

**Committee on Agriculture, Nutrition and Forestry
United States Senate**

**Hearing on
The Expanding Role of Biofuels for America**

**Written Testimony of
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Good afternoon Chairman Harkin. My name is Bill Couser and I am a 4th generation farmer from Nevada, Iowa. Together with my wife Nancy, I farm roughly 5000 acres, raise seed corn for Monsanto, and feed out 4000 to 5000 head of cattle. Our feedlot is involved in an Alternative Technology Project with Iowa Department of Natural Resources and U.S. EPA to demonstrate methods to reduce feedlot run-off. I am a current board member and past president of the Iowa Renewable Fuels Association and I also serve on the board of Lincolnway Energy, a 50 million gallon ethanol plant in Nevada, Iowa. As you can imagine, I have thought about and participated in the evolving biofuels industry from just about every angle possible.

I want to thank you for holding this hearing and for your outstanding leadership in defending agriculture and biofuels. I am pleased to be able to offer some insights into the challenges facing farmers and biofuels producers. Quite frankly, we believe some of the decisions made in the next 6 months will set the tone for agriculture and biofuels for the next decade – and we are nervous.

Whether it's indirect land use change in the Renewable Fuels Standard 2 (RFS2) rule, the debate over E15, or conflicting views of how cellulosic feedstocks will change our landscape, those of us living and breathing this industry day in and day out feel that some in Washington, DC are prisoners of old "data sets" that fail to grasp the rapid evolution of farming and biofuels production and that others hide behind unproven scientific "theories" to push what is really an anti-agriculture agenda.

We hear about being "cautious" toward expanding the production and use of biofuels because we don't want any unintended consequences. That's fair to a point. But what we see in Washington, DC today is "over caution" – not supported by sound science or the latest data – that leads to the very unintended consequences biofuels opponents claim they want to avoid. For example, the EPA is using flawed models and inaccurate data to conclude that biofuels production here leads to the burning down of the rain forest in Brazil. The corresponding rules and regulations stemming from this conclusion would create high barriers to the growth of renewable fuels production in the U.S.

However, better models and data have shown this indirect land use change theory to be unsupported. Therefore, the “caution” of the EPA will reduce the amount of low carbon ethanol replacing gasoline produced from tar sands; resulting in more carbon in the atmosphere, not less. As a proponent of the farmer’s ability to both feed and fuel the world, this type of policy making is frustrating to say the least.

Let me expand on this from my personal perspective.

As a seed corn grower for Monsanto I have witnessed first hand the wonderful improvements in corn and soybean genetics over the last few years. The simple fact is that yields are not only increasing, they are increasing at an increasing rate. Coupled with improved farming practices, I have no trouble believing Monsanto’s national average projection of 300 bushels per acre corn by 2030. Iowa will likely hit that mark much sooner. And we will do it with fewer inputs and less impact on soil and water than today. Quite frankly, the Senate Agriculture Committee shouldn’t be worried about the so-called food vs. fuel debate; you ought to be worried about the arbitrary 15 billion gallon cap on corn ethanol in the renewable fuels standard. With 300 bushel per acre corn, we either turn it into ethanol and other bio-products or we’ll have huge surpluses, cheap prices and a farm program costing billions and billions of dollars again.

As a corn and soybean grower, I can tell you that it’s not just the natural stewardship instinct of a farmer that is driving better farm practices like no-till. It is economics as well. Diesel costs money. Nitrogen costs money. Herbicide costs money. Farmers are increasingly using technology – in their seeds and in their equipment – to reduce these costs, which also improves the environmental profile of crops we produce.

Farmers are excited about the new income opportunities that cellulosic ethanol and other next generation biofuels present. Farming is like any other business – you want to maximize profits within the context of being a good neighbor and being able to hand down to the next generation a tradition to be proud of.

Therefore, we are eager to find ways to sustainably and profitably produce biomass for fuel and power in addition to our current crops. But the enthusiasm for this potential doesn’t seem to be matched by government attention to the huge hurdles standing in our way.

Harvesting biomass will take new, very expensive equipment that might be out of reach for most farmers. Storing biomass in the necessary quantities and under proper conditions is a factor most folks seem to brush over. And don’t forget, we’re supposed to store this biomass in addition to the 300 bushel per acre corn. Harvesting and storage of biomass will create seasonal and long term farm employment challenges that typical Midwestern agriculture has not faced before. Efficient transportation of biomass may require us to rethink how we design and regulate farm-to-market roads.

I don’t want to be seen as “negative” or to use my earlier phrase, “over cautious,” but the best biomass seed in the world and the best enzymatic or thermal-chemical conversion process won’t matter if the biomass itself cannot be efficiently and cost-effectively taken from the field, stored,

and eventually delivered to the biorefinery. I understand these challenges better than most because we currently bale about 5000 big round bales per year of corn stocks and soybean stubble for feed and bedding. Further, we are working in cooperation with John Deere and Vermeer Manufacturing to develop experimental equipment to harvest corn cobs and stover in a single pass along with the corn kernel. The challenge is that farmers do not want to delay or slow down the combine during key harvest periods in order to collect the less valuable biomass. While progress has been made, this remains a chief concern. In addition, farmers and equipments providers simply do not know today what end users need as a final product. Do they want the whole cob or stock? Or do they prefer pellets or partially processed biomass? All options create different equipment, storage and transportation challenges for the farmer for what today is considered a low value commodity.

There also seem to be some folks in DC who sincerely believe corn ethanol will fade away to be replaced with cellulosic ethanol. I believe nothing is further from the truth. We have come through a bruising battle over so-called “food vs. fuel.” While the facts are clear that ethanol did not drive up food prices, opponents of ethanol scared a lot of people. Let me remind you that only the starch of the corn kernel is used for ethanol. The rest goes back into the feed market as co-products like distillers grains. Just imagine the “food vs. fuel” argument if vast areas of highly productive Iowa corn ground were planted to perennial energy crops that produce no food or feed at all. This may not be true for all areas of the country, but it is certainly true for Iowa.

Cellulosic ethanol will be a great addition to existing corn ethanol plants. Probably starting with corn cobs and stover and eventually adding some dedicated energy crops, existing ethanol plants are the logical place to convert biomass into fuel and other products. Once the cellulose is broken down into sugars, the back two-thirds of existing ethanol plants can be used to complete the conversion. Infrastructure like rail, storage and buildings are already in place. Therefore, spreading the fixed costs over both corn and cellulosic ethanol production will ease the startup burden on cellulosic conversion.

As the founding president of the locally-owned Lincolnway Energy ethanol refinery, I can also tell you that many folks writing these regulations don't have a handle on the rapid improvements taking place in the dry mill ethanol industry. According to one analysis conducted by Christianson & Associates, between just 2004 and 2007, ethanol plants producing dried distillers:

- Reduced BTUs by 4,700 per gallon – or nearly 14%.
- Reduced electricity use by nearly 15% per gallon.

In addition, ethanol yield per bushel of corn has gone up and water use per gallon of ethanol has gone down. All of the input arrows are in the environmentally friendly direction. The same cannot be said for petroleum products.

Lincolnway Energy is one of many ethanol plants adopting new process technologies to create marketplace opportunities while, at the same time, reducing our carbon footprint. We have installed equipment that removes non-food grade corn oil from our syrup stream that otherwise ends up as part of our distillers grains. The result is a new, valuable co-product that can be used as a feedstock for biodiesel production. The resulting distiller grains provide ration flexibility for a wider variety of livestock.

Corn oil extraction should give us a carbon credit as a co-product. However, it also improves the energy efficiency of the plant by, among other things, reducing the energy use as we no longer have to dry the corn oil as a part of the distillers grains. This type of innovation is happening so quickly the regulators in DC and their models can't keep up. Yet, the ethanol industry is on the verge of being held back by these outdated models.

I mentioned livestock a second ago. I can't end without expanding on that a little bit as I think of myself as a cattleman. Ethanol co-products, like distillers grains, are a huge part of our feed ration. Their use is growing and helping bring the cattle industry back to Iowa. But even here the folks in DC get it wrong. They want to give ethanol a carbon credit based on distillers grains replacing corn on a pound-for-pound basis. This is not reality. With the starch gone, distillers grains is a high protein feed ration. On a protein basis, I back out more than a pound of corn and soybean meal when I add distillers grains. I can make up the difference by adding roughage like soybean straw. Just getting the true feed value of distillers grains right goes a long ways toward correcting ethanol's carbon footprint.

Finally, I'm also a consumer. I drive a big truck, and believe me, it is used for work. I need the opportunity to put E15 into my truck. All this talk today about next generation fuels and cellulosic feedstocks doesn't matter if there's nowhere to use the fuel. You know about the blend wall – it's time to act. EPA needs to allow E15 for all vehicles. And that is just the first step. We need to enact your bill Senator Harkin, S. 1672, that will require more flexible fuel vehicles (FFVs) sold in the U.S. and more blender pumps to fuel them. Without swift and aggressive action on E15 and FFVs, the discussion of next generation fuels is, in fact, meaningless.

The next six months in DC may very well determine my livelihood for the next ten years – and I am nervous. I urge you to work with regulators to prevent “over caution” from unnecessarily restraining the role biofuels can play in not just reducing carbon emissions, but also in creating green collar jobs, reducing our dependence on foreign oil and boosting farm opportunities. Again, thank you for holding this hearing and for listening to Iowans who are actually engaged in agriculture and biofuels production. I look forward to answering any questions you may have.