Adam Monroe, Novozymes
Senate Committee on Agriculture, Nutrition and Forestry
"Grow It Here, Make It Here: Creating Jobs Through Biobased Manufacturing"
Tuesday, June 17

Chairmwoman Stabenow and Members of the Committee,

My name is Adam Monroe, Novozymes Regional President for the Americas. It is an honor to be here representing our company, technology and the bridge we see between biobased manufacturing and a new American industry.

Let me start today by thanking Chairwoman Stabenow for holding today's hearing – and the Committee for recognizing that the United States is on the doorstep of a new industry in biobased products made from domestic renewable feedstocks.

We are already seeing that industry at work: We are growing biomass and have built plants in rural communities, creating good-paying jobs for operators, technicians, scientists and engineers. We are seeing new products, like plastics made from plants and fuel made from trash, that reduce our need to purchase expensive fossil feedstock from other countries.

But I believe – and I know you do, Madame Chairwoman – these advances are part of a bigger story.

That story is a new American industry:

- New companies innovating an entire family of products for consumers.

- America dotted with advancing manufacturing plants to make these products using the latest technologies – from new fermentation techniques to microbial development.

- Construction workers welding, wiring and installing advanced equipment we need; and plants staffed by full-time workers with high school, technical and college degrees from the local community.

These manufacturing plants can drive development in some of our most economically underserved areas, bringing new businesses, restaurants and tax revenue to our communities. And because America's biomass availability is so big, the potential for biomanufacturing is equally as big.

I want to thank Senator Hagan for inviting me here today. Novozymes has a proud history in North Carolina: We were doing biotech before people called it "biotech" and built our first US manufacturing plant in 1977 in a soybean field.

That soybean field is now home to the largest multi-purpose enzyme manufacturing plant in the country. Our site has undergone multiple expansions, including the establishment of our global R&D center on biomass conversion. We recently announced a $36 million expansion of that site.

North Carolinians are there making enzymes, working in our labs – but also working in a number of roles including Human Resources and Accounting, showing how the biobased industry creates science and non-science jobs alike.

We recently announced plans to create a new BioAgriculture research center in the Research Triangle Area, investing more than $36 million and creating 100 jobs.

In the Mid-Atlantic, we have been working hard with Senator Hagan to establish North Carolina as a leader in the biotech space, including biotechnology for the Nation's agriculture, health and industrial needs.

Across the South, states like Senator Boozman's hold tremendous potential for biobased manufacturing.

And in the Midwest, our biobased technology is making an impact in Senator Thune's home state, too. Working together with POET, we are increasing the efficiency of the corn ethanol production process, helping them use less corn and energy to make biofuel, and turn crop waste into advanced renewable fuel.

As a businessman, I want to thank you for your ambition. The Agricultural Act of 2014 is a driver that can push the biobased products industry through the doorstep of commercialization. I would like to talk a bit more about how to take the ambition a step further.

We are in the biobased manufacturing business. We make enzymes and microorganisms, Nature's technology. They perform powerful and essential tasks for society – and some of them come from unique and interesting places.

Back in World War II, our troops in the South Pacific were fighting heat, humidity, insects – and a strange blue-green fungus that ate all things cotton. It destroyed their uniforms. It destroyed their tents. It even destroyed the sandbags, ropes and canvas used to protect their most vital equipment.

A sample of this strange fungus was taken from a degrading tent in camp and sent off to a little-known research group at the US Army QuarterMaster Research and Development Center at Natick, Massachusetts. After extensive study, it was revealed this organism could produce enzymes – ones powerful enough to turn a tent into sugar.

Forty years later and after a decade of Novozymes research, powerful new enzymes developed from this original fungus are being used to make fuels and products from sources we never imagined, including the waste in your trash can.

We believe that story is a powerful example of how these new technologies can put our vision into action.

The root of the biobased manufacturing industry – and our biobased technology – is unlocking the power of renewable sources of carbon, the key ingredient in biobased products. Please forgive the scientist in me for about a minute.

As many of you know, carbon is the foundation for many of the materials in our world – from plastics to clothing, to chemicals and fuel. We can source carbon two ways: Renewable from plants and fossil from sources like oil. There are some challenges for the ways we traditionally source our carbon:

1. Fossil sources are getting more expensive and difficult to extract. They are also exposed to volatility on the global markets;
2. We export American dollars to import foreign crude – and therefore support economies abroad instead of our own; And
3. While the technology to drill, frack and mine is developing, the safety and environmental risks are omnipresent.

While humans use drilling, fracking and mining, Nature has a much simpler, efficient way: Photosynthesis.

Photosynthesis captures renewable carbon from the atmosphere and stores it in feedstocks as diverse as seaweed, algae, grasses, plants and trees. We can then use those feedstocks to make everything from fuel to diapers and paint.

As the world's demand for products grows, developing these new renewable feedstock supply chains will provide unique economic opportunities for the United States: We can grow the feedstock, make the product and ship it – all from the same community.

Our site in Senator Johanns' state is our most sophisticated enzyme manufacturing plant. Funded by $200 million in private investment, the plant is a regional and global provider of enzymes to turn biomass into biofuels.

Today we have 110 men and women working at that plant, many coming from local high schools or community college training programs. Local Nebraskans and Iowans are receiving the raw materials, making our enzymes, working in our labs and moving our product.

Like that example, our company's ambition is to see biobased manufacturing grow. That ambition has led us to make more than $500 million worth of investment across the United States.

We have more than 1,000 employees across North America, with 6,000 across the globe. Our US footprint runs from coast to coast, including locations in California, Iowa, Nebraska, South Dakota, Texas, North Carolina, Virginia and Wisconsin. Our enzyme and microbe technologies are at work in 700 products in 130 countries.

Between farmers, timber growers and trash collectors, we believe the US is the most productive producer of renewable feedstocks in the world. We also believe market-making policies like the Renewable Fuel Standard are critical to establishing these new feedstock supply chains.

These key drivers were important in our decision to invest heavily in the US – and to choose Blair, Nebraska, over China for our advanced manufacturing plant location.

Peder Holk Nielsen, our President and CEO, reiterated the importance of these drivers while attending a White House meeting with President Obama, Valerie Jarrett, Jeff Zients and CEOs of international companies in May 2014. The Administration wanted to hear from business leaders on how it could encourage more investment in the United States. Peter indicated that if policy remains stable we would be willing to invest significantly more.

Consequently, the lack of long-term support for well-thought out strategic decisions reflected in key policies, like the Farm Bill and Renewable Fuel Standard, creates tremendous uncertainty in the investment community.

Here is an example of how the future could look with policy stability: Chemtex, our partner in North Carolina – a renewable fuel company working with the swine industry – is designing an advanced renewable fuel plant. Their plan is to grow energy crops on fields currently sprayed with hog waste and convert the feedstock into fuel using our enzymes. Programs at the United States Department of Agriculture and funded in the Farm Bill, like the Biomass Crop Assistance Program, are important in establishing these new feedstock supply chains.

Congress wisely made strategic policy decisions to give the Nation more options to meet its product needs from domestic, renewable sources. This broader portfolio helps insulate America from global price shocks. It helps improve the environment. It also provides a powerful new economic growth engine for the US.

In addition to the Farm Bill, I know you are working to provide more stability with a tax credit for renewable chemical producers, helping them to commercialize and build in the United States.

But as with any new industry, there will be important lessons learned, some failures and unforeseen obstacles. It is critical the industry remains backed by Congress and their strategic decisions despite setbacks.

I want to be clear: This is not picking winners and losers. This is about making strategic decisions for the good of the country.

Every day at Novozymes across the country – from our researches in California to our plant workers in North Carolina – we are discovering and developing the critical technology and products to drive this new American industry.

Ten years ago, we could not imagine converting trash from the trash truck into fuel in an economic way. Today, you can go to Lawrenceville, Virginia, and watch the process happen.

With your support, we are confident that when we look back ten years from now, we will be amazed by what we have helped to create.

Thank you for the opportunity to testify today. I am happy to answer any questions the Committee might have. # # #