]he potential for
16 offsite injury to neighboring crops from dicamba can result in conflict
17 between neighbors.”⁷³ Incredibly, EPA justifies its refusal to critically assess
18 the enormous social costs of past and future over-the-top dicamba use by
19 speculating that such social costs, absent over-the-top dicamba, would
20 continue to be incurred due to illegal use of other forms of dicamba that are
21 currently registered by EPA.⁷⁴

22 249. The 2020 Registration Actions will result in the same strain on
23 social relations in farming communities. Dicamba drift will continue
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25 ⁷³ EPA, *Dicamba Incident Report*, *supra* n. 51, at 45.

26 ⁷⁴ *Id.* at 46.

1 impacting neighbors' crops and gardens and continue to drive apart
2 communities.

3 *Further Assessments on Adverse Effects on the Environment*

4 250. EPA's additional hurried assessments, and the mitigations based
5 on them, like the prior registrations, were not supported with substantial
6 evidence and will not prevent adverse effects on the environment. A few
7 examples are explained below.

8 *Volatility*

9 251. For instance, EPA's volatility control measures are based on
10 small field studies, and the EPA admits that it "cannot definitively exclude"
11 volatility damage from real-world applications.

12 *Runoff*

13 252. Despite learning more about how dicamba in runoff water can
14 damage off-field plants many days after application, EPA has still failed to
15 collect sufficient data on this important impact, or assess and mitigate the
16 combined effects of concurrent dicamba exposure via spray drift, volatility,
17 and runoff.

18 *Environmental Damage*

19 253. Despite reports of millions of trees damaged by dicamba drift,
20 and the fact that long-lived trees in dicamba use areas are exposed
21 repeatedly over the season and over years to spray and vapor drift, EPA has
22 collected only a single study on the subject, involving what appears to be a
23 one-time dicamba exposure.

24 *New 2020 Mitigation*

25 254. EPA did update several 2020 use instructions, yet based several
26 of its updates on limited studies or assumptions. EPA expanded the
27 downwind in-field buffer to 240 feet (or 110 feet for soybeans if using a
28

1 qualified hooded sprayer), added calendar cutoff dates for applications (June
2 30th for soybeans and July 30th for cotton), and required use of a qualified
3 VRA/pH buffering adjuvant in the tank for every application.

4 255. EPA asserts that these mitigation measures will reduce adverse
5 environmental impacts, yet acknowledges its limited data to support these
6 measures.

7 256. For example, in order to reduce risks to non-target plants from
8 dicamba-contaminated runoff water, the Registration Actions prohibit
9 dicamba application “if soil is saturated with water or when rainfall that may
10 exceed soil field capacity is forecasted to occur within 48 hours.”⁷⁵ Yet
11 because EPA collected only a single registrant study on runoff, EPA is unable
12 to quantify the degree to which this restriction would reduce non-target plant
13 risk, which is dependent on a host of “site-specific conditions such as field
14 size, amount of saturation in the field at the time of the event, soil type,
15 hydrologic conditions, etc.,” which a single study cannot encompass.⁷⁶ Nor did
16 EPA evaluate whether even trained applicators could reliably predict – 48
17 hours in advance – whether or not a rainfall event “may exceed” soil field
18 capacity, or assess the feasibility of enforcing such a label restriction.

19 257. Similarly, EPA found that hooded sprayers have “the potential to
20 reduce spray drift,” so the Registration Actions allow in-field spray drift
21 buffer zones of only 110 feet instead of 240 feet when hooded sprayers are
22 used on soybeans. Ex. A, at 13. However, the EPA has a “limited number of
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24 ⁷⁵ EPA, *2020 Ecological Assessment of Dicamba Use on Dicamba-*
25 *Tolerant (DT) Cotton and Soybean Including Effects Determinations for*
Federally Listed Threatened and Endangered Species 8 (Oct. 26, 2020).

26 ⁷⁶ *Id.* at 62.

1 field studies” to support this measure. *Id.* Moreover, EPA itself acknowledges
2 that “buffers are poorly understood and making distinctions between FIFRA
3 and ESA buffers based on application equipment [hooded or broadcast
4 sprayers) could add an additional layer of complexity and unintentionally
5 result in misuse.”⁷⁷

6 258. EPA also notes differing levels of certainty in the effectiveness of
7 its uniform cutoff date of June 30 intended to reduce volatility. EPA admits
8 that “because the dates are the same in all 34 states and the meteorological
9 data vary across these geographies, the magnitude of the protective certainty
10 of cut-off dates is not uniform across the 34 states.” Ex. A, at 14. Compliance
11 with the cutoff date will be easier for growers in the southern States because
12 of the longer growing season and planting at earlier calendar dates. The ease
13 of compliance could also be influenced by crop progress, weed pressure, and
14 weather. Despite these substantial uncertainties, the cutoff dates are still
15 “expected to provide protection” from the effects of applications coinciding
16 with temperatures favoring dicamba volatility. *Id.*

17 259. About 60% of damage incidents have been reported after June 30,
18 the new cut-off date; however, symptoms of dicamba damage can take two
19 weeks to show up.⁷⁸

20 260. EPA also expects VRAs (pH buffering adjuvant) to lower dicamba
21 volatility. However, compliance with VRA usage requirements cannot be
22 estimated because they “will have to be purchased separately by the
23 applicator and added to the tank,” because “[r]etailers and distributors may
24

25 ⁷⁷ EPA, Dicamba Incident Report, *supra* n. 51, at 39.

26 ⁷⁸ Hettinger, *supra* n. 17.

1 stock only a small number [of VRAs] based on their client needs” and because
2 “[t]he Agency has no information about the current availability of the
3 required buffering agent.”⁷⁹ Additional compliance uncertainties arise from
4 the “cost to the grower, and how difficult the product is to use.”⁸⁰

5 261. EPA also restricted spraying to the period from one hour after
6 sunrise to two hours before sunset to “reduce applications being made at
7 times of day when temperature inversions often occur.” Ex. A, at 24. To the
8 contrary, University of Missouri weed scientists’ analysis of weather stations
9 from seven states has shown that temperature inversions occur frequently in
10 the afternoon and evening hours of May, June and July. Further, newer data
11 from Tennessee and Missouri show that those inversions frequently occur
12 earlier than two hours before sunset. University of Missouri Extension weed
13 scientist, Mandy Bish, confirmed that “Sunset is not a good predictor in every
14 location,” and these restrictions may not prevent spraying during inversions.

15
16 **EPA’s Reversal Regarding FIFRA Section 24(c)**

17 262. EPA administers FIFRA at the federal level, but states have an
18 important role to play in the regulatory scheme. FIFRA section 26 specifies
19 that states are to have primary enforcement responsibility if they
20 demonstrate to EPA that they have adopted adequate regulations and
21 enforcement mechanisms. *See* 7 U.S.C. § 136w-1. For example, FIFRA section
22 11, 7 U.S.C. § 136i, authorizes EPA to certify state programs for the training,
23 licensing, and certification of pesticide applicators as meeting federal

24
25 _____
26 ⁷⁹ EPA, *Dicamba Incident Report*, *supra* n. 51, at 38.

27 ⁸⁰ *Id.*

1 standards. FIFRA section 23, 7 U.S.C. § 136u, allows EPA to enter into
2 cooperative agreements with states to enforce the FIFRA training, licensing,
3 and certification requirements and to assure that the state programs in these
4 areas are consistent with federal standards.

5 263. The Registration Actions also include a reversal in decades of
6 EPA precedent. EPA has long allowed states to issue “special local needs
7 labels” on an annual basis, to address local agricultural, environmental, or
8 public health needs by granting “additional uses” to federal pesticide labels.
9 No longer, after this decision: EPA placed this rule reversal in a three-
10 sentence footnote, without first providing a notice and comment period.

11 264. The footnote for the first time now prohibits states from
12 “impos[ing] further restrictions on the dicamba products, or any other
13 federally registered pesticides” through Section 24(c) of FIFRA. Ex. A, at 20
14 n.19. Thus, the decision goes far beyond the three products being registered,
15 and covers state restrictions on any and all pesticides.

16 265. Instead, states must now impose restrictions under Section 24(a),
17 which allows states to regulate federal pesticides through state legislatures
18 or rulemaking procedures: a time-consuming and often political process that
19 can take years.

20 266. Section 24(c) allows states to “provide registration for additional
21 uses of federally registered pesticides formulated for distribution and use
22 within that State to meet special local needs in accord with the purposes of
23 this Act.” 7 U.S.C § 136v(c)(1).

24 267. For nearly three decades, EPA has interpreted Section 24(c) as
25 permitting states to “impose more restrictive measures” to federal labels, and
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27
28

1 that is what states have done. In 1996, the EPA formalized this
2 interpretation and published it as a guidance for states.⁸¹

3 268. FIFRA 24(c) labels allow state lead agencies to be nimble, timely,
4 practical, and appropriately responsive in quickly setting mitigation
5 measures beyond the federal label. Every state is different, and one-size-fits-
6 all mitigation measures on federal labels do not take into account possible
7 unique or special local conditions, which may increase risks. States have
8 specialized knowledge of conditions within their state. They are in the best
9 position to identify deficiencies in federal labels and identify necessary
10 modifications to enable the product to be used legally at the local level while
11 minimizing the potential risks of harm to man and the environment. They
12 are in the best position to respond to additional data and feedback in a timely
13 manner.

14 269. Specifically, in the dicamba context, as discussed *supra*, many
15 states had applied the provision to positive effect, reducing drift complaints,
16 as detailed above, setting cutoff dates, requiring training, and other
17 restrictions.

18 270. For example, following the 2017 growing season numerous states
19 responded to EPA's inadequate registration by issuing FIFRA 24(c) special
20 local needs labels that added further restrictions for 2018.⁸² Iowa required an
21 additional special dicamba training for applicators. Minnesota prohibited
22 spraying after June 20 and when field or forecasted high temperatures
23 exceed 85°F. North Dakota set a cutoff date of June 30, as well as an 85°F

24
25 ⁸¹ EPA, *Guidance on FIFRA 24(c) Registrations*, *supra* n. 6.

26 ⁸² Sonja Begemann, *States Tighten Dicamba Regulations* (Feb. 8, 2018),
27 <https://www.agprofessional.com/article/states-tighten-dicamba-regulations>.

1 limit and numerous other restrictions, while Tennessee permitted spraying
2 only between 7:30 am and 5:30 pm, and required hooded sprayers for
3 applications from July 15 to October 1.

4 280. Following the 2018 growing season, numerous states again rolled
5 out 24(c) labels to place additional restrictions for the 2019 growing season.⁸³
6 Illinois set a cut-off date of June 30, 2019 for spraying dicamba-resistant
7 soybeans, prohibited application when the wind is blowing towards adjacent
8 residential areas, added a downwind buffer between the last treated row and
9 the nearest edge of any Illinois Nature Preserves Commission site, as well as
10 several other restrictions. The Minnesota, North Dakota, and South Dakota
11 Departments of Agriculture also set cutoff dates for dicamba application:
12 June 20, 2019 in Minnesota and June 30, 2019 in North and South Dakota.

13 271. When it initially raised the specter of a rule change, EPA agreed
14 on the importance of flexibility for states and assured that any changes on
15 the interpretation of 24(c) would be subject to APA notice and comment
16 rulemaking. However, in the 2020 Registration Actions overturning this
17 guidance, EPA did not undertake any public comment.

18 272. The reversal will prevent the majority of states from
19 implementing critical local special needs restrictions for the 2021 growing
20 season (and other future growing seasons).

21 273. The remaining alternative route under FIFRA 24(a), adding
22 mitigation measures through formal rulemakings or legislative processes, can
23 take years while in the meantime, unacceptable non-target damage could

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25 ⁸³ Sophie Watterson, *The State of Dicamba Regulation in the U.S. and*
26 *Missouri* (May 5, 2020), [https://moenvironment.org/the-state-of-dicamba-](https://moenvironment.org/the-state-of-dicamba-regulation-in-the-u-s-and-missouri/)
27 [regulation-in-the-u-s-and-missouri/](https://moenvironment.org/the-state-of-dicamba-regulation-in-the-u-s-and-missouri/).

1 occur. States do not often use FIFRA 24(a) because decisions during the
2 growing season need to be made swiftly, to adapt and adjust to changing
3 conditions. States will not have sufficient time.

4 274. Because of the footnote in the Registration Actions' new
5 limitations, states are now deprived of providing these essential protections
6 to farmers and the environment.

7 8 **Plaintiffs' Injuries**

9 275. Plaintiffs and their members are being and will be adversely
10 affected by the challenged Registration Actions: EPA's approval of novel and
11 increased uses of over-the-top dicamba on herbicide-resistant cotton and
12 soybean.

13 276. Plaintiffs and their members are concerned by the detrimental
14 impacts on farmers and the environment, including on endangered species
15 and their habitat, and on public health that will result from the re-
16 registration of over-the-top dicamba.

17 277. Plaintiffs' members are farmers, gardeners, and conservationists.
18 They live, farm, and recreate in the many locations where EPA has re-
19 approved over-the-top spraying of these dicamba products and where
20 applicators have and will spray the products.

21 *Farmers*

22 278. The approved uses of over-the-top dicamba injure Plaintiff
23 members' farm productivity, livelihoods, and environment, to the detriment
24 of their economic, socioeconomic, vocational, environmental, health, and
25 personal interests.

26 279. Many of Plaintiffs' farmer members grow vulnerable crops, such
27 as tomatoes, grapes, and conventional soybeans, which are at risk of dicamba
28

1 drift damage. Plaintiffs' farmer members will have to adjust their planting
2 season and choice of seed or crop or impose costly measures such as buffer
3 zones, in an attempt to avoid crop damage by the challenged dicamba uses.

4 280. Other Plaintiff members are gardeners that also grow vegetables,
5 fruits, herbs, and other crops that are at risk of dicamba drift damage. These
6 members are rural community members who enjoy the benefits of pollinators,
7 birds, and other wildlife that rely on vulnerable plants for food, nesting, or
8 breeding. They are at risk of dicamba damage to their crops, hedgerows,
9 gardens, and surrounding ecologically important flora.

10 281. EPA's registration of over-the-top dicamba use has already
11 caused unprecedented damage to farmers and gardeners' crops and plants
12 across millions of acres. Some of Plaintiffs' members include farmers and
13 gardeners who live and grow crops that have already been damaged by drift
14 under EPA's previous registration and now will likely be damaged again
15 based on the new registration. The new registration will lead to increased use
16 and more frequent applications of over-the-top dicamba this year, making it
17 more likely that Plaintiffs' farmer and gardener members who cultivate crops
18 near areas of over-the-top dicamba application will suffer crop or land use
19 damage.

20 282. Such members may have to adjust their planting season, impose
21 costly measures such as buffer strips, or forego the planting of certain crops,
22 in order to try to reduce the negative impacts of over-the-top dicamba use
23 near their crops. The livelihoods and economic interests of CFS members who
24 cultivate and farm such crops are injured by the Registration Actions.

25 283. Plaintiffs' members also live, farm, and recreate in states that
26 were also previously protected in part by their states' FIFRA 24(c) labels and
27 use restrictions issued by states to protect farmers from damage. EPA's new
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1 approval, which eliminates that state level authority and protection, thus
2 also injures them.

3 284. Plaintiffs' members are deeply concerned that EPA's registration
4 of the challenged dicamba uses will harm their farm productivity, livelihoods,
5 and environment, to the detriment of their economic and recreational
6 interests, especially without the 24(c) labels states previously imposed.

7 285. Plaintiffs' rural members are also injured by the social impacts of
8 the Registration Actions, the severe strain on social relations in farming
9 communities EPA's approvals have caused.

10 286. Plaintiffs' farmer members are also injured by the anti-
11 competitive, monopolistic impacts of the Registration Actions to the seed
12 market. EPA's re-registration will mean that many farmers in states where
13 Plaintiffs' members reside will have no choice but to switch to planting
14 dicamba-resistant soy and cotton in order to avoid economic losses due to
15 drift damage. This will further reduce the availability of non-dicamba-
16 resistant and non-genetically engineered seeds as local seed companies have
17 no incentive to sell such varieties due to reduced demand. Because of the
18 registration and forced defensive adoption, farmers find it increasingly
19 difficult to find non-dicamba-resistant soybean seeds.

20 287. Many of Plaintiffs' members are committed to reducing the use of
21 pesticides and endeavor to preserve the use of non-patented seed crops.
22 Because of Defendants' registration, they face a lose-lose choice of either
23 risking drift damage or losing their right to farm and safely plant the crops of
24 their choice.

25 288. Thus, the registration of over-the-top dicamba has, and will
26 continue to, injure Plaintiffs' members' interests and ability to obtain and
27 plant non-dicamba-resistant seeds, diminishing their ability to grow the
28

1 crops of their choice, and costing them additional time and money to locate
2 such seeds.

3 289. EPA's simultaneous elimination of the state level protections
4 under FIFRA 24(c) will exacerbate the anti-competitive, monopolistic injuries
5 as well by reducing state supplemental protections and thus increasing drift
6 harm as well as defensive adoption to avoid it.

7 290. Because of EPA's re-registration decision, Plaintiffs' members
8 may have to adjust their planting season and choice of seed or crop or
9 undertake costly measures such as buffer zones, in an attempt to avoid
10 dicamba drift crop damage.

11 291. For example, NFFC member John Zuhlke, an organic farmer and
12 owner of Little Shire Farm in South Dakota, experienced damage to his crops
13 from dicamba use by neighboring farms, particularly to his susceptible
14 tomato crop. As a result of this damage, he lost \$40,000 to \$80,000 worth of
15 sales during the 2018 growing season and his personal relationships with
16 neighbors suffered. He also experienced damage to the trees on his property,
17 particularly a maple tree. Because of the 2020 Registration Decisions,
18 continued use of dicamba on neighboring fields will result in further strained
19 relationships and economic losses.

20 292. Additionally, CFS member, Eric Pool, the owner of Berryville
21 Vineyards, is concerned about dicamba drift continuing to harm his vineyard
22 because grapes are sensitive to dicamba. He currently farms about ten acres
23 of wine grapes and berries in Berryville, Illinois in an area near dicamba-
24 resistant soybean crops where farmers rely heavily on herbicides. He has
25 suffered economic and labor costs resulting from extensive damage to his
26 vineyard and has filed several complaints with the Illinois State Department
27 of Agriculture.

28

1 *Conservationists*

2 293. Plaintiffs' members are also conservationists with aesthetic,
3 recreational, vocational, and personal interests in the protection of the
4 environment from the adverse impacts of dicamba spraying. Those members
5 are heavily involved with maintaining a healthy environment for many
6 species of animals, plants, and trees for recreational, aesthetic, and personal
7 reasons. The use of over-the-top dicamba will harm wild plants, trees,
8 animals, insects, and their native habitats, injuring Plaintiffs' members'
9 recreational and aesthetic interests. The intensive use of over-the-top
10 dicamba on crops compromises Plaintiffs' members' enjoyment of their local
11 environment and injures the aesthetic and recreational interests of members
12 in maintaining biodiversity and protecting sensitive species.

13 294. EPA's registration of these products will continue to cause a
14 skyrocketing increase in the spraying of dicamba by millions of pounds a
15 year. This dicamba will be sprayed in new ways, over the top of growing
16 crops, at new times of the year, and during summer. Through drift and
17 runoff, the dicamba will leave the farm fields and enter water and soil, as
18 well as expose native species.

19 295. Dicamba drift and consequential environmental harm will also
20 increase because of EPA's elimination of states' 24(c) authority to limit
21 spraying, which further injures Plaintiffs' members' conservation interests.

22 296. Plaintiffs' members are concerned about the adverse impacts to
23 the environment and to wild plants, trees, insects, birds, and other animals
24 from dicamba exposure because of EPA's decision. They are also concerned
25 about the effects on water quality and human health. They live and regularly
26 hike and recreate in and around areas now approved for dicamba spraying.

1 297. For example, CBD member John Buse is concerned about the
2 effects of pesticides and herbicides on the wellbeing and recovery of
3 threatened and endangered species, as well as on water quality and human
4 health. Specifically, he enjoys hiking and recreating near Indiana bat habitat
5 near Indianapolis, Indiana and observing bat colonies. He is concerned that
6 dicamba products will be routinely applied in Indiana and elsewhere in and
7 around Indiana bat habitat without regard to the species' conservation and
8 recovery.

9 *Organizational Injury*

10 298. In addition to the injury to its individual members, the
11 registration decision also adversely injures Plaintiffs' organizational
12 interests. *See supra* ¶¶ 26-34. Each organization has a mission dedicated to
13 protecting the environment and/or farmers from the adverse impacts of
14 industrial agriculture, including specifically pesticides. EPA's 2020
15 Registration Actions caused Plaintiff organizations to continue to divert
16 resources from addressing other pesticides to focus on the harms and injuries
17 caused by the over-the-top uses of dicamba on dicamba-resistant cotton and
18 soybean.

19 *Failure to Hold Notice and Comment*

20 299. Plaintiffs and their members are also injured by EPA's refusal to
21 hold notice and comment on the challenged decision. EPA's refusal deprived
22 Plaintiffs and their members of their procedural rights under the APA and
23 FIFRA to formally submit to the EPA comments on the proposed decision.

24 300. The registrations are still the first attempt at a lawful, novel new
25 use of dicamba, which should proceed through notice and comment. Also, the
26 decision made a rule change for all pesticides, eliminating states' protections
27 under FIFRA 24(c). The public and stakeholders such as Plaintiffs and their
28

1 members should have been given the formal opportunity to weigh in on such
2 a precedential decision and have the right to responses from EPA on their
3 critiques and consideration of the evidence they might present.

4 301. EPA's failure to hold public comment on the proposed decision
5 before issuing the challenged decision injures Plaintiffs' due process rights to
6 participate in proceedings affecting them. These procedural injuries are
7 directly connected to the substantive injuries to Plaintiffs' economic and
8 environmental interests explained above. Had EPA held public comment, it
9 might have reached a different decision in whole or part.

10 *Summary*

11 302. In sum, EPA's decision to register over-the-top dicamba for use
12 on cotton and soybean injures Plaintiffs' substantive and procedural
13 interests, their organizational interests in protecting agriculture and the
14 environment, as well as the aesthetic, recreational, economic, and personal
15 health interests of thousands of their members.

16 303. Plaintiffs' and their members' injuries will be redressed if and
17 when this Court declares the approval unlawful and vacates the Registration
18 Actions, halting the use and sale of the pesticide products.

19
20 **FIRST CAUSE OF ACTION**

21 ***Registration Not Supported by Substantial Evidence***
22 ***Violation of FIFRA***

23 304. Plaintiffs reallege and incorporate by reference Paragraphs 1
24 through 303.

25 305. To unconditionally register a pesticide, EPA must conclude
26 among other things that the pesticide "will perform its intended function
27 without unreasonable adverse effects on the environment" and that "when
28

1 used in accordance with widespread and commonly recognized practice it will
2 not generally cause unreasonable adverse effects on the environment.” 7
3 U.S.C. § 136a(C)(5).

4 306. FIFRA defines “unreasonable adverse effects on the
5 environment” to mean “any unreasonable risk to man or the environment,
6 taking into account the economic, social, and environmental costs and
7 benefits of the use of any pesticide.” 7 U.S.C. § 136(bb).

8 307. EPA’s registration conclusion is not supported by substantial
9 evidence because the EPA understated some risks and costs and failed to
10 address others.

11 308. These include:

- 12 1. understating the amount of dicamba to be sprayed and
13 which will move off-field and enter the environment;
- 14 2. understating the damage from unreported drift;
- 15 3. failing to account for and quantify or even estimate the
16 economic cost of crop damage from dicamba drift;
- 17 4. failing to account for the impossibility of complying with
18 the label instructions in real world farming conditions;
- 19 5. failing to consider and assess the anti-competitive,
20 monopolistic economic impacts of defensive dicamba-
21 resistant seed adoption;
- 22 6. failing to consider and assess the social impacts of dicamba
23 drift, crop damage, and defensive adoption on farming
24 communities
- 25 7. Failing to consider and assess the impacts of dicamba drift,
26 runoff, and rainwater on the environment, including drift
27 damage to wild plants, trees, and other species;
- 28

1 8. failing to consider and assess the efficacy of the new label
2 mitigations, such as hooded sprayers, a June 30 cutoff date,
3 and the use of VRAs.

4 309. The EPA based its determination that the Registration Actions
5 will not result in “adverse effects on the environment” on mitigation, in the
6 form of label instructions. Yet EPA failed to study and account for the
7 substantial likelihood that farmers and applicators, despite their best efforts,
8 cannot follow the use directions in real world conditions. In previous seasons,
9 numerous use directions, the same directions still in the Registration Actions,
10 proved “difficult if not impossible to follow,” *NFFC II*, 960 F.3d at 1124, 1140-
11 41. And that the additional measures EPA added will fare better is also not
12 supported by substantial evidence. Despite the Ninth Circuit’s unambiguous
13 instruction, EPA still has not studied the efficacy or feasibility in the real
14 world of the measures upon which it is banking its decisions. EPA unlawfully
15 made no effort to test the efficacy of the mitigation on which it is relying.

16 310. EPA played up the alleged benefits of the dicamba new uses, but
17 left out any assessment of their true costs. The EPA based its Registration
18 Actions on a flawed cost-benefit assessment that failed to take into account
19 social and economic impacts, in violation of FIFRA. 7 U.S.C. § 136(bb).
20 Nowhere in the decision documents, including the two Benefits Assessments,
21 does EPA critically assess and quantify, farmers’ financial losses as a result
22 of off-target drift or the anticompetitive effect of these crop systems.

23 311. EPA’s cost-benefit assessment is also flawed because EPA failed
24 to assess the costs to non-agricultural systems, such as ornamental plants
25 and trees.

26 312. EPA failed to assess the intertwined social costs to farming
27 communities and agriculture of the renewed registration of these products.

1 The prior registrations have not merely caused financial hardship; they have
2 torn apart farming communities, pitting farmer against farmer.

3 313. All of these violations mirror the past unlawful registration
4 decisions for these products, and are errors of law the Ninth Circuit
5 specifically rebuked the EPA for making just this past June 2020.

6 314. The Registration Actions are thus not supported by substantial
7 evidence in violation of FIFRA.

8
9 **SECOND CAUSE OF ACTION**
10 *Violation of the Unconditional Registration Standard*
11 *Violation of FIFRA*

12 315. Plaintiffs reallege and incorporate by reference Paragraphs 1
13 through 314.

14 316. The prior product registrations were conditional and only for 2
15 years; this time, EPA registered the products unconditionally and for 5 years.

16 317. As compared to conditional registration, unconditional
17 registration imposes a different, higher standard, both in terms of the data it
18 requires as well as its risk standard. Whereas for conditional, only
19 “satisfactory data” is required, 7 U.S.C. § 136a(c)(7)(B), for unconditional,
20 EPA must determine that “no additional data are necessary.” 40 C.F.R.
21 § 152.112(c).

22 318. Whereas for conditional registration, EPA must only determine
23 that the conditional new use will not “significantly increase the risk of any
24 unreasonable adverse effect” beyond the already existing registration, 7
25 U.S.C. § 136a(c)(7)(B), an unconditional registration requires EPA to find
26 that the pesticide “will perform its intended function without unreasonable
27 adverse effects on the environment. 7 U.S.C. 136a(C)(5)(C). EPA must also
28

1 find that the pesticide “when used in accordance with widespread and
2 commonly recognized practice . . . will not generally cause unreasonable
3 adverse effects on the environment.” 7 U.S.C. § 136a(c)(5)(D).

4 319. EPA failed to support with substantial evidence several prongs of
5 the unconditional registration standard. First, EPA failed to consider and
6 assess whether farmers are actually able to use the products for their
7 “intended function” of weed control and still not cause unreasonable adverse
8 effects on the environment. The use instructions remain “difficult to
9 impossible” to follow in real world farming conditions, *NFFC II*, 960 F.3d at
10 1124, 1140-41, leaving farmers with the lose-lose choice of violating the use
11 restrictions and causing unreasonable adverse effects, or not using the
12 pesticide for its intended function. In order to meet the unconditional
13 registration standard, EPA must find that a pesticide can be sprayed *and*
14 accomplish its “intended purpose” in the real world of farming *without*
15 causing unreasonable adverse effects, not according to whatever
16 hypothetically EPA can think up to put on a label.

17 320. Second, EPA failed to support with substantial evidence that the
18 byzantine, impossible to follow mitigation measures—the use instructions for
19 the products on which EPA has predicated its finding of no unreasonable
20 adverse effects—constitute “widespread and commonly recognized practice[s]”
21 in farming. 7 U.S.C. § 136a(c)(5)(D). The unconditional registration standard
22 requires EPA to assess whether the pesticide products will cause
23 unreasonable adverse effects “when used in accordance with widespread and
24 commonly recognized practice,” not when used in *any scenario that EPA can*
25 *contemplate*, however unrealistic in real farming and weather conditions it
26 might be.

1 332. The FIFRA 24(c) reversal by EPA is subject to notice and
2 comment because it is a legislative rule that alters legal rights and has the
3 force and effect of law. The rule change removed states' rights to grant
4 "special local needs labels" to restrict pesticide uses beyond the federal label
5 without going through FIFRA 24(a), which requires lengthy state law or
6 rulemaking processes.

7 333. The decision conflicts with prior longstanding EPA policy, which
8 allowed states to issue further restrictions beyond federal labels to meet
9 special local needs under section 24(c) of FIFRA.

10 334. Despite being a part of particular product registration decisions
11 otherwise limited to three pesticide products, EPA declared that its new rule
12 change applied to all registered pesticides. This was the first time EPA
13 publicly announced the change.

14 335. As a substantive rule that has the force and effect of law, this
15 decision was subject to APA notice-and-comment rulemaking requirements.
16 However, contrary to the APA, EPA did not provide notice and comment
17 opportunities to the public before issuing the 2020 decision. Instead, it buried
18 it in a footnote.

19 336. Through its decision, EPA altered the established rights of states,
20 and the farmers that depend on state regulators to improve on flawed federal
21 oversight. In the past, for these products and for other products, through
22 FIFRA 24(c), states have been able to move quickly to address developing
23 harms, such as the unprecedented dicamba drift crisis of millions of acres in
24 2016-2020. Now, the lengthy state rulemaking and legislative procedures
25 required by FIFRA 24(a) will prevent states from issuing 24(c) labels for the
26 2021 growing season, or during any subsequent season, if and when timely
27 state action is required to address that season's needs, as it has in past years.
28

- 1 5. Prohibit any continued use of existing, already sold pesticide
2 products registered under the now-vacated registrations;
- 3 6. Grant any other relief as may be necessary and appropriate to
4 stop the use and sale of pesticides authorized by the Registration
5 Actions before and after vacatur;
- 6 7. Declare that the Defendants' action in reversing longstanding
7 EPA rules regarding Section 24(c) of FIFRA for these products
8 but also all other pesticides without notice and comment was in
9 violation of the APA and was arbitrary, capricious, without
10 observance of procedures required by law, and therefore must be
11 set aside;
- 12 8. Declare that EPA, should it wish to alter Section 24(c), must
13 undertake notice and comment rulemaking;
- 14 9. Set aside, or vacate, the Registration Actions with regard to
15 Section 24(c);
- 16 10. Award Plaintiffs the costs of this litigation, including reasonable
17 attorneys' fees and expert witness fees; and
- 18 11. Grant such other relief as the Court deems just and proper.

19
20 Respectfully submitted this 23rd day of December, 2020.

21
22 s/ Sylvia Shih-Yau Wu

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