



INTERNATIONAL FOOD POLICY  
RESEARCH INSTITUTE

Supported by the CGIAR

[www.ifpri.org](http://www.ifpri.org)

# **Comments on: Biofuels & the Changing Nature of Agricultural Demand**

**Siwa Msangi**

Global Change Research Theme

Environment & Production Technology Division

FSE Global Food Policy and Food Security Symposium

Encina Hall, Stanford University

11 April 2012

---

# Linkage between biofuels and prices

**There is a very relevant linkage that Roz points out – which makes the price of oil a critical market driver**

- The fast growth in US ethanol production before 2008 may have had less to do with tax credits than the high price of oil which made huge returns on investment (Babcock, 2011)
- The effects that high oil prices have on economy-wide growth and demand reinforce the ups-and-downs of food and fuel demand shifts – which could underlie future volatility
- Price rises can be positive for farmers – as long as they are gradual and sustained ( to allow supply response) – rather than short spikes, which really hurt consumers
- Although ag markets do have much less influence on energy markets than vice-versa – there are notable impacts – the high sugar prices has caused Brazil to produce less ethanol, which the US now exports

# Multiple use of biofuel feedstocks is key

- This flexibility between food or fuel uses, is what has made Brazil's sector unique and highly productive
  - The lack of by-products or alternative food uses is the big drawback of jatropha (among others) – less options for the farmer in case biofuel demand falls (w/oil prices)
- EcoEnergy in Tanzania has adopted a food-first approach, where they focus on producing as much sugar as they can (since they know demand is going up) – whatever ethanol they can make is extra \$\$\$
  - Edible oil crops could offer the same opportunity if one focuses on increasing productivity (which lowers costs) – which palm oil has achieved

# The problem with jatropha

Although many are excited about the hardiness of jatropha under adverse conditions & its non-food nature – it has huge drawbacks

- Current yields of rainfed jatropha are too low to be profitable for a large-scale sector (high labor costs are an extra drawback)
- *Jatropha curcas* has undergone zero genetic improvement (though lots of studies on agronomic practices) – needs 10-15 yrs of proper R&D
- The fact that the crush cannot be eaten as feed, like other oil cakes is a big minus (despite other claims)
- Transfers a lot of risk onto small farmers – give them a low-yielding perennial with no food/feed value and no existing value chain or reliable market demand

# What are biofuels *for*? (policy objectives)

- For some countries (US) the policy objective is to produce lots of biofuels (which favors certain feedstocks)
- For some – the objective is to avoid GHG emissions by lowering the carbon intensity of the fuel pool (EU, California LCFS)
- For some – reducing fossil fuel imports is important
- For some – increasing energy security/independence
- These are all different, and a policy which tries to meet one may not necessarily meet the others
- An ongoing study at UC Davis is trying to sort through these for the US – and to evaluate the tradeoffs

# Final Thoughts

- Biofuels operations work best when:
  - Feedstock production can be of high productivity – which lowers costs and competes less with other land uses
  - There is dual/multiple uses of products (esp 1<sup>st</sup> gen)
  - There is a well-functioning value chain with opportunities for vertical integration
- Those countries who don't meet these conditions should re-consider their priorities & assess tradeoffs
- Energy problems in Africa go beyond transport fuels – a more comprehensive (even regionally-based) strategy might be better to address urban/rural needs
- Where good agribusiness opportunities exists – take it!

**THANK YOU!**