

**Responses by James C. Collins (DuPont) to Questions for the Record
from the September 20, 2016 Senate Judiciary Committee hearing on
“Consolidation and Competition in the U.S. Seed and Agrochemical Industry”
October 12, 2016**

Questions from Senator Leahy

1. All farmers, whether they use genetically engineered (GE)-traited technologies or not, are still looking for non-GE choices to expand their rotations and to seek higher value markets. Many of you have discussed the impact that the pending seed and chemical company mergers will have on innovation. Some have argued that the mergers will enhance innovation, and others that it will stifle innovation. Those who are concerned about less innovation if the mergers are approved have noted the difficulty in crafting a potential remedy for that concern, as questions about innovation present unique challenges that are far more complex than simply divesting existing businesses or product lines.
 - a. What are the potential opportunities and mechanisms for enhancing public plant breeding capacity to address the loss in diversity of seed choices for farmers, and the many needs of farmers that will not be addressed by the private sector, whether or not we continue to see mergers in seed companies?

Response: Public breeders focus on basic research projects that are essential to improving genetic diversity. DuPont Pioneer provides funding for a number of public breeding research projects. We have previously collaborated with Iowa State University, Cornell University, University of Minnesota, Purdue University and Michigan State University. After the merger, we will have more resources and capabilities to expand the number of agriculture collaborations.

- b. As you consider the challenges farmers are facing today needing access to seeds that are well adapted to their farming systems, soils, and the changing climate, would you support additional investments in public research on diversification of seed stocks and publically available plant varieties in this country that could lead to greater genetic diversity?

Response: DuPont has advocated for public plant breeding primarily through the American Seed Trade Association (ASTA), whose diverse membership includes 700 large and small seed companies. Through ASTA, we have been engaged with the National Association of Plant Breeders (NAPB) to advocate for more funding for public plant breeding.

Questions from Senator Blumenthal

1. How does the elimination of \$1.3 billion in R&D spending (as referenced on the website created by your two companies and designed to provide information on the merger) improve market competitiveness?

Response: The \$1.3 billion in synergies referenced on the website refers to the total synergies the two companies believe we can achieve in our overall agriculture operations, not just R&D spending. In addition to R&D, these synergies include Cost of Goods Sold (COGS) – a very large category of spend that includes raw materials, supplies and our operating site costs.

We believe this transaction is pro-competitive and is good for farmers and consumers. The two companies have many complementary product lines and bringing them together will enable us to be a more vigorous competitor than we can be independently, bringing even greater innovation and choice to our customers.

2. If the merger of your two companies is to combine “complementary” assets of each company, why is there such a gain to be made by eliminating “redundancies” between the two?

Response: After merging, the two companies will be able to achieve cost efficiencies in a number of areas where there are redundancies in terms of infrastructure and facilities, not through elimination of existing products or new product development programs. For example, much of the projected synergy savings come from Cost of Goods Sold (COGS), a very large category of spend that includes raw materials, supplies and our operating site costs, as well as sales and general & administrative expenses.

- a. Can you explain in detail the redundancies that will be eliminated and how these eliminations of head-to-head R&D will not harm consumers?

Response: There will not be a reduction in our investment in science and innovation. There is currently minimal overlap in the two companies’ product pipelines and we will not be reducing spending on R&D programs. Any reduction in R&D spending will be primarily focused on the elimination of duplicative infrastructure and support functions such as regulatory affairs and field testing operations and will give us the opportunity to reinvest those funds in true R&D, and, ultimately provide more cost effective solutions and greater choice for farmers. We believe the merger will strengthen the innovation engine and drive greater output and improved productivity outcomes for farmers.

Questions from Senator Cruz

1. Earlier this month, the Agricultural and Food Policy Center (AFPC) at Texas A&M University issued a report, “Effects of Proposed Mergers and Acquisitions Among Biotechnology Firms on Seed Prices.” This report concludes that the proposed mergers between Dow and DuPont and Monsanto and Bayer will increase seed prices for corn, soybeans, and cotton. Notably, the report indicates that the price of cotton could increase by almost 20%. Do you have any response to these findings? Will seed prices increase? If not, what did the report get wrong?

Response: The Texas A&M study relies on a static model that assumes that there will be a reduction in competitive intensity, and no entry or repositioning by other competitors post-merger. The model also ignores the substantial cost savings generated by the Dow-DuPont merger. In contrast to the assumptions in that model, we believe that not only will competition remain vigorous after the transaction in a dynamic environment, but that the transaction will generate significant savings and efficiencies which will help us deliver competitive price for value.

DuPont is committed to creating an agriculture company that drives innovation and promotes farmer choice, leading to higher yields and customer profitability. Competition in seeds will continue to be extremely intense post-transaction and it will be essential for the combined firm to price its seeds to be competitive in that marketplace.

2. In the last quarter century, the agricultural industry has consolidated dramatically into the “Big Six” companies that now control the market. With these proposed mergers, it looks like we’re heading toward a “Big Four.” In her written testimony, Dr. Moss states that the Dow-DuPont and Monsanto/Bayer mergers “will likely raise entry barriers for smaller innovators and increase the risk that they are foreclosed from access to technology and other resources needed to compete effectively.” Can you respond to this? How would these mergers affect the smaller businesses and entrepreneurs in Texas?

Response: The transaction will not raise entry barriers or foreclose smaller innovators, in Texas or elsewhere. Smaller companies are an important part of the competitive dynamic of the seed, crop protection and trait development industries. Numerous small agriculture companies and institutions innovate in crop protection and seeds and traits today and will remain a major competitive force after the merger. Post-transaction, the combined firm and others will continue to collaborate with smaller players and public entities to ensure that new products are brought to market as quickly and efficiently as possible to meet the needs of growers and their customers.

3. Several of the people I have spoken with in the farm and agricultural industry believe that effects stemming from these mergers should be reviewed collectively. If you disagree, could you please explain why?

Response: The Department of Justice typically reviews each transaction on its own merits and DuPont believes this is the proper approach.

We believe the Dow-DuPont merger is distinguished by its lack of significant overlap, particularly in the R&D pipelines of the two companies. That is one of many reasons we believe this merger will enhance competition and is good for farmers and consumers, no matter what happens with any other transaction.

It is not uncommon for the antitrust agencies to be reviewing one merger when another transaction in the same industry is announced. Delaying review of the first transaction because another transaction is announced months later would add significant delay and uncertainty to the regulatory process.

4. The Wall Street Journal has noted that Federal Reserve policies after the financial crisis inflated asset prices, and more recently, that the end of Fed stimulus has led the dollar to rise sharply, which has given us falling prices in many farm commodities. We have seen this effect very clearly in Texas’s energy industry, which has seen prices fall more than in half since 2014, hitting the entire regional economy. Do swings in commodity prices, specifically crop prices, have a negative impact on the agricultural industry as whole? Would it be better for your company to have a more stable dollar and more stable commodity prices? What role do Federal Reserve policies play when your company makes decisions, such as the decision to merge with another company?

Response: Low commodity prices are certainly negative to farmers by impacting net farm income. Some farmers (particularly those who rent land) are now losing money and eating into their equity. Crop price volatility is primarily due to supply/demand imbalances as three years of low yields led to unnaturally record high prices followed more recently by four years of above yields which have created a global excess of grain and depressed agricultural commodity prices.

Additionally, a strong dollar is generally negative for US farmers as it makes other countries’ (e.g., Brazil) grain production more competitive in global markets which hurts demand for U.S. exports. Swings in

relative currency exchange rates can certainly impact prices of U.S. agricultural goods, especially those goods with exposure to global export markets. In general, it has been observed that when the U.S. dollar is strong relative to the currencies of other major agriculture exporting countries, U.S. agriculture goods are relatively more expensive on the global market which in turn pressures domestic U.S. prices. The converse is also true. It is difficult to say whether these currency exchange rate swings would be described as “negative” in all cases. Currency exchange rate movements that impact agriculture prices may create both risks and opportunities. DuPont’s U.S. agriculture business serves a wide range crop and livestock producers who may view these swings differently depending on the direction and magnitude. For example, a strong dollar that pressures grain prices would be viewed negatively by a row crop producer, but may be welcomed by a livestock producer.

That said, there are situations where stable currency relationships can be beneficial to U.S. agriculture producers. This is due to the long decision making and production cycles inherent to agriculture relative to other industries. If relative currency exchange rates experience large swings within what is considered an agriculture production decision making cycle, it can distort the market signals U.S. producers use to make production and risk management decisions. A row crop producer’s decision, production and marketing cycle may stretch 15+ months for one crop. Beef producers often have even longer windows.

Questions from Senator Perdue

1. Over the last two decades the ag seed and chemical industry has seen a substantial increase in the cost and time of getting new technologies from discovery and development to farmers in the field. Studies have shown that it takes an average of 13 years and \$136 million to get new biotechnology registrations and 11 years and \$286 million to get new crop protection products to market. A large portion of these increased costs are from the increasingly complex federal regulatory framework.
 - a. In what ways do federal regulations specifically impact your company’s process from discovery to registration?

Response: The regulatory process from discovery to product registration is complex. DuPont devotes extensive time and resources to data collection before preparing filings for the product in every relevant jurisdiction around the globe. From there, while the product is under review, the review timelines can be extended to the point where the discovery is well into its patent life before the launch of the product. Specifically, that begins to limit economic opportunity in addition to limiting customer choice in the marketplace.

- b. In what ways could this regulatory burden be eased on your company?

Response:

Regulators in the US now have over 30 years’ experience regulating biotech products and we have over 20 years of commercial experience with these products planted on millions of acres. Consistent with the recommendations of the National Academy of Science extensive review, we feel it’s time to modernize the regulatory system. We believe that a more streamlined and efficient regulatory review process should be science-based and proportional to risk, with greater predictability and reduced time from start to finish. Ultimately, all of these considerations are integral to a company’s evaluation of its R&D targets.

2. How would you describe the impact of the proposed Dow-DuPont merger on American and global agriculture?

Response: The merger will enable us to combine our complementary strengths into a single American agriculture leader. The new agriculture business will be able to respond faster and more effectively to the changing conditions that impact farmers with innovative products, greater choice and competitive price for value. It will remain a strong number two in the global seed market while in crop protection, it will represent the combination of numbers four and five in the market which will place us at number three at best in sales, behind the market leaders. Overall, the merger will enhance competition and be good for farmers and consumers no matter what the outcome of any other transaction.

3. How will this merger make you a more competitive player in the agricultural marketplace?

Response: We believe this transaction is pro-competitive and is good for farmers and consumers. The two companies have many complementary product lines and bringing them together will enable us to be a more vigorous competitor than we can be independently, bringing even greater innovation and choice to our customers. The merger will allow us to take advantage of innovation opportunities with seamless collaboration that can be faster and broader, delivering better price for value. The transaction costs associated with partnering and cross-licensing are high and this combination removes those barriers to innovation and enables us to bring more diverse and durable solutions to market faster.

4. What is your rationale for combining Dow and DuPont? How will it impact your company legacies?

Response: The merger will enable us to combine our complementary strengths in to a single American agriculture leader. This transaction is pro-competitive and good for farmers and end consumers. Our vision for the agriculture business is one that creates innovative products and promotes farmer choice to drive higher yield, increasing farmer productivity and profitability. In agriculture, DuPont's legacy is providing innovative products that meet farmers' needs. The merger will enable us to continue this legacy with even greater innovation and choice for our customers.