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E.I. DUPONT DE NEMOURS AND COMPANY, INC.
BEFORE THE COMMITTEE ON AGRICULTURE, NUTRITION & FORESTRY
UNITED STATES SENATE
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CREATING JOBS IN RURAL AMERICA

Chairman Stabenow, Ranking Member Roberts and members of the committee. I appreciate the opportunity to submit this written statement for the record to offer DuPont's perspective on the potential for the United States to establish a leadership role in the emerging field of biomaterials, and to reap the manufacturing jobs that will accompany the development of this industry.

My core message is simple. There is a significant burgeoning industry in biomaterials – making a wide variety of products from agricultural materials rather than hydrocarbons. The U.S. has a clear leadership position in the underlying biotechnology, and the core manufacturing expertise to be the leader in developing and making these products. Congress has a role in helping to make the U.S. the place this industry flourishes.

Over our 210 years as a company DuPont has developed and applied a variety of scientific tools in multiple disciplines such as physical, chemistry, materials sciences, engineering and physics to allow us to develop and manufacture products serving global market needs. Some of those products, such as nylon, polyester and synthetic rubbers created entire new global industries that have provided millions of jobs. In the last 20 years we have invested heavily in biotechnology because we saw it as one of the key scientific and manufacturing tools of this century. We are currently the single largest holder of biotech patents in the United States. This technology tool, when combined with traditional U.S. strengths in chemistry and chemical engineering, is helping create the next generation of manufactured products and manufacturing jobs. The U.S. can be the leader in this new industry.

We have applied biotechnology in the agriculture arena to help drive steady and increasing gains in food crop yields. We are making crops more draught and pest resistant and fertilizer efficient. And we have a rich pipeline of biomaterials that are producing products for diverse end use markets, with many new products on the way. These products are made in facilities employing American workers and use American agricultural feedstocks in lieu of imported hydrocarbons.

We began with the production of the chemical 1,3-propanediol, or Bio-PDO™, in a joint venture with Tate and Lyle. At our facility in Loudon, Tennessee we ferment a dilute sugar stream from the adjacent corn wet mill to produce Bio-PDO™. This may

not seem remarkable, but there is a reason this technology earned DuPont the Presidential Medal for Green Chemistry. Bio-PDO™ has a significantly lower life cycle greenhouse gas footprint than the identical product made from petroleum. It offsets the use of hydrocarbon-based products in multiple applications. And it is the starting point for a wide variety of products in diverse markets

Bio-PDO™ is one of the main ingredients in our renewably sourced polymer SORONA®, a high performance polymer, or plastic that is competing head to head with existing high performance polymers such as nylon and polyester in the marketplace – and beating them on performance. It is the basis for Mohawk's SMARTSTRAND™ carpet and for high end sportswear, where it provides natural stretch without the need for additional fibers, dyes well to produce brilliant colors, has a natural soft touch and great durability. SORONA® is also being used in molded plastic parts in automobiles. Bio-PDO™ also is used in a variety of other markets such as personal and home care, aircraft wing deicing fluids and polymers such as polyurethanes and polyester resins. We are steadily increasing our share of the \$13 billion market that our suite of PDO-based products can compete in.

There are large market growth opportunities for biomaterials. We have had two significant signs that we are on the right track. We started up our Bio-PDO™ plant in November 2006 and are currently investing to expand production in Loudon by 35%. In 2008 and 2009 in the worst recession in our Company's history since the Great Depression, we expanded SORONA® capacity by starting up two new polymer production plants. These new plants were sold out by the end of 2009. We think these facts are a testament to the economic competitiveness of our bio-derived materials and the market opportunities.

U.S. production of Bio-PDO™ also helps create downstream job growth opportunities, such as our SORONA® polymer production plants in Kinston, North Carolina and the manufacturing growth of our customers like Mohawk.

And Bio-PDO™ is only the beginning. Markets and Markets magazine has estimated the renewable chemical market will grow to \$76 billion by 2015, while Pike Research has forecast market growth to \$98.5 billion by 2020. Moreover, just this year Frost and Sullivan pointed out that since bioplastics represent only 0.1% of the world-wide plastics sector the current 20% compound annual growth rates in the industry are "perfectly sustainable". At DuPont, beyond Bio-PDO™ we are producing high performance synthetic rubber for automotive applications like belts and hoses from renewable feedstocks, in response to increasing market demand for renewably sourced materials. We are using industrial biotechnology to develop high quality Omega-3 fatty acids, normally derived from harvesting small ocean fish like anchovies, through fermentation of sugars. Why? Because the majority of seafood eaten in the world is derived from aquaculture – fish farming – and those fish and shrimp are fed Omega-3s in the form of fish meal derived from small ocean fish. This is putting significant pressure on the world's fisheries – and recycling ocean contaminants. Our fermentation derived Omega-3s are intended for this large and

growing aquaculture fish food market and will provide global nutrition in a more sustainable manner. We are also close to market commercialization of products in markets as diverse as personal care, lightweight automotive components and industrial textiles.

The U.S. has a clear leadership position in the core sciences necessary to turn these ideas into market realities. We also have the opportunity to have a leadership position in the commercialization of this technology to manufacture a wide variety of products for global markets, creating high value U.S. manufacturing jobs in the process. Companies like DuPont and others are providing the technology and market leadership to make this happen. Congress can help to capture this opportunity for the U.S. by creating and sustaining a policy framework that makes the U.S. the most attractive place to develop and commercialize these products.

Thank you for the opportunity to share our views with the committee.