

Steen Riisgaard
BIO World Congress
George Washington Carver Acceptance Speech
Tuesday, May 1, 2012

Let me begin by thanking:

- Jim Greenwood, President and CEO;
- Brent Erickson, Executive Vice President, Industrial and Environmental;
- the Industrial and Environmental Section Governing Board and Carver selection committee;
- and the entire BIO team for this prestigious award.

One of the beauties of biotechnology is its freedom. Ideas, concepts and theories flow freely – and it's that freedom that brings out our best.

But even our field has a bedrock. And for us, that bedrock is innovation.

Some of the smartest innovators I know are in this room. And to be chosen by you to share this award with its other distinguished owners is among the greatest honors of my career. Thank you.

Now, I do not accept this award for me alone. If you know our company, you know one of our values is “connect to create.”

- Connecting with employees, in their region and across the globe.
- Connecting with customers, understanding their specific needs and crafting specific solutions to solve them.
- And connecting with you, working together to make biotechnology a practical and essential part of people's lives.

Getting here today took making that connection – and on behalf of that incredible group, I thank you, too.

Now, I have a confession: I was a bit of a rebellious youth.

In the 70s, I became active in environmental causes, focusing on pollution from industrial chemicals.

I studied biology at the university in Copenhagen. The topic of choice for the youth like me was pollution. At the time, pollution from the chemical industry was out of control.

So I took part in demonstrations, protests and events and even founded a local chapter of “Noah,” a Danish environmental group linked to Friends of the Earth.

Then genetic engineering came along – and we were excited.

Suddenly, it was possible to replace dirty chemistry with clean, natural biology. Using nature’s own resources, you could create a closed loop based on biodegradable materials. We could mirror nature’s system in the industrial environment – in fact, nature could *drive* the industrial environment.

So I went to work for industry, believing industry could drive this change.

Novozymes was born from that idea in 2000 when we were spun out of Novo Nordisk. Basically, we saw that the enzyme technology could be expanded much more if it was established as its own business.

Let me tell you, back then a lot of people had no idea what we were about.

In 2003, Jack Huttner, who was with Genencor at the time, and I were working together to get a white biotech track included in a EuropaBio meeting. Back then, only Novozymes, Genencor and a few academics were working in this space. All the focus was on red and green biotech.

But at this conference, for the first time ever, the organizers included a white biotech track.

You can imagine how nervous Jack and I were. Would anyone show up? Would they ‘get it’?

But the track was a hit: lots of people attended, and lots of people talked about it.

When it was over, I remember Jack saying this was a prime example of the Chinese war strategy: “Get something out of nothing.”

This was in many ways a beginning.

Today, we've come a long way and the world is starting to realize that it needs *us*.

The human race hit a milestone in 2011: There are now seven billion of us in the world. Seven billion men, women and children who need clean water, safe housing, healthy food, and fuel. It is a blessing that comes with a burden.

More people mean more pressure on food, water and energy supplies, which are already under pressure. We should also expect about 80 million new citizens of the world each year, adding to those pressures.

This is a threat facing world stability and security. As resources dry up, people will be displaced, forcing them to forage for fewer resources. More people on the move looking for – and competing for – fewer resources is a recipe for conflict.

Easing this pressure is the great challenge of our scientific age.

George Washington Carver started us on this path more than 100 years ago, using agriculture and science to produce the basic products people turn to every day: soap, medicine and cosmetics.

Our previous Carver award winners – Dr. Patrick Gruber, CEO of Gevo; Charles O. Holliday, Jr., Chairman of the Board of DuPont; Dr. Greg Stephanopoulos of MIT; and Feike Sijbesma of Royal DSM – picked up where Carver started.

And now I am happy that it's our turn to answer Carver's call.

Opportunity is everywhere – that is why biotechnology is so great. The world is not used to seeing it because the world is rooted in oil.

Our great challenge is to shift its thinking and root it in science – and *nature*.

Here's just one example.

American consumers are paying an average of \$3.91 a gallon to fuel their cars and trucks. Drivers in Amsterdam and Oslo are paying up to three times

more. By 2050, the globe will host 2.3 billion additional cars, 1.9 billion of these in developing countries, according to the International Energy Agency.

Fossil fuel will be part of the transportation mix for some time – but it does not need to be the *only* part. Biofuels can be part a choice for consumers. Secretary Vilsack talks about how biofuels reduce the price of a gallon of gas nearly a dollar. Say an average American gas tank holds 13 gallons – that’s \$13 extra dollars in a family’s pocket.

And just like biofuels can provide a choice and a savings, we can provide a choice and saving in other areas, too:

- Plastics and polymers based on renewable biomass
- Renewable chemicals instead of industrial ones
- Animal feed that promotes greater nutrient absorption, and reduces harmful by-products in animal waste

Biotechnology can separate plant matter in its building blocks so we make the best possible use of our resources. That’s food AND fuel AND feed AND fiber AND chemicals from the same plant.

That’s making more with less.

And that’s what the world needs.

And think about the jobs we are creating to do this: Jobs for farmers to grow food AND fuel. Jobs for people to bring the biomass to the refineries. Jobs building those biorefineries. And *careers* to run those biorefineries.

That’s thousands of people newly engaged in the economy because of the power of science and innovation, all because we bound the world together with an agent other than oil.

To me, the Carver Award is recognition of the results we’ve achieved so far in industrial biotech. And it is a mandate to seize the great opportunities ahead.

In that sense, I believe the journey of industrial biotech has only just begun. It is a journey that will move biotech out of the laboratory and onto the table of global economy, global health, global welfare. The world’s economies need us.

I am proud to be taking this journey with you. And I thank you once again, on behalf of Novozymes and all of you, for this award.

#