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Thomas C. Dorr Under Secretary for Rural Development Luncheon Remarks

Good morning. It is a distinct pleasure to be here with you today.

Over the last several years, I have addressed a number of international gatherings on renewable energy. This of course reflects the surging demand for renewables around the world in response to both rising oil prices and increasing concerns about greenhouse gas emissions.

But this is the first opportunity I have had to discuss biofuels in a bilateral U.S.-Brazilian context ... and I hasten to add I am very glad to have the opportunity before my term of service ends a few months from now. I thank the Brazil-Texas Chamber for this timely conference and their invitation.

Brazil and the United States, of course, are by a wide margin the world leaders in biofuels. Together we produce almost 90 percent of the world's

ethanol [actual 2007 figure: 87%]. Brazil is the pioneer and the pacesetter in sugarcane based ethanol. The U.S. leads in corn based ethanol and, looking ahead, in bringing next generation feedstocks ... non-food feedstocks ... into production.

Our nations therefore share a common appreciation of the strategic potential of biofuels for national and energy security.

I believe we also both recognize, over the long run, the importance of biofuels for diversifying away from oil and reducing our carbon footprint.

And as major agricultural nations, we both recognize the importance of sustainable production methods as agriculture transitions into a future in which it will be a primary producer of fuel as well as maintaining its traditional roles of food, feed, and fiber.

So, in that spirit, let me say that in an environment in which some interest groups ... and some countries ... seem to be looking for excuses to resist the biofuels revolution, it is refreshing to spend this time with friends from the south who ... like us ... recognize the enormous opportunity that biofuels offer to both our nations and the world.

Let me say also that I am delighted that this meeting is in Texas. I didn't come to give a political speech and, while there is an election in two weeks, President Bush isn't on the ballot.

So while I am here I would like to take the opportunity to acknowledge the vision and leadership that President Bush has provided for renewable energy, including but not limited to biofuels, over the last eight years.

I first met then-Governor Bush back in 1998, before he was running for President. Even at that time, George Bush was talking about the need to diversify away from oil. This isn't a new issue for him.

The simple truth is ... thanks in substantial part to President Bush's leadership ... more has been accomplished in the U.S. on renewable energy in the last eight years than in the previous 30 years combined.

In 2000, the United States produced 1.6 billion gallons of ethanol. This year we're going to produce over 9 billion, and the new RFS will drive us to 36 billion by 2022.

In 2000, we produced 2 million gallons of biodiesel. Last year we produced 450 million.

Since 2000, installed wind capacity in the United States has increased over 700%, and shipments of photovoltaic units is up more than tenfold.

The United States has led the world the last three years running in new installed wind capacity. Texas is the nation's leading wind energy state thanks to a Renewable Portfolio Standard signed by then-Governor Bush in 1999. We lead the world in solar thermal, geothermal, and waste to energy.

This is a remarkable record of progress when you stop to reflect on it, and it has been a privilege for me to be a part of President Bush's team toward this end.

I don't know who is going to win in November ... but I do know that the next President will inherit a renewable energy program, including

biofuels, that is already a world leader ... and more importantly, one that is poised for continued rapid growth in the years ahead.

Sustaining that progress, however, requires that we get the details right. Two weeks ago, USDA with DOE hosted the rollout of the National Biomass Action Plan. That is a 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, by the way, a remarkable testament to federal interagency collaboration – something President Bush insisted on. Those of you who have been involved in that sort of exercise will understand how difficult even simple things become when you have nearly a dozen federal agencies "cooperating" at cross purposes. The Action Plan 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.

But again, we have to get the details right. There are many challenges. Some of them are formidable. We must make significant decisions and undertake investments in an environment of rapid technological change. There is uncertainty and risk. There are penalties for being wrong. We face also a growing backlash arising from the fact that large-scale biofuels development represents disruptive change. It is clearly capable of eliciting opposition from a wide variety of groups that find established policies and business models threatened by change. These include producer groups, some environmental groups, even some governments.

This is already happening.

We see this opposition, for example, in ongoing efforts in various nations to block GMO's for reasons which do not appear to be based on science. Countries that choose that path will be left behind technically and economically. 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 not just in other countries, but here in the U.S.

We see something similar in the food vs. fuel debate and in the emerging debate on sustainability. It is astonishing, for example, especially after the remarkable agricultural productivity gains of recent decades, that so many forecasts ... including official forecasts ... are predicated on static production models and status-quo modeling assumptions.

And it is potentially destructive when this static view percolates into the regulatory machinery, where many critics seem eager to translate a professed concern for sustainability into a web of rules designed to inhibit the introduction of new technologies. This is a danger that we must avoid.

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

The discussion on sustainability ought not to focus on hypothetical worst-case scenarios. On the contrary -- the discussion needs to recognize that modern agriculture is characterized by ongoing productivity gains.

Straight-line extrapolations of status quo technology tell us very little, and nothing useful. Agriculture is dynamic. The real discussion is about iterative technology driven productivity gains.

Taking corn as an example, consider that the United States has about 20% of the world's total of land devoted to the production of corn ... yet the U.S. produces 40% of the world's harvest. A handful of countries approach U.S. levels of productivity, but most do not. China has 18% of the world's corn acreage and produces 17% of the harvest.

World corn production could approximately double ... <u>on the existing</u> <u>acreage base</u> ... if the current U.S. productivity level became the norm. That should be the goal. This is a question of technology transfer and investment, not of an expanded acreage base.

Nor should anyone suppose that current production levels, even in the U.S. are a ceiling. At the end of the Second World War, U.S. producers

averaged 40 bushels an acre. Today we average about 155. But we again are still in the early stages of the genomics revolution.

The Farm to Market Sustainability Alliance is a recently formed privatesector group devoted to studying agricultural sustainability issues. Farm to Market estimates that we could reach 290-300 bushels an acre by 2030. The authors of that analysis believe this is a conservative estimate.

This is not wishful thinking. It is based on an assessment of the potential from full deployment of current technologies, primarily better genetics supported by the aggressive use of spatial technologies like GPS/GIS. This estimate of course is not a guarantee, but it <u>is</u> a serious, credible assessment by technology leaders in the field.

If you apply those figures globally, the raw multiples imply a potential, admittedly theoretical quadrupling of yield <u>on the existing acreage</u>.

The point is that it is justified to assume that we don't need the mass conversion of marginal farmground into intensive corn production ... or in the Brazilian case, to clear cut the Amazonian rain forest. We need to get 21st century technology into the hands of farmers to reap the productivity gains that are within our reach but also into the minds of policymakers. As the economists say, these are "non-trivial changes." They are game changers. This is an extraordinary opportunity.

The sustainability debate has a similar logic. No one is more committed to sustainability than American farmers.

Over the last two decades, from 1987-2007, U.S. corn yields increased 30% per acre. In the same period, energy input per bushel, including nitrogen, has been reduced 30%. Soil erosion has been sharply reduced. Greenhouse gas emissions have been cut 10% per bushel.

Again, these technologies are dynamic. I use corn as an example, but one can perform the analysis for other crops as well. Simply put, we <u>can</u> produce more ... sustainably ... if we invest in the technology and allow markets to work. Why? We have done this sustainably for at least 100 years. I see no reason why we won't continue. Finally, it is essential that we keep our eyes on the prize ... that we do not lose sight of the opportunities, that we maintain consistency of purpose: that being energy security and national security.

The United States is building out to around 15 billion gallons of corn ethanol, which is the equivalent of E10 nationally. But that's just a start.

When cellulosic ethanol becomes cost competitive, the Billion Ton Study, which was released in 2005, estimated that the United States could supply 30% of our transportation fuel needs with biofuels while still meeting our traditional food, feed, and export demands.

New and genetically modified feedstocks may boost that potential significantly. Any way you measure it, that's a lot of oil displaced. This is a critical national security objective. It will enhance our economic and energy security. It is good for the environment.

And the bottom line is it is great for American producers and consumers. Biofuels are already paying significant dividends. Earlier this year USDA and DOE estimated that biofuels are reducing U.S. gasoline prices by an estimated 20-35 cents per gallon.

There are other credible private studies now under review at DOE that estimate that E10 may reduce consumer costs by anywhere from 39-62 cents per gallon. If we overcome the blend wall barrier, E20 at the pump could represent an estimated savings of up to 86 cents per gallon.

So this is an extraordinary opportunity ... an opportunity to diversify away from oil ... an opportunity to shift to cleaner, home-grown fuels ... an opportunity for new industries, new jobs, and new wealth creation in rural communities, not just in the United States but around the world. So it is my sincere hope that we continue to maintain this consistency of purpose.

Thank you.