

**Select Committee on Energy Independence and Global Warming**

*“Global Warming’s Growing Concerns:  
Impacts on Agriculture and Forestry”*

June 18, 2009

9:30 am

2175 Rayburn House Office Building

**Witness Questions for the record**

### **Questions for Mr. West (The Fertilizer Institute)**

1. In the last decade, approximately half of the nitrogen industry has shut down as a result of high natural gas prices and foreign competition. American farmers import 55% of their nitrogen as a result of this leakage. Do you see this trend continuing? How will this reliance on foreign sources of fertilizer affect American agriculture?
2. In your written testimony, you discussed how fuel switching threatens the nitrogen industry. What other costs would a cap and tax system create for the industry? Considering that fertilizer is traded in a global commodity market, how would these additional costs impact the domestic fertilizer's ability to stay competitive?
3. We have heard a lot of discussion on the need for energy independence from foreign oil. American farmers import over 55% of our nitrogen. How will cap and trade impact our reliance on foreign sources for American food production and what does this mean to our food security in the U.S.?

### **Questions for Mr. Troxel (Black Hills Forest)**

1. What are the consequences of excluding federally-harvested timber from the renewable fuel standard as it is currently defined by the American Climate and Energy Security (ACES) Act? Without inclusion of federal biomass in an RFS, what would happen with the thinned biomass from national forests?
2. Do you support the carbon emissions reductions certification process set forth in the ACES Act? Does the EPA have the necessary expertise to measure certifiable greenhouse gas reductions that result from forest management techniques?
3. You state, “reducing the number and severity of wildfires may be the single most important short-term action we can take to lower greenhouse gas emissions.” How do proper forest management techniques, specifically thinning crowded stands, reduce the possibility of wildfires? Should forest management be a part of our portfolio to mitigate carbon emissions?
4. How good is the scientific data on how much carbon is sequestered by forests, by the various types of forests, and on how changes in forestation affect the global climate?
5. A 2008 article in *Science Journal* discussed a study that suggested that the large increase in bio-fuels will have negative greenhouse gas impacts worldwide when incorporating land-use changes, particularly from deforestation to plant more crop land. What role do you think bio-fuel mandates play in rainforest degradation? Do you support inclusion of land-use changes in assessing life-cycle greenhouse gas emissions of bio-fuels?
6. What methods are there to contain the pine beetle epidemic in trees?

### **Questions for Dr. Lehmann (Cornell)**

1. Do you support EPA's accounting for international land-use changes in calculating lifecycle greenhouse gas emissions for biofuels?
2. How energy intensive is the pyrolysis process? How would significant increases in energy prices change the cost structure of biochar?
3. Is your process commercially deployable at this time? What steps are necessary to take advantage of using biochar in the farming process?
4. You note that biochar can demonstrate additionality due to the lack of existing global deployment of the technology and further highlight that sequestration can be measured and verified. How would you suggest verifying the amount of biochar in a field? What process would be most effective and who would pay to verify the additionality and measured emissions reductions resulting from using biochar?
5. How much additional cost per acre would be required to utilize biochar in farming techniques? What economies of scale exist with pyrolysis that could drive down that cost?
6. In your testimony you wrote, "The distributed nature of biochar systems and the potential for variability between systems create significant opportunities for sustainability, but also hurdles to widespread adoption, regulation, and financial viability." What are the existing hurdles and what steps can be taken to reduce those hurdles?
7. Are there any long-term issues or concerns with biochar remaining in the Earth's soils for hundreds of years?

### **Questions for Ms. Cooley (Pacific Institute)**

1. How would significant increases for farming inputs (for example, fuel and fertilizer costs) affect profitability of farms?
2. Given that climate change uniquely affects different parts of the US, shouldn't each region approach this issue based on its experiences, rather than involve the federal government, which may implement a plan of action that could help one sector of the US to the detriment of another?
3. You propose a lot of programmatic suggestions for the federal government without addressing the financial aspects of your suggestions. What sort of revenue mechanisms are necessary to fund your programs?
4. How do you see technology assisting adaptation efforts to climate change? For example, are you aware of any projects being developed right now that will help manage water supply and increase crop resiliency?
5. What responsibilities do the state governments have to designate flood plans? Could the state governments require certain high risk properties to have flood insurance?
6. Isn't it prudent for farmers to buy flood insurance to protect their crops?
7. Increasing technology has long increased the productivity of our agriculture industry. Won't technology continue to improve the resiliency of our crops?

### **Questions for Mr. Hatfield (USDA)**

1. In your summary, you note agriculture's long-standing ability to adapt to the variability caused by a changing climate. Is there any reason to assume that we will not be able to adapt to future climate change?
2. Increasing technology has long increased the productivity of our agriculture industry. Won't technology continue to improve the resiliency of our crops?