UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
SOUTHEASTERN DIVISION

BADER FARMS, INC. and BILL BADER,	)	
Plaintiffs,	)	
v.	)	Case No. 1:16-cv-00299-SNLJ
MONSANTO CO., and BASF CORPORATION,	)	JURY TRIAL DEMANDED
Defendants.	)	

THIRD AMENDED COMPLAINT

COME NOW Plaintiff Bader Farms, Inc. and Plaintiff Bill Bader, by and through their undersigned counsel, and for their Third Amended Complaint against Defendants Monsanto Company and BASF Corporation, state as follows:

The Parties

1. Plaintiff Bader Farms, Inc. (hereinafter "Plaintiff Bader Farms"), is a Missouri corporation authorized to do business in the State of Missouri. Plaintiff Bader Farms is located and has its principal place of business in Campbell, (Dunklin County) Missouri.

2. Plaintiff Bill Bader ("hereinafter "Plaintiff Bader") is a resident of Campbell, (Dunklin County) Missouri.

3. Defendant Monsanto Company ("Defendant Monsanto") is a global agrochemical and agricultural biotechnology corporation, incorporated in the State of Delaware, with its world headquarters and principal place of business in St. Louis, Missouri.

4. Defendant BASF Corporation ("Defendant BASF") is a subsidiary of BASF SE and is one of the largest chemical producers in the world. Defendant BASF is incorporated in the State of Delaware and headquartered in Florham Park, New Jersey. The registered agent of service

for Defendant BASF in the State of Missouri is CT Corporation System, 120 South Central Avenue, Clayton, Missouri 63105.

Jurisdiction and Venue

5. At all times relevant to this Third Amended Complaint, Defendant Monsanto researched, designed, formulated, compounded, developed, tested, manufactured, produced, processed, assembled, inspected, distributed, marketed, labeled, promoted, packaged, advertised, and sold its genetically modified ("GM"), dicamba-based Roundup Ready 2 Xtend crop system that includes Defendant Monsanto's dicamba-tolerant ("DT") cotton seed, Bollgard 3 XtendFlex Cotton, Bollgard II XtendFlex Cotton, and XtendFlex Cotton (collectively, "Xtend cotton"), Defendant Monsanto's DT soybean seed, Roundup Ready 2 Xtend soybean ("Xtend soybean") (collectively, "Xtend seed" or "Xtend crops"), and allegedly low-volatility dicamba-based herbicides, XtendiMax with VaporGrip Technology ("XtendiMax") and Roundup Xtend with VaporGrip Technology ("Roundup Xtend"), including each and every seed brand, trait, and variety of Defendant Monsanto's above-mentioned seed and herbicides, to allegedly protect crops from harm caused by weeds, most especially from highly aggressive pigweeds such as Palmer amaranth, waterhemp, and marestail.

6. At all times relevant to this Third Amended Complaint, Defendant BASF researched, designed, formulated, compounded, developed, tested, manufactured, produced, processed, assembled, inspected, distributed, marketed, labeled, promoted, packaged, advertised, and sold an allegedly low-volatility dicamba-based herbicide called Engenia for use on Xtend crops to allegedly protect crops from harm caused by weeds, most especially from highly aggressive pigweeds such as Palmer amaranth, waterhemp, and marestail.

7. As more fully described herein, Defendant Monsanto and Defendant BASF entered into one or more agreements in order to, and did, engage in a partnership, joint venture, joint

enterprise, or similar relationship to develop technologies for their dicamba-tolerant crop system ("DT System" or "Xtend Crop System"), respecting which they jointly fund projects and share risks, costs, profits, and losses. They jointly developed the dicamba-tolerant trait, as well as dicamba formulations for application over the top of crops grown from that trait, entered into reciprocal licensing arrangements, engaged in joint field testing, jointly developed stewardship guidelines, and otherwise acted at all relevant times together in designing, developing, marketing, manufacturing, licensing and sale of the DT System. On information and belief, a substantial portion of these activities occurred in this district.

8. Among other things, BASF provided Monsanto with the dicamba formulation that became XtendiMax. BASF markets and sells its own dicamba herbicide Engenia specifically for use with seed containing the dicamba-tolerant trait.

9. At all relevant times, Monsanto and BASF acted together and in concert as joint venturers, joint enterprises, partners and co-conspirators who shared financial risks and benefits, proprietary dicamba formulations and bioengineered crop traits, collaborated in and jointly conducted field testing, marketing, promotion, training, and other shared activities all with mutual voice and control and all with the common interest and purpose of creating ever more demand for seed with the dicamba-tolerant trait and further use of dicamba, each acting in its own right and as agent for the other.

10. Plaintiffs assert these claims pursuant to Sections 537.760 (Strict Liability; Negligence) and 537.353 (Crop Damage Liability) of the Missouri Revised Statutes and Missouri common law.

11. Venue is proper in this Court pursuant to Section 508.010(4) of the Missouri Revised Statutes, which provides:

> Notwithstanding any other provisions of law, in all actions in which there is any count alleging a tort and in which the plaintiff was first injured in the state of

Missouri, venue shall be in the county where the plaintiff was first injured by the wrongful acts or negligent conduct alleged in the action.

12. Venue is proper in this Court because Dunklin County, Missouri is where the injury to Plaintiff Bader Farms and Plaintiff Bader occurred, and it is also where Plaintiff Bader Farms has its principal place of business and where Plaintiff Bader resides.

Summary of Claims

13. Plaintiff Bader is one of thousands of farmers throughout the nation, including Southeast Missouri, whose farm has been devastated by dicamba, a volatile and drift-prone herbicide that has ruined millions of acres of farmland in the United States.

14. The cause of this destruction to Plaintiff Bader Farms' and Plaintiff Baders' (collectively, "Plaintiffs") crops is Defendants' willful and negligent release of their dicamba products on the market. Defendants methodically engaged in a coordinated, systematic plan to release their defective products onto the market, thereby ensuring that non-DT crops would be destroyed.

15. In 2015 and 2016, Defendant Monsanto, in partnership and joint venture with Defendant BASF, willfully and negligently launched the Xtend seed, releasing Xtend cotton in 2015 and Xtend soybean in 2016, without an effective and safe herbicide for use with Xtend crops. Defendant Monsanto did so even though it marketed its Xtend products as a "crop system" – Xtend seed to be used in conjunction with its or Defendant BASF's dicamba herbicides. Defendants knew farmers would purchase and use other dicamba herbicides to spray on Xtend crops and Defendants encouraged farmers to do so, even though such spraying was not legal.

16. At all times relevant to this Third Amended Complaint, Defendant Monsanto and Defendant BASF (collectively, "Defendants") conspired to their mutual economic benefit and entered into a joint venture to create a market for the components of this DT System. Both

Defendants knew and consented to the release of Xtend seed knowing such release would benefit both Defendants in a variety of ways.

17. Defendant Monsanto would benefit from the sales of its defective and incomplete seed system. Defendant BASF, as the nation's largest seller of dicamba-based herbicides would benefit from the sale of its existing, older dicamba-based herbicides. In the long-term, both Defendants knew that the massive increase in the use of dicamba-based herbicides in 2015 and 2016 would create a fear-based marketing frenzy for Xtend seed and Monsanto's XtendiMax herbicide and Defendant BASF's Engenia herbicide.

18. In 2017, Defendants released their defective, unsafe, volatile dicamba herbicides – XtendiMax and Engenia, respectively – as the additional component of this already-defective DT System.

19. Thus, Defendants knowingly conspired to set in motion the chain of events which has destroyed non-DT crops and forced farmers to buy and use Defendants' dicamba-based products out of self-defense. The damage caused by off-label dicamba spraying over Xtend seed caused the sale of these seed and both companies' herbicides to skyrocket in what amounts to a modern-day agricultural protection racket.

20. Defendants knew that dicamba herbicides cannot be applied safely to Xtend crops due to their extreme volatility and propensity to move off-target, which caused crippling damage to Plaintiffs' peach trees, agricultural crops, vegetation, and timber throughout 2015, 2016, 2017, 2018 – and is ongoing.

ALLEGATIONS COMMON TO ALL COUNTS

A. What Is Dicamba?

21. Dicamba is a highly volatile herbicide that is used on crops to kill weeds.

22. Defendant BASF was one of the, if not the first, manufacturer to distribute dicamba.

23. Since dicamba was first introduced about 50 years ago, weed scientists have noted some yearly occurrences of dicamba injury due to its use and off-target movement. *See* http://bulletin.ipm.illinois.edu/?p=3942 (last visited Aug. 21, 2017).

24. There are three primary ways dicamba, including Defendants' new dicamba-based herbicides, moves off-target and causes damage to surrounding crops and vegetation that have not been genetically modified to withstand dicamba.

25. The first and most destructive cause of off-target movement is volatilization. Volatilization occurs when dicamba is applied to a crop but then evaporates and moves in the air as a gas. This gas, or dicamba vapor, easily moves away from its intended target and can travel an immense distance before it settles on sensitive plants or other surfaces, thereby causing damage.

26. After dicamba is sprayed on a crop, it can volatilize for many hours and days after application, thus increasing the scope of the damage it causes to crops. Also, the volatility of already-volatile dicamba increases in the warmer months of a growing season – June, July, and August.

27. The next way dicamba moves off-target is through physical drift. Drift is the airborne migration of dicamba spray particles moved by the wind before the particles reach their intended target.

28. Calm and windless environments that might otherwise minimize drift, such as in a temperature inversion, also increase the off-target movement of dicamba.

29. The third way off-target movement of dicamba occurs is when dicamba is sprayed during a temperature inversion. Here, the dicamba does not volatilize into a gas or move off-target because of drift. Instead, when dicamba is sprayed into a temperature inversion, the fine spray particles of dicamba become suspended in a mass of cool air that hangs above the soil line.

30. As this cool air mass containing suspended dicamba particles leaves the field with the slightest breeze, the fine dicamba particles travel with it. The dicamba eventually falls out of suspension when the air mass warms many hours later, moving potentially miles away from its original location.

31. The dangers posed by the volatile nature and off-target movement of dicamba alarm many weed scientists and farmers because many agricultural and specialty crops, including Plaintiffs' crops, such as fruit trees, peaches, soybean, cotton, tomatoes, watermelon, grapes, peanuts, and melons, among other crops, are ultra-sensitive to dicamba and can be damaged by extremely low doses of the herbicide.

B. Trajectory and Introduction of Defendants' Dicamba-based Products

32. The purpose of GM seed is to help farmers combat problematic weeds that have evolved to resist certain herbicides.

33. Defendant Monsanto's Xtend seed are genetically modified to resist the herbicides dicamba and glyphosate, the latter being the main ingredient in Defendant Monsanto's most prized herbicide product, Roundup.

34. Defendant Monsanto pushed its dicamba-based products, i.e., Xtend crop system, in cooperation and joint venture with Defendant BASF, onto the market to supplant existing crop systems, including Liberty Link – a crop system designed by Bayer Crop Sciences – and to move beyond Defendant Monsanto's Roundup Ready crop system, which has failed to control herbicide-resistant weeds that plague agriculture throughout the U.S., including Missouri.

35. According to Dr. Sam Atwell, an agronomist at the University of Missouri, in an August 8, 2016 *Missouri Ruralist* article, "products like Roundup [are] failing completely." *See* http://www.missouriruralist.com/story-caused-widespread-dicamba-drift-missouri-9-145000 (last visited Aug. 17, 2017). This is a growing consensus in the agricultural scientific community.

36. In 2015 and 2016, Defendant Monsanto, in partnership and joint venture with Defendant BASF, distributed and sold an incomplete and defective "crop system" in Southeast Missouri – particularly in the four-county area of Dunklin, New Madrid, Stoddard, and Pemiscot Counties – by releasing Xtend seed without a safe and effective herbicide.

37. In 2017, Defendants then failed to provide an effective, safe, and non-defective herbicide for over-the-top use, i.e. once the seed is in the ground until it is harvested, on Xtend crops.

38. By releasing their unsafe, defective dicamba products prematurely, Defendants created an economic and ecological disaster for the citizens of Southeast Missouri, especially farmers. This was done with a single-minded, mutual goal – to increase the need and demand for their dicamba products, profit off the damage caused to farmers' crops, including Plaintiff Bader's, and ensure that soybean and cotton farmers had no choice but to plant Xtend seed or else risk the destruction of their crops to dicamba. *See* http://www.reuters.com/article/us-usa-pesticides-dicamba-insight-idUSKBN1AP0DN (last visited Aug. 22, 2017).

39. Defendant Monsanto's own website identifies its Xtend seed and dicamba herbicides as a "crop system" – meaning that Xtend seed is meant to be used with a dicamba herbicide.

40. It was not until late 2016, well past the 2015 and 2016 growing seasons and two years after Defendant Monsanto placed Xtend seed on the market, that the Environmental Protection Agency ("EPA") finally registered Defendants' dicamba herbicides for in-crop use. Prior to that, there was no legal dicamba available to use on Xtend crops.

41. So, in 2015 and 2016, most farmers who purchased and grew Xtend seed were left with the unenviable choice of either allowing their Xtend crops to be invaded by weed overgrowth or using the only dicamba on the market at that time, older and highly volatile, drift-prone

formulations of dicamba, such as Clarity, Banvel, Distinct, Marksman, and Status that are manufactured and sold by Defendant BASF.

42. With a seed that is designed to resist dicamba, Defendants knew that farmers would apply older, highly volatile formulations of dicamba, sold by Defendant BASF or on its behalf, on their Xtend soybean and cotton.

43. Unbeknownst to the farmers spraying these older formulations, these herbicides could not be sprayed safely over-the-top of Xtend crops.

44. Some farmers, however, had Defendants' XtendiMax and Engenia herbicides for use in 2015 and 2016 through Defendants' permit and trial programs, such as Defendant Monsanto's Ground Breakers Field Trials Under Permit Program. Numerous farmers in five states participated in these programs and used Defendant Monsanto's XtendiMax in test plots. Brad Gilmer and Lance Lawson, partners in L&G Farms in New Madrid County, Missouri were among the farmers who participated. *See* http://www.deltafarmpress.com/soybeans/missouri-bootheel-partners-spray-xtendimax-legally-and-safely; http://www.missourifarmertoday.com/news/crop/farmer-plants-monsanto-s-new-dicamba-tolerant-beans/article_ae61cea4-f429-11e4-86dc-fba374830d6e.html; http://www.iowafarmertoday.com/news/crop/farmer-plays-part-in-strict-roll-out-of-new-weed/article_cf64b860-6f8d-11e6-95aa-67d52cca3cc9.html (last visited Aug. 23, 2017).

45. Despite Defendant Monsanto's false claims about the test plots, numerous surrounding farmers at the time were damaged by Defendant Monsanto's product moving off-target. Thus, Defendants knew – in 2016 – their products were volatilizing and drifting, but consistently lied about and concealed the damage caused to innocent third-party landowners even under the tightly controlled conditions of the test fields.

46. In 2017 and 2018, the only dicamba-based herbicides registered for in-crop use with Xtend seed were Defendant Monsanto's XtendiMax, Defendant BASF's Engenia, and E. I. Du Pont De Nemours and Company's ("DuPont") FeXapan Herbicide Plus VaporGrip ("FeXapan").

47. FeXapan is sold by DuPont. DuPont and Defendant Monsanto have a multi-year licensing and distribution agreement that allows DuPont to source XtendiMax from Defendant Monsanto and sell it as FeXapan. XtendiMax and FeXapan are the same herbicides.

48. At all times relevant to this Third Amended Complaint, Plaintiffs refer to the Defendants' unsafe XtendiMax and Engenia herbicides, not DuPont's. Any defect with DuPont's FeXapan herbicide is attributable to Defendant Monsanto because DuPont is merely a licensed distributor of Defendant Monsanto's defective technology, selling it under the brand name, FeXapan.

49. Defendants claim their new dicamba herbicides are lower volatility formulations of dicamba that will greatly minimize, but not entirely eliminate, volatility and drift.

50. Robb Fraley, Defendant Monsanto's Chief Technology Officer, claims there is a 100-fold reduction in volatility for XtendiMax and Engenia compared to older dicamba formulations. *See* http://www.indianaprairiefarmer.com/crop-protection/monsanto-officials-add-their-perspective-dicamba-issues-season (last visited Aug. 21, 2017). These claims, however, have been soundly rejected and disproved by weed scientists across the country.

C. Conditional Approval of XtendiMax and Engenia

51. On November 9, 2016, Defendant Monsanto received a two-year, conditional registration from the EPA for XtendiMax, a dicamba-based herbicide that is identical to Defendant BASF's Clarity herbicide with an additive called VaporGrip.

52. On December 21, 2016, Defendant BASF's Engenia herbicide also received a two-year, conditional registration from the EPA.

53. The typical EPA registration period for herbicides is 20 years. *See* http://www.reuters.com/article/us-usa-pesticides-dicamba-insight-idUSKBN1AP0DN (last visited Aug. 16, 2017). The EPA may register pesticides conditionally when there are outstanding data requirements or under other circumstances. During this conditional registration, if Defendants do not comply with the conditions, the EPA may cancel their registrations.

54. While there were strong requests from some to classify Defendants' herbicides as restricted use, requests that Defendants vehemently opposed, the EPA did not classify Defendants' herbicides as such.

55. The EPA does not consider damage to non-target crops, like Plaintiffs' crops, when it considers whether an herbicide should be classified for restricted use. A classification for "restricted use" restricts a product, or its uses, to use by a certified applicator or under a certified applicator's direct supervision. *See* https://www.epa.gov/pesticide-worker-safety/restricted-use-products-rup-report (last visited Aug. 23, 2017).

56. Prior to receiving EPA approval for XtendiMax and Engenia, Defendants withheld pivotal information from the EPA that might have prevented approval of their herbicides' labels.

57. Defendants conspired to strategically withhold key information on dicamba's volatility from the EPA, only provided the EPA with their own misleading company data, and refused to allow independent, unbiased, more intensive testing on volatility by university researchers prior to commercialization. *See* http://www.reuters.com/article/us-usa-pesticides-dicamba-insight-idUSKBN1AP0DN (last visited Aug. 23, 2017).

58. As a result of Defendants' efforts to provide the EPA with an incomplete picture of their herbicides' safety and volatility, the EPA approved Defendants' herbicides, ultimately

resulting in the immense damage to non-DT crops that has occurred in 2017. This damage will continue to occur unless or until Defendants' defective dicamba-based products are pulled off the market.

59. Roundup Xtend, Defendant Monsanto's allegedly low-volatility herbicide premix of XtendiMax and glyphosate remains unapproved by the EPA.

D. Dicamba Damage Continues in 2017 and 2018 in Southeast Missouri

60. In 2017, the dicamba problem did not end with the availability of Defendants' dicamba herbicides, and it continues today.

61. Concerns about the safety and efficacy of Defendants' dicamba herbicides resulted in calls from scientists, agronomists, and others in the agricultural scientific community for more research before and after gaining EPA registration.

62. In 2017-2018, damage caused by the use of Defendants' dicamba herbicides far surpassed the damage caused by older, allegedly more volatile dicamba formulations that occurred in 2015 and 2016. As farmers and state agencies quickly realized Defendants' dicamba products cannot be used safely on Xtend crops, bans and restrictions on the use of these and older dicamba herbicides have occurred in several states, including Missouri.

63. Thus, farmers in Southeast Missouri, including Plaintiff Bader, have been victimized by Defendants' greed through the coordinated release of their unsafe and defective dicamba products.

64. Defendants' new dicamba herbicides have volatilized and drifted across thousands of acres of farmland in Southeast Missouri, causing unprecedented damage, including damage to every acre of Plaintiffs' peach orchards.

65. Defendants violated standard industry practice and legal standards by releasing Xtend seed without a safe, non-defective herbicide on the market.

66. Defendants both violated standard industry practice and legal standards by releasing their defective, unsafe dicamba-based herbicides without proper testing and training.

67. Because both Defendants knew XtendiMax and Engenia would volatilize and move off-target, threatening to disrupt Defendants' scheme, Defendant Monsanto willfully refused to allow proper testing of its herbicide by university researchers.

68. Defendants also conspired to withhold accurate and complete data from their test results on volatility from federal and state agencies, failed to adequately train farmers and applicators for their use, and concealed this information from government regulators, weed scientists, distributors, licensees, farmers, applicators, and the general public.

69. As for the target of their sales, Defendants set their sights on Southeast Missouri and Northeast Arkansas. Southeast Missouri is a unique farming environment. The same geography and weather that makes Southeast Missouri a heaven for cotton, soybean, peaches, among other crops, also makes the area, the Bootheel in particular, especially vulnerable to herbicide volatilization and off-target movement – and Defendants knew this.

70. In Missouri, there have been more than 500 official dicamba damage complaints since Defendant Monsanto launched its unsafe and defective Xtend crop system in 2015. Many more incidents of dicamba damage go unreported by farmers.

71. Plaintiffs' peach trees are not resistant to dicamba, and they have been decimated by dicamba, including Defendants' XtendiMax and Engenia herbicides, sprayed over-the-top of Xtend crops in Southeast Missouri and neighboring Arkansas.

E. Plaintiff Bader Farms and Plaintiff Bader

72. Plaintiff Bader Farms is a family-owned, 5,000-acre farming operation located in Campbell, (Dunklin County) Missouri, squarely within Southeast Missouri at the epicenter of the dicamba damage complaints.

73. Plaintiff Bader is a peach farmer and an owner of Plaintiff Bader Farms.

74. Plaintiff Bader Farms is owned by Plaintiff Bill Bader and Denise Bader who both reside in Campbell, Missouri.

75. Plaintiff Bader and Denise Bader started in the peach business in 1986 as a small, 150-acre operation.

76. In 1987, Plaintiff Bader and Denise Bader formed Plaintiff Bader Farms, a Missouri corporation. Over the years, the Baders have built their farm into the largest peach producing operation in Missouri and are known throughout the U.S. for their delicious peaches.

77. Today, the Bader's children, sons Cody and Levi, and daughter Breana, also operate the family farm throughout the year. Additional members of the Bader family, including uncles, aunts, cousins, etc., participate at harvest time.

78. Prior to Defendants' commercialization of Xtend seed, Plaintiff Bader Farms had a significant agricultural footprint in Southeast Missouri, particularly in the Bootheel, with nearly 110,000 peach trees and over 1,000 acres devoted to peach production of 30 varieties of peaches.

79. Plaintiff Bader Farms accounts for more than half of Missouri's peach harvest.

80. Prior to Defendants' commercialization of Xtend seed, Plaintiff Bader Farms' typical peach harvest produced five million to six million pounds of peaches per year.

81. Unlike other forms of crops and agriculture, peach production requires a lengthy investment of time in order for the trees to yield crops.

82. Plaintiff Bader Farms, like all peach producers, must purchase infant peach trees from a vendor. Those infant trees are planted with no expectation or hope of them producing viable crops for many years after they are planted.

83. It takes five years for these infant peach trees to grow into mature trees able to produce peaches that can be harvested and sold on the market.

84. Under normal circumstances, these commercial peach trees have a life expectancy of approximately 20 years.

85. Plaintiff Bader Farms sells its peaches to several major grocery chains in the Midwest, as well as to smaller grocers and road-side stands throughout Missouri.

86. Plaintiff Bader Farms also sells directly to customers at its farm. During the peach season, which is from April to October, Plaintiff Bader Farms is open seven days per week. Other produce, nuts, and peach smoker wood are available for sale at the farm as well.

87. Prior to Defendants' commercialization of Xtend seed, Plaintiff Bader Farms averaged $4.3 million in sales per year.

88. From June until the end of August, which is peak harvest season, Plaintiff Bader Farms employed upwards of 110 workers, making Plaintiff Bader Farms an indispensable and valuable Southeast Missouri employer.

89. As a result of Plaintiff Bader Farms' excellence in its work with agricultural commodities and the local community, in November 2014, Governor Jay Nixon recognized and honored Plaintiff Bader, Denise Bader, and Plaintiff Bader Farms with the Governor's Award for Agricultural Achievement.

F. Defendant Monsanto and Defendant BASF

90. Defendant Monsanto, a global agrochemical and agricultural biotechnology corporation headquartered in St. Louis, Missouri, was one of the first companies to apply biotechnology industry models to agriculture. Defendant Monsanto is most widely known for being the leading producer of GM seed and herbicides, such as Roundup, but has also promoted other agricultural changes and biotechnological trait products.

91. Defendant BASF is the largest affiliate of BASF SE and is the second largest producer and marketer of chemicals and related products in North America. In addition to

Engenia, Defendant BASF manufactures several other dicamba herbicides, including Banvel, Clarity, Distinct, Marksman, and Status.

92. Defendants have an established research, development, and marketing collaboration to develop and sell weed control products, including DT seed and dicamba herbicides.

93. In early 2007 and thereafter, Defendant Monsanto and Defendant BASF entered into a partnership, joint venture, or joint enterprise and agreed to a joint licensing agreement to accelerate the development and commercialization of dicamba-based weed control products – resulting in dicamba-tolerant trait and seed, XtendiMax, FeXapan (XtendiMax sold by DuPont under another name), Engenia, and other dicamba herbicides – sharing proprietary information and a joint budget of some $1.5 billion. The Defendants' biotechnology traits would be commercialized by Monsanto, with profits split 60% to Monsanto and 40% to BASF. Joint News Release (BASF from Limburgerhof, Germany and Monsanto from St. Louis, Missouri), *BASF Plant Science and Monsanto to Expand Their Collaboration in Maximizing Crop Yield* (July 7, 2010), https:// monsanto.com/news-releases/basf-plant-science-and-monsanto-to-expand-their-collaboration-in-maximizing-crop-yield/.

94. Defendant Monsanto and Defendants BASF entered into a series of subsequent agreements and amendments further solidifying and memorializing their partnership, joint venture, or joint enterprise to develop and commercialize their dicamba-based weed control system, including Xtend seed and dicamba-based herbicides sprayed over the top, for their mutual benefit and profit, with common purpose and community of interest in that purpose, shared oversight and control, and shared profits and losses associated with their joint venture.

95. In a joint press release issued by BASF (from Germany) and Monsanto (from St. Louis), Robb Fraley, Monsanto's Chief Technology Officer and Executive Vice President, stated:

"By broadening the pipeline of potential traits, exchanging technology and sharing risk, this collaboration can accelerate the discovery of next-generation technologies for the farm and effectively double the risk-adjusted net present value of Monsanto's yield and stress trait technology pipeline." News Release, *BASF and Monsanto Announce R&D and Commercialization Collaboration Agreement in Plant Biotechnology* (March 21, 2007), https://monsanto.com/news-releases/basf-and-monsanto-announce-rd-and-commercialization-collaboration-agreement-in-plant-biotechnology/.

96. In January 2009, Monsanto (from St. Louis) and BASF (from Germany) announced a joint licensing agreement to accelerate use of dicamba-based weed control chemistry products, stating that Monsanto and BASF both "will participate in the development of innovative formulations for dicamba for use with herbicide-resistant cropping systems." News Release, *BASF and Monsanto Formalize Agreement to Develop Dicamba-Based Formulation Technologies* (Jan. 20, 2009), https://monsanto.com/news-releases/basf-and-monsanto-formalize-agreement-to-develop-dicamba-based-formulation-technologies/.

97. Monsanto and BASF explained: "Crops that are resistant to both Roundup® agricultural herbicides and dicamba" would represent the next generation of herbicide-resistant crops and that "[i]mproved formulations of dicamba are being developed to complement this new combination of herbicide-resistant crops." *Id.*

98. Emmanuel Butstraen, Group Vice President, Global Strategic Marketing, Herbicides, for BASF stated: "We are very excited to actively participate in developing innovative solutions for this next-generation cropping system for growers." *Id*.

99. By 2010, Monsanto and BASF added a joint investment of more than $1 billion to their collaboration.

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104. In a joint press release on July 10, 2010, Monsanto (from St. Louis) and BASF (from Germany), Peter Eckes, President of BASF Plant Science (a subsidiary, "division," and agent of BASF SE), stated: "The collaboration with Monsanto was not only the first agreement that we entered, it also represents our most significant partnership, covering several large row crops . . . The expansion of our partnership reflects the fit between the two companies." News Release, *BASF Plant Science and Monsanto to Expand Their Collaboration in Maximizing Crop Yield* (July 7, 2010), https://monsanto.com/news-releases/basf-plant-science-and-monsanto-to-expand-their-collaboration-in-maximizing-crop-yield/.

105. In a joint press release on November 2, 2010, Monsanto (from St. Louis) and BASF (from Germany) announced "significant progress toward launching next-generation dicamba-based weed control systems for soybeans and cotton." Joint Press Release, *BASF and Monsanto Announce Progress in Dicamba Formulations* (Nov. 2, 2010), https://monsanto.com/news-releases/basf-and-monsanto-announce-progress-in-dicamba-formulations/.

106. Kerry Preete, Monsanto Vice President of Crop Protection, stated: "Together the strength of the formulation expertise BASF has with dicamba and our team's biotech focus seeks to deliver another breakthrough product in weed control." *Id*.

107. Markus Heldt, president of BASF's Crop Protection division, stated: "The dicamba tolerant system is designed [to] give growers pre- and post-emergence application flexibility, allowing them to better manage their resources and thus improving productivity." Joint Press Release (Monsanto from St. Louis and BASF from Germany), *BASF and Monsanto Announce Progress in Dicamba Formulations* (Nov. 2, 2010), https://monsanto.com/news-releases/basf-and-monsanto-announce-progress-in-dicamba-formulations/.

108. In a January 6, 2011 Press Release, Monsanto described collaborative "Agronomic Traits Projects," which included dicamba-tolerant soybeans. Peter Eckes from BASF stated: "The

advances in development show that we chose the right path in our partnership with Monsanto . . . BASF is confident that our genes will result in crops that produce significantly higher yields and that we will be able to make these available to farmers in the future." Press Release, *Monsanto Announces Nine Project Advancements in Annual Research and Development Pipeline* (Jan. 6, 2011), https://monsanto.com/news-releases/monsanto-announces-nine-project-advancements-in-annual-research-and-development-pipeline-update/ (emphasis added).

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112. In a March 14, 2011 joint press release, Monsanto (from St. Louis) and BASF (from Germany) described agreement to "collaborate on the advancement of dicamba tolerant cropping systems. The companies have granted reciprocal licenses and BASF has agreed to supply formulated dicamba herbicide products to Monsanto." Joint Press Release, *BASF and Monsanto Take Dicamba Tolerant Cropping System Collaboration to the Next Level* (March 14, 2011), https://monsanto.com/news-releases/basf-and-monsanto-take-dicamba-tolerant-cropping-system-collaboration-to-the-next-level/.

113.

REDACTED

114. Through their partnership, joint venture, shared technologies, and mutual greed, Defendants have conspired to create and encourage an ecological disaster in Missouri and other states to increase the profits and demand for their dicamba products.

115. Defendants are jointly and severally liable for all damages to Plaintiffs.

G. A Brief History of Roundup

116. In the 1960s, Defendant Monsanto was not yet a major player in the agricultural industry and was widely known as a major producer of dioxin-laced Agent Orange.

117. In 1970, that all changed when Defendant Monsanto discovered the chemical properties of glyphosate, currently the company's flagship herbicide, and began marketing it in products in 1974.

118. Glyphosate is the main ingredient in Roundup, and is a non-selective herbicide used to kill weeds that commonly compete with crop growth.

119. A non-selective herbicide tries to kill most plants while a selective herbicide is designed to kill specific types of plants, usually grasses or broad leaf weeds.

120. For more than 40 years, Roundup has been manufactured, sold, and distributed by Defendant Monsanto to farmers all over the world. Roundup is registered in 130 countries and is approved for use on over 100 crops.

121. Because Defendant Monsanto's Roundup products are ubiquitous, Roundup has become a household name. Roundup is the most heavily-used agricultural chemical in the history of the world.

122. The success of Roundup is key to Defendant Monsanto's dominance in the seed and herbicide marketplace.

123. From the outset, Defendant Monsanto marketed Roundup as a safe herbicide for widespread commercial and consumer use, posing no unreasonable risk of harm to the environment or human health.

124. Defendant Monsanto's marketing claims regarding Roundup's safety have not been without contention and in recent years have come under fire. In March, 2015, the World Health Organization announced findings that the herbicide glyphosate is "probably carcinogenic to humans."

H. The Rise of GM Seed

125. An important factor in Defendant Monsanto's and Roundup's ascension during the 1990's was the development and launch of GM corn and soybean seed in 1996, sold under the brand name Roundup Ready. Because Roundup Ready seed are genetically modified to resist glyphosate, farmers could use Roundup to kill unwanted weeds without damaging their GM crops.

126. By the year 2000, Roundup Ready seed were planted on more than 80 million acres worldwide and nearly 70% of North American soybean were planted from Roundup Ready seed.

127. As the sales of Roundup Ready seed proliferated, the sales of Roundup soared, accounting for almost $2.8 billion dollars in the year 2000.

128. As of 2015, Defendant Monsanto was the largest seed and herbicide supplier in the world with over $11.8 billion in yearly sales and market valuation of $55.7 billion.

I. The Emergence of Super Weeds

129. The agriculture industry's over-reliance on glyphosate-tolerant crops and the constant spraying of Roundup and glyphosate led to naturally-evolved resistance to Roundup in weeds, causing the emergence of so-called "super weeds."

130. Weed resistance is not a novel problem in Missouri. The first weed resistance was discovered in Missouri in 1992. Waterhemp, one of the most common weeds in the Midwest and a species of pigweed (or amaranth), was found to be resistant to herbicides in Missouri in 1994.

131. Since the mid-1990s, an increasing number of weed species in Missouri have shown resistance to herbicides such as glyphosate.

132. Ecologists call this the "pesticide treadmill," where weeds evolve to resist the chemicals designed to destroy them, forcing farmers to apply ever-higher doses or use a different pesticide. This also forces herbicide producers to invent new herbicides to kill the super weeds or reinvent new uses for older, more dangerous herbicides.

133. As a direct result, over 70 million acres of land in the U.S. contained Roundup-resistant weeds by 2015.

134. In the U.S., where approximately 90% or more of all cotton, soybean, and corn crops consist of GM, glyphosate-tolerant varieties, the acreage of farmland overrun with

glyphosate-resistant weeds has almost doubled between 2010 and 2012, from 32.6 million acres to 61.2 million acres.

135. With the introduction of glyphosate-tolerant crops, the pattern of weed control has also changed from predominantly pre-plant applications of herbicides to mostly post-plant and in-season application practices. This transformation has made herbicide drift and volatilization major concerns to crop producers of all kinds.

136. This dramatic increase has occurred because Roundup and glyphosate-resistant crop systems are relatively inexpensive and simple for farmers to use.

137. In Missouri, super weeds are rampant, particularly in Southeast Missouri where Palmer amaranth and waterhemp are significant problems.

138. Dr. Tom Barber, a weed scientist at the University of Arkansas, identified 2016 as one of the worst years for Palmer amaranth in recent memory.

139. Despite the causal link between Defendant Monsanto's Roundup products and the pervasive super weeds, Defendants have done nothing to address this agricultural tsunami, but rather have continued to reap billions of dollars in profits from it.

J. Dicamba's Role

140. Dicamba has been on the market since 1967, first sold by Defendant BASF under the brand name, Banvel.

141. Dicamba is a broad-spectrum, synthetic auxin herbicide that kills broad-leafed weeds, as opposed to eradicating plants in the grass family.

142. Dicamba kills weeds before and after they sprout by increasing a plant's growth rate so the plant outgrows its nutrient supply and dies.

143. Dicamba is therefore extremely toxic to virtually all broadleaf plants (plants that are not grasses), such as fruits, nuts, vegetables, and is especially toxic to cotton and soybean. These crops are very sensitive to ultra-low rates of dicamba.

144. By its very nature, dicamba is a supplemental herbicide, not a foundation herbicide.

145. Dicamba's volatility, its off-target movement, and the resulting injury to sensitive crops has historically constrained its use.

146. The volatility of dicamba has been proven by various, reputable weed scientists in the U.S. According to Dr. Aaron Hager, a professor of crop sciences at the University of Illinois Extension, all formulations of dicamba available for commercial use are volatile, including Defendants' XtendiMax and Engenia herbicides. There is no such thing as non-volatile dicamba. *See* http://bulletin.ipm.illinois.edu/?p=3942 (last visited Aug. 17, 2017).

147. The volatility and off-target movement of dicamba increases when dicamba is sprayed during what is known as a temperature inversion.

148. Normally, the air temperature at the soil level is warm and the air cools as it rises. In a temperature inversion, this condition inverts – the air temperature is cool at the soil level, and if a farmer sprays dicamba at this time, such as at dusk or early morning when there is minimal wind and dew or low-lying fog are present in a field, the fine spray particles of dicamba, i.e., "fines", do not fall to the ground. Instead, the "fines" hang in a suspended mass of cool air for hours, even overnight.

149. The dicamba trapped in this cool air mass can travel many miles away from its spray site. After the inversion layer travels a great distance, it then warms again as the earth's surface warms and the dicamba particles fall out of suspension and drop on crops or fields below, causing injury to non-DT crops. *See* http://news.utcrops.com/2017/07/volatility-temperature-inversion/ (last visited Aug. 17, 2017).

150. A wind speed of one half mile per hour is enough to move an air mass full of suspended dicamba particles for distances of many miles.

151. The off-target movement of dicamba is not limited to spray particles being trapped and moved in the air mass during a temperature inversion. Volatile dicamba gas is also collecting and moving during inversion conditions and causing damage in a landscape effect, i.e., a uniform pattern of damage to crops in an entire field or area. *See* http://www.deltafarmpress.com/soybeans/baldwin-understanding-herbicide-volatility-during-inversion-conditions (last visited Aug. 19, 2017).

152. As accurately stated by Dr. Ford Baldwin, Professor Emeritus at the University of Arkansas and a partner at Practical Weed Consultants, in a *Delta Farm Press* article dated August 17, 2017:

> Common logic along with our understanding about long distance transport of pesticides in stable air told us the only way we could be getting the landscape effect we are seeing with dicamba is through movement in temperature inversions. Common logic also told us there had to be more than just spray particles being trapped in inversions when the herbicides are restricted to ground application and ultra-coarse nozzles. The results from studies like these now confirms the logic that it is volatiles trapped in the inversions causing the landscape dicamba damage.

See http://www.deltafarmpress.com/weeds/baldwin-latest-dicamba-research-and-new-task-force (last visited Aug. 22, 2017).

153. Dr. Baldwin is not alone in his assessment that volatility is dicamba's fatal flaw. Dr. Kevin Bradley, a weed scientist at the University of Missouri, along with many other weed scientists, are convinced that volatility occurs with Defendants' new dicamba herbicides. Dr. Bradley also identifies whole fields planted with non-DT seed that have been damaged by dicamba. "We've seen a lot of that," Dr. Bradley stated. *See* http://cen.acs.org/articles/95/i33/Widespread-crop-damage-dicamba-herbicide.html (last visited Aug. 22, 2017.

154. Further, this type of uniform damage to crops is proof that the damage caused by Defendants' XtendiMax and Engenia herbicides is a result of volatility, not the myriad causes offered by Defendants. *See* http://www.deltafarmpress.com/herbicide/baldwin-what-causes-large-acreage-dicamba-damage (last visited Aug. 19, 2017).

155. Dicamba can also move on dust particles on roads running through treated fields. These particles can move from roads and field edges onto non-DT crops, causing injury.

156. According to Dr. Ford Baldwin, the damage to crops from volatility is not limited to older formulations. "The labeled formulations are less volatile but not non-volatile," Dr. Baldwin stated. *See id.*

157. In Southeast Missouri, Plaintiff Bader Farms is located in an ideal area to grow peaches and other crops, but it is also an area where volatility of dicamba and temperature inversions prosper, causing immense and widespread damage to Plaintiffs' crops when other farmers spray Defendants' dicamba herbicides over-the-top of Xtend crops.

K. Defendants' Incomplete Perspective on the Use of Dicamba

158. According to Defendant Monsanto, dicamba has an alleged decades-long history of effective use in corn, wheat, fallow, and pasture land in the U.S. *See* http://news.monsanto.com/press-release/corporate/monsanto-and-dupont-sign-dicamba-supply-agreement (last visited Aug. 17, 2017).

159. Prior to 2017, dicamba was actually used very little in American agriculture because of its volatile nature. According to data reported by Defendant Monsanto, only 3.8 million pounds of dicamba were applied to 25.3 million acres in 2011, representing just 0.9% of total agricultural herbicide use in 2007 and 6.5% of total cropland area of 390 million acres in 2012. *See* http://www.centerforfoodsafety.org/files/cfs-dicamba-cotton-and-soy-deis-science-comments-i_21022.pdf at p. 5 (last visited Aug. 20, 2017).

160. Yet dicamba herbicides continue to be sold in the U.S. under a variety of older and generic formulations, as well as several dicamba herbicides sold and marketed by Defendant BASF, including Banvel, Clarity, Distinct, Marksman, and Status.

161. Defendant BASF is the largest seller of dicamba herbicides in the U.S. *See* http://www.intlcorn.com/seedsiteblog/?p=847 (last visited Aug. 22, 2017).

162. Defendant BASF claims its Clarity herbicide is eight times less volatile than generic dicamba products. *See* http://agproducts.basf.us/products/research-library/clarity-brochure.pdf (last visited Aug. 22, 2017).

163. As early as 2005, Defendant Monsanto licensed the dicamba resistance gene from the University of Nebraska.

164. In doing so, Defendant Monsanto sought to prolong the usefulness of its Roundup crop system with dicamba, an active ingredient in XtendiMax and Roundup Xtend. With Defendant BASF's cooperation and partnership, the two companies began diligently developing a new crop system featuring dicamba.

165. Several noted weed scientists have attested to Roundup's failure to control Southeast Missouri's aggressive pigweeds and herbicide-resistant weeds. As correctly stated by Dr. Tom Barber in a report published on the University of Arkansas Cooperative Extension Program's website on July 15, 2016, "Roundup no longer controls pigweed." *See* https://www.uaex.edu/media-resources/news/july2016/07-15-2016-Ark-dicamba-drift-injuries.aspx (last visited Aug. 16, 2017).

166. With Defendant Monsanto's Roundup Ready corn, soy, and cotton losing the battle of the increasing infestation of glyphosate-resistant weeds in Southeast Missouri, Defendants rushed to release dicamba-resistant Xtend seed. Defendant Monsanto did this in order to renew its stranglehold on the weed control market which would foster its scheme with Defendant BASF

as well. Worse, Defendant Monsanto did so despite having previously said it would not release Xtend seed without an accompanying, approved, and safe herbicide.

167. In anticipation of the profits it will reap from dicamba, Defendant Monsanto has invested $2 billion toward its dicamba scheme – over $1 billion producing its new dicamba formula and another $1 billion to upgrade a dicamba manufacturing plant in Luling, Louisiana.

168. In 2015 and 2016, Defendants counted on farmers to rapidly adopt Xtend crops which would boost earnings in its seed and pesticide units, and Defendants proactively encouraged the sale of Xtend seed.

169. In 2016, Defendant Monsanto, in partnership and joint venture with Defendant BASF, sold about three million acres of Xtend cotton and one million acres of Xtend soybean.

170. In 2017, Defendant Monsanto exceeded its expectations for Xtend seed sales, as farmers in the U.S. have planted 20 million acres of Xtend soybean and five million acres of Xtend cotton.

171. Defendant Monsanto projects that by 2019, two-thirds of all U.S. soybean fields will be planted with Xtend seed. *See* https://www.wsj.com/articles/grain-traders-rejecting-new-soybeans-developed-by-monsanto-1462217040 (last visited Aug. 17, 2017).

172. As dicamba-resistance is added to other crops, Xtend seed will eventually cover at least 250 million acres in the U.S.

173. Defendants' reckless and negligent behavior has placed farmers in a no-win situation. With all the dicamba being sprayed on Xtend crops in Southeast Missouri since 2015, soybean and cotton farmers who do not grow Xtend soybean or cotton are being forced to purchase Defendants' products out of self-preservation.

174. Cotton and soybean farmers have lost their freedom to choose. As Dr. Tom Barber stated when discussing how farmers are being forced to purchase Xtend seed to protect themselves,

"They're afraid that they're not going to be able to grow what they want to grow. They're afraid that they're going to be forced to go with that technology." *See* http://www.npr.org/sections/thesalt/2016/08/01/487809643/crime-in-the-fields-how-monsanto-and-scofflaw-farmers-hurt-soybeans-in-arkansas (last visited Jan. 22, 2017).

175. In 2017, the sheer amount of Xtend seed planted in Southeast Missouri played a primary role in the dicamba dilemma, and the numbers do not lie. According to Dr. Kevin Bradley, 80% of the cotton and 65% of the soybean in the Bootheel were planted using Xtend seed and nearly all of it was sprayed with dicamba. *See* http://www.hpj.com/rich/dicamba-complaints-are-sprouting-like-weeds/article_4513c642-67fd-11e7-9085-97102969d2f9.html (last visited Aug. 17, 2017).

176. Dr. Bob Hartzler, a weed scientist at Iowa State University, echoed Dr. Bradley's findings in a blog post on the Iowa State University Extension and Outreach's website on July 13, 2017, stating that the percentage of acreage planted with Xtend seed in Dunklin County, Missouri could be even higher, upwards of 80%. *See* https://crops.extension.iastate.edu/blog/bob-hartzler/thoughts-dicamba-dilemma (last visited Aug. 17, 2017).

L. Defendants' Efforts to Gain Regulatory Approval

177. For Defendants' scheme to be successful, Defendants needed to encourage the sale of Xtend seed. The more Xtend seed Defendant Monsanto sold, the more Defendant BASF's older formulations of dicamba would be used on those seed, thereby increasing the pre-label approval profits for both Defendants.

178. Likewise, Defendants shared a mutual interest in the creation of their dicamba products and registering them for approval by the United States Department of Agriculture ("USDA") and the EPA.

179. The partnership, joint venture, and licensing agreements Defendants share span many years and share borrowed technologies. For instance, Defendant Monsanto's XtendiMax is the same dicamba formulation as Defendant BASF's Clarity herbicide, only with an extra additive called VaporGrip. *See* http://agfaxweedsolutions.com/2016/12/07/dicamba-4-formulation-choices-fight-herbicide-resistant-weeds/ (last visited Aug. 17, 2017).

180. Further, Defendant BASF is a longstanding producer of dicamba herbicides and by sharing its technologies and formulas with Defendant Monsanto, Defendants shortened the timeline for their dicamba products to reach the market.

181. As early as 2009, Defendants formed a partnership, joint venture, or joint enterprise and agreed to a joint licensing agreement to fast-track their dicamba products to market.

182. In April 2010, Defendant Monsanto made its first submission to the EPA to register dicamba to use the herbicide with GM soybean.

183. In July 2010, Defendant Monsanto announced it had recently completed its regulatory submission to the USDA to deregulate its DT soybean. According to Defendant Monsanto's announcement:

> Dicamba is an ideal tank-mixing partner for Roundup® agricultural herbicides for both pre-plant and post-emergence weed control . . . Dicamba is an economical herbicide that provides excellent control for a wide spectrum of broadleaf weeds and ideally complements Roundup agricultural herbicides to provide another step change in soybean weed control. This new technology would provide soybean farmers another low-cost weed management solution through the use of glyphosate, dicamba, or combinations of both.

184. Defendant Monsanto's statements received early and sustained criticism from industry experts. On September 30, 2010, Steve Smith, Director of Agriculture for Red Gold, the largest privately-held canned tomato processor in the U.S., and Chairman of the Save Our Crops Coalition ("SOCC"), testified before Congress about the distribution of dicamba-resistant soybean in the Midwest. In his testimony, Mr. Smith stated his conviction, based on a lifetime of work and

education in the agriculture industry, that widespread use of dicamba is the single most significant threat to specialty crops in the Midwest and would be incompatible with Midwestern agriculture. *See* https://oversight.house.gov/wp-content/uploads/2012/01/20100930Smith.pdf (last visited Aug. 18, 2017).

185. Mr. Smith also testified as to why dicamba is not a foundation herbicide, stating, "The answer is simple. Dicamba has proven itself to move off-target and cause injury and yield reductions to soybeans and so in a large sense, it is rarely used." *See id.*

186. Further, Mr. Smith emphasized the volatility risk of dicamba, stating the newest formulations are proven to move off-target. He also told Congress how farmers who spray dicamba are in a no-win situation. If the wind is slight on a hot and humid day and a farmer sprays dicamba, dicamba may have less drift propensity, but the volatility of dicamba skyrockets under those conditions. Mr. Smith stated, "The science is clear and settled in regard to dicamba's susceptibility to off-target movement due to volatility." *See id.* His warning proved prescient.

187. In November 2010, Defendants proceeded with the development of their dicamba products and jointly announced they had recently completed field testing of their dicamba-based herbicides. In these tests, Defendants' dicamba herbicides were applied over-the-top of Xtend seed at Defendant Monsanto's research facility in Monmouth, Illinois.

188. By 2012, weed scientists, agronomic crop growers, and specialty crop growers began warning consumers and growers alike of dangers of dicamba-resistant crops and dicamba herbicides, including dicamba's volatility and propensity to move off-target onto sensitive, neighboring crops, and how dicamba use will accelerate the evolution of super weeds. Defendants knew about these reports. *See* https://www.extension.purdue.edu/extmedia/id/id-453-w.pdf (last visited Aug. 17, 2017); http://www.intlcorn.com/seedsiteblog/?p=847 (last visited Aug. 17, 2017).

189. Throughout 2012, weed scientists questioned the use of dicamba over-the-top of Xtend seed. In an article titled, "2,4-D and Dicamba-resistant Crops and Their Implications for Susceptible Non-target Crops" published on the Michigan State University Extension's website, Dr. David Mortenson, a weed scientist at Penn State University, stated that "plant injury was 75 to 400 times higher for dicamba and 2,4-D, respectively, than for glyphosate." *See* http://msue.anr.msu.edu/news/24_d_and_dicamba_resistant_crops_and_their_implications_for_susceptible_non (last visited Aug. 19, 2017).

190. Again in 2012, despite their knowledge of the risks of using dicamba herbicides over-the-top, Defendants submitted petitions to the EPA to register their dicamba herbicides, with Defendant Monsanto submitting its petition to register dicamba for in-crop use with cotton and Defendant BASF submitting a petition to register Engenia.

191. In 2013, Defendant Monsanto submitted its application to deregulate dicamba for use with GM cotton.

192. Also in 2013, industry experts, such Steve Smith of SOCC and Red Gold met with Defendants to express concerns about dicamba's volatility and danger. Defendants knew of the risks, dangers, and industry problems associated with their dicamba products from these meetings, yet they continued to suppress their knowledge of dicamba's risks from federal and state agencies and consumers.

193. During these meetings, Steve Smith also proposed changes to the labels for Defendants' dicamba herbicides. Nothing came of it, as Defendants had no interest in altering their scheme to dominate the GM seed and herbicide market with their dicamba products. As accurately stated by Steve Smith to *USA Today* on March 13, 2014, "[i]t became real apparent that they were intent on not making any changes." *See*

https://www.usatoday.com/story/news/nation/2014/03/13/monsanto-dow-agrosciences-herbicides-save-our-crops/6015519/ (last visited Aug. 18, 2017).

194. In the same *USA Today* article, Mr. Smith said Defendant Monsanto's proposed label restrictions were woefully inadequate and Defendant Monsanto was unwilling to constructively address the "very real" threats faced by growers. *See id.*

195. In 2014, despite Defendants' efforts to rush their products onto the market, industry experts again issued warnings about the obvious dangers of dicamba crop systems. In a statement dated February 19, 2014, Steve Smith stated:

> Unfortunately, Monsanto and BASF have, so far, chosen not to act [responsibly]. SOCC wants to make clear that there remain several points of contention with Monsanto and BASF that are unlikely to be resolved through simply learning more about their products. Our differences with Monsanto and BASF are especially stark with respect to the use of older, more volatile, forms of dicamba, and product stewardship. **Moreover, unlike 2,4-D, many food crops have no tolerance or exemption for dicamba residues. Unfortunately, Monsanto and BASF have yet to implement effective measures to protect against non-target plant damage**.

See http://saveourcrops.org/2014/02/19/socc-corrects-the-record-regarding-24-d/ (last visited Aug. 18, 2017) (emphasis added).

196. In addition to Mr. Smith's statement about Defendants' failure to cooperate with anyone at odds with their collaborative scheme to create and profit from a dicamba disaster, Mr. Smith also sent a letter to Thomas Vilsack, Secretary of Agriculture for the USDA. In his letter, Mr. Smith detailed his frustrations with Defendants' complete lack of desire to make their products safe:

> For instance, just from a review of publically [sic] available sources, we know our differences with Monsanto and BASF are especially stark with respect to the use of so-called 'generic' forms of dicamba. Monsanto has sought the registration for its older, more volatile Clarity formulation, and failed to mention the availability of the lower volatility Engenia formulation within its publically [sic] available petition documents. Our differences are also stark with respect to product stewardship. Monsanto has not publicly presented any strategy to mitigate adverse environmental effects of either herbicide, through label language, through

> limitations on application timing, or through the competitive pricing of lower volatility formulations. Monsanto has also not proposed recordkeeping practices to ensure that applicators are aware and have documented application location, timing, and windspeed, before applicators use dicamba. Moreover, unlike 2,4-D, many food crops have no tolerance or exemption for dicamba residues. Because a commodity containing residues without a tolerance or an exemption is prohibited from passing in interstate commerce, SOCC is very concerned that, without an exemption or tolerance, even trace residues would render crops unmarketable, even if those crops are safe. In short, SOCC still regards dicamba tolerant crops as highly likely to have significant non-target plant damage effects on broadleaf specialty crops, because Monsanto has yet to implement effective measures to protect against non-target plant damage.

See http://saveourcrops.org/wp-content/uploads/2014/02/FINAL-SOCC-Letter-to-the-Secretary-EIS-022012.pdf (last visited Aug. 18, 2017).

197. Despite these clear warnings of dicamba's danger, in June 2014, Defendant BASF announced plans to boost production of its dicamba weed-killers by 50% to keep pace with anticipated demand should Defendant Monsanto receive regulatory approval to sell its Xtend seed.

198. Six months later, in January 2015, Defendant BASF's plan paid off when the USDA announced its decision to deregulate Xtend crop technology for soybean and cotton, authorizing the crops for unrestricted commercial planting.

199. In April 2016, in a move strikingly similar to Defendant BASF's announcement to boost its dicamba production, Defendant Monsanto announced plans for a $975 million expansion of its chemical manufacturing facility in Luling, Louisiana.

200. The Luling facility will produce dicamba for Defendants' DT System with expectations to supply more than one-third of the eventual market demand for dicamba-based products. The plant is expected to open between 2019 and 2021, coinciding with the time when Defendant Monsanto expects Xtend seed to cover two-thirds of cropland in the U.S.

M. Dicamba Herbicides Granted Conditional Registration

201. With Defendants' conspiracy in progress and Xtend seed already on the market, Defendants still lacked EPA registration for their new dicamba-based herbicides.

202. On November 9, 2016, Defendant Monsanto received a two-year conditional EPA registration for XtendiMax, making it available for the 2017 growing season.

203. On December 21, 2016, Defendant BASF secured a two-year conditional EPA registration for its dicamba herbicide, Engenia, for use on DT soybean and cotton, making Engenia available for the 2017 growing season.

204. In order to receive these approvals, however, Defendants knowingly suppressed damaging data about their own research. In a bold and deceptive move, Defendant Monsanto provided samples of its dicamba herbicides to university researchers prior the herbicides receiving EPA approval, but required these researchers to sign contracts that forbade them from testing for volatility. *See* http://www.reuters.com/article/us-usa-pesticides-dicamba-insight-idUSKBN1AP0DN (last visited Aug. 22, 2017).

205. This data could have provided the EPA with a complete picture of Defendants' herbicides' safety. Defendant Monsanto's refusal to allow such testing prevented the real dangers and risks of its dicamba herbicide from becoming public knowledge.

206. Defendant Monsanto's Vice President of Global Strategy, Scott Partridge, claimed the company prevented all testing for volatility because it was unnecessary. *See id.*

207. Further, on or about August 8, 2016, in a meeting before the Arkansas State Plant Board, Dr. Boyd Carey, a representative for Defendant Monsanto, stated that no outside university or independent researcher was allowed to test XtendiMax for volatility and drift because the results of the tests could jeopardize the federal registration that Defendant Monsanto needed from the EPA to sell its herbicide. *See id.*

208. Yet Defendants knew about these dangers from the countless state agency hearings and meetings they attended on the subject of their dicamba products since 2013, as well as from

their own scientists who, behind closed doors, were warning company executives that these new formulations were extremely volatile and would cause massive destruction to non-DT crops.

209. Defendants knew their XtendiMax and Engenia herbicides were volatile, unsafe, defective, and unreasonably dangerous, yet they placed them on the market anyway.

210. Defendants created demand for the Xtend crop system in order to jump-start a billion-dollar profit center. By prematurely releasing the Xtend seed in 2015, priced at a $5 to $10 per acre premium, and by claiming greater yields, Defendants created initial buzz for the Xtend crop system, causing Defendant Monsanto to reap between $15 million and $30 million in first-year sales alone.

211. Ironically, the damage caused by off-label dicamba spraying on Xtend seed caused the sale of those same seed to skyrocket in what amounts to a modern-day agricultural protection racket.

212. Unless something is done to stop them, now that Defendants' conspiracy is complete, the vast majority of soybean and cotton farmers will be forced to purchase Defendants' dicamba products, which was Defendants' plan all along. Defendant Monsanto expects its profits for Xtend seed alone will reach $1.25 billion to $2.5 billion dollars annually, to say nothing of either Defendants' herbicide sales.

213. Many farmers, including Plaintiff Bader, contacted Defendant Monsanto to voice complaints about dicamba damage to their crops in 2015 and 2016, further putting Defendant on notice. These farmers were ignored.

214. The more Defendants' dicamba products (Xtend seed and older dicamba formulations) sold in 2015 and 2016, the more fear arose in farmers under drastic weed pressure who saw no choice but to purchase Defendants' dicamba products or else face immense reductions in yields and lost crops.

215. For example, in an August 15, 2014 meeting before the Arkansas State Plant Board, Kim Magin, Defendant Monsanto's Director of Industry Affairs, stated to the Plant Board that while farmers are not required to spray dicamba on Xtend crops, most seed production activities would spray dicamba.

216. These remarks and Defendants actions show that Defendants systematically conspired to create an ecological disaster for profit in the agricultural communities of Southeast Missouri, neighboring Arkansas, and other states.

N. The Sale and Distribution of Xtend Cotton in 2015

217. Defendants' intentional, reckless, and negligent behavior has caused great financial harm to Plaintiffs on account of their irresponsible and premature release of their products. The first instance occurred in 2015 when Defendant Monsanto released Xtend cotton seed.

218. This release was premature even by Defendant Monsanto's standards. In a press release dated November 28, 2012, Defendant Monsanto's Chief Technology Officer, Robb Fraley, stated that the company would not release its Xtend crop system until it received EPA approval for its dicamba herbicides, which is standard industry practice. *See* http://news.monsanto.com/press-release/strong-harvest-results-demonstrate-monsanto-companys-position-industry-yield-leader-ch (last visited Aug. 17, 2017).

219. On or around January 2015, instead of waiting to secure EPA approval for a dicamba herbicide to pair with its Xtend cotton like a responsible company would, Defendant Monsanto put greed and its quest for endless profits before safety and distributed and sold Xtend cotton in a limited commercial introduction in the U.S., expecting to sell 500,000 acres.

220. Xtend cotton was introduced in Missouri, Arkansas, and Tennessee, and was particularly targeted at Southeast Missouri's cotton country, i.e., Dunklin County (where Plaintiff Bader Farms is located), Stoddard County, New Madrid County, and Pemiscot County.

221. Through its distribution channels, Defendant Monsanto distributed and sold Xtend crops throughout Southeast Missouri to its national distributors, wholesalers, retailers, and other regional and local representatives and agriculture dealers and partners.

222. Through Defendant Monsanto's distributors, wholesalers, and retailers, Xtend crops were distributed and sold to end-use customers, farmers, industrial users, and government agencies (such as highway departments) in Southeast Missouri.

223. Xtend cotton is genetically modified to allegedly tolerate exposure to the herbicides dicamba, glyphosate, and glufosinate.

224. The distribution and sale of Defendant Monsanto's Xtend cotton in 2015 was reckless and negligent, violated standard industry practice, and ushered in a wave of reckless and unreasonably dangerous experimentation in the farming community of Southeast Missouri.

225. According to researchers at the University of Missouri and the University of Arkansas, it is completely contrary to standard industry practice to release a new seed without the simultaneous availability of a corresponding herbicide – whether that corresponding herbicide already exists or is a new product.

226. Echoing this fact is Dr. Bob Scott, a weed specialist at the University of Arkansas Extension. In a *Delta Farm Press* article, Dr. Scott stated, "It's an odd situation because we can't recall a technology like this being released without a corresponding herbicide. We had Roundup Ready, LibertyLink – none released without a herbicide." *See* http://www.deltafarmpress.com/soybeans/dicamba-drift-incidents-have-ripple-effect (last visited Aug. 22, 2017). What's more, the corresponding herbicide must be safe and non-defective in order to avoid injury to innocent third-parties, such as Plaintiffs.

227. However, Defendant Monsanto, in partnership and joint venture with Defendant BASF, sold only one part of the system – Xtend seed – and failed to provide a safe, accompanying

herbicide, knowing full well that no safe, non-defective dicamba herbicide existed, and it still does not.

228. In 2015 and 2016, even if Defendants released XtendiMax or Engenia with Xtend seed, neither XtendiMax nor Engenia would have been safe and non-defective because there is no such thing as non-volatile dicamba herbicide – and Defendants knew this.

229. The absence of a safe, legal, non-defective dicamba herbicide did not thwart Defendants' goals. On the contrary, it furthered them and was both a short-term win and a long-term win for both Defendants.

230. It was a short-term victory for Defendants because as Defendants conspired to mutually develop their dicamba products for use in a dicamba-based "system," Defendants marketed their products as a "system," and farmers expected to be able to use a "system."

231. Defendant Monsanto launched its Xtend seed without providing a safe, accompanying herbicide, knowing that Defendant BASF (or others on its behalf) manufacturers and distributes older dicamba formulations, like Banvel and Clarity, among others.

232. The illegal use of these older dicamba herbicides on Xtend crops, which Defendants instructed farmers to use together or, at a minimum, reasonably anticipated farmers would use together, foreseeably resulted in massive damage to non-DT crops in 2015, 2016, and on an on-going basis. Most importantly, it instilled fear in farmers.

233. This fear translated into those farmers purchasing Xtend seed and even more dicamba in 2017 and 2018, giving Defendants a tremendous advantage for the upcoming growing seasons. These self-defensive farmers are just pawns in Defendants' scheme to seize the market.

234. The defensive planting expanded in part because Defendants conspired to withhold data and mislead federal and state agencies about the volatility of their XtendiMax and Engenia

herbicides. Defendants also marketed their products as safe, non-defective, and far less volatile herbicides, despite their knowledge that this was false.

235. Defendants knew their dicamba products were equally, if not more volatile than older dicamba formulations. And the absence of a safe, non-defective herbicide makes the system defective. As Defendants knew and expected, XtendiMax and Engenia volatilized and moved off-target on a massive scale, causing unprecedented damage to non-DT crops in Missouri.

(1) Defendants Encouraged Illegal Spraying

236. Not only were Defendants' products dangerous and defective, but their actions showed a reckless disregard for the rights of farmers with crops that were not dicamba-tolerant. Defendants made it a practice of telling farmers who purchased Xtend seed to go ahead and spray illegal dicamba formulations on their Xtend crops.

237. For example, sworn testimony before the Arkansas State Plant Board establishes that the Plant Board sanctioned a Missouri farmer who Defendant Monsanto directed to illegally spray dicamba on his Xtend crops. *See* http://www.arkansasmatters.com/news/local-news/working-4-you-illegal-chemical-use-damages-soybeans-threat-of-spread-outside-ag/521534160 (last visited Jan. 23, 2017).

238. In this sworn testimony before the Arkansas State Plant Board, Donald E. Masters, a Missouri farmer who has farmland in Dunklin County, Missouri and Northeast Arkansas, testified that a Defendant Monsanto representative told him to spray dicamba on his Xtend crops. Mr. Masters' testimony is as follows:

> 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.
> MR. FINCH: So Monsanto told him to go out and tell you?
> MR. MASTERS: Well, they developed the cotton. They spent a lot of money developing the cotton.
> MR. FINCH: I'm sure they did.
> MR. MASTERS: And they wanted the seed sold. Now, all Monsanto – that DPL variety had on the sack "Do not spray with Dicamba." Okay?
> **MR. FINCH: But this guy told you to spray it?**
> **MR. MASTERS: But well – yes**, but there was another company that sold Dicamba cotton that is just a plain sack and didn't say a thing in the world about spraying over the top or anything else.

See Ex. 1A – Donald Masters' Testimony at Tr. at 10-12 (emphasis added).

239. So, when asked under oath the direct question whether "this guy" – a Defendant Monsanto representative – told him to spray older dicamba in 2015, Mr. Masters says unequivocally, "Yes." Mr. Masters' testimony is only one example of a pattern and practice engaged in by Defendants to overtly and covertly encourage and approve the illegal spraying of older dicamba over-the-top of Xtend seed in 2015 and 2016.

240. The illegal spraying in 2015 and 2016 was not only foreseeable to Defendants but essential to their scheme. To create wide-spread fear among farmers who had not purchased DT seed, Defendants' agents engaged in a wide-spread effort to encourage the illegal spraying.

Defendants' agents told users to spray, falsely characterized the legality of the spraying, and assured users that Defendants would take no action against them for the illegal spraying.

241. Further, as discussed in subsequent allegations, Defendants could have revoked its use agreements at any time had they been concerned about illegal, off-label spraying. Yet Defendant Monsanto repeatedly made it clear that no use agreements would be revoked, and indeed, none were.

242. By Defendant Monsanto telling farmers to spray older dicamba on Xtend crops in 2015, Defendants ensured that farmers would use both of their products, causing the crisis that ensued, thereby forcing farmers of non-DT crops to purchase Defendants' products in the future. The result would be astronomical profits for Defendants at the expense of defenseless farmers, like Plaintiffs.

243. Donald Masters also made a statement to the Missouri Department of Agriculture Plant Industries Division. In that statement, Mr. Masters admitted he illegally sprayed dicamba over portions of his cotton fields in Arbyrd, Missouri, in May 2015. The bulk of Donald Masters' farm is located in Dunklin County, Missouri, the same county where Bader Farms is located.

244. Because XtendiMax and Engenia were not available for use with Xtend crops until November 9, 2016, at the earliest, and because of Defendant Monsanto's representatives telling farmers to spray older, illegal dicamba formulations over-the-top of their Xtend crops, it was inevitable and completely foreseeable that farmers who grew Xtend seed would, in fact, spray the older dicamba formulations on Xtend crops and damage Plaintiffs' and others' crops.

245. Any instructions, notices, or even warnings, if such existed, that accompanied Defendants' dicamba products in 2015 to present were negated by their representatives instructing farmers to spray older dicamba on Xtend crops and by Defendants' refusal to pull user agreements from growers who expressed an intention to spray older dicamba formulations on Xtend crops.

(2) Defendants' Labels Fail to Warn About the Danger

246. At all times relevant to this Third Amended Complaint, Defendants knew their product labels, including the Xtend seed, were inadequate and did not address the real dangers associated with their products' use. Defendants did not warn farmers of these dangers and, at least through the 2017 growing season, failed to train farmers how to avoid using the products in a dangerous and unsafe manner.

247. Further, Defendants' use instructions and notices fail to explain that any application of any dicamba herbicide available on the market in 2015 and 2016 for use with Xtend crops will result in off-target movement of dicamba, causing damage to surrounding crops and vegetation.

248. Defendant Monsanto made no efforts to warn farmers that the inherent danger of the older dicamba formulations included extreme short-term and long-term volatilization, drift, off-target movement due to temperature inversions, and damage and yield loss to sensitive crops.

O. The Sale and Distribution of Xtend Seed in 2016

249. Therefore, in 2016, Defendants continued their intentional, reckless, and negligent behavior with Defendant Monsanto's premature release of its Xtend soybean.

250. In early January 2016, Defendant Monsanto distributed and sold Xtend soybean and Xtend cotton in the U.S., including in Missouri, with expectations to corner the soybean market in cooperation and joint venture with Defendant BASF.

251. According to a February 2016 press release, Defendant Monsanto boasted that demand for their Xtend soybean was strong, highly anticipated by farmers, and there were "significant pre-orders from farmers."

252. As soybean are the second most widely-grown crop in the U.S. after corn, Defendant Monsanto's ability to dominate the soybean seed market with its Xtend system will result in massive financial gain for both Defendants.

253. In 2015, Missouri ranked eighth in top soybean producing states. As with cotton, the top four soybean producing counties were also located in Southeast Missouri: 1) Stoddard County; 2) New Madrid County; 3) Pemiscot County; and 4) Dunklin County.

254. Xtend soybean facilitate a wider application window (at planting and in-crop) of dicamba and offer growers an expanded use of dicamba in soybean production into the warm summer months when dicamba is more volatile in higher temperatures.

255. On February 3, 2016, Defendant Monsanto announced commercial launch plans for Xtend soybean after the seed received import approval from China, even though the EPA did not approve XtendiMax for the 2016 growing season.

256. With respect to an accompanying herbicide, Kim Magin for Defendant Monsanto, stated to the *Delta Farm Press* on April 15, 2016, "[O]ur best guess is having dicamba formulations ready for growers is unlikely for this year. We have our fingers crossed that the approval will come as quickly as possible so growers, without further delay, will be able to use this new tool in soybean and cotton production in 2017."

257. However, Defendant Monsanto never told farmers not to plant Xtend crops and never warned farmers, commercial applicators, regulators, or third-parties who might be harmed about the dangers of dicamba volatilization and drift – the two characteristics that make Defendants' dicamba herbicides unsafe, unreasonably dangerous, and defective.

258. Even though there were numerous issues and concerns surrounding its Xtend crop system in 2016, Defendant Monsanto, in partnership and joint venture with Defendant BASF, proceeded with the launch of Xtend soybean. Now Defendants had both Xtend cotton and soybean on the market.

259. As was the case with Xtend cotton, Defendants ensured that farmers would spray older dicamba on Xtend soybean, causing more damage to farmers like Plaintiffs.

260. Thus, during the 2016 growing season in Southeast Missouri, farmers, as reasonably anticipated by Defendants and as instructed by Defendant Monsanto's representatives, predictably and illegally sprayed older, more volatile dicamba herbicides on Xtend soybean and cotton.

261. Defendant Monsanto estimates that Xtend soybean were planted across approximately one million acres of farmland in 2016, along with three million acres of Xtend cotton.

262. This rise in Xtend seed sales from 2015 to 2016 increased Defendants' profits through sales of the Xtend trait and seed and through sales of older dicamba formulations (e.g. Clarity) and also set the stage for the proliferation of Defendants' other dicamba products (e.g. XtendiMax with VaporGrip and Engenia) in 2017.

263. Defendants concealed their knowledge of the dangers of their products, the damage they would cause, and refused to correct or stop the use of their defective products.

264. Further, to entice farmers to purchase Xtend seed and increase both seed demand and the use of Defendant BASF's older dicamba herbicides, Defendant Monsanto lowered the price of its Xtend soybean. As a result, Xtend seed flooded the market, creating the phenomenon of defensive planting that emerged in 2017 and continues today.

265. Ashley Berthold, a district sales manager for Asgrow, a seed brand distributed by Defendant Monsanto, stated that 400 units of Xtend soybean were planted in Missouri in 2016. This was just enough to cause widespread damage to thousands of acres of non-DT crops, like Plaintiffs' crops, resulting in an increased demand for Defendants' products.

266. The distribution and sale of Xtend soybean and cotton seed in 2016 in Southeast Missouri violated standard industry practice and created a destructive wave of crop loss by a reckless experiment in Southeast Missouri.

267. Farmers who purchased Xtend soybean in 2016 did not have access to any safe dicamba herbicide, and thus, it was reasonably foreseeable, indeed inevitable, and expected by Defendants that farmers would substitute older dicamba formulations to protect their crops, furthering Defendants' goal of spurring demand for their products in the next growing season.

268. With farmers spraying dicamba products available from Defendant BASF, Defendant BASF also did nothing to warn farmers or remove and restrict its products availability for use during a growing season in Missouri that set a then record for dicamba damage, and also increased its dicamba sales.

269. In August 2016, the EPA issued a Compliance Advisory due to the unusually high number of reports of crop damage related to herbicides containing dicamba. *See* https://www.epa.gov/compliance/compliance-advisory-high-number-complaints-related-alleged-misuse-dicamba-raises-concerns (last visited Jan. 18, 2017).

270. As accurately stated by Dr. Larry Steckel, a weed extension specialist at the University of Tennessee, the weather and growing conditions in the Mid-South, which includes Southeast Missouri, created the perfect storm for dicamba injury to crops. *See* http://www.southeastfarmpress.com/soybeans/perfect-storm-created-dicamba-injury-mid-south (last visited Aug. 23, 2017).

271. The damage caused by Defendants' dicamba products was expected. According to Dr. Jason Norsworthy, an Extension weed scientist at the University of Arkansas, to the *Delta Farm Press* in August 19, 2016 article titled "Dicamba Drift Was Expected, No Blindsiding" – "There was no blindsiding. We knew this was likely to be a major issue. We've been telling the [Arkansas State Plant Board] this for several years now. We've been saying it in all the winter meetings." *See* http://www.deltafarmpress.com/soybeans/dicamba-drift-expected-no-blind-siding (last visited Aug. 22, 2017).

272. And as correctly stated by Dr. Ford Baldwin to *DTN/The Progressive Farmer* in July 2016 upon commenting on reports of off-target and off-label dicamba use, "It looks like a bomb went off in some parts of the South." *See* http://agfax.com/2016/12/29/dicamba-the-time-bomb-went-off-and-no-one-was-prepared-dtn/ (last visited Aug. 22, 2017).

273. As for 2016, it has been estimated that approximately 200,000 acres of various crops, produce, and ornamentals in Arkansas, Tennessee, and Missouri were impacted by Defendants' wanton and reckless disregard of Plaintiffs and countless others like them.

P. Defendants' Licensing Agreements with Seed Growers

274. At all times relevant to this Third Amended Complaint, all purchasers and growers of Xtend seed are licensees of Xtend seed. All purchasers and growers of such seed must sign a Monsanto Technology/Stewardship Agreement (Limited Use License), available within Defendant Monsanto's Technology Use Agreements ("TUG") and TUG addendums.

275. These licenses and their requirements allow each licensed grower to use and plant Xtend seed. Thus, Defendant Monsanto retains ownership of the Xtend seed and the Xtend crop system and exercises extensive control and supervision over such licensees' use.

276. Defendant Monsanto's Technology/Stewardship Agreements give Defendant Monsanto the right to revoke the license/agreement with its licensees for any breach of the license/agreement.

277. Defendant Monsanto has stated that over-the-top spraying of older formulations of dicamba on Xtend crops is inconsistent with its instructions and labels, and thus, such a violation is a breach of the license/agreement, providing Defendant Monsanto with a basis for revoking the license/agreement.

278. However, in 2015 and 2016 (and allegedly, 2017), with full knowledge that some of its licensees were spraying older formulations of dicamba over-the-top on Xtend crops,

Defendant Monsanto took no actions to indicate it was remotely interested in revoking any of its licensees' licenses/agreements.

279. As long as Defendant Monsanto's licensees continue to purchase and use Defendants' dicamba products, Defendant Monsanto will do nothing to protect innocent third-parties, such as Plaintiffs, despite possessing the most power to do so. Defendant Monsanto has shown this time and again.

280. For instance, on July 6, 2015, when Defendant Monsanto was asked at public hearings before the Arkansas State Plant Board whether the company intended to revoke any licenses/agreements with its licensees who violated their contracts by illegally spraying dicamba herbicides, Duane Simpson of Defendant Monsanto stated that its use agreements with licensees would only be pulled in a worst-case scenario.

281. Also, in a separate meeting before the Arkansas State Plant Board on July 25, 2016, a spokesman for Defendant Monsanto, Dr. Boyd Carey, specifically rejected the idea of revoking any agreements with its licensees who used older, illegal formulations of dicamba on Xtend crops and indicated that these licenses/agreements would probably not be pulled.

282. Defendant Monsanto has not cancelled a single license/agreement with its licensees for their use of any dicamba herbicide. *See* https://www.agweb.com/article/dicamba-questions-cloud-2017-horizon-naa-chris-bennett/ (last visited Aug. 17, 2017).

283. In public statements, as shown below, Defendant Monsanto denies having any control over licensees of its Xtend seed and claims the spraying of older formulations of dicamba on its Xtend crops is from "third-parties."

284. For instance, in a statement issued by Defendant Monsanto's Charla Lord on February 16, 2017, in response to the dicamba damage that occurred in Missouri in 2015 and 2016, Ms. Lord stated that the use of dicamba herbicides on Xtend seed, "was illegal and performed by

third-parties over whom Monsanto has no control." This statement is absolutely false. *See* http://molawyersmedia.com/2017/02/16/monsanto-facing-class-action-suit-over-dicamba-spraying/ (last visited Aug. 23, 2017).

285. Defendant Monsanto remains in a contractual, licensing agreement with its licensees who purchase Xtend seed, who sprayed older formulations of dicamba on Xtend crops, and faced no repercussions from Defendant Monsanto. *See* http://www.missourinet.com/2017/02/16/missouri-farmers-join-class-action-lawsuit-against-monsanto-in-herbicide-controversy/ (last visited Aug. 18, 2017).

286. Defendant Monsanto did not pull these license/agreements with its licensees because to do so would have undermined its scheme with Defendant BASF to corner the market for GM seed and herbicide sales no matter the cost or damage suffered by innocent third-parties, like Plaintiffs.

287. At all times relevant to this Third Amended Complaint, Defendants hid the level of control that Defendants had over farmers who sprayed dicamba-based herbicides on Xtend crops in Southeast Missouri and injured Plaintiffs' crops.

288. At all times relevant to this Third Amended Complaint, Defendants also failed to provide proper training regarding proper use and application of their dicamba products. Such absence, coupled with Defendant Monsanto giving its licensees the green light to spray off label, ensured that a dicamba crisis would occur and Defendants would reap the harvest of profits when it did.

Q. Defendants' Marketing and Advertising

289. Defendant Monsanto's marketing and advertising materials for Xtend soybean influenced and induced farmers in Southeast Missouri to purchase Xtend seed.

290. Throughout 2016 and beyond, Defendant Monsanto marketed and sold its dicamba products to consumers and those searching for the right seed and herbicides to purchase in 2017 to institutionalize a false message – that farmers need Defendants' dicamba-based products and that the Xtend system provides greater yields than other seed on the market.

291. For example, Defendant Monsanto's website claims "the Roundup Ready Xtend Crop System is an advanced weed management system that helps control more resistant and tough-to-control broadleaf weeds in soybean and cotton than any other crop system." The website boasts that Xtend soybean are "[b]uilt on the proven yield performance of Genuity Roundup Ready 2 Yield technology" and allegedly have a "5.4 Bu/A [bushel per acre] average advantage vs. LibertyLink® in herbicide system trials." The website also claims Xtend cotton has, allegedly, "60 lbs. lint/A [lint per acre] average advantage vs. top yielding competitors." *See* https://www.roundupreadyplus.com/resourcecenter/advanced-weed-control-technology (last visited June 25, 2017); *see also* https://www.roundupreadyxtend.com/Pages/default.aspx (last visited June 25, 2017).

292. Further, in a press release dated November 9, 2016, titled "Farmers to Realize The Benefits Of The Roundup Ready Xtend Crop System in 2017," Defendant Monsanto stated the Xtend crop system was intended to maximize crop yield potential and allow farmers to control tough, glyphosate resistant weeds." *See* http://news.monsanto.com/press-release/products/monsantos-xtendimaxtm-herbicide-vaporgriptm-technology-approved-epa-crop-use (last visited Aug. 18, 2017).

293. The overall, alleged advantage of Xtend soybean, however, has been disproved by the agricultural scientific community. The 2016 test trials by weed extension programs at the University of Minnesota and the University of Wisconsin found just the opposite – lower yields.

294. In these field trials, Xtend soybean tended to yield a bushel or two lower on average. *See* http://blog-crop-news.extension.umn.edu/2016/10/u-of-m-se-minnesota-dicamba-tolerant.html (last visited Jan. 18, 2017); http://ipcm.wisc.edu/blog/2016/11/new-traits-dont-automatically-translate-to-highest-yield/ (last visited Jan. 18, 2017).

295. These scientific results stand in stark contrast to assertions made by Miriam Paris, Defendant Monsanto's U.S. Soybean Marketing Manager. In July 2016, Ms. Paris claimed the potential for greater yields, a two and a half to seven bushel-per-acre yield advantage above Roundup Ready 2 Yield varieties, factored into the company's decision to commercialize Xtend soybean in 2016, despite the absence of a safe, approved dicamba herbicide for use with the seed and crops at that time.

296. Throughout 2016 and beyond, as consumers were making decisions about what seed and herbicides to purchase and plant in the future, Defendant Monsanto, in partnership and joint venture with Defendant BASF, ran false, misleading, and confusing advertisements for the Xtend crop system.

297. One of these advertisements for Xtend soybean ran in a September 2016 issue of *Delta Farm Press* and is particularly misleading. This advertisement claims, "The Field Was Spotless," and provides a quote from Steve Minner, a corn and soybean farmer in Morley, Missouri, who states in the advertisement: "I was able to spray dicamba on my Asgrow Roundup Ready 2 Xtend production acres this season and the field was spotless. I can't wait for dicamba to receive regulatory approvals to help control tough pigweed."

298. Defendant Monsanto's "The Field Was Spotless" advertisement is misleading, deceptive, and false for several reasons (*see* Ex. 1B – The Field Was Spotless):

(a) First, the title is misleading. No dicamba-based herbicides were approved by the EPA for use with Xtend soybean at the time this advertisement ran in September 2016;

(b) The advertisement does not identify what type of dicamba Mr. Minner used on his Xtend soybean – Banvel, Clarity, a test trial of XtendiMax, etc. – and suggests any dicamba product could be used;

(c) The advertisement also fails to discuss the use of any dicamba formulation, whichever one was used, and how was used, at what spray rate or tank mix, and the number and timing of applications;

(d) The body of the advertisement does not state whether the application of dicamba was legal or illegal;

(e) If this was an illegal application of dicamba, then the advertisement gives an impression that Mr. Minner is boasting about an off-label application of dicamba;

(f) The only mention of the illegality of spraying dicamba and use instructions appears in very fine print at the bottom of the advertisement; and

(g) When Mr. Minner is quoted as saying "the field was spotless," the advertisement assumes the farmer acquired 100% weed control with dicamba – information that has been flatly rejected by scientific data (*see* http://agfaxweedsolutions.com/2017/05/05/herbicide-resistance-dicamba-not-effective-pigweed-populations-says-study/ (last visited Aug. 17, 2017).

299. Weed scientists have been critical of this advertisement because Defendant Monsanto touts the advantages of its dicamba technology during a time when dicamba damage complaints were surging in Missouri and other states due to the release of its dicamba products.

See https://crops.extension.iastate.edu/blog/bob-hartzler/ad-hall-shame-worthy (last visited Aug. 17, 2017).

300. Defendant Monsanto ran other misleading and false advertisements for Xtend soybean in September 2016 issues of *Delta Farm Press*, such as "The Answer to Resistant Weeds Is Here." *See* Ex. 1C – The Answer to Resistant Weeds Is Here. This advertisement is misleading, false, and deceptive in the following ways:

(a) The title is misleading. No dicamba-based herbicides were approved by the EPA for use with Xtend soybean at the time this advertisement ran in September 2016;

(b) The advertisement states "the answer" to resistant weeds is available, but "the answer" refers to the ability to control pigweeds in DT crops when no safe herbicide was approved;

(c) The "strong defense" stated in the advertisement refers to Defendant Monsanto's unapproved and unregistered herbicide. In 2016, there was no strong defense, and to state or imply otherwise is false and misleading;

(d) The "raise your yield potential with elite genetics" statement in the advertisement is inaccurate and counter to available, unbiased research; and

(e) The advertisement suggests farmers use can dicamba on Xtend crops, which, at the time, was illegal. Because Defendant Monsanto is advertising its seed system as "the answer" and the herbicide for that system is unavailable, the advertisement is misleading.

301. Additionally, Defendant Monsanto's "Xtend Your Yield" advertisements for Xtend seed (*see* Ex. 1D – Xtend Your Yield), in tandem with web and social media contests and marketing campaigns under the same name on Facebook, Twitter, Instagram, YouTube, Snapchat,

Pinterest, LinkedIn, @MONSANTOCO, @RRPLUS, #xtend, #XtendYourYield, and #MyFarmMyYield, are also false, misleading, and confusing because the advertisements and marketing campaigns focus on the yield potential of Xtend seed, which have not proved to outperform other GM seed technologies. *See id.*; *see* http://www.roundupreadyxtend.com/xtendyouryield/Pages/default.aspx (last visited Aug. 17, 2017).

R. Reaction to the 2015 and 2016 Dicamba Damage in Southeast Missouri

302. Because of the widespread damage to crops in Southeast Missouri and Defendant Monsanto's inaction and indifference to the damage caused by putting Xtend products on the market, a media firestorm began, causing negative publicity for Defendants, particularly Defendant Monsanto.

303. In light of the widespread damage and complaints by farmers, including Plaintiff Bader Farms, on July 29, 2016, the University of Missouri Extension held a Dicamba Crop Injury Forum to share and gather information on the dicamba damage.

304. The forum, held at the Fisher Delta Center in Portageville, Missouri, was organized in response to the devastation to Southeast Missouri's agricultural community, as well as the mass outrage and growing concerns on behalf of farmers and local citizens. More than 130 people gathered at the forum, including Plaintiff Bader.

305. Throughout the summer of 2016, as evidence of crop damage caused by dicamba volatilization and drift continued to escalate, concerns in and among the Southeast Missouri agricultural community did not abate. The evidence of dicamba damage was real and widespread, so much that federal and state governments were getting involved.

306. The EPA is continuing investigations throughout Southeast Missouri into the damage caused by dicamba being sprayed on Xtend seed.

(1) Special Missouri Hearing on Dicamba

307. On August 31, 2016, the Missouri House Select Committee on Agriculture ("Committee on Agriculture") held a special hearing at the Fisher Delta Research Center in Portageville, Missouri in an effort to gather information and access the problem and ramifications of dicamba and its effect on Missouri crops.

308. Members of the Committee on Agriculture in attendance at the special hearing were: Chairman Representative ("Rep.") Bill Reibolt, Rep. Tracy McCreery, Rep. Sonya Anderson, Rep. Mike Bernskoetter, Rep. J. Eggleston, Rep. Jay Houghton, Rep. Sue Meredith, Rep. Tommie Pierson, Rep. Craig Redmon, and Rep. Don Rone.

309. Also in attendance at the special hearing was Missouri Speaker of the House, Rep. Todd Richardson.

(2) Testimony of Defendant Monsanto

310. Testimony at the special hearing began with Duane Simpson speaking on behalf of Defendant Monsanto. Mr. Simpson leads Monsanto's state and local government affairs team.

311. Mr. Simpson outlined the history of dicamba and Defendant Monsanto's efforts to gain EPA approval for its "cost-effective" dicamba herbicides.

312. Further, Mr. Simpson discussed causes of off-target dicamba movement, including spray drift, volatilization, and chemical contamination. He admitted Defendant Monsanto identified spray drift as by far the number one, overwhelming cause of dicamba's off-target movement.

313. Mr. Simpson testified Defendant Monsanto has undertaken several large-scale drift trials across the country to conduct research on dicamba drift.

314. Mr. Simpson testified Defendant Monsanto's dicamba-based herbicides have low volatility and numerous application restrictions.

315. Mr. Simpson testified Defendant Monsanto's testing shows that its dicamba-based herbicides will have two percent of the relative volatility of older dicamba formulations.

316. Mr. Simpson testified Defendant Monsanto plans to offer its dicamba-based herbicides to farmers and applicators, but had not yet done so.

317. Mr. Simpson stated Defendant Monsanto will not host its first academic symposium on its new dicamba products until the end of 2016.

318. Mr. Simpson also admitted:

a) General training with dealers, applicators, and numerous farmers on Defendant Monsanto's XtendiMax and Xtend products cannot begin until the EPA releases a final label for XtendiMax;

b) The critical time for herbicide training is in the fall – the same period of time when Defendant Monsanto hoped to have final label approval to begin their dicamba product training program;

c) With the Xtend soybean seed and cotton on the market for the prior two years, Defendant Monsanto did not want to train specifically on how to use dicamba in-crop because it was illegal at the time;

d) Defendant Monsanto has been waiting six and a half years for label approval, which is five years beyond Defendant Monsanto's anticipation in seeing the label;

e) The first and most important next step for Defendant Monsanto is to receive a label from the EPA; and

f) Defendant Monsanto is concerned about the damage they have seen from the use of its pesticides.

319. According to Mr. Simpson, Defendant Monsanto expected it "would have [XtendiMax] available" by Spring 2017.

320. "We can't sell the chemistry to retailers until the label is done," Mr. Simpson stated. "There is an urgency for training on the final label."

(3) Testimony of Missouri Department of Agriculture

321. Up next to testify at the special hearing was Judy Grundler, Director of the Plant Division with the MDA. Ms. Grundler stated her department began receiving dicamba damage complaints on June 22, 2016 in a four-county area in Southeast Missouri. Within this four-county area, Ms. Grundler stated, the MDA received over 140 pesticide/dicamba damage complaints, including a few dicamba damage complaints from Butler and Carroll Counties.

322. Ms. Grundler also discussed the time and financial investments required to fully investigate a pesticide damage complaint, which can take months to investigate for each complaint and requires certified laboratory testing. Ms. Grundler further remarked about the low civil penalty in Missouri at that time for violations of the Missouri Pesticide Use Act.

323. Ms. Grundler stated that a different seed and herbicide company chose not to release their GM seed in Missouri.

324. Further, Ms. Grundler stated that Defendant Monsanto released the Xtend seed because Defendant Monsanto received import approval from China for soybean in January 2016.

(4) Testimony of Dr. Kevin Bradley

325. Dr. Kevin Bradley also testified at the special hearing. Dr. Bradley is an Associate Professor at the University of Missouri in the Division of Plant Sciences. He has been a State Extension Weed Scientist for the past 14 years.

326. During his testimony, Dr. Bradley recalled the steady stream of dicamba damage complaints that came into the MDA in June 2016 – up to eight to 10 calls per day.

327. Dr. Bradley also noted Defendant Monsanto has done research since 2006 on Xtend soybean and there is a lot of data on the seed and its weed control capability.

328. However, Dr. Bradley testified there has been concern from "day one" about bringing a product to market that will be sprayed with dicamba. Peach trees, tomatoes, tobacco, and soybean that are not dicamba resistant will be impacted.

329. And despite the application protections suggested by XtendiMax then-pending label, Dr. Bradley testified he is not confident those protections will work because not enough research has been done. "This new formulation is not going to solve everything," he said.

330. Dr. Bradley stated, "We just experienced an experiment in Missouri, Arkansas, and Tennessee as to what could occur with dicamba once it gets out there on a larger basis."

331. Dr. Bradley predicted defensive planting, stating that by 2017, soybean farmers will have no choice but to plant Xtend soybean simply to protect themselves. "Soybeans are incredibly sensitive to dicamba," he said. He testified that farmers will effectively be left with only one soybean seed they can plant if they want to continue in the farming industry.

332. Dr. Bradley testified that research on XtendiMax had been done only from a weed control standpoint, i.e., whether it kill weeds and what are the proper spray applications. To Dr. Bradley's knowledge, no university researcher was allowed to evaluate XtendiMax for its volatility.

333. Dr. Bradley further expressed his frustrations with the limitations placed on university researchers by companies, like Defendant Monsanto, that want to protect their patents and technology. Because of this, Dr. Bradley and other independent researchers were not able to test dicamba or study its impact.

334. Further, Dr. Bradley stated the new dicamba formulation will not stop drift. Drift can be reduced, but not eliminated.

335. With 15 years of historical wind speed data at his disposal, Dr. Bradley stated that the Missouri Bootheel has one of the highest wind speeds on average in the entire state. Between 10 o'clock a.m. to three o'clock p.m., the Bootheel, according to Dr. Bradley, experiences wind speeds of 12 to 13 miles per hour. Most herbicide labels do not allow spraying over ten miles per hour, Dr. Bradley testified.

336. Dr. Bradley also explained the additional factor that temperature inversions play in dicamba's volatilization and off-target movement. Between the months of June and July in the Bootheel, there are temperature inversions that last between eight to ten hours, mostly in the evenings and overnight. The more humidity there is, the hotter the temperatures rise, more volatility occurs in these herbicides.

337. Dr. Bradley stated he has also spoken to a farmer who sprays pesticides at ten o'clock at night, directly into a temperature inversion where the pesticide can literally move miles away.

338. Further, despite herbicide labels warning against spraying in a temperature inversion, whether or not farmers know what a temperature inversion is or what it means or looks like is an additional concern and an opportunity for more training and education.

339. Then Dr. Bradley discussed soybean loss in the Missouri Bootheel. "Once soybean flower and move past flowering," he said, "any dicamba injury will likely cause yield loss." Such yield loss could range from 1% to 30%.

340. On soybean, the tell-tale signs of dicamba damage include leaves cupping upward distinctively, twisted and distorted leaves, elongated stems with no leaves, flowers, or pods, and soybean pod tightening and abortion.

341. He testified that in peach trees, the tell-tale signs of dicamba damage include leaf twisting, leaf cupping, and leaf distortion, plus malformed fruit on the peach trees. Peach trees can also show excessive new growth where very light-colored leaves sprout out of the tree two feet to 30 inches above the tree's canopy.

342. Finally, Dr. Bradley answered the ultimate question on the recent problem of dicamba volatilization and drift in the Bootheel: Is it normal practice for a GM seed to hit the market without an approved, corresponding herbicide? "No," Dr. Bradley testified. "Many have

said and I would agree that is part of the problem," Dr. Bradley said. "We have a trait without [a] corresponding herbicide to go with it. Allegedly, a certain number of farmers have said, 'I'm gonna spray the old herbicide because I have this trait out here [in the fields] and you won't give me the new stuff.'"

343. As of the special hearing, Dr. Bradley stated there had been 28 dicamba damage cases filed with the Arkansas State Plant Board, less than the 125 dicamba damage complaints filed in Missouri at the same point in time in 2016.

344. As accurately stated by Dr. Bradley to *DTN/The Progressive Farmer*, because some farmers do not like to turn in other farmers, approximately 100,000 acres of soybean were damaged in 2016 in Missouri alone.

(5) Testimony of Plaintiff Bader

345. Plaintiff Bader, of Plaintiff Bader Farms, also testified at the special hearing.

346. Plaintiff Bader discussed his battles and damage from dicamba and the illegal spraying, beginning in 2015-2016, including calls he made to the MDA and the USDA.

347. Plaintiff Bader said that a lot of dicamba was being sold and the off-label spraying came from dicamba sprayed on crops during 100-degree weather and the dicamba volatilizes. Also, some of the dicamba was sprayed at pre-planting after wheat filled in and the weather was warm.

348. Plaintiff Bader also shared his grave concerns about the Xtend crop system – that some farmers planted Xtend crops and would not have sprayed dicamba over-the-top if those farmers did not have Xtend soybean and cotton in the ground.

349. Plaintiff Bader told the Committee on Agriculture about a number of phone calls he made to Defendant Monsanto and its failure to take responsibility for the dicamba damage to Plaintiff Bader Farms.

350. Plaintiff Bader further stated that because Plaintiff Bader Farms is set geographically in a "dicamba magnet," near a ridge, Morris State Park, and a lot of timber, Plaintiff Bader Farms is extremely vulnerable to pesticide volatilization and drift.

351. Plaintiff Bader added that he was asked many times if his fruit was safe to eat. "You have to be honest with the public," he said.

352. Plaintiff Bader told the Committee on Agriculture he had already lost 7,000 peach trees and would lose another 20,000 in 2016.

353. At Plaintiff Bader Farms, there is a cost of $2,000 per acre to produce a peach crop, Plaintiff Bader said.

(6) More Testimony from Southeast Missouri Farmers

354. A number of other local farmers within the Missouri Bootheel also testified before the Committee regarding their experiences and difficulties with dicamba and pesticide drift and volatility.

355. Ellis Sapp, a soybean farmer from East Prairie, Missouri, in Mississippi County, testified at the special meeting.

356. Mr. Sapp and his father together farm over 3,200 acres of soybean. Every acre of their soybean has been hit with dicamba, damaging about roughly 1,700 acres of soybean.

357. Most of the Sapp's soybean were hit early in the growing season with dicamba, Mr. Sapp said. The Sapp's crops are planted near or around Xtend cotton fields.

358. Mr. Sapp testified that one of the reasons Defendant Monsanto put their Xtend seed on the market was because farmers wanted the technology to increase their crop yields by six to ten more bushels per acre.

359. Mr. Sapp testified in 2016 he should see a crop yield in his non-Xtend soybean of 70 to 80 bushels per acre – but he estimated he will only get between 25 and 40 bushels per acre in his soybean due to damage from the dicamba.

360. The next farmer who testified at the special meeting was Eddie Bowman from Dexter, Missouri, in Stoddard County.

361. Mr. Bowman grows 40 acres of cotton. In 2016, he grew Xtend cotton. Mr. Bowman, who did not state whether or not he has used dicamba on his crop, testified he has chopped his cotton (removed weeds) three times in 2016. Mr. Bowman's neighbor behind him, however, who plants 640 acres of Xtend cotton has not chopped once, "So it's pretty clear what he's using."

362. Mr. Bowmen also testified that he has suffered dicamba damage to 250 acres of soybean, and that his yield will be low in 2016, with 20 bushels per acre compared to 70 bushels per acre that will be reaped by farmers who grow Xtend soybean and spray their crops with dicamba.

363. The final farmer to testify at the special meeting was Joe Woolverton from Gideon, Missouri, in New Madrid County.

364. Mr. Woolverton grows 2,000 acres of soybean. Every field that he grows has been damaged by dicamba.

365. Mr. Woolverton's testimony focused on bringing to the Committee's attention the weak laws and low fines for violations of the Missouri Pesticide Act. He stated there is nothing in the current law (as it stood in 2016) that would help him.

366. Mr. Woolverton testified further about the troubles in testing for dicamba. He said the testing may not indicate detectable dicamba levels in the plant material tested, especially if it

is not tested soon enough, but visible, tell-tale signs of dicamba damage can still be seen in the crops.

S. Industry Denies Responsibility in 2015-2016

367. During and after the deluge of dicamba damage complaints to the MDA in 2015 and 2016 and the ravaging of Plaintiff Bader Farms caused by dicamba volatilization and off-target movement, Defendant Monsanto has consistently denied any wrongdoing for the negligent release of the Xtend crop system.

368. On August 1, 2016, for example, Dan Urnikis, Industry Affairs Lead, and Kyel Richard, Product Communications Lead for Defendant Monsanto, were asked by a reporter from the *Delta Farm Press* about the premature sale and distribution of Xtend cotton and soybean without a corresponding dicamba formulation. Mr. Urnikis evaded the question as follows:

> [A]t this time, there is no approved chemistry over-the-top for the Xtend crop system . . . We've been developing soybean varieties for several years in anticipation of a full regulatory approval. That process takes several years and we've had continued delays. Our best products continue to sit on the shelf . . . So, farmers tell us they'd prefer to try new varieties on their farm for small quantities in initial years to see which work on their farms the best. We chose to launch this year to allow growers to experience the industry-leading varieties of [Xtend] soybeans. They can plant with confidence this year in anticipation of the chemical approval for the 2017 growing season . . . We thought it important for growers to get the opportunity to experience the new technology while really understanding the requirements and expectations for farmers to follow the label when applying herbicides on their farms . . . Pending regulatory approval, next year we'll be out with a Roundup Ready cropping system that features the VaporGrip . . .

369. When asked by the *Delta Free Press* if Defendant Monsanto had a position on the growers who illegally sprayed dicamba off-label on their Xtend products, Mr. Urnikis stated, "We understand the EPA is investigating and Monsanto is supporting that work."

370. To the same question, Kyel Richard replied, "The thing I want to underline is we, as a company, aren't an enforcement agency . . . As a company, we can't speculate on what action government officials will take – especially those who are investigating complaints . . . It's very

important to note that [Defendant Monsanto] doesn't manufacture any dicamba products . . . it isn't our [dicamba] products being used."

371. On or about August 2, 2016, Philip Miller, Vice President of Global Regulatory Affairs for Defendant Monsanto, stated to *The Wall Street Journal* that Defendant Monsanto does not manufacture older versions of dicamba. Mr. Miller failed to state that its Xtend partner, Defendant BASF, does.

372. On or about August 3, 2016, Miriam Paris stated to *DTN Progressive Farmer*, "We've been developing Xtend soybeans for over a decade . . . At what point do we not bring forward these really strong genetics."

373. On August 4, 2016, Defendant Monsanto released a statement by Miriam Paris titled, "Monsanto Statement on Reports Alleging Illegal Dicamba Use."

374. In the August 4 statement, Defendant Monsanto described the release of Xtend soybean as a test and hoped to offer for the 2017 growing season a "complementary weed killer called dicamba" to pair with Xtend seed that will "significantly reduce off-target movement."

375. Ms. Paris returned to Defendant Monsanto's original justification for releasing the Xtend crop system early in the first place – higher yields. "Therefore, we introduced the seed in order to give farmers a chance to test out our latest soybean varieties," Ms. Paris stated. "Making the new soybean available allows our customers to decide if they want to invest more acres in [Xtend soybean] next year." *See* https://monsanto.com/company/media/statements/illegal-dicamba-use-statement/ (last visited Aug. 21, 2017).

376. Despite Defendant Monsanto's claims, Defendants knew that the releasing of the Xtend seed prematurely removed farmers' choice. Defendants' actions amounted to fear-based marketing. With 25 million acres of Xtend crops planted in 2017, it clear that Defendants' plan worked.

377. Despite Defendant Monsanto's insistence that it did not manufacture a dicamba product until it released XtendiMax for the 2017 growing season, its partner, co-conspirator, and joint venturer Defendant BASF sold and marketed numerous dicamba herbicides that were available for purchase by farmers and applicators to use on Xtend crops in 2015 and 2016.

378. The coordinated efforts and joint venture between Defendant Monsanto and Defendant BASF created mutual benefits, increased demand for their products, shared profits, and a no-win situation for farmers – but a win-win for Defendants. Defendants benefited by releasing the Xtend seed prior to EPA approval of XtendiMax and Engenia and profited off the sales of the seed and sales of existing dicamba herbicides that farmers purchased and used off-label over the top of Xtend crops.

379. According to weed scientists, Defendant BASF's Banvel and Clarity formulations were used illegally in 2016 and caused dicamba damage to crops from volatility and drift. *See* http://agfax.com/2016/12/29/dicamba-the-time-bomb-went-off-and-no-one-was-prepared-dtn/ (last visited Aug. 20, 2017).

380. Defendants knew that the dicamba devastation in Missouri and other states in 2015 and 2016 would drive farmers to purchase their products and give rise to, as Dr. Kevin Bradley predicted, farming by self-defense. *See* http://www.stltoday.com/business/local/suspected-illegal-herbicide-use-takes-toll-on-southeast-missouri-farmers/article_af161843-b6cf-5939-beba-fc23585e8478.html (last visited Aug. 20, 2017).

T. The Sale and Distribution of XtendiMax and Engenia for Use with the Xtend Crop System in 2017-Present

381. Beginning in 2017, Defendant Monsanto sold and distributed its Xtend seed and Defendants sold and distributed their newly registered dicamba-based, over-the-top herbicides to farmers, growers, applicators, and licensees in Missouri and other states.

382. Weed scientists and farmers correctly feared a wave of destruction to sensitive crops due to the volatility and drift-prone nature of Defendants' new dicamba formulations. *See* http://wreg.com/2017/06/16/arkansas-plant-board-motion-for-immediate-ban-of-dicamba-use-following-complaints/ (last visited Aug. 20, 2017); *see* http://agfax.com/2016/12/29/dicamba-the-time-bomb-went-off-and-no-one-was-prepared-dtn/ last visited Aug. 20, 2017).

383. Dr. Jason Norsworthy stated to *Farm Journal* in late January 2017, "The dicamba situation was bad in 2015 and worse in 2016. Lots of people are worried about a big dicamba collision in 2017." *See* https://www.agweb.com/article/dicamba-questions-cloud-2017-horizon-naa-chris-bennett/ (last visited Aug. 22, 2017).

384. As a result of Defendants' fear-based marketing, greed, and quest for profits, Defendant Monsanto sold 25 million acres of Xtend seed in 2017.

385. Defendant Monsanto stated the launch was one of their largest ever. *See* http://www.indianaprairiefarmer.com/crop-protection/monsanto-officials-add-their-perspective-dicamba-issues-season (last visited Aug. 20, 2017).

386. Also, according to Defendant Monsanto, XtendiMax is being used on many of those 25 million acres, resulting in the disaster of the 2017 growing season that has further damaged Plaintiffs. *See* https://monsanto.com/products/articles/dicamba-field-investigations-monsanto-learned-far/ (last visited Aug. 21, 2017).

387. This spike from a mere one million acres of Xtend soybean and 3 million acres of Xtend cotton sold in 2016 to 25 million acres of Xtend seed in 2017 is a direct result of the dicamba disaster that Defendants conspired to set in motion at least by 2009, if not before. Their plans to partner in public and collude in private have reaped Defendants great profits at the expense of Plaintiffs and thousands like them.

388. Defendants claim that their dicamba herbicides are the lowest volatility dicamba herbicides on the market. Through their company executives and scientists, Defendants have gone to great lengths to promote this exaggerated and false message, giving the impression that their product won't move off-target.

389. For example, Defendant Monsanto claims XtendiMax is designed to be the industry's lowest volatility dicamba herbicide with the addition of a VaporGrip additive, a mechanism that allegedly prevents the formation of dicamba acid and allows for an alleged 90% to 99% reduction in volatility compared to older dicamba herbicides currently on the market. *See* https://www.roundupreadyplus.com/resourcecenter/advanced-weed-control-technology; https://www.roundupreadyxtend.com/About/vaporgriptechnology/Pages/default.aspx; https://monsanto.com/products/product-stewardship/articles/dicamba-xtendimax-vaporgrip-technology/; https://monsanto.com/products/product-stewardship/articles/historic-testing-dicamba-formulation-xtendimax-vaporgrip-technology/ (last visited Aug. 24, 2016).

390. According to Defendant Monsanto's Robb Fraley, XtendiMax and Engenia are 100 times less volatile than older dicamba herbicides. *See* http://www.indianaprairiefarmer.com/crop-protection/monsanto-officials-add-their-perspective-dicamba-issues-season (last visited Aug. 21, 2017).

391. Scott Partridge, Defendant Monsanto's Vice President of Global Strategy, has been even more definitive, stating XtendiMax "will not move far, including through volatilization." *See* http://cen.acs.org/articles/95/i33/Widespread-crop-damage-dicamba-herbicide.html (last visited Aug. 22, 2017).

392. Defendant BASF claims Engenia offers superior weed control and "a 70 percent reduction in volatility when compared to DGA dicamba." *See*

https://www.basf.com/us/en/company/news-and-media/news-releases/2016/12/P-US-16-251.html (last visited Aug. 19, 2017).

393. But despite their efforts to promote the safety of their products, Defendants knew their new dicamba herbicides are volatile, prone to drift, move off-target, cannot be sprayed during a temperature inversion, cannot be not be used safely with Xtend crops or any other crops, and cause massive harm to non-DT crops. Defendants foresaw the damage that would occur to Plaintiffs and others, yet Defendants suppressed these risks, lied to the public, legislatures and regulators, encouraged licensees to spray XtendiMax and Engenia, and lied to their consumers and licensees about the safety of their herbicides.

394. There is no non-volatile dicamba on the market. This sentiment is echoed by the scientific community time and time again.

395. As accurately stated by Dr. Tom Barber to *Farm Journal* in late January 2017, "Some people have an impression that the new formulations will be a silver bullet. If an applicator sprays too far above the canopy in a 15-mph wind, we're heading for serious physical drift regardless of volatility." *See* https://www.agweb.com/mobile/article/dicamba-questions-cloud-2017-horizon-naa-chris-bennett/ (last visited Aug. 24, 2017).

396. Similarly, weed scientists have also regarded with skepticism Defendants' statements that their dicamba herbicides will stop the dicamba problem. As accurately stated by Dr. Kevin Bradley to *DTN / The Progressive Farmer* in January 2017, "comments that the recently approved formulations are going to magically prevent drift and injury are misleading." *See* http://agfax.com/2017/01/17/dicamba-off-target-drift-10-lessons-learned-the-hard-way-dtn/ (last visited Aug. 24, 2017).

397. Agreeing with these noted weed scientists is Dr. Mark Loux, a Professor of horticulture and crop science at the Ohio State University. Dr. Loux states, "Yes, it is volatilizing

for sure." *See* http://cen.acs.org/articles/95/i33/Widespread-crop-damage-dicamba-herbicide.html (last visited Aug. 22, 2017).

398. In unison with Dr. Bradley, Dr. Barber, and Dr. Loux are Dr. Jason Norsworthy, Dr. Aaron Hager, and Dr. Ford Baldwin, who all state there is no non-volatile formulation of dicamba, even now. *See* http://www.agupdate.com/crops/soybeans/dicamba-damage-is-back-and-possibly-worse-than-before/article_47cc776c-5aa6-11e7-9d43-e33904613167.html; http://www.deltafarmpress.com/soybeans/baldwin-2-reasons-increase-target-dicamba-damage http://www.croplife.com/crop-inputs/monsanto-illegal-improper-use-at-root-of-drift-problems/ (last visited Aug. 20, 2017).

399. Further, the labels and instructions for Defendants' new dicamba-based herbicides provide insufficient information and do not warn about dicamba's volatility, its propensity to drift, and the severity of the damage and yield loss likely to occur to non-DT crops when farmers spray these herbicides and they move off-target. *See* http://www.cdms.net/ldat/ldDF9000.pdf; http://www.cdms.net/ldat/ldDG8005.pdf; http://agproducts.basf.us/campaigns/engenia/assets/pdf/Engenia-NVA-2016-04-385-0298-DT-soybeans-12-20-2016b-S.pdf (last visited Aug. 25, 2017); *see also* Ex. 1E – XtendiMax Label.

400. Due to their complexity, the over 4,500-word labels for Defendants' XtendiMax and Engenia, even if they were more restrictive, cannot prevent dicamba from moving off-target and causing damage, even when followed very carefully.

401. Under optimal conditions, the XtendiMax and Engenia labels are extremely difficult for farmers to follow. Dr. Larry Steckel referred to Defendants' labels as a "logistical nightmare" and a near impossibility to attempt to follow. *See* http://news.utcrops.com/2017/07/cant-keep-dicamba-field/ (last visited Aug. 20, 2017);

https://www.dtnpf.com/agriculture/web/ag/news/crops/article/2017/07/12/states-contemplate-herbicide-2 (last visited Aug. 20, 2017).

402. Dr. Steckel also said, "Even following the label, some dicamba injury is likely to occur in neighboring fields." *See* http://www.deltafarmpress.com/soybeans/what-you-should-know-about-newly-approved-dicamba-formulations (last visited Aug. 21, 2017).

403. Dr. Steckel is not alone in his criticism of Defendants' herbicide labels. As accurately stated by Dr. Ford Baldwin in a *Delta Farm Press* article on June 15, 2017, "I said from the start the label couldn't be followed and allow all the acres to be sprayed in a timely manner." *See* http://www.deltafarmpress.com/soybeans/dicamba-drift-issues-move-back-spotlight (last visited Aug. 20, 2017).

404. Even when farmers follow Defendants' dicamba herbicide labels precisely, as many, including Dr. Jason Norsworthy, have, XtendiMax and Engenia move off-target. Therefore, they cannot be used safely.

(1) State Bans and Restrictions

405. Such a recipe for disaster and a dramatic expansion of the use of dicamba on 25 million acres of Xtend crops in the U.S. in 2017 created a heightened sense of apprehension in many states, causing several states, including Missouri, to take action.

406. The first state to take preemptive action after XtendiMax and Engenia were approved by the EPA was Arkansas.

407. On January 17, 2017, Arkansas banned XtendiMax and older dicamba formulations for the 2017 growing season. Defendant Monsanto's failure to allow university weed scientists in Arkansas to perform volatility tests on XtendiMax was the stated reason for the ban.

408. The new rules in Arkansas also mandate buffer zones between dicamba-treated fields and non-dicamba fields, testing by university researchers on Defendant BASF's dicamba

herbicide, and required an online training and certification course for all applicators. Defendant BASF's herbicide was begrudgingly not banned at that time because Defendant BASF had allowed the University of Arkansas and others to conduct some volatility testing.

409. Defendant Monsanto called the decision to ban XtendiMax "unfortunate," arguing that farmers need its technology to control weeds, despite the risks inherent to dicamba crop systems. *See* http://www.arkansasmatters.com/news/local-news/governor-approves-dicamba-rule/635811898 (last visited Aug. 20, 2017).

410. Also in early 2017, Missouri introduced tighter restrictions on the use of dicamba herbicides. On March 31, 2017, Missouri passed a bill to increase the penalty for off-label herbicide applications to $10,000 per violation. Repeat offenders will pay $25,000 per application.

411. Other states, such as Mississippi, North Carolina, and Tennessee also proposed harsher fines for illegal spraying and rules to restrict the use of XtendiMax, Engenia, and other dicamba applications.

412. Foreseeably, in 2017, despite the precautions taken by state legislatures, Missouri, neighboring Arkansas, and other states experienced a deluge of dicamba damage that far surpassed the damage that occurred in 2015 and 2016 combined. This sharp increase of damage was a direct result of the proliferation of Defendants' defective dicamba products on the market.

413. Once XtendiMax and Engenia became available for use in 2017, Defendants' herbicides proved to be defective and inherently dangerous, as XtendiMax and Engenia both volatilize and drift, damaging non-DT crops, including Plaintiffs'.

414. As early as May 2, 2017, Defendant Monsanto heard initial reports of dicamba damage occurring from the full-scale launch of its Xtend crop system with over-the-top dicamba herbicides. In response, the company reissued its press release, dated August 4, 2016, regarding

dicamba damage. *See* https://monsanto.com/company/media/statements/illegal-dicamba-use-statement/ (last visited Aug. 24, 2017).

415. In June 2017, the first dicamba damage complaints were reported in Missouri. By the end of June 2017, the MDA had received 60 formal dicamba damage complaints.

416. At the same time, the situation in Arkansas was grim with an explosion of 437 cases of dicamba damage. Defendant BASF, the main target of these complaints, issued a statement on June 22, 2017 following a proposal by the Arkansas State Plant Board to place an emergency ban on Engenia:

> BASF is closely monitoring the recent actions taken by the Arkansas Plant Board and the official statements posted by the Plant Board on their website. From our field visits, Arkansas growers are successfully applying Engenia herbicide to dicamba-tolerant crops this season to combat resistant weeds. We are continuing to support their efforts.
>
> BASF is firmly committed to application stewardship and has worked diligently to equip and educate applicators of Engenia® herbicide with the knowledge to make good application decisions. Our goal is that our customers have the best experience possible when applying Engenia herbicide. We certainly want to hear from growers if they have questions regarding the use of Engenia® herbicide and we will continue to reinforce the need to read and follow label requirements.

See http://www.croplife.com/crop-inputs/basf-closely-monitoring-dicamba-situation-in-arkansas/ (last visited Aug. 21, 2017).

417. On June 23, 2017, the Arkansas State Plant Board approved an emergency rule by a vote of 9-5 to ban the use and sale of in-crop dicamba herbicides in Arkansas, including Engenia, calling Defendants' herbicides "unsafe" for their intended use.

418. In the wake of this decision by the Arkansas State Plant Board to ban the sale of dicamba for agricultural use, Defendants issued coordinated public statements that condemned Arkansas's attempt to protect farmers.

419. On June 24, 2017, Defendant Monsanto issued a statement that it was troubled by the Arkansas State Plant Board's recommendation. The statement consisted of remarks from Robb

Fraley for Defendant Monsanto, as well as others from Defendant Monsanto. *See* https://monsanto.com/spotlight/articles/monsanto-statement-arkansas-plant-board-decision-dicamba/ (last visited Aug. 21, 2017).

420. Mr. Fraley stated the following:

> I'm troubled by the Arkansas State Plant Board's recommendation to deprive Arkansas farmers of an important crop protection tool in the middle of a growing season, especially in light of not hearing directly from those farmers this recommendation impacts.

See https://monsanto.com/spotlight/articles/monsanto-statement-arkansas-plant-board-decision-dicamba/ (last visited Aug. 24, 2017).

421. In the same June 24, 2017 statement, Defendant Monsanto criticized the decision as abrupt and issued the following statement:

> Today, the Arkansas State Plant Board recommended an action that will prevent farmers from having access to all of the available weed control options. The recommendation made by the Plant Board to ban the use in Arkansas of the only remaining dicamba product previously approved for in-crop use with dicamba-tolerant crops blatantly ignores the interests of Arkansas farmers. The Plant Board's decision was made without hearing directly from farmers about the impact of removing a valuable weed-management tool, without providing sufficient notice to the public and without allowing the opportunity for public input. The Plant Board did not allow farmers to describe how the Board's mid-season action to abruptly remove a valuable weed management tool would affect their operations in connection with the approximately 1.5 million acres of dicamba-tolerant seed already planted throughout Arkansas. Instead the Board based its decision on off-target movement claims that are still being investigated and have not been substantiated.
>
> Based on a prior decision by the Plant Board, Monsanto has not sold any dicamba products within Arkansas . . . Arkansas farmers should not be forced to continue to operate at a disadvantage to farmers in other states where bans like the Board's current proposed action do not exist.

See id.

422. In a statement dated July 7, 2017, Defendant Monsanto weighed in once again on the Arkansas dicamba ban, characterizing it as premature:

> [T]he decision to ban dicamba in Arkansas was premature since the causes of any crop injury have not been fully investigated. While we do not sell dicamba products in Arkansas, we are concerned this abrupt decision in the middle of a growing season will negatively impact many farmers in Arkansas.

See https://monsanto.com/spotlight/articles/monsantos-statement-arkansas-dicamba-ban/ (last visited Aug. 24, 2017).

423. Defendant BASF, in a statement dated July 10, 2017, also addressed the Arkansas ban on its Engenia herbicide, along with a response to the actions being taken in Missouri, stating:

> Recent actions taken in Arkansas and Missouri to ban or restrict the use of dicamba herbicides, including BASF's Engenia®, deprive farmers of the one option that has proven effective in controlling this worrisome, yield-robbing issue. These actions punish farmers who have successfully and lawfully used the product. It also fails to provide a reasonable deterrent to those who may be willing to ignore the ban or not strictly follow label instructions, which is a major culprit in a number of complaints. We feel a better approach would be developing a fact and science-based recommendation that focuses on a longer-term solution for farmers . . . It has been suggested it is time for a "pause" on dicamba. Unfortunately, farmers cannot hit "pause" on the growing season and their window of opportunity to protect their yields is closing.

See http://www.agproducts.basf.us/news-&-events/press-releases/current-press-releases/2017-our-view-on-dicamba-restrictions-in-arkansas-and-missouri.html (last visited Aug. 24, 2017).

424. On July 11, 2017, the Arkansas State Plant Board's rule establishing a ban on the sale and use of dicamba for 120 days went into effect. The sale, use, and application of all dicamba containing pesticides for agricultural use was prohibited. The rule also raised the civil penalty for herbicide damage from $1,000 to a maximum of $25,000. Sadly, by then, there were nearly 600 dicamba damage complaints and the agriculture community in Arkansas was left wondering how it could possibly recover.

425. On July 19, 2017, Defendant BASF issued a second statement on the Arkansas ban of its dicamba herbicides, stating that its Engenia herbicide was brought to market after years of research, farm trials, and reviews by university and regulatory parties, that farmers told Defendant BASF that this new dicamba technology was needed, and that dicamba damage to non-DT crops

is only due to "improper use" of dicamba and nothing else. *See* http://www.agproducts.basf.us/news-&-events/press-releases/current-press-releases/2017-working-together.html (last visited Aug. 21, 2017).

426. Missouri also instituted a dicamba ban, as dicamba damage complaints in the state, especially in Southeast Missouri, continued to snowball.

427. On July 7, 2017, as a result of the ecological disaster occurring in Missouri, the MDA's Director of Agriculture issued a Stop Sale, Use or Removal Order on all products labeled for agricultural use that contain dicamba. All on-farm applications of dicamba products in Missouri ceased immediately for in-crop, post-emergent use, including all sales and offers of sales for all dicamba products, including XtendiMax and Engenia. *See* http://agriculture.mo.gov/news/newsitem/uuid/c1e77acb-f9af-47ac-9700-8a633f4cb74c (last visited Aug. 17, 2017).

428. In response to the order, Defendants again issued coordinated public statements. On July 8, 2017, Defendant Monsanto issued a statement that it would comply with the order and encouraged its growers and applicators to do the same. Defendant Monsanto's statement also said, "We spent years developing [XtendiMax] to minimize the potential for off-site movement. We want to stress how important it is that growers and applicators who use our product follow the label requirements." *See* https://monsanto.com/company/media/statements/monsantos-statement-missouris-dicamba-announcement/ (last visited Aug. 24, 2017).

429. The Missouri ban on dicamba only lasted six days. On July 13, 2017, the MDA issued a Notice of Release from the Stop Sale, Use or Removal Order for XtendiMax and Engenia. The sale, distribution, and use of XtendiMax and Engenia resumed in Missouri, subject to a Special Local Need label for the re-released dicamba-based herbicides, in effect until December 1, 2017.

430. These updated labels imposed new application requirements for applicators, including a 10-mph maximum wind speed restriction, a limited application timing window between 9:00 a.m. and 3:00 p.m., certification requirements for applicators, completion of an online notice of applicator prior to entering the field with a sprayer, recordkeeping requirements, and the applicator must measure and record wind speed and wind direction for each field prior to application. *See* http://agriculture.mo.gov/news/newsitem/uuid/864bbc1a-9871-48dc-8fe3-a3b518a9c15d (last visited Aug. 17, 2017).

431. Certified applicators are person who have undergone training and become certified in the safe use of restricted use products. To obtain a certified private application license in Missouri, the applicator must complete a training program through the University of Missouri Extension Office and complete a verification form.

432. Several other states, including Arkansas, Alabama, Georgia, and North Carolina have also required Special Local Need labels. These more restrictive labels for XtendiMax and Engenia have not stopped the damage.

433. As accurately stated by Dr. Ford Baldwin in a *Delta Farm Press* article on August 17, 2017, "Additional application restrictions on the herbicides simply will not fix this problem." *See* http://www.deltafarmpress.com/weeds/baldwin-latest-dicamba-research-and-new-task-force (last visited Aug. 19, 2017).

434. Dr. Jason Norsworthy echoed Dr. Baldwin's concern, stating the biggest problem with Defendants' dicamba herbicides is their volatility, and the tighter restrictions on spraying XtendiMax or Engenia will not fix their tendency to move off target. "I can fix physical drift," Dr. Norsworthy stated. "I can't do anything about volatility." *See* http://www.arkansasonline.com/news/2017/aug/18/no-dicamba-in-18-weed-expert-urges-2017/#.WZtMIWp96TA.email (last visited Aug. 22, 2017).

435. Missouri's brief ban and new restrictions on dicamba did not stop Defendants' dicamba herbicides from wreaking havoc to farmers' crops, including Plaintiffs', once farmers resumed spraying Defendants' dicamba herbicides on Xtend crops for the continuation of the 2017 growing season.

436. More than half of the approximately 280 dicamba damage complaints that the MDA has received in 2017 have come since Missouri lifted its ban and put the new restrictions in place.

437. The defect is with Defendants' products, not with the labels or the restrictions placed on them. As accurately stated by Dr. Jason Norsworthy in the *Arkansas Democrat-Gazette* on August 18, 2017, speaking to an Arkansas task force appointed to address the future use dicamba, "This is a product that is broken. This is a product we can't put on plants during the summer months of 2017 and keep it there." *See* http://www.arkansasonline.com/news/2017/aug/18/no-dicamba-in-18-weed-expert-urges-2017/#.WZtMIWp96TA.email (last visited Aug. 22, 2017).

438. On July 11, 2017, the Tennessee Department of Agriculture took measures to mitigate the risk of dicamba damage by banning older formulations of dicamba for the remainder of the 2017 growing reasons, adding certification requirements for applicators, an application window between 9 a.m. and 4 p.m., and no dicamba applications on cotton after first bloom. *See* https://www.tn.gov/agriculture/article/ag-businesses-dicamba-resources (last visited Aug. 21, 2017).

439. In response to the dicamba restrictions in Tennessee, Defendant Monsanto released a statement on July 12, 2017. In this statement, Defendant Monsanto congratulated Tennessee's "good sense" decision to only ban older dicamba formulations for the 2017 growing season, not Defendants' newly-minted dicamba herbicides. *See*

https://monsanto.com/company/media/statements/tennessee-dicamba-statement/ (last visited Aug. 17, 2017).

440. The actions by Arkansas, Missouri, Tennessee, and other states upon receiving over a thousand dicamba damage complaints and suffering millions of acres of damage in 2017 were again aimed to protect non-DT crops and specialty crop growers from the damage caused by the use of Defendants' defective DT System.

441. In late July 2017, the EPA issued a second Compliance Advisory – Crop Damage Complaints Related to Dicamba Herbicides Raising Concerns – to replace its Advisory issued in August 2016.

442. The 2017 Advisory addressed agricultural concerns with the conditional approval of the new dicamba-based herbicides and that some states are reporting high numbers of dicamba complaints. "Both physical drift and volatilization of dicamba from the target application site have been reported," the EPA stated.

443. Despite the EPA's comments and actions taken by Missouri and other states, Defendants have consistently pressed state agencies, weed scientists, and farmers not to rush to conclusions about the cause of the on-going damage in 2017. Yet Defendants have publicly offered a plethora of conclusions about the cause of the damage. Some of these are:

(a) off-label use of older formulations of dicamba;

(b) volatility of older and generic dicamba formulations;

(c) volatility of older and generic dicamba formulations (exacerbated or confused by temperature inversions);

(d) other herbicides, such as Liberty Link;

(e) other crop protection products and additives;

(f) contaminated equipment;

(g) contaminated glufosinate products;

(h) wind patterns;

(i) wind speeds;

(j) wind conditions;

(k) other weather factors;

(l) environmental factors;

(m) disease;

(n) calcium deficiency;

(o) misdiagnosis;

(p) "unsubstantiated" claims;

(q) improper tank mixes;

(r) improper sprayer clean outs;

(s) aerial applications;

(t) farmers using the wrong nozzles;

(u) farmers using the wrong boom height;

(v) farmers using the wrong spray pressure;

(w) farmers' failure to follow guidelines and buffer restrictions; and

(x) there is no real problem at all because the damage is cosmetic and will not cause yield loss.

See http://www.indianaprairiefarmer.com/crop-protection/monsanto-officials-add-their-perspective-dicamba-issues-season; https://medium.com/@RobbFraley/talking-dicamba-with-farmers-what-i-learned-3830a07c6e75; http://www.croplife.com/crop-inputs/basf-in-arkansas-drift-cases-buffer-zones-mostly-not-followed/ (last visited Aug. 21, 2017).

444. In other words, according to Defendants, everything but Defendants' defective products are to blame. Defendant Monsanto's Robb Fraley also said, without a shred of data in support, that the use of older dicamba herbicides in 2017 accounts for 25% of the applications, and thus the problems. *See id.* Even if this conjecture were true, Defendant Monsanto's refusal to cancel any use agreements with its licensees is exactly why licensees are emboldened to use any dicamba formulation they choose, knowing Defendant Monsanto will impose no consequences on them.

445. According to Defendant Monsanto, the company is conducting its own investigations into reports of off-target damage from dicamba. "And we are visiting every single field," Scott Partridge stated. *See* http://cen.acs.org/articles/95/i33/Widespread-crop-damage-dicamba-herbicide.html (last visited Aug. 22, 2017).

(2) Volatility Testing by Weed Scientists Proves Defendants' New Dicamba Herbicides Are Unsafe and Defective

446. Unbiased weed scientists have been very clear through their analysis and data results that XtendiMax and Engenia are volatile herbicides, despite Defendants' claims to the contrary. Weed scientists have also identified the volatility of Defendants' XtendiMax and Engenia as the primary reason for the damage that is occurring to non-DT crops. *See* https://ipm.missouri.edu/IPCM/2017/7/Ag_Industry_Do_we_have_a_problem_yet/ (last visited Aug. 22, 2017).

447. For example, on July 6, 2017, Dr. Kevin Bradley showcased his preliminary research and findings on XtendiMax and Engenia. In his presentation on the off-target movement of Defendants' dicamba herbicides, Dr. Bradley stated, "The majority of the 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." *See*

http://weedscience.missouri.edu/2017%20Dicamba%20Injury%20Forum.pdf (last visited Aug. 22, 2017); *see also* Ex. 1F - Dr. Kevin Bradley – Dicamba Injury Forum.

448. Dr. Bradley's research on the volatility of XtendiMax and Engenia, especially his preliminary results with air samples and indicator plants, suggest that both XtendiMax and Engenia can be detected in the air after application and that volatilization continues at least 24 hours after treatment. *See id.*

449. Further, Dr. Bradley's research shows that Defendant Monsanto's XtendiMax performs worse than older formulations of dicamba, like Banvel, and that over time, XtendiMax has the same, if not worse, volatility as Banvel. *See id.*

450. These findings rebut Defendant Monsanto's statements on the panoply of reasons for the dicamba damage occurring in Southeast Missouri and its claims that XtendiMax has reduced volatility compared to other dicamba herbicides. They also help explain why Defendant Monsanto refused to allow university scientists to test its XtendiMax herbicide for volatility and off-target movement. *See id.*; http://www.deltafarmpress.com/weeds/what-does-latest-research-dicamba-show; http://weedscience.missouri.edu/2017%20Dicamba%20Injury%20Forum.pdf (last visited Aug. 22, 2017).

451. Dr. Thomas Mueller, a weed science professor at the University of Tennessee, also conducted independent research on Defendants' new dicamba-based herbicides. Dr. Mueller's data shows that Engenia volatilizes and can depart from a field at least 36 hours after application. Dr. Mueller stated:

> [Engenia] is moving from the site of application into the air immediately above the treated field. Subsequent later movement in air is to be expected. Given sensitivity of soybeans to POST dicamba, these data indicate that soybean injury in adjacent areas should be expected from vapor movement of dicamba after application. Yield effects from this injury, or multiple injuries (from multiple episodes of dicamba drift) are unknown, but yield reductions may be possible.

See https://aapco.files.wordpress.com/2017/08/dicamba-epa-call.pdf (last visited Aug. 23, 2017).

452. Dr. Meuller's research on Engenia refutes Defendant BASF's claims about the various reasons for the dicamba damage occurring in Southeast Missouri and its claims that Engenia's alleged reduced volatility compared to other dicamba herbicides renders it unsafe for its intended use. *See id.*

453. In response to Dr. Mueller's findings, Dr. Larry Steckel stated on the UT crops News Blog on July 18, 2017, "I have seen data as well that would suggest that XtendiMax shows [a] similar level of volatility over that same time frame." *See* http://news.utcrops.com/2017/07/cant-keep-dicamba-field/ (last visited Aug. 22, 2017).

454. Also, Dr. Jason Norsworthy's presentation "Primary and Secondary Large-plot Dicamba Movement," at Arkansas's August 8, 2017 Northeast Research and Extension Center Field Day in Keiser, Arkansas offers more scientific proof that Defendants' XtendiMax and Engenia herbicides are volatile and the volatility is long-lived. *See* https://www.youtube.com/watch?feature=youtu.be&v=DOTNglIORVU&app=desktop; http://www.deltafarmpress.com/weeds/what-does-latest-research-dicamba-show (last visited Aug. 22, 2017).

455. In his research and trials with XtendiMax and Engenia, Dr. Norsworthy discovered tremendous amounts of Defendants' dicamba herbicides moving off the research fields. After at least 12 days following applications of Defendants' dicamba herbicides, both XtendiMax and Engenia, volatilized and moved off-target, even when the herbicides were sprayed following the labels. *See id.*

456. Dr. Norsworthy's data revealed that when XtendiMax and Engenia were applied on the research field into a westward wind, damage occurred to non-DT crops on the east side of the

field due to volatilization. When the wind shifted to blow out of the south six hours after application, damage occurred to the north side of the field due to volatilization. *See id.*

457. Further, Dr. Norsworthy introduced soybean plants originally grown in a greenhouse to the fields treated with Defendants' dicamba herbicides a half hour, 24 hours, and 36 hours after application. These plants were also severely damaged due to volatilization. *See id.*

458. In addition, soybean plants that were sheltered under buckets near the treated fields when Dr. Norsworthy sprayed XtendiMax and Engenia and were uncovered 30 minutes and 36 hours after application also suffered damage due to volatilization. "Is [XtendiMax and Engenia] volatizing and causing damage to plants under buckets? Absolutely," Dr. Norsworthy stated. *See id.*; http://www.nwaonline.com/news/2017/aug/12/tests-show-dicamba-s-volatility-2017081/ (last visited Aug. 22, 2017).

459. Further, Dr. Norsworthy's data refutes the effectiveness of Defendants' buffer zone requirements for XtendiMax and Engenia, as off-target movement and damage to crops occurred well beyond the 110-foot buffer restrictions set by the labels, out to at least 220 feet, proving that Defendants' buffer zones are of little consequence in regard to volatility and drift. *See id.*

460. Despite Defendants' assertions that the cause of the dicamba damage is farmer and applicator error or an inability to follow the label requirements, Dr. Norsworthy's findings prove that a user can follow all of the regulations and still experience volatility and off-target movement for at least 36 hours after application Defendants' herbicides, if not more. Dr. Norsworthy stopped his study at the 36-hour mark. *See id.*

461. Dr. Tom Barber, also a presenter August 8, 2017 Field Day in Keiser, Arkansas, echoed Dr. Norsworthy's findings on the volatility of XtendiMax and Engenia. *See* http://www.nwaonline.com/news/2017/aug/12/tests-show-dicamba-s-volatility-2017081/?business (last visited Aug. 24, 2017).

462. Additionally, Dr. Aaron Hager is among the many scientists who vehemently disputes Defendants' stated reasons for the dicamba-related damage.

463. In his post on a pest management and crop development blog on the University of Illinois's website, Dr. Hager states, "Environmental conditions are frequently mentioned as inducing leaf cupping, yet I cannot find any peer-reviewed literature that specify or describe these conditions." Dr. Hager also stated that there have been no reports of Xtend crops suffering from the effects of environmental conditions – a sign that many of Defendants' claims are blatantly false or invented. *See* http://bulletin.ipm.illinois.edu/?p=3942 (last visited Aug. 22, 2017).

464. Dr. Hager challenges Defendants' claims about the rampant use of the older formulations. He states, "If we should 'thoroughly investigate before drawing conclusions,' it seems premature to me to conclude the instances of volatility are wholly attributable to older dicamba formulations." *See id.*

465. Dr. Hager also disputes several other explanations Defendants have offered as the cause of the dicamba damage, including physical drift or contaminated equipment. Dr. Hager found that the symptoms in many affected fields "do NOT" follow patterns associated with drift or contaminated application equipment," and that exposure to volatility is the actual culprit. *See id.* (emphasis in original).

466. Additionally, according to Dr. Bob Hartzler, other herbicides rarely show uniform injury across entire fields. This is a specific injury pattern caused by dicamba volatilization. Dr. Hartzler emphasized that crop sensitivity to dicamba, the use of dicamba later in the growing season, higher temperatures, increased acreage, and the increased use of Defendants' dicamba products since 2015 only magnify the volatility of Defendants' already volatile products. *See* https://crops.extension.iastate.edu/blog/bob-hartzler/thoughts-dicamba-dilemma (last visited Aug. 22, 2017).

467. Dr. Aaron Hager agrees with Dr. Hartzler's position on the risk posed by dicamba in non-DT crops due to their sensitivity. As accurately stated by Dr. Hager to *Chemical & Engineering News* on August 21, 2017, "Soy is so sensitive to very small amounts of dicamba. It is an amount like the spray when you open a can of Coke – but spread over an acre." *See* http://cen.acs.org/articles/95/i33/Widespread-crop-damage-dicamba-herbicide.html (last visited Aug. 22, 2017).

468. In several statements, Defendant Monsanto's Robb Fraley has denied that Defendants' products will result in lost yields to non-DT crops. Dr. Fraley stated that leaf cupping, the foremost recognizable symptom of dicamba damage, is temporary, short-term injury in affected plants, and the injured plants will outgrow the damage and produce normal yields. *See* http://www.indianaprairiefarmer.com/crop-protection/monsanto-officials-add-their-perspective-dicamba-issues-season; https://medium.com/@RobbFraley/talking-dicamba-with-farmers-what-i-learned-3830a07c6e75 (last visited Aug. 22, 2017).

469. Defendants not only deny that injury caused by their dicamba products will cause yield loss in sensitive crops, but they state that in many cases the yields in injured crops will actually increase. *See* http://bulletin.ipm.illinois.edu/?p=3942 (last visited Aug. 22, 2017).

470. Weed scientists, however, contest Defendant Monsanto's absurd statement on the recovery and normal yield production of dicamba injured crops.

471. In an August 17, 2017 article in the *Delta Farm Press*, Dr. Ford Baldwin stated that in his many investigations of soybean fields damaged by Defendants' dicamba herbicides, he has observed that while some plants appear to recover from a vegetative standpoint after being injured by dicamba, a closer inspection of the injured plant shows that the pods and beans look and remain afflicted. "[W]hen you pull the plants back and look for blooms and pods it is a much different story," Dr. Baldwin stated. The result of dicamba injury to crops results in yield loss. *See*

http://www.deltafarmpress.com/weeds/baldwin-latest-dicamba-research-and-new-task-force (last visited Aug. 22, 2017).

472. Further, Dr. Aaron Hager rebukes Dr. Fraley's premature and unsubstantiated statement on the absence of yield loss in crops injured by Defendants' herbicides, calling it incredibly troubling, unprofessional, and unethical. *See* http://bulletin.ipm.illinois.edu/?p=3942 (last visited Aug. 22, 2017).

473. Such negligent and irresponsible behavior by Defendants is now the norm. Despite overwhelming, unbiased scientific findings by the foregoing, respected members of the agricultural scientific communities, Defendants still deny that the cause of the harm to Plaintiff' and others in 2017 is the volatility of their herbicides.

474. In a July 21, 2017 blog post on Defendant Monsanto's website, Brian Naber, Defendant Monsanto's U.S. commercial operations lead, stated:

> [V]olatility of the approved over the top products is ***not*** the major source of off-target movement. Instead, the evidence we're seeing is pointing to: [i]llegal applications of non-approved products; [l]ack of compliance with the labeled spray requirements; and direct application of contaminated products that can result from either improper tank clean out or the use of contaminated products (emphasis in original).

See https://monsanto.com/products/articles/dicamba-field-investigations-monsanto-learned-far/ (last visited Aug. 22, 2-17).

475. Weed scientists have refused to back down from their positions about the ecological and agricultural crisis Defendants have created.

476. For example, referring to Defendants' products as "broken," Dr. Jason Norsworthy recently told the members of a task force on dicamba that he does not recommend that dicamba herbicides be allowed for use in Arkansas. *See* http://www.arkansasonline.com/news/2017/aug/18/no-dicamba-in-18-weed-expert-urges-2017/#.WZtMIWp96TA.email (last visited Aug. 22, 2017).

477. Additionally, David Hundley, a grain production manager for Ozark Mountain Poultry, a fast-growing poultry operation in Arkansas, told the Arkansas task force that the use of Defendants' dicamba herbicides is "not just bad; it's toxic." *See id.*

478. Thus, Defendants' coordinated statements and stated reasons for the damage serve Defendants' mutual purpose to act in concert to create a massive dicamba crisis from the sale and distribution of their dicamba products in order to ensure increased demand and profits.

479. By mid-August 2017, the total acreage of farmland, vegetation, and timber damaged by dicamba in the U.S. had reached approximately 3 million acres, with over 850,000 damaged acres in neighboring Arkansas and more than 300,000 acres of damage in Missouri, and these numbers increase with each passing day.

480. On August 24, 2017, the Arkansas task force on dicamba recommended severe restrictions for the in-crop use of dicamba herbicides, including Defendant's XtendiMax and Engenia herbicides. The task force recommended an April 15 cutoff for the spraying of dicamba in-crop. Defendants made presentations to the task force and admitted there is volatility and off-target movement of their new herbicides, but continued to place the blame for the nationwide dicamba damage on the applicators. *See* http://m.arkansasonline.com/news/2017/aug/25/task-force-recommends-april-15-dicamba--1/; http://www.arkansasonline.com/news/2017/aug/24/panelists-meeting-again-on-dicamba-2017/?f=business (last visited Aug. 25, 2017).

481. In 2017, the MDA received 310 dicamba damage complaints. The Arkansas State Plant Board received 986 complaints. These rising numbers of dicamba damage complaints in Missouri and Arkansas are a tragic measure of the damage caused by Defendants' defective dicamba products.

482. As stated by Dr. Larry Steckel, commenting on the many dicamba damaged fields he has walked, "I knew we'd see drift and there'd be problems. But I had no idea it would be to this scale. The scale caught us all off-guard, I think." *See* http://www.deltafarmpress.com/soybeans/new-dicamba-regulations-issued-tennessee (last visited Aug. 25, 2017).

483. Use of the Xtend crop system doubled nationwide in 2018, from approximately 25 million acres in 2017 to approximately 50 million acres in 2018, with farmers defensively planting Xtend seed to avoid crop damage. As of September 6, 2018, approximately 1,400 dicamba-related incidents were reported to AAPCO for 2018. The sensitive crops identified in these incidents include everything from fruit and nut trees to tobacco to vegetables and vegetation. As of mid-July, Dr. Bradley reported 1.1 million U.S. soybean acres had suffered dicamba injury, and total complaints nationwide were 605.

484. In spite of farmers' losses due to the volatility of Defendants' herbicides and weed scientists' findings that Defendants' products are the cause of the problems of the dicamba damage, sales of Defendants' dicamba products will continue to soar as more and more soybean and cotton farmers in Missouri and elsewhere are forced to engage in defensive planting.

485. Through their concerted activities to suppress the risks of the volatility and damage caused by Defendants' dicamba products, and their fear-based marketing tactics, Defendants conspired to threaten, harass, and intimidate innocent growers from complaining or seeking regulatory or legal assistance.

486. Based on the volatility research conducted by university weed scientists and the heart-wrenching stories told by farmers whose crops have suffered damage at the hands of Defendants' products, it is evident there never was a safe, non-defective dicamba herbicide available for use with Xtend seed. Defendants' new dicamba herbicides and dicamba-tolerant seed

are dangerous and defective products that cannot be used safely for their intended use, thus making the entire crop system defective.

U. Dicamba Damage to Plaintiff Bader Farms

487. Plaintiff Bader Farms is located in Dunklin County, Missouri. A vast amount of farmland in Dunklin County is devoted to the production of cotton and soybean.

488. Many farmers whose land is located in close proximity to Plaintiff Bader Farms planted Xtend cotton in 2015 and in 2016, they planted Xtend cotton and Xtend soybean.

489. In 2015, in an effort to control weeds in their Xtend crops, Plaintiffs' neighboring farmers sprayed their Xtend crops over-the-top with older versions of dicamba, sold by Defendant BASF or on its behalf. At that time, neither of Defendants' new dicamba-based herbicides had received EPA registration.

490. The result of these farmers planting Xtend seed and spraying them with older versions of dicamba was mass destruction to Plaintiffs' crops, resulting in great financial loss by the end of 2017.

491. Yet, in 2017, with the availability of Xtend seed and Defendants' XtendiMax and Engenia herbicides, Plaintiffs' dicamba problems did not abate – they got worse. When farmers near Plaintiff Bader Farms sprayed Defendants' new herbicides over-the-top of their Xtend crops, Defendants' herbicides volatilized, resulting in more damage to all Plaintiffs' crops and timber trees.

492. The harm to Plaintiffs, beginning in 2015 and extending into 2018 and beyond, will not be remedied as long as this defective crop system remains on the market. Plaintiffs cannot force other farmers to stop planting Xtend seed or to stop using Defendants' herbicides. Plaintiff Bader cannot move his farm. The damage caused by Defendants' defective products will continue well past 2018, and with it, massive losses in Plaintiffs' revenues.

(1) Dicamba Damage to Plaintiff Bader Farms in 2015

493. In 2015, Plaintiff Bader began to notice signs of dicamba damage on his farm.

494. Plaintiff Bader Farms first experienced dicamba damage in early Spring of 2015, following exposure to dicamba caused by aerial application during burndown. However, Plaintiff Bader Farms peach trees began recovering shortly after the burndown injury occurred. Then, following this exposure, Plaintiffs' peach trees were damaged again with later-season exposures to over-the-top dicamba applications, causing more substantial injury that stretched beyond the areas that were damaged from burndown.

495. The bulk of the injury Bader Farms experienced in 2015 was the result of the later-season exposure to dicamba sprayed over the top of Xtend cotton crops.

496. The dicamba damage to Plaintiff Bader Farms in 2015 from farmers spraying dicamba on their Xtend crops was extensive – damaging more than 7,000 peach trees.

497. On April 16, 2015, due to Plaintiff Bader's increasing concern for the safety of his peach trees and his livelihood, Plaintiff Bader filed a damage complaint with the MDA, alleging a pesticide application drifted and damaged a peach orchard on his property.

498. An additional damage complaint similar to Plaintiff Bader's was filed by Judy Weaver of the Missouri Department of Natural Resource, alleging a pesticide application drifted and damaged trees in Morris State Park, which is by Plaintiff Bader Farms.

499. Also on April 16, 2015, Plaintiff Bader Farms enlisted A&L Analytical Laboratories in Memphis, Tennessee to conduct leaf and fruit testing done on its peach trees.

500. The results of the tests performed by A&L Analytical Laboratories confirmed detectable amounts of glyphosate and 2,4-D.

501. Additionally, on the same day that Plaintiff Bader Farms pulled leaves from its peach trees for analysis, Austin Hake, a Pesticide Use Investigator with the Missouri State Plant

Board pulled leaves from peach trees at multiple locations on Plaintiff Bader Farms' property for testing.

502. The results of the tests done by the Missouri State Plant Board on tree foliage of Plaintiff Bader Farms' peach trees in the southeast and southwestern corners of the property confirmed large amounts of dicamba, 2,4-D, and glyphosate.

503. Plaintiff Bader also filed an insurance claim with Old Republic Insurance Company due to the chemical damage done to his crops in 2015.

504. Old Republic Insurance Company pulled leaves from Plaintiff Bader Farms' peach trees for testing in late April 2015. The results of those tests confirmed detectable amounts of dicamba and 2,4-D.

505. To protect Plaintiff Bader Farms, Plaintiff Bader also fought aggressively to save 150 acres of peach trees that showed symptoms of dicamba damage. He treated the trees with micronutrients and spent $200,000 in an effort to return them to good health.

506. In early August 2015, Plaintiff Bader made the first of several calls to Defendant Monsanto and spoke to a customer service representative.

507. During the call, Plaintiff Bader complained to Defendant Monsanto about the damage being done by off-target movement of dicamba from off-label, over-the-top spraying on Xtend cotton.

508. Plaintiff Bader asked Defendant Monsanto to come out and visit his property and look the damage. Defendant Monsanto replied that it did not have the manpower to investigate Plaintiff Bader's complaint. Defendant Monsanto told Plaintiff Bader that a field representative, Mr. Greg Starling, would contact Plaintiff Bader soon.

509. In early August 2015, Starling contacted Plaintiff Bader by telephone. During their conversation, Plaintiff Bader asked Mr. Starling to come see the damage at Plaintiff Bader Farms. Mr. Starling never came.

510. Even with actual notice of off-label spraying in 2015, Defendant Monsanto continued to give farmers a green light to spray dicamba on Xtend crops.

511. On October 23, 2015, Plaintiff Bader and Judy Weaver received a response to their damage complaints from the MDA.

512. In the response, the MDA stated that it believed a violation of the Missouri Pesticide Use Act had occurred, and determined from its investigation, specifically that Mr. James Long of Hampton Aviation in Dudley, Missouri, applied herbicides as a burndown application to Mr. Cody Levert's 75-acre field located south of State Highway J and east of County Road 233 in Dunklin County, Missouri – less than one and a half miles from Plaintiff Bader Farms. The MDA stated that James Long used a registered pesticide inconsistent with label directions, restrictions and precautions found on relevant pesticide labels pursuant to Sections 281.101.1 and 281.101.2(1) of Missouri Revised Statutes.

513. Also on October 23, 2015, James Long received a warning from the MDA notifying him there was reason to believe that he used a pesticide inconsistent with label directions, restrictions, and precautions.

514. As a result, Plaintiff Bader Farms' insurance company, Old Republic, denied the claim.

515. On December 10, 2015, Plaintiff Bader attended an annual watermelon meeting in Kennett, Missouri. The meeting covered timely topics for agriculture growers. Darryl Slade from the MDA was present to discuss details regarding 2,4-D and dicamba injuries to crops. Mr. Slade

also discussed how a farmer could file a dicamba damage complaint and how the MDA conducts investigations on pesticide damage.

516. In 2015, Plaintiff Bader Farms suffered damage to more than 7,000 peach trees.

517. Plaintiff Bader Farms' peach sales since 2011 have seen the following yearly totals:

a) 2011: $2,308,383.00;

b) 2012: $2,027,623.00;

c) 2013: $2,376,905.00; and

d) 2014: $2,428,505.00.

518. In 2015, Plaintiff Bader Farms' total peach sales of $1,673,795.00 was a significant reduction from its 2011-2014 average of $2,285,354.00.

(2) Dicamba Damage to Plaintiff Bader Farms in 2016

519. Despite the problems of dicamba drift and volatilization in 2015, the 2016 growing season had the appearance of a bumper peach crop for Plaintiff Bader Farms.

520. This bumper crop should have reached upwards of 120,000 bushels of peaches.

521. In 2009, Plaintiff Bader Farms planted an additional 60,000 new peach trees on its property. These new trees should have been at the peak of their prime production years for harvest in 2016.

522. However, because of the excessive destruction that occurred in the 2016 growing season from the illegal spraying of dicamba on Xtend crops near Plaintiff Bader Farms, Plaintiffs' hopes for a bumper crop were dashed.

523. During the 2016 growing season, the MDA received 130 formal complaints of dicamba damage, alleging damage across more than 40,000 acres to soybean, peaches, tomatoes, watermelons, cantaloupe, rice, purple-hull peas, peanuts, cotton and alfalfa, as well as to residential gardens, trees, and shrubs. Among these complaints was Plaintiff Bader's.

524. The vast majority of the dicamba damage complaints were made between June 22, 2016 and the first week of August 2016, and also all occurred within the four-county region of Dunklin, New Madrid, Pemiscot, and Stoddard Counties.

525. As accurately stated by the MDA, yearly pesticide damage complaints are typically split evenly between farmers and commercial applicators. In 2016, however, the majority of pesticide damage complaints were against farmers.

526. On June 2, 2016, Plaintiff Bader contacted the MDA to inform it that Plaintiff Bader knew and had heard about several area farmers who were out looking for older dicamba formulations to spray on their Xtend crops.

527. Based upon Plaintiffs' damage and knowledge, the older dicamba formulations sold to those same local farmers was sprayed initially on or about June 10, 2016.

528. Typically, it takes 10 to 14 days for symptomology of dicamba injury to reveal itself in crops and trees.

529. On or about June 21, 2016, Plaintiff Bader and Cody Bader saw the first signs of dicamba damage to their peach trees from dicamba sprayed on Xtend crops by other farmers. These signs include: the leaves on the tree curled and turned yellow, the peach fruit did not size properly and would not grow beyond the size of a quarter coin, and many peach trees began to die.

530. Plaintiff Bader Farms was hit with dicamba on at least four separate occasions in 2016 from dicamba sprayed on Xtend crops by other farmers, roughly every 10 days beginning on June 21, 2016.

531. Week after week throughout June, July, and August 2016, Plaintiff Bader Farms' peach trees all across their orchards began to die.

532. In response to the damage from pesticide drift and volatilization, Plaintiff Bader Farms used expensive applications of micronutrients and fertilizer to nurse their injured peach

trees back to health, but these remedial efforts proved futile as the dicamba drift and volatilization continued and Plaintiff Bader Farms' crops continued to suffer irreparable damage.

533. Since 2016, Plaintiff Bader Farms has spent over $300,000 to combat the dicamba damage and revive damaged peach trees with micronutrients and fertilizer.

534. As of June 15, 2016, the damage from dicamba drift and volatilization to Plaintiff Bader Farms had affected over 700 acres of peach orchards with light to heavy damage from dicamba, inclusive of over 20,000 injured peach trees.

535. The dicamba damage to Plaintiff Bader Farms also prevented Plaintiff Bader from harvesting fruit from roughly 8,000 to 10,000 peach trees in 2016.

536. In late June 2016, Plaintiff Bader called the MDA based on concerns that his peach trees looked sick. Clients and consumers also expressed concern as to whether the fruit was safe to eat.

537. On or about late June 2016, the MDA sent a local health team to Plaintiff Bader Farms, along with a group from the USDA, to pull pesticide test samples.

538. The MDA has not completed its analysis, but Plaintiff Bader Farms' peach fruit, peach trees, and the leaves on the trees continue to show signs of dicamba damage.

539. In an effort to get Defendant Monsanto to do the right thing, on or around July 6, 2016, Plaintiff Bader telephoned Defendant Monsanto, as he had done in 2015. The damage to his crops was overwhelming and he wanted Defendant Monsanto to know what was happening in Southeast Missouri. This call was directed to a company representative.

540. During this call with Defendant Monsanto, Plaintiff Bader explained the numerous issues he had seen with dicamba since 2015. Plaintiff Bader informed Defendant Monsanto that other farmers were spraying dicamba over-the-top on Xtend soybean and cotton and he complained that Defendant Monsanto was doing nothing to stop or deter the illegal spraying of dicamba.

541. Defendant Monsanto said it did not sell dicamba, it had no dicamba approved for use with its Xtend products, and that the farmers in question were spraying illegally. Defendant Monsanto's employee also told Plaintiff Bader that the telephone conversation was being recorded.

542. A day or two later, on or around July 6 or 7, 2016, a lawyer for Defendant Monsanto called Plaintiff Bader. In the conversation, the lawyer asked Plaintiff Bader if he had hired an attorney, to which Plaintiff Bader responded, "No."

543. Plaintiff Bader relayed the same information that he told the employee for Defendant Monsanto a few days earlier and expressed frustration that thousands of acres of Southeast Missouri farmland were being destroyed. Yet Defendant Monsanto was unwilling to do anything about it. The lawyer told Plaintiff Bader that this call was also being recorded.

544. On or around July 10 or 12, 2016, Plaintiff Bader spoke with the same lawyer for Defendant Monsanto that he spoke to on July 6 or 7. The conversation went much like Plaintiff Bader's prior conversations with Defendant Monsanto, except he also informed Defendant Monsanto's attorney that the damage done to the field crops at Plaintiff Bader Farms will not be known until the fall of 2016.

545. Plaintiff Bader further stated that farmers in and around Dunklin County were saying that 10% to 15% of their crops would be unable to be harvested. Plaintiff Bader said his own peach crop had been cut by at least 40%. Plaintiff Bader invited Defendant Monsanto's lawyer to come visit his farm and see the extensive damage for himself or send someone on his behalf to witness the damage. The lawyer declined.

546. Another similar call between Defendant's Regional Agronomy Lead, Boyd Carey, and Plaintiff Bader occurred in mid to late July 2016, resulting in further inaction and denial of responsibility by Defendant Monsanto.

547. In 2016, the damage to Plaintiff Bader Farms from dicamba increased dramatically.

548. By November 2016, Plaintiff Bader Farms estimated a loss of over 30,000 peach trees due to dicamba damage across hundreds of acres of its peach orchards.

549. Also in 2016, Plaintiff Bader Farms had at least seven workers who experienced respiratory problems, including Plaintiff Bader, and all workers complained of worsening sinus and allergy symptoms.

550. In an attempt to rebuild its losses in 2016 alone, Plaintiff Bader Farms spent hundreds of thousands of dollars on efforts to revive and salvage the dicamba-damaged trees.

551. The pride and reputation for quality peaches that Plaintiff Bader Farms has built over the years has also been impacted by Defendants and dicamba.

552. Demand for Plaintiff Bader Farms' peaches is extremely high. Due to the dicamba damage, Plaintiff Bader Farms has suffered losses to the business due to a lack of supply of peaches from the injured or destroyed peach trees.

553. Further, Plaintiff Bader Farms had to turn away new business because Plaintiff Bader Farms struggled to supply its existing customer base with peaches and could not take on new business.

554. Also, many existing customers complained about the lack of peaches from Plaintiff Bader Farms. Some of these existing customers had bought peaches from Plaintiff Bader Farms for 10 to 20 years and could no longer do so.

555. The on-site retail business at Plaintiff Bader Farms was also down 15% to 20% in retail sales in 2016.

556. By the end of the 2016 growing season, the ability of Plaintiff Bader Farms to remain financially viable in the face of this onslaught of damage was uncertain.

(3) Dicamba Damage to Plaintiff Bader Farms in 2017

557. In 2017, the damage to Plaintiff Bader Farms' peach trees, other crops, and business from dicamba compounded the damage that Plaintiffs suffered in 2015 and 2016.

558. On at least two occasions in July 2017, Plaintiffs noticed the tell-tale signs of dicamba damage from volatility and off-target movement, including damage from the spraying and use of Defendants' extremely volatile and drift-prone dicamba-based herbicides, to their peach trees, other crops, and timber trees.

559. Every acre of Plaintiffs' orchards, fields, and crops has suffered dicamba damage, resulting in substantial yield loss and lost profits.

560. Plaintiffs continued to purchase new peach trees and other crops in an effort to curtail the damage, expend additional labor to plant and treat their peach trees, and also treat their peach trees and other crops with costly fertilizers and nutrients to attempt to save them for current and future production, only to watch more trees, including newly planted trees, die.

(4) Dicamba Damage to Plaintiff Bader Farms in 2018 and Beyond

561. In 2018, damage to Bader Farms in 2018 continued, as cotton and soybean farmers near Bader Farms continued to plant Xtend cotton and soybean and spray Defendants' dicamba herbicides, thereby causing continuing damage to Bader Farms' peach trees through off-target movement.

562. The damage to the peach trees in 2018 was visible, with the peach trees and surrounding vegetation showing classic signs of dicamba damage.

563. This 2018 dicamba damage, combined with the dicamba damage in each year from 2015 through 2017, had a cumulative and crippling impact on Plaintiffs' peach trees, which were already weakened from the prior years of damage caused by dicamba sprayed over the top of Xtend crops.

564. In 2018, Plaintiffs continued to relentlessly purchase and apply micronutrients attempting to nurse Bader Farms' peach trees back to health.

565. Mr. Bader pushed out dead or severely damaged trees and planted new ones, only to see those trees die within a year or two as well. Despite these exhaustive efforts, the existing trees are so weakened by now, and have been for the last couple of years, that nothing Mr. Bader does will salvage them, and there is nothing he can do to protect any newly planted trees.

566. Once again, Plaintiffs were forced to expend hundreds of thousands of dollars to repair the damage to their peach trees and other crops from dicamba damage.

567. By the end of the 2018 growing season, Bader Farms' peach trees have become so damaged that it is not feasible for the peach operation to continue without operating at a loss.

568. Bader Farms' peach operation is no longer sustainable from either a biological or a financial perspective.

569. Bader Farms' lost future profits caused by dicamba damage to date are estimated to have a net present value in excess of $55,000,000.

V. Damage to Plaintiff Bader

570. As a direct result of Defendants' greed and irresponsible behavior, Plaintiff Bader has experienced great frustration, sadness, anxiety, depression, distress, loss of time, and damage to his personal and professional reputation.

COUNT I – STRICT LIABILITY – DESIGN DEFECT

571. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

572. Defendants designed, tested, developed, manufactured, marketed, distributed, and sold the Xtend Crop System – including Xtend seed, Defendant Monsanto's XtendiMax herbicide, Defendant BASF's Engenia herbicide and other dicamba herbicides (hereinafter "dicamba-based products") – in their ordinary course of business.

573. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1) an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

574. As described above, Defendants' dicamba-based products were in a defective condition, unreasonably dangerous when put to their reasonably anticipated use because no safe, non-defective herbicide, including Defendants XtendiMax and Engenia herbicides, was marketed by Defendants. Thus, Defendants' dicamba-based products were defective and unreasonably dangerous due to Defendants' inability to provide an herbicide reasonably safe for its intended use.

575. Defendants' dicamba-based products were used by farmers and applicators for the cultivation and protection of crops which was their reasonably anticipated use.

576. Even in instances in which use of Defendants' dicamba-based products involved application error or misuse, such error or misuse was reasonably anticipated, rendering these products defective.

577. Plaintiffs were damaged as a direct result of such defective condition which existed when these dicamba-based products were sold.

578. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

579. At all times, Defendants sold dicamba-based products and knew of the defective condition and danger of their dicamba-based products.

580. The actions of Defendants and the injuries inflicted against Plaintiffs as set forth herein show complete indifference to or conscious disregard for the safety of others, were also

reckless, intentional, knowing, malicious, and willful, and entitle Plaintiffs to a recovery of punitive damages against Defendants in a fair and reasonable amount.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count I of this Third Amended Complaint for (1) an award of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT II – STRICT LIABILITY – FAILURE TO WARN

581. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

582. Defendants sold their dicamba-based products in their ordinary course of business.

583. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1) an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

584. As described above, Defendants' dicamba-based products were unreasonably dangerous at the time of sale. Defendants' dicamba-based products were unreasonably dangerous when put to their reasonably anticipated use without knowledge of purchasers and third-parties of their defective condition because no safe herbicide was marketed by Defendants.

585. Defendants did not give adequate warnings to purchasers or third-parties of the danger of their dicamba-based products.

586. Defendants' dicamba-based products used by farmers and applicators for the cultivation and protection of crops which was their reasonably anticipated use.

587. Even in instances in which use of Defendants' dicamba-based products involved application error or misuse, such error or misuse was reasonably anticipated.

588. Plaintiffs were damaged as a direct result of Defendants' dicamba-based products being sold without adequate warnings.

589. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

590. At all times, Defendants sold their dicamba-based products and knew of the danger of their dicamba-based products.

591. The actions of Defendants and the injuries inflicted against Plaintiffs as set forth herein show complete indifference to or conscious disregard for the safety of others, were also reckless, intentional, knowing, malicious, and willful, and entitle Plaintiffs to a recovery of punitive damages against Defendants in a fair and reasonable amount.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count II of this Third Amended Complaint for (1) an award of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT III – NEGLIGENT DESIGN AND MARKETING

592. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

593. Defendants negligently designed and marketed their dicamba-based products.

594. Defendants designed and marketed their dicamba-based products in their ordinary course of business.

595. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1)

an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

596. As described above, Defendants failed to use ordinary care in the design and marketing of their dicamba-based products because no herbicide reasonably safe for its intended use was marketed by Defendants for use with Xtend crops. Thus, Defendants' dicamba-based products were defective and unreasonably dangerous due to the lack of any safe herbicide and no company exercising ordinary care would have designed or marketed such products.

597. Defendants' dicamba-based products were used by farmers and applicators for the cultivation and protection of crops which was their reasonably anticipated use.

598. Even in instances in which use of Defendants' dicamba-based products involved application error or misuse, such error or misuse was reasonably anticipated.

599. Plaintiffs were damaged as a direct result of such negligence in design and marketing by Defendants.

600. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

601. The actions of Defendants and the injuries inflicted against Plaintiffs as set forth herein show complete indifference to or conscious disregard for the safety of others, were also reckless, intentional, knowing, malicious, and willful, and entitle Plaintiffs to a recovery of punitive damages against Defendants in a fair and reasonable amount.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count III of this Third Amended Complaint for (1) an award of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs

their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT IV – NEGLIGENT FAILURE TO WARN

602. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

603. Defendants designed their dicamba-based products in their ordinary course of business.

604. Defendants sold their dicamba-based products in their ordinary course of business.

605. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1) an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

606. As described above, Defendants' dicamba-based products were defective and unreasonably dangerous at the time of sale. Defendants' dicamba-based products were defective and unreasonably dangerous when put to their reasonably anticipated use without knowledge of purchasers and third-parties of their defective and unreasonably dangerous condition because no safe herbicide was marketed by Defendants.

607. Even in instances in which use of Defendants' dicamba-based products involved application error or misuse, such error or misuse was reasonably anticipated.

608. Defendants failed to use ordinary care by neglecting to provide an adequate warning of the danger of their dicamba-based products.

609. Defendants' dicamba-based products were used by farmers and applicators for the cultivation and protection of crops which was their reasonably anticipated use.

610. Plaintiffs were damaged as a direct result of Defendants' dicamba-based products being sold without an adequate warning.

611. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

612. The actions of Defendants and the injuries inflicted against Plaintiffs as set forth herein show complete indifference to or conscious disregard for the safety of others, were also reckless, intentional, knowing, malicious, and willful, and entitle Plaintiffs to a recovery of punitive damages against Defendants in a fair and reasonable amount.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count IV of this Third Amended Complaint for (1) an award of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT V – NEGLIGENT TRAINING

613. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

614. Defendants sold their dicamba-based products to farmers and applicators knowing of their defective and unreasonably dangerous condition.

615. Defendants had a legal duty to innocent third-parties, including Plaintiffs, to use ordinary care to protect them against the unreasonable risk of harm from the use of Defendants' dicamba-based products.

616. Defendants had a duty to provide training to their employees, agents, and product users commiserate with the substantial risk of their unsafe dicamba-based products and the likelihood of their use.

617. Defendants failed to use ordinary care in the training of their employees and agents and product users to prevent the unsafe use of their dicamba-based products and the resulting damage to third-parties, including Plaintiffs.

618. Defendants never provided adequate warnings or training to their employees, agents, and product users regarding the risks of harm to innocent third-parties.

619. Defendants breached their legal duty to innocent third-parties, including Plaintiffs, to use ordinary care to protect them against the unreasonable risk of harm.

620. Defendants' negligence, as described above, proximately damaged Plaintiffs as described herein.

621. Plaintiffs have suffered damages to their person and property as described above.

622. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1) an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

623. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

624. The actions of Defendants and the injuries inflicted against Plaintiffs as set forth herein show complete indifference to or conscious disregard for the safety of others, were also reckless, intentional, knowing, malicious, and willful, and entitle Plaintiffs to a recovery of punitive damages against Defendants in a fair and reasonable amount.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count V of this Third Amended Complaint for (1) an award

of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT VI –VIOLATION OF MISSOURI CROP PROTECTION STATUTES (INTENTIONAL)

625. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

626. Pursuant to Mo. Rev. Stat. § 569.132.2, it is a violation for any person to intentionally cause the loss of any crop.

627. Pursuant to Mo. Rev. Stat. § 569.132.4, "[a]ny person who has been damaged by a violation of this section shall have a civil cause of action under section 537.353."

628. Pursuant to Mo. Rev. Stat. § 537.353, "[a]ny person or entity who knowingly damages or destroys any field crop product that is grown for personal or commercial purposes . . . shall be liable for double damages pursuant to this section." In addition, the court may award court costs, including reasonable attorneys' fees. *Id.*

629. As alleged above, Defendants did cause loss of and damage to Plaintiffs' peach crops grown for commercial purposes, thereby damaging Plaintiffs.

630. As alleged above, Defendants did so knowingly and intentionally for the purpose of accelerating the adoption and purchase of their Xtend Crop System, including their dicamba-based products, for their mutual financial gain.

631. Defendants knowingly and intentionally foisted their dangerous and defective Xtend Crop System on the public knowing and intending that it destroys sensitive, non-tolerant crops like Plaintiffs' peach trees.

632. Accordingly, Plaintiffs are entitled to double damages pursuant to statute.

633. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1)

an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

634. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count VI of this Third Amended Complaint for (1) an award of such compensatory and double damages as provided by statute; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT VII –VIOLATION OF MISSOURI CROP PROTECTION STATUTES (NEGLIGENCE)

(In Alternative to COUNT VI)

635. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

636. As alleged above, Defendants did cause loss of and damage to Plaintiffs' peach crops grown for commercial purposes, thereby damaging Plaintiffs.

637. At a minimum, Defendants negligently damaged Plaintiffs' peach crops by failing to exercise ordinary care in the commercialization, marketing, training on use, and sale of their defective Xtend Crop System, including their dicamba-based products, and as such, Defendants are liable for compensatory damages pursuant to Section 537.353.2.

638. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1) an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the

direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

639. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count VII of this Third Amended Complaint for (1) an award of such compensatory damages as provided by statute; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT VIII – CIVIL CONSPIRACY

(Concerted Action By Agreement)

640. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

641. Defendants, in a joint scheme to improperly market, sell, and expand the sales and profits for their dicamba-based products, as described above in Counts I-VII, conspired with each other to their mutual economic benefit to create a market for their dicamba-based products and profit from the ecological disaster caused by them.

642. The object of the conspiracy is to create an ecological disaster through the use of Defendants dicamba-based products that will force farmers to purchase their dicamba-based products out of self-defense and cause Defendants to reap great profits at the expense of innocent third-parties, like Plaintiffs, who have suffered damage.

643. Early on, Defendants formed a partnership, joint venture, and a written joint licensing agreement to share technologies in an effort to speed their dicamba-based products to market.

644. Indeed, Defendants are so intertwined that it is difficult to tell where one of their products ends and the next product begins. For example, Defendant Monsanto's XtendiMax is the same herbicide as Defendant BASF's Clarity herbicide only with Defendant Monsanto adding an additive to Clarity called VaporGrip.

645. Defendants share defective technology.

646. Defendants invested in their dicamba production facilities in preparation for the demand that would be created by the damage that their dicamba-based products would cause.

647. Defendants mutually developed and researched their dicamba-based products together, testing their dicamba-based products at Defendant Monsanto's research facilities.

648. From their testing, Defendants knew the risks and dangers posed to innocent third-parties and non-DT crops from their dicamba-based products and conspired to and did conceal this information, especially on volatility, from the public, federal and state regulatory authorities, state legislatures, farmers, their licensees, consumers, and Plaintiffs.

649. Defendants also conspired to and did inadequately train and educate on how to use their dicamba-based herbicides and products, thereby increasing the damage and driving up demand for their dicamba-based products.

650. Defendants also conspired to and did provide inadequate warnings, ineffective notices, and confusing labels and use instructions for their dicamba-based products to increase the damage and drive up demand for their dicamba-based products.

651. Defendants conspired to and did advertise and market their dicamba herbicides as low volatility formulations of an inherently volatile herbicide, dicamba. Through these coordinated marketing efforts, Defendants created demand for their dicamba-based products before and after the damage caused by them required action by federal and state governments.

652. In 2015 and 2016, through their joint venture and concerted activities, Defendants colluded in the release of Xtend seed prior to either Defendant receiving approval for their dicamba-based herbicides, with knowledge and certainty that farmers would use older dicamba herbicides, such as Defendant BASF's Banvel or Clarity, on Xtend seed and both Defendants would profit in the short-term and long-term.

653. Defendants, through their agents and representatives, conspired to and did encourage legal and illegal spraying of their dicamba herbicides, regardless of how much damage it would cause.

654. Defendants' conspiracy required the illegal spraying of Defendant BASF's older dicamba formulations on Xtend seed to create fear in farmers – either use this technology or face the loss of their non-DT crops – until farmers no longer had a choice.

655. Once the EPA approved XtendiMax and Engenia, Defendants jointly proceeded with a full-scale launch of their dicamba-based products, causing a wave of destruction to non-DT crops, including Plaintiffs' crops, in Missouri and other states.

656. In response to the damage, Defendants issued coordinated public statements and offered identical stated causes for the damage, none of which had anything to do with Defendants' dicamba-based products, in order to ensure increased demand and profits for their dicamba-based products.

657. Defendants conspired to and did knowingly and intentionally cause damage to non-DT crops, including Plaintiffs' peaches, in violation of the Missouri Crop Protection Statutes.

658. Since 2015, the damage caused by Defendants' dicamba-based products has forced non-DT crop farmers to purchase and use Defendants' dicamba-based products out of self-defense – precisely as the conspiracy intended.

659. Defendants conspired to and did threaten, harass, and intimidate innocent landowners from complaining or seeking regulatory or legal assistance.

660. Defendants also conspired to and did suppress the level of control they had over their licensees who used their dicamba-based products.

661. Further, Defendants did not revoke any licenses with their licensees, including those farmers who used Defendants' dicamba-based products and caused damage to Plaintiffs' crops. Defendants could have taken action to prevent or stop the damage that their dicamba-based products cause, but chose not to. In fact, Defendants gave the green-light to illegal spraying by announcing they would take no action against licensees that sprayed illegally.

662. Defendants Monsanto and BASF combined to accomplish the purpose of commercializing, manufacturing demand for, and profiting from sales of their dicamba-based products. Defendants used unlawful, oppressive, and/or immoral means to accomplish this purpose, resulting in the injury of Plaintiff Bader Farms and Plaintiff Bill Bader.

663. Defendants carried out their conspiracy by engaging in their negligent and intentionally tortious acts in concert with one another pursuant to their joint agreements to develop and commercialize the Xtend Crop System, including their dicamba-based products.

664. The unlawful actions of Defendants resulted in damages to Plaintiffs, and thereby Plaintiffs were harmed in the ways and manners described above.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count VIII of this Third Amended Complaint for (1) an award of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT IX – CIVIL CONSPIRACY

(Aiding and Abetting)

665. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

666. Defendants, in a joint scheme to improperly market, sell, and expand the sales and profits for their dicamba-based products, as described above in Counts I-VII, conspired with each other to their mutual economic benefit to create a market for their dicamba-based products and profit from the ecological disaster caused by them.

667. The object of the conspiracy is to create an ecological disaster through the use of Defendants dicamba-based products that will force farmers to purchase their dicamba-based products out of self-defense and cause Defendants to reap great profits at the expense of innocent third-parties, like Plaintiffs, who have suffered damage.

668. Early on, Defendants formed a partnership, joint venture, and a written joint licensing agreement to share technologies and aid one another's efforts to speed their dicamba-based products to market.

669. Indeed, Defendants are so intertwined that it is difficult to tell where one of their products ends and the next product begins. For example, Defendant Monsanto's XtendiMax is the same herbicide as Defendant BASF's Clarity herbicide only with Defendant Monsanto adding an additive to Clarity called VaporGrip.

670. Defendants share defective technology.

671. Defendants invested in their dicamba production facilities in preparation for the demand that would be created by the damage that their dicamba-based products would cause.

672. Defendants mutually developed and researched their dicamba-based products together, testing their dicamba-based products at Defendant Monsanto's research facilities.

673. From their testing, Defendants knew the risks and dangers posed to innocent third-parties and non-DT crops from their dicamba-based products and conspired to and did conceal this information, especially on volatility, from the public, federal and state regulatory authorities, state legislatures, farmers, their licensees, consumers, and Plaintiffs.

674. Defendants also conspired to and did inadequately train and educate on how to use their dicamba-based herbicides and products, thereby increasing the damage and driving up demand for their dicamba-based products.

675. Defendants also conspired to and did provide inadequate warnings, ineffective notices, and confusing labels and use instructions for their dicamba-based products to increase the damage and drive up demand for their dicamba-based products.

676. Defendants conspired to and did advertise and market their dicamba herbicides as low volatility formulations of an inherently volatile herbicide, dicamba. Through these coordinated marketing efforts, Defendants created demand for their dicamba-based products before and after the damage caused by them required action by federal and state governments.

677. In 2015 and 2016, through their joint venture and concerted activities, Defendants colluded in the release of Xtend seed prior to either Defendant receiving approval for their dicamba-based herbicides, with knowledge and certainty that farmers would use older dicamba herbicides, such as Defendant BASF's Banvel or Clarity, on Xtend seed and both Defendants would profit in the short-term and long-term.

678. As described above, Defendant BASF agreed to and did support, promote, and substantially assist in generating farmer support and demand for de-regulation and sale of the Xtend seed.

679. As described above, Defendant BASF agreed to and did supply the market with ample amounts of its dicamba-based Clarity herbicide as a component to—and to aid and abet the

launch of—Defendants' defective DT System prior to Defendants gaining EPA registration of an in-crop dicamba approved for over-the-top spraying.

680. As described above, Defendant BASF agreed to and did supply the market with ample amounts of its dicamba-based Engenia herbicide as a component to—and to aid and abet sales of—Defendants' defective DT System, including Xtend seed.

681. As described above, Defendant Monsanto agreed to and did support, promote, and substantially assist the sale and use of Defendant BASF's older dicamba formulations (e.g., Clarity) by supplying the market with the Xtend seed and encouraging and/or promoting the use of older dicamba formulations over the top of Xtend seed.

682. As described above, Defendant Monsanto agreed to and did support and substantially assist the commercialization of Defendant BASF's Engenia herbicide by supplying BASF with the Xtend seed, crops, and test sites to enable and aid Defendant BASF's "data generation" and de-regulation efforts.

683. As described above, Defendant Monsanto agreed to and did support and substantially assist the sale and use of Defendant BASF's Engenia herbicide by supplying the market with Xtend seed as a necessary component to Defendants' defective DT System.

684. Defendants, through their agents and representatives, conspired to and did encourage legal and illegal spraying of their dicamba herbicides, regardless of how much damage it would cause.

685. Defendants' conspiracy required the illegal spraying of Defendant BASF's older dicamba formulations on Xtend seed to create fear in farmers – either use this technology or face the loss of their non-DT crops – until farmers no longer had a choice.

686. Once the EPA approved XtendiMax and Engenia, Defendants jointly proceeded with a full-scale launch of their dicamba-based products, causing a wave of destruction to non-DT crops, including Plaintiffs' crops, in Missouri and other states.

687. In response to the damage, Defendants issued coordinated public statements and offered identical stated causes for the damage, none of which had anything to do with Defendants' dicamba-based products, in order to ensure increased demand and profits for their dicamba-based products.

688. Defendants conspired to and did knowingly and intentionally cause damage to non-DT crops, including Plaintiffs' peaches, in violation of the Missouri Crop Protection Statutes.

689. Since 2015, the damage caused by Defendants' dicamba-based products has forced non-DT crop farmers to purchase and use Defendants' dicamba-based products out of self-defense – precisely as the conspiracy intended.

690. Defendants conspired to and did threaten, harass, and intimidate innocent landowners from complaining or seeking regulatory or legal assistance.

691. Defendants also conspired to and did suppress the level of control they had over their licensees who used their dicamba-based products.

692. Further, Defendants did not revoke any licenses with their licensees, including those farmers who used Defendants' dicamba-based products and caused damage to Plaintiffs' crops. Defendants could have taken action to prevent or stop the damage that their dicamba-based products cause, but chose not to. In fact, Defendants gave the green-light to illegal spraying by announcing they would take no action against licensees that sprayed illegally.

693. Defendants Monsanto and BASF combined to accomplish the purpose of commercializing, manufacturing demand for, and profiting from sales of their dicamba-based

products. Defendants used unlawful, oppressive, and/or immoral means to accomplish this purpose, resulting in the injury of Plaintiff Bader Farms and Plaintiff Bill Bader.

694. Defendants carried out their conspiracy by aiding and abetting each other's negligent and intentionally tortious conduct in furtherance of their joint plan to develop and commercialize the Xtend Crop System, including their dicamba-based products, knowing that each other's conduct breached the duty of ordinary care and nonetheless aiding and substantially assisting in the commission of that conduct.

695. The unlawful actions of Defendants resulted in damages to Plaintiffs, and thereby Plaintiffs were harmed in the ways and manners described above.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count IX of this Third Amended Complaint for (1) an award of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT X – JOINT VENTURE LIABILITY

696. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

697. Defendants, in a joint scheme to improperly market, sell, and expand the sales and profits for their dicamba-based products, as described above, entered into one or more agreements with each other to their mutual economic benefit to create a market for their dicamba-based products and profit from the ecological disaster caused by them.

698. Specifically, as describe above, Defendant Monsanto and Defendants BASF entered into a series of agreements and amendments (including but not limited to those agreements identified in Paragraphs 90-115 above), to act in partnership, joint venture, or joint enterprise to develop and commercialize their Xtend Crop System, including Xtend seed and dicamba-based

herbicides sprayed over the top, for their mutual benefit and profit, with common purpose and community of interest in that purpose, shared oversight and control, and shared profits, risks, costs, and losses associated with their joint venture.

699. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1) an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

700. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable for all claims in this Third Amended Complaint.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count X of this Third Amended Complaint for (1) an award of such compensatory and punitive damages as are fair and reasonable; (2) awarding Plaintiffs their costs, expenses, and reasonable attorney's fees incurred in this matter; and (3) for such further relief as the Court deems just and proper.

COUNT XI – PUNITIVE DAMAGES

701. Plaintiffs reallege all preceding paragraphs as if incorporated herein.

702. At all times, Defendants sold their dicamba-based products and knew of the defective condition and danger of their dicamba-based products.

703. At all times, Defendants sold their dicamba-based products and knew that their dicamba-based products could not be used safely and would damage third-parties, including Plaintiffs.

704. As partners and joint venturers in the development and commercialization of the Xtend Crop System, Defendants developed and sold their dicamba-based products pursuant to (1) an agreement or agreements; (2) a common purpose to be carried out by Defendants; (3) a community of pecuniary interest in that purpose; and (4) a shared voice in and control over the direction of the enterprise. In so doing, Defendants agreed to share in the profits, risks, costs, and losses associated with their joint venture.

705. As partners and joint venturers in the development and commercialization of the Xtend Crop System, including the dicamba-based products, Defendants are jointly liable.

706. The actions of Defendants and the injuries inflicted against Plaintiffs as set forth herein show complete indifference to or conscious disregard for the safety of others, were also reckless, intentional, knowing, malicious, and willful, and entitle Plaintiffs to a recovery of punitive damages against Defendants in a fair and reasonable amount.

WHEREFORE, Plaintiffs respectfully pray that this Court enter judgment against Defendants, jointly and severally, on Count XI of this Third Amended Complaint for (1) an award of such punitive damages as are fair and reasonable; and (2) for such further relief as the Court deems just and proper.

A JURY TRIAL IS DEMANDED ON ALL ISSUES SO TRIABLE.

Respectfully submitted,

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April 21, 2017

Mr. Ford Baldwin
412 Webber Lane
Austin, AR 72002

Subject - Freedom of Information Request by E-mail on April 20, 2017

Dear Mr. Baldwin:

Thank you, for contacting the Arkansas State Plant Board (ASPB) regarding the above mentioned Freedom of Information Act Request. The requested copy of the transcript from the July 08, 2016 hearing for Case File 15-126 involving Donald Masters is enclosed. This is a true and correct copy of the certified transcript.

Cordially,

Cody Bassham
Agri Program Manager
Arkansas Agriculture Department

CB/sn

Enclosure

BEFORE THE ARKANSAS STATE PLANT BOARD

* * * * * * * * * *

IN THE MATTER OF:

DONALD MASTERS

* * * * * * * * * *

BE IT REMEMBERED that on the 8th day of July, 2016, at 12:15 p.m., before the Arkansas State Plant Board, # One Natural Resource Drive, Little Rock, Arkansas, the above caption claim came on for Hearing and testimony was introduced as follows:

APPEARANCES:

MS. GRACE ELLEN RICE
OFFICE OF THE ATTORNEY GENERAL
Attorney at Law
111 Center Street
Little Rock, AR 72201

*** On Behalf of the Board ***

BOARD MEMBERS:

Mr. Otis Howe, III, Chairman
Ms. Peggy Johnson, Hearing Officer
Mr. Jammy Turner
Mr. Ray Vester
Mr. Danny Finch
Mr. Greg Hay
Mr. Dennie Stokes
Mr. Rick Cartwright
Mr. Larry Jayroe
Mr. Robert Campbell
Ms. Mary Eaton - via telephone
Mr. Kyle Baltz

ORIGINAL

I N D E X

E X H I B I T S

EXHIBIT 11
Certified Applicator Records Inspection

EXHIBIT 12
Missouri Department of Agriculture Investigation/
Inspection Statement

EXHIBIT 13
Missouri Department of Agriculture Investigation/
Inspection Statement

EXHIBIT 14
Notice of Inspection

EXHIBIT 15
Pesticide Dealers Records Inspection

EXHIBIT 16
Pesticide Dealers Records Inspection

EXHBITI 17
Pesticide Dealers Records Inspection

EXHIBIT 18
Pesticide Dealers Records Inspection

EXHIBIT 19
Missouri Department of Agriculture Private Applicator
License

EXHIBIT 20
Narrative

EXHIBIT 21
Report of Investigation

EXHIBIT 22
Product Label for Strut

EXHIBIT 23
Bollgard II XtendFlex Cotton Label

C A P T I O N

The hearing in re of DONALD MASTERS, was taken before me, Linda Parker, within and for Pulaski County, State of Arkansas, duly commissioned and acting, at the Arkansas State Plant Board, #One Natural Drive, Little Rock, Arkansas, beginning at the hour of 12:15 p.m. on Friday, July 8, 2016, by agreement of counsel in accordance with the provision of Act 335, 1953, Act of Arkansas, as amended, at which time the taking of the hearing was commenced.

PROCEEDINGS

HEARING OFFICER JOHNSON: All right, we are before the Pesticide Committee of the Arkansas State Plant Board in the matter of Donald E. Masters' Farm. Mr. Donald Masters is present today.

MR. MASTERS: Yes, ma'am.

HEARING OFFICER JOHNSON: Good afternoon. Thank you for being present. And he's before the Board and of course Ms. Grace Ellen Rice is the attorney representing the State Plant Board. This matter is before the State Plant Board to determine whether there has been a violation of the rules and regulations that govern the Arkansas State Plant Board and Pesticide Committee, and whether Mr. Masters used pesticide in a manner inconsistent with the labeling registered with the Environmental Protection Agency or Plant Board for that pesticide. I will ask first of all, will there be testimony in this matter today, Ms. Rice?

MS. RICE: Probably.

HEARING OFFICER JOHNSON: Okay.

MS. RICE: Yes. I'm going to have three witnesses.

HEARING OFFICER JOHNSON: All right. And who will they be?

MS. RICE: Leigh Gibson, Jerri Gann and Mike Hill -- Michael Hill.

HEARING OFFICER JOHNSON: Okay. And of course, Mr. Masters, will you be giving testimony?

MR. MASTERS: Myself.

HEARING OFFICER JOHNSON: Okay. Well, then let's raise your right hand -- all four of you. Do you swear or affirm the testimony today will be the truth, the whole truth and nothing but the truth?

(ALL WITNESSES ANSWERED AFFIRMATIVELY)

HEARING OFFICER JOHNSON: All right. With regard to exhibits, Ms. Rice, you have what looks like to be Exhibit A through Exhibit 16. It shows A, B and then 1 through 16.

MS. RICE: That is correct.

MR. MASTERS: What's that for?

HEARING OFFICER JOHNSON: And on this hearing.

MR. MASTERS: Oh.

HEARING OFFICER JOHNSON: Mr. Masters, you've been given a copy of it. He's looking through it now. And Mr. Masters --

MR. MASTERS: It's the same thing I got back in the winter, wasn't it?

HEARING OFFICER JOHNSON: Right.

MR. MASTERS: Right.

HEARING OFFICER JOHNSON: That's what I was going to say. Most of this you probably have already received. Do you have any objection to this being considered by the Board -- by the Committee today?

MR. MASTERS: No.

HEARING OFFICER JOHNSON: All right. You need to speak up so they can hear you.

MR. MASTERS: No, I do not have any objections.

HEARING OFFICER JOHNSON: Thank you. Thank you.

(THEREUPON, Plant Board Exhibits One (1) through 16 were marked for identification and appended.)

MR. MASTERS: I've already signed them. Are these the ones I signed and sent back?

HEARING OFFICER JOHNSON: Oh, was this a consent form?

MR. MASTERS: I signed --

MS. RICE: I'm going to let Ms. Nichols explain that.

MS. NICHOLS: We sent out an original consent agreement awhile back and staff recommendation. The Committee rejected our recommendation, moved to up certain violations to $1,000.00, but then opted to have Mr. Masters come in on one violation, similar to the last case, not exactly the same, but there were multiple violations. But we sent additional

settlement agreements back out where the fine was raise and were -- a certain violation we asked him to come in.

MR. MASTERS: Okay. I signed those and said I was guilty, right? They were signed documents said I was guilty.

HEARING OFFICER JOHNSON: All right. Did he sign those?

MR. MASTERS: Yes.

HEARING OFFICER JOHNSON: The new documents?

MS. NICHOLS: The new ones that have a $1,000.00?

MR. MASTERS: I don't know about -- I've already received one deal that I remember. I got it back in December or January. I don't know when it was.

MS. NICHOLS: Now you've received some updated ones since then.

HEARING OFFICER JOHNSON: So, are you saying that the documents you sent Mr. Masters were basically what was amounted to a consent agreement telling him that the Staff has rejected the first --

MR. MASTERS: Yeah.

HEARING OFFICER JOHNSON: -- set of --

MR. VESTER: The Committee.

HEARING OFFICER JOHNSON: -- the Committee, I'm

sorry.

MR. MASTERS: Okay.

HEARING OFFICER JOHNSON: The Committee has rejected the first disciplinary -- findings and disciplinary settlement offer, basically.

MR. MASTERS: Said they rejected --

HEARING OFFICER JOHNSON: They rejected --

MR. MASTERS: The Board rejected.

HEARING OFFICER JOHNSON: -- and imposing a fine, a penalty of $1,000.00.

MS. NICHOLS: And requested him to come in on one violation.

HEARING OFFICER JOHNSON: Okay.

MS. RICE: It was not a request. It was mandatory.

MS. NICHOLS: Mandatory.

HEARING OFFICER JOHNSON: Mandatory. I'm sorry. And the violation that he is here on today is --

MS. NICHOLS: It is for an over the top application of -- let me read this real quick before I state incorrectly. An over the top application of Strut to about 200 acres at 32 ounces an acre.

MR. MASTERS: That's right.

HEARING OFFICER JOHNSON: All right. Is that what you admitted to?

MR. MASTERS: I told them I did.

HEARING OFFICER JOHNSON: Okay.

MR. MASTERS: About 14 months ago or 15 months ago.

HEARING OFFICER JOHNSON: All right. So, I'm not understanding exactly. If he admitted to this prior --

MR. MASTERS: Why am I here?

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.

MR. FINCH: So, Monsanto told him to go out and

tell you?

MR. MASTERS: Well, they developed the cotton. They spent a lot of money developing the cotton.

MR. FINCH: I'm sure they did.

MR. MASTERS: And they wanted the seed sold. Now, all Monsanto -- that DPL variety had on the sack "Do not spray with Dicamba." Okay?

MR. FINCH: But this guy told you to spray it?

MR. MASTERS: But well -- yes, but there was another company that sold Dicamba cotton that is just a plain sack and didn't say a thing in the world about spraying over the top or anything else.

MR. FINCH: Did Monsanto go and compensate your neighbors that you drifted over on their beans?

MR. MASTERS: Well, now I farm in Missouri, mainly and I have them a mile north and south and four miles east and west. And I don't have too many neighbors.

MR. FINCH: I'm pretty close to you.

MR. MASTERS: Where are you at?

MR. FINCH: I'm south of 18 highway.

MR. MASTERS: South of 18?

MR. FINCH: Yeah. I know where this complaint come from.

MR. MASTERS: Well, you are -- from where I farm

in Missouri, I'm five miles north of Leachville.

MR. FINCH: But the complaint came off the 160 in --

MR. MASTERS: Well, down there in Gordan. I mean off --

MR. FINCH: Did you compensate Mr. Wallace?

MR. MASTERS: No, because he -- I damaged 10 acres of his beans, at least. And I told him I would pay ever what he wanted on the beans, but he asked me $100,000.00 for his cotton. Well, his cotton wasn't damaged. Ask what kind of cotton he's got this year? What kind of cotton did Mike plant this year?

MR. FINCH: They planted 1518 because they knew you was going to spray Dicamba again.

MR. MASTERS: But I didn't spray Dicamba on it. There's no Dicamba ever been sprayed on that cotton. And the Plant Board came. First thing out of the box they had a complaint, they came to me. I told them to go look at the field. And they -- if they found Dicamba they put it there, because I didn't.

MR. FINCH: So, you didn't use it this year?

MR. MASTERS: No. You can spray Liberty, which isn't near as good, it cost a lot more, over that same cotton. If you -- you can spray with Roundup, Liberty or Dicamba.

MR. FINCH: So, we really don't need this Dicamba technology.

MR. MASTERS: No, no, no, no. No. No. I said, you can spray Liberty, but it's not near as good. You know as well as I do, if you farm, that Liberty -- you can spray it one day and it may work pretty good. Next day it may not even look like you even sprayed it. It's very light sensitive. You've got to have a lot of heat and sunshine. I've got some Liberty beans this year and I've sprayed them twice and I thought I done a good job, but the weeds are coming back. Now, some boys have better luck with Liberty than I do, but it will kind of beat it down a little bit. Now, they say there's a new Liberty coming out and what it is, it's a Clarity with a drift pardon in it. And they said they used it up in Missouri and they sprayed, you know rows of soybeans and rows of cotton right side by side and it hadn't -- if it didn't get on it, it didn't damage it.

MR. FINCH: Are you talking about Dicamba or Liberty?

MR. VESTER: Dicamba.

MR. MASTERS: Dicamba.

MR. FINCH: You said Clarity.

MR. MASTERS: Okay. You boys might have made me

nervous. I might have slipped my tongue. You know what I mean don't you?

MR. JAYROE: Yeah.

MR. MASTERS: Okay. You've been on the hot seat before?

MR. JAYROE: Yes, sir. I have.

HEARING OFFICER JOHNSON: We thank you for your candor, Mr. Masters.

MR. MASTERS: Okay. So, I haven't denied anything and the issue with Mr. Wallace is I told him I'd pay him for the beans. Besides him there was a neighbor right joining me on the south end, Keith Jackson, and I damaged his beans. And I paid him. He gave me the figure and I paid him what he asked. And Mr. Wallace says I damaged his cotton. Of course his problem is, he planted the wrong variety of cotton and it got a virus and it didn't make cotton like it was supposed to. And Gentlemen, if you know that, you know that that Stoneville variety of cotton didn't make. Nobody didn't make it. Now, why we're talking about it, I -- you think that I just sprayed his? I had regular beans around my cotton fields. I sprayed it for my own purpose, right beside of it. One row was cotton, one row of beans. I sprayed right down the top of it -- the cotton, and where I

did not get it sprayed directly on it, there was no difference in yield. Now, if you spray it on top of the non Dicamba beans, it will kill the bean and it will pucker the leaves for a quarter of a mile, but it won't take the yield.

MR. FINCH: So, you're saying you think it might be a little volatile?

MR. MASTERS: No more volatile than 245T. No more volatile --

MR. FINCH: I'll have to agree.

MR. MASTERS: Yeah. Well, we used to use that all the time.

MR. FINCH: I'll have to agree.

MR. MASTERS: But, if you use a -- it depends on what you put it out with and what kind of retardant you put in it.

MR. FINCH: Did the volatility go in all four directions from that cotton field?

MR. MASTERS: From the cotton field? What I seen, it mainly follows the stream of the wind. Now, I don't think -- you know it's like the old stuff that turned everything white. It don't --

MR. FINCH: Command.

MR. VESTER: Command.

MR. MASTERS: Command. It doesn't come up from

the ground after a rain and move, what I've seen with my experience of it. Because I've got one section over there that's -- I go a mile north and -- two miles north, south and four miles east and west. And I haven't noticed it doing that and I've got another place that's a mile by four miles. But -- and it's all rice country over there. But for my own purposes I wanted to see what it done to the beans. It is, as he said, a volatile chemical until they get one that doesn't move, it's a danger. And you can harm a crop with it.

MR. FINCH: Do you realize that there may not ever be a label on it due to the fact of misuse?

MR. MASTERS: Well, I've heard that, but if they develop a chemical that doesn't move, probably it will be labeled. Now, you know the Roundup will move also. It will drift and 20 years ago when Roundup crops first started being used, that there were a lot of lawsuits and problems over people that had Roundup ready crops spraying over -- going over on my non Roundup ready crops. And you know that all got worked out. So, I don't know what --

MR. FINCH: Would you have planted this -- would you have bought this cotton had you known that Montsanto 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.

MR. VESTER: We ain't got there yet.

MR. MASTERS: But it's not legal today.

MR. VESTER: No.

MR. MASTERS: And the soybeans that they developed, that you can spray Dicamba over, the elevators have said they are not going to buy the bean with the Dicamba gene in it, even if you didn't spray Dicamba over it.

MR. VESTER: Export issues.

MR. MASTERS: Well, that's what I told the -- that's the kind --

MR. VESTER: Who wants a crop you can't sell?

MR. MASTERS: That's got to do with money over a company wanting to buy Monstanto. So, it all comes back to money. Well, like I say I ain't not admitting anything; that I did what I did and it was a mistake, but anyway I did it.

HEARING OFFICER JOHNSON: Mr. Masters has pretty much given his testimony. I mean he's been sworn in, everybody has and the Board asked him questions and they -- now, did you want to ask him any questions or add anything to that, Ms. Rice?

MS. RICE: No. We appreciate that you came down today and you made it down.

MR. MASTERS: And got lost.

MS. RICE: I knew you got lost. We're glad you're here.

HEARING OFFICER JOHNSON: That's what I was pretty much thinking myself. The Board has pretty much heard all it needs to hear or the Committee has heard what it needs to hear to make a decision on this matter. I don't think much is in dispute. Mr. Masters has been very candid and you know he pretty much said --

MR. MASTERS: Well, ain't that what I told y'all when y'all come to see me a couple years ago? I told you --

MS. NICHOLS: Yes, sir.

MR. MASTERS: -- what I done.

MS. NICHOLS: And on the phone with me.

MR. MASTERS: And you can see very simply where it crossed his bean field.

MR. ?: We're ready for a motion.

HEARING OFFICER JOHNSON: All right. Well, we can do this on the record. It's not a problem. Is the Board ready to entertain a motion with respect to the allegations of fact contained in the order and notice of hearing on Mr. Masters' farms; allegation one through four.

MR. HOWE: Six.

HEARING OFFICER JOHNSON: Excuse me. One through six.

MR. VESTER: So moved.

MR. FINCH: Second.

HEARING OFFICER JOHNSON: All right.

MR. HOWE: We've got a motion and a second. Is there any discussion? We find these allegations and facts correct. All in favor please say "aye."

(ALL COMMITTEE MEMBERS ANSWERED "AYE.")

MR. HOWE: Or raise your hand. Do you want a hand raise?

HEARING OFFICER JOHNSON: No, that's fine. Yeah. It looks like it's unanimous. Any opposed, speak up. Then it is unanimous.

MR. HOWE: I'm sorry, I keep doing this.

HEARING OFFICER JOHNSON: The Board has found the allegations and fact one through six have been

proven. And with respect to any disciplinary action that the Board -- the Committee wants to impose, do I hear a motion?

MR. FINCH: I move to not accept Staff's recommendation and set the penalty at $1,000.00.

MR. STOKES: I second.

MR. HOWE: We've got a motion and a second. So, you want hands raised?

HEARING OFFICER JOHNSON: Well -- all in favor of the motion --

MR. HOWE: Was there any discussion on that? Anybody have anything to say on that? Okay.

HEARING OFFICER JOHNSON: All in favor signify by raising your hand. Any opposed? Motion unanimously approved. The Board has found the allegations and fact to be substantiated by the testimony today and has imposed a penalty of $1,000.00.

MR. MASTERS: Is that $1,000.00 per cap or total?

HEARING OFFICER JOHNSON: It's $1,000.00 in total.

MR. HOWE: No, no, no.

MS. NICHOLS: According to this allegation it is -- the previous one we sent you, those are still

1,000 unless you would like to contest them, but we haven't heard from you on that.

MR. MASTERS: So, my total bill is what?

MS. NICHOLS: I'd have to have the others in front of you -- in front of me. I can give you call later today or Monday and let you know for sure.

MR. MASTERS: Can I leave you a check today?

MS. NICHOLS: No. Don't pay us yet.

MR. MASTERS: Okay.

MS. NICHOLS: Our Board has to approve it. I'll let you know when you have to pay it.

MR. MASTERS: So, this is not the final end? It may not be rejected -- this proposal may be rejected?

MS. NICHOLS: It may be, but this is the maximum they can fine you. They can't go any higher.

HEARING OFFICER JOHNSON: The only thing the Board can do is go lower.

MR. MASTERS: Okay.

HEARING OFFICER JOHNSON: The ultimate State Plant Board has the authority to --

MR. VESTER: The Board has to vote on it.

HEARING OFFICER JOHNSON: But the absolute most that it can be is 1,000 for this today and then how many others?

MS. NICHOLS: Per current -- I don't remember

how many he had off the top of my head, because they're not in front of me.

HEARING OFFICER JOHNSON: Okay. But she's going to check that out.

MS. NICHOLS: I will let you know.

HEARING OFFICER JOHNSON: All right. Well, that's the Board's decision. Thank you Mr. Masters for traveling all this way and I appreciate your candor today and --

MS. NICHOLS: You're done with her, not me.

MR. MASTERS: Do what?

HEARING OFFICER JOHNSON: We're done with you, Mr. Masters.

MR. MASTERS: Done with me. All right. Good deal.

HEARING OFFICER JOHNSON: Thank you, sir.

MS. NICHOLS: Thank you, Mr. Masters.

(The deposition was concluded at 12:35 p.m.)


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SOYBEANS
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CORN AND SOYBEAN FARMER
MORLEY, MO
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DO NOT APPLY DICAMBA HERBICIDE IN-CROP TO Roundup Ready 2 Xtend® So
you use a dicamba herbicide product that is specifically labeled for that use in the location where you intend to make the application. While no in-crop use of dicamba is
be labeled for weed control prior to planting a crop and subject to minimum plant back restrictions. IT IS A VIOLATION OF FEDERAL AND STATE LAW TO MAKE AN
PRODUCT ON Roundup Ready 2 Xtend® Soybeans, OR ANY OTHER PESTICIDE APPLICATION, UNLESS THE PRODUCT LABELING SPECIFICALLY AUTHORIZES THE USE.
with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend® Soybeans and follow all pesticide product labeling.
is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance,
Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems.
or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material
import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of
may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather

THE ANSWER TO RESISTANT WEEDS IS HERE

RAISE YOUR YIELD POTENTIAL WITH ELITE GENETICS AND STRONG DEFE

neer.com/Soybeans

no dicamba herbicide product has been approved for commercial in-crop use with soybeans with Roundup Ready 2 Xtend technology. DO NOT APPLY DICAMBA HERBICIDE IN-CROP TO SOYBEANS WITH Ready 2 Xtend technology IN 2016 unless you use a dicamba herbicide product that is specifically labeled for that use in the location where you intend to make the application. While no in-crop use of dicamba is approved, some dicamba products may be labeled for weed control prior to planting a crop and subject to minimum plant back restrictions. IT IS A VIOLATION OF FEDERAL AND STATE LAW TO MAKE AN IN-CROP OF ANY DICAMBA HERBICIDE PRODUCT ON SOYBEANS WITH Roundup Ready 2 Xtend technology, OR ANY OTHER PESTICIDE APPLICATION, UNLESS THE PRODUCT LABELING SPECIFICALLY AUTHORIZES THE Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with soybeans with Roundup Ready 2 Xtend technology and pesticide product labeling.

READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Soybeans with Roundup Ready 2 Xtend technology contain genes that confer tolerance to glyphosate and dicamba. Glyphosate herbicides will kill crops that are to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Roundup Ready 2 Xtend™ is a trademark of Monsanto Technology LLC used under license.

under the Pioneer Premium Seed Treatment offering for soybeans are applied at a DuPont Pioneer production facility or by an independent sales representative of Pioneer. Not all sales representatives offer

APPLY DICAMBA HERBICIDE IN-CROP TO ROUNDUP READY 2 XTEND® SOYBEANS IN 2016 unless you use a dicamba herbicide product that is specifically labeled for that use in the [illegible]

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR XTENDIMAX™ WITH VAPORGRIP™ TECHNOLOGY BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using XtendiMax™ With VaporGrip™ Technology as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the container label and booklet provided with the product container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

XTENDIMAX™

With VaporGrip™ Technology

This supplemental label expires on 11/09/2018 and must not be used or distributed after this date.

EPA Reg. No. 524-617

GROUP	4	HERBICIDE

FOR PREEMERGENCE AND POSTEMERGENCE USE ON ROUNDUP READY 2 XTEND® SOYBEANS

Keep out of reach of children

CAUTION!

In case of an emergency involving this product, call collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

ROUNDUP READY 2 XTEND® SOYBEANS CONTAIN A PATENTED GENE THAT PROVIDES TOLERANCE TO DICAMBA, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO SOYBEANS THAT ARE NOT DICAMBA TOLERANT, INCLUDING SOYBEANS WITH A TRAIT ENGINEERED TO CONFER TOLERANCE TO AUXIN HERBICIDES OTHER THAN DICAMBA. FOLLOW THE REQUIREMENTS SET FORTH HEREIN TO PREVENT SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS. CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A DICAMBA TOLERANCE GENE OR ARE NOT NATURALLY TOLERANT TO DICAMBA, COULD RESULT IN SEVERE PLANT INJURY OR DESTRUCTION.

Information on Roundup Ready 2 Xtend® Soybeans can be obtained from your seed supplier or Monsanto representative. Roundup Ready 2 Xtend® Soybeans must be purchased from an authorized licensed seed supplier.

The instructions contained in this Monsanto Supplemental Label include all applications of XtendiMax™ With VaporGrip™ Technology that may be made to Roundup Ready 2 Xtend® Soybeans during the cropping season. DO NOT combine these instructions with other instructions in the "SOYBEAN" Section of any other XtendiMax™ With VaporGrip™ Technology label for use over crops that do not contain the dicamba tolerance trait.

Note: Roundup Ready 2 Xtend® Soybeans and methods of controlling weeds and applying dicamba in a Roundup Ready 2 Xtend® Soybean crop are protected under U.S. patent law. No license to use Roundup Ready 2 Xtend® Soybeans is granted or implied with the purchase of this herbicide product. Roundup Ready 2 Xtend® Soybeans are owned by Monsanto and a license must be obtained from Monsanto before using it. Contact your Authorized Monsanto Retailer for information on obtaining a license to Roundup Ready 2 Xtend® Soybeans.

See the "PRODUCT INFORMATION" and "APPLICATION EQUIPMENT AND TECHNIQUES" sections of the XtendiMax™ With VaporGrip™ Technology product label for important use information. In the event that there are any inconsistencies with the directions for use between this supplemental label and any other labeling for this product, follow the directions for use on this supplemental label.

Training and education on proper pesticide application is encouraged. Applicators should visit www.xtendimaxapplicationrequirements.com for training information and opportunities relative to this product.

TYPES OF APPLICATIONS: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

XtendiMax™ With VaporGrip™ Technology is approved by U.S. EPA to be used in the following states, subject to county restriction as noted: Alabama, Arkansas, Arizona, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas, Virginia, West Virginia, Wisconsin.

Restrictions

- Do not apply this product aerially.
- Do not make application of this product if rain is expected in the next 24 hours.

USE INSTRUCTIONS

Apply this product in a minimum of 10 gallons of spray solution per acre as a broadcast application. For best performance, control weeds early when they are less than 4 inches. Timely application will improve control and reduce weed competition. Refer to the following table for maximum application rates of this product with Roundup Ready 2 Xtend® Soybeans.

Maximum Application Rates	
Combined total per year for all applications	88 fluid ounces per acre (2.0 lb. a.e. dicamba per acre)
Total of all Burndown/Early preplant, Preplant, At-Planting, and Preemergence applications	44 fluid ounces per acre (1.0 lb. a.e. dicamba per acre)
Total of all In-crop applications from emergence up to and including beginning bloom (R1 stage soybeans)	44 fluid ounces per acre (1.0 lb. a.e. dicamba per acre)
Maximum In-crop, single application	22 fluid ounces per acre (0.5 lb. a.e. dicamba per acre)

a.e. – acid equivalent

Refer to Table 1 of the XtendiMax™ With VaporGrip™ Technology label booklet for application rates for weed type and growth stage controlled by this product. Maximum in-crop application rate should be used when treating tough to control weeds, dense vegetative growth or weeds with a well-established root system.

Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be used to control broadleaf weeds and may be applied before, during or immediately after planting Roundup Ready 2 Xtend® Soybeans. Refer to the "WEEDS CONTROLLED" section of the label booklet for XtendiMax™ With VaporGrip™ Technology for specific weeds controlled.

RESTRICTIONS: The maximum combined quantity of this product that may be applied for all preplant, at-planting, and preemergence applications is 44 fluid ounces (1.0 lb a.e. dicamba) per acre per season. The maximum application rate for a single, preplant, at-planting, or preemergence application must not exceed 44 fluid ounces (1.0 lb a.e. dicamba) per acre. Do not apply less than 22 fluid ounces (0.5 lb a.e. dicamba) per acre.

Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control broadleaf weeds in Roundup Ready 2 Xtend® Soybeans. In-crop applications of this product can be made from emergence (cracking) up to and including beginning bloom (R1 growth stage of soybeans). Do not make in-crop applications of this product after beginning bloom (R1 growth stage of soybeans). The maximum and minimum rate for any single, in-crop application is 22 fluid ounces (0.5 lb a.e. dicamba) per acre. Using the appropriate application rate may reduce the selection for resistant weeds. For best performance, control weeds early when they are less than 4 inches. Monsanto Company does not warrant product performance of applications to labeled weeds greater than 4 inches in height.

A second application of this product up to the R1 crop growth stage may be necessary to control new flushes of weeds. Allow at least 7 days between applications. For best results, apply XtendiMax™ With VaporGrip™ Technology after some weed re-growth has occurred.

Application of this product postemergence and under stressful environments may cause temporary loss of turgor, a response commonly described as leaf droop in Roundup Ready 2 Xtend® Soybeans. Typically, affected plants recover in 1-3 days depending on the level of droop and environmental conditions.

RESTRICTIONS:

- The combined total application rate from crop emergence up to R1 must not exceed 44 fluid ounces (1.0 lb. a.e. dicamba) per acre.
- The maximum single, in-crop application rate must not exceed 22 fluid ounces (0.5 lb. a.e. dicamba) per acre.
- The combined total per year for all applications must not exceed 88 fluid ounces (2.0 lb. a.e. dicamba) per acre.
- Allow at least 7 days between final application and harvest or feeding of soybean forage.
- Allow at least 14 days between final application and harvest or feeding of soybean hay.

TANK-MIXING INSTRUCTIONS

XtendiMax™ With VaporGrip™ Technology may only be tank-mixed with products that have been tested and found not to adversely affect the offsite movement potential of XtendiMax™ With VaporGrip™ Technology. A list of those products may be found at www.xtendimaxapplicationrequirements.com. DO NOT tank mix any product with XtendiMax™ With VaporGrip™ Technology unless:

1. You check the list of tested products found not to adversely affect the offsite movement potential of XtendiMax™ With VaporGrip™ Technology at www.xtendimaxapplicationrequirements.com no more than 7 days before applying XtendiMax™ With VaporGrip™ Technology; and
2. The intended tank-mix product is identified on the list of tested products; and
3. The intended products are not prohibited on either this supplemental label or the label of the tank mix product.
4. Additional Warnings and Restrictions:
   - Some COC, HSOC and MSO adjuvants may cause a temporary crop response.
   - Do not tank mix products containing ammonium salts such as ammonium sulfate and urea ammonium nitrate.
   - Drift reduction agents (DRAs) can minimize the percentage of driftable fines. However, the applicator must check www.xtendimaxapplicationrequirements.com to determine if the DRA is listed and check with the DRA manufacturer to determine if the DRAs will work effectively with the approved spray nozzle, spray pressure, and the desired spray solution.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MONSANTO MAKES NO RECOMMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY PRODUCT THAT MAY APPEAR ON THE WEBSITE REFERENCED ABOVE, REGARDLESS OF WHETHER SUCH PRODUCT IS USED ALONE OR IN A TANK MIX WITH XTENDIMAX™ WITH VAPORGRIP™ TECHNOLOGY. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH PRODUCT ALONE OR IN A TANK MIX WITH XTENDIMAX™ WITH VAPORGRIP™ TECHNOLOGY. See the section titled "LIMIT OF WARRANTY AND LIABILITY" herein for more information.

WEED RESISTANCE MANAGEMENT

Some naturally occurring weed biotypes that are tolerant (resistant) to dicamba may exist due to genetic variability in a weed population. Where resistant biotypes exist, the repeated use of herbicides with the same sites of action can lead to the selection for resistant weeds. Certain agronomic practices can delay or reduce the likelihood that resistant weed populations will develop and can be utilized to manage weed resistance once it occurs.

Do not use less than 22 fluid ounces per acre (0.5 lb a.e./A) of this product in a single application. Using the appropriate application rate can minimize the selection for resistant weeds.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful management of the weed resistance program; therefore, it is very important to perform the following actions.

To aid in the prevention of developing weeds resistant to this product, the following steps should be followed where practical:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Apply full rates of XtendiMax™ With VaporGrip™ Technology for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in weed species.
- Report any incidence of non-performance of this product against a particular weed species to your Monsanto retailer, representative or call 1-844-RRXTEND.
- If resistance is suspected, treat weed escapes with a herbicide having a site of action other than Group 4 and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 4 herbicides.
- Avoid making more than two applications of dicamba and any other Group 4 herbicides within a single growing season unless mixed with another mechanism of action with an overlapping spectrum for the difficult to control weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.

- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

Contact the local agricultural extension service, Monsanto representative, agricultural retailer or crop consultant for further guidance on weed control practices as needed.

APPLICATION EQUIPMENT AND TECHNIQUES

DO NOT APPLY THIS PRODUCT TO ROUNDUP READY 2 XTEND® SOYBEANS USING AERIAL SPRAY EQUIPMENT.

Apply this product using properly maintained and calibrated equipment capable of delivering the desired volumes.

SPRAY DRIFT MANAGEMENT

Do not allow herbicide solution to mist, drip, drift or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result. The following drift management requirements must be followed.

Controlling Droplet Size

Drift potential may be reduced by applying large droplets that provide sufficient coverage and control. Applying larger droplets can reduce drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the **"Wind Speed and Direction"**, **"Temperature and Humidity"** and **"Temperature Inversions"** sections of this label).

- **Nozzle type.** Use only Tee Jet® TTI11004 nozzle with a maximum operating pressure of 63 psi when applying XtendiMax™ With VaporGrip™ Technology or any other approved nozzle found at www.xtendimaxapplicationrequirements.com. Do not use any other nozzle and pressure combination not specifically listed on this website.
- **Hooded Sprayers.** Using a hooded sprayer in combination with approved nozzles may further reduce drift potential.
- **Spray Volume.** Apply this product in a minimum of 10 gallons of spray solution per acre. Use a higher spray volume when treating dense vegetation. Higher spray volumes may also allow the use of larger nozzle orifices (sizes) which produce coarser spray droplets.
- **Equipment Ground Speed.** Select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but do not exceed a ground speed of 15 miles per hour. Slower speeds generally result in better spray coverage and deposition on the target area.
- **Spray boom Height.** Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but do not exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the drift potential.

Temperature and Humidity

When making applications in low relative humidity or temperatures above 91 degrees Fahrenheit, set up equipment to produce larger droplets to compensate for evaporation. Larger droplets have a lower surface to volume ratio and can be impacted less by temperature and humidity. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Do not apply this product during a temperature inversion. Drift potential can be high during a temperature inversion.

- During a temperature inversion, the atmosphere is very stable and vertical air mixing is restricted, which can cause 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 can 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 often dissipate with increased winds (above 3 mph) or at sunrise when the surface air begins to warm (generally 3°F from morning low).

Wind Speed and Direction

- Drift potential is lowest between wind speeds of 3 to 10 miles per hour.
- Do not apply at wind speeds greater than 15 mph.
- For XtendiMax™ With VaporGrip™ Technology wind speed and direction restrictions see below table:

Wind speed	Application conditions and restrictions
<3 mph	Do not apply XtendiMax™ With VaporGrip™ Technology.
3-10 mph	Optimum application conditions for XtendiMax™ With VaporGrip™ Technology provided all other application requirements in this label are met.

>10 – 15 mph	Do not apply product when wind is blowing toward non-target sensitive crops.
> 15 mph	Do not apply XtendiMax™ With VaporGrip™ Technology.

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

PROTECTION OF SENSITIVE AREAS

Maintain a 110 foot downwind buffer (when applying 22 fluid ounces of this product per acre) or a 220 foot downwind buffer (when applying 44 fluid ounces of this product per acre) between the last treated row and the closest downwind edge (in the direction in which the wind is blowing). If any of the following areas below are directly adjacent to the treated field, the areas listed below can be considered part of the buffer distance.

To maintain this required buffer zone:

- No application swath can be initiated in, or into an area that is within the applicable buffer distance.

The following areas may be included in the buffer distance calculation when adjacent to field edges:

- Roads, paved or gravel surfaces,
- Planted agricultural fields containing: corn, dicamba tolerant cotton, dicamba tolerant soybean, sorghum, proso millet, small grains and sugarcane. If the applicator intends to include such crops as dicamba tolerant cotton and/or dicamba tolerant soybeans in the buffer distance calculation, the applicator must confirm the crops are in fact dicamba tolerant and not conventional cotton and/or soybeans.
- Agricultural fields that have been prepared for planting.
- Areas covered by the footprint of a building, silo, or other man made structure with walls and or roof.

Non-target Susceptible Crops

Failure to follow the requirements in this label could result in severe injury or destruction to desirable sensitive broadleaf crops and trees when contacting their roots, stems or foliage.

- Do not apply under circumstances where drift may occur to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.
- Do not allow contact of herbicide with foliage, green stems, exposed non-woody roots of crops, and desirable plants, including beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potato, soybean, sunflower, tobacco, tomato, and other broadleaf plants because severe injury or destruction may result, including plants in a greenhouse.
- Small amounts of dicamba that may not be visible may injure susceptible broadleaf plants.
- Applicators are required to ensure that they are aware of the proximity to non-target susceptible crops, and to avoid potential adverse effects from drift of XtendiMax™ with VaporGrip™ Technology.

Before making an application, the applicator must survey the application site for neighboring non-target susceptible crops. The applicator must also consult sensitive crop registries to identify any commercial specialty or certified organic crops that may be located near the application site.

DO NOT APPLY this product when the wind is blowing toward adjacent commercially grown dicamba sensitive crops, including but not limited to, commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), and grapes.

Application Awareness

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR

The interaction of equipment and weather related factors must be monitored to maximize performance and on-target spray deposition. The applicator is responsible for considering all of these factors when making a spray decision. The applicator is responsible for compliance with state and local pesticide regulations, including any state or local pesticide drift regulations.

Proper spray system equipment cleanout

Minute quantities of dicamba may cause injury to non-dicamba-tolerant soybeans and other sensitive crops (see the "Non-target Susceptible Crops" section of this label for more information).

Clean equipment immediately after using this product using a triple rinse procedure as follows:

1. After spraying, drain the sprayer (including boom and lines) immediately. Do not allow the spray solution to remain in the spray boom lines overnight prior to flushing.
2. Flush tank, hoses, boom and nozzles with clean water.
3. Inspect and clean all strainers, screens and filters.
4. Prepare a cleaning solution with a commercial detergent or sprayer cleaner or ammonia according to the manufacturer's directions.
5. Take care to wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.
7. Repeat above steps for two additional times to accomplish an effective triple rinse.
8. Remove nozzles, screens and strainers and clean separately in the cleaning solution after completing the above procedures.
9. Appropriately dispose of rinsate from steps 1-7 in compliance with all applicable laws and regulations.
10. Drain sump, filter and lines.
11. Rinse the complete spraying system with clean water.

All rinse water must be disposed of in compliance with local, state, and federal requirements.

CROP ROTATIONAL RESTRICTIONS

No rotational cropping restrictions apply when rotating to Roundup Ready 2 Xtend® Soybeans or cotton seed with XtendFlex® technology (including Bollgard® 3 XtendFlex® Cotton, Bollgard II® XtendFlex® Cotton, or XtendFlex® Cotton). For other crops the interval between application and planting rotational crop is given below. When counting days from the application of this product, do not count days when the ground is frozen. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

Planting/replanting restrictions for XtendiMax™ With VaporGrip™ Technology applications of 33 fluid ounces per acre or less

For corn, cotton (except cotton seed with XtendFlex® technology), sorghum, and soybean (except Roundup Ready 2 Xtend® Soybeans), follow the planting restrictions in the directions for use for preplant application in **Section 10. Crop-Specific Information** of the label booklet. Do not plant barley, oat, wheat, and other grass seedings for 15 days for every 11 fluid ounces of this product applied per acre east of the Mississippi River and 22 days for every 11 fluid ounces per acre applied west of the Mississippi River. No planting restrictions apply beyond 120 days after application of this product.

Planting/replanting restrictions for applications of more than 33 fluid ounces and up to 44 fluid ounces of XtendiMax™ With VaporGrip™ Technology per acre

Wait a minimum of 120 days after application of this product before planting corn, sorghum and cotton (except cotton seed with XtendFlex® technology) east of the Rocky Mountains and before planting all other crops (except Roundup Ready 2 Xtend® Soybeans) grown in areas receiving 30 inches or more rainfall annually. Wait a minimum of 180 days before planting crops in areas with less than 30 inches of annual rainfall. Wait a minimum of 30 days for every 22 fluid ounces of this product applied per acre before planting barley, oat, wheat, and other grass seedings east of the Mississippi River and 45 days for every 22 fluid ounces of this product applied per acre west of the Mississippi River.

LIMIT OF WARRANTY AND LIABILITY

Monsanto Company ("Company") warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in this supplemental label ("Directions") when used in accordance with the Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein. Specifically, and without limiting the foregoing, MONSANTO MAKES NO RECCOMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY PRODUCTS THAT MAY APPEAR ON THE WEBSITE REFERENCED IN THE TANK-MIXING INSTRUCTIONS HEREIN, REGARDLESS OF WHETHER SUCH PRODUCT IS USED ALONE OR IN A TANK MIX WITH XTENDIMAX™ WITH VAPORGRIP™ TECHNOLOGY. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH PRODUCT ALONE OR IN A TANK MIX WITH XTENDIMAX™ WITH VAPORGRIP™ TECHNOLOGY.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, tort, or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those expressly recommended by Company in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to dicamba, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those expressly recommended by Company in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For in-crop (over-the-top) uses on crops within the Roundup Ready® Xtend™ Crop System, crop safety and weed control performance are not warranted by Company when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY

OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA

11/15/2016 35008P2-8

Dicamba Injury Forum

Kevin Bradley
University of Missouri

DICAMBA UPDATE

July 6, 2017

Agriculture.Mo.Gov

2016 DICAMBA COMPLAINTS

- 130 – Total Dicamba complaints for 2016

- June 22, 2016 - Received first Dicamba complaint

2017 DICAMBA COMPLAINTS

- **134 – Dicamba complaints received (as of 1:00 pm 7/6/2017)**

- **June 13, 2017 - Received first Dicamba complaint**

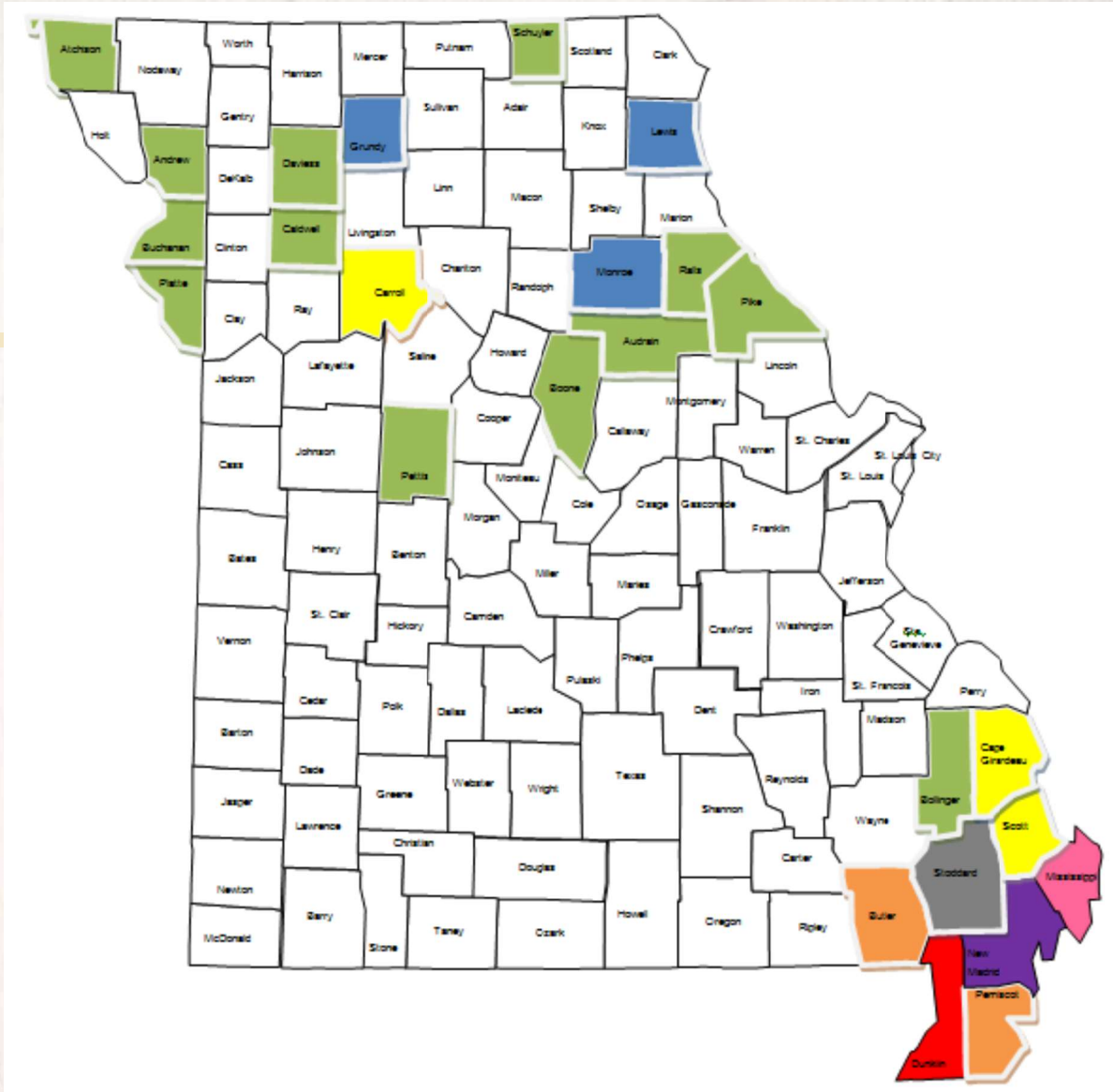
2017 DICAMBA COMPLAINTS

Crops damaged as identified by complainants:

- 59,862 acres of soybeans
- 6,400 tomato plants
- 73 acres of watermelons
- 18 acres of cantaloupes
- 5 acres of a vineyard
- 2 acres of pumpkins
- 24 acres of certified organic vegetables
- Several residential gardens, trees and shrubs

2017 Dicamba Complaints

- 1 Complaint
- 2 Complaints
- 6 Complaints
- 10 Complaints
- 15 Complaints
- 17 Complaints
- 19 Complaints
- 34 Complaints



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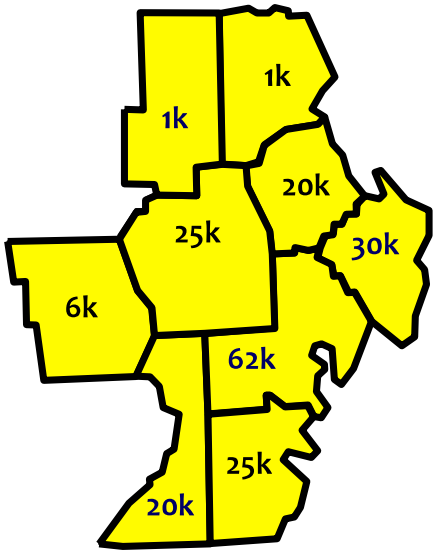
Personal Observations:

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.

So what's the difference between the bootheel (i.e., AR, MS, TN) and the rest of Missouri (i.e., the Midwest)?



300,000 acres cotton

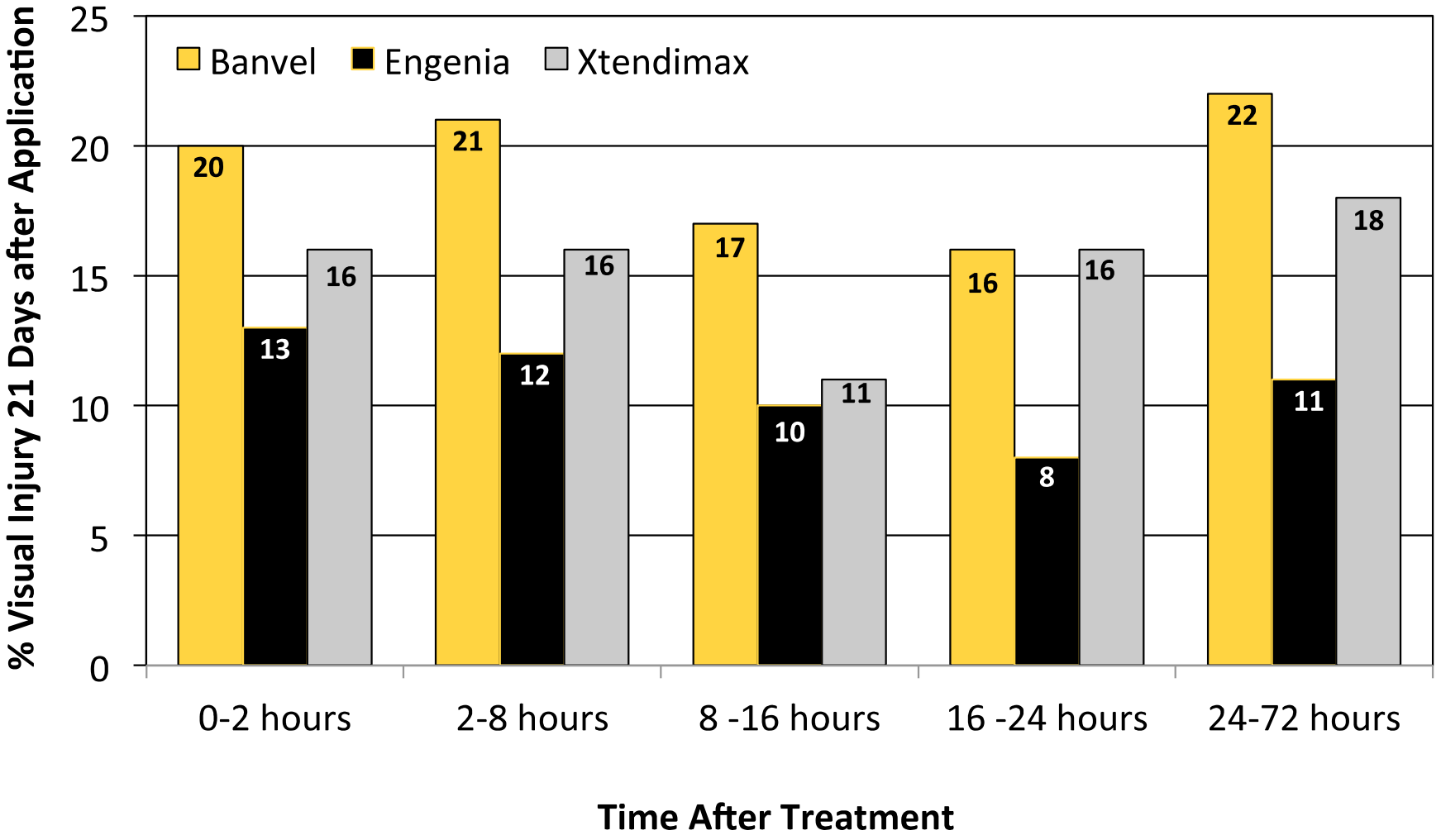
- ~80% Xtend (almost all sprayed w/dicamba)
- How many dicamba applications in-crop?

875,000 acres soybean

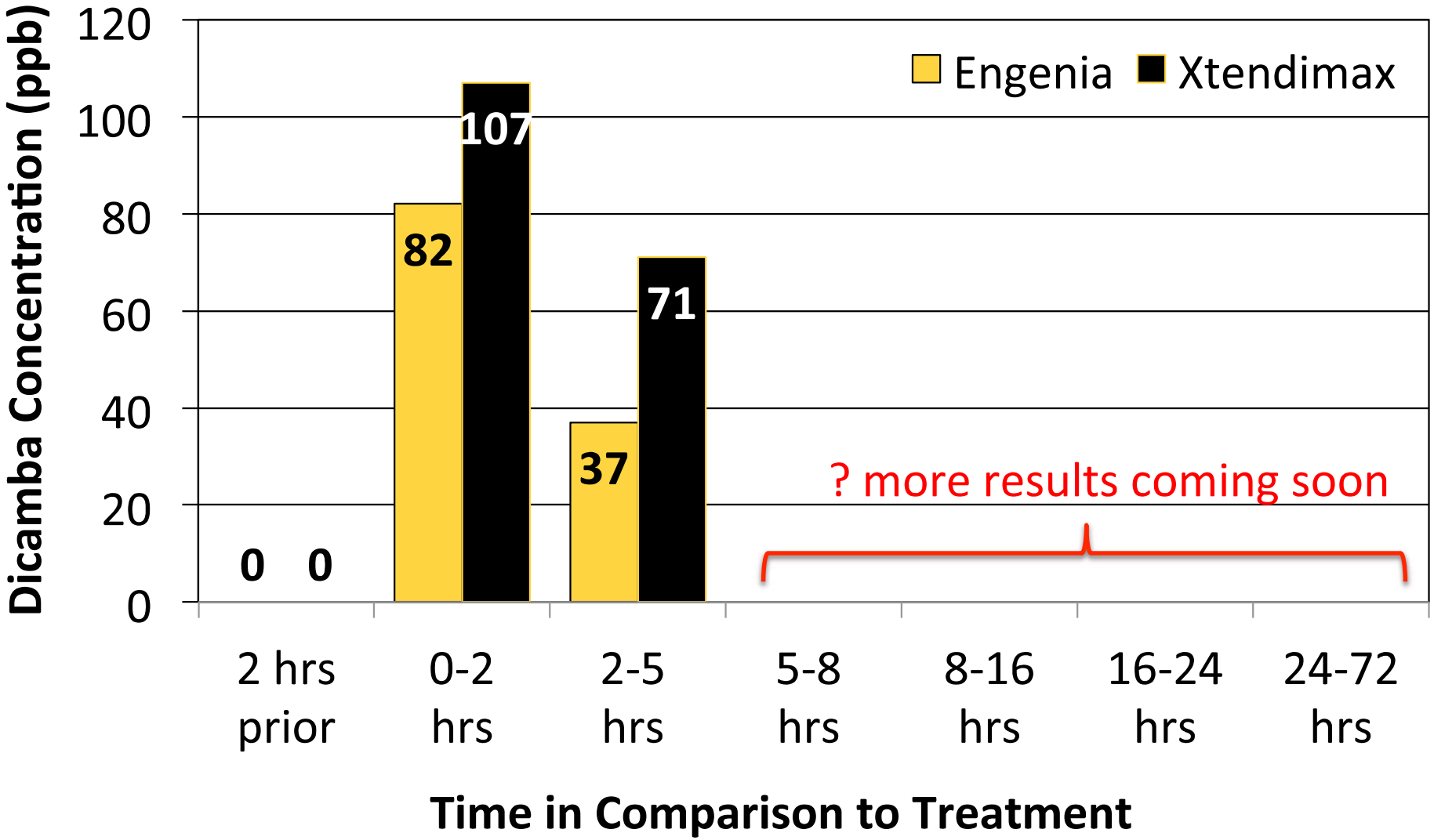
- ~65% Xtend (almost all sprayed w/dicamba) = 306,000 acres non-Xtend soybean
- 195,000 acres estimated to be injured with dicamba= ***64% of the total non-Xtend soybean; 22% of the total soybean grown in the bootheel***

We are not close to these percentages in the rest of Missouri (i.e., the Midwest). What will happen if/when we reach these levels?

Evaluation of Soybean "Indicator Plant" Injury Following Application of 3 Dicamba Formulations



Some Preliminary Air Sampling Results with Engenia and XtendiMax



Our Efforts to Understand the Role of Formulations & Temperature Inversions in the Off-site Movement of Dicamba

Our **very preliminary** results suggest:

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.