

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MISSOURI  
SOUTHEASTERN DIVISION**

**IN RE: DICAMBA HERBICIDES** ) **MDL No. 2820**  
**LITIGATION** )  
 ) **JURY TRIAL DEMANDED**

**MASTER ANTITRUST CLASS ACTION COMPLAINT**

Pursuant to the Court's Orders (Docs. 39 and 46), Plaintiffs bring this master antitrust action individually and on behalf of all others similarly situated against Monsanto Company, and state:

**NATURE OF THE ACTION**

1. Plaintiffs bring this action under Section 2 of the Sherman Act on behalf of themselves and a class of direct purchasers of Monsanto's genetically modified ("GM"), dicamba-tolerant traits in soybeans. Monsanto is charging supra-competitive prices because it possesses, and for several years has possessed, dominance and monopoly power in the herbicide-tolerant traits market.

2. Beginning in 2016, Monsanto released an herbicide-tolerant trait conferring tolerance to dicamba, an herbicide known to be not only highly damaging to susceptible non-tolerant crops, including soybeans, but also highly volatile and prone to move off target. Monsanto knew that commercializing dicamba-tolerant technology would effectively force farmers into buying seeds containing Monsanto's patented Roundup Ready 2 Xtend technology to protect their crops from the harmful effects of the use of dicamba on surrounding farms. In other words, soybean producers must buy dicamba-tolerant seeds or risk massive crop losses. In turn, this artificially-increased demand for dicamba-tolerant seeds resulted in Monsanto reaping higher monopoly profits than it otherwise would have reaped. Monsanto created a problem only it could solve, and then purported to solve it by unleashing a product that literally destroys its competition.

Monsanto's conduct is anticompetitive, has substantially reduced competition in the relevant markets, and is a violation of the Sherman Act. All direct purchasers of Monsanto's technology were injured by paying higher prices than they would have paid had Monsanto not engaged in this anti-competitive conduct.

## **PARTIES**

### ***Plaintiffs***

3. Plaintiff Sam Branum is a citizen of Missouri who farms crops, including soybeans, in Missouri. He purchased and planted soybeans containing Monsanto's dicamba-tolerant GM trait in 2017 and 2018. Branum purchased and planted those seeds out of fear of crop damage.

4. Plaintiff Wapsie Farms originally filed this action in the United States District Court for the Northern District of Iowa. Martin Marticoff, Aaron Matthias, Kevin Leistikow, and Kurt Leistikow, the partners in Wapsie Farms Partnership, are citizens of Black Hawk County, Iowa. In 2017 and 2018, Wapsie Farms planted dicamba-based seeds out of fear of crop damage.

### ***Defendant***

5. Defendant Monsanto Company is a Delaware corporation whose headquarters and principal place of business are in St. Louis County, Missouri. Monsanto develops, manufactures, licenses, and sells agricultural biotechnology, agricultural chemicals, and other agricultural products, including herbicides and seed genetically modified to produce crops tolerant of various herbicides, such as its recently-commercialized Roundup Ready 2 Xtend Soybean ("Xtend soybeans") and a dicamba-herbicide known as XtendiMax with VaporGrip Technology®.

6. Monsanto is engaged in interstate commerce and activities substantially affecting interstate commerce. It is a leading supplier of agricultural products, including biotechnology traits, seeds, and crop protection products, and is the world's largest supplier of herbicide-tolerant

biotechnology traits in agricultural seeds. Monsanto sells and/or licenses these products to other companies and to customers throughout the United States.

#### **JURISDICTION AND VENUE**

7. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 (federal question) and 1337 (actions arising under statutes regulating commerce or protecting against restraints and monopolies) as the claims herein arise under federal antitrust laws.

8. Additionally, this Court has subject matter jurisdiction under 28 U.S.C. § 1332(d)(2)(A) and (C) because this case is brought as a class action on behalf of citizens of states diverse from Monsanto's citizenship and the amount in controversy exceeds \$5,000,000, exclusive of interest and costs.

9. This Court has personal jurisdiction over Monsanto under 15 U.S.C. § 22 because it inhabits, may be found, and/or transacts business in this district. Among other things, Monsanto and/or its agents sold and/or licensed its herbicide-tolerant GM technology to class members in this district. Monsanto conducts business in this district, has exercised its monopoly market power in this district, and has sold and/or licensed its products in this district, including sales of its dicamba seeds and crop-protection products to producers such as Plaintiffs. Monsanto is also headquartered in this district and has its principal place of business in this district.

10. Venue in this district is proper under 28 U.S.C. § 1391(b) because Monsanto resides in this district and because a substantial part of the events or omissions giving rise to the claims occurred in this district.

## ANTITRUST FRAMEWORK

### *Relevant Product Markets*

11. Herbicide-tolerant traits in soybean seeds are a line of commerce and relevant product market within antitrust laws. The market share of herbicide-tolerant traits is tracked separately from the market share for germplasm varieties, they have differing functions, and there is separate demand for different varieties of germplasm versus traits.

12. There is no substitute for herbicide-tolerant traits, which provide a foundation for unique product lines.

13. Nearly all GM soybean seeds contain herbicide-tolerant traits. *U.S. v. Bayer AG, Monsanto Co., and BASF SE* Competitive Impact Statement, Case No. 18:cv-01241 (Doc. 3) (May 29, 2018).

14. Farmers do not view conventional soybean seeds as viable substitutes for GM seeds to produce commodity crops. *Id.*

### *Relevant Geographic Markets*

15. The relevant geographic market for herbicide-tolerant traits in soybeans is the areas of the United States where soybeans are grown and/or relevant sub-markets thereof.

16. An overwhelming majority of major crops in the United States are genetically modified. Monsanto is the dominant supplier of herbicide-tolerant traits in soybean in the United States. Monsanto possesses monopoly power in the relevant market, including the power to control prices and exclude competition.

***The Soybean Seeds and Traits Markets Are Highly Concentrated***

17. The GM seed, biotech traits, and crop protection markets are highly concentrated, with the vast majority of the supply coming from just a few firms during the relevant time period. Historically, the “Big Six” dominated the agricultural biotech markets:

**The world’s “Big Six” agricultural chemical companies**

Company	Country	2015 sales (\$ millions)		Proposed merger partner
		Seeds and biotech	Agricultural chemicals	
BASF	Germany	Small	6,211	None
Bayer	Germany	819	9,548	Monsanto
Dow Chemical	U.S.	1,409	4,977	DuPont
DuPont	U.S.	6,785	3,013	Dow Chemical
Monsanto	U.S.	10,243	4,758	Bayer
Syngenta	Switzerland	2,838	10,005	ChemChina

Note: BASF does not separately report seed sales, placing them under an “other” category.  
Source: USDA, Economic Research Service using data from Company Annual Reports.

See James M. MacDonald, *USDA Economic Research Service, Mergers and Competition in Seed and Agricultural Chemical Markets* (April 03, 2017) (hereinafter “MacDonald, *Mergers and Competition Report*”), <https://www.ers.usda.gov/amber-waves/2017/april/mergers-and-competition-in-seed-and-agricultural-chemical-markets/>.

18. With recent mergers and acquisitions, including Bayer acquiring Monsanto, what was once known as the “Big Six” biotech companies is now known as the “Big Four”: (1) Bayer/Monsanto; (2) Dow/DuPont; (3) ChemChina/Syngenta; and (4) BASF.

19. As reported before the Senate Judiciary Committee in 2016:

In the traits market in 2009, the Big 6 [Monsanto, Syngenta, Bayer, DuPont, Dow, and BASF] held greater than 95% of trait acres for corn, soybeans and cotton in the U.S., with Monsanto alone accounting for 90% of these acres.

Testimony of Diana L. Moss, Ph.D., President, American Antitrust Institute, before The Senate Judiciary Committee “Consolidation and Competition in the U.S. Seed and Agrochemical Industry” at 4-5 (hereinafter Moss, *Judiciary Committee Testimony*) (Sept. 20, 2016), <https://www.judiciary.senate.gov/imo/media/doc/09-20-16%20Moss%20Testimony.pdf>.

20. In the 2014-2015 marketing year, the share of U.S. soybean seed sales controlled by the four largest firms reached 76%. Aleksandre Maisashvili, et al., *Seed Prices, Proposed Mergers and Acquisitions Among Biotech Firms* (4th Quarter 2016), [https://ageconsearch.umn.edu/bitstream/246985/2/cmsarticle\\_540.pdf](https://ageconsearch.umn.edu/bitstream/246985/2/cmsarticle_540.pdf).

21. Concentrated markets are more susceptible to the exercise of market power than when not concentrated. “At low levels of concentration, when they face many competitors, firms have little control over pricing. If a single firm attempts to raise the price for its seeds or chemicals, farmers would be able to quickly switch to rival sellers, and the firm would lose so much business that the price increase would result in reduced revenues and profits. However, at higher levels of concentration, with only a few rivals in a market, farmers have fewer alternatives if a seller raised seed or chemical prices.” MacDonald, *Mergers and Competition Article*.

22. The more concentrated a market, the closer it becomes to a monopolistic market. The Herfindahl-Hirschman Index (HHI) market concentration measures the sum of squared market share percentages. It falls within a range of 0 to 10,000; 10,000 representing a pure monopoly market. The U.S. Department of Justice and Federal Trade Commission have guidelines related to the HHI that considers a market “moderately concentrated” if the HHI is between 1,500 and 2,500, and “highly concentrated” if the HHI is above 2,500.

23. In 2017, the market for herbicide-tolerant traits for soybeans was highly concentrated with an HHI of approximately 5,000.

*Monsanto's Market Power*

24. Monsanto dominates the U.S. soybean seed, biotech traits, and crop chemicals markets, as well as accounting for the overwhelming majority of all research and development for future traits.

25. By 2016, Monsanto seed traits were in more than 90% of the U.S.'s soybean acreage. *A Monsanto-Bayer Merger Will Raise the Price of Agricultural Inputs, Reduce Seed Choices and Increase Costs for U.S. Farmers* (Dec. 2017), <https://farmersandfamiliesfirst.com/wp-content/uploads/2017/12/A-Monsanto-Bayer-Merger.pdf>.

26. There are substantial barriers to entry into the herbicide-tolerant trait market, including the significant time and expense to develop those traits and obtain necessary regulatory approvals.

27. It generally takes a prohibitive investment of time, money, and experience for anyone other than the Big Four to bring a new herbicide-tolerant biotech trait to market. A prospective trait developer must have access to a large inventory of seeds for research and breeding purposes. Those resources are controlled by the Big Four—Monsanto in particular. Small seed companies must license technologies from Monsanto to enter the seeds market, thereby limiting their ability to truly compete. *U.S. v. Bayer AG, Monsanto Co., and BASF SE Competitive Impact Statement*, Case No. 18:cv-01241 (Doc. 3) (May 29, 2018).

28. The rapidly evolving and costly agricultural biotechnology innovations, coupled with the cost of obtaining permission to use patented technology, prevents smaller companies from participating in innovative research and creates a significant barrier to entry. Aleksandre Maisashvili, et al., *Seed Prices, Proposed Mergers and Acquisitions Among Biotech Firms* (4th Quarter 2016), [https://ageconsearch.umn.edu/bitstream/246985/2/cmsarticle\\_540.pdf](https://ageconsearch.umn.edu/bitstream/246985/2/cmsarticle_540.pdf).

29. Competition experts have long-recognized Monsanto's dominance in the GM traits market. In 2010, the American Antitrust Institute recognized:

There are very few independent, rival transgenic seed platforms comprised of technologies other than Monsanto's. Inter-platform competition is thus limited, giving farmers few choices of traited seeds that do not include Monsanto technologies. Likewise, the ability of rivals to obtain access to Monsanto's traits to combine with their own technologies also appears limited because of potentially restrictive or selective licensing. This impedes intra-platform competition. A central issue, therefore, is the potential use of patent rights to improperly control or influence competition.

Diana L. Moss, *Transgenic Seed Platforms: Competition Between a Rock and a Hard Place? (Addendum)* (hereinafter Moss, *Transgenic Seed Platforms*) American Antitrust Institute, (Apr. 5, 2010) [https://www.antitrustinstitute.org/sites/default/files/Addendum%20to%20AAI%20White%20Paper\\_Transgenic%20Seed.4.5\\_040520101107.pdf](https://www.antitrustinstitute.org/sites/default/files/Addendum%20to%20AAI%20White%20Paper_Transgenic%20Seed.4.5_040520101107.pdf).

30. Monsanto's competitors have also repeatedly recognized Monsanto's dominant position initially obtained through its Roundup Ready technology. Jim Denvir, a lawyer for DuPont, was quoted in January 2010 as saying: "Farmers will not buy soybeans without Roundup Ready in it. So, that gives Monsanto an amazing amount of leverage." Frank Morris, *Monsanto GMO Ignites Big Seed War* (Jan. 12, 2010), <https://www.npr.org/templates/story/story.php?storyId=122498255>.

31. According to Mr. Denvir, "[a] seed company can't stay in business without offering seeds with Roundup Ready in it, so if they want to stay in that business, essentially they have to do what Monsanto tells them to do." *Id.*

32. Monsanto has possessed market dominance in genetic traits (herbicide and insect tolerance) for a long time. As of 2009, Monsanto's market share of GM traits was 97% for soybeans. *See* Moss, *Transgenic Seed Platforms*. In her article, Moss, Vice-President and Senior fellow at the American Antitrust Institute at the time, notes that these figures came from



Monsanto's own documents. According to Moss, Monsanto's shares "are—by any antitrust metric—market shares that would be considered monopolistic." *Id.*

33. In 2009, Neil Harl, an agricultural economist at Iowa State University, opined that the extent of Monsanto's level of control of seed genetics "is almost unbelievable," and "[t]he upshot of that is that it's tightening Monsanto's control, and makes it possible for them to increase their prices long term. And we've seen this happening the last five years, and the end is not in sight." *AP: Monsanto Strong-Arms Seed Industry* (Dec. 14, 2009), <https://www.cbsnews.com/news/ap-monsanto-strong-arms-seed-industry/>.

34. Charles Benbrook, professor at Washington State University's Center for Sustaining Agriculture and Natural Resources, estimated that from 2000 to 2010 – as GM soybeans came to dominate the market – the price for seed increased 230%. The cost of Monsanto's RR2 soybeans in 2010 was \$70 per bag, a 143% price increase since 2001. Ken Roseboro, *The GMO Seed Monopoly: Fewer Choices, Higher Prices* (Oct. 4, 2013), [https://www.fooddemocracynow.org/blog/2013/oct/4/the\\_gmo\\_seed\\_monopoly\\_fewer\\_choices\\_higher\\_prices](https://www.fooddemocracynow.org/blog/2013/oct/4/the_gmo_seed_monopoly_fewer_choices_higher_prices).

35. These price increases were driven by Monsanto's monopoly power in the herbicide-tolerant traits market, obtained through anticompetitive licensing agreements.

36. In comments to the Justice Department, DuPont stated: "The ag biotech trait market is firmly in the grip of a single supplier, acting as a bottleneck to competition and choice." *Comments of DuPont/Pioneer Hi-Bred International Regarding Agriculture and Antitrust Enforcement Issues in Our 21st Century Economy*, <https://www.justice.gov/atr/public/workshops/ag2010/016/AGW-15019-a.pdf>.

37. Because of Monsanto's market power, a small, but significant, non-transitory increase in prices above competitive levels for herbicide-tolerant traits in soybean would not cause customers to switch a significant enough quantity of purchases to another product so as to make the price increase unprofitable for Monsanto.

***Monsanto's Anticompetitive Conduct***

38. Monsanto unlawfully maintained and attempted to maintain monopoly power by implementing a scheme designed to, and that did, pressure soybean farmers to buy and plant its latest dicamba-tolerant herbicide trait out of fear of incurring dicamba-related crop damage.

39. Monsanto knew that this scheme would harm competition in the marketplace by depriving farmers of a viable choice to buy seed that does not contain its dicamba-tolerant GM trait by including the trait in all soybean varieties.

40. Monsanto used deception to carry out its scheme in that it misled farmers into believing that a less volatile version of dicamba herbicide would allow farmers to spray dicamba over-the-top of soybean crops without harming non-target soybeans and other plant life.

41. Monsanto's scheme further harmed competition by raising its rivals' costs by pressuring them to stack Monsanto's dicamba-resistant trait into their seed varieties, and pay the corresponding royalty fee to Monsanto, to provide farmers the option of using rival herbicide-tolerant traits without fear of yield loss from volatilization or drift of nearby dicamba use.

42. The harm to competition from Monsanto's scheme intrinsically compounds itself—the more dicamba-tolerant traits are sold, and thus the more that dicamba is sprayed, the greater the risk of dicamba-based crop damage to those who did not purchase dicamba-tolerant traits and thus greater the pressure to purchase dicamba-tolerant seeds the following season.

43. Monsanto further obtained, and maintains, monopoly power through licensing agreements with competitors and independent seed companies that suppress competition and restrict farmers choices as to the herbicide-tolerant traits they purchase.

44. Because Monsanto also possesses market power in the market for soybean seed germplasm, Monsanto has leveraged this market power to obtain, and maintain, its monopoly power in the market for herbicide-resistant traits by bundling its herbicide-tolerant traits, including its dicamba-tolerant trait, with every seed variety containing a high-yielding germplasm and have thereby restricted farmers' options to purchase a high-yielding soybean seed without also paying for Monsanto's herbicide-resistant traits.

#### ***Antitrust Injury***

45. Monsanto's unreasonable exclusionary conduct has harmed competition to such an extent that Monsanto has been able to leverage its monopoly power to obtain unjust profits.

46. Plaintiffs and the Class have suffered an antitrust injury because they have paid higher supra-competitive prices for Monsanto's dicamba-tolerant trait in soybeans.

47. Monsanto's scheme to launch its dicamba-tolerant traits is simply one more overt act in continuation of its scheme to deprive farmers of choices and to monopolize the herbicide-tolerant traits market that has allowed it to exercise monopoly power for decades.

### **FACTUAL ALLEGATIONS**

#### ***Biotechnology Crop Traits***

48. The inherent value of a soybean seed is determined by two factors: (1) its germplasm; and (2) any GM traits implanted into the seed.

49. Germplasm is the base genetic material that determines the agronomic characteristics of a plant. Monsanto is a dominant player in the market for soybean germplasm.

50. In general terms, the germplasm determines the yield potential of the seed, while GM traits are used to avoid yield loss from factors such as weed pressure, insect pressure, or drought.

51. A farmer's seed purchase starts with selecting good germplasm that has high yield potential in the geographic region and agronomic conditions of the acres where the seed will be planted.

52. Monsanto was one of the first companies to utilize biotechnology in the field of agriculture and has become a leading producer of GM seed and agro-chemicals.

53. Biotechnology has made it possible to introduce genetic characteristics, or traits, into plant seeds. Among the most widely used GM traits are herbicide-tolerant traits.

54. In the 1970s, Monsanto patented the glyphosate molecule, which became the active ingredient in Roundup herbicide sold by Monsanto.

55. Glyphosate is a non-selective herbicide that causes severe injury or destruction to plants, including soybean, that have not been genetically modified to tolerate when the herbicide is sprayed over the top of the crop.

56. Once absorbed by a plant, glyphosate binds to and blocks the activity of a key enzyme (enolpyruvylshikimate-3-phosphate synthase) and inhibits the function of the shikimic acid pathway causing a deficiency in aromatic amino acids, eventually starving the plant to death.

57. Introduced in 1974, Roundup became one of the world's most widely used herbicides.

58. Monsanto also genetically engineered seed to withstand glyphosate, sold by Monsanto under the trade name Roundup Ready ("RR").

59. Monsanto's development and sale of RR seeds changed how farmers applied glyphosate herbicide. Rather than applying it only before the crop was planted (in the "burn-down" stage), Roundup could be sprayed over the top of growing crops genetically modified to withstand it. As a result, farmers planting RR crops could apply Roundup over an entire field, after the crop emerged without damaging the crop itself. Over-the-top application of glyphosate is now commonplace. As a result, the RR trait created the market for herbicide-tolerant traits.

60. Monsanto's Roundup herbicide and RR seed became a blockbuster combination.

61. Glyphosate use in the U.S. rose from 12.5 million pounds in 1995 to 250 million pounds in 2014. Science Daily, *Monsanto's glyphosate now most heavily used weed-killer in history* (Feb. 2, 2016), [www.sciencedaily.com/releases/2016/02/160202090536.htm](http://www.sciencedaily.com/releases/2016/02/160202090536.htm).

62. The glyphosate-tolerant trait is a technology that Monsanto patented, owns and licenses. A farmer cannot obtain that trait without buying the seed in which it has been inserted.

63. Monsanto began selling RR soybean seed in 1996.

64. Over the next two decades, a GM hybrid soybean seed needed to contain the RR trait to be competitive.

65. By 2015, more than 90% of soybeans were grown with seed containing Monsanto's RR trait.

66. Monsanto described the original RR soybean as "the world's most widely adopted biotech trait, planted by farmers on billions of acres since 1996." Monsanto News Release, *Roundup Ready Soybean Patent Expiration* (April 9, 2017), [monsanto.com/company/media/statements/roundup-ready-soybean-patent-expiration/](http://monsanto.com/company/media/statements/roundup-ready-soybean-patent-expiration/).

67. Monsanto's patent on this "first generation" Roundup Ready trait expired in 2015. Well before the RR patent expired in 2015, Monsanto patented a "second generation" Roundup Ready ("RR2") trait, which expresses the same enzyme that confers glyphosate-tolerance as RR.

68. According to Monsanto, "[f]armers have planted more than 50 million acres of the second-generation trait since it launched in 2009." *Id.*

69. Monsanto raised the price of RR2 soybeans by more than 40 percent compared to RR soybeans even though it offered the same tolerance of glyphosate.

***Weed Resistance to Glyphosate and Development of Dicamba-Tolerant Seed***

70. Due to the widespread use of glyphosate as a result of Monsanto's RR seed trait, weeds developed a resistance to glyphosate. Herbicide-resistant weeds are known as "super weeds."

71. According to a survey by Stratus Agri-Marketing in 2012, the area of U.S. cropland infested with glyphosate-resistant weeds was 61.2 million acres. That number has more than doubled today.

72. Knowing that glyphosate-resistant weeds threatened to diminish its strong-hold on the herbicide-tolerant traits market, Monsanto developed a new GM trait to maintain its market dominance.

73. One of the strongest agricultural chemicals that could kill the glyphosate-resistant super weeds is a chemical called dicamba, which was originally developed by BASF.

74. Dicamba is a broad-spectrum systemic herbicide that destroys broadleaf weeds and plants. Dicamba mimics the plant hormone auxin, causing uncontrolled cell division and growth, causing the plant to grow so fast that it cannot retain the nutrients it requires, which kills the plant.

75. Dicamba has been on the market in various forms since the 1960s for use in pre-planting or post-harvest burndown. It has not historically been used during hot summer months because of the risk of damaging neighboring crops.

76. Dicamba also has long been recognized as extremely volatile, meaning that it has a high propensity to evaporate from the soil and/or plant surface and then move as vapor through the air to other plants. Vaporized dicamba can travel great distances before its particles fall onto and damage desirable off-target plants, including non-tolerant crops.

77. In addition, dicamba's volatility is long-lived, meaning longer exposure for non-tolerant plants and increased risk of movement.

78. Dicamba not only is very volatile but very prone to spray drift. Such drift, as opposed to volatilization, is movement of spray droplets to non-target areas. Such drift can be influenced by weather, wind speed and direction, droplet size, ground speed and spray pressure.

79. Even a very small amount of dicamba can result in extensive damage to susceptible non-tolerant crops. It has been estimated that while one-eighth of a quart of glyphosate "will cause 20 percent damage to susceptible vegetation ... you get 20 percent damage at one-fifteen-hundredth of a pint of dicamba." According to Larry Steckel, a weed scientist from Tennessee, "[t]hat's a game changing difference." Elton Robinson, *New Herbicide Tech Demands New Nozzle Thinking – 10 Quick Points*, <https://agfaxweedsolutions.com/2017/01/12/new-herbicide-tech-demands-new-nozzle-thinking-10-quick-points/> (last visited May 25, 2018).

80. Certain plants are extremely sensitive to dicamba, even in trace amounts, including soybeans.

81. A healthy soybean plant will produce fully-developed pods and leaves throughout the stem of the plant. Dicamba exposure to susceptible crops, including soybeans, results in unique

and distinctive physical symptoms including leaf cupping, alone or together with other symptoms such as curling, strapping, discoloration, leaf elongation, wrinkling, stunting, and twisting. A soybean plant damaged by dicamba will lose pods throughout the stem as well as number of beans per pod.

82. Monsanto patented a new GM trait that, when inserted into the DNA of a soybean seed, allowed crops grown from those seeds to tolerate being sprayed with dicamba.

83. To maintain and enhance its dominance of the herbicide-tolerant trait market, Monsanto entered into one or more agreements with BASF in or around 2007 and thereafter to develop and promote a crop system featuring dicamba that involved spraying this highly volatile, drift-prone, and damaging herbicide over the top of growing soybean (and cotton) crops.

84. In January 2009, Monsanto and BASF announced a joint-licensing agreement to accelerate use of dicamba-based weed control products, both participating in development of formulations of dicamba to be used with Monsanto's dicamba-tolerant seed trait.

85. Monsanto knew that dicamba is volatile, drift-prone, and has extreme negative effects on desirable broad-leaf plants, including trees, fruits, vegetables, and various crops like soybeans. Monsanto's development of a trait genetically engineered to allow certain crops to tolerate dicamba, and the spraying of dicamba over the top of those crops after emergence from the ground, meant that dicamba would for the first time be sprayed in hot summer months and in the vicinity of susceptible non-tolerant crops also emerging and at high risk for damage by dicamba. See Danny Hakim, *Monsanto's Weed Killer, Dicamba, Divides Farmers*, (hereinafter "Hakim Article") (Sept. 21, 2017) N.Y. Times <https://www.nytimes.com/2017/09/21/business/monsanto-dicamba-weed-killer.html>.



86. On April 29, 2010, Monsanto applied to the Environmental Protection Agency (EPA) for registration of M-1691 Herbicide, a diglycolamine (DGA) salt of dicamba (a formulation previously sold by BASF as Clarity herbicide), supposedly less volatile than older formulations.

87. In a joint press release with BASF, Monsanto stated that they had agreed 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.” See 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/>.

88. Monsanto and BASF conducted joint field testing of dicamba-based formulations applied over the top of Monsanto’s dicamba-tolerant soybean technology in development, and also said their collaboration included joint development of stewardship, education programs and best practices to “support long term sustainability” of a dicamba-tolerant system. Monsanto and BASF Yield-and-Stress Collaboration Field Tour Monmouth Research Facility PowerPoint (Aug. 8, 2011), [https://www.basf.com/documents/corp/en/investor-relations/calendar-and-publications/calendar/2011/roundtable\\_agricultural/110808\\_Agro\\_Roundtable\\_2011\\_Tour.pdf](https://www.basf.com/documents/corp/en/investor-relations/calendar-and-publications/calendar/2011/roundtable_agricultural/110808_Agro_Roundtable_2011_Tour.pdf).

89. On July 30, 2012, Monsanto applied for EPA registration of M-1768 Herbicide, again a DGA dicamba salt, this time with Monsanto’s “VaporGrip® Technology” that supposedly further lowered volatility, for use post-emergence, or over-the-top, of GM dicamba-tolerant soybeans.

90. Monsanto, which provided the EPA only with its own volatility studies, refused independent volatility testing of XtendiMax with “VaporGrip Technology.” Monsanto repeatedly denied university requests to research the volatility of the herbicide. While Monsanto provided samples of XtendiMax to various universities, including the University of Missouri and the University of Arkansas, the samples came with contracts containing never-before-seen strict constraints that expressly prohibited volatility testing.

91. The new dicamba formulations otherwise were inadequately tested for sufficient time or under real-world conditions in areas in which they would be sold. Among other things, there was no multiple-exposure testing or modeling of large-scale spraying as would occur in areas where usage would predictably be high and in accordance with the soil and weather / inversion conditions in those areas. Monsanto, for example and according to publicly available EPA documents, field tested its “VaporGrip Technology” in only two locations – Texas and Georgia – involving specific soil types, only a few acres, and a limited time span. Controlled-condition testing (such as Humidome and Hoop House methods) were limited to 24 hours.

92. Monsanto’s dicamba-tolerant trait in soybean seed was deregulated by the USDA on or about January 14, 2015.

93. After deregulation, Monsanto commercialized its new variety of dicamba-tolerant soybean seeds under the trade name “Roundup Ready 2 Xtend,” which contain both the RR trait and the Xtend trait that genetically-modifies the seed to grow a plant that is able to tolerate being sprayed with dicamba. Thus, a farmer who plants Roundup Ready 2 Xtend soybean seeds can theoretically spray his soybeans with Roundup and/or dicamba and kill weeds, but not the glyphosate-tolerant and dicamba-tolerant crops.

94. In addition to seed sales, Monsanto exercises its dominant market power through licensing and cross-licensing deals with other seed companies. Monsanto licensed its dicamba-tolerant GM traits to other seed manufacturers, which proliferate the dicamba-tolerant technology beyond Monsanto's sales.

95. The only inherent benefit of Roundup Ready 2 Xtend soybean seeds over other alternatives is the seeds' tolerance of dicamba. In fact, Xtend seeds have a slight yield drag compared to RR seeds. <https://www.dtnpf.com/agriculture/web/ag/news/crops/article/2016/11/16/university-yield-data-emerging-xtend-2>.

96. As one analyst, Jonas Oxgaard from the investment firm Bernstein, commented in the context of an EPA cut-off for spraying: "If the EPA imposed an April 15 [2018] cut-off date for dicamba spraying, that would be catastrophic for Xtend – it invalidates the entire point of planting it." Tom Polansek and Emily Flitter, Reuters, *EPA eyes limits for agricultural chemical linked to crop damage* (hereinafter "Polansek and Flitter Article") (Sept. 5, 2017), <https://www.reuters.com/article/us-usa-pesticides-epa-exclusive/exclusive-epa-eyes-limits-for-agricultural-chemical-linked-to-crop-damage-idUSKCN1BG1GT>.

### ***Monsanto's Biggest Competitor Sues it for Abusing Its Monopoly Power***

97. In 2009, Monsanto sued to stop DuPont/Pioneer from stacking Monsanto's RR trait with Pioneer's Optimum® GAT® trait for tolerance to ALS herbicides, which was designed to provide farmers an option against glyphosate-resistant weeds. See DuPont News Release, *DuPont Names Glyphosate, ALS Tolerant Trait Optimum GAT* (Mar. 2, 2006), [www2.dupont.com/Media\\_Center/en\\_US/news\\_releases/2006/article20060302c.html](http://www2.dupont.com/Media_Center/en_US/news_releases/2006/article20060302c.html).

98. DuPont/Pioneer is a competitor of Monsanto both as a developer of seed varieties and a developer of GM traits.

99. In July 2009, Pioneer counterclaimed against Monsanto, alleging that Monsanto engaged in numerous anticompetitive acts to acquire, protect, and expand its monopoly power in the soybean and corn herbicide-tolerant markets. *See* Defendants’ Amended Answer and Counterclaims (“Counterclaim”), *Monsanto Co. v. E.I. Dupont De Nemours and Co.*, No. 4:09-cv-00686, Doc. #24, 2009 WL 2589331, at \*28 (E.D. Mo. July 10, 2009).

100. Pioneer alleged that Monsanto “is the dominant supplier of herbicide resistant soybean traits in the United States with a market share of approximately 99.7%” and has “virtually a complete monopoly” of this market, “including the power to control prices and exclude competition.” *Id.*, Counterclaim, ¶ 25.

101. Pioneer also alleged that Monsanto used stringent provisions in its licensing agreements to stifle competition, including requiring independent seed companies to switch to RR2 before the RR patent expired thus suppressing competition on the original technology, preventing other companies from stacking non-Monsanto traits with Monsanto traits, and preventing independent seed companies from incorporating competing traits into their own breeding programs. *See* Counterclaim, at ¶¶ 64 et seq.; *see also AP: Monsanto Strong-Arms Seed Industry* (while Monsanto licenses its technology to other companies, which not only spreads the technology but commands a royalty, its contracts “ban[] independent seed companies from breeding plants that contain both Monsanto’s genes and the genes of any of its competitors, unless Monsanto gives prior written permission – giving Monsanto the ability to effectively lock out competitors from inserting their patented traits into the vast share of U.S. crops that already contain Monsanto’s genes”).

102. Pioneer also noted that during 2002-2006 alone, the price of the RR soybean trait increased 118%. Counterclaim ¶54. These price increases are contrary to a competitive market, where widespread adoption of technology typically results in a decline in prices.

103. In August 2012, a jury awarded Monsanto a \$1 billion verdict on its claims against DuPont for patent infringement. Shortly thereafter, however, and with DuPont's antitrust claims still pending, Monsanto and DuPont announced in 2013 that they would resolve their respective lawsuits and enter into a deal under which Monsanto would waive the verdict and DuPont would dismiss its antitrust claims and pay some \$1.75 billion in royalties in exchange for access to Monsanto's genetic technology, including RR and dicamba-tolerance.

104. Monsanto entered into technology licensing agreements with DuPont under which DuPont could market and sell soybean seed containing Monsanto's RR2Yield, as well as Monsanto's dicamba-tolerant technology. Joint Press Release, *DuPont and Monsanto Reach Technology Licensing Agreements on Next-Generation Soybean Technologies* (Mar. 26, 2013), <https://www.pioneer.com/home/site/about/news-media/news-releases/template.CONTENT/guid.EAB5E402-FECE-0123-144E-CBC62A6D8513>.

105. Monsanto's scheme to launch its dicamba-tolerant traits is simply one more overt act in continuation of its anticompetitive conduct as alleged by Pioneer designed to monopolize the herbicide-tolerant traits market.

106. As of 2014, DuPont had begun "[r]apid integration of Roundup Ready 2 Xtend into Pioneer germplasm." DuPont PowerPoint Presentation at 15, [https://s2.q4cdn.com/752917794/files/doc\\_presentations/2014/2014-Goldman-Sachs-Presentation-FINAL.pdf](https://s2.q4cdn.com/752917794/files/doc_presentations/2014/2014-Goldman-Sachs-Presentation-FINAL.pdf) (last visited May 25, 2018).

***Monsanto Knew Its Commercialization of Dicamba-Tolerant Soybean Traits Would Cause Substantial Crop Damage***

107. At least as early as 2010, Monsanto's own dicamba advisory board warned that commercializing Xtend 2 soybean would lead to the dicamba problems currently roiling farms and farming communities. Steve Smith, a former member of Monsanto's dicamba advisory board testified before congress that "[t]he widespread use of dicamba is incompatible with Midwestern agriculture" and "[e]ven the best, the most conscientious farmers cannot control where this weed killer will end up." See Hakim Article.

108. Among concerns expressed early on, scientists from Ohio State University addressed a conference in Columbus in October 2011 focused on dicamba. Representatives of Monsanto were in attendance. Douglas Doohan, a conference organizer, and his colleagues outlined the risk of unapproved spraying of older dicamba versions when dicamba-tolerant seed became available and also that damage to other crops would lead farmers to buy dicamba-tolerant seed to protect themselves. Emily Flitter, Reuters, *The story behind Monsanto's sprawling herbicide crisis* (Nov. 10, 2017), <http://www.provmweb.com/news/a05a1/www.provmweb.com/news/a05a1/the-story-behind-monsantos-sprawling-herbicide-crisis>.

109. David Mortenson and other scientists published an article in 2012 warning not only of high risk of drift and volatility, but the negative impacts on nontarget crops and vegetation, noting that risk to plants from dicamba is 75 times greater than from glyphosate. David A. Mortenson, J. Franklin Egan, Bruce D. Maxwell, Matthew R. Ryan, Richard G. Smith, *Navigating a Critical Juncture for Sustainable Weed Management*, BioScience Vol. 62, Issue 1 (Jan. 2012), <https://doi.org/10.1525/bio.2012.62.1.12>.

110. In the same article, these scientists also warned that growers and commercial applicators do not always use recommended application practices, and that new resistant cultivars

“will enable growers to apply synthetic auxin herbicides several weeks later into the growing season, when higher temperatures may increase volatility and when more varieties of susceptible crops and nontarget vegetation are leafed out, further increasing the potential for nontarget drift damage.” *Id.*

111. They also warned about weed resistance and sustainability of a dicamba-based crop system, recognizing that “once an initial number of growers in a region adopts [seed with dicamba-tolerance] the remaining growers may be compelled to follow suit in order to reduce the risk of crop injury and yield loss.” *Id.* In other words, damage to non-target plants “could create a strong incentive for growers to plant resistant seeds as insurance against crop damage from herbicide drift or applicator mistakes, even if they are not interested in applying synthetic auxin herbicides themselves. This effect could further augment the portion of the seed market and of the landscape garnered by the resistant seed varieties, which would reduce genotypic diversity and restrict farmers’ access to different crop varieties.” *Id.*

112. Weed scientist Ford Baldwin asked Monsanto representatives at meetings as early as 2013 how Monsanto was going to manage the off-target issues with dicamba. The answer was that “everyone will just have to plant Xtend Crops, and then it won’t be an issue.” *Bader Farms, Inc. v. Monsanto Co.*, No. 1:16-CV-00299 (E.D. Mo.), Baldwin Dep. Tr. (Oct. 31, 2017) at 19:23-20:6. As Dr. Baldwin described it, the technology is all or nothing: “We’re either going to plant all the acres to dicamba crops, or none. And they’ve never really denied that.” *Id.* at 20:6-12.

113. Monsanto continued to develop its dicamba-based technology, including a supposedly less volatile version of dicamba under the trade name XtendiMax, to sell to farmers for use on Roundup Ready 2 Xtend soybean.

114. Monsanto initially represented it would delay commercializing the Roundup Ready Xtend Crop system (featuring dicamba herbicide and seed containing the dicamba-tolerant seeds) pending regulatory approvals. On March 1, 2012, Monsanto announced:

Monsanto Company (NYSE: MON) today unveiled its new Roundup Ready® Xtend Crop System, which is designed to provide farmers with more consistent, flexible control of weeds, especially tough-to-manage and glyphosate-resistant weeds to maximize crop yield potential. **Pending regulatory approvals, this advanced system** is expected to be available to U.S. farmers for the 2014 growing season, consisting of an innovative new soybean trait solution and a next-generation herbicide formulation.

Monsanto Press Release, *New Roundup Ready Xtend Crop System to Extend Weed Control and Maximize Yield* (March 1, 2012), <https://monsanto.com/news-releases/new-roundup-ready-xtend-crop-system-to-extend-weed-control-and-maximize-yield/> (emphasis added).

115. By October 2015, Monsanto dropped any pretense it would delay launching Roundup Ready 2 Xtend soybeans, despite its earlier statements to the contrary. In Monsanto's October 7, 2015 Q4 conference call, Monsanto's CEO Hugh Grant explained Monsanto's ability to charge a premium for dicamba-tolerant seeds over other second-generation Roundup varieties. *Monsanto Company Q4 2015 Earnings Conference Call* ("Q4 2015 Earnings Conference Call") (Oct. 7, 2015 9:30 AM ET), <https://seekingalpha.com/article/3557566-monsantos-mon-ceo-hugh-grant-q4-2015-results-earnings-call-transcript?page=5>. As of 2015, there was no registration from the EPA for a "low" volatility dicamba for use over the top of growing plants.

116. Monsanto aggressively commercialized its XtendFlex cotton for the 2015 growing season despite lack of approval for over-the-top dicamba.

117. As predicted, in areas where XtendFlex cotton was planted, there were numerous complaints of crop damage resulting from dicamba drift and volatility.



118. Despite the prior year's experience of damage from dicamba drift, Monsanto aggressively commercialized Xtend soybeans for the 2016 growing season, telling farmers that approval of its new "low" volatility dicamba herbicide was "imminent." *Monsanto Q1 2016 Results Earnings Call Transcript* (Jan. 6, 2016), <https://seekingalpha.com/article/3794576-monsanto-companys-mon-ceo-hugh-grant-q1-2016-results-earnings-call-transcript>.

119. EPA registrations for the new dicamba formulations were not available until after harvest in 2016.

120. Not only did dicamba again cause crop damage in 2016, it was on a much larger scale with both Monsanto's Xtend cotton and Xtend soybeans on the market.

***Full Ramp-Up of Commercializing the Dicamba-Tolerant Trait in 2017***

121. In November and December 2016, after the harvest, Monsanto, BASF, and DuPont, respectively, received registrations from the EPA for their dicamba herbicides approved for over-the-top use with Monsanto's Xtend seed technology.

122. Monsanto began selling its dicamba formulation under the trade name XtendiMax with VaporGrip Technology.

123. Notwithstanding multiple warnings from weed scientists and others, and despite its knowledge of the crop damage in 2015 and 2016, Monsanto engaged in a full-scale launch of its dicamba-tolerant trait in 2017.

124. BASF began selling its dicamba herbicide under the trade name Engenia. BASF markets Engenia as a low-volatility dicamba formulation designed for use with seed containing the dicamba-tolerant trait sold under the trait name Roundup Ready 2 Xtend Soybeans, .

125. Dupont received EPA registration on or about February 16, 2017 and began selling dicamba herbicide with Monsanto's "VaporGrip Technology" under the trade name FeXapan.

126. Syngenta is seeking approval of its own dicamba herbicide, Tavium, under license from Monsanto.

127. Monsanto's licensing of its dicamba-tolerant trait to companies like DuPont and Syngenta is one of Monsanto's "Key Metrics and Platform Drivers." See Monsanto, *Fourth-Quarter FY2017 Earnings Presentation "Fiscal Year 2017 Results and Outlook"* (hereinafter "Monsanto, *Fiscal Year 2017 Results and Outlook*") (Oct. 4, 2017), [https://monsanto.com/app/uploads/2017/10/MonsantoCo.\\_Q4F17\\_Earnings\\_Presentation\\_2017.10.04.pdf](https://monsanto.com/app/uploads/2017/10/MonsantoCo._Q4F17_Earnings_Presentation_2017.10.04.pdf). That licensing was intended to and does further promote Monsanto's penetration of the market and increase licensing revenue from the dicamba-tolerant trait on which over-the-top use of dicamba herbicide depends.

128. Monsanto bred the dicamba-tolerant trait into its entire stock of soybeans, thus depriving farmers of choices with respect to getting the germplasm they want without the dicamba-tolerant trait. See Emily Flitter, *Special Report: The decisions behind Monsanto's weed-killer crisis* (Nov. 9, 2017), <https://www.reuters.com/article/monsanto-dicamba/special-report-the-decisions-behind-monsantos-weed-killer-crisis-idUSL1N1NF0QY>.

129. The commercialization of Roundup Ready 2 Xtend is one of Monsanto's biggest product releases ever. In 2016, roughly 1 million acres of soybeans were planted with Xtend technology. In 2017, an estimated 22 million acres of soybeans, or roughly a quarter of all planted soybean acres, were dicamba-tolerant. Eric Lipton, *Crops in 25 States Damaged by Unintended Drift of Weed Killer* (Nov. 1, 2017) [https://www.nytimes.com/2017/11/01/business/soybeans-pesticide.html?\\_r=0](https://www.nytimes.com/2017/11/01/business/soybeans-pesticide.html?_r=0).

130. Monsanto commercialized Xtend soybeans even more aggressively in 2018, doubling the scope of dicamba-tolerant soybeans to an estimated 40 million acres planted in 2018.

131. By 2019, Monsanto predicts U.S. farmers will plant Xtend 2 soybeans on 60 million acres. According to one analyst, this represents a \$400-\$800 million opportunity for Monsanto. *See* Polansek and Flitter Article.

132. Monsanto is targeting a penetration of more than 80 million soybean acres alone in the U.S. *See* Monsanto, *Fiscal Year 2017 Results and Outlook*.

133. In 2017, the USDA reported a “record level” of 89.5 million acres of soybeans planted in the United States, even though yield was down 6% from 2016. Thus, even at the 2017 record high, Monsanto’s target is near 100% of the entire United States soybean market. And Monsanto has ensured that its market dominance will continue by licensing the right to sell its Xtend soybeans to seeds companies with more than 90% U.S. soybean seed share. *See id.*

134. XtendiMax, Engenia and FeXapan are all volatile.

135. Volatilization cannot be corrected with education or manner of spraying by the applicator.

136. Field tests undertaken in 2017 showed that volatility of the dicamba formulations occurred over at least a 2-3 day period after application.

***Increased Crop Damage from Dicamba in 2017 and 2018***

137. By the end of 2017, the EPA estimated that over 3.6 million acres—about 4 percent of all soybeans planted in the United States—were damaged by dicamba in 2017 alone.

138. Nationally, over 2,000 dicamba-crop damage investigations have been conducted. Photos of the crop damage reflect a surreal landscape where a dicamba-tolerant field survives while a neighboring non-tolerant field looks as if someone burned the non-tolerant field to the ground.

139. A leading weed scientist, Dr. Kevin Bradley from the University of Missouri, stated all dicamba-based herbicides need to be kept “in the pre-plant, burndown, pre-emergence use pattern. Leave the post-emergence alone” and should not be used post-emergence, explaining that “the risk is too great for off-target movement” to be spraying it over-the-top of growing plants. David Bennett, *What’s the latest on dicamba drift in Missouri?* (Sept. 1, 2017), <http://www.deltafarmpress.com/soybeans/what-s-latest-dicamba-drift-missouri>.

140. According to Dr. Bradley: “I’ve been doing this for more than 20 years now and I was around when Roundup Ready was introduced.... In my opinion, this is nothing like the introduction of any trait or technology as far as the scope and the significance of the injury that’s been observed across the U.S.... I just don’t think we know enough yet to apply [dicamba] safely.” Eli Chen, *As harvest season begins, farmers worry how dicamba herbicide could affect next year’s crop* (Sept. 19, 2017), <http://news.stlpublicradio.org/post/harvest-season-begins-farmers-worry-how-dicamba-herbicide-could-affect-next-year-s-crop#stream/0>.

141. Dr. Rick Cartwright, a plant pathologist, University of Arkansas Extension administrator and Arkansas State Plant Board member, explained: “You apply (new dicamba formulations) to soybeans, and 36 hours later the product gets up and goes somewhere else. I don’t know how you educate people to fix that.” Greg D. Horstmeier, *Arkansas Sets Dicamba Limits* (Sept. 22, 2017), <https://www.dtnpf.com/agriculture/web/ag/news/crops/article/2017/09/22/plant-board-limits-herbicide-use-2>.

142. As of July 2018, university weed scientists have estimated that approximately 1.1 million acres of soybeans have suffered dicamba injury so far in 2018 along with extensive injury to other plants as well, and that number is likely to go higher.

*Monsanto Used the Threat of Crop Damage to Leverage Sales of its Dicamba-Tolerant Traits*

143. Dicamba volatility and drift produced predictable anticompetitive pressure on farmers to buy dicamba-tolerant seeds or risk losing their crop. Whether through volatilization or physical drift, a dicamba crop system has a high risk of harm to farmers who grow susceptible non-dicamba tolerant crops. As predicted, this would be a driver for sales of Monsanto's dicamba-tolerant traits.

144. As observed by the Center for Food Safety in comments before the Arkansas Plant Board, "[o]ne might think that the farmers' experiences over the past two years would generate a backlash against Monsanto's Xtend crop system...but unfortunately, precisely the opposite is happening in this case." Center for Food Safety, *Comments on the Arkansas State Plant Board's Proposal to Restrict Dicamba Use* at 34 (hereinafter "Center for Food Safety Comments") (Oct. 30, 2017), [https://www.centerforfoodsafety.org/files/cfs-dicamba-comments-for-arkansas--final-1\\_40098.pdf](https://www.centerforfoodsafety.org/files/cfs-dicamba-comments-for-arkansas--final-1_40098.pdf).

145. Farmers have purchased and will continue to purchase Monsanto's dicamba-tolerant traits at higher prices for defensive purposes even if they would otherwise prefer not to buy that trait.

146. Before the new supposed "low" volatility dicamba formulations were even on the market, weed scientists and others were warning that they too would result in damage to non-tolerant crops, and farmers were expressing frustration and fear that they were "not going to be able to grow what they want to grow" but rather, "forced to go with that technology." Dan Charles, *How Monsanto And Scofflaw Farmers Hurt Soybeans In Arkansas* (Aug. 1, 2016), [www.npr.org/sections/thesalt/2016/08/01/487809643/crime-in-the-fields-how-monsanto-and-scofflaw-farmers-hurt-soybeans-in-arkansas](http://www.npr.org/sections/thesalt/2016/08/01/487809643/crime-in-the-fields-how-monsanto-and-scofflaw-farmers-hurt-soybeans-in-arkansas).

147. Farmers now report that growing non-dicamba-tolerant crops is becoming “impossible.” *See* Hakim Article. Farmers must forego planting less expensive varieties because such varieties could be wiped out by dicamba. To avoid losing their crops, farmers are placed in an untenable position: plant less expensive GM or non-GM varieties and risk their crop being wiped out by dicamba or buy Monsanto’s more expensive Xtend 2 seeds. *See* Polansek and Flitter Article.

148. As one Arkansas farmer, Brent Henderson, put it: “If it’s going to be legal to use and neighbors are planting it, I’m going to have to plant [dicamba-tolerant soybeans] to protect myself.” Striepe, Becky, *EPA Allows Farmers to Keep Spraying Monsanto’s Dicamba* (Oct. 20, 2017), [www.care2.com/greenliving/epa-dicamba-decision-2017.html](http://www.care2.com/greenliving/epa-dicamba-decision-2017.html).

149. As one Missouri producer, Landon Hays put it: “[Monsanto] knew that people would buy [Xtend] just to protect themselves.... You’re pretty well going to have to. It’s a good marketing strategy, I guess. It kind of sucks for us.” Jack Kaskey & Lydia Mulvany, *Creating a Problem — And a Lucrative Solution*, Bloomberg, (Sept. 5, 2016), <http://cehn-healthykids.org/wp-content/uploads/2017/04/Bloomberg-buisness-week-sept-5-112c2016.pdf>.

150. Another farmer said he “got burnt so bad last year with dicamba on my beans,” that he “planted all dicamba seed [in 2017] just for self-protection to keep from having that damage again” and “[m]ost everybody in my area did the very same thing that I did” even though the dicamba-tolerant seed was more expensive. Bryce Gray, *Weedkiller dicamba unlocks record harvests – and a web of conflict among divided farmers*, St. Louis Post-Dispatch, (Oct. 17, 2017), [http://www.stltoday.com/business/local/weedkiller-dicamba-unlocks-record-harvests-and-a-web-of-conflict/article\\_fa3ba16e-10ef-5220-b1a0-71a84bcd7668.html](http://www.stltoday.com/business/local/weedkiller-dicamba-unlocks-record-harvests-and-a-web-of-conflict/article_fa3ba16e-10ef-5220-b1a0-71a84bcd7668.html).

151. As summed up by another farmer: “You either get on board or get hurt.” Bryce Gray, St. Louis Post-Dispatch, ‘Get on board or get hurt’: Missouri farmers wrestle with widespread dicamba damage (Oct. 22, 2017) <http://www.theledger.com/news/20171022/get-on-board-or-get-hurt-missouri-farmers-wrestle-with-widespread-dicamba-damage>.

152. According to Dr. Bradley: “Every farmer I’ve visited with that’s been injured...has said the same thing, and that is that next year they will plant the new trait—the dicamba resistant trait—to protect themselves. I hear that terminology over and over and over...that they aren’t able to plant whatever they want to plant. And that they’ve got to plant a dicamba resistant soybean in the future so they don’t get injured.” *Center for Food Safety Comments*.

153. “It’s hard to think of a better example of bad behavior rewarded.” *Id.* at 34-35.

154. Farmers’ use of dicamba was foreseeable and in fact foreseen by Monsanto: the only reason for a producer to pay a premium to purchase dicamba-tolerant seeds is to take advantage of the seeds’ supposed herbicide-tolerance. Otherwise the producer would opt for less expensive GM or GM-free options. And Monsanto in fact foresaw and knew that farmers would spray dicamba-tolerant crops with dicamba.

155. Monsanto employees advised seed dealers that farmers would have to adopt its new dicamba-tolerant trait technology because they would face too great of a risk of incurring crop damage if they did not plant dicamba-tolerant seeds.

156. Because of its market power and perverse incentives of its own making, Monsanto can and does charge a considerable premium for dicamba-tolerant seeds. Dicamba-tolerant soybeans can cost more than twice as much (\$64 per bag) as Monsanto’s RR soybeans (\$28 per bag), but the commercialization of dicamba-tolerant seeds means farmers must now pay this premium to avoid their crops and businesses being wiped out. *See Polansek and Flitter Article*.

157. On an earnings call, Monsanto CEO Begemann outlined how dicamba crop systems would enhance Monsanto's market dominance:

The other near-term blockbuster soybean technology is our Roundup Ready Xtend crop system, which will enhance the strength of our current Roundup Ready system with dicamba tolerance. We now see this as a 250 million acre opportunity across the Americas that extends beyond the soybeans and cotton to encompass corn given the progress we see in our pipeline. We expect this technology to ramp even faster than Intacta and our U.S. teams are gearing up for the largest technology launch ever, more than 3 million acres of Roundup Ready 2 Xtend soybeans in fiscal year 2016 as shown on Slide 15.

*See Q4 2015 Earnings Conference Call.* Thus, Monsanto plans to extend its dicamba-tolerant technology to yet another commodity crop—it now has a dicamba-tolerant trait for corn seed.

158. And because of the destruction and acrimony caused by dicamba volatility and drift, Monsanto's monopoly power continues to grow as the number of acres planted with dicamba-tolerant soybeans continues to rise rapidly.

159. Damage from dicamba to crops not genetically modified to tolerate it has and will continue to intimidate and pressure farmers to purchase Monsanto's dicamba-tolerant traits whether they want them or not, suppressing competition and unlawfully creating and increasing demand by fear.

160. The more crops planted with dicamba-tolerant seed and the more dicamba sprayed after emergence of susceptible non-tolerant crops, the more farmers will be forced to buy Xtend technology to protect themselves at higher cost.

161. Farmers not only are coerced into buying the dicamba-tolerant trait, but to get that trait, must purchase it along with the RR trait stacked with it.



162. The behavior of Monsanto is anticompetitive, as it effectively suppresses and even eliminates competition, creating and increasing demand for Monsanto's traits based on fear, permitting and resulting in unlawful overcharge for seed containing that trait.

***Monsanto's Restrictive Licensing Agreements***

163. Monsanto requires all farmers who purchase seed containing its herbicide-tolerant traits to sign a Monsanto Technology/Stewardship Agreement ("MTSA") and pay a fee for the technology.

164. According to Monsanto policy, "seed containing Monsanto patented technologies can be sold only to growers who are properly licensed." Seed containing that technology, including the dicamba-tolerant Xtend technology "can only be sold to growers who have a current, active, signed MTSA." Monsanto Seed Dealer Stewardship Policy, <https://monsanto.com/app/uploads/2017/05/2016-trait-stewarship-policy.pdf> (last visited May 25, 2018).

165. The MTSA is a limited use license that allows growers to use Monsanto patented traits and germplasm only during that growing season—meaning the farmer agrees that he will not save or plant seed containing Monsanto technology for use the following year. Rather, the farmer must purchase new seed every year. *Id.*

166. Monsanto requires that the grower sign the agreement and be licensed before delivery of the seed. *Id.*

167. Among other things, the 2017 MTSA provides that the farmer agrees:

[t]o pay all applicable royalties and technology fees for the use of the Monsanto Technologies and applicable fees due Monsanto that are part of, associated with the Seed purchase price or that are invoiced for the Seed. If Grower fails to pay Monsanto or any wholly owned Monsanto subsidiaries, for costs of Seed, Monsanto Technologies, and/or royalties, Grower agrees to pay Monsanto default interest charges at the rate of 18% per annum (or the maximum allowed by law whichever is less) plus reasonable attorneys' fees, court costs and all other costs of collection.

Id.

168. As is common in the industry, Monsanto licenses its herbicide-tolerant traits to other seed companies. These seed companies also must obtain licenses to use Monsanto's herbicide-tolerant traits with its own seed varieties, alone or "stacked" with other GM traits, such as traits providing insect resistance or drought-tolerance.

169. Monsanto holds the patent on the dicamba-tolerant trait technology with exclusive control over who can access the technology, pricing, marketing, and promotion, including the ability to place restrictions and requirements on any other companies who might want to use the technology. Given that farmers have and will continue to need dicamba-tolerant technology to protect themselves against dicamba volatility and drift – an enormous problem created by the actions of Monsanto itself – Monsanto's market power is massive and will only continue to grow.

170. Monsanto uses licensing to spread its technology and obtain huge market power. It also uses licensing agreements with other seed companies to control what other companies can use, and can stack with its herbicide-tolerant traits. "The cost of obtaining permission to use patented technology or genetic material often prevents smaller firms from participating in innovative research and creates significant barriers to entry." Aleksandre Maisashvili, et al., *Seed Prices, Proposed Mergers and Acquisitions Among Biotech Firms* (4th Quarter 2016), [https://ageconsearch.umn.edu/bitstream/246985/2/cmsarticle\\_540.pdf](https://ageconsearch.umn.edu/bitstream/246985/2/cmsarticle_540.pdf). Thus, Monsanto's licensing practices further support the high concentration that exists in the herbicide-tolerant traits market.

171. Monsanto has cross-licensing agreements with each of the largest players: Dow/duPont, ChemChina, BASF, and Bayer. And, while the others may license to competitors or

new entrants to the market, they have no incentive to grant licenses at attractive rates, which would be a barrier to new entry in the market for transgenic seed. *Id.*

172. Monsanto has entered into various agreements and combinations to ensure it can create and maintain its outsized market power. These combinations and agreements significantly diminish Monsanto's rivals' incentives to compete with Monsanto to offer meaningful dicamba-free growing options, because the other major biotech firms want to market and sell their own dicamba herbicide and dicamba-tolerant seeds.

173. Before the introduction of dicamba-tolerant traits, the reason farmers paid licensing fees for seeds containing herbicide-tolerant traits was so they could use the herbicide for which the seed provided tolerance. The close relationship between GM seeds and herbicides "may encourage combination and linked pricing of seeds and chemicals." MacDonald, *Mergers and Competition Article*.

***The Harm Caused by Monsanto's Anticompetitive Conduct Outweighs any Pro-Competitive Impact***

174. Monsanto's monopolization and attempted monopolization of the market for herbicide-tolerant traits in soybeans stymies competition, hurts producers, and harms the public at large. As the Associated Press has noted, "[d]eclining competition in the seed business could lead to price hikes that ripple out to every family's dinner table. That's because the corn flakes you had for breakfast, soda you drank at lunch and beef stew you ate for dinner likely were produced from crops grown with Monsanto's patented genes." *See AP: Monsanto Strong-Arms Seed Industry*.

175. According to the USDA, prices for seed, which include the price of herbicide-tolerant traits, have increased far more than for other agricultural inputs. The USDA compared prices farmers paid for 5 types of farm inputs. Seed prices was the largest increase between 1994-2010, which more than doubled compared to the price received for the crop sold. Keith O. Fuglie,

et al., *Research Investments and Market Structure in the Food Processing, Agricultural Input, and Biofuel Industries Worldwide*, ERR-130 at 11, 13 (Dec. 2011).

176. Mounting data indicates that GM seeds are associated with a marked increase in the use of herbicides like dicamba. According to the New York Times, “[m]uch of the increase in herbicide use has come from Monsanto’s first-generation Roundup, in which the active ingredient is Glyphosate.” Monsanto thus knows from its experience with Roundup that herbicide-tolerant seeds drive sales of herbicide. Karl Russell and Danny Hakim, *Broken Promises of Genetically Modified Crops*, N.Y. Times (Oct. 29, 2016), <https://www.nytimes.com/interactive/2016/10/30/business/gmo-crops-pesticides.html>.

177. Monsanto has publicly attempted to shift blame to growers by claiming that growers have failed to properly follow its complicated labeling instructions. *See, e.g.*, Chris Bennett, *Dicamba Lawsuits Mounting* (Sept. 13, 2017), <https://www.agweb.com/article/dicamba-lawsuits-mounting--naa-chris-bennett/>. But Monsanto’s labeling instructions are often inscrutable, containing pages of highly-detailed instructions, such as only spray dicamba when the wind speed is between 3-10 mph, do not spray between sunset and sunrise, use buffer zones, and do not apply dicamba during temperature inversions. “Dicamba Debate Continues, States Contemplate More Herbicide Restrictions,” DTN Progress Farmer (July 12, 2017) (Downloaded July 14, 2017 from <https://www.dtnpf.com/agriculture/web/ag/news/article/2017/07/12/states-contemplate-herbicide>); “I can’t keep dicamba in the field,” UTCrops News Blog (July 18, 2017) (Downloaded July 19, 2017 from <http://news.utcrops.com/2017/07/cant-keep-dicamba-field/>). But even if the instructions are followed, it will not prevent dicamba drift or volatilization.

178. Temperature inversions are defined nebulously in the label instructions, including the instruction that inversions “can be indicated by ground fog” or “[s]moke that layers and moves

laterally in a concentrated cloud....” The inscrutability of such instructions provide no assistance—the supposed low–volatility dicamba remains volatile and prone to drift, a characteristic of the herbicide that will not be remedied by strict compliance with application instructions. Monsanto thus knew and intended the consequences of the threat of crop damage from dicamba.

179. Plaintiffs and the class are direct purchasers of Monsanto’s dicamba-tolerant trait in soybean seeds.

180. As direct purchasers, Plaintiffs and the Class have been harmed in their business or property by paying supra-competitive, monopolistic prices for Monsanto’s dicamba-tolerant traits.

#### CLASS ALLEGATIONS

181. Plaintiffs bring this action under Rules 23(a) and (b)(3) of the Federal Rules of Civil Procedure on behalf of all persons and entities in the United States who, after 2015, were direct purchasers of Monsanto’s dicamba-tolerant traits in soybean seeds (the “Class”). Excluded from the Class are the Court, the Court’s relatives, and Court personnel; Monsanto and its subsidiaries, officers, directors, employees, contractors, and agents; and governmental entities.

182. The “numerosity” requirement of Rule 23(a)(1) is met because there are tens of thousands of class members geographically dispersed across the country such that joinder of all members is impracticable. Plaintiffs believe that Monsanto’s records, including but not limited to MTSA records, maintained in the ordinary course, will provide the identities of Class members.

183. The “commonality” requirement of Rule 23(a)(2) is met because there are questions of law and fact common to each of the members of the Class, including:

- a. whether Monsanto knew or should have known that its acts or omissions would cause or contribute to cause dicamba volatilization and/or drift and damage to crops not planted with seed containing the dicamba-tolerant trait;
- b. whether Monsanto has monopoly power in the market for herbicide-tolerant traits in soybean seeds;

- c. whether Monsanto acquired and/or maintains its market power through anticompetitive conduct;
- d. whether there is substantial danger that Monsanto will acquire such monopoly power;
- e. whether Monsanto conspired with BASF to monopolize or maintain its monopoly in the market for herbicide-tolerant traits in soybean seeds; and
- f. whether Plaintiffs and class members have been damaged in their business or property through artificially increased prices or otherwise because of one or more antitrust violations.

184. Plaintiffs' claims are typical of the claims of all Class members because they arise from the same course of conduct by Monsanto and are based on the same legal theories as the claims of all Class members. Moreover, Plaintiffs seek the same forms of relief for themselves as on behalf of class members. Accordingly, Plaintiffs have met the "typicality" requirement of Rule 23(a)(3).

185. Plaintiffs will pursue these claims vigorously and have no conflicts with, or interests antagonistic to, other Class members relating to these claims. Also, Plaintiffs' commitment to vigorously prosecute this action is reflected in their retention of competent counsel experienced in litigation of this nature to represent Plaintiffs and other Class members. Plaintiffs' counsel will fairly and adequately represent the interests of the Class and: (a) have identified and thoroughly investigated the claims set forth herein; (b) are highly experienced in the management and litigation of class actions and complex litigation; (c) have extensive knowledge of the applicable law; and (d) possess the resources to commit to the vigorous prosecution of this action on behalf of the Class. Accordingly, the adequacy of representation requirements of Rule 23(a)(4) are met.

186. In addition, this action meets the requirements of Rule 23(b)(3). Common questions of law and fact, including those set forth above, exist as to the claims of all Class members and predominate over questions affecting only individual Class members, and a class action is the superior method for the fair and efficient adjudication of this controversy. Class treatment will permit large numbers of similarly-situated persons to prosecute their respective class claims in a single forum simultaneously, efficiently, and without the unnecessary duplication of evidence, effort, and expense that numerous individual actions would produce. Further, while damage to Class members is substantial in the aggregate, the damages to any individual member may be insufficient to justify individually controlling the prosecution of separate actions against Monsanto given the time and expense involved in litigating these types of claims.

187. This case is manageable as a class action and a class trial will be manageable. Notice may be provided to members of the Class by first-class mail and through alternative means of publication and the internet. Moreover, members' claims will be decided under federal substantive law, thus the Court will not have to apply the law of multiple jurisdictions.

188. To the extent not all issues or claims, including damages, can be resolved on a class-wide basis, Plaintiffs invoke Rule 23(c)(4) and reserve the right to seek certification of narrower and/or re-defined classes and/or to seek to certify a liability class or certification of certain issues common to the class. To the extent necessary for Rule 23(c)(4) certification, Rules 23(a) and 23(b) are satisfied. And resolution of particular common issues would materially advance the disposition of the litigation as a whole.

#### **CLAIMS FOR RELIEF**

#### **Count I: Monopoly (Violation of Section 2 of Sherman Act)**

189. Plaintiffs incorporate all previous paragraphs as though fully alleged herein.

190. Monsanto possesses monopoly power in the relevant market for herbicide-tolerant traits in soybean seeds, including tolerance to dicamba.

191. Monsanto has used its monopoly power to foreclose competition, gain a competitive advantage, and/or destroy competition.

192. In violation of Section 2 of the Sherman Act, Monsanto willfully and unlawfully acquired, maintains and exercises monopoly power by coercive, exclusionary and anticompetitive conduct as alleged herein, including developing and promoting a crop system certain to harm competitor crops that are not dicamba-tolerant, enhancing Monsanto's long-term ability to suppress or foreclose competition, artificially increase demand, and reap the benefits of its monopoly power.

193. Monsanto's anticompetitive conduct was not driven by a legitimate business justification and, in any event, was designed to suppress competition and has produced harm disproportionate to any claimed benefits.

194. As a result of its willful and unlawful monopolistic conduct, Monsanto has maintained its monopoly or market power in the relevant market in which competition has been unlawfully reduced, eliminated or foreclosed.

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

196. Plaintiffs and the Class are entitled to treble the damages sustained, together with the cost of suit and reasonable attorneys' fees under 15 U.S.C. § 15.

**Count II: Attempt to Monopolize  
(Sherman Act § 2)**

197. Plaintiffs incorporate all previous paragraphs as though fully alleged herein.



198. Monsanto has and continues to willfully engage in anticompetitive conduct as alleged herein, including promoting a crop system that places competing non-tolerant crops at great risk and improperly pressures purchasers to buy its dicamba-tolerant traits out of fear in order to obtain/ maintain a monopoly in the market for herbicide-tolerant traits in all crops susceptible to dicamba, including soybeans.

199. There is a dangerous probability of Monsanto's success, as demonstrated by Monsanto's own projections of Xtend sales.

200. Monsanto has acted with the specific intent to monopolize, to maintain its monopoly power, to control prices and/or suppress and destroy competition in the relevant market.

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

202. Plaintiffs and the Class are entitled to treble the damages sustained, together with the cost of suit and reasonable attorneys' fees under 15 U.S.C. § 15.

**Count III: Combination, Contract, or Conspiracy to Monopolize  
(Sherman Act § 2)**

203. Plaintiffs incorporate all previous paragraphs as though fully alleged herein.

204. Monsanto, by its agreements and collaborations with BASF, has engaged in a conspiracy to monopolize and continue its monopolization of herbicide-tolerant traits in the relevant geographic market. To date, Monsanto and BASF have entered into joint agreements worth more than \$2.5 billion.

205. Monsanto has engaged in numerous overt acts in furtherance thereof as more specifically alleged above.

206. BASF, a competitor of Monsanto, joined with Monsanto to collaborate and conspire with the common unlawful objective to promote and sell a crop system featuring Monsanto's dicamba-tolerant trait virtually certain to harm non-tolerant crops susceptible to dicamba, including soybeans, with anticompetitive purpose and effect.

207. BASF benefits from its agreement, combination or conspiracy with Monsanto. Sales of Monsanto's dicamba-tolerant trait benefit BASF's sales of Engenia.

208. Monsanto acted with specific intent to monopolize as expressed through its actions to destroy competition and build monopoly.

209. Monsanto's co-conspirator BASF shared Monsanto's specific intent to permit Monsanto to monopolize and/or further its monopoly in the market for herbicide-resistant traits because BASF is not a large seller of GM traits but Monsanto's scheme would increase BASF's sales of dicamba herbicides. Each company thus benefits from such a monopoly as alleged herein.

210. Monsanto has dominant market power in herbicide-tolerant traits, and as patent-holder, is the only developer with power over who has access to its dicamba-tolerant traits, as well as the terms of its use. Monsanto has power to raise prices significantly above the competitive level and also to exclude competition.

211. Moreover, Monsanto's conduct, together with BASF, has produced and will continue to produce unlawful adverse effects on competition, including injury to competing crops grown with non-dicamba-tolerant seed, discouraging farmers from purchasing competing non-tolerant seed, suppressing competition and depriving farmers of choice in what they purchase, as well as artificially high prices for seed containing a dicamba-tolerant trait.

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

213. Plaintiffs and the Class are entitled to treble the damages sustained, together with the cost of suit and reasonable attorneys' fees under 15 U.S.C. § 15.

**PRAYER FOR RELIEF**

Plaintiffs, on behalf of themselves and the Class, respectfully request judgment against Monsanto for:

- a. All statutory damages to which they are entitled and will be entitled to at the time of trial;
- b. Pre-judgment interest at the maximum rate permitted by the law;
- c. All costs incurred in connection with this action;
- d. Reasonable attorneys' fees; and
- e. Such other and further relief, at law or in equity, as this Court deems just and proper.

Dated: August 1, 2018

Respectfully submitted,

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***Plaintiff's Executive Committee***

**CERTIFICATE OF SERVICE**

I hereby certify that on August 1, 2018, the foregoing was filed electronically with the Clerk of Court to be served by operation of the Court's electronic filing system on all counsel of record.

/s/ Don M. Downing