Senate Committee on the Judiciary Hearing

"Consolidation and Competition in the U.S. Seed and Agrochemical Industry"

Written Statement by Tim Hassinger, President and CEO of Dow AgroSciences

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Chairman Grassley, Ranking Member Leahy, and Members of the Judiciary Committee, I am Tim Hassinger, President and CEO of Dow AgroSciences. I appreciate the opportunity to share my thoughts with you today about Dow's merger with DuPont.

I grew up on a diversified family farm in Central Illinois. I have been with Dow for 32 years, and have had the opportunity to see up close the evolution in agriculture and to work closely with farmers and agricultural retail and distributor customers on six continents. I have lived in many areas of the United States and in China as well where I led Dow AgroSciences' Greater China business.

Founded in 1897, The Dow Chemical Company first began developing chemicals to protect crops from weeds, insects, and disease in the 1950s. More recently, the company added seeds and trait development to its product portfolio. Our seeds business focuses on the development of transgenic traits for corn, soybean, and cotton seeds. Transgenic traits improve the performance of seeds, providing important qualities such as resistance to insect damage or tolerance to certain key low-cost herbicides. In 1989, The Dow Chemical Company entered a joint venture with the Elanco Plant Sciences business of Eli Lilly and Company resulting in the formation of DowElanco. In 1997, Dow acquired 100 percent ownership of DowElanco, and the company was renamed Dow AgroSciences.

Headquartered in Indianapolis, Indiana, Dow AgroSciences has two platforms – seeds and crop protection. The business has more than 8,000 employees with the majority based in the United States, across 18 states and Puerto Rico. We have an established, world-class manufacturing and research and development network with sites around the world. Our presence continues to expand with facilities in more than 40 countries and products sold in more than 130 countries.

Our culture of collaboration, deep appreciation of diverse perspectives and a determined entrepreneurial spirit is the core of who we are and has fueled our ability to consistently serve farmers throughout the world for several decades. I could not be prouder of the talent and commitment of our workforce, and the passion they bring to their jobs every day.

That commitment to agricultural innovation has led to the development of technology and tools that American farmers need to remain competitive and meet the food security challenges of a world where land is finite, but population growth continues. We are proud of the role that Dow AgroSciences has played in helping the American farmer be the most productive and making the United States the world leader in agricultural innovation.

During the past 30 years I have seen many changes in the agricultural industry. Only one other time in my career – in the mid-80s – have I seen a downturn in the agricultural markets like we have experienced the past three years, and it has negatively impacted farmers, agricultural distributors and retailers and manufacturers. To put this in perspective, U.S. net farm income is estimated to be down 55 percent from a 2013 high. The extraordinary downturn in the commodity markets, in combination with the regulatory delays we have encountered in getting approvals for our new Enlist herbicide tolerant crops and reformulated herbicide, have severely impacted our business.

In order for the U.S. to maintain its global leadership in agricultural production and technology, companies such as Dow and DuPont must find ways to more effectively and efficiently deliver new technologies and tools to the American farmer. With new technology, farmers will be able to improve productivity and deliver the quality and quantity of food the world needs. And that is the rationale behind our proposed merger.

The current downturn in agricultural markets and consolidation in the agricultural industry are generating many questions and concerns among farmers and other agricultural industry participants in the U.S. and around the world. I know my DuPont colleague Jim Collins has heard the same concerns, as have the members of this committee.

One of the most important values Dow and DuPont share is a farmer-focused culture – where farmers are not just buyers, but partners with whom we work side-by-side. Our business success depends upon our customers' success.

While I cannot speak about other potential agricultural consolidations, I am excited to have the chance to speak to the merits of the proposed merger of Dow and DuPont and the intended subsequent spin into three, independent U.S. publicly traded companies, one of which will be an Agriculture Company. I am sharing with you what I have told many customers and farmers over the past several months about why this merger, and the intended spin of a leading, independent Agriculture Company, will be good for the American farmer:

Our proposed merger will bring more competition to the market, not less. I emphasize that this is a procompetitive combination that will enhance – not diminish – our ability to compete in the global seeds and crop protection markets, to innovate and to provide more options – not fewer – to American farmers. How is this possible? There are three main reasons:

1. Dow and DuPont have extraordinarily complementary portfolios—since the parties compete against each other very little today, the transaction will not end any meaningful competition;

2. The combination will provide a level of scale and efficiency that will reduce input costs, resulting in savings which can be reinvested for innovation and the creation of higher value products for farmers; and

3. The proposed merger will bring together the research and development (R&D) capabilities of both companies, which will lead to even more future innovation. Moreover, it will incentivize greater investment in Dow's traits business since DuPont's complementary seed business provides far better market access than Dow has today.

Those of us involved in agriculture understand that there are many factors we cannot control: factors such as the weather and commodity prices, regulatory delays, currency headwinds or other market conditions. But there are factors we can control, such as our input and overhead costs, which can be reduced by eliminating duplication and creating greater efficiency.

The combination of Dow and DuPont's complementary portfolios will create a U.S. based entity with the scale and balance of agricultural offerings that will allow us to more fully meet grower needs. These offerings will be built from new technologies derived from a robust R&D program. The intended Agriculture Company spun from the merger will be more efficient over the long term and be a stronger competitor, which in turn will enhance competition to the benefit of U.S. farmers.

To help illustrate this point, let's focus on crop protection. By combining the two crop protection businesses, the combination of Dow – the 4th largest in the industry today - and DuPont – the 6th largest - the new Agriculture Company would rank 3rd in the global crop protection industry. Two others would obviously still be ahead of the Agriculture Company, and, of course, there is a long list of other competitors as well.

Combining Dow and DuPont's complementary offerings would result in one of the most comprehensive and diverse product portfolios in the world, giving more choices than ever to our customers who are combatting unprecedented weed and insect pressures. Today, growers continue to face resistance issues across all classes of **crop protection** products. There is documented evidence of resistance to the vast majority of current crop protection chemicals. This is a strong indicator that continued innovation will be critical in order to remain competitive in the crop protection industry. With these tools, the company will be better positioned to compete head-to-head in the market with domestic and foreign competitors.

In the **seeds** business, the transaction will combine DuPont's Pioneer seed business and strong germplasm with Dow's transgenic traits and traits pipeline. The additional market access will incentivize investment and help DowDuPont become the first real challenger with both strong germplasm and strong transgenic traits. The transaction will also generate significant R&D growth synergies. It will allow us to combine the best talent, ideas and processes of both companies resulting in better and more innovative solutions. By combining capabilities, we will be able to gain more R&D value for every dollar invested, both in crop protection and in seeds/traits.

We are committed to continued innovation. Innovation drives this industry and, simply said, we could not remain competitive without a significant investment in R&D. A more detailed understanding of the complexities of our business is necessary to fully appreciate the benefits of this particular transaction.

Our crop protection business focuses on innovating a broad range of solutions to control weed, insect and disease pressures. At our primary research center in Indianapolis, we have built a significant R&D capability to address these ever changing challenges. As we do this, however, the costs of developing new crop protection active ingredients are skyrocketing. In 1995, the R&D and regulatory costs for bringing a new crop protection product to market averaged $152 million. Today, the cost is approximately $286 million.[1]

This increased cost is primarily driven by two factors, one related to research or "discovery," the other to development. First, in order to invent novel solutions, we typically test tens of thousands of compounds for pest-control activity before identifying a viable candidate that can be developed into a commercial product. This has resulted in average research costs increasing by approximately 50 percent since 1995.[2] Second, increasingly complex and demanding regulatory requirements that are not harmonized around the world have increased the cost to develop a product to commercialization. This has resulted in average development stage costs more than doubling from approximately $67 million to $146 million since 1995 for new active ingredients that make it to market.[3]

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[1] Phillips McDougall, Agrochemical Research and Development, A Consultancy Study for Crop Life America and the European Crop Protection Association, March 2016, p.3 (showing AI costs for 1995 and 2010-2014).

[2] Phillips McDougall, Agrochemical Research and Development, A Consultancy Study for Crop Life America and the European Crop Protection Association, March 2016, p.3 (showing AI research costs for 1995 and 2010-2014) .

[3] Phillips McDougall, Agrochemical Research and Development, A Consultancy Study for Crop Life

A combination with DuPont will enhance our ability to innovate across our seeds and traits and crop protection portfolios for years to come in this challenging agricultural industry.

- **Complementary crop protection R&D capabilities unlock new possibilities.** Because obvious crop protection innovations have already been found and environmental regulations further restrict what can be registered, innovation going forward will be about going deeper to find sustainable solutions. The merger will allow the combined company to do this by having a broader set of capabilities.

- **Greater ability to launch mixtures.** Beyond new active ingredients, the combined company will also be able to create new mixtures from its combined portfolio of existing active ingredients, offering better, broader solutions to farmers at lower cost. This allows products that better manage resistance issues, without the added expense of cross-licensing fees.

- **Stronger seeds competitor.** Moreover, combining our seeds and traits businesses creates another player that is better able to innovate and compete.

    - **DuPont's large seeds business provides a channel to market for Dow's transgenic traits.** Today, there is only one company with both a strong seeds and traits business. That company is neither DuPont nor Dow. Thus, farmers have limited choices. Dow has faced challenges effectively recovering our investments in transgenic traits because our seeds business is small. The limited seed sales available to Dow makes it difficult to justify new investments. The flip side is

America and the European Crop Protection Association, March 2016, p.3 (showing AI development costs for 1995 and 2010-2014).

DuPont, which has the large seeds business we need to have enough market access to support continued investment in discovering and developing traits, and to benefit from combination with Dow's strength in traits.

- **Access to DuPont's germplasm library allows Dow to be independent of its major traits competitor from whom Dow must in-license germplasm today.** Because of the limitations on the depth and scope of Dow's germplasm breeding program, we must in-license almost all of the seed genetic material that we combine with our transgenic traits to sell seeds to farmers. DuPont, however, has a broad library of genetic material that would eliminate our need to in-license from our major traits competitor. This will create additional choices for farmers.

- **Access to Dow's transgenic traits allows DuPont to be independent of its largest seeds competitor from whom it must in-license traits today.** At the same time, DuPont has historically needed to in-license transgenic trait technology from its largest seed competitor. The combination will allow DuPont to supply its own transgenic traits, creating a new strong competitor with differentiated products.

- **These synergies create an important counter-balance to enhance effective competition in the sale of seeds, establishing a second agricultural company that can innovate across both seeds and traits, and sell higher quality products at lower prices.**

I would respectfully ask you, members of the Committee, that in addition to your antitrust oversight responsibilities, you take into account the long view – the global view – to ensure the

U.S. is going to maintain its leadership in agricultural productivity and technology. The DowDuPont merger brings more than 300 years of combined experience delivering technological innovations through science. Through the DowDuPont merger, we will bring innovations forward for American farmers. We also believe that this merger will give the best chance of preserving, and ultimately growing, our U.S. manufacturing and R&D base, which includes much-needed, well-paying, knowledge-based jobs in Delaware, Indiana, Iowa, and across the country. And, this merger will allow us to compete globally and to maintain our nation's long-standing leadership in agricultural productivity and technology, unmatched across the globe.

To conclude, Dow's merger with DuPont is a true win-win solution for U.S. farmers and for this country. Thank you for your time.

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