

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF MISSOURI  
EASTERN DIVISION**

SMOKEY ALLEY FARM PARTNERSHIP; )  
AMORE FARMS; JTM FARMS; )  
KENNETH LORETTA GARRETT QUALLS )  
FARM PARTNERSHIP; QUALLS LAND CO.; )  
MICHAEL BAIONI; and MCLEMORE )  
FARMS LLC )

*Plaintiffs,* )

v. )

MONSANTO COMPANY, )  
BASF CORPORATION, BASF SE, )  
BASF CROP PROTECTION, )  
E.I. DUPONT DE NEMOURS AND COMPANY, )  
PIONEER HI-BRED INTERNATIONAL INC., )  
and DUPONT PIONEER )

*Defendants.* )

Case No.: 4:17-cv-2031

Judge: T/B/D

***JURY TRIAL DEMANDED***

**CLASS ACTION COMPLAINT AND DEMAND FOR JURY TRIAL**

Plaintiffs Smokey Alley Farm Partnership, Amore Farms, JTM Farm, Kenneth Loretta Garrett Qualls Farm Partnership, Qualls Land Co., Michael Baioni and McLemore Farms LLC (together, “Plaintiffs”), by their undersigned attorneys, on their own behalf and on behalf of all others similarly situated, upon personal knowledge as to themselves and their own acts, and upon information and belief as to all other matters, bring this action against Monsanto Company (“Monsanto”); BASF Corporation and BASF Crop Protection (together, “BASF”); and E.I. DuPont De Nemours and Company, Pioneer Hi-Bred International Inc. (“Pioneer) and DuPont Pioneer (“DuPont Pioneer”) (all three together, “DuPont”), and allege as follows:

## NATURE OF THE CASE

1. This is not an anti-GMO lawsuit; it's a lawsuit about corporate greed, a rush to market, and the resulting fallout.

2. With a global population expected to exceed nine billion by 2050, food production must grow 70% to feed the world.

3. While there are some that believe organic or non-GMO crops are a better choice, the math is clear...without GMO crops, there will not be enough food to feed the world.

4. Despite this reality, the biotech industry has repeatedly proven there are risks of harm if GMO crops are not handled responsibly. From the Starlink corn recall in 2000 (when over 300 food products were found to contain a GMO corn that had not been approved for human consumption),<sup>1</sup> to Bayer's contamination of the U.S.'s natural long-grain rice in 2006 with an unapproved GMO,<sup>2</sup> to Syngenta's premature release of Viptera corn in 2014 (prior to approval by a major importer which led to a crash in corn prices),<sup>3</sup> history has shown that when biotech companies put greed and profit before responsibility, harm occurs across the entire market.

5. Part of acting responsibly requires biotechnology companies to avoid the premature release of genetic traits into the market. This why biotechnology and agriculture companies have pledged to their stakeholders that they will act responsibly when introducing new bio-engineered genetic traits.

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<sup>1</sup> Ex. 1, Starlink Corn Recall Wikipedia entry (Downloaded June 22, 2017 from [https://en.wikipedia.org/wiki/StarLink\\_corn\\_recall](https://en.wikipedia.org/wiki/StarLink_corn_recall)).

<sup>2</sup> Ex. 2, "Genetic rice lawsuit in St. Louis settled for \$750 million," St. Louis Post-Dispatch (July 2, 2011) (Downloaded June 22, 2017 from [http://www.stltoday.com/news/local/metro/genetic-rice-lawsuit-in-st-louis-settled-for-million/article\\_38270243-c82f-5682-ba3b-8f8e24b85a92.html](http://www.stltoday.com/news/local/metro/genetic-rice-lawsuit-in-st-louis-settled-for-million/article_38270243-c82f-5682-ba3b-8f8e24b85a92.html)).

<sup>3</sup> Ex. 3, "Syngenta Loses \$218 Million Verdict in First GMO Trial Test," Bloomberg (June 23, 2017) (available from <https://www.bloomberg.com/news/articles/2017-06-23/syngenta-ordered-by-jury-to-pay-218-million-to-kansas-farmers>).

6. Although the Defendants here pledged to act responsibly, Defendants acted selfishly, focused on profits, and ignored their responsibilities to the market.

7. The GMO products at issue are Monsanto's Roundup Ready 2 Xtend Soybeans ("Xtend soybeans")<sup>4</sup> and Bollgard II XtendFlex cotton ("XtendFlex cotton") (together, "Xtend products"), which are utilized in conjunction with the Defendants' dicamba herbicides (Monsanto's XtendiMax® Herbicide with VaporGrip® Technology ("XtendiMax"), BASF's Engenia herbicide ("Engenia") and DuPont's FeXapan™ herbicide Plus VaporGrip® Technology("FeXapan")).

8. Monsanto marketed its Xtend products as "blockbusters" that would provide desperate farmers meaningful relief from ever increasing weed pressure.

9. The fundamental technological advance of Xtend is a genetic modification which results in resistance to the herbicide dicamba. This genetic resistance provides an advantage: after planting Xtend soybeans or XtendFlex cotton, dicamba herbicide could be applied post-emergence, or, colloquially, "over-the-top." The result: clean, almost weed-less fields except for Xtend soybean and XtendFlex cotton plants.<sup>5</sup>

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<sup>4</sup> DuPont also sells a brand of Xtend soybeans via a license from Monsanto.

<sup>5</sup> Ex. 4, "Tips on applying dicamba/glyphosate tank mix on Xtend soybeans," Manitoba Co-Operator (July 6, 2015) (Downloaded July 13, 2017 from <http://www.npr.org/sections/thesalt/2016/08/01/487809643/crime-in-the-fields-how-monsanto-and-scofflaw-farmers-hurt-soybeans-in-arkansas>)



The addition of genetic resistance to dicamba offers a benefit to farmers struggling with weed control. This benefit, however, comes with a cost: dicamba is known to volatilize and drift, which results in the damage and death to neighboring crops and plants not resistant to dicamba. This can be seen in the below photo, showing dicamba damage to fields on the left side of the road, whereas the crops on the right side were dicamba resistant.<sup>6</sup>

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<sup>6</sup> Ex. 5, "GMO-herbicide drift disaster threatens non-GMO, fruit, and vegetables farms throughout the South," The Organic & Non-GMO Report (Aug. 25, 2016) (Downloaded July 13, 2017 from <http://non-gmoreport.com/articles/gmo-herbicide-drift-disaster-threatens-non-gmo-fruit-vegetable-farms-throughout-south/>).



10. Prior to November 2016, it was illegal to use dicamba for over-the-top applications on Xtend products due to the risk of damage to non-target crops and plants due to dicamba volatilization and drift.

11. To take advantage of the Xtend products genetic resistance (*i.e.*, the reason farmers would buy such products), Monsanto, BASF and DuPont needed to develop and seek approval by the Environmental Protection Agency (“EPA”) for new formulations of dicamba that were not yet on the market—formulations that would allegedly not volatilize or drift.

12. Initially, Monsanto stated it would not release its Xtend products until the EPA approved an over-the-top dicamba herbicide formulation.<sup>7</sup>

13. Greed, however, won out over responsibility. In 2015, although it lacked EPA approvals for over-the-top applications of dicamba, Monsanto released its XtendFlex cotton to farmers on a “limited” basis.<sup>8</sup>

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<sup>7</sup> Ex. 6, Nov. 28, 2012 Monsanto Press Release (Downloaded June 22, 2017 from <http://news.monsanto.com/press-release/strong-harvest-results-demonstrate-monsanto-companys-position-industry-yield-leader-ch>).

<sup>8</sup> Ex. 7, “EPA to Approve Dicamba for Use on Roundup Ready 2 Xtend Soybeans,” No-Till Farmer (April 2016) (Downloaded on June 22, 2017 and available at: <https://www.no-tillfarmer.com/articles/5632-epa-to-approve-dicamba-for-use-on-roundup-ready-2-xtend-soybeans>).

14. Monsanto did so despite warnings from farmers and industry experts. For example, in 2014, a coalition of farmers named Save Our Crops warned Monsanto that premature release of dicamba resistant traits would pose a risk to crops in the Midwest:

Vegetable farmers in the Midwest, where large amounts of corn and soybeans are grown, will be at “high risk” because they’ll be in close proximity to fields being sprayed with 2,4-D and dicamba...<sup>9</sup>

15. Monsanto’s “plan” to prevent drift and volatilization damage to non-target crops and plants was, despite years of marketing Xtend products’ dicamba tolerance, simply to publicly tell XtendFlex purchasers not to use dicamba.

16. This tactic failed. Farmers sprayed dicamba over-the-top of their XtendFlex cotton in 2015. *See, e.g.*, Ex. 9, Excerpts from AR State Plant Board Complaint, Case File#15-204. This resulted in the death and damage of non-target crops and plants.

17. Monsanto’s “plan” failed for multiple reasons. First, while publicly stating it was instructing farmers *not* to apply dicamba over the top of its XtendFlex cotton, Monsanto seed representatives instructed farmers to do the opposite: to illegally spray their fields with dicamba.

18. For example, a 2015 purchaser of XtendFlex Cotton testified before the Arkansas Plant Board that a Monsanto seed representative told him to spray dicamba over-the-top of his Xtend crops, even when it was illegal to do so.

MS. NICHOLS: The Committee asked that you come in or required that he come in. I think they have some questions as to why they considered this a grievous and they wanted to know -- from what I understand, *why this application was made at this rate.*

MR. HOWE: Exactly right.

MR. MASTERS: *Well, you think I just grabbed it out of the air? You think the boy that just left here just grabbed those figures out of the air and did it. Somebody told him to, right?*

MR. FINCH: *Who told you to?*

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<sup>9</sup> Ex. 8, “Monsanto in dispute with veggie farmers over herbicide,” USA Today (March 2014) (Downloaded on July 13, 2017 from <http://www.usatoday.com/story/news/nation/2014/03/13/monsanto-dow-agrosciences-herbicides-save-our-crops/6015519/>).

MR. MASTERS: *You know who did. I'm not going to say it.*

MR. FINCH: *Monsanto?*

MR. MASTERS: *A few words may incriminate myself. Why sure.*

MR. FINCH: *So, Monsanto told you to spray this Strut --*

MR. MASTERS: *Well --*

MR. FINCH: *-- directly over the top and it wouldn't hurt a thing?*

MR. MASTERS: *Right. And the cotton is developed and it didn't hurt the cotton one dab, but they told us it would be legal, but you know it's not legal. Now, this is January of '15 that it's not legal right now, but it will be by May at the latest. So, we planted it, we sprayed it, then everybody commenced to saying, "Oh, it's not legal no more. It's not legal." Well, it -- I'm just like the rest of you. I didn't read the writing. Dicamba, I've used it on corn. Clarity, which is a more refined Dicamba that's some of the other. There's two formulations of Dicamba. One, the salts in them are a little different. And I can't remember exactly what they were, but Clarity is the one that's a little more better to spray over cotton than the other cheaper variety is.*

MR. FINCH: *But who's your rep?*

MR. MASTERS: *I'm not going to say, because he was just doing what somebody told him.*

Ex. 10, In the Matter of Don Masters at Tr. at 10-12 (emphasis added).

MR. FINCH: *Would you have planted this – would you have bought this cotton had you known that Monsanto [sic] would come in or EPA might come in and destroy that crop because you did an off label application? Would you have planted that crop?*

MR. MASTERS: *No. And I wouldn't have planted that crop if they hadn't told me that it would probably be -- in other words, they pretty well assured me that in '15, that before May, that it would be legal. You could spray over the top of it and be just fine.*

*Id.* at 17-18. This was Monsanto's real plan: publicly appear as if it were complying, while allowing its seed representatives to tell farmers the opposite in person. Their sales pitch: assure purchasers that off-label and illegal uses of dicamba would "be just fine." *Id.*

19. Second, Monsanto's "plan" failed because weed pressure is one of the largest concerns for farmers. Faced with such pressures, and years of Monsanto bragging about the benefits of its XtendFlex products, it's unrealistic to believe there would be no damage to non-target crops due to off-label application of dicamba.

20. Third, because no non-volatizing or drift-free dicamba formulations were approved by the EPA in 2015 (and thus no non-volatizing or drift free dicamba formulations available to

farmers), any use of dicamba over-the-top of XtendFlex products *would* result in damage to non-target crops or plants.

21. Fourth, the penalties for improper use of dicamba were so small as to be nonexistent. In some states, the *maximum* fine was \$1,000.<sup>10</sup> Considering how dicamba use would improve their Xtend crop yield, many farmers took the risk, simply writing off a potential \$1,000 fine, as a cost of doing business...*if* they'd get caught.

22. Considering the average size of a cotton farm is over 1,000 acres, the average fine would amount to less than \$1 an acre.<sup>11</sup>

23. Fifth, Monsanto's warning system was flawed. Monsanto focused solely on the consequences to the farmers/applicators themselves: a minimal fine. Monsanto's warnings failed to explain that *any* over-the-top application of 2015 dicamba formulations on its Xtend products would lead to drift/volatilization *and* damage to non-target crops and plants. Monsanto's warnings were silent in this regard, and, accordingly, ineffective.

24. Despite the need for new (and then unavailable) dicamba formulations, Monsanto misled, or at a minimum confused, its farmer/customer base for years by touting its Xtend products would have dicamba resistance – period – although use of other formulations would lead to non-target crop and plant damage. This was reinforced when Monsanto seed representatives encouraged illegal spraying of dicamba over-the-top of XtendFlex seed in 2015 when no non-drifting/non-volatilizing formulas were available. See, e.g., Ex. 10 at 17-18.

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<sup>10</sup> Ex. 11, "As EPA label for dicamba-tolerant soybeans lags behind availability of seed, reports of drift injury flourish," University of Arkansas Division of Agriculture Cooperative Extension Service (Downloaded on July 13, from <http://www.uaex.edu/media-resources/news/july2016/07-15-2016-Ark-dicamba-drift-injuries.aspx>).

<sup>11</sup> In 2007, the United States Department of Agriculture determined that the average cotton farm was 1,312 acres in size, compared to 418 acres of an average farm. Ex. 12, "2007 Census of Agriculture, Cotton Industry," U.S. Dept. of Agriculture, Nat'l Agricultural Statistics Service (Downloaded from [https://www.agcensus.usda.gov/Publications/2007/Online\\_Highlights/Fact\\_Sheets/Production/cotton.pdf](https://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/Production/cotton.pdf)).



25. After the damage caused to non-target crops and plants by over-the-top dicamba applications to XtendFlex cotton in 2015, Monsanto had no reasonable basis to expect anything less than additional drift and volatilization damage should it continue offering Xtend products, especially prior to EPA approval of non-drifting/non-volatilizing dicamba formulations.

26. Once again, Monsanto had the opportunity to act responsibly. Monsanto could have withheld further release of Xtend products until EPA approvals for non-drifting/non-volatilizing dicamba formulations were issued.

27. Monsanto chose not to. Instead, it rolled the dice on a second release of XtendFlex cotton and a major release of Xtend soybeans for the 2016 planting season. Its public reasoning: approvals were “imminent,” so farmers would be able to use new and approved formulations of dicamba for the 2016 season.<sup>12</sup>

28. Monsanto again gambled, and lost. When it shipped its major release of Xtend soybeans and second season of XtendFlex cotton, it still lacked EPA approvals for over-the-top application of dicamba, and did not receive such approvals until after harvest.

29. Predictably, with a larger release, there was more misuse and more damage to non-target crops. Applications of dicamba over-the-top of Xtend soybeans led to tens of thousands of acres of non-target damaged and dying crops.<sup>13</sup>

30. In 2016 in Missouri, Tennessee and Arkansas, there were at least 27, 44, and 26 filed complaints (respectively).<sup>14</sup>

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<sup>12</sup> Ex. 13, MON Q1 2016 Results – Earnings Call Transcript, p. 24.

<sup>13</sup> Ex. 14, EPA Compliance Advisory (Aug. 2016) (Downloaded on July 14, 2017 from <http://ifca.com/media/fifra-dicambacomplianceadvisory.pdf>).

<sup>14</sup> Ex. 15, Dicamba Facts, MO Dept. of Agriculture (Downloaded June 22, 2017 from <http://agriculture.mo.gov/plants/pesticides/dicamba-facts.php>); Ex. 16, “Off-Target Trauma, States Dig Through Dicamba Claims,” DTN Progressive Farmer (Aug. 2016) (Downloaded July 14, 2017 from <https://www.dtnpf.com/agriculture/web/ag/news/article/2016/08/03/states-dig-dicamba-claims>).

31. In late 2016 and early 2017, Defendants won EPA approvals of their over-the-top dicamba formulations. However, in doing so, Defendants withheld crucial information from the EPA. For example, Monsanto relied on misleading volatility testing (*e.g.*, only testing volatility *relative* to other dicamba formulations and not determining a safe level of volatility). Also, despite allowing independent and unbiased testing by third parties (*i.e.*, universities) on the efficacy of its over-the-top dicamba formulations, it did not allow similar independent and unbiased tests on volatilization despite receiving multiple requests. When specifically asked about this on or about August 8, 2016, a Monsanto representative (Boyd Carey) stated to the Arkansas Plant Board such tests would not be allowed because the results might jeopardize Monsanto's registrations.

32. The result: the approved over-the-top dicamba formulations, even if properly applied, were *not* non-drifting or non-volatilizing.

33. In 2017, with issued EPA approvals, and despite two years of dicamba drift damage, Monsanto fully rolled out its Xtend soybean and XtendFlex cotton seeds, and its XtendiMax dicamba formulations to be sprayed over-the-top of its Xtend seeds. Similarly, BASF and DuPont released their own approved dicamba formulations for over-the-top use on Xtend products: Engenia and FeXapan (respectively). Through a license from Monsanto, DuPont also released a version of Xtend seeds marketed as Pioneer Xtend soybeans.

34. Unbeknownst to farmers and applicators, XtendiMax, Engenia and FeXapan—even when applied pursuant to their labels—were *not* non-volatizing.<sup>15</sup> For example, Dr. Kevin Bradley of the University of Missouri reported damage even when label instructions were followed.

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<sup>15</sup> Ex. 17, Dicamba Injury Forum at 17, Dr. Kevin Bradley, University of Missouri (July 6, 2017) (Downloaded on July 14, 2017 from <http://weedscience.missouri.edu/2017%20Dicamba%20Injury%20Forum.pdf>).

## In 2017, off-site movement of dicamba has also occurred with:

- Engenia, FeXapan, and XtendiMax
- Daytime spraying
- Proper sprayer set up

*Id.* Despite being touted by Defendants as safe for non-target crops and plants, they were not.

35. In his experiments, Dr. Bradley's initial test results showed that after proper spraying techniques, even the approved dicamba formulations show volatility:

Formulations = Will be interesting to see how Engenia and XtendiMax compare to Banvel, but **initial results w/ air samples and indicator plants suggest that both can be detected in air after application.**

Volatility = Much more to see with the remaining time points and air samples. **Indicator plants suggest volatilization is still occurring at least 24 hours after treatment.**

*Id.* at 28 (emphasis added).

36. Similarly, Dr. Thomas Mueller of the University of Tennessee Institute of Agriculture in July 2017 released test results finding, "This data indicates the dicamba (from Engenia) is moving from the site of application into the air immediately above the treated field" and "Given sensitivity of soybeans to POST dicamba, these data indicate that soybean injury in adjacent areas *should be expected* from vapor moment of dicamba after application." Ex. 18.<sup>16</sup>

37. The reason for withholding independent testing on Defendants' over-the-top dicamba formulations is clear: independent, unbiased tests would have challenged in-house findings submitted by Defendants to the EPA, and jeopardized Defendants' registrations.

38. Predictably, with a larger roll out of Xtend products in 2017, the damage to non-target crops and plants has dramatically increased.

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<sup>16</sup> "Effect of adding Roundup PowerMax to Engenia on vapor losses under field conditions," Thomas Mueller, University of Tennessee (July 2017).

39. As of the filing of this complaint, and still early in the soybean season, in Arkansas there have been over 633 filed complaints due to dicamba drift damage, over 69 in Tennessee and over 130 in Missouri.<sup>17</sup> There have also been complaints in other states such as Illinois and Indiana.

40. In June 2017, both Arkansas and Missouri temporarily banned dicamba use for over-the-top applications, and Tennessee instituted emergency rules regarding over-the-top dicamba application.

41. Unlike the 2015 and 2016 damage, caused by illegal applications of dicamba, 2017 damage appears even when Engenia, FeXapan and XtendiMax instructions and labels are followed...to the extent they can be followed. See e.g., Ex. 17. As experts have explained, the majority of 2017 damage to non-target crops and fields is uniform, meaning the damage arises due to volatility. As Dr. Kevin Bradley of the University of Missouri Extension stated:

The majority of fields I've been in are injured from one end to the other with no discernable difference in soybean symptomology. This suggests problems with off-site movement through volatility.

*Id.* at 13. Damage due to volatility is not due to applicator error or failure to follow instructions/labels; it arises due to a defect with the product. *Id.* at 13, 17, 28.

42. The problem is compounded in that Defendants drastically underplayed the risk of damage due to volatilization and temperature inversions to the EPA for their Xtend, Engenia and FeXapan products. Described in greater detail below, temperature inversions (cooler ground level temperatures) lift volatilized and very small droplets of dicamba from fields into the air, allowing them to travel in an inversion layer, sometimes for miles. As temperatures invert again (warmer temperatures at ground level this time), the entire inversion layer is deposited onto non-target

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<sup>17</sup> Ex. 19, "Dicamba Debate Continues, States Contemplate More Herbicide Restrictions," DTN Progress Farmer (July 12, 2017) (Downloaded July 14, 2017 from <https://www.dtnpf.com/agriculture/web/ag/news/article/2017/07/12/states-contemplate-herbicide>).

fields. This results in the widespread and uniform damage to non-target crops and plants seen in 2017.

43. Additionally, experts such as the University of Tennessee's Larry Steckel have criticized Defendants' labels and instructions (e.g., they do not allow for timely application), and questioned whether the technology itself is safe enough to be used under any conditions.

The label associated with the approved low-volatility dicamba formulations called XtendiMax, FeXapan and Engenia are already complicated without further restrictions. "Following them as they are now is a Herculean task. Talk about threading the needle -- you can't spray when it's too windy. You can't spray under 3 miles per hour. You got to keep the boom down -- there are so many things," Steckel said. "It looks good on paper, but when a farmer or applicator is trying to actually execute that over thousands of acres covering several counties, it's almost impossible."

...

He added that many farmers abandoned dicamba sprays and turned to other herbicide options to avoid hurting neighboring crops further. Depending on the weed control pressure and problems, that's a sacrifice and potential loss of income for those that bought into the technology, he agreed. "Mostly farmers want to do the right thing."

"I'm just not sure we can steward this technology as it currently exists," he added.

Ex. 19. In a later article, Dr. Steckel expanded on the difficulty in following the label:

[T]hough it looks straight forward on paper, it is extremely hard to follow the label. The best example of this is that you cannot spray when the wind is above 10 mph or below 3 mph. Just that stipulation when you have crops to spray timely in three different counties makes the logistics a nightmare.

Ex. 72.<sup>18</sup>

44. With labels that are difficult, if not impossible, to follow, improper spraying necessarily will follow application of even approved over-the-top dicamba formulations, leading to additional off-target damage. Regardless, given the now-shown volatility inherent even in the approved over-the-top formulations, non-target crop and plant damage was inevitable.

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<sup>18</sup> "I can't keep dicamba in the field," UTCrops News Blog (July 18, 2017) (Downloaded July 19, 2017 from <http://news.utcrops.com/2017/07/cant-keep-dicamba-field/>).

45. Ironically, and as a potential motivating factor, dicamba damage only helps sales of Xtend Soybeans, XtendFlex cotton and other upcoming Xtend products as well as the over-the-top dicamba formulations with which they are used.

46. The 2015 and 2016 premature releases and the disaster that is 2017 proves that whenever Xtend products are used, damage due to temperature inversions, dicamba drift and volatilization will follow. This creates and perpetuates the cycle of damage to non-target crops which do not have the Xtend dicamba resistance trait. The only solution for innocent farmers then is to play defense: if they do not want their crops hurt by dicamba, they must also buy Xtend products with dicamba resistance *if they are available* for their crops and plants. It is a repeating cycle of increased sales and profits for Defendants.

47. As one farmer explained in 2016:

“[Monsanto] knew that people would buy it just to protect themselves,” Hayes says. “You’re pretty well going to have to. It’s a good marketing strategy, I guess. It kind of sucks for us.”<sup>19</sup>

48. That sentiment continued in 2017 by another farmer whose field suffered damage despite his neighbor’s taking the allegedly proper precautions:

“I’m not against the technology because I’ve seen how it knocks out pigweed. Next year, I may have to go with a dicamba-tolerant soybean.”<sup>20</sup>

49. Property owners with trees and ornamentals do not have such an option as the approved species of crops and plants with GMO dicamba resistance is limited. As dicamba can damage and kill numerous types of crops and plants, plants without GMO dicamba resistance will be at risk of damage every year Xtend products are on the market.

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<sup>19</sup> Ex. 20, “Monsanto Seeds Unleash Unintended Consequences Across U.S. Farms,” Bloomberg (Sept. 1, 2016) (Downloaded July 14, 2017 from: <http://www.bloomberg.com/news/articles/2016-09-01/a-soybean-killing-pesticide-spreads-across-america-s-farm-belt>).

<sup>20</sup> Ex. 21, “Dicamba Drift Blowing Farm Trouble Again in 2017,” AG Web (June 19, 2017) (Downloaded July 14, 2017 from <https://www.agweb.com/article/dicamba-drift-blowing-farm-trouble-again-in-2017-naa-chris-bennett/>).

50. Defendants have created a scenario pitting neighbors against neighbors. Sadly, in 2016, there was a homicide over dicamba drift.<sup>21</sup> Yet still, Defendants sold their products in 2017.

51. As the consequences of their actions were not only foreseeable, they were foretold, Defendants must now pay for putting greed above the best interests of the market.

### **PARTIES**

52. Plaintiff Smokey Alley Farm Partnership (“Smokey Alley”) grows soybeans in Earle, Arkansas. It farms approximately 4,000 acres, of which 1,400 acres were planted with non-dicamba resistant soybeans.

53. Plaintiff Amore Farms grows soybeans in Marion, Arkansas. It farms approximately 1900 acres of non-dicamba resistant soybeans.

54. Plaintiff JTM Farm grows soybeans in Crittenden County, Arkansas. It farms approximately 3,400 acres of non-dicamba resistant soybeans.

55. Plaintiff Kenneth Loretta Garrett Qualls Farm Partnership and Qualls Land Co. (together, “KLGQ Farm”) grows soybeans and peanuts in Craighead County, Arkansas. KLGQ Farm grows approximately 220 acres of non-dicamba resistant soybeans and approximately 680 acres of peanuts.

56. Plaintiff McLemore Farms LLC (“McLemore Farms”) grows soybeans in Crittenden County, Arkansas. It farms 1,026 acres of non-dicamba resistant soybeans.

57. Plaintiff Michael Baioni grows soybeans in Marion and Crawfordsville, Arkansas. He grows approximately 400 acres of soybeans.

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<sup>21</sup> Ex. 22, “Dicamba Movement Prompts Arkansas Shooting,” Successful Farming (Oct. 28, 2016) (Downloaded June 29, 2017 from <http://www.agriculture.com/news/crops/off-target-dicamba-movement-prompts-arkansas-shooting>).

58. Defendant Monsanto Company is a Delaware corporation with a principle place of business in St. Louis, Missouri. It is a global provider of agricultural products, including seeds, herbicides, and fertilizers.

59. Defendant BASF Corporation is a company organized and existing under the laws of Delaware, having a business address at 100 Park Avenue, Florham Park, New Jersey. BASF is the largest chemical producer in the world. BASF is authorized to do and does business in Texas and has facilities in Beaumont, Port Arthur, Pasadena, Channelview, Freeport, and Houston, Texas. BASF Corporation is the affiliate, subsidiary, agent, distributor and North American agent for BASF SE, a German company. In the United States, BASF sells its dicamba products through BASF Crop Protection, which is either a division of, D/B/A or wholly owned subsidiary of BASF Corporation. Hereinafter, BASF Corporation, BASF SE and BASF Crop Protection will jointly be referred to as “BASF”.

60. BASF cooperates and joint ventures with Monsanto in research, development and marketing of herbicides and weed control products, including dicamba. In early 2009, Monsanto collaborated with BASF and agreed to a joint licensing agreement to accelerate the development of dicamba-based weed control products.<sup>22</sup>

61. On information and belief, Defendant DuPont is a Delaware corporation with its principal place of business at 1007 Market Street, Wilmington, Delaware 19898.

62. On information and belief, Defendant Pioneer is an Iowa corporation with its principal place of business located in Polk County, at 7000 NW 62nd Ave., Johnston, Iowa 50131.

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<sup>22</sup> Ex. 23, “BASF and Monsanto Formalize Agreement to Develop Dicamba-Based Formulation Technologies,” MON Press Release (Jan. 2009) (Downloaded July 14, 2017 from <https://monsanto.com/news-releases/basf-and-monsanto-formalize-agreement-to-develop-dicamba-based-formulation-technologies/>).



63. On information and belief, DuPont Pioneer is a d/b/a for a joint venture between DuPont and Pioneer.

64. DuPont cooperates and joint ventures with Monsanto in research, development and marketing of herbicides and weed control products, including dicamba. In July 2016, Monsanto and DuPont announced a multi-year dicamba supply agreement for the U.S.<sup>23</sup> DuPont also has licensed a variety of Xtend soybean seeds from Monsanto.

### **JURISDICTION AND VENUE**

65. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1332 and supplemental jurisdiction pursuant to 28 U.S.C. §1367(a).

66. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b) and (c) because Monsanto is headquartered in this district and transacted business in this district relating to the marketing, sales, and dissemination of its Xtend products and its dicamba formulations, including licensing those technologies to Defendants BASF and DuPont. Further, BASF and Monsanto partnered on creating the relevant dicamba formulations, meaning BASF conducted work on the relevant dicamba formulations in this district.<sup>24</sup> BASF also has an operation in Palmyra, Missouri (Marion County), in the Northern Division of the Eastern District.<sup>25</sup> It also appears that either DuPont Pioneer or Pioneer Hi-Bred owns and operates a commercial soybean seed production plant in New Madrid, Missouri, also in this district. Upon information and belief, DuPont's Xtend seeds were made, processed, or otherwise disseminated from this location.

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<sup>23</sup> Ex. 24, "DuPont and Monsanto Sign Dicamba Supply Agreement" (July 7, 2016 Press Release)(Downloaded July 17, 2017 from <http://www.dupont.com/products-and-services/crop-protection/soybean-protection/press-releases/dicamba.html>).

<sup>24</sup> *Id.*

<sup>25</sup> Ex. 25, BASF Fact Sheet for Hannibal (Palmyra), MO Site (Downloaded June 29, 2017 from <https://www.basf.com/documents/us/en/Fact-Sheets/Hannibal-Missouri-SiteFactSheet.pdf>).

67. Further, Defendants have and continue to market, sell, and/or otherwise disseminate Xtend products, Engenia and FeXapan in this district.

68. Defendants also upon information and belief derived substantial revenue from goods and products made in, used in, and sold from this district.

### **FACTUAL ALLEGATIONS**

#### ***Plaintiffs***

##### **Smokey Alley**

69. Smokey Alley grows soybeans in Earle, Arkansas.

70. On or about June 15, 2017, damage was initially observed on Smokey Alley's soybeans (e.g., curling of leaves). For the next week, the damage/curling increased.

71. The damage was observed on approximately 500 acres.

72. As harvest has not yet occurred, the total dollar value of damage is not known.

73. Prior to observed damage, in mid-to-late May, Robert Gammill of Smokey Alley met with an Engenia sales representative. During that meeting the Engenia Sales representative stated Engenia molecules were like "bowling balls" and would not go anywhere as compared to other chemicals molecules that were like "softballs" or "baseballs."

##### **Amore Farms**

74. Amore Farms grows soybeans in Marion, Arkansas.

75. On or about June 26, 2017, damage was initially observed on Amore Farms soybeans (e.g., curling of leaves, stunted growth).

76. Damage was observed on 1585 acres of soybeans.

77. Due to the damage, Amore Farms' soybeans grew slower, and required an additional herbicide application.

78. The damaged soybeans were Liberty Link and a Roundup Ready product (without the Xtend trait). Amore Farms utilized the Liberty Link in fields with pigweed problems, while the Roundup Ready product was utilized in fields where there were no pigweed problems (the yield potential was slightly better). However, due to damage by Xtend, next year Amore Farms likely will need to purchase Xtend seeds to defend against non-target dicamba damage.

79. As harvest has not yet occurred, the total dollar value of damage is not known.

**JTM Farm**

80. JTM Farm grows soybeans in Crittenden County, Arkansas.

81. On or about June 15-20, 2017, damage was initially observed on JTM Farm's soybeans (e.g., curling of leaves and stunted growth).

82. JTM Farm grows 3,400 acres of soybeans, and damage was observed in all of its soybean fields.

83. The damaged soybeans were Asgrow and Pioneer products, purchased by JTM Farm in part because it did not need to pay the extra expense for the Xtend trait (e.g., has always been able to control pigweed). However, due to damage by Xtend, next year JTM Farm likely will need to purchase Xtend seeds to defend against non-target dicamba damage.

84. As harvest has not yet occurred, the total dollar value of damage is not known.

**KLGO Farm**

85. KLGQ Farm grows soybeans and peanuts in Craighead County, Arkansas.

86. On or about June 12-15, 2017, damage was initially observed on KLGQ Farm's soybeans (e.g., leaf curling, stunted growth).

87. KLGQ Farm grows 220 acres of soybeans, all of which showed dicamba damage.

88. KLGQ Farm grows 680 acres of peanuts. Tissue samples of KLGQ Farm's peanuts showed the presence of dicamba.

89. The damaged soybeans were Roundup Ready 2. KLGQ Farm used these soybeans because they were less expensive but still had high yields. However, due to damage by Xtend, next year KLGQ Farm likely will need to purchase Xtend seeds to defend against non-target dicamba damage.

90. As harvest has not yet occurred, the total dollar value of damage is not known.

**McLemore Farms**

91. McLemore Farms grows soybeans in Crittenden County, Arkansas.

92. On or about May 26, 2017, damage was initially observed on McLemore's Farms soybeans (e.g., leaf curling, stunted growth). Several trees also showed damage as well (e.g., leaf curling).

93. Beyond the initial 2017 damage, McLemore Farms was hit with dicamba several times this year. Each time its soybeans showed damage.

94. McLemore Farms grows 1,026 acres of soybeans, at least 85% of which showed dicamba damage.

95. As harvest has not yet occurred, the total dollar value of damage is not known.

96. In addition to 2017 damage, McLemore Farms experienced dicamba damage in 2016 to its soybeans.

**Michael Baioni**

97. Michael Baioni grows soybeans in Marion and Crawfordsville, Arkansas.

98. On or about June 10, 2017, damage was initially observed on Mr. Baioni's soybeans (e.g., leaf curling, stunted growth).

99. Mr. Baioni grows approximately 400 acres of soybeans, all of which showed dicamba damage.

100. Due to their stunted growth, Mr. Baioni had to apply additional rounds of herbicide treatments to his soybeans.

101. As harvest has not yet occurred, the total dollar value of damage is not known.

102. In 2017, Mr. Baioni planted Liberty Link soybeans. Due to the damage by Xtend, next year Mr. Baioni likely will need to purchase Xtend seeds to defend against non-target dicamba damage.

### ***The Herbicide Dicamba***

103. Dicamba is not a new herbicide; it has been around since the 1940s.

104. As an herbicide, dicamba works by increasing plant growth rate. Once sufficient concentration is reached, the target plant grows in abnormal and uncontrollable ways, eventually outgrowing its nutrient supplies. It essentially grows itself to death.

105. Symptoms of dicamba application can include cupping, twisting, stunting and yield loss. Damage also can carry over into the next generation of seed that can produce symptoms in its progeny.

106. Dicamba is a potent herbicide capable of killing difficult weeds such as pigweed, some of which is glyphosate (Roundup) tolerant.

107. Soybeans are especially vulnerable to dicamba, responding negatively to much lower concentrations of dicamba than most other plants.

108. When it comes to people, dicamba is moderately toxic by ingestion and slightly toxic by inhalation or dermal exposure.

109. Dicamba is mobile, and can spread across a large area, including unintended areas and fields.

110. Due to its high mobility, dicamba can reach non-target plants via field/site runoff, spray drift during application, by vapor drift from volatilization and through temperature inversion drift. The three types of damage to non-target crops and plants due to drift are relevant to this action, and damage caused by each type of drift is often distinguishable from the others.

111. Non-target damage caused by physical/spray drift of dicamba has a specific, identifiable signature.

Spray particle drift has a telling pattern, which most anyone in the industry has observed at one time or another for various herbicides. The dosage and symptoms in an adjacent sensitive crop are greatest closest to the treated field, due to the highest frequency of larger spray droplets settling out fairly rapidly. For this reason, one indicator of spray particle drift is herbicide symptomology on weeds growing along an adjacent roadside or in a fencerow between the two fields. The injury then tapers off with distance from the treated area as a decreasing number of smaller droplets continues to settle out, until the point where no injury occurs due to insufficient number of droplets and dosage to cause injury.

Ex. 26.<sup>26</sup> Drift leads to concentrated damage to neighboring non-target crops and plants, and less concentrated damage the further from the sprayed field. As can be seen in the photograph below, the damage caused to the field on the left is likely caused by physical drift as the damage is more concentrated by the road, but then lessens as it moves into the field.

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<sup>26</sup> “It’s Beginning to Look a lot Like – Off-Target Dicamba Movement – Our Favorite Time of the Year!” Ohio State University Extension (2017) (Downloaded July 14, 2017 from <https://agcrops.osu.edu/newsletter/corn-newsletter/2017-21/it%E2%80%99s-beginning-look-lot-%E2%80%93-target-dicamba-movement-%E2%80%93-our-favorite>)



Ex. 5. With physical drift, most times it is possible to see where the dicamba was sprayed, or at a minimum, determine the direction where the drift arose.

112. Volatilization occurs when a liquid or solid changes into a vapor after spraying. Non-target damage due to volatilization occurs when an herbicide, after it hits the target, dries, then minutes to hours later, lifts off the target as a gas. Wind then allows for the dispersal of the herbicide gas to non-target fields.

113. Temperature inversion drift differs from volatilization in that both volatilized dicamba (as a gas) and physical droplets of dicamba travel in an “inversion layer.” This occurs because vapors and fine droplets of dicamba hang in cold air. Typically during summer days, it is warmer at the soil level, and cooler as altitude increases.<sup>27</sup> When a temperature inversion occurs, temperatures are cooler at the soil line. This allows for vapors and fines to hang in the air for hours. When the temperature inverts (warmer air occurring again at ground level, and colder at higher

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<sup>27</sup> An easy to understand explanation is provided in Dr. Larry Steckel’s video “Dicamba Volatility or Inversion? Do You Know the Difference?” at [http://agfaxweedsolutions.com/2017/07/07/dicamba-volatility-temperature-inversion-know-difference-video/?utm\\_content=buffer0f424&utm\\_medium=social&utm\\_source=twitter.com&utm\\_campaign=buffer](http://agfaxweedsolutions.com/2017/07/07/dicamba-volatility-temperature-inversion-know-difference-video/?utm_content=buffer0f424&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer) .

altitudes), the vapors and fines travel upwards with the inversion layer. When this happens, breezes, even a light breeze (a few miles an hour) will allow the fines to travel *en masse*, sometimes miles. When an inversion occurs again (warmer temperatures at ground level than in the air), the vapors and fines *en masse* drop onto fields below.

114. Damage caused by temperature inversion results in widespread and uniform damage.

115. Also, because temperature inversions can cause damage miles away from the source, it is sometimes impossible to determine the field from which the herbicide was sprayed.

116. The results are like the detonation of a dicamba bomb. All fields at the same growth stage will be affected in the same manner, even where dicamba was not sprayed for several miles.

117. Further, as the vapor and fines can remain aloft for multiple days, with multiple temperature inversions, non-target crops and plants could get hit day-after-day, multiple times. As experts such as the University of Tennessee's Larry Steckel have stated, multiple hits will result in increased yield loss.

Fields that got hit early with light doses of herbicide may not have yield losses. "However, these fields that got hit multiple times are struggling. Some of them aren't boot-top tall and they were planted May 1. They are likely going to have some significant yield loss."

Ex. 19.

118. Due to its volatility, dicamba has primarily been used as a pasture herbicide and for vegetation burn down prior to planting in soybean, cotton, and other crops. Prior to Nov. 2016, dicamba was registered for use on pre-plant and post-harvest soybeans and on pre-plant and post-harvest cotton. It was not approved for post-emergent spraying.

119. On April 28, 2010 and July 30, 2012, Monsanto filed applications to register new uses of dicamba on genetically-modified, dicamba-tolerant soybeans and cotton. Monsanto's



proposed new use focused on adding post-emergence/over-the-top applications to dicamba-tolerant soybeans and cotton.

120. In 2012, experts questioned Monsanto's plan to utilize dicamba for over-the-top application on resistant crops. For example, a posting from Diane Brown from the Michigan State University Extension, interviewing David Mortenson, a professor of weed ecology from Penn State, stated that non-target crop and plant damage due to dicamba was 75 times greater than for glyphosate.

“What is [more] troubling is that 2,4-D and dicamba are older and less environmentally friendly [than glyphosate].” Vapor drift of more toxic herbicides has been implicated in many incidents of crop injury and may have additional impacts on natural vegetation interspersed in agricultural landscapes, Mortensen stated. Scientists have documented that non-target terrestrial plant injury was 75 to 400 times higher for dicamba and 2,4-D, respectively, than for glyphosate.

Ex. 27.<sup>28</sup>

121. When considering whether to approve dicamba for use over-the-top of Xtend soybean crops, Monsanto convinced the EPA that spray drift exposure was the principal risk issue.

Without consideration of mitigation measures on the approved label, the agency considers spray drift exposure to be the principal risk issue to be considered with these new uses, owing to a variety of lines of evidence, including past experience with other dicamba formulations.

Ex. 28.<sup>29</sup>

122. Due to dicamba's motility, it took until Nov. 2016 for the EPA to approve over-the-top application of certain formulations of dicamba for soybeans and cotton. *Id.*

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<sup>28</sup> “2,4-D and dicamba-resistant crops and their implications for susceptible non-target crops,” Michigan State University Extension (Nov. 2013) (Downloaded July 14, 2017 from [http://agfaxweedsolutions.com/2017/07/07/dicamba-volatility-temperature-inversion-know-difference-video/?utm\\_content=buffer0f424&utm\\_medium=social&utm\\_source=twitter.com&utm\\_campaign=buf](http://agfaxweedsolutions.com/2017/07/07/dicamba-volatility-temperature-inversion-know-difference-video/?utm_content=buffer0f424&utm_medium=social&utm_source=twitter.com&utm_campaign=buf)).

<sup>29</sup> “Final Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean,” EPA, Jack E. Housenger (Nov. 9, 2016).

123. After EPA approval numerous states approved the use of Engenia, FeXapan and XtendiMax for over-the-top applications on Xtend crops.

124. Arkansas, however, especially hard hit by the dicamba drift in 2016, was skeptical of the safety of Monsanto's over-the-top dicamba formulations. It *did not* approve the use of Monsanto's XtendiMax dicamba formulations for 2017. It only approved BASF's Engenia.

### ***Monsanto's Xtend Product Line***

125. Monsanto's Xtend products can be thought of as the latest version of its Roundup Ready seeds, which can trace its history to the 1970s.

126. In 1974, Monsanto brought a glyphosate herbicide to the market, and marketed it as "Roundup."

127. As an herbicide, Roundup was a popular-selling product. It was especially profitable for Monsanto because it was protected under patents until 2000 (when the final glyphosate patent expired). During that time, Roundup earned Monsanto billions of dollars.

128. Even after its patents lapsed, glyphosate enjoyed continued popularity because, starting in 1996, Monsanto released GMO crops that were resistant to glyphosate. Marketed as "Roundup Ready," these crops allowed farmers the ability to spray the glyphosate herbicide over-the-top of growing Roundup Ready crops. In this manner, the glyphosate herbicide would kill other plants and weeds, while not hurting the Roundup Ready glyphosate resistant crops. Its use led to almost weed-free, clean fields containing just the desired Roundup Ready crops.

129. As the years have passed, certain glyphosate tolerant weeds proliferated. Because spraying glyphosate on such weeds was no longer effective, farmers needed to engage in additional practices for weed control.

130. To combat glyphosate tolerant weeds, Monsanto worked on what would become its Xtend platform. Monsanto's goal was to create crops not only resistant to glyphosate, but also resistant to dicamba. This would create a GMO crop resistant to a glyphosate/dicamba herbicide cocktail which, in theory, would allow glyphosate and dicamba to work together to kill additional weeds (even those that had evolved a resistance to glyphosate) while leaving the Xtend crops unharmed.

131. As Monsanto acknowledged in its marketing materials, the Xtend products in combination with dicamba created a "crop system."<sup>30</sup> In other words, Xtend and approved, over-the-top formulations of dicamba should be considered as products necessarily used together to achieve their full benefits.

#### ***Monsanto's Unflinching March to Release***

132. In 2012, Monsanto unveiled its Roundup Ready® Xtend Crop System.

133. Monsanto's initial position on the Xtend technologies was that release would not occur until "regulatory approval" was obtained for the use of dicamba over-the-top. As stated by Chief Technology Officer Robert Fraley:

The Roundup Ready® Xtend Crop System is intended to offer more consistent, flexible control of weeds, especially tough-to-manage and glyphosate-resistant weeds, Fraley noted, adding that the system is on track for Ground Breakers(SM) on-farm field trials under permit next season and introduction to U.S. soybean farmers in 2014, *pending regulatory approval*.

Ex. 6.

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<sup>30</sup> Ex. 29, "Next Level Weed Control is Here, Welcome to Your Source for the Latest Information on the Roundup Ready® Xtend Crop System," (Downloaded June 9, 2017 from <https://www.roundupreadyxtend.com/Pages/default.aspx>).

134. Monsanto's delaying release until regulatory approval would have been responsible and necessary. If Xtend products were released prior to EPA approval of over-the-top dicamba formulations, application of the then available dicamba formulations on Xtend crops would necessarily lead to non-target crop and plant damage. This is why, at least initially, Monsanto indicated it would withhold Xtend products from the market until over-the-top formulations were approved—to eliminate the chance of non-target damage to crops and plants.

135. At least as early as 2013, Monsanto marketed the Xtend soybean product lines' resistance to dicamba to farmers with its "Follow-a-Field" initiative. This marketing scheme followed three commercial-scale Xtend soybean fields "from burndown through harvest as part of the Monsanto Ground Breakers® Field Trials Under Permit program." Ex. 30.<sup>31</sup>

"The Follow-A-Field program will showcase three farmers who will tell the story of how the system works on their farm. These farmers will share their own experience with the system and application requirements, as well as show the advantages of incorporating dicamba into their weed control plans." says Michelle Vigna, Monsanto Roundup Ready Xtend launch manager

*Id.* The Follow-a-Field initiative targeted farmers and focused on the benefits of over-the-top applications of dicamba.

The Follow-A-Field program will showcase the components of Roundup Ready 2 Xtend soybeans and local Roundup Ready PLUS recommendations that incorporate a new mode of action, dicamba. Visitors viewing the program online will get a full preview of the weed control technology – management practices, seed traits, farmer perspectives and more. The initiative will demonstrate the Roundup Ready Xtend™ Crop System application requirements, local Roundup Ready PLUS® recommendations, and the efficacy and crop safety of dicamba and glyphosate as an integral part of a diversified weed management program.

*Id.*

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<sup>31</sup> "Monsanto Announces 'Follow-A-Field Initiative to Educate Growers on the Roundup Ready 2 Xtend™ Soybeans,'" Mon Press Release (Aug. 27, 2013) (Downloaded July 14, 2017 from <http://news.monsanto.com/news/follow-field/monsanto-announces-follow-field-initiative-educate-growers-roundup-ready-2-xtend-s>)

136. The purpose of Monsanto's Follow-a-Field marketing scheme was to advertise the benefits of dicamba resistance, so that once released, farmers would be enticed to purchase Xtend products.

137. When it came to its XtendFlex cotton, Monsanto's waiting for "regulatory approval" stance quickly changed. On or about January 2015, Monsanto announced a "limited introduction" of Xtend cotton for the 2015 planting season. Ex. 31.<sup>32</sup> This "limited" release targeted half a million acres despite still lacking dicamba approval for over-the-top applications.

138. Upon information and belief, Monsanto wanted to test the water to see what type of repercussions would occur when there was off-target dicamba damage due to its product. A "limited" release of XtendFlex cotton presented the perfect opportunity for this test.

139. In discussing this early and "limited" release during Monsanto's Second Quarter 2015 Results-Earnings Conference Call, Brett Begemann, Monsanto's Chief Operating Officer, explained Xtend cotton was not yet approved for over-the-top application.

We announced our pricing of \$6 an acre for the added value from flexible, improved weed control along with a full XtendFlex chemistry rebate to reflect that growers are unable to use dicamba over-the-top as we await final regulatory approvals.

Ex. 32 at 8.<sup>33</sup>

140. At the time, it was Monsanto's public position that a "rebate" and warnings to farmers to not use dicamba for over-the-top applications on XtendFlex cotton would be sufficient to deter improper dicamba use. Monsanto CFO Pierre Courduroux, reiterated this sentiment during the same conference call:

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<sup>32</sup> "Bollgard II® XtendFlex™ Cotton Expected On Over 500,000 Acres," Monsanto Press Release (Jan. 2015). (Downloaded July 14, 2017 from <http://news.monsanto.com/press-release/products/bollgard-ii-xtendflex-tm-cotton-expected-over-500000-acres>).

<sup>33</sup> MON's Q2 2015 Results – Earnings Call Transcript, (Downloaded July 14, 2017 from <http://seekingalpha.com/article/3045726-monsantos-mon-ceo-hugh-grant-on-q2-2015-results-earnings-call-transcript>).

I would point you to we did price the XtendFlex cotton in the south at \$6, but we also extended a rebate to farmers because they won't have the opportunity to use dicamba this year, but they will get the opportunity to use two herbicide modes of action with glufosinate.

*Id.* at 17.

141. While publicly stating it was hoping farmers would not use dicamba on XtendFlex, it appears Monsanto nonetheless allowed its seed representatives to encourage off-label, dicamba usage.

142. Before the Arkansas Plant Board, a 2015 purchaser of XtendFlex Cotton testified that Monsanto seed representatives told him he could spray dicamba over-the-top of his Xtend crops, even when it was illegal to do so, because approval was imminent.

MS. NICHOLS: The Committee asked that you come in or required that he come in. I think they have some questions as to why they considered this a grievous and they wanted to know -- from what I understand, *why this application was made at this rate.*

MR. HOWE: Exactly right.

MR. MASTERS: *Well, you think I just grabbed it out of the air? You think the boy that just left here just grabbed those figures out of the air and did it. Somebody told him to, right?*

MR. FINCH: *Who told you to?*

MR. MASTERS: *You know who did. I'm not going to say it.*

MR. FINCH: *Monsanto?*

MR. MASTERS: *A few words may incriminate myself. Why sure.*

MR. FINCH: *So, Monsanto told you to spray this Strut --*

MR. MASTERS: *Well --*

MR. FINCH: *-- directly over the top and it wouldn't hurt a thing?*

MR. MASTERS: *Right. And the cotton is developed and it didn't hurt the cotton one dab, but they told us it would be legal, but you know it's not legal. Now, this is January of '15 that it's not legal right now, but it will be by May at the latest. So, we planted it, we sprayed it, then everybody commenced to saying, "Oh, it's not legal no more. It's not legal." Well, it -- I'm just like the rest of you. I didn't read the writing. Dicamba, I've used it on corn. Clarity, which is a more refined Dicamba that's some of the other. There's two formulations of Dicamba. One, the salts in them are a little different. And I can't remember exactly what they were, but Clarity is the one that's a little more better to spray over cotton than the other cheaper variety is.*

MR. FINCH: *But who's your rep?*

MR. MASTERS: *I'm not going to say, because he was just doing what somebody told him.*

Ex. 10 at 10-12 (emphasis added).

MR. FINCH: Would you have planted this – would you have bought this cotton had you known that Monsanto [sic] would come in or EPA might come in and destroy that crop because you did an off label application? Would you have planted that crop?

MR. MASTERS: No. And I wouldn't have planted that crop if they hadn't told me that it would probably be -- in other words, they pretty well assured me that in '15, that before May, that it would be legal. You could spray over the top of it and be just fine.

*Id.* at 17-18. Monsanto's duplicitous stance led to off-label spraying of dicamba, and damage to 2015 crops and plants. *See, e.g.*, Ex. 9, 10.

143. Contrary to its position on XtendFlex cotton, at least to the outside world, Monsanto continued its “waiting for regulatory approval” approach for Xtend soybeans. In the April 1, Q2 2015 earning conference call, Monsanto COO Begemann stated:

Preparations for a record trade launch of Roundup Ready 2 Xtend soybeans continued *as we await final regulatory approvals* and secure seed production acres for what we expect to be a greater than 3 million acre launch in 2016 and available in more than 60 varieties, as shown on Slide 13.

Ex. 32 at 7-8 (emphasis added).<sup>34</sup>

144. Monsanto CFO Courduroux also reiterated Monsanto's bullish opinion of Xtend soybeans:

Our core share footprint has grown in the southern hemisphere this season, and Roundup Ready 2 Xtend soybeans *continue to meet the milestones necessary to propel it forward for what is now expected to be a more than 3 million acre launch in 2016.*

*Id.* at 9 (emphasis added). The “milestones” Courduroux referred to were regulatory approvals, including EPA approval of over-the-top application of dicamba.

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<sup>34</sup> MON (Downloaded July 14, 2017 from: <http://seekingalpha.com/article/3045726-monsantos-mon-ceo-hugh-grant-on-q2-2015-results-earnings-call-transcript>).

145. Even in May 2015, it appeared publicly that Monsanto intended to act responsibly with its Xtend soybean products consistent with its 2012 statements. In a presentation at the Wells Fargo Industrial & Construction Conference, Michael Frank, Vice President of Global Commercial at Monsanto, indicated Xtend soybeans were “ON TRACK FOR 2016 LAUNCH,” but were still “Awaiting EPA approval for in-crop use” of dicamba.

## Roundup Ready Xtend Crop System

Integrated Soybean Agronomic System  
Targets Almost 200 Million Acres Globally



<b>ROUNDUP READY 2 XTEND SOYBEANS</b> <b>ROUNDUP READY XTEND CROP SYSTEM TRIALS HUXLEY, IA 2014</b>	<b>ROUNDUP READY XTEND PLATFORM</b> <b>CURRENT STATUS</b>								
<div style="display: flex;"> <div style="width: 50%; text-align: center;">  <p style="font-size: small;">Untreated Control</p> <p><b>UNTREATED CONTROL</b></p> </div> <div style="width: 50%; text-align: center;">  <p style="font-size: small;">BEST: Xtend PPE MONITORING 10-10-15 + ROUNDUP READY CROP SYSTEM PLOT 1 PLOT 2 PLOT 3 PLOT 4 PLOT 5 PLOT 6 PLOT 7 PLOT 8 PLOT 9 PLOT 10 PLOT 11 PLOT 12 PLOT 13 PLOT 14 PLOT 15 PLOT 16 PLOT 17 PLOT 18 PLOT 19 PLOT 20 PLOT 21 PLOT 22 PLOT 23 PLOT 24 PLOT 25 PLOT 26 PLOT 27 PLOT 28 PLOT 29 PLOT 30 PLOT 31 PLOT 32 PLOT 33 PLOT 34 PLOT 35 PLOT 36 PLOT 37 PLOT 38 PLOT 39 PLOT 40 PLOT 41 PLOT 42 PLOT 43 PLOT 44 PLOT 45 PLOT 46 PLOT 47 PLOT 48 PLOT 49 PLOT 50 PLOT 51 PLOT 52 PLOT 53 PLOT 54 PLOT 55 PLOT 56 PLOT 57 PLOT 58 PLOT 59 PLOT 60 PLOT 61 PLOT 62 PLOT 63 PLOT 64 PLOT 65 PLOT 66 PLOT 67 PLOT 68 PLOT 69 PLOT 70 PLOT 71 PLOT 72 PLOT 73 PLOT 74 PLOT 75 PLOT 76 PLOT 77 PLOT 78 PLOT 79 PLOT 80 PLOT 81 PLOT 82 PLOT 83 PLOT 84 PLOT 85 PLOT 86 PLOT 87 PLOT 88 PLOT 89 PLOT 90 PLOT 91 PLOT 92 PLOT 93 PLOT 94 PLOT 95 PLOT 96 PLOT 97 PLOT 98 PLOT 99 PLOT 100</p> <p><b>ROUNDUP READY XTEND CROP SYSTEM AND ROUNDUP READY PLUS SYSTEM</b></p> </div> </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #D9EAD3; padding: 5px;"><b>OPPORTUNITY:</b></td> <td style="padding: 5px;"><b>Majority of 200M ACRES</b> N. AND S. AMERICA SOY ACRES</td> </tr> <tr> <td style="background-color: #D9EAD3; padding: 5px;"><b>COMMERCIAL LICENSES:</b></td> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>• TARGETING SEED COMPANIES WITH &gt;90% OF U.S. SOYBEAN ACRES</li> </ul> </td> </tr> <tr> <td style="background-color: #D9EAD3; padding: 5px;"><b>REGULATORY STATUS:</b></td> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>• ON TRACK FOR 2016 LAUNCH<sup>1</sup></li> <li>• EU IMPORT APPROVAL RECEIVED</li> </ul> </td> </tr> <tr> <td style="background-color: #D9EAD3; padding: 5px;"><b>LAUNCH PLANS:</b></td> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>• EXPECT &gt;3M ACRE LAUNCH WITH &gt;60 VARIETIES COVERING ALL MATURITY GROUPS</li> </ul> </td> </tr> </table>	<b>OPPORTUNITY:</b>	<b>Majority of 200M ACRES</b> N. AND S. AMERICA SOY ACRES	<b>COMMERCIAL LICENSES:</b>	<ul style="list-style-type: none"> <li>• TARGETING SEED COMPANIES WITH &gt;90% OF U.S. SOYBEAN ACRES</li> </ul>	<b>REGULATORY STATUS:</b>	<ul style="list-style-type: none"> <li>• ON TRACK FOR 2016 LAUNCH<sup>1</sup></li> <li>• EU IMPORT APPROVAL RECEIVED</li> </ul>	<b>LAUNCH PLANS:</b>	<ul style="list-style-type: none"> <li>• EXPECT &gt;3M ACRE LAUNCH WITH &gt;60 VARIETIES COVERING ALL MATURITY GROUPS</li> </ul>
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### THREE SOURCES OF VALUE IN ROUNDUP READY XTEND CROP SYSTEM



Innovative Traits in Leading Germplasm

+



Enhanced Chemistry Options

=



Greater Flexibility,  
Weed Control and Yield Potential

1. USDA deregulation received. Awaiting EPA approval for in-crop use.

Ex. 33, p. 11.<sup>35</sup>

146. Further, on December 2, 2015, at the 2015 Citi Basic Materials Conference, a slide presented by Dr. Robb Fraley, Monsanto Chief Technology Officer, again stated the Xtend

<sup>35</sup> Michael J. Frank Presentation, Wells Fargo Industrial & Construction Conference (May 6, 2015).



soybean system was “[o]n track for 2016 launch” it was just “[a]waiting EPA approval for in-crop use.”

Ex. 34, p.13.

147. Despite these reassurances, there were hints that Monsanto might be paying lip service to EPA regulatory approval. In the Q3, 2015 conference of June 2015, during a question and answer period, Hugh Grant, Chief Executive Officer of Monsanto, was questioned about the “pretty sizeable investments” of the Xtend system opportunities for the future.

**Don Carson**

Yes, thank you. Hugh a question on your Dicamba investments, pretty sizable investments, you talked about getting a reasonable return on investment, is that return on investment based on just the chemistry itself or is that considering the roughly \$6 fee you’re going to get on Xtend, so just wondering how big an opportunity Dicamba as a chemistry can be for you going forward?

Ex. 35 at 16.<sup>36</sup>

<sup>36</sup> MON Q3 2015 Results – Earnings Call Transcript (Downloaded July 14, 2017 from <http://seekingalpha.com/article/3282135-monsantos-mon-ceo-hugh-grant-on-q3-2015-results-earnings-call-transcript>).

**Hugh Grant**

Yes, thanks for the question Don. I think it's going to be substantial. It is, we said 200 million plus, I wish we had that, today there is tremendous demand out there. As we run the mass from this we looked at both, we looked at the return based on the plan alone and then also the platform opportunity when you enable 200 million plus acres, but Pierre maybe a few more inputs.

*Id.* This shows concerns over wanting to monetize Monsanto's investments in its Xtend products was mounting.

148. Further, Grant was asked, "On the dicamba side I thought that we were still waiting for regulatory approval on the in crop use, is there any update there," to which he answered Monsanto was "optimistic" on the timing of approvals. *Id.* at 29.

149. Monsanto dropped its outward appearance of waiting for EPA approval on or about late summer or early fall 2015. In Monsanto's October 7, 2015 Q4 conference call, Monsanto COO Begemann explained the plan:

We recently rolled pricing and are now planning for a launch that includes more than 70 unique soybean varieties across our branded and licensed footprint. Based on the value creation demonstrated, we have priced the new Xtend varieties at roughly \$5 to \$10 per acre premium over Roundup Ready 2 Yield varieties. This level of incremental value creation continues to reinforce Xtend as one of the leading core business growth drivers. *Given the overwhelming demand from farmers, dealers and licensees, we've implemented a pre-order reservation process in advance of the final regulatory milestones and based on current tracking, we expect the seed to be fully reserved by early December.*

Ex. 36 at 9.<sup>37</sup>

150. Publicly citing to "overwhelming demand," Monsanto announced that, regardless as to whether the EPA approved its products, it would begin the process of selling Xtend soybeans.

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<sup>37</sup> MON Q4 2015 Results – Earnings Conference Call Transcript (Downloaded July 14, 2017 from: <http://seekingalpha.com/article/3557566-monsantos-mon-ceo-hugh-grant-q4-2015-results-earnings-call-transcript>).

151. The real reason for Monsanto's premature release was not "overwhelming demand," it was because the process of growing a sufficient amount of soybean seeds to sell must be committed to at least one year in advance. Soybean seeds to be sold in 2016, must come from a 2015 crop. Soybean seeds to be sold in a major release in 2016, required a larger 2015 crop. So, statements made in October 2015 were made after the crops for Monsanto's 2016 release were grown. Therefore, despite outward appearances, months before, Monsanto gambled on a what it hoped was an imminent EPA registration, but was committed to a major release nonetheless.

152. This shows Monsanto's arrogance. In its mind, the EPA registration process was a foregone conclusion; it was an annoying delay before Monsanto could start making money. Monsanto's actions show it never considered outright rejection of its over-the-top formulations was possible. And as discussed in this Complaint, is likely why Monsanto did not allow universities to run independent volatility tests on its products. Such tests would slow the process more, or, because the 2017, independent test-results show volatility of over-the-top dicamba formulations, result in a rejection.

153. CFO Courduroux provided Monsanto's actual reasoning for its premature release: greed.

In North America, the excitement for the Roundup Ready 2 Xtend launch continues to grow as we target more than 3 million acres with the new Xtend varieties priced at \$5 to \$10 per acre premium.

*Id.* at 12.

154. The price for Monsanto to overlook its responsibilities was apparently a \$5 to \$10 premium per acre for 3 million acres; a potential initial earning of \$15 to \$30 million.

155. But this was just the beginning. Monsanto's focus was not on just the initial release, but the yearly "incremental" increase in demand. As the slide presentation for the Q4 conference call stated, the "Roundup Ready Xtend Crop System penetration [is] expected to create >250M acres of incremental demand." Ex. 37 at 16.<sup>38</sup>

156. At a \$5 to \$10 premium, this would potentially earn Monsanto \$1.25 to \$2.5 billion a year.

157. Monsanto's premature release would ensure the "incremental" demand increase would begin sooner, so that it could maximize profits earlier.

158. During the same conference call, it appears from the transcript that Hugh Grant side-stepped answering a question about EPA approval:

And then on the EPA side, we continue to hear it's progressing through that process. But I don't know if -- so I guess that's all we can say on that at the moment.

Ex. 36 at 26.

159. Outside of the conference call, and in the fields, XtendFlex cotton season was proceeding, and reports of dicamba abuse leading to drift and damage to non-target/neighboring crops surfaced. *See, e.g.*, Ex. 9, 10. Some of this damage was caused by Monsanto seed representatives encouraging spraying dicamba over-the-top of the XtendFlex cotton. Ex. 10 at 10-12, 17-18.

160. Undaunted by the damage caused by off-label dicamba usage, and still lacking EPA approval, Monsanto continued with its December reservation process for Xtend soybeans, as well as a second-year release of XtendFlex cotton.

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<sup>38</sup> MON Fiscal Year 2015 Results and Fiscal Year 2016 Outlook (Oct. 7, 2015).

161. On January 6, 2016, in the Q1 conference call, Fraley repeated the motivations for not acting responsibly were financial when he called the Xtend product line a “\$1 billion plus blockbuster product.” Ex. 38 at 10.<sup>39</sup>

162. With pressures circling over a major release without EPA approval, in the same Q1 2016 phone call, Hugh Grant attempted to justify the release, characterizing EPA approval as “imminent,” and implying farmers would have access to over-the-top application of dicamba this planting season. *Id.* at 24.

163. Grant’s “imminent” statement was misleading, or at a minimum, confusing to potential purchasers of Monsanto’s Xtend products.

164. Grant, also in Q1 2016, emphasized that this was a product that farmers “really, really need and frankly they are tired of waiting.” *Id.* at 24. The release, however, shows it was Monsanto that was “frankly...tired of waiting” for the EPA.

165. In the 2016 Q1 call, Monsanto COO Begemann was asked whether, like with cotton, Monsanto would offer a rebate for basically the unusable dicamba resistance. In response, Begemann stated:

That’s the way we would look at it. And the whole approach behind that is getting the farmers comfortable with the varieties and buying new varieties and I missed that in your earlier question. Yes, if we have the opportunity to get some out there whether they used the whole system or not it will make for a bigger launch next year than this year. So it definitely benefits us and the farmer to get that experience with the new varieties.

*Id.* at 25.

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<sup>39</sup> Q1 2016 Results - Earnings Call Transcript (Downloaded July 14, 2017 from <http://seekingalpha.com/article/3794576-monsanto-companys-mon-ceo-hugh-grant-q1-2016-results-earnings-call-transcript>).

166. On April 6, 2016, Monsanto continued to mislead and confuse Xtend customers with its “imminent” EPA approval theme, though it pared it down to only *one* dicamba formulation:

Our other blockbuster soybean growth driver is Roundup Ready 2 Xtend soybeans, as shown on slide 11. As you know, we received our China import approval back in early February and now are very pleased to see the recent opening of the EPA comment period for the in-crop use of M1691, a low-volatility dicamba formulation. This marks a critical step forward for the Roundup Ready 2 Xtend crop system. According to the EPA, this first label for in-crop use is expected by late summer to early fall, and we expect approval for the in-crop use of XtendiMax and Roundup Xtend, both with VaporGrip technology, shortly thereafter to be ready for the fiscal year 2017 season.

Ex. 39 at 7.<sup>40</sup>

167. While its Xtend soybean release was looking more premature (and thus more irresponsible), Monsanto publicly held out hope (albeit a decreasing amount) it could get approval for one dicamba formulation this season, while conceding it would not get others.

168. Still, with or without EPA approval, Monsanto was committed to the launch of Xtend soybeans, regardless of the potential consequences.

169. Begemann confirmed Monsanto’s no-matter-what attitude:

I’ll tell you, though, the demand for this product is really high. Farmers can’t wait to get their hands on it. We know there’s challenges out there. It’s a great product, so I’m not calling or throwing a flag saying I’m worried about next year yet because I think we’re going to get enough of these varieties out there. Farmers are going to see it, and the appetite is going to be really good for next year. So, we’re going to stay on our launch plan for next year.

*Id.* at 19.

170. With the decision to launch its Xtend soybeans without EPA approval, Monsanto decided to paper its release to give the appearance of propriety.

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<sup>40</sup> Mon Q2 2016 Results – Earnings Call Transcript (downloaded July 14, 2017 from <http://seekingalpha.com/article/3962120-monsantos-mon-ceo-hugh-grant-q2-2016-results-earnings-call-transcript>).

171. Until about January 2016, Monsanto marketed Xtend products for sale on its webpages. A limited disclaimer appeared on these pages stating:

The launch of Roundup Ready Xtend Crop System is pending regulatory approvals for its component products.

Ex. 40.<sup>41</sup>

172. An over-the-top dicamba formulation was a necessary “component” of the Xtend crop system. Therefore, the message to potential customers was clear: “launch” would not occur until all “regulatory approvals” were received.

173. With its launch now “imminent” without EPA approval, on or about May 2016, after orders were placed, with planting season ongoing and seeds likely in at least some farmers’ hands, Monsanto changed this disclaimer:

**The launch of the Roundup Ready® Xtend Crop System is pending regulatory approvals.**

**This information is for technical and educational purposes only and is not an offer to sell Roundup Xtend or Roundup Ready 2 Xtend. Roundup Xtend and Roundup Ready 2 Xtend are not yet registered or available for sale or commercial use anywhere in the United States.**

Ex. 41.<sup>42</sup>

174. Monsanto’s visible-to-the-public strategy change then was not to act responsibly, but rather to recast its obvious marketing attempts to induce sales as mere “technical and educational” information, well after the fact. Such changes were admissions that Monsanto knew their premature release would damage non-target crops and plants, but rather than act responsibly and withhold the launch, to rely on wobble words in the hopes of escaping liability.

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<sup>41</sup> Roundup Ready 2 Xtend Soybeans Product Page (~Jan. 2016).

<sup>42</sup> Roundup Ready 2 Xtend Soybeans Product Page (~May 2016).

***2016 Damage Due to Monsanto's Premature Release of Xtend Soybeans***

175. As predicted, numerous purchasers of Xtend soybeans and XtendFlex cotton sprayed their fields with dicamba. Because less-volatile dicamba formulations were not available (*i.e.*, they still lacked EPA approval), the damage and death to non-target crops and plants was exacerbated.

“In addition, the improved formulations of dicamba that reduce volatility are not available, so any dicamba formulations that have been sprayed to these fields are ones that tend to be more volatile, which increases the potential for off-target movement. The result of these applications is damage on neighboring susceptible soybean and cotton fields that are not Xtend or tolerant to dicamba herbicide. Over the last two weeks, we have received more phone calls than we can count wondering what to do and what to expect once this injury occurs,” Barber wrote.

Steckel noted in his recent newsletter that dicamba formulations available today can move off intended target areas under warm air temperatures. The herbicide turns into a gaseous state and moves into the air up to 24 hours after application. “Clarity and Banvel are designed and indeed labeled to be applied in March and April for burndown or to small corn,” Steckel said. “The air temperatures during that time of the year are almost never warm enough to be conducive for volatility. They are not designed for use in June and July in Tennessee as 80- to 90-degree temperatures greatly increase the probability that these herbicides will move off the target and with a small breeze move on to a sensitive crop,” he said.

Ex. 42.<sup>43</sup>

176. The scale of damage due to dicamba misuse was so large, the EPA issued a statement in August 2016.

EPA and state agencies have received an unusually high number of reports of crop damage that appear related to misuse of herbicides containing the active ingredient dicamba. Investigations into the alleged misuse are ongoing. This Compliance Advisory is intended to provide information on the agricultural and compliance concerns raised by these incidents.

Ex. 14.

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<sup>43</sup> “Dixie Dicamba Dilemma, Off-Target and Off-Label Herbicide Issues Arise,” *The Progressive Farmer* (July 2016) (Downloaded July 14, 2017 from <https://www.dtnpf.com/agriculture/web/ag/news/crops/article/2016/07/07/target-label-herbicide-issues-arise-2>).



177. In detailing the geography affected, the EPA continued:

To date, the Missouri Department of Agriculture has received approximately 117 complaints alleging misuse of pesticide products containing dicamba. Missouri growers estimate that more than 42,000 acres of crops have been adversely affected. These growers have reported damage on a number of crops including peaches, tomatoes, cantaloupes, watermelons, rice, cotton, peas, peanuts, alfalfa, and soybeans. Similar complaints alleging misuse of dicamba products have been received by Alabama, Arkansas, Illinois, Kentucky, Minnesota, Mississippi, North Carolina, Tennessee and Texas.

*Id.*

178. Industry experts agreed the scale of damage to non-target crops and plants in 2016 was unprecedented.

“This is a huge issue and is really unprecedented,” says Kevin Bradley, University of Missouri weed specialist. “The situation with drift in the Bootheel is unlike anything I’ve seen before.”

Ex. 43.<sup>44</sup>

179. Dicamba effects a broad range of plants, and is not limited to soybean, or even crops generally. Instead, any plants in the dicamba drift/volatilization path are likely adversely affected.

“Soybeans are what have been affected most,” says Bradley. “There will be yield losses, sometimes large, in some of these fields. However, there are some vegetable crops and homeowners are calling with complaints about harmed ornamental or fruit trees. It isn’t just row-crop farmers being affected.”

*Id.*

180. While some fault lies with the farmers who applied dicamba over-the-top of Xtend products, it’s easy to see why they did what they did. Given the benefits of dicamba, farmers are undeterred by the small fines they may need to pay *if* they are caught.

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<sup>44</sup> “Improper dicamba use leaves Mid-South a multitude of drift cases,” Delta Farm Press (July 2016) (Downloaded July 14, 2017 from <http://deltafarmpress.com/soybeans/improper-dicamba-use-leaves-mid-south-multitude-drift-cases>).

*“The farmers are flat out telling us that ‘we’ll write you a check’,”* Susie Nichols from the Arkansas State Plant Board told the Wall Street Journal.

Ex. 44 (emphasis in original).<sup>45</sup>

181. The penalties for using dicamba were almost nonexistent: in some states, a potential maximum \$1,000 fine. Considering the benefits dicamba use gives to Xtend crop yield, and the low dollar value of the fine *if a farmer would get caught*, it’s clear why many farmers simply wrote off any potential fine as a cost of doing business. Other farmers were blunt about the uselessness of a \$1,000 fine, such as Curtis Storey:

“\$1,000 fine? Sure, that’ll stop them,” he says with heavy dismay. “I’ve had people tell me to keep quiet or we may lose the technology. That’s false reasoning to blame me since I’m not the one breaking the law. Multiple people have continued making dicamba applications over the top. This is going on in other counties and states. Everybody knows it.”

Ex. 45.<sup>46</sup>

### ***The Unprecedented Damage of the 2017 Season***

182. Despite the damage from the growing season in 2016, the EPA approved the application of certain formulations of dicamba for over-the-top application of Xtend crops in Nov. 2016.

183. This approval led to a full rollout of Monsanto’s Xtend products, along with its XtendiMax dicamba formulation, BASF’s Engenia and DuPont’s FeXapan.

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<sup>45</sup> “Farm feud: Monsanto and its clients under fire for damaging crops,” RT News (Aug. 2016) (Downloaded July 14, 2017 from <https://www.rt.com/usa/354520-monsanto-dicamba-pesticide-illegal/>).

<sup>46</sup> “Dicamba Drift Stirs Pot of Farm Trouble,” Delta Farm Press (July 2016) (Downloaded July 14, 2017 from [http://www.oisc.purdue.edu/pesticide/pdf/iprb\\_147\\_dicamba.pdf](http://www.oisc.purdue.edu/pesticide/pdf/iprb_147_dicamba.pdf)).

184. As many predicted, the 2017 planting season has been a disaster. In Arkansas, there have been over 633 filed complaints; in Tennessee, over 69; in Missouri, over 130.<sup>47</sup> These complaints arose even where “strict adherence” to label instructions were followed:

Ominously, Goodson insists many of the countywide drift incidents involve applications with strict adherence to label specifications: spraying done right. “Some guys are doing it absolutely right by the label and management and still ending up with dicamba on a neighbor’s crops through volatility,” he says.

Ex. 21.

185. This led to temporary bans of over-the-top dicamba usage in Missouri<sup>48</sup> and Arkansas, and label changes in Tennessee.

186. What needs to be kept in mind is that the parties harmed by dicamba drift are innocent. They did not purchase the Xtend products. If they had, their crops and plants would be fine. Plaintiffs here are innocent bystanders hurt by Defendants’ decision to prematurely release their products.

***The Dicamba Damage From 2015-2017 Was Foreseeable, And Defendants Knew Damage Would Occur***

187. Defendants knew dicamba damage would occur and be widespread. Damage occurred with Monsanto’s premature release of XtendFlex cotton in 2015, warning Defendants that a larger release would result in more damage. Still, they trudged forward, leading to the predicted greater damage in 2016. And 2017 has been a deluge.

188. Industry experts predicted Xtend’s premature release would result in damage to non-target crops and plants. For example, University of Arkansas weed scientist Jason Norsworthy warned of these dangers for years.

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<sup>47</sup> Ex. 19, “Dicamba Debate Continues, States Contemplate More Herbicide Restrictions,” DTN Progress Farmer (July 12, 2017) (Downloaded July 14, 2017 from <https://www.dtnpf.com/agriculture/web/ag/news/article/2017/07/12/states-contemplate-herbicide>).

<sup>48</sup> On July 13, Missouri removed its ban after requiring label changes.

“I had a reporter call two weeks ago after the first hearing at the Plant Board,” says Norsworthy. “They asked ‘Did you not see this coming? Why were you blindsided?’”

“There was no blind-siding. We knew this was likely to be a major issue. We’ve been telling the Plant Board this for several years now. We’ve been saying it at all the winter meetings.

“Two years ago, a 400-foot buffer was set in every direction for dicamba applications to dicamba-resistant crops, even though the crop was not yet deregulated. That buffer was set based on the work we’d done in drift and volatility trials as well as injury to the progeny (offspring). At the end of the day, soybeans are highly sensitive to dicamba.”

Ex. 46.<sup>49</sup>

189. Some of the industry experts’ complaints focused on Monsanto’s premature 2015 and 2016 releases. As Dr. Bob Scott, Extension Weed Scientist from the University of Arkansas, explained:

The dicamba drift, says Bob Scott, “is an absolute shame. There’s blame to pass around to many facets of agriculture. You have to ask if the technology should have been released without the new herbicide formulations. There’s no excuse -- *no excuse* -- for making off-label applications. It looks like there needs to be some sharper teeth in the regulatory side. Guys with fields that have been drifted on won’t file complaints with the Plant Board. It’s just a mess and it’s irritating. This is really having ramifications, and setting up potential future problems, up and down the line.

Ex. 47.<sup>50</sup>

190. Other experts indicated that even with EPA approved formulations, dicamba damage was inevitable.

From the first time I heard dicamba-tolerant soybeans and cotton were going to be developed, I have seen this coming. However, a part of me wanted to believe that surely with the brilliant minds in industry they must know something that I do not.

The answer to that is now obvious.

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<sup>49</sup> “Dicamba drift expected, no ‘blind-siding,’” Delta Farm Press (Aug. 15, 2016) (Downloaded July 14, 2017 from <http://deltafarmpress.com/soybeans/dicamba-drift-expected-no-blind-siding>).

<sup>50</sup> “Dicamba drift incidents have ripple effect,” Delta Farm Press (July 21, 2016) (Downloaded July 14, 2017 from <http://deltafarmpress.com/soybeans/dicamba-drift-incidents-have-ripple-effect>).

Last year's experiences should have told anyone everything they needed to know about this year. Yet there was the hope that lowering the volatility of dicamba formulations would somehow solve the problem.

...

However, what it really boils down to is the sensitivity of soybean to dicamba -- that part can't be fixed. I wish I could feel differently because the last thing I want is for a technology to fail. However I have said from the beginning this one would be the biggest train wreck agriculture has ever seen.

Ex. 48.<sup>51</sup>

191. Industry experts also informed Defendants their label instructions could not be followed (e.g., they would not allow for timely application), and would lead to dicamba damage.

I said from the start the label couldn't be followed and allow all the acres to be sprayed in a timely manner.

*Id.* Despite knowing their label instructions were not workable, Defendants withheld such information from the EPA, again choosing profit over responsibility.

192. The damage being caused is not simply failure to follow the instructions or labels. As experts have explained, the majority of 2017 damage to non-target crops and fields is uniform, meaning the damage arose due to temperature inversion and volatility. As Dr. Kevin Bradley of the University of Missouri Extension stated:

The majority of fields I've been in are injured from one end to the other with no discernable difference in soybean symptomology. This suggests problems with off-site movement through volatility.

Ex. 17 at 13. Damage due to volatility is not due to applicator error or failure to follow instructions/labels; it arises due to a defect with the product.

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<sup>51</sup> "Dicamba drift issues move back into spotlight," Delta Farm Press (Jun. 15, 2017) (Downloaded July 14, 2017 from <http://www.deltafarmpress.com/soybeans/dicamba-drift-issues-move-back-spotlight>).

193. In conducting independent tests after the 2017 planting season, Dr. Bradley's initial test results indicate that after proper spraying techniques, even the approved dicamba formulations show volatility:

Formulations = Will be interesting to see how Engenia and XtendiMax compare to Banvel, but **initial results w/ air samples and indicator plants suggest that both can be detected in air after application.**

Volatility = Much more to see with the remaining time points and air samples. **Indicator plants suggest volatilization is still occurring at least 24 hours after treatment.**

*Id.* at 28 (emphasis added).

194. This is contrary to how Monsanto markets its approved dicamba herbicides; instead, Monsanto misleads its consumers by touting that XtendiMax has a "significant reduction in volatility potential," has "[l]ow volatility" and "Will provide applicators confidence in on-target application of dicamba in combination with application requirements for successful on-target applications." Ex. 49.

195. Even BASF touts that it has solved the volatility problem:

Although the potential for dicamba volatility is low, the Engenia herbicide formulation was developed to further minimize secondary loss due to volatilization.

Ex. 50 at 3, Engenia Preregistration brochure. BASF also touts that the "Volatility Concerns" have been "Addressed." *Id.*

196. It's not just Dr. Bradley's tests that find Defendants' claims of "low" volatility were false. Dr. Thomas Mueller of the University of Tennessee in July 2017 released test results finding, "This data indicates the dicamba (from Engenia) is moving from the site of application into the air immediately above the treated field" and "Given sensitivity of soybeans to POST dicamba, these data indicate that soybean injury in adjacent areas should be expected from vapor moment of dicamba after application." Ex. 18.

197. Having volatilization after proper treatment is not acceptable, and certainly not “low volatility” or a “significant reduction in volatility potential” and has not “Addressed” the “Volatility Concerns” ...especially in areas where temperature inversions are common, and neighboring crops are very susceptible to dicamba damage (such as soybeans).

***Defendants Withheld Crucial Information From the EPA***

198. Defendants withheld information from the EPA, which had they disclosed, would have resulted in the denial of their over-the-top dicamba formulations, if not of Xtend products altogether. Such information includes, but is not limited to, misrepresenting the risks of temperature inversions and volatility, providing misleading test results, and failing to inform the EPA that their label instructions were unrealistic and potentially impossible to follow.

199. Monsanto also limited its EPA disclosures to its own tests; it did not allow independent tests on volatility, despite numerous requests from experts that such independent tests be conducted *prior* to receiving their EPA registrations.

200. In August 2016, Dr. Bradley of the University of Missouri, commented on Monsanto’s refusal to allow such independent studies.

Bradley says that he and other university researchers have studied the efficacy of the new herbicide for its weed control, but he says Monsanto has not allowed independent research on the drift properties of the new compound.

“We can talk about what these formulations do for weed control nine ways from Sunday,” said Bradley. “We really can’t tell you anything about the volatility or its potential volatility, because we have not been able to do that research, and that’s really unfortunate.”

Ex. 67. Dr. Bradley explained his concerns that more tests were needed in detail to a reporter after he addressed the Missouri House Agriculture Committee in 2016.

Secondly there is a lot of stuff coming out from companies in response to all of this about, you know, when you have the new formulations of dicamba in the future, or if we have the new formulations of dicamba in the future, that this is all going to go away, kind

of, I'm paraphrasing there. But that's basically the gist of the message, and you know I would say, you know, I just tried to tell the committee I'm not of that opinion, I'm not real comfortable in being able to say that we have all this solved. And yes, what has happened this year is primarily due to some illegal applications of formulations that shouldn't have been sprayed, but I guess I don't have the confidence of being able to say that when we move forward assuming EPA grants approval of these new herbicides and different formulations that we won't experience some of this in the future and I think we just need to have a little bit of a moment of pause and also perhaps some more research to figure all this out.

*Id.*<sup>52</sup>

201. Further, during an Arkansas Plant Board meeting on or about August 8, 2016, there was a discussion with Monsanto about its refusal to allow University of Arkansas weed scientists to conduct drift and volatility research on XtendiMax with VaporGrip. During this discussion, Monsanto's representative (Dr. Boyd Carey) responded that Monsanto was concerned that the results of such studies could jeopardize Monsanto's EPA registration.

202. The point of this should not be lost. Monsanto allowed independent, unbiased testing by universities on efficacy; it did not allow such independent, unbiased testing for volatility. Not allowing such tests for volatility is suspect by itself. The damage in 2017, shows such tests were warranted, especially as the results of Dr. Bradley (Ex. 17) and Dr. Mueller (Ex. 18) confirm damage is caused by volatilization even after following the labels' instructions. This is due to a product defect, not applicator error.

203. Defendants also were aware of the risk of dicamba damage to non-target crops and plants through temperature inversion, but downplayed its risks.

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<sup>52</sup> Dr. Bradley's statements are in an audio file provided on [http://cdn.brownfieldagnews.com/wp-content/uploads/2016/09/160831\\_KevinBradley-1.mp3](http://cdn.brownfieldagnews.com/wp-content/uploads/2016/09/160831_KevinBradley-1.mp3).



204. Though mostly a self-serving document, in July of 2017, Monsanto COO Fraley responded to the large-scale dicamba damage. Ex. 51.<sup>53</sup> There, he admitted that Defendants were warned about the risk of dicamba damage due to temperature inversions.

Some consultants and academicians felt that vaporization of dicamba, especially from older and generic formulations not approved for in-crop use, could be exacerbated by temperature inversions, which were quite frequent this spring.

205. Despite receiving these warnings, Defendants did not provide any testing showing their products could be safely used in environments where temperature inversions were common (e.g., the midsouth where temperature inversions occur nearly every clear night) and where the neighboring crops would be very susceptible to dicamba damage (e.g., soybeans).

206. Further, the labels for XtendiMax and Engenia provide inadequate precautions to limit the risk of damage caused by temperature inversions. For example, the Engenia label states:

#### **Temperature Inversions**

**DO NOT** make applications of **Engenia** when temperature inversions exist at the field level. Temperature inversions increase drift potential because fine droplets may remain suspended in the air longer after application. Suspended droplets can move in unpredictable directions because of the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind.

Inversions begin to form as the sun sets and often continue into the morning before surface warming. Their presence can be indicated by ground fog, smoke not rising, dust hanging over a road, or presence of dew or frost. Smoke that layers and moves laterally (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Inversion conditions typically dissipate with increased winds (above 3 MPH) or when surface air begins to warm (3° F from morning low).

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<sup>53</sup> “Talking Dicamba With Farmers—What I Learned,” Medium (July 11, 2017) (Downloaded July 14, 2017 from <https://medium.com/@RobbFraley/talking-dicamba-with-farmers-what-i-learned-3830a07c6e75>).

Ex. 71. This is an inadequate instruction, as dicamba, even the approved formulations, could volatilize after application for periods exceeding 24 hours. This means regardless of the conditions at the time of spraying, they could (and often would) drastically change within the next 24 hours.

207. Similarly, the XtendiMax label<sup>54</sup> has similar inadequate and misleading statements about the risk of temperature inversion.

**Temperature Inversions.** Do not apply during a temperature inversion because off-target movement potential is high.

- During a temperature inversion, the atmosphere is very stable and vertical air mixing is restricted, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions.
- Temperature inversions are characterized by increasing temperatures with altitude and are common on evenings and nights with limited cloud cover and light to no wind. Cooling of air at the earth's surface takes place and warmer air is trapped above it. They begin to form as the sun sets and often continue into the morning.
- Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- The inversion will dissipate with increased winds (above 3 miles per hour) or at sunrise when the surface air begins to warm (generally 3°F from morning low).

Ex. 52.

208. Defendants thus down-played the risk of temperature inversions and their products ability to stay “on target” rather than drift non-target. Had they properly raised other experts’ concerns about temperature inversions, Engenia, FeXapan and XtendiMax would not have been approved (if not Xtend products all together).

209. Defendants’ failure to properly apprise the EPA and its customers of the risk of temperature inversions directly led to off-target crop and plant damage. In 2017, the damage seen

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<sup>54</sup> The FeXapan label contains nearly-identical language to the XtendiMax label.

is widespread and uniform. Multi-county/multi-state damage of a uniform nature could only occur due to temperature inversions.

210. Along these same lines, Defendants did not explain to the EPA that dicamba volatility takes place over time, sometimes over several days. With inversions in summertime in the mid-south occurring on most clear nights, the result would be volatilized dicamba and fine droplets catching in the inversion layer, then moving *en masse* and affecting others' fields. Such damage is a chemical problem (*i.e.*, a problem with Engenia, FeXapan and XtendiMax not performing as explained to the EPA and to Defendants' customers), not an applicator problem.

211. Experts such as the University of Tennessee's Larry Steckel confirm the observed 2017 damage is due to the Defendants' products *not* misapplication.

Steckel, like weed specialists in other states, say much of the injury they are seeing this year seems related to the herbicide moving as a gas at some point after application. "This is landscape level redistribution of that herbicide," Steckel said, compared to physical drift that often injures in a pattern in the field.

"It's 200-acre or larger fields covered pretty uniformly. I've never seen anything like it," he said.

Ex. 19. Other experts, such as Dr. Mark Loux from the Department of Horticulture and Crop Science at University of Illinois and Dr. Bill Johnson of Purdue University similarly agree that most of the damage is not due to spray drift, but rather the volatility of dicamba.

But particle drift does not result in the relative uniformity of dicamba injury over a large adjacent field that has occurred in some cases. This would be more indicative of movement via dicamba volatilization from leaf or soil surfaces, occurring sometime within several days after application. Vapors then move with prevailing air currents, with potential to move far greater distances than spray particles, upwards of a half mile. Movement of vapors does not require much wind. For example, volatilization of dicamba that occurs under relatively still inversion conditions can result in prolonged suspension and movement of vapors with gentle air currents. In one field we looked at, there appeared to be an initial volatilization event from the adjacent dicamba-treated soybeans, with some subsequent soybean recovery. This appeared to followed by a second round of dicamba exposure and injury to the recovering soybeans several weeks later.

Ex. 26.

212. Temperature inversions in combination with volatility is what has led to the wide-spread, uniform damage of fields, such as what is being seen in 2017.

213. Given Defendants' products' propensity to volatilize and cause damage at least through temperature inversions even where their labels are followed, Defendants' products do not perform their intended function without unreasonable adverse effects on the environment (especially given the scale of damage).

214. Further, Defendants' volatility tests submitted to the EPA were inadequate. Defendants did not submit tests to the EPA 1) showing the safe level of dicamba volatility to eliminate non-target damage and 2) that their products meet that safe level. Rather, Defendants merely showed their products were *less* volatile (*i.e.*, have a "reduced" volatility) than currently approved dicamba formulations. Given how sensitive soybeans are to dicamba, a "reduced" volatility<sup>55</sup> test is insufficient as any amount of volatility would lead to non-target crop and plant damage. As Aaron Hager of the University of Illinois stated:

Please keep in mind that low volatility is not the same as no volatility. The new formulations are still volatile, albeit less volatile than older formulations.<sup>56</sup>

215. Additionally, Defendants did not inform the EPA that despite farmers best efforts, following the label might be impossible.

216. Experts have called the instructions into question as unworkable given the window of application is very small.

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<sup>55</sup> Even after the disaster of 2017, Monsanto sticks to its "reduced" volatility language (six times in a July 2017 blog). Ex. 70 ("Dicamba-based Herbicide XtendiMax® with VaporGrip® Technology: Years in the Making," Monsanto.com (Downloaded on July 15, 2017 from <https://monsanto.com/products/product-stewardship/articles/dicamba-xtendimax-vaporgrip-technology/>). This emphasizes it chose the wrong types of tests to mislead others into thinking "reduced" and "safe" are the same.

<sup>56</sup> Ex. 73, "The Dicamba Dilemma in Illinois: Facts and Speculations," The Bulletin (July 18, 2017)(Downloaded on July 19, 2017 from <http://bulletin.ipm.illinois.edu/?p=3942>).

“We’ve probably had everything occur,” [University of Illinois weed scientist Aaron Hager] notes. “There were not many days where it was possible to spray within label requirements.”

Josh Gunther, Burrus Hybrids, used weather data from 2013, 2014 and 2015 to compare label requirements and possible XtendiMax, Liberty and RoundUp PowerMax application hours. “On average, there are half as many hours available to spray on label with XtendiMax compared to Liberty and RoundUp,” [Stephanie Porter, sales agronomist with Burrus Hybrids] explains.

Every growing season has different weather conditions, she notes, but the calculations indicate just how small the application window can be, especially considering temperature inversion frequencies.

Ex. 53.<sup>57</sup>

217. Experts such as the University of Tennessee’s Steckel also have criticized Defendants’ instructions, and questioned whether the technology itself is safe enough to be used under any conditions.

The label associated with the approved low-volatility dicamba formulations called XtendiMax, FeXapan and Engenia are already complicated without further restrictions. “Following them as they are now is a Herculean task. Talk about threading the needle -- you can’t spray when it’s too windy. You can’t spray under 3 miles per hour. You got to keep the boom down -- there are so many things,” Steckel said. “It looks good on paper, but when a farmer or applicator is trying to actually execute that over thousands of acres covering several counties, it’s almost impossible.”

...

He added that many farmers abandoned dicamba sprays and turned to other herbicide options to avoid hurting neighboring crops further. Depending on the weed control pressure and problems, that’s a sacrifice and potential loss of income for those that bought into the technology, he agreed. “Mostly farmers want to do the right thing.”

“I’m just not sure we can steward this technology as it currently exists,” he added.

Ex. 19.

218. With labels that are difficult if not impossible to follow, improper spraying necessarily occurs with application of Defendants’ products.

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<sup>57</sup> “Dicamba: What’s happening in Illinois,” *Prairie Farmer* (July 11, 2017) (Downloaded July 14, 2017 from <http://www.prairiefarmer.com/crop-protection/dicamba-what-s-happening-illinois>).

219. Defendants' products then, when used in accordance with widespread and commonly recognized practices (*e.g.*, attempting to follow a label that cannot reasonably be followed, and with a product that is prone to volatilize and temperature inversions), has led to unreasonable adverse effects on the environment as described in detail in this Complaint.

220. The injury caused by exposure to dicamba-containing products resulted in damage to non-target crops and plants. Particularly here, exposure to dicamba led to financial loss to all Plaintiff farmers.

221. The proximate cause of the injury was the defective design, marketing, selling, and misbranding of the Xtend products and the dicamba formulations that made up the Xtend crop system. Defendants were willful and negligent in their release, marketing, and selling of a defective crop system (*e.g.*, in 2017) and for releasing, marketing, and selling a defective crop system without an accompanying EPA-approved dicamba herbicide (in 2015 and 2016).

222. For example, Monsanto falsely markets XtendiMax as allowing for "successful on-target applications."

#### **Significantly Reduce Relative Volatility With VaporGrip® Technology**

- Proprietary technology developed by Monsanto that helps prevent the formation of dicamba acid
- XtendiMax® herbicide with VaporGrip® Technology provides a significant reduction in volatility potential compared to commercially available dicamba formulations
- *Will provide applicators confidence in on-target application of dicamba in combination with application requirements for successful on-target applications*

Ex. 54 (emphasis added).<sup>58</sup> Upon information belief this identical (and similar statements) appeared on Monsanto marketing materials from earlier in 2017 as well and therefore was marketed towards potential customers.

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<sup>58</sup> XtendiMax-Tech-Sheet (Downloaded July 14, 2017 from <http://www.roundupreadyplus.com/products/cotton/xtendimax>).

223. Similar misleading statements were made about Engenia, and remain on BASF's webpage today.

Field research demonstrates on-target herbicide application success with low volatility and drift, *so the herbicide remains in place.*

Ex. 55 (emphasis added).<sup>59</sup> This same statement appeared on BASF's website at least as of April 2017 (if not earlier), and thus was marketed towards potential customers. Ex. 56.<sup>60</sup> Further, when speaking with customers, Engenia sales representatives compared Engenia molecules to "bowling balls" that would not go anywhere as compared to other chemicals molecules that were like "softballs" or "baseballs."

224. On Feb. 16, 2017, in its press release announcing EPA registration of FeXapan, DuPont made similar statements about its "low-volatility dicamba formulation."

FeXapan™ employs a new formulation of dicamba that offers *a significant reduction in volatility potential* than conventional dicamba herbicides, which helps *minimize off-target movement* when used according to label guidelines.

Ex. 57 (emphasis added).<sup>61</sup>

225. These statements, and statements like these, are false and misleading. As shown above even properly applied XtendiMax, Engenia and FeXapan volatilize and damage other fields through temperature inversion. Therefore, Defendants stating or implying that there will be no volatilization is likely to confuse and mislead consumers.

226. Defendants have common-law and statutory duties to not mislead consumers about their products ability to damage non-target crops and plants.

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<sup>59</sup> BASF Engenia marketing (Downloaded on July 11, 2017, from <http://agproducts.basf.us/campaigns/engenia/>).

<sup>60</sup> Archive.org capture of <http://agproducts.basf.us/campaigns/engenia/> from Apr. 8, 2017.

<sup>61</sup> "EPA Approval: FeXapan™ Herbicide Plus VaporGrip® Technology" (Feb. 16, 2017 DuPont Press Release) (Downloaded July 16, 2017 from <http://www.dupont.com/products-and-services/crop-protection/soybean-protection/press-releases/dicamba-herbicide.html>).

227. Defendants also have common-law and statutory duties to give reasonable and adequate warning of dangers reasonably foreseeable in the use of their products to others.

228. Defendants also have common-law and statutory duties to provide instructions on how to utilize their products to make it reasonably likely that any harm to non-target crops will be avoided if followed.

229. None of the labels for Defendants' products provide full, complete, and accurate information about the extreme toxicity of dicamba-containing products. None of Defendants' labels contain directions for use that, if complied with, are adequate to protect the environment, including Plaintiffs' crops and plants. Defendants' labels do not and never have contained warning or caution statements that, if complied with, are adequate to protect the environment, including Plaintiffs' crops and plants.

230. The inherent, phytotoxic profile of dicamba-containing products cannot be applied with reasonable safety in agricultural areas using any typical or reasonably practical application techniques and conditions of use limitations. Given the well-recognized nature and patterns of cultivation in these (and other) regions, the proximity of other non-Xtend crops and plants, and the foreseeable weather patterns and timing of likely application, damage to non-target crops and plants was inevitable and known to Defendants. Accordingly, Defendants products are defective as inherently posing an irreducible, unreasonable risk of harm to crops that are not resistant to dicamba.

***Non-Target Dicamba Damage Actually Helps Defendants' Sales***

231. Counterintuitively, the damage due to dicamba drift hastens additional Xtend sales, and thus helps the Defendants. As numerous farmers have reported, since the only crops



that would not be damaged would be dicamba resistant crops, to protect their own fields, they need to use Xtend (whether they want to or not).

“When my suppliers say ‘I’m going to have to quit growing non-GMO soybeans and start planting dicamba beans just to protect myself’ it becomes an issue,” he said. “They don’t want to go that route, but they may not have a choice.”

Ex. 58.<sup>62</sup> Dr. Bradley of the University of Missouri in an audio interview after addressing the Missouri House Agriculture Committee in 2016 stated every farmer he had spoken with who suffered dicamba damage indicated they would have to plant dicamba resistant crops the next year to protect themselves.

Every farmer I’ve visited with that’s been injured, and these are farmers that have done nothing wrong, they’ve just got drifted onto. Every single one of them has said the same thing, and that is that next year they will plant the new trait—the dicamba resistant trait—to protect themselves. I hear that terminology over and over and over and it just makes me cringe a little bit to think that farmers won’t have choices. That they aren’t able to plant whatever they want to plant. And that they’ve got to plant a dicamba resistant soybean in the future so they don’t get injured.<sup>63</sup>

232. There are large segments of farmers who prefer older, less expensive seed, and do not wish to pay an increased trait fee. There are also farmers that wish to use other breeds of soybeans as a diversity tool. There are also farmers that want to grow non-GMO for specialty markets for a premium, or grow food beans for a specialty market. As more farmers utilize dicamba for over-the-top applications, the possibility of damage to these non-dicamba tolerant crops will increase, to the point most (if not all) soybeans and/or cotton eventually will need to be Xtend products to survive growing season.

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<sup>62</sup> Illegal Herbicide Use on GMO Crops Causing Massive Damage to Fruit, Vegetable and Soybean Farms, EcoWatch (Aug. 23, 2016) (Downloaded July 14, 2017 from <http://www.ecowatch.com/monsanto-roundup-ready-soybean-1983477089.html?platform=hootsuite>).

<sup>63</sup> Full audio available from: [http://cdn.brownfielddagnews.com/wp-content/uploads/2016/09/160831\\_KevinBradley-1.mp3](http://cdn.brownfielddagnews.com/wp-content/uploads/2016/09/160831_KevinBradley-1.mp3).

233. Upon information and belief, the timing of the release of Xtend soybeans was also motivated by competition from Bayer's Liberty Link soybeans. Upon information and belief, Liberty Link, especially in the mid-South was beginning to erode Monsanto's market share for soybeans. Now, without resistance to dicamba, it is unlikely that Liberty Link will viably compete against Xtend soybeans.

234. Given this, the more damage caused by dicamba to non-target plants and crops, the better Defendants' sales the next season.

***Defendants' Knowledge and Warnings of the Dicamba Drift Crisis***

235. As shown above, for years, Defendants were warned that release of Xtend products would have the disastrous consequences that have taken place each year in 2015, 2016 and 2017.

236. For example, in 2013-14, a coalition of farmers called Save Our Crops complained to both Monsanto and Dow AgroSciences about their dicamba herbicide formulations.

237. Save Our Crops was not an anti-GMO organization, in fact, it was pro-GMOs. Its concern was damage to off-target crops and plants.

238. After meeting with Save Our Crops, Dow AgroSciences took the warnings to heart, and changed one of its herbicides on the market. In the words of a Save Our Crops representative, Dow acted as a "good corporate citizen[]." Ex. 8.

239. Save Our Crops met with Monsanto in 2013; nothing came of their meeting.

Monsanto officials "have just dug their feet in," said Steve Smith, chairman of the Save Our Crops group. "I'm not here to be a salesman for Dow, but I'm here to stand up when people do the right thing," he said. "Dow did."

*Id.* The fears raised by Save Our Crops to Monsanto in 2013 are exactly what has taken place with its Xtend releases:

Farmers feared with millions more acres being sprayed with these drift-prone chemicals, their vegetable fields will be in danger. While the new genetically modified varieties of corn and soybean will resist the herbicides, their vegetables won't.

*Id.* Experts in the field such as Neil Rhodes, director of the herbicide stewardship program at the University of Tennessee, Knoxville, were not surprised about the concerns raised by Save Our Crops. *Id.* Similarly, Franklin Egan a research ecologist with the U.S. Department of Agriculture's Agricultural Research Service joined in with Save Our Crops' sentiment:

Vegetable farmers in the Midwest, where large amounts of corn and soybeans are grown, will be at "high risk" because they'll be in close proximity to fields being sprayed with 2,4-D and dicamba, he said.

*Id.*

240. Worse than the financial damages inflicted by dicamba drift and volatilization are damages to the farming community:

"You're accusing your neighbor of harming your stuff. You've got to live with these people your whole life, and your children will live with their children," he said.

*Id.*

241. After damage caused by XtendFlex cotton in 2015 and Xtend soybeans and XtendFlex cotton in 2016, Save Our Crops warned Monsanto again. On August 9, 2016, Steve Smith, Chairman of the Save Our Crops Coalition sent Hugh Grant, Chairman and CEO of the Monsanto Company, a letter predicting the very disaster now ongoing in 2017.

The Save Our Crops Coalition (SOCC) has, since its inception, repeatedly warned of the potential for dicamba to drift and volatilize when applied later in the growing season. Such drift incidents have confirmed what SOCC had already suspected –

- That unscrupulous applicators will apply non-labeled generic forms of dicamba that are prone to off-target movement if such generic forms cost less, and,

- That dicamba application later and later in the growing season is especially hazardous given dicamba's propensity to volatilize and drift as temperatures rise.

Unfortunately, there can be no doubt that Monsanto created this problem by selling Xtend soybeans and cotton, before lower volatility dicamba products were made available to applicators. Our fear is that this single, devastating mistake will be only be compounded by further mistakes that Monsanto seems eager to make.

...

At every opportunity, SOCC has presented its case to Monsanto's usually very capable personnel. Unfortunately, either because of inertia or intransigence, such personnel have found reasons not to deal with the problems that are clearly visible on our horizon. For this reason, I must elevate my concerns to you – the CEO.

Ex. 59.<sup>64</sup>

242. As is made clear by the above, Defendants ignored these warnings.

***The Sole Benefit of Xtend is Dicamba Resistance.***

243. The only meaningful difference between the Xtend products and other comparable Roundup Ready products is the trait for dicamba resistance. See, e.g., Ex. 60 (“The same yield and quality potential farmers already know and trust from their Genuity® Roundup Ready 2 Yield® Soybeans.”)<sup>65</sup>

244. In the Q1 2016 phone call in January 2016, Fraley confirmed that the sole benefit of the Xtend soybean product was its “superior weed control” because it had the “same high yield” as other Roundup Ready 2 varieties. Ex. 38 at 11.

245. This is an important and oft-represented point, appearing also in Monsanto's 2015 Q4 conference call (Xtend products, such as the Xtend soybeans, “enhance the strength of [its]

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<sup>64</sup> SOCC Pens Open Letter to Chairman of Monsanto (Aug. 9, 2016) (Downloaded on July 14, 2017 from <http://saveourcrops.org/>).

<sup>65</sup> Traits/Roundup Ready® Xtend Crop System, capture of <https://www.roundupreadyxtend.com/About/Traits/Pages/default.aspx> from Mar. 14, 2017 webpage from archive.org.

current Roundup Ready system with dicamba tolerance”<sup>66</sup>), in a 2016 Monsanto press release (Xtend products “are built on the same high-yielding germplasm as Genuity® Roundup Ready 2 Yield® soybeans, which continue to deliver a greater than four bushel per acre advantage as compared to the original Roundup Ready® soybeans”)<sup>67</sup> and in a 2015 Monsanto press release:

Initial results from the 2015 U.S. harvest reinforce Monsanto’s performance advantage DEKALB® corn is outperforming competitive products for the tenth consecutive year, with early 2015 harvest results once again highlighting a strong performance advantage of more than 7 bushels per acre on average. In soybeans, early Roundup Ready 2 Yield® harvest results reinforce the platform’s industry-leading yield advantage of more than 4 bushels per acre on average versus first-generation Roundup Ready soybeans.

*Importantly, this becomes the foundation for Roundup Ready 2 Xtend™ soybeans whose performance is expected to be at parity with Roundup Ready 2 Yield® soybeans from a yield performance perspective, with the benefits of improved weed control for those hard to control weeds.*

Ex. 62 (emphasis added).<sup>68</sup>

246. Independent, university testing also found the yields were actually *lower* than Monsanto’s prior Roundup Ready products. Ex. 63.<sup>69</sup>

So far, these university trials have not found any significant yield bumps from the Xtend trait alone. In field trials from the Universities of Wisconsin and Minnesota, Xtend varieties tended to yield a bushel or two lower on average.

When University of Wisconsin agronomist Shawn Conley crunched the numbers for Wisconsin Soybean program's field trials, he found that Roundup Ready 2 varieties out-yielded Xtend varieties by 1.8 bushels per acre on average.

*Id.*<sup>70</sup>

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<sup>66</sup> Ex. 36 at 9.

<sup>67</sup> Ex. 61, “Farmers to Gain Access to Monsanto’s Roundup Ready 2 Xtend™ Soybeans in 2016,” MON Press Release (Feb. 3, 2016) (Downloaded July 14, 2016 from <http://news.monsanto.com/press-release/products/farmers-gain-access-monsantos-roundup-ready-2-xtend-soybeans-2016>).

<sup>68</sup> “Clear Focus, Strength of Core Business...”, MON Press Release (Nov. 17, 2015) (Downloaded July 14, 2017 from <http://news.monsanto.com/press-release/clear-focus-strength-core-business-emergence-new-platforms-and-financial-discipline-ba>)”

<sup>69</sup> “New Trait Data Available, University Yield Data Emerging for Xtend Soybeans,” The Progressive Farmer (11/16/2016) (Downloaded July 16, 2017 from <https://www.dtnpf.com/agriculture/web/ag/news/crops/article/2016/11/16/university-yield-data-emerging-xtend-2>).

<sup>70</sup>

247. Considering the above, the price premium paid for Xtend is solely for the dicamba resistance trait.

248. Despite the above, it appears when marketing to farmers, Monsanto marketed the Xtend traits as having *better* yields. For example, when asked why the Monsanto released Xtend soybeans in 2016, Duane Simpson, the lead of Monsanto's U.S. State and Local Government Affairs Team stated:

What we've seen here with the soybeans is that about 70% of our best germplasm—our best varieties—were in our Xtend traits. So here in the bootheel are best varieties are providing 7 to 12 bushels or better per acre than the ones that don't have the Xtend trait in them.<sup>71</sup>

From Mr. Simpson's statements, it appears Xtend yields were falsely marketed to farmers.

249. Further, his statements emphasize the benefit (and need) in the industry for unbiased, independent testing on Monsanto products (indeed on all GMO products). Here, the independent yield tests served as a check to separate marketing claims (of a 7-to-12-bushels-per-acre increase) versus reality (a 1.8-bushel-per-acre *decrease*). Ex. 63. Similarly, it makes Monsanto's decision to not allow universities to conduct volatilization testing prior to the 2017 release (tests which now refute Monsanto's claims<sup>72</sup>) more suspect.

### ***Defendants' Nonexistent and Ineffective Stewardship Program***

250. Prior to approval of a dicamba product for over-the-top application, Monsanto left farmers without a stewardship program. Instead, Monsanto basically put a warning label on its Xtend or XtendFlex products stating that dicamba should not be used with these products. This, however, was only for appearance as its seed representatives told its customers it would be OK to spray over-the-top.

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<sup>71</sup> Statements available on .mp3 file at [http://cdn.brownfieldagnews.com/wp-content/uploads/2016/09/160831\\_DuaneSimpson.mp3](http://cdn.brownfieldagnews.com/wp-content/uploads/2016/09/160831_DuaneSimpson.mp3) (starting at ~1:05).

<sup>72</sup> See, e.g., Exhs. 17, 18.

251. Further, without the availability of non-drifting dicamba formulations in 2015 and 2016, no matter what available formulations were utilized by farmers/applicators, drift onto non-target plants and crops was guaranteed.

252. Without an adequate stewardship plan prior to at least Nov. 2016, Monsanto did not inform its customers that *all* available dicamba formulations would drift or volatilize and lead to non-target plant damage. To the contrary, Monsanto's years of marketing misled and/or confused Monsanto's customers to believe that if they applied available formulations of dicamba to Xtend or XtendFlex, it would only be the purchasers at risk of a fine for applying a non-approved herbicide.

253. Purchasers, however, were unaware that improperly applying dicamba would lead to drift and volatilization, which would lead to damage to non-target crops and harm to others.

254. Even after EPA approval of over-the-top application of dicamba on Xtend products, Defendants' stewardship plan failed. Rather than providing labels and instructions that would allow for safe application of approved dicamba products (if possible), what has resulted is more damage and complaints than in 2015 and 2016 combined.

***Defendants Failed in their Responsibilities and Legal Duties***

255. Manufacturers should exercise reasonable care not to commercialize and sell products that they know will create a risk of widespread harm.

256. Beyond that, Monsanto agreed to a legal, ethical, and moral obligation to release only safe and environmentally responsible products. Through at least its website, Monsanto represented that it takes product stewardship "seriously":

We take the stewardship of our products seriously. Product stewardship is the legal, ethical and moral obligation to ensure our products and technologies are safe and environmentally responsible. It is a component of Product Life Cycle Stewardship, which includes product introduction, stewardship of products in the marketplace and

effective discontinuation of outdated technology.

Ex. 64.<sup>73</sup>

257. Monsanto agreed that “Stewardship is the *shared* responsibility of Monsanto, our licensees and our grower customers.” *Id.* (emphasis added).

258. Here, Monsanto and its licensees BASF and DuPont failed in their duties and in their shared responsibility by releasing products they knew created a risk of widespread harm.

259. Monsanto also failed in this “shared responsibility,” by allowing applicators and farmers who illegally sprayed dicamba over-the-top of Xtend in prior years, to continue purchasing Xtend products in 2017.

260. Upon information and belief and as developed facts will show, Monsanto representatives were pressed by the Arkansas Plant Board in 2015 and/or 2016 for a promise to bar Xtend purchasers would illegally applied dicamba from future purchases of Xtend products. Monsanto refused to take such actions. Not only is this a failure by Monsanto to meet the duty it owed to the industry, it also shows its true motive: profit over responsibility.

261. BASF also failed to meet its duties. Even now, BASF contends Engenia is safe for use and offers a stewardship program

A responsibility for stewardship.

Every aspect of farming takes commitment, and teaching correct, effective herbicide application is our commitment to you.

In modern agriculture, the advent of new and advanced herbicide technologies must accompany an equal dedication to stewardship. With the push toward leading technologies, like Engenia herbicide, BASF developed the On Target Application Academy (OTAA) to provide best-practice training that promotes correct and effective herbicide application.

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<sup>73</sup> “Stewardship and The Pledge” (Downloaded on Sept. 6, 2016 from <http://www.monsanto.com/products/pages/stewardship-and-pledge.aspx>).



OTAA guides BASF's long-standing stewardship responsibility to growers through a one-of-a-kind educational program. Featuring some of the top minds in herbicide application technology in the country, OTAA sessions teach growers how to minimize drift and make applications of low-volatility Engenia herbicide safe, accurate and effective. Since its inception in 2012, OTAA has reached thousands of growers in highest crop producing regions in the country.

Ex. 65.<sup>74</sup>

262. BASF has failed in this regard. As the above-tests show, Engenia was volatile, subject to drift through at least temperature inversions and damaged non-target crops and plants. Particularly for Plaintiffs and the State Class, Engenia was the only dicamba formulation approved for over-the-top application in Arkansas. Thus, Engenia contributed to the record reports of damage in Arkansas.

263. DuPont has a similar stewardship pledge.

Balancing our search for solutions that are both science-enabled and sustainable helps us make the most responsible and appropriate use of science to help ensure food security, deliver global energy solutions, and protect the earth and its citizens.

Ex. 66.<sup>75</sup>

264. DuPont has failed in this regard. As the above-tests show, FeXapan was volatile, subject to drift through at least temperature inversions and damaged non-target crops and plants. Allowing such destruction to occur to non-target crops does not align with DuPont's purported duty to ensure "the most responsible and appropriate use of science to help ensure food security."

*Id.*

265. The interconnected nature of the parties' relationship here also gave rise to a duty from the exact harm Defendants caused.

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<sup>74</sup> "A responsibility for stewardship" (Downloaded July 14, 2017 from <http://agproducts.basf.us/campaigns/engenia/#stewardship>).

<sup>75</sup> "Stewardship" (Downloaded on July 16, 2017 from <http://www.dupont.com/corporate-functions/sustainability/sustainability-commitments/product-stewardship-regulator/articles/product-stewardship.html>).

266. Defendants commercialized their products without taking sufficient steps to avoid the foreseeable consequences of dicamba application, temperature inversion, volatilization, and destructive drift.

267. Further, Defendants acted affirmatively to mislead and confuse consumers and the industry in general, and to cover up their wrongdoing by blaming misuse on its customers—customers that it admitted had a shared duty along with Defendants to avoid the harm they caused.

268. The parties here are part of an inter-connected industry and market, with expectations on all sides that manufacturers, growers, and sellers would act at least in part for the mutual benefit of all in that inter-connected web.

269. The harm to Plaintiffs and others were not only foreseeable, it was foreseen as Plaintiffs suffered the very harm expected to occur.

270. Defendants were not only warned about the risk of such harms, Monsanto's premature release of XtendFlex cotton in 2015 and of both Xtend soybeans and XtendFlex cotton in 2016 confirmed that a larger 2017 release would lead to more dicamba misuse and damage to non-target crops and plants.

271. Further, and as discussed above, Defendants withheld information from the EPA in violation of duties owed not only to the EPA but to the industry.

272. The connection between Plaintiffs' harm centers on Defendants' release of Xtend products and their dicamba formulations. If such products were not available, Xtend customers would not have sprayed dicamba over the top of their crops, and therefore the damage complained of in this action would not have occurred.

273. Sales representatives informing prospective customers to engage in off-label uses further confirms the harm centers on Defendants.

274. The injury suffered by Plaintiffs and others are not out of proportion to Defendants' culpability. Defendants knew from Monsanto's premature 2015 and 2016 releases that damage to non-target plants and crops would occur. Defendants' refusal to allow independent testing on volatility also confirm they were aware their products would damage non-target crops and plants. Defendants also knew (or should have known) a much larger rollout of Xtend products would cause additional, greater damage than prior years. Further, Defendants were aware that no matter what safeguards were taken, damage due to temperature drift, volatility and drift would result, and hid such information from the EPA.

275. Monsanto also knew its "warning" process to prevent off-label use was insufficient as well, especially after its 2015 and 2016 releases.

276. Additionally, Monsanto's release of Xtend and XtendFlex has not only led to damaged crops, it has sowed anger and resentment in farming communities where farmers may have had their crops damaged by other members of their community.

277. Finally, Defendants are seeking to shirk their responsibility onto their customers that allegedly misused dicamba, despite their pledge that stewardship is a "shared responsibility." That should not be lost here. Defendants' public defense to the damage in 2017 is either 1) Xtend product customers or applicators did not follow the approved, over-the-top labels/instructions when applying dicamba, or 2) Xtend product customers utilized unauthorized dicamba formulations for over-the-top applications. While these defenses overlook the independent tests that now show volatility even when the approved formulations were properly applied, Defendants' defense is their customers.

278. Through their stewardship pledge, Defendants affirmatively adopted a duty or responsibility to prevent the harm they caused.

279. Here, greed won out over their duty and responsibilities. Finding Defendants guilty simply adopts the policies that Defendants purported they followed, yet did not.

280. Implementing such a rule is feasible. Manufacturers should not release GMOs, or products in general, which will inevitably lead to non-target crop and plant damage, especially when those damaged are innocent parties guilty only of not buying Xtend products.

281. Given Defendants' adoption of stewardship standards, the expectation on behalf of Plaintiffs and other similarly situated stakeholders, would be that Defendants would not release a product that would cause harm to others.

282. There is no burden in guarding against injuries of this type. Monsanto created a product (Xtend) that to work as created and planned required another product (specific formulations of dicamba). Linking the sales of these two products (as Defendants refer to them, a "crop system") is not a burden.

283. Further, allowing a damages recovery in a case like this has a sensible stopping point: once Xtend products are removed from the market and/or over-the-top dicamba use is prevented, future damages will stop (though, as some damage will occur to seeds which will be planted the following year, the stopping point would require an additional growing season).

284. Defendants failed to provide assistance in the form of stewardship programs that would eliminate dicamba volatilization or drift, and thereby avoid non-target crop damage.

285. Defendants failed to offer a dicamba formulation that would not volatilize or drift, thereby making non-target crop damage inevitable.

286. Defendants engaged in affirmative conduct that contributed to the harm caused.

287. With the benefits to Monsanto of premature releases of Xtend (*i.e.*, additional and increased sales of Xtend products in the future due to farmers' purchasing products to defend against others' misuse), Monsanto's decision to prematurely release its Xtend products and to continue selling such products were intended to affect non-Xtend planting farmers.

288. At a minimum, Monsanto and DuPont distributed Xtend seeds, and Defendants Monsanto, BASF and DuPont distributed dicamba formulations for over-the-top application on Xtend seeds, knowing they would lead to damage to non-target crops and plants.

289. The obligations imposed by the damage caused by dicamba in 2015 and 2016 put Defendants in a position to control, and, in fact, prevent damage to non-target plants crops (by withholding Xtend from the market) or control the damage.

290. Allegedly, Monsanto had agreements with each purchaser of Xtend products that warned them against utilizing dicamba in the 2015 and 2016 seasons. These alleged agreements gave Monsanto some measure of control over the use of its Xtend products, as well as a means to abate any damages caused by misuse.

291. Similarly, and allegedly, Monsanto and DuPont have agreements with each purchaser of Xtend products that warned them against utilizing dicamba in the 2017 season. These alleged agreements give Monsanto and DuPont some measure of control over the use of their Xtend products, as well as a means to abate any damages caused by misuse.

292. Still, it appears Defendants took no actions in this regard.

### ***Defendants' Illegal Monopolistic Behavior***

293. In the U.S. soybean market, Monsanto holds great market power. Ninety percent (90%) of soybeans grown in the U.S. are genetically engineered with Monsanto's Roundup resistance. Ex. 68.<sup>76</sup>

294. In the U.S. cotton seed market, Monsanto holds great market power, as well. Ninety percent (90%) of the cotton market in the U.S. is GMO, and upon information and belief, Monsanto seeds make up a significant portion of the GMO cotton seed sold in the U.S. Ex. 69.<sup>77</sup>

295. Monsanto's goal by adding its Xtend dicamba herbicide resistance to soybeans and cotton was to maintain and expand its already vast market power in these markets.

296. Monsanto's strategy in 2015 and 2016: since all available dicamba formulations would drift or volatilize, the only way farmers could protect their crops from improper dicamba use would be to also buy Xtend products. As the evidence above shows, this worked. Further, after EPA approval, given drift and volatilization would always occur, the only way farmers could protect their crops would be to purchase Xtend products.

297. With the damage caused to crops by over-the-top dicamba use, farmers now believe they need to purchase their seeds defensively (*i.e.*, purchase dicamba resistant crops) to protect themselves.

298. The relevant markets are currently soybeans and cotton. In the future, the relevant markets expand to all crop types which Monsanto genetically modifies to incorporate dicamba herbicide resistance. In this manner, Monsanto hopes to hijack additional crop markets, turning

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<sup>76</sup> "As Patents Expire, Farmers Plant Generic GMOs," MIT Technology Review (July 30, 2015) (Downloaded on July 15, 2017 from <https://www.technologyreview.com/s/539746/as-patents-expire-farmers-plant-generic-gmos/>).

<sup>77</sup> "Recent Trends in GE Adoption," U.S. Dept. of Agriculture (July 12, 2017) (Downloaded July 15, 2017 from <http://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us/recent-trends-in-ge-adoption.aspx>). While discussing the GMO market generally, discovery will determine the actual share of the market which is Monsanto products. Upon information and belief, it is expected to be 90% of the market.

them (via fear of non-target crop damage) into exclusive dicamba resistant markets for which it owns the patents to exclude others from competing.

299. The geographic market is all areas of the United States where soybean and cotton planting occurs, or where to-be-created created Xtend crops will be planted.

300. Monsanto's products in this market currently include its Xtend soybeans, XtendFlex cotton, and other products Monsanto it is developing with dicamba resistance.

301. Facts supporting Monsanto's market/monopoly power include:

Monsanto's share of the soybean market is about 90%, and it has had such a presence since at least 2008.

Monsanto has a large share of the cotton market (which could be 90% as well), and it has had this large of a presence since at least 2012.

Monsanto's dominant market share in both the soybean and cotton markets are now protected by the fear of dicamba drift. After the damage caused by the 2015, 2016 and 2017 growing seasons, farmers feel they need to defensively purchase dicamba tolerant products to ensure their crops are not affected by others. This creates a barrier to entry because Monsanto owns the patents on dicamba tolerance.

Largely due to its market share and patent ownership over dicamba tolerance, the market of consumers lack commercially viable alternatives to Xtend soybeans, XtendFlex cotton and other Xtend products. In other words, if dicamba is going to be used, only Xtend crops are guaranteed to survive undamaged. All other crops are at risk.

302. By promoting dicamba drift, Monsanto can potentially eliminate non-dicamba resistant crops. As some have put it...

"[Monsanto] knew that people would buy it just to protect themselves," Hayes says. "You're pretty well going to have to. It's a good marketing strategy, I guess. It kind of sucks for us."

Ex. 20.

303. Given that the soybean and cotton markets could be turning into "dicamba resistant only" markets, Monsanto can set the price of its products without fear of competition, ensuring maintenance of its minimum \$6-\$10 price premium.

304. Further, Xtend could eliminate non-GMO, organic and/or other types of soybeans and cotton from the market (e.g., stop Liberty Link from eroding its soybean market share). This would not be through free-market competition, but rather by physically damaging competing products (through non-target damage), or through fear rightfully felt by consumers that to have a viable crop, the only choice would be Xtend products.

### **CLASS ACTION ALLEGATIONS**

305. Plaintiffs bring this action pursuant to Rules 23(a), 23(b)(1), and 23(b)(3) of the Federal Rules of Civil Procedure (“Rules” or, individually, “Rule”), on behalf of themselves and a number of classes (each a “Class,” and collectively, “the Classes”), consisting of all persons and entities, either in Plaintiffs’ respective states or, collectively, in the Nationwide Class (defined below), who, during the relevant time period, suffered damaged crops or plants due to dicamba drift or volatilization when dicamba was sprayed upon Xtend products. Excluded from the classes described below are the Court and its officers, employees, and relatives; Defendants and their subsidiaries, officers, directors, employees, contractors, and agents; and governmental entities. Also excluded are farmers who purchased or planted Xtend products.

306. In addition, Plaintiffs assert claims against Defendants, individually and on behalf of state specific claims. The Arkansas statewide Class, defined below, corresponds to the state of which Plaintiffs are citizens and in which they suffered damage due to Defendants’ acts.

307. The Nationwide Class consists of all farmers who suffered damage to their crops in 2015-2017 due to over-the-top application of dicamba on others’ Xtend crops. Excluded from the Nationwide Class are the Court and its officers, employees, and relatives; Defendants and their subsidiaries, officers, directors, employees, contractors, and agents; and governmental entities. Also excluded are farmers who solely purchased or planted Xtend products.



308. The Arkansas State Class consists of all Arkansas farmers who suffered damage to their crops in 2015-2017 due to over-the-top application of dicamba on others' Xtend crops. Excluded from this State Class are the Court and its officers, employees, and relatives; Defendants and their subsidiaries, officers, directors, employees, contractors, and agents; and governmental entities. Also excluded from the state classes are farmers who solely purchased or planted Xtend products.

309. The requirements of Rule 23(a) are satisfied for each of the foregoing Classes because the members of each Class are so numerous and geographically dispersed that joinder of all its members is inapplicable. With regard to the Nationwide and State Classes, it is likely well-over 1,000,000 acres of damaged crops have been reported from 2015-2017. Millions of acres of Xtend crops were also planted. Although the exact number and identity of each Class member is not known, there are hundreds, if not thousands, of members in each Class. The "numerosity" requirement of Rule 23(a)(1) is, therefore, satisfied.

310. The "commonality" requirement of Rule 23(a)(2) is satisfied because there are questions of law and fact common to each of the respective Plaintiffs and the other members of each of the Classes they respectively seek to represent. Among those common questions of law and fact are:

a. whether the members of the Nationwide Class have sustained or continue to sustain damages in their business or property by reason of Defendants' acts or omissions, and, if so, the proper measure and appropriate formula to be applied in determining such damages;

b. whether Defendants knew or should have known that their acts or omissions would cause or contribute to dicamba drift/volatilization and damage to non-target plants and crops;

c. whether Defendants are legally responsible for the damages caused to non-target plants and crops under one or more of the legal theories asserted in this complaint;

d. whether the members of the Nationwide Class and/or State Class have sustained and continue to sustain damage as a result of Defendants' wrongful conduct, and, if so, the proper measure and appropriate formula to be applied in determining such damages for the Nationwide Class and/or each of the respective State Class; and

e. whether the members of the Classes are entitled to compensatory, statutory, exemplary, and/or punitive damages.

311. Plaintiffs' claims are typical of the claims of all other members of each of the respective Classes that they seek to represent, as described above, because they arise from the same course of conduct by Defendants and are based on the same legal theories as do the claims of all other members of each of the respective Classes. Moreover, Plaintiffs seek the same forms of relief for themselves as they do on behalf of absent Class members. Accordingly, Plaintiffs have satisfied the "typicality" requirements of Rule 23(a)(3) with respect to each of the Classes they respectively seek to represent.

312. Because their claims are typical of the respective Classes that they seek to represent, Plaintiffs have every incentive to pursue those claims vigorously. Plaintiffs have no conflicts with, or interests antagonistic to, the plaintiff farmers comprising the other members of the Classes they respectively seek to represent relating to the claims set forth herein. Also, Plaintiffs' commitment to the vigorous prosecution of this action is reflected in their retention of competent counsel experienced in litigation of this nature to represent them and the other members of each of the Classes. Plaintiffs' counsel will fairly and adequately represent the interests of each of the proposed Classes, and: (a) have identified and thoroughly investigated the

claims set forth herein; (b) are highly experienced in the management and litigation of class actions and complex litigation; (c) have extensive knowledge of the applicable law; and (d) possess the resources to commit to the vigorous prosecution of this action on behalf of the proposed Classes. Accordingly, Plaintiffs satisfy the adequacy of representation requirements of Rule 23(a)(4) with respect to each of the proposed Classes.

313. In addition, this action meets the requirements of Rule 23(b)(1). This case raises questions about, among other things, Defendants' duty of care with respect to its commercialization of herbicides and genetically modified traits, which necessarily require class wide adjudication to prevent the risk of inconsistent rulings and incompatible standards of conduct for Defendants. Moreover, absent a representative class action, many members of the proposed Classes would continue to suffer the harms described herein, for which they would have no remedy. Even if separate actions could be brought by individual Plaintiffs, the resulting multiplicity of lawsuits would cause undue hardship and expense for both the Court and the litigants, as well as create a risk of inconsistent rulings and adjudications that might be dispositive of the interests of similarly situated corn producers, substantially impeding their ability to protect their interests, while establishing incompatible standards of conduct for Defendants. Further, as this action seeks an injunction, if litigated separately, could result in inconsistent decisions pertaining to duties owed by Defendants.

314. This action additionally meets the requirements of Rule 23(b)(3). Common questions of law and fact, including those enumerated above, exist as to the claims of all members of each of the respective Classes and predominate over questions affecting only individual Class members of each such Class, and a class action is the superior method for the fair and efficient adjudication of this controversy. Class treatment will permit large numbers of

similarly-situated persons to prosecute their respective class claims in a single forum simultaneously, efficiently, and without the unnecessary duplication of evidence, effort, and expense that numerous individual actions would produce. Furthermore, while damages to members of each of the proposed Classes are substantial in the aggregate, the damages to any individual member of the proposed Classes may be insufficient to justify individually controlling the prosecution of separate actions against Defendants.

315. This case is manageable as a class action, and a class trial will be manageable. Notice may be provided to members of the respective Classes by first-class mail and through alternative means of publication and the Internet. Moreover, the Nationwide Class members' claims will be decided under federal substantive law and the substantive law of only one state (Missouri), and the State Classes' claims will likewise each be decided under the substantive law of only one state, that of the respective state of each of those Classes. Thus, the Court will not have to grapple with the application of multiple jurisdictions' law to the members of any single Class.

316. To the extent not all issues or claims, including damages, can be resolved on a class-wide basis, Plaintiffs invoke Rule 23(c)(4) and reserve the right to seek certification of narrower and/or re-defined Classes and/or to seek certification of a liability class or certification of certain issues common to the class. Plaintiffs further reserve the right to seek to combine one or more of the Statewide Classes as appropriate, including to the extent the laws of any two or more states do not have materially conflicting laws relevant to the claims that they may be combined into a single Class.

**PLAINTIFFS' CLAIMS FOR RELIEF**

**COUNT I**

**Violation of Lanham Act  
(15 U.S.C. § 1125(a)(1)(B))  
On Behalf of Plaintiffs and Nationwide Class**

317. Plaintiffs incorporate by reference all of the above paragraphs as though fully set forth herein.

318. The Lanham Act, 15 U.S.C. § 1125(a), provides in pertinent part:

(1) Any person who, on or in connection with any goods or services, or any container for goods, uses in commerce any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact, which—

(B) in commercial advertising or promotion, misrepresents the nature, characteristics, qualities, or geographic origin of his or her or another person's goods, services, or commercial activities,

shall be liable in a civil action by any person who believes that he or she is or is likely to be damaged by such act.

319. Monsanto's statements and commentary made to the press, statements on the internet, during quarterly conference calls, incorporated into Defendants' websites and on its Xtend product labels and marketing materials, which, inter alia, represent that dicamba for over-the-top use on Xtend would imminently be approved by the EPA prior to and including the 2016 planting season, as alleged above, were materially false statements that were likely to cause confusion and mistake as to the nature, characteristics, and qualities of Xtend soybeans and dicamba's use thereon.

320. Monsanto's statements include, but are not limited to:

- i. Monsanto's statements to farmers and prospective customers in its marketing materials (e.g., on its websites and in its advertising literature) that its Xtend products would not be released until EPA approval;

- ii. The numerous statements Monsanto made to the press and to investment analysts on quarterly conference calls that its Xtend products would not be released until EPA approval;
- iii. The numerous statements to the press and to investment analysts on quarterly conference calls made concerning “imminent” EPA approval; and
- iv. Through other statements indicating that approval from of over-the-top application of dicamba on its Xtend products was expected at times when Monsanto knew it was not.
- v. Sales representatives informing applicators and farmers it was OK to spray dicamba over-the-top of their Xtend crops in 2015 and 2016.

321. Further, Defendants’ statements and commentary made to the press, statements on the internet, during quarterly conference calls and incorporated into Defendants’ websites, product labels and marketing materials, which, inter alia, represent that dicamba could be safely used for over-the-top application on Xtend products and would not lead to drift and volatilization were materially false statements that were likely to cause confusion and mistake as to the nature, characteristics, and qualities of Xtend soybeans and Defendants’ over-the-top dicamba formulations use thereon.

322. As more fully alleged above, these statements are materially false as they misrepresented, and are, and continue to be, likely to cause confusion and mistake as to the nature, characteristics, and qualities of Xtend products and the dicamba formulations to be used with Xtend products, the impact of drift, volatilization, and temperature inversion of dicamba on non-target crops and plants, and the ability to prevent/minimize damage due to over-the-top dicamba application.

323. Defendants’ statements were made as advertisements for the Xtend product line, XtendiMax, Engenia and FeXapan.

324. Defendants’ statements refer specifically to the Xtend product line, XtendiMax, Engenia and FeXapan.

325. Defendants had an economic motivation for making its statements – sales of the Xtend product line, XtendiMax, Engenia and FeXapan.

326. Defendants' statements were likely to and did influence purchasing decisions.

327. Defendants' misleading representations deceived and/or continue to deceive, farmers, applicators, and other consumers.

328. Defendants' statements were widely distributed, which is, at least, sufficient to constitute promotion within the soybean and cotton industries.

329. Upon information and belief, Plaintiffs and class members relied on Defendants' material misrepresentations, for example, by purchasing products other than Xtend products believing their products would be safe from non-target damage due to others' use of dicamba.

330. Plaintiffs and class members have and continue to be damaged by Defendants' material misrepresentations.

331. Defendants' acts proximately caused damage to Plaintiffs and the Class.

332. Defendants' acts constitute the use of false descriptions and false representations in interstate commerce in violation of the § 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

**COUNT II**  
**Public Nuisance**  
**(Arkansas Common Law)**  
**On Behalf of Plaintiffs and Arkansas State Class**

333. Plaintiffs incorporate by reference all of the above paragraphs as though fully set forth herein.

334. Through the conduct alleged above, Defendants have created a public nuisance by causing widespread damage due to over-the-top spraying of dicamba on Xtend products.

335. This constitutes an unreasonable and substantial interference with rights common to the general public.

336. This unreasonable interference is imposed on the community at large and on a considerable diverse number of persons and entities. It arises from 1) Monsanto's premature release of Xtend prior to EPA approval of over-the-top dicamba formulations, and/or 2) Defendants providing products in 2017 prone to the creation of drift, volatilization and temperature inversions: (a) without adequate precautions to prevent damage to other crops and plants due to drift, volatilization and temperature inversion; (b) with the knowledge that dicamba would damage non-target crops and plants; (c) with the knowledge that this contamination would likely affect the U.S. crop and seed supplies; or (d) with the knowledge that there was a substantial risk of damage to crop and seed supplies earmarked for sale and export.

337. Defendants have unreasonably interfered with the public's right to expect damage to their crops and plants due to others' use of Defendants' products.

338. This interference is unreasonable in that it involves a significant interference with the public health, the public safety, the public peace, the public comfort, or the public convenience. It is also unreasonable in that it is of a continuing nature and has produced a permanent or long-lasting effect not only because it affects the next generation of non-target plants due to seed damage, but also because dicamba is moderately toxic if ingested and slightly toxic if inhaled or exposed to skin.

339. Plaintiffs and class members have suffered harm caused by Defendants public nuisance distinct from and different than that suffered by the general public in that, as described above, they have suffered business losses in the form of, among other things, the damage and destruction of non-target crops and plants.



340. Considering the surrounding circumstances described above, Defendants knew or should have known that their conduct would naturally or probably result in injuries and damages to the Plaintiffs and class members. Nevertheless, Defendants continued such conduct in reckless disregard of or conscious indifference to those consequences.

**COUNT III**  
**Trespass to Chattels**  
**(Arkansas Common Law)**  
**On Behalf of Plaintiffs and Arkansas State Class**

341. Plaintiffs incorporate by reference all of the above paragraphs as though fully set forth herein.

342. Plaintiffs and class members are farmers engaged in the planting, cultivation, harvesting and selling of crops such as soybeans and peanuts.

343. Defendants by selling Xtend, Engenia and FeXapan have damaged or killed Plaintiffs and class members crops and plants as described above.

344. Dicamba drift, volatilization and/or damage due to temperature inversions have negatively impacted Plaintiffs and the classes' crops, including harvest and yield.

345. Defendants' actions led not only to damage Plaintiffs and the classes' crops and plants, but also market-wide damage as the harm is widespread.

346. Upon information and belief, and as the affected crops have yet to be harvested, this harm has manifested itself as reduced yield, and ultimately a loss of sales. Further, for those growing crops for seed, damage to the next generation of crops as well.

**COUNT IV**  
**Negligence**  
**(Arkansas Common Law)**  
**On Behalf of Plaintiffs and Arkansas State Class**

347. Plaintiffs incorporate by reference all of the above paragraphs as though fully set forth herein.

348. Defendants owed a duty of at least reasonable care to its stakeholders, including Plaintiffs and the Class, in the timing, scope, and terms under which they commercialized their Xtend products and their dicamba formulations.

349. Defendants also owed a duty to prevent the exact harm they caused here to non-target crops and plants.

350. Defendants commercialized their products without taking sufficient steps to avoid the foreseen consequences of dicamba application, including temperature inversion, volatilization, and destructive drift.

351. Defendants breached their duty by acts and omissions including but not limited to:

- a. Commercializing Xtend and their dicamba formulations on a widespread basis without reasonable or adequate safeguards;
- b. Instituting a nonexistent, or at a minimum, careless and ineffective “stewardship” program;
- c. Failing to enforce or effectively monitor their stewardship program and/or providing an inadequate stewardship program;
- d. In 2015 and 2016, selling Xtend products to thousands of farmers with knowledge that they lacked the mechanisms, experience, ability and /or competence to effectively prevent them from utilizing dicamba for over-the-top applications;
- e. Utilizing inadequate and difficult if not impossible, to follow labels and instructions,
- f. Failing to adequately warn and instruct farmers on the dangers of utilizing dicamba would lead to others’ crops;
- g. Prior to and including the 2016 soybean and cotton season, distributing misleading information about the EPA approval of dicamba formulations for Xtend crops; and
- h. Prior to and including the 2016 soybean and cotton season, distributing misleading information regarding the timing of the EPA’s approval of dicamba for over-the-top application on Xtend crops.

352. Further, each Defendant has a duty to use ordinary care in the design and in the selection of the materials used in its products to protect those who are in the area of its use from unreasonable risk of harm. Given the toxicity of dicamba to certain crops, it was negligent to design, formulate, manufacture, and sell a dicamba-resistant seed and over-the-top dicamba formulations in the subject area. Each Defendant, therefore, failed to use ordinary care in the design and selection of materials in its products.

353. Defendants also had a duty to test their products, including allowing independent testing, to determine the extent to which over-the-top dicamba application would injure off target crops, and to provide reasonable instructions and take other appropriate measures as are necessary to prevent such non-target damage. Defendants failed to adequately test their products or to take appropriate steps to prevent such damage.

354. Defendants also have a duty to give reasonable and adequate warnings of dangers inherent or reasonably foreseeable in the use of their products and to provide such instructions as are necessary to permit the reasonably safe use of their products.

355. Defendants' negligence is a direct and proximate cause of the injuries and damages sustained by the Plaintiffs and the Class.

356. With respect to the release their products, Defendants had a duty to utilize their professional expertise and exercise that degree of skill and learning ordinarily used under the same or similar circumstances by a person or entity in Defendants' business.

357. Defendants breached their duties by failing to exercise the requisite degree of care in selling and disseminating their products to prevent them from damaging non-target crops and plants.

358. The damages incurred by Plaintiffs and class members were or should have been foreseen by Defendants as they understood the risks of releasing their products

359. As alleged above, Defendants breached their duties and the requisite standard of care owed to all foreseeable Plaintiffs, and were therefore negligent.

360. Plaintiffs and the Class are thus entitled to an award of compensatory damages, prejudgment and post judgment interest.

361. Defendants' conduct was grossly negligent and showed a complete indifference to or conscious disregard of the rights of others, including the Plaintiffs and the Class. Punitive damages are thus warranted.

362. In 2015 and 2016, Monsanto sold its Xtend products knowing that without a safe, approved herbicide there was a significant risk that farmers would use unapproved herbicides to protect their crops.

363. Further, Defendants sold their products knowing there was a significant risk that use of even approved dicamba formulations would lead to damage to non-target crops and plants, especially in view of the inadequate instructions provided.

364. Defendants violated their duty to give a reasonable and adequate warning of the dangers inherent and reasonably foreseeable in the use of their products, including the danger of causing significant and far-reaching off-target movement, temperature inversion, migration, and drift of dicamba-containing products in amounts that would cause severe damage to crops and plants other than those grown from Xtend seeds.

365. Likewise, Defendants' violated their duty to provide adequate instructions for use of their products that would not lead to damage to non-target crops and plants.

366. Defendants' inadequate warnings were a proximate cause of the harm to Plaintiffs and the Class.

367. Defendants were negligent in selling of products in areas that they knew or should have known that using dicamba-containing products posed an unreasonable risk of harm to nearby crops, given their physical proximity to non-dicamba resistant crops and plants, the timing of use of Defendants' products, the inadequate instructions provided, and the history of crop and plant damage occurring in these areas from the use of dicamba-containing products.

**COUNT V**  
**Strict Liability – Products Liability**  
**(Ark. Code § 4-86-102)**  
**On Behalf of Plaintiffs and Arkansas State Class**

368. Plaintiffs incorporate by reference all of the above paragraphs as though fully set forth herein.

369. Pursuant to Section 4-86-102 of the Arkansas Code, a supplier of a product is liable for harm to another person or his property if: (1) the supplier is engaged in the business of manufacturing, selling, or distributing the product; (2) the product was supplied by him in a defective condition that rendered it unreasonably dangerous; and (3) the defective condition was a proximate cause of the harm to person or to property.

370. Defendants are engaged in the business of manufacturing, selling, and distributing Xtend seeds and/or dicamba formulations to be utilized over-the-top of Xtend seeds, and therefore are each a "supplier" for the purpose of Section 4-86-102 of the Arkansas Code.

371. Defendants' Xtend products and over-the-top dicamba formulations are defective products that cannot be used in a safe manner to prevent injury to non-target crops. Each of the Defendants supplied their respective products in a defective condition that rendered them unreasonably dangerous.

372. The defective condition of Defendants' products was a proximate cause of the harm to Plaintiffs and the Class.

373. Defendants are strictly liable for all damages to Plaintiffs and the Class caused by their products.

374. Monsanto was and continues to be a supplier of Xtend products.

375. BASF was and continues to be a supplier of Engenia.

376. DuPont was and continues to be a supplier of Xtend seeds.

377. Monsanto has in the past and continues to manufacture, sell, or otherwise distribute Xtend products.

378. BASF has in the past and continues to manufacture, sell, or otherwise distribute Engenia.

379. DuPont has in the past and continues to manufacture, sell, or otherwise distribute Xtend seeds.

380. Xtend products and Engenia were used in a manner reasonably foreseeable and anticipated.

381. As a direct and proximate result of the defective and unreasonably dangerous condition of Xtend products and Engenia as they existed when Defendants supplied them, Plaintiffs and the Class have sustained injuries and damages as alleged above.

382. In light of the surrounding circumstances, Defendants knew or should have known that their conduct would naturally or probably result in injuries and damages to the Plaintiffs and the Class.

383. The Xtend products and Engenia are the direct and proximate cause of the injuries and damages sustained by Plaintiffs and the Class.

384. Nevertheless, Defendants continued such conduct in reckless disregard of conscious indifference to those consequences.

**COUNT VI**  
**Strict Liability – Ultrahazardous or**  
**Abnormally Dangerous Activity**  
**(Arkansas Common Law)**  
**On Behalf of Plaintiffs and Arkansas State Class**

385. Plaintiffs incorporate by reference all of the above paragraphs as though fully set forth herein.

386. Monsanto and DuPont's testing, growing, selling, disposing, or otherwise disseminating Xtend products and BASF's selling, disposing, or otherwise disseminating Engenia continues to constitute an abnormally dangerous or ultrahazardous activity because such activities created a high degree of risk of harm, the harm has been and will continue to be significant, the risk cannot be eliminated by the exercise of reasonable care, the value to the community is outweighed by its dangerous attributes, and the activity resulted in injuries and damages to Plaintiffs and the Class.

387. Further, dicamba itself is moderately toxic by ingestion and slightly toxic by inhalation or dermal exposure.

388. Given its proclivity to drift and volatilize, it poses a risk to people and animals; not just non-target plants.

389. In addition, the activity was unduly dangerous and inappropriate for the places where it was conducted.

390. The type of harm suffered by Plaintiffs and the Class is the kind of harm, or the possibility of such harm, which makes the activity abnormally dangerous.

391. As a direct and proximate result of Defendants' ultrahazardous or abnormally dangerous activities, Plaintiffs and the Class have sustained, and will continue to sustain substantial injuries and damages, including those alleged above.

392. Defendants are therefore strictly liable to Plaintiffs and the Class for all damages which have resulted or will result from their abnormally dangerous activities with respect to Monsanto and DuPont's testing, growing, storing, selling, disposing, or otherwise disseminating Xtend products and BASF's selling, disposing, or otherwise disseminating Engenia.

393. In light of the surrounding circumstances, Defendants knew or should have known that their conduct would naturally or probably result in injuries to Plaintiffs and the Class.

394. Nevertheless, Defendants continued such conduct in reckless disregard of or conscious indifference to those consequences.

**COUNT VII**  
**Strict Liability – Failure to Warn**  
**(Arkansas Common Law)**  
**On Behalf of Plaintiffs and Arkansas State Class**

395. Plaintiffs incorporate by reference all of the above paragraphs as though fully set forth herein.

396. Defendants are strictly liable to Plaintiffs and the Class as a result of their failure to warn about the dangers of dicamba use associated with Xtend products.

397. Defendants sold Xtend products and Engenia in the course of their business, as alleged above.

398. When Xtend products are planted, grown, harvested, or otherwise utilized as reasonably anticipated in conjunction with over-the-top dicamba formulations such as Engenia, and without knowledge of the products true characteristics, Xtend products and Engenia were unreasonably dangerous at the time of its sale.



399. Defendants did not give adequate warnings of the danger of planting, growing, harvesting, or otherwise utilizing Xtend products and use of, disposing, or otherwise disseminating Engenia for over-the-top applications.

400. Upon information and belief, Xtend products and Engenia were utilized together in a reasonably anticipated manner.

401. Plaintiffs and the Class suffered injury and damages as a direct and proximate result of Defendants' failure to provide adequate warnings regarding the dangers of planting, growing, harvesting, or otherwise utilizing Xtend products in conjunction with over-the-top dicamba formulations such as Engenia at the time both products were sold.

402. In light of the surrounding circumstances, Defendants knew or should have known that their conduct would naturally or probably result in injuries to Plaintiffs and the Class.

403. Nevertheless, Defendants continued such conduct in reckless disregard of or conscious indifference to those consequences.

**COUNT VIII**  
**Illegal Maintenance of Monopoly in the Soybean Market**  
**(Section 2 of Sherman Act)**  
**On Behalf of Plaintiffs and Nationwide Class**

404. Plaintiffs incorporate all of the above paragraphs as though fully set forth herein.

405. As set forth above, Monsanto possesses monopoly power in the soybean seed market. The market is characterized by significant barriers to entry.

406. Through the anticompetitive conduct described herein, Monsanto has willfully maintained that power by anticompetitive and unreasonably exclusionary conduct. Monsanto has acted with the intent to maintain its monopoly power in the soybean market, and its illegal conduct has allowed it to do so, in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

407. Monsanto's conduct occurred in and affected interstate commerce.

408. Monsanto's anticompetitive acts have harmed consumers (including those consumers who do not wish to purchase Xtend soybeans) and competition.

409. As a direct, foreseeable, and proximate result of Monsanto's unlawful maintenance of its monopoly in the soybean seed market in violation of Section 2 of the Sherman Act, Plaintiffs and the class have been deprived of the benefits of free and fair competition on the merits, including but not limited to the ability to successfully utilize products that compete with Xtend soybeans. Plaintiffs have been and will continue to be damaged, in amounts to be proven at trial.

410. Plaintiffs' injuries are of the type the antitrust laws are intended to prevent and thus constitute antitrust injuries.

411. Unless the activities complained of are enjoined, Plaintiffs will suffer immediate and irreparable injustice for which Plaintiffs are without an adequate remedy at law, including, but not limited to, the inability to purchase, plant, grow and harvest products that compete with Xtend soybeans.

**COUNT IX**  
**Illegal Maintenance of Monopoly in the Cotton Market**  
**(Section 2 of Sherman Act)**  
**On Behalf of Plaintiffs and Nationwide Class**

412. Plaintiffs incorporate all of the above paragraphs as though fully set forth herein.

413. As set forth above, Monsanto possesses monopoly power in the cotton seed market. The market is characterized by significant barriers to entry.

414. Through the anticompetitive conduct described herein, Monsanto has willfully maintained that power by anticompetitive and unreasonably exclusionary conduct. Monsanto has acted with the intent to maintain its monopoly power in the dicamba resistant cotton market, and

its illegal conduct has allowed it to do so, in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

415. Monsanto's conduct occurred in and affected interstate commerce.

416. Monsanto's anticompetitive acts have harmed consumers (including those consumers who do not wish to purchase XtendFlex cotton) and competition.

417. As a direct, foreseeable, and proximate result of Monsanto's unlawful maintenance of its monopoly in the cotton seed market in violation of Section 2 of the Sherman Act, Plaintiffs has been deprived of the benefits of free and fair competition on the merits including but not limited to the ability to successfully utilize products that compete with XtendFlex cotton. Plaintiffs have been and will continue to be damaged, in amounts to be proven at trial.

418. Plaintiffs' injuries are of the type the antitrust laws are intended to prevent and thus constitute antitrust injuries.

419. Unless the activities complained of are enjoined, Plaintiffs will suffer immediate and irreparable injustice for which Plaintiffs are without an adequate remedy at law, including, but not limited to, the inability to purchase, plant, grow and harvest products that compete with XtendFlex cotton.

**COUNT X**  
**Attempted Monopolization of the Soybean Market**  
**(Section 2 of Sherman Act)**  
**On Behalf of Plaintiffs and Nationwide Class**

420. Plaintiffs incorporate all of the above paragraphs as though fully set forth herein.

421. Monsanto has willfully engaged, and is engaging, in a course of anticompetitive conduct, including destroying competitors' planted soybean seed, tying, refusals to deal and

predatory pricing, among other acts, to obtain a monopoly in the markets for its dicamba soybean.

422. There is a dangerous probability that, unless restrained, Monsanto will succeed in obtaining a monopoly of such markets in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

423. Monsanto has acted with the specific intent to monopolize and destroy effective competition in the markets for soybean seeds.

424. Monsanto's conduct occurred in and affected interstate commerce.

425. Monsanto's conduct has injured consumers and competition.

426. As a direct, foreseeable, and proximate result of Monsanto's conduct in violation of Section 2 of the Sherman Act, Plaintiffs have been and will continue to be damaged, in amounts to be proven at trial.

427. Plaintiffs' injury is of the type the antitrust laws are intended to prohibit and thus constitutes antitrust injury.

428. Unless the activities complained of are enjoined, Plaintiffs will suffer immediate and irreparable injury for which Plaintiffs are without an adequate remedy at law, including, but not limited to, the inability to purchase, plant, grow and harvest products that compete with Xtend soybeans.

**COUNT XI**  
**Attempted Monopolization of the Cotton Market**  
**(Section 2 of Sherman Act)**  
**On Behalf of Plaintiffs and Nationwide Class**

429. Plaintiffs incorporate all of the above paragraphs as though fully set forth herein.

430. Monsanto has willfully engaged, and is engaging, in a course of anticompetitive conduct, including destroying competitors' planted cotton seed, tying, refusals to deal and

predatory pricing, among other acts, to obtain a monopoly in the markets for its XtendFlex cotton.

431. There is a dangerous probability that, unless restrained, Monsanto will succeed in obtaining a monopoly of the cotton market in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

432. Monsanto has acted with the specific intent to monopolize and destroy effective competition in the markets for cotton seed.

433. Monsanto's conduct occurred in and affected interstate commerce.

434. Monsanto's conduct has injured consumers (including consumers who chose not to purchase XtendFlex cotton) and competition.

435. As a direct, foreseeable, and proximate result of Monsanto's conduct in violation of Section 2 of the Sherman Act, Plaintiffs have been and will continue to be damaged, in amounts to be proven at trial.

436. Plaintiffs' injury is of the type the antitrust laws are intended to prohibit and thus constitutes antitrust injury.

437. Unless the activities complained of are enjoined, Plaintiffs will suffer immediate and irreparable injury for which Plaintiffs are without an adequate remedy at law, including, but not limited to, the inability to purchase, plant, grow and harvest products that compete with XtendFlex cotton.

**COUNT XII**  
**Arkansas Deceptive Trade Practices Act**  
**(Ark. Code§ 4-88-101, et seq.)**  
**On Behalf of Plaintiffs and Arkansas State Class**

438. Plaintiffs incorporate all of the above paragraphs as though fully set forth herein.

439. Each of the Defendants is a “person” for the purposes of the Arkansas Deceptive Trade Practices Act pursuant to Ark. Code Ann. § 4-88-102(3).

440. The Xtend products and Engenia constitute “goods” within the meaning of Ark. Code Ann. § 4-88-102(6).

441. Pursuant to Arkansas Code Annotated section 4-88-108, it is unlawful for any person to use deception, fraud, or false pretense in, or to conceal, suppress, or omit material facts in connection with the sale or advertisement of goods, such as Xtend products and Engenia.

442. Pursuant to Arkansas Code Annotated section 4-88-107(a)(1), it is unlawful for any person to knowingly make false representations as to the characteristics of goods, such as Xtend products and Engenia.

443. Pursuant to Arkansas Code Annotated section 4-88-107(a)(10), it is unlawful in Arkansas to engage in an “unconscionable, false, or deceptive act or practice in business, commerce, or trade.” Further, pursuant to Arkansas Code Annotated section 4-88-107(b), “[t]he deceptive and unconscionable trade practices listed in this section are in addition to and do not limit the types of unfair trade practices actionable at common law or under other statutes of this state.”

444. Defendants engaged in unconscionable, false, and deceptive acts and practices in marketing, selling, and labeling their products to imply that the product could safely be used and not lead to damage to non-target crops and plants. Defendants knew or should have known, if exercising ordinary care, that this was not the case. Defendants also knew or should have known that the use of the products as labeled posed a risk to non-target crops and plants that was beyond the control of the user, when following the label or other instructions.

445. Defendants' customers and Plaintiffs and members of the Class (e.g., consumers who purchased products other than Defendants' products, because of representations made by Defendants that Xtend products and Engenia would not damage non-target crops and plants), were subjected to suppression, concealment and omission of material facts as a product of collusive, unlawful efforts by Defendants to control the market and suppress, conceal and omit from Plaintiffs, and others similarly situation, that their products posed a risk to non-target crops and plants that was beyond the control of the user, when following the label or other instructions.

446. As a result of Defendants' concealment of their conspiracy and unlawful, unconscionable, false, fraudulent, unfair and deceptive conduct directed toward Plaintiffs and the Class, the running of any statute of limitations has been tolled with respect to any claims that Plaintiffs and the Class has as a result of the wrongful and unlawful conduct alleged in this complaint.

447. Plaintiffs have a cause of action against each Defendant pursuant to Arkansas Code Annotated section 4-88-113 to recover their damages related to crop and plant injury, as well as reasonable attorneys' fees.

**COUNT XIII**  
**Civil Conspiracy**  
**(Arkansas Common Law)**  
**On Behalf of Plaintiffs and Arkansas State Class**

448. Plaintiffs incorporate all of the above paragraphs as though fully set forth herein.

449. Monsanto, in a scheme to improperly market and expand the sales of its defective Xtend crop system, conspired with BASF and DuPont to create the scenario where over-the-top spraying of dicamba on Xtend products would lead to non-target crop and plant damage, which

would then lead to more purchases of Xtend products (which would be immune to such damage) the following planting season.

450. The object of the unlawful conspiracy was marketing of the Xtend crop system (including over-the-top dicamba formulations), the protection of the Xtend crop system through the over-the-top spraying of dicamba-containing herbicides on Xtend, damage to non-target crops and plants and a proliferation of the Xtend products through marketing to corner the market for soybeans and cotton, such that farmers would have no choice but to purchase Xtend products or risk destruction to their non-dicamba tolerant crops.

451. Defendants, through their agents and representatives, encouraged and directed their purchasers to illegally spray dicamba-based herbicides on Xtend seeds (in 2015 and 2016) and to spray dicamba herbicides on Xtend seeds (despite an unworkable label that would lead to off-label practices in 2017) to protect the Xtend seeds and crops, knowing damage to non-target crops and plants would occur.

452. Purchasers of Xtend seeds did unlawfully spray dicamba-containing herbicides on the Xtend seeds (in 2015 and 2016) and to spray dicamba herbicides on Xtend seeds (despite an unworkable label that would lead to off-label practices in 2017), including but not limited to violations of state statutes and regulations governing herbicide use.

453. Monsanto's scheme to sell more Xtend seeds by harming those farmers that did not originally purchase the dicamba-resistant Xtend seeds caused severe and irreversible harm to the Plaintiffs' land, crops and plants, and livelihoods.

454. The unlawful actions of Monsanto, BASF and DuPont resulted in extensive damages to Plaintiffs for which the Defendants should be held liable.



**PRAYER FOR RELIEF**

Plaintiff, on behalf of itself and all others similarly situated, requests:

- A. Entry of preliminary and permanent injunctions providing that Monsanto and DuPont shall be enjoined from selling, marketing, distributing, or otherwise disseminating Xtend products;
- B. Entry of judgment ordering Monsanto, BASF and DuPont to take affirmative steps to remediate the damage caused by over-the-top application of dicamba on Xtend products;
- C. For an order certifying this lawsuits as a class action under Fed. R. Civ. Pro. 23, appointing counsel herein as class counsel and named Plaintiffs as class representatives;
- D. Entry of judgment finding:
  - i. Defendants falsely advertised Xtend products, Engenia and FeXapan under § 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).
  - ii. Defendants' release of Xtend products and Engenia constitutes a public nuisance;
  - iii. Defendants' release of Xtend products and Engenia and use of over-the-top dicamba formulations constitute a trespass to chattels;
  - iv. Defendants' release of Xtend products and Engenia were negligent;
  - v. Defendants are strictly liable for damages done by the release of Xtend products and Engenia;
  - vi. Monsanto engaged in illegal, monopolistic acts to corner the cotton and soybeans market,

- vii. Monsanto engaged in an illegal attempt to monopolize the cotton and soybeans market,
  - viii. Defendants violated the Arkansas Deceptive Trade Practices Act, and
  - ix. Defendants engaged in conspiracy to illegally increase sales of Xtend products and Engenia to the detriment of non-dicamba resistant crops.
- E. Monetary damages including compensatory relief to which Plaintiffs and the proposed class members are entitled and will be entitled at the time of trial, in an amount exceeding \$75,000;
  - F. Disgorgement of Defendants' profits for their sale of Xtend products, XtendiMax, Engenia and FeXapan;
  - G. Punitive damages against Defendants;
  - H. A trebling of damages;
  - I. Prejudgment interest;
  - J. The attorneys' fees for the costs of this action;
  - K. The costs of this action; and
  - L. Such other and further relief as the Court deems proper.

**DEMAND FOR JURY TRIAL**

Plaintiffs request a jury trial on all issues so triable.

Dated: July 19, 2017

Respectfully submitted,

PEIFFER ROSCA WOLF ABDULLAH  
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