

February 13, 2017

Jeff Sessions, Attorney General  
U.S. Department of Justice  
950 Pennsylvania Avenue, NW  
Washington, DC 20530

**Re: The Proposed Dow-DuPont, Monsanto-Bayer and Syngenta-ChemChina Mergers**

Dear Mr. Sessions,

On behalf of our millions of members and supporters around the country, the undersigned organizations oppose the impending mergers of the world's largest agrochemical and seed companies. The proposed mergers—of Dow Chemical with DuPont, Monsanto with Bayer AG, and Syngenta with ChemChina—are each problematic on their own, with many likely negative impacts on farmers, businesses, workers, and consumers. When taken together, they pose the threat of major oligopolistic outcomes in the industries of farming inputs, research, development, and technology.

We urge the United States Department of Justice to conduct a thorough investigation to determine the impacts of these takeovers (alone and most importantly in combination) and to enjoin the mergers when it becomes clear that these impacts will prove detrimental to farmers, businesses, workers, consumers, the environment and our American food system.

In December 2015, U.S. chemical giants Dow Chemical and DuPont agreed to a \$130 billion merger.<sup>1</sup> They plan to streamline agricultural operations, creating a company that unites DuPont's and Dow's seed and crop protection businesses. The resulting company would be one of the world's largest seed and pesticide conglomerates, controlling 17 percent of global pesticide sales and approximately 40 percent of America's corn-seed and soybean markets.<sup>2</sup> This year, multi-billion dollar German pharmaceutical and chemical giant, Bayer AG, made an offer of \$66 billion to acquire Monsanto, Co., which Monsanto accepted.<sup>3</sup> The resulting company would be the largest agribusiness in the world, selling 29 percent of the world's seeds and 24 percent of pesticides.<sup>4</sup> Even before the mergers began, these seed and agrochemical companies held inordinate market power, with Monsanto, Dow and Syngenta collectively controlling more than half of the global seed market.<sup>5</sup>

It is predicted that if all three deals were to close, the three resulting companies would control nearly 70 percent of the world's pesticide market, more than 61 percent of commercial seed sales and 80 percent of the U.S. corn-seed market.<sup>6,7</sup> Such a heavily consolidated seed and agricultural input industry makes it easier for cartel-like tacit collusion that raises prices for farmers and other buyers and ultimately consumers while stifling innovation that is propelled by healthy competition in the marketplace. Predictably, more concentration of power and less competition will lead to reduced responsiveness to documented farmer and consumer desire for ecologically sound technologies that are cost-effective and sustainable, meaning less choice in the marketplaces for seeds, inputs and foods.

Taken together, these mergers pose significant potential threats to U.S. security interests. If allowed to pass, they could undermine food security in the United States and worldwide; disrupt trade flows;<sup>8</sup> and accelerate the international consolidation of the food and agribusiness industries to the detriment of American farmers, rural communities and consumers. Further, the mergers would eliminate head-to-head competition in agricultural biotechnology innovation, crop seed and chemical markets and reduce opportunities for pro-competitive research and development (R&D) collaborations.<sup>9</sup>

### **The mergers will eliminate competition, hurt our economy and hamper U.S. investments and innovation**

There is a strong antitrust case against these mergers, as has been outlined in investigations by the *Konkurrenz Group*, the *American Antitrust Institute* and the *Agricultural and Food Policy Center of Texas A&M University*, among others.<sup>10,11,12</sup> These studies detail market trends that demonstrate that the merging parties “have been the dominant players in the relevant markets and do not indicate any trend of reduced concentration,” and as a result, the merger should be enjoined.<sup>13</sup> In the case of the Bayer AG and Monsanto merger, Monsanto has already been investigated for antitrust violations in Texas, Iowa, Illinois, Ohio and Virginia.<sup>14</sup>

These mergers will exacerbate and worsen consolidation that the industry has been experiencing for many years. In 1996 there were 600 independent seed companies; this number dropped to 100 by 2009.<sup>15</sup> This concentration resulted in crop seed prices more than doubling relative to the prices farmers received for commodity crops between 1994 to 2010.<sup>16</sup>

The “Big Six” firms—Monsanto, Bayer, BASF, Syngenta, Dow and DuPont—held more than 95 percent of trait acres for corn, soybeans and cotton in the U.S. by 2009, with seed containing Monsanto traits accounting for 90 percent of those acres.<sup>17</sup> Bayer-Monsanto and Dow-DuPont corporations would intensify their dominance among a shrinking pool of similarly situated firms. These mergers would likely create substantial vertical integration between traits, seeds and chemicals currently produced independently by Dow, DuPont, Bayer and Monsanto. The result would be a more tightly integrated platform of components that are bound together both economically and technologically for the purpose of creating exclusive packages of traits, seeds and chemicals that do not “interoperate” with rival products.

The mergers would likely further limit farmers’ choices of the best seeds to suit their needs and would force independent seed producers and customers to rely primarily on Bayer-Monsanto and Dow-DuPont traits.<sup>18</sup> This will likely raise entry barriers for smaller rivals and increase the risk that they are foreclosed from access to technology and other resources needed to compete effectively. Monsanto already possesses a 97 percent share for soybean traits, a 75 percent share for corn traits and a 95 percent share for cotton traits. A combined Bayer-Monsanto would have a greater (and for cotton, a dominant) share of the seed market where its traits are promoted. These market shares—by any antitrust metric—would be considered monopolistic.<sup>19</sup> Monsanto, as the dominant owner and developer of patented seed traits, can already exert considerable market power through its cross-licensing agreements.<sup>20</sup> Many independent seed companies do not hold desired patented traits. They must enter into licensing agreements with the patent owner to include the

patented technology in their seeds.<sup>21</sup> Further, due to seed patents and licensing, farmers are only allowed to plant seeds for one crop season.<sup>22</sup> This places an unfair burden and increased cost on farmers, as they have to pay for seeds each year. As a result of these mergers, farmers will likely have to pay more for seeds as market competition diminishes.

Merged Bayer AG/Monsanto and Dow/DuPont companies would be monoliths that hold significant control over farmers' choices and the development of new technologies. The market dominance of these companies and costs associated with changing investments will make it even harder for small, upcoming companies to enter the market. The mergers will further reinforce this dynamic through a lock-in effect on investment as wealthy investors that hold stocks in the merged companies will have little to no incentive to reinvest in innovative start-ups.

The mergers additionally threaten competition-driven innovation in the merged companies themselves, because a concentrated market in seed traits discourages aggressive competition-based innovation to capture new customers, instead encouraging profit making from monopoly rents that are easier to maintain. Increased concentration in the traits, seed and herbicide markets will mean fewer firms are responsible for many of the new innovations that drive growth in agricultural productivity. Innovation will likely continue on the path of chemical dependence instead of exploring more sustainable, lower cost forms of technology that could wean our dependence on chemical intensive forms of agriculture.

We are already experiencing elimination of funding for research and development (R&D) as a result of these mergers. These reductions in R&D would also lead to a significant loss in jobs in R&D sectors and are already hurting U.S. workers. In the months since DuPont agreed to buy long-time U.S. rival Dow, executives have cut at least \$300 million from its research budget and laid off as many as 700 employees in R&D.<sup>23</sup> Further, DuPont planned to cut a total of 10 percent of its research budget for 2016 and reduce spending on new plants and equipment by 20 percent in 2016.<sup>24</sup>

### **Opposing these mergers will protect U.S. farmers and consumers**

Farmers are themselves very concerned about the mergers. The majority of the national farming associations in the U.S. have expressed concern that the mergers will negatively impact American farmers' livelihoods by increasing input costs, reducing competition and decreasing research and development. National farming associations concerned with the mergers include: The American Farm Bureau,<sup>25</sup> the American Soybean Association,<sup>26</sup> the National Farmers Union,<sup>27</sup> the National Family Farm Coalition and the National Corn Growers Association.<sup>28</sup>

Because the outsized market power of the companies involved would grow as a result of the mergers, these companies would be able to unilaterally raise input prices for farmers, hurting rural economies across the United States and leading to increased prices for consumers as well. As an example, a combined Bayer AG-Monsanto company would control 70 percent of the southeast cottonseed market. The price of cotton could rise over 18 percent as a result of the mergers, according to a study from Texas A&M University.<sup>29</sup>

In addition, there is a growing interest and investment in farming by small businesses, minority farmers and farmer families that are growing and bringing to market a variety of specialty and ethnic crops, hoping to create niche markets in the wholesale and retail sectors. Using a variety of growing methods, they are carving out a place in rural communities that are helping to build and develop these rural areas. Such farmers need a fair playing field, which would be precluded by consolidated market power in the farm input sectors.

Furthermore, the companies in question impose “technology fees,” which make up a significant portion of seed costs. These fees, that were once a line item in farmers’ budgets, are now combined into the total costs of seeds, making it difficult for farmers to compare competitors’ prices and costs over time. Seed prices have generally continued to rise faster than commodity prices over the past 20 years and have outpaced growth in yields as well.<sup>30</sup>

These mergers will likely impact the food chain from farm to table. Farmers will continue to cultivate food for consumers and for their livestock, even if their costs increase. This means that the increase in cost may be passed along to the consumers to enable farmers to maintain competitive profit margins. As Senator Blumenthal (D-CT) said at the Senate Judiciary Committee meeting on Consolidation and Competition in the U.S. Seed and Agrochemical Industry, “[The] troubling, in fact alarming, potential consequences of these mergers...include less innovation, higher agricultural input prices, less choice for farmers and high food prices for consumers.”<sup>31</sup>

These mergers should also be examined in the context of exacerbating income inequality. Although there are many views, some conflicting, on income inequality itself, no developed nation can escape its responsibility to maximize the opportunities for its poor to be able to afford a broad range of nutritional foods. Today, in most developed nations, the relatively low price of food products minimizes the adverse impact of often growing income inequality. Many consumer groups, as indicated by U.S. Senator Blumenthal, believe that these mergers have the potential to substantially alter the present relatively affordable basic food industry.

In addition to higher prices for consumers, the merger could result in harms to agricultural workers. Some farmers will likely offset declining profit margins by cutting back on labor costs. For example, they may hire fewer workers and make them work harder, offer lower wages and benefits, and some unscrupulous growers may even engage in wage theft.

### **The mergers will increase overall pesticide use and harm the environment**

The proposed mergers will aggregate the power of companies that promote chemical intensive agricultural practices that are harmful to human health, pollinator populations and the environment.

Many agricultural pesticides pose threats to the health of farmers and farmworkers as well as rural agricultural communities<sup>32</sup> and are associated with a range of negative health outcomes for consumers.<sup>33,34</sup> The proposed mergers are likely to result in a more highly concentrated pesticide industry that will be in a greater position to influence regulators. The resulting conglomerates could exert their influence to lower use restrictions of pesticides currently on the market and to push for broader approval of new products—all with a lessened regard for human safety.

The mergers could reinforce unsustainable dependence on genetically engineered (GE) crops that are developed to be used in combination with herbicides. Over 70 percent of all GE crops are engineered to be herbicide-resistant.<sup>35</sup> The most commonly engineered of these traits is “Roundup” tolerance. The active ingredient in Roundup, glyphosate, was designated a probable human carcinogen by the World Health Organization.<sup>36</sup> Reliance on these systems leads to more overall chemical use.<sup>37</sup>

Increased planting of herbicide-resistant GE crops in recent decades has led to the development of “superweeds” and “super bugs” as plants and insects evolve to resist the chemicals used against them.<sup>38</sup> For example, in 2012, glyphosate-resistant weeds covered 61 million acres; this number rose to 84 million acres in 2014.<sup>39</sup> In response to the decreased efficacy of glyphosate, Bayer developed Liberty Link crops engineered to be tolerant to Liberty, a combination of ten different herbicides. Companies are also turning to older herbicides with known toxicity to humans, such as dicamba and 2,4-D as they develop herbicide-tolerant traits to combat superweeds.<sup>40</sup>

The use of herbicide-tolerant crops is a key factor in the destruction of pollinator habitat, which has contributed to the overall decline in pollinator species. Monarch population numbers have fallen by 90 percent in less than 20 years.<sup>41</sup> Monarch decline is associated with the pervasive use of glyphosate and other herbicides that kill off milkweed plants, which monarchs need to survive and reproduce.<sup>42</sup>

Another threat to pollinators is the widespread use of neonicotinoids (neonics), a class of insecticides developed by Bayer. A growing body of scientific data implicates neonics in the decline of bee species.<sup>43,44,45</sup> Dow, Dupont and Monsanto all manufacture and sell neonic-coated seeds, which have been demonstrated to impact bees and birds.<sup>46,47,48</sup> The consolidation of the companies in question will likely lead to greater control of the seed market, further entrenching the use of neonic-coated seeds and limiting farmers’ choice to access uncoated alternatives.

## **Conclusion**

Conglomerates of such massive scale, breadth and reach, such as those proposed by these mergers, pose a real risk to our economy, to our agricultural sector, to public health, to food security, to the environment and to the general health of the agricultural and food business climate. Dominance of this magnitude can pose both domestic and international consequences that would be irreversible, once set in motion.

For all the above reasons, we encourage the Department of Justice to thoroughly investigate and enjoin the mergers. The Department must act quickly to protect American investments, American farmers, American workers and American consumers from the harmful effects resulting from increased consolidation in the agrochemical industry.

Sincerely,

1,000 New Gardens  
100grannies.org

21 Acres  
Acta Non Verba: Youth Urban Farm Project  
ActionAid USA  
Agricultural Justice Project  
Alianza Nacional de Campesinas, Inc.  
All-Creatures.org  
Alliance for Democracy  
Alliance for Global Justice  
Alliance for the Wild Rockies  
American Bird Conservancy  
Animals Are Sentient Beings, Inc.  
Appalachian Sustainable Development  
Appetite For Change  
Arabber Preservation Society  
AXE, LLC  
Backyard Growers  
Baltimore Lutheran Campus Ministry, University of Maryland, Baltimore County  
Berks Gas Truth  
Beyond Pesticides  
Beyond Toxics  
Biodynamic Association  
Biofuelwatch  
Biosafety Alliance  
Bio-Way Farm, Ware shoals, SC  
Black Warrior Riverkeeper  
Bold Visions Conservation  
California Farmers Guild  
Californians for Alternatives to Toxics  
Californians for Pesticide Reform  
Camp Grier, Old Fort, NC  
Carolyn Haines Inc.  
CATA - El Comité de Apoyo a los Trabajadores Agrícolas  
California Certified Organic Farmers  
Center for Environmental Health  
Center for Food Safety  
Center for International Environmental Law (CIEL)  
Central Jersey Coalition Against Endless War  
Central Maryland Beekeepers Association  
Chicken Scratch Farms  
Chris Maykut, President, Friends of Bumping Lake  
Citizens for GMO Labeling  
City Roots, LLC  
Clean Air Watch  
Coalition of Immokalee Workers

Coastal Monmouth Democratic Club  
Cobblestone Valley Farm  
Colorado College Real Food Challenge  
Committee for a Sustainable Waterfront  
Community Agroecology Network  
Community Alliance for Global Justice  
Connecticut Families Against Chemical Trespass  
Conservation Law Foundation  
Corporate Accountability International  
Cottonwood Environmental Law Center  
Cow Cow Ranch  
Crawford Stewardship Project  
Creation Plantation, Louisburg, NC  
Dakota Rural Action  
DC Environmental Network  
Dinner Bell Farm, Snow Camp, NC  
Dogwood Alliance  
Domestic Fair Trade Association  
Donna Smith, Farmer  
Dr. Bronner's  
Earthjustice  
Earth's Echo Farm  
Ecohermanas  
Eco-Justice Ministries  
Ecology Center  
Elder-Activists  
Endangered Habitats League  
Endangered Species Coalition  
Environment America  
Environment Arizona  
Environment California  
Environment Colorado  
Environment Connecticut  
Environment Florida  
Environment Georgia  
Environment Illinois  
Environment Iowa  
Environment Maine  
Environment Maryland  
Environment Massachusetts  
Environment Michigan  
Environment Minnesota  
Environment Missouri  
Environment Montana

Environment Nevada  
Environment New Hampshire  
Environment New Jersey  
Environment New Mexico  
Environment New York  
Environment North Carolina  
Environment Ohio  
Environment Oregon  
Environment Rhode Island  
Environment Texas  
Environment Virginia  
Environment Washington  
Environmental Defenders of McHenry County  
Environmental Protection Information Center  
Environmental Task Force, University of Maryland, Baltimore County  
Experimental Farm Network  
Factory Farming Awareness Coalition  
Fairtrade America  
Fair World Project  
Family Farm Defenders  
Farmworker Association of Florida  
Farmworker Justice  
Florida Certified Organic Growers and Consumers Inc.  
Food Chain Workers Alliance  
Food Craft Institute  
Food Democracy Now!  
Food Fight  
Food First/Institute for Food and Development Policy  
Food Forward  
Food for Maine's Future  
Food and Water Watch  
Food Well Alliance  
Food, Equity, Entrepreneurship, & Development (FEED)  
Food Integrity Campaign  
Food Truth, Students of Clark University  
Fox Haven Organic Farm  
Friends of the Earth U.S.  
Friends of the Earth Australia  
Gap Mountain Goats  
Get Down Farm  
Georgia ForestWatch  
Glencora LLC, Grover, NC  
Global Brigades Environmental, University of Maryland, Baltimore County  
Global Justice Ecology Project



GMO Free Arizona  
GMO Free USA  
GMO Inside  
Good Flavor Farm  
Goss Farms, Salisbury, NC  
Grassroots Global Justice Alliance  
Green America  
Greenbrier River Watershed Association  
Green Environmental Coalition  
Green Goose Farm  
GreenCatch  
Greenhorns  
Green Plate Catering  
Grow Dat Youth Farm  
Haiku Aina Permaculture Initiative  
Harriet Moulder, Member of Carolina Farm Stewardship Association  
Haw River Mushrooms Farm, Saxapahaw, NC  
Hawk Dance Farm  
Hmong American Farmers Association  
IFOAM - Organics International  
Illinois Right to Know GMO  
Illinois Stewardship Alliance  
Institute for Agriculture and Trade Policy  
Iowa Citizens for Community Improvement  
Iowa Farmers Union  
Iowa Organic Association  
Iron Horse Farm, Cedar Grove, NC  
Jayhawk Audubon Society  
Judith D. Schwartz, Author  
Just Food, University of Maryland, Baltimore County  
Kansas City Food Circle  
Kansas Rural Center  
L.A. Kitchen  
Living Oak Farm, Abbeville, SC  
Local Futures/International Society for Ecology and Culture  
MADGE Australia Inc  
Maine Organic Farmers & Gardeners Association  
Mangrove Action Project  
Maryland Environmental Health Network  
Maryland Ornithological Society  
Maryland Pesticide Education Network  
Massachusetts Right to Know  
Mercola  
Mesa Winds Farm

Michigan Farmers Union  
Midwest Pesticide Action Center  
Migrant Justice  
Missouri Farmers Union  
MOM's Organic Market  
Moms Across America  
Montana Organic Association  
Montgomery Countryside Alliance  
Multinational Exchange in Sustainable Agriculture (MESA)  
Namu Farm  
Nancy's Garden  
National Asian American Coalition  
National Diversity Coalition  
National Family Farm Coalition  
National Organic Coalition  
New England Farmers Union  
North Beach Films  
North Carolina A&T State University  
North County Watch  
Northeast Organic Dairy Producers Alliance  
Northeast Organic Farming Association-Connecticut  
Northeast Organic Farming Association - Interstate Council  
Northeast Organic Farming Association-Massachusetts  
Northeast Organic Farming Association of New Jersey  
Northeast Organic Farming Association of New York (NOFA-NY)  
Northeast Organic Farming Association of Vermont  
Northeastern University Real Food Challenge  
Northern California Community Loan Fund  
Northern NJ Chapter of National Organization for Women  
Northwest Arkansas Workers' Justice Center  
Northwest Atlantic Marine Alliance  
Northwest Center for Alternatives to Pesticides  
OASIS Center International  
Occidental Arts and Ecology Center  
Ohio Ecological Food and Farm Association  
Ohio Environmental Council  
Old McCaskill's Farm, Rembert, SC  
Olympia Beekeepers Association  
Oregonians for Safe Farms and Families  
Organic Consumers Association  
Organic Seed Alliance  
Organic Seed Growers and Trade Association  
Organic Vision LLC  
Organization for Competitive Markets

Origin Farms, Yemassee, SC  
Our Family Farms  
PastureMap Inc  
PCC Natural Markets  
PennEnvironment  
Perennial Roots Farm  
Personal Family Farm  
Pesticide Action Network North America  
Philly Permaculture  
Planting Justice  
Pollinate Minnesota  
Pollinator Friendly Alliance  
Pollinator Stewardship Council  
Public Citizen  
Rural Advancement Foundation International  
Raft Swamp Farms, Red Springs, NC  
Raptors Are The Solution  
Real Food Challenge at Northwestern University  
Real Food Challenge  
Real Food Challenge at San Francisco State University  
Real Food Challenge Towson University  
Real Food Hopkins  
Real Food University of Georgia  
Real Food Utah  
Reverence Farms, Graham, NC  
RootsAction.org  
Roots of Change  
Rural Advancement Foundation International  
Rural Coalition  
Rural Vermont  
Russian Riverkeeper  
Santa Cruz Permaculture  
Save Our Sky Blue Waters  
SAVE THE FROGS!  
Sea Cliff Farmers Market  
Seed the Commons  
Sequoia ForestKeeper  
Sierra Club  
Sierra Club Massachusetts  
Sierra Harvest  
Sierra Nevada Memorial Hospital  
Slow Food California  
Slow Food North Shore  
Slow Food USA

Small Planet Institute  
Soil Generation  
Soko Farm  
Solomon Springs Farm, Landrum, SC  
South Dakota Farmers Union  
South Florida Wildlands Association  
Sow True Seeds  
Stick and Stone Farm  
Students for Environmental Awareness, University of Maryland, Baltimore County  
Students for Sustainable Food of Western Washington University  
SumOfUs  
Sunrock Farm  
Sustainable Economies Law Center  
Sustainable Food Center  
Sustainable Living Systems  
Terra Genesis International  
Texas Organic Farmers and Gardeners Association  
The Center for Biological Diversity  
The Center for Sustainable Medicine  
The Conscious Kitchen  
The Cornucopia Institute  
The Happy Berry, Six Mile, SC  
The harvest collective  
The Lands Council  
Thistledown Farm, Graham, NC  
Top Leaf Farms  
Toxics Action Center  
Toxic Free North Carolina  
Turning Green  
Turtle Island Restoration Network  
Transnational Institute  
Triangle C Beef  
University of Maine Real Food Challenge  
University of Montana Real Food Challenge  
University of Utah Real Food Challenge  
University of Vermont Real Food Revolution  
Urban Permaculture Institute  
U.S. PIRG  
Utica Bridge Farms  
Vermont Conservation Voters  
Vermont Public Interest Research Group  
Virginia Association for Biological Farming  
War Is A Crime

Washington County Beekeepers Association  
Washington Sustainable Food and Farming Network  
Waterkeepers Chesapeake  
Wesleyan Local Co-op  
Western Colorado Congress  
White Swan Farm & Forge, Cedar Grove NC  
WhyHunger  
Wild Hill Farm  
Wisconsin Environment  
Women, Food and Agriculture Network (WFAN)  
Women's International League of Peace & Freedom US  
Woodleaf Farm  
Worker Justice Center of NY  
Writerspace LLC

**Cc:**

Brent C. Snyder, Acting Assistant Attorney General, Antitrust Division, Department of Justice  
Mark B. Tobey, Special Counsel for State Relations and Agriculture, Antitrust Division, Department of Justice  
Members of Congress  
State Attorneys General

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<sup>1</sup> Gara, Antoine. "Dow Chemical and Dupont Deserve a Little Goodwill In \$130 Billion Mega Merger" *Forbes*. December 11, 2015. <http://www.forbes.com/sites/antoinegara/2015/12/11/dow-chemicals-and-dupont-deserve-a-little-goodwill-in-130-billion-mega-merger/#113e3d753f17>

<sup>2</sup> Harwell, Drew. "Dow and Dupont, two of America's oldest giants, to merge in jaw-dropping megadeal." *The Washington Post*. December 11, 2015. <https://www.washingtonpost.com/news/business/wp/2015/12/11/dow-and-dupont-two-of-americas-oldest-giants-to-merge-in-job-dropping-megadeal/>

<sup>3</sup> Roumeliotis, Greg. "Bayer clinches Monsanto with improved \$66 billion bid." *Reuters*. September 15, 2016. <http://www.reuters.com/article/us-monsanto-m-a-bayer-deal-idUSKCN11K128>

<sup>4</sup> Francis, David. "Is the Bayer-Monsanto Merger too big to succeed?" *Chicago Tribune*. September 16, 2016. <http://www.chicagotribune.com/business/ct-bayer-monsanto-merger-20160916-story.html>

<sup>5</sup> Hubbard, Kristina. "Seed Privatization and the Path Toward Equitable Exchange." *Organic Seed Alliance*. 2014. <http://seedalliance.org/uploads/Hubbard%20Seeds%20and%20Breeds%20Paper.pdf>

<sup>6</sup> Steele, Anne. "Bayer's Deal for Monsanto." *The Wall Street Journal*. September 14, 2016. <http://blogs.wsj.com/briefly/2016/09/14/bayers-deal-for-monsanto-at-a-glance/>

<sup>7</sup> Douglas, Leag. "Monsanto-Bayer mega-deal a nightmare for America?" *CNN*. May 23, 2016. <http://www.cnn.com/2016/05/23/opinions/monsanto-bayer-douglas/>

<sup>8</sup> Hauter, Wenonah and Johnson, Roger. "Re: China National Chemical Corporation proposed purchase of Syngenta AG." *Food & Water Watch and National Farmers Union*. July 21, 2016.

<sup>9</sup> Hauter, Wenonah et al. "Re: The Proposed Dow-Dupont Merger." *American Antitrust Institute, Food & Water Watch and National Farmers Union*. May 31, 2016.

[http://1yd7z7koz052nb8r33cfxyw5-wpengine.netdna-ssl.com/wp-content/uploads/2016/05/Joint\\_Dow-Dupont\\_5.31.16.pdf](http://1yd7z7koz052nb8r33cfxyw5-wpengine.netdna-ssl.com/wp-content/uploads/2016/05/Joint_Dow-Dupont_5.31.16.pdf)

<sup>10</sup> "An Antitrust Review of a Bayer-Monsanto Merger" Stucke, Maurice E. and Grunes Allen P. July 22, 2016.

<https://s3-us-west-2.amazonaws.com/sou-assets/Konkurrenz-findings-on-Bayer-Monsanto.pdf>

<sup>11</sup> "Consolidation and Competition in the U.S. Seed and Agrochemical Industry" Testimony Of Diana L. Moss, President, American Antitrust Institute. September 20, 2016 <https://www.judiciary.senate.gov/imo/media/doc/09-20-16%20Moss%20Testimony.pdf>

<sup>12</sup> "Effects of Proposed Mergers and Acquisitions Among Biotechnology Firms on Seed Prices" Working Paper 16-2, Bryant, H., A. Maisashvili, J. Outlaw, and J. Richardson. Agricultural & Food Policy Center, Department of Agricultural Economics, Texas A&M AgriLife Research. September 2016. [https://www.afpc.tamu.edu/pubs/0/675/WP\\_16-2.pdf](https://www.afpc.tamu.edu/pubs/0/675/WP_16-2.pdf)

<sup>13</sup> Chicago Bridge & Iron Co. N.V. v FTC, 534 F.3d 410, 432 n.12 (5th Cir. 2008). <http://caselaw.findlaw.com/us-5th-circuit/1442634.html>

<sup>14</sup> Bloomberg. "Monsanto 7-state probe threatens profit from 93% soybean." *Business Standard*. March 11, 2010.

[http://www.business-standard.com/article/markets/monsanto-7-state-probe-threatens-profit-from-93-soybean-110031100023\\_1.html](http://www.business-standard.com/article/markets/monsanto-7-state-probe-threatens-profit-from-93-soybean-110031100023_1.html)

<sup>15</sup> Matthew Wilde, "Independent Seed Companies A Dying Breed". *The Courier*. May 31, 2009.

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[http://wfcourier.com/business/local/independent-seed-companies-a-dyingbreed/article\\_7cef1ffc-b0bb-56a8-8d83-faf894bf76ad.html](http://wfcourier.com/business/local/independent-seed-companies-a-dyingbreed/article_7cef1ffc-b0bb-56a8-8d83-faf894bf76ad.html);  
DuPont/PioneerComments, *supra* note 7, at 21.

<sup>16</sup> Keith O. Fuglie, Paul W. Heisey, John L. King, Carl E. Pray, Kelly Day-Rubenstein, David Schimmelpfennig, Sun Ling Wang, and Rupa Karmarkar-Deshmukh, Research Investments and Market Structure in the Food Processing, Agricultural Input, and Biofuel Industries Worldwide, ERR-130, USDA, Econ. Res. Serv., December 2011, p. 19.

<sup>17</sup> AAI et al., *supra* note 2.

<sup>18</sup> David J. Lynch & Guy Chazan, *Bayer-Monsanto Sows Seeds of Doubt Among Regulators*. Financial Times.

May 30, 2016. <https://www.ft.com/content/e76f4d8a-23f2-11e6-9d4d-c11776a5124d>

<sup>19</sup> Moss, Diana L. "Transgenic Seed Platforms: Competition Between a Rock and a Hard Place?" *American Antitrust Institute*. April 5, 2010.

[http://www.antitrustinstitute.org/sites/default/files/Addendum%20to%20AAI%20White%20Paper\\_Transgenic%20Seed.4.5\\_040520101107.pdf](http://www.antitrustinstitute.org/sites/default/files/Addendum%20to%20AAI%20White%20Paper_Transgenic%20Seed.4.5_040520101107.pdf)

<sup>20</sup> Letter dated December 31, 2009 from Food & Water Watch to Attorney General Eric Holder and USDA Secretary Tom Vilsack re: Agriculture and Antitrust Enforcement Issues in Our 21st Century Economy at 16 [hereinafter Food & Water Watch Letter].

<sup>21</sup> *Id.*

<sup>22</sup> Food & Water Watch Letter

<sup>23</sup> Bunge, Jacob. "Dupont to Cut 1,700 Jobs in Delaware." *The Wall Street Journal*. December 29, 2015.

<http://www.wsj.com/articles/dupont-to-cut-1-700-jobs-in-delaware-1451409479>

<sup>24</sup> Reisch, Marc. "DuPont Cuts 2016 R&D Budget Ahead of Merger With Dow Chemical". *C&EN*. January 28, 2016.

<http://cen.acs.org/articles/94/i5/DuPont-Cuts-2016-RD-Budget.html>

<sup>25</sup> Watson, Shala. "What impact will ag mergers have on farmers, ranchers?" *Texas Agriculture Daily*. September 29, 2016.

<http://texasfarmbureau.org/impact-will-ag-mergers-farmers-ranchers/>

<sup>26</sup> "ASA to Review Bayer/Monsanto Acquisition from Impacts on Soybean Farmers." *American Soybean Association*. September 15, 2016.

<https://soygrowers.com/asa-to-review-bayermonsanto-acquisition-for-impacts-on-soybean-farmers/>

<sup>27</sup> Johnson, Roger. "Testimony of Roger Johnson, President, National Farmers Union." *National Farmers Union*. September 20, 2016.

<https://www.judiciary.senate.gov/imo/media/doc/09-20-16%20Johnson%20Testimony.pdf>

<sup>28</sup> Novak, Christopher. "Joint Testimony on Behalf of National Corn Growers Association and American Soybean Association Before the Committee on the Judiciary United States Senate." *National Corn Growers Association*. September 19, 2016.

<http://www.ncga.com/upload/files/documents/pdf/testimonies/NCGA-and-ASA-Grassley-Hearing-Written-Testimony-of-Chris-Novak-9-19-16.pdf>

<sup>29</sup> Fannin, Blair. "Proposed mergers by biotechnology firms could result in cotton seed price surge." *Agrilife Today*. September 23, 2016.

<http://today.agrilife.org/2016/09/23/proposed-mergers-biotechnology-firms-result-cotton-seed-price-surge/>

<sup>30</sup> U.S. Dep't of Agric., Econ. Res. Serv., Commodity Costs and Returns, <http://www.ers.usda.gov/data-products/commodity-costs-and-returns.aspx>;  
U.S. Dep't of Agric., Nat'l Agric. Stat. Serv., Quick Stat., <http://quickstats.nass.usda.gov>

<sup>31</sup> "Consolidation and Competition in the U.S. Seed and Agrochemical Industry." *Senate Judiciary Committee*. September 20, 2016.

<http://www.judiciary.senate.gov/meetings/consolidation-and-competition-in-the-us-seed-and-agrochemical-industry>

<sup>32</sup> Food & Water Watch. "Five Things Monsanto Doesn't Want You to Know About GMOs." *Food & Water Watch*. May 7, 2015.

<http://www.foodandwaterwatch.org/news/five-things-monsanto-doesnt-want-you-know-about-gmos>

<sup>33</sup> Gillam, Carey. "Private Tests Show Cancer-Linked Food Herbicide in Breakfast Foods; FDA mum on its Assessments." *The Huffington Post*. April 19, 2016. [http://www.huffingtonpost.com/carey-gillam/private-tests-show-cancer\\_b\\_9723758.html](http://www.huffingtonpost.com/carey-gillam/private-tests-show-cancer_b_9723758.html)

<sup>34</sup> Murphy, D and Rowland, H. "Glyphosate: Unsafe on Any Plate." *Food Democracy Now & The Detox Project*. 2016. [https://usrtk.org/wp-content/uploads/2016/11/FDN\\_Glyphosate\\_FoodTesting\\_Report\\_p2016-3.pdf](https://usrtk.org/wp-content/uploads/2016/11/FDN_Glyphosate_FoodTesting_Report_p2016-3.pdf)

<sup>35</sup> Benbrook C. "Impacts of Genetically Engineered Crops on Pesticide Use in the United States: The First Thirteen Years." *The Organic Center*. November 2009. <https://www.organic-center.org/reportfiles/GE13YearsReport.pdf>

<sup>36</sup> International Agency for Research on Cancer. "IARC Monographs Volume 112: evaluation of five organophosphate insecticides and herbicides." *The World Health Organization: International Agency for Research on Cancer*. March 20, 2015. <http://www.iarc.fr/en/media-centre/iarcnews/pdf/MonographVolume112.pdf>

<sup>37</sup> Benbrook, C. "Impacts of genetically engineered crops on pesticide use in the U.S.—the first in sixteen years." *Environmental Sciences Europ*. Vol. 24:24. September 28, 2012. <http://enveurope.springeropen.com/articles/10.1186/2190-4715-24-24>

<sup>38</sup> Clark, Brian. "Summary of Major Findings and Definitions of Important Terms." *Washington State University*. October 1, 2012.

<http://cahnrs.wsu.edu/news-release/2012/10/01/summary-of-major-findings-and-definitions-of-important-terms/>

<sup>39</sup> Bayer Cropscience. "Liberty Link System." *Bayer Cropscience*. February 25, 2016.

[https://www.cropscience.bayer.us/products/traits/libertylink/libertylink-system#phcontent\\_9\\_divAccordion](https://www.cropscience.bayer.us/products/traits/libertylink/libertylink-system#phcontent_9_divAccordion)

<sup>40</sup> Union of Concerned Scientists. "The Rise of Superweeds—and What to do About it." Union of Concerned Scientists. December 2013.

[http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food\\_and\\_agriculture/rise-of-superweeds.pdf](http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/rise-of-superweeds.pdf)

<sup>41</sup> Freese, B., and Crouch, M. "Monarchs in Peril." *Center for Food Safety*. February 2015. [http://www.centerforfoodsafety.org/files/cfs-monarch-report\\_2-4-15\\_design\\_05341.pdf](http://www.centerforfoodsafety.org/files/cfs-monarch-report_2-4-15_design_05341.pdf)

<sup>42</sup> Fausset, Richard. "Mexico monarch butterfly population smallest in years, study says." *LA Times*. March 13, 2013.

<http://articles.latimes.com/2013/mar/13/world/la-fg-mexico-butterflies-20130314>

<sup>43</sup> Arce, A. N., David, T. I., Randall, E. L., Ramos Rodrigues, A., Colgan, T. J., Wurm, Y. and Gill, R. J. (2016), Impact of controlled neonicotinoid exposure on bumblebees in a realistic field setting. *J Appl Ecol*. doi:10.1111/1365-2664.12792

<sup>44</sup> Dara A. Stanley, Avery L. Russell, Sarah J. Morrison, Catherine Rogers, Nigel E. Raine, David Kleijn. "Investigating the impacts of field-realistic exposure to a neonicotinoid pesticide on bumblebee foraging, homing ability and colony growth." *Journal of Applied Ecology*. 2016, 53, 5, 1440.

<sup>45</sup> Urlacher, E., Monchanin, C., Rivièrè, C. et al. *J Chem Ecol* (2016) 42: 127. doi:10.1007/s10886-016-0672-4

<sup>46</sup> Cornell University. "Ground nesting bees in your backyard!" *Cornell University, College of Agriculture and Life Sciences*. 2016.

<https://entomology.cals.cornell.edu/extension/wild-pollinators/native-bees-your-backyard>

<sup>47</sup> Center for Food Safety. "Frequently Asked Questions." *Center for Food Safety*. 2015. <http://www.pollinatorsandyourplate.org/faq/>

<sup>48</sup> American Bird Conservancy. "Birds, Bees, And Aquatic Life Threatened By Gross Underestimate Of Toxicity Of World's Most Widely Used Pesticide." 2013. <https://abcbirds.org/article/birds-bees-and-aquatic-life-threatened-by-gross-underestimate-of-toxicity-of-worlds-most-widely-used-pesticide-2/>

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