

Biofuels, Climate Change & Trade:  
“It’s the feedstock... stupid!”

Gao Pronove  
Earth Council Geneva  
GHG Management Institute  
Eco Market Farms

# The Great Biofuels Story

- Reduce oil imports
- Ensure low energy costs & economic growth
- Promote farms & rural development
- Alleviate poverty
- Fight global climate change

“It’s the feedstock... stupid”



## US Corn

## *Big but Controversial*

- Oil imports still high
- Impact on energy prices minimal
- Increased farm revenue, created new wealth through ethanol plant ownership
- Minimal dent on GHG footprint

# Brazilian Sugarcane

## *Success*

- Reduced oil imports
- Local impact on energy prices
- Increased plant owners revenue, created employment
- Kept Brazil's GHG emissions low
- Environmental concerns

# Cassava

## *High Potential*

- Reduce oil imports - higher ethanol yield per hectare
- Lower production cost than corn, can complement sugar
- Easy to farm, low inputs, small farms
- Better GHG footprint than corn
- **Asia's ethanol and perhaps Central America's?**

# Feedstock Comparison

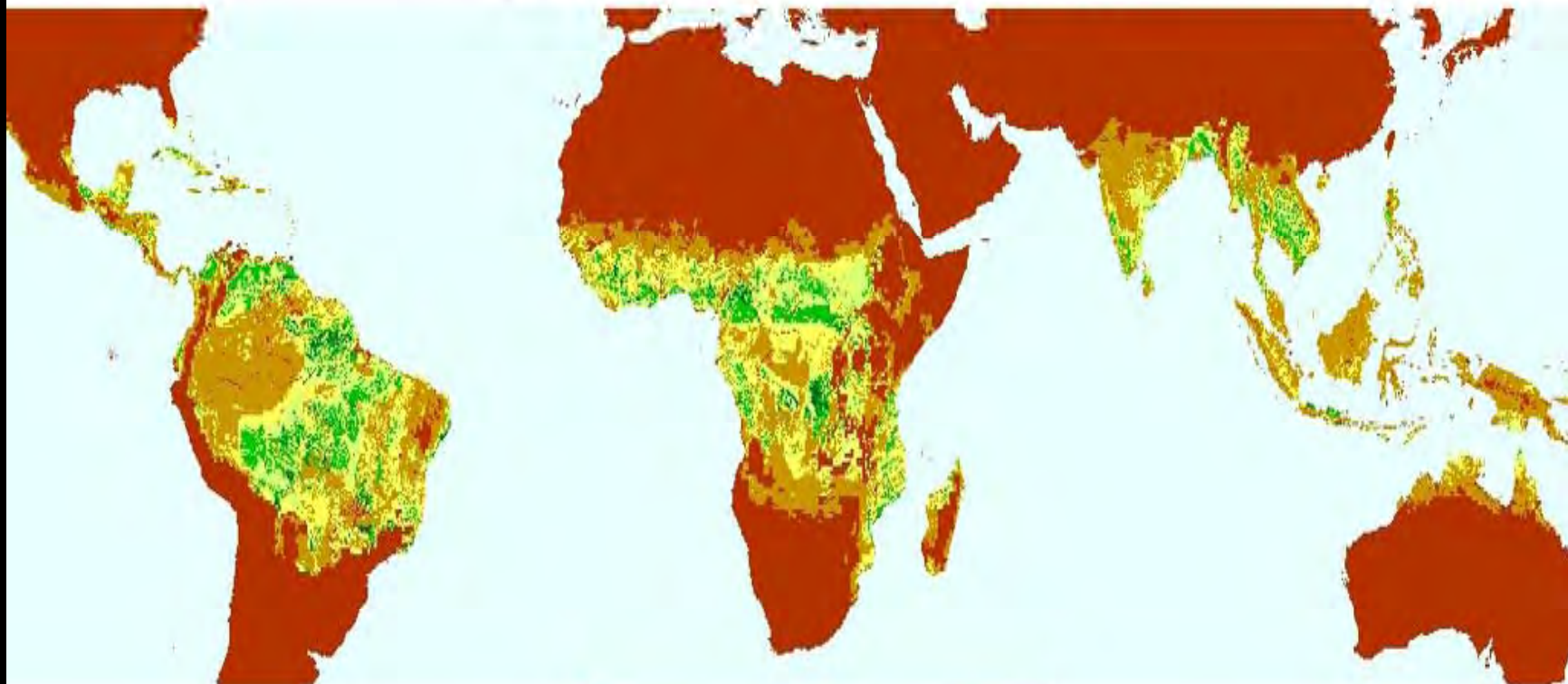
	Energy Balance	Farm inputs	Tech/ Cost	Env Impact	GHG savings
Cellulosic	~4-8	low	high	low	high
Corn	~1.2-1.8	high	low	high	low
Sugarcane	~8-10	med	low	med	high
Cassava	~6-8	low	low	low	med-high

# The essential ingredient in biofuels is the feedstock

- Why did corn ethanol thrive in US?
- Why isn't there more biofuel production in other countries?
- Highest cost in biofuel production is the feedstock
- **Biofuels is an agricultural activity!**

# 1stGen Biofuels Beltway

Global Agro-Ecological Zone: land-suitability for rainfed cassava



Source: FAO/GAEZ, land suitability maps for rainfed cropping



1st Gen seems more viable  
as a global solution than  
2nd Gen

- Transforming agriculture  
in developing countries
- Implications for trade and  
investment

# If biofuels is more efficient in the tropics...

- Then we should liberalize its trade
- Increase investment in rural development and infrastructure
- Increase R&D in 1st Gen Biofuels

# Eco Market Farms: Idyllic but ...



QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.



# Need more investment

- Infrastructure to support big agriculture - capital intensive
- Logistics - transport, storage
- 1st Gen R&D
- Increase the Market
  - Biofuels law
  - Carbon footprint

# How can carbon credits promote biofuels

- If you can't measure it, you can't manage it
- GHG offsets from biofuels are highest in fuel switching but it is the fuel switcher who owns the credit
- Therefore...

# Empower consumers to manage their carbon footprint

- MyCarbonFootprint.com
  - Consumer authorizes utility and gas company to share data
  - Capture 80-90% of GHG emissions
  - Take action - like switch to biofuels, energy-efficient appliances - and earn carbon credits

# Resources



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



[www.EarthCouncil.com](http://www.EarthCouncil.com)