

**Farm Foundation
Transition to a Bioeconomy Conference
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“Impacts and Issues for Rural Development”**

Good morning. It is, as always, a pleasure to participate in one of these discussions. The Farm Foundation over the years has done as much as anyone ... and more than most ... to stimulate discussion on issues and opportunities facing agriculture and rural America. The bioeconomy is in the front rank of such questions. It's good to be here. Thank you for inviting me.

I often begin the discussion of biofuels and the bioeconomy, and rural America in general, by characterizing myself as an incurable optimist. The potential of biofuels, biobased products, the related investment opportunities in rural America is enormous.

So I want to stress the word opportunity. Obviously I'm taking a long view here. For the last couple of weeks, the financial upheaval in credit markets and its impact on stock markets around the world has been all the news. That is an important story. I'm not minimizing it.

But when all is said and done, the key underlying trend in the world economy has not changed. Since the fall of the Berlin Wall, almost three billion people have joined the world market system. This is the greatest explosion of economic freedom in history.

Our current difficulties, serious as they are, do not change the fact that we have enjoyed several decades of extraordinary economic growth ... and despite temporary bumps in the road there is no end in sight.

India, China, and other emerging economies are very rapidly bringing hundreds of millions of people into the global middle class. That is a good thing ... and it is going to continue.

The rise of the bioeconomy is just part of this picture ... but it is an important part. Greater wealth translates into greater demand for food and energy. Commodities prices are being revalued across the board. Farm prices, farm exports, and farm equity are at or near record highs.

This is an historic opportunity for agricultural producers ... and because much of the infrastructure for the biobased economy will be rural, it is an historic opportunity for rural communities as a whole ...

not only for farmers and not only in the United States, but around the world. We need to make policy with an eye on the long term, and we ought to approach the future with confidence.

We now live in a world in which corn ethanol is cheaper than oil. Cost-competitive cellulosic ethanol will be a profound game changer when it arrives.

We are living in a world in which corn yields, according to the Field to Market Sustainability Alliance, may reach 300 bushels an acre by 2030, with similar gains in other crops due mainly to better genetics.

It's a world in which surging demand is creating new opportunities, not just for energy, but for a wide variety of biobased products.

There are, however, a number of things we need to get right to reap the benefits. The biggest issue, in my view, is consistency of purpose. We have had false starts before. It is essential that we stay on track.

I will tread lightly here because there is an election in three weeks and I can't speak for the next Administration.

That said, we have made great progress, especially on renewable energy, over the last eight years. Since 2000, ethanol production is up more than 500% ... installed wind capacity over 700% ... shipments of solar units over 1000%. The United States leads the world in many renewable energy technologies, including bringing cellulosic ethanol to market.

Renewable energy now accounts for more than 10% of the energy produced in the United States and more than 7% of the energy consumed. The 3% differential, of course, is mostly imported oil.

However you slice the numbers, this is remarkable progress in a relatively short period of time. It is appropriate, in the closing months of this Administration, to acknowledge the leadership and policy consistency of President Bush in bringing this about. We've made more gains and have become more committed than at any other time in the past 30-35 years.

But as we look ahead, it is even more important to emphasize that this effort must be sustained. We have moved the renewable energy sector to

the point of liftoff. Growth rates are robust but we are still in the early stages of deployment. There are still challenges.

A week ago, USDA hosted an event in which we rolled out the National Biomass Action Plan. That is an interagency document which lays out a comprehensive government-wide strategy regarding sustainable production of biofuels ... feedstock logistics ... conversion technologies ... distribution ... and end use considerations such as overcoming the blend wall barrier.

The Action Plan is the product of two years of intensive work across the government. It is online, and I urge you to read it if you've not done so already. It is tangible. It is concrete. It is achievable ... and whoever wins in November, it is a strong foundation for continued progress. It is also a remarkable testament to Federal interagency collaboration.

But we have to get the details right. At the end of the Second World War, we averaged 40 bushels an acre for corn. We're now averaging over 150. As I mentioned a minute ago, we may double that over the

next twenty years. Most of that gain is attributable to better genetics and aggressive use of spatial technologies like GPS.

Most of the world, however, still lags far behind the U.S. in deploying agricultural technologies, GMO's and modern ag infrastructure. The growth potential, both in the U.S. and globally, is very large, provided we keep our eyes on the prize and make the necessary investments.

We're going to need that growth to meet growing demand for both food and fuel. But these are disruptive technologies. They are capable of generating a backlash from governments and producer groups and institutions that find old policies and old business models threatened by change.

We see this for example in attempts in various nations to block GMO's for political, not scientific reasons. Countries that do that will be left behind. That is their choice ... but what should concern us is the attempt through a variety of backdoor regulatory initiatives to inhibit the spread of high-productivity technologies in other countries, including the U.S.

We see something similar in the emerging debate on sustainability. It is astonishing, at this late stage in the debate, that so many forecasts, including official forecasts, are predicated on static production models.

This static view then percolates into the regulatory machinery, where there is a threat of sustainability being translated into a web of rules designed to inhibit the introduction of new technologies.

The reality is that U.S. producers are the world's best conservationists. The productivity gains of the last two decades are matched by significant reductions in chemical inputs, increased drought tolerance, and reduced erosion. On the output side, we see continuing iterative productivity gains from improvements in genetics and conversion technologies.

Sustainability therefore needs to be understood in a dynamic, not a static fashion. It is essential that we not let arbitrary benchmarks based on worst-case modeling assumptions prejudice the debate.

Finally, we must continue to be willing to accept the disciplines of the market. That isn't always easy.

Ultimately, accepting markets means accepting the inevitability of what Joseph Schumpeter so aptly called creative destruction ... the necessity of old business models being challenged and overthrown by the new.

For rural America, this means stepping up to the opportunity and building an entrepreneurial culture. An ethanol plant isn't just corn and enzymes ... or soon to come, switchgrass and enzymes. It's steel and concrete ... IT contracts ... banking and finance ... trucking and railroads ... insurance ... workforce training ... distribution systems ... new infrastructure ... more jobs in town, more kids in school, and more pizzas delivered on Saturday night.

Each of these is an opportunity for business development and job growth, if rural entrepreneurs and traditional rural lenders will step up to the plate. The opportunity is enormous. I can't put a dollar figure on it, but the effect is already large, and we are just beginning.

Rural America holds its future in its own hands. Renewable energy is the biggest new opportunity for wealth creation in rural America in our lifetimes. This is an opportunity we can't afford to miss. Thank you.

