



April 21, 2022

Lina Khan, Chairwoman
Federal Trade Commission
600 Pennsylvania Ave., NW
Washington, DC 20580

Jonathan Kanter, Ass't Attorney General for Antitrust
U.S. Department of Justice
950 Pennsylvania Ave., NW
Washington, DC 20530

RE: Request for Information on Merger Enforcement; FTC-2022-0003

Center for Food Safety appreciates the opportunity to comment on the need for improved guidelines for enforcement of mergers. Center for Food Safety (CFS) is a public interest, nonprofit organization with 970,000 members and supporters, and offices in Washington, D.C., San Francisco, California, and Portland, Oregon. CFS's mission is to empower people, support farmers, and protect the earth from the harmful impacts of industrial agriculture. Through groundbreaking legal, scientific, and grassroots action, CFS protects and promotes the public's right to safe food and the environment.

In these comments, we describe an egregious instance of anti-competitive conduct in the seed-pesticide industry that has caused substantial harms to farmers and small seed companies, and which threatens to create, in the words of the Ninth Circuit Court of Appeals, a "monopoly or near-monopoly" in the market for seeds of America's second-most widely planted crop, soybeans.¹ We then briefly describe how vertical integration of the seed, pesticide and biotechnology trait sectors fosters such egregious conduct, and more generally advances an ever more pesticide-intensive agriculture that harms the interests of both farmers and consumers.

The Dicamba Debacle

The near-monopoly in soybean seeds was created by the Monsanto Company's 2017 introduction of the dicamba-resistant crop system: soybeans and cotton genetically engineered to survive over-the-top application of drift-prone dicamba herbicide, and a dicamba formulation for use on them.

The dicamba system created an agricultural nightmare. Sprayed in large quantities over-the-top of resistant crops in the summertime heat, dicamba vaporized and drifted long distances to cause enormous damage across the landscape. Soybeans not engineered for resistance to dicamba are particularly sensitive to it, and thus were particularly hard hit, with nearly four million acres reported damaged in the system's first year of use.² Pesticide expert Andrew Thostenson of North

¹ Nat'l Family Farm Coalition et al. v. EPA, 960 F.3d 1120 (9th Cir. 2020). Center for Food Safety was co-plaintiff and counsel in this lawsuit, discussed further below.

² Kevin Bradley, A final report on dicamba-injured soybean acres, University of Missouri Integrated Pest & Crop Management, October 30, 2017. https://ipm.missouri.edu/cropPest/2017/10/final_report_dicamba_injured_soybean/.

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Dakota State University said it was unlike anything that “has ever happened in the history of pesticide use in this country.”³

Soybean farmers desperate to avoid damage in future years shifted *en masse* to Monsanto’s seeds. University of Tennessee’s Larry Steckel reported: “Many growers have told me they simply gave up trying to grow [non-dicamba-resistant] soybeans because they had repeatedly seen dicamba injury in past years – often multiple times in the same year.”⁴ North Dakota State University agricultural economist David Ripplinger similarly stated that “almost all” [the farmers he spoke to] are “going to grow dicamba soybeans this year [2018] because they don’t want to be exposed to the risk.”⁵ Thus, it is no surprise that dicamba-resistant crop plantings more than doubled from 2017 to 2019, when they comprised roughly two-thirds of both crops, covering 60 million acres.⁶ Based on a 2018 survey of soybean farmers by USDA, from one-third to one-half of the dicamba-resistant soybeans in major soybean states were likely planted for self-protection, since not treated with dicamba.⁷

Center for Food Safety and other groups sued the U.S. Environmental Protection Agency (EPA) for illegally registering the three dicamba formulations for use on resistant crops, alleging in part that EPA had not assessed costs, such as those resulting from dicamba drift damage. The Ninth Circuit ruled in our favor and revoked the three dicamba registrations in June of 2020, though under the Trump Administration EPA re-registered dicamba in October 2020.⁸ The same plaintiffs challenged this re-registration. The case is currently pending, and meanwhile dicamba drift has continued to cause devastating damage in 2021, year five of this debacle.

Among the grounds for the Court’s revocation was that EPA had failed, as required by the Federal Insecticide, Fungicide and Rodenticide Act, to assess the costs of the registrations, including “the economic cost imposed by the coercion” of farmers to convert to dicamba-resistant crops, “and the resulting anti-competitive effect of that coercion.” Aside from higher seed costs for farmers, the Court explained that Monsanto’s dicamba system put small independent seed firms at a competitive disadvantage, quoting the principals of Rob-See-Co of Nebraska, and Merschman

³ Robin Booker, Dicamba volatility causes anxiety as new season nears, *The Western Producer* (May 3, 2018), <https://www.producer.com/crops/dicamba-volatility-causes-anxiety-as-new-season-nears/>.

⁴ NFFC, 960 F.3d at 1143.

⁵ *Id.* at 1142-43. In fact, internal memos released in the context of class-action lawsuits against Monsanto reveal that the company anticipated, years before release, that its dicamba system would cause thousands of dicamba drift episodes, and planned to exploit the drift threat as a means to sell farmers its seed. See: Johnathan Hettinger, ‘Buy it or else’: Inside Monsanto and BASF’s moves to force dicamba on farmers, *Midwest Center for Investigative Reporting*, Dec. 4, 2020, <https://investigatamidwest.org/2020/12/04/buy-it-or-else-inside-monsanto-and-basfs-moves-to-force-dicamba-on-farmers/>.

⁶ At the same time, USDA estimated that up to 15.7 million acres of soybeans, 18% of the soy planted that year, were damaged by dicamba drift. See: US EPA, Dicamba use on genetically modified dicamba-tolerant (DT) cotton and soybean: incidents and impacts to users and non-users from proposed registrations, Table 8, Docket: EPA-HQ-OPP-2020-0492-0003, October 26, 2020.

⁷ Seth J. Wechsler et al. (2019). The use of genetically engineered dicamba-tolerant soybean seeds has increased quickly, benefiting adopters but damaging crops in some fields. *USDA Economic Research Service Amber Waves*, October 1, 2019, <https://www.ers.usda.gov/amber-waves/2019/october/the-use-of-genetically-engineered-dicamba-tolerant-soybean-seeds-has-increased-quickly-benefiting-adopters-but-damaging-crops-in-some-fields/>.

⁸ See footnote 1.

Seeds of Iowa, both of whom saw long-term customers abandon them to instead purchase dicamba-resistant seeds, to forestall drift injury, from a Monsanto subsidiary or licensee.⁹

Most insidious is the devastating effect dicamba drift has had on public sector soybean science. University soybean breeding programs in Missouri, Arkansas, Kansas and Nebraska have all seen experimental varieties in their outdoor plots damaged by dicamba drift, destroying valuable research that could help all farmers. As University of Missouri's Pengyin Chen, a professor of soybean breeding and genetics, put it: "If you kill the public research programs, who is going to study disease resistance, or stress tolerance? Those efforts are going to be gone."¹⁰ Chen also worries that dicamba drift will further marginalize affordable, non-commercial, soybean varieties that university breeding programs such as his offer directly to farmers, since they do not incorporate dicamba resistance.

Vertical Integration of Seeds, Pesticides and Biotechnology Traits

The dicamba debacle described above would likely never have occurred absent vertical integration of the germplasm/seed, pesticide and biotechnology trait sectors. Going forward, similar episodes are far more likely as long as these three sectors remain consolidated.

Since the 1980s, pesticide firms have obtained massive stocks of germplasm via acquisitions of hundreds of major and minor, formerly independent, seed companies. These pesticide firms have also acquired numerous biotechnology start-ups to augment in-house research and development in the techniques of genetic engineering. The latest wave of concentration has seen the six leading seed-pesticide-biotechnology behemoths merge into three still larger entities. Bayer acquired Monsanto, Dow and DuPont merged and spun off their agricultural sectors to form Corteva; and ChemChina acquired Swiss giant Syngenta. A fourth firm, German BASF, is largely a pesticide supplier but has acquired some germplasm.

The integration of these sectors has led to channelization of the research agendas of the conglomerates into narrow pathways that maximize synergies between their seed and pesticide products, and thereby lead American agriculture into an ever more toxic, pesticide-dependent future. It is thus no accident that very nearly 100% of genetically engineered crop acreage in the U.S. comprises crops with one or more herbicide-resistance traits, which dramatically increases use and sales of the companion herbicides. A recent example is Corteva's Enlist crop system, comprising corn, soybean and cotton varieties resistant to 2,4-D, another volatile herbicide of the same class as dicamba. Despite far less crop area devoted to this system as of yet, it is already beginning to generate outsize drift damage, much as dicamba has. The future R&D priorities of the integrated companies is more of the same: crops engineered for resistance to, and hence dramatically increased use and sales of, multiple herbicides.¹¹

A second pathway strongly favored by vertical integration of these sectors is coating seeds with insecticides and fungicides. The integrated firms, particularly Bayer/Monsanto and

⁹ NFFC, 960 F.3d.

¹⁰ Dan Charles, Rogue weedkiller vapors are threatening soybean science, National Public Radio, July 19, 2019. <https://www.npr.org/sections/thesalt/2019/07/19/742836972/rogue-weedkiller-vapors-are-threatening-soybean-science>.

¹¹ Bayer recently petitioned USDA to approve a corn variety resistant to five different herbicides, and resistance traits have been identified for most major classes of herbicide, awaiting only incorporation into seed via genetic engineering.

ChemChina/Syngenta, are leaders in both seed sales and the development and deployment of these so-called “seed treatments.” Virtually 100% of U.S. corn seed, the majority of soybean seed, and the seeds of many additional crops are routinely coated with neonicotinoid insecticides that are known to harm pollinators,¹² as well as multiple fungicides that both synergize the toxicity of insecticides, and often have their own harmful environmental effects. Farmers have little or no choice of “bare” seed, and often have little knowledge of the pesticidal coatings or their purpose;¹³ and indeed, agronomists have found they often serve no useful pesticidal purpose at all,¹⁴ but rather superfluously pollute the environment. But like herbicide-resistance traits, seed coatings serve as price points for the firms in their marketing to farmers. And seed costs have risen dramatically with the advent of genetic engineering and seed treatments.¹⁵

Breaking Up the “Inputs” Industry

Breaking up the seed, pesticide and agricultural biotechnology sectors would sharply decrease the incentives driving U.S. agriculture on its current pathway of intensifying pesticide use. For example, seed companies without biotechnology and pesticide portfolios would be less motivated to tie their offerings to pesticides, either through herbicide-resistance traits or seed coatings, and would more readily respond to farmer demands for conventional or untreated seeds. Each sector would better meet the full range of farmers’ diverse needs as they negotiate an increasingly precarious world of climate destabilization, and the rising demands of consumers for sustainably produced foods.

There is much more that could be said on this topic. CFS would happy to discuss any of the issues raised in these comments, and provide fuller documentation of the points made. We have uploaded to the docket the Ninth Circuit Court of Appeal’s opinion discussed above.

Regards,

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Center for Food Safety

¹² Thomas J. Wood and Dave Goulson (2017). The environmental risks of neonicotinoid pesticides: a review of the evidence post 2013, *Environ Sci Pollut Res* 24: 17285-17325.

¹³ Claudia Hitaj et al. (2020). Sowing uncertainty: what we do and don’t know about the planting of pesticide-treated seed, *Bioscience* 70(5): 390-403.

¹⁴ Spyridon Mourtzinis et al. (2019). Neonicotinoid seed treatments of soybean provide negligible benefits to US farmers. *Scientific Reports* 9: 11207.

¹⁵ Charles Benbrook (2009). The Magnitude and Impacts of the Biotech and Organic Seed Price Premium. The Organic Center, Dec. 2009. <https://kohalacenter.org/archive/publicseedinitiative/images/seedpricepremium.pdf>.