

What are Models Saying about the Supply of Bioenergy: Regionally and Temporally: Discussion

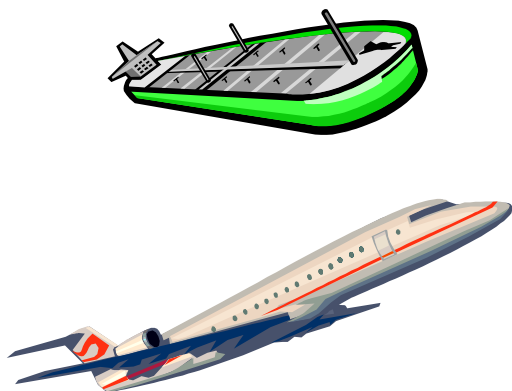
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Energy



Climate Adaptation



GHG Mitigation

Presented at

Climate Change Effects

Forestry and Agriculture Greenhouse Gas Modeling Forum

Workshop # 6: Forestry, Agriculture & Climate Change

Modeling to Support Policy Analyses

September 26-29, 2011, Shepherdstown, West Virginia

My List

1. The threat of diminished technological progress
2. Resource considerations -Land and irrigation water
3. International leakage modeling
4. Future of cellulosic
5. Food/fuel/carbon offset/adaptation tradeoffs
6. Beyond farm supply chain and transactions costs
7. Stickiness of land use change
8. Climate change influences
9. Full CO₂eq accounting
10. International policy and response
11. One size fits all bioenergy crop data

Nature of my discussion

Here I sit making this up with 40% the papers from the session

Plus power points only so what will they say?

So I punt

I will make a list up of major modeling challenges then will listen and react

I am trying not be be paper #6 so here is the list

My List

1. The threat of diminished technological progress
 - We have seen evidence this from Justin
 - Some explanations from my work climate change and co2 effects
 - Diversion of resources to food and environmental efforts
 - Reduced effective funding

2. Resource considerations
 - Land and irrigation water
 - Limited availability (people have done on land but not on water)
 - Billion ton study and TX
 - Need to consider limits to use and ground vs surface

My List

3. International leakage modeling

- We have seen evidence this from Farzad
- Large changes depending on modeling assumptions and disaggregation
- Model must minimally cover land use change with portrayal of
 - cropping with some geography that informs on suitable zones
 - Grasslands and livestock
 - Forest for deforestation and maybe afforestation

4. Future of cellulosic

- What do we do
- What is realistic

My List

5. Food/fuel/carbon offset/adaptation tradeoffs
 - All use common land and water resources plus high potential places
 - Clear tradeoffs

6. Beyond farm supply chain and transactions costs
 - Storage and coping with seasonality
 - Hauling to central collection point and possible distant use point (particularly for electricity)
 - Spoilage
 - Slagging and foreign matter discounts
 - Dealing with contracting under tech change with perennials
 - Assembling sellers and verifying claims

My List

7. Stickiness of land use change
 - Income regimes
 - Entrenched production systems
8. Climate change influences
 - Disturbances
9. Full CO₂eq accounting
10. International policy and response
 - Bioenergy policy
 - Other ag and consumption developments
11. One size fits all bioenergy crop data
 - A few switchgrass yields go everywhere

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