



Jatropha : The Perfect feedstock for Rural Development
by

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Overview of my presentation:

- Brief description of JA
- The need for biodiesel
- Problem of selecting the right Feedstock
- Jatropha-the wonder plant
- Application of Jatropha
- Creating wealth out of Jatropha
- Question Time



- **Brief Description of JA**
- Jatropha Africa is both a British and a Ghanaian owned company.
- Started with outgrowers in 2005.
- Est. in Ghana as LLC in 2006
- Biodiesel feedstock producer.
- Has acquired 120,000ha of land lease .
- Has its own variety called ' JA Improved seeds' .
- Has 100ha existing plantation
- Partner for EU/ACP funding non-food biofuel project
- Discussing JV to form Ghana + UK company and Cooperative.



WHY BIODIESEL?

- High World Crude Oil Price (has made Biofuel Competitive)
- Legal Mandate
- Geopolitical Tensions (Iran, Iraq, Nigeria, Russia & Venezuela)
- Emergence of New Economic Powers
- Kyoto Protocol (Reduction in GHG & Global Warming)
- IEA Projections

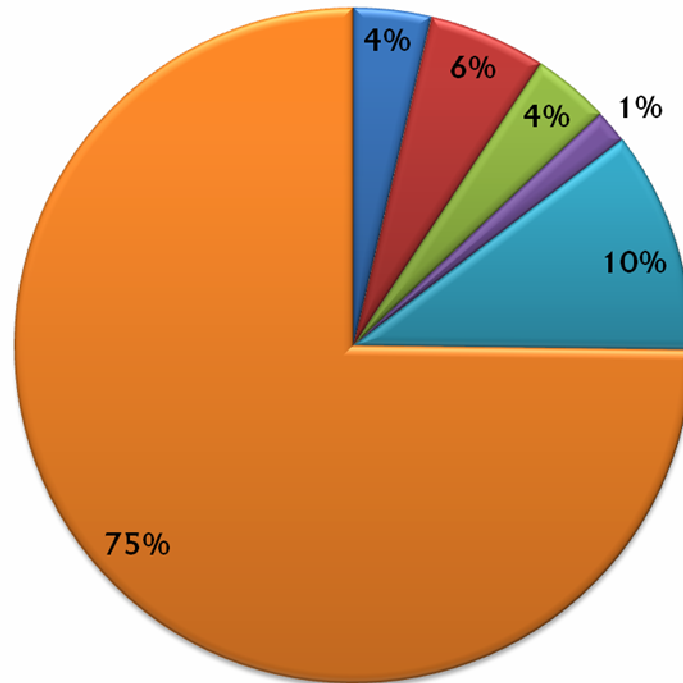


- **IEA Projections by 2015:**
- Increase global crude oil production by a margin of 37.5mb/d.
- Estimations from all the 230 major oil exploration project will amount to 25mb/d.
- There will be shortage of 12.5mb/d. → High Oil Crude Oil Price



COST

■ Labor ■ Depreciation ■ Overhead & Maintenance ■ Energy ■ Chemical ■ Feedstock





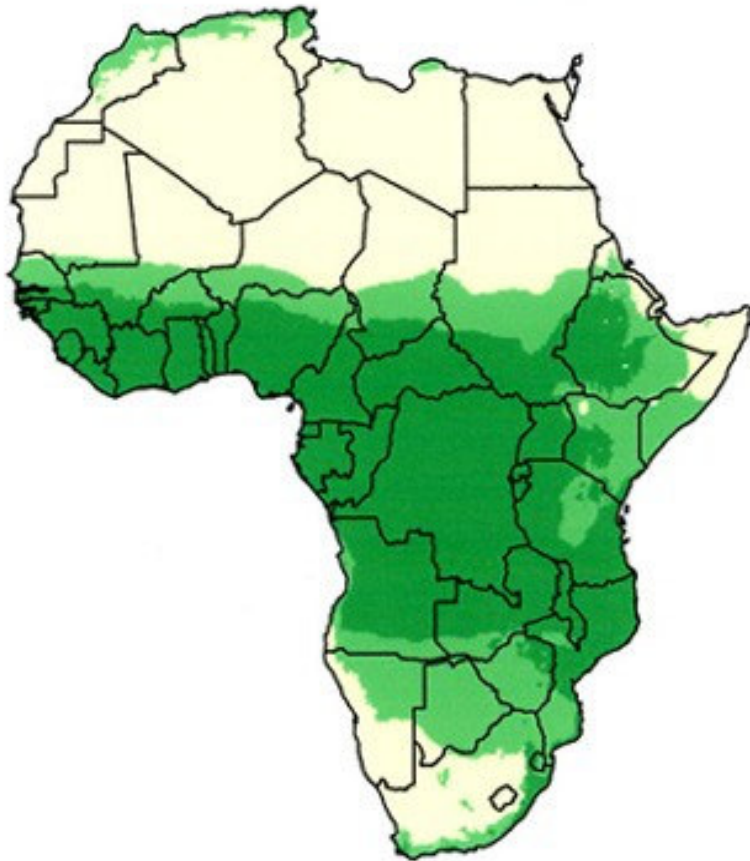
Problems of selecting Right feedstock?

- Higher Prices of traditional feedstocks Makes Biofuel Production Unprofitable.
- Traditional Feedstock Serves as Food.
- Traditional feedstocks Require High Use of Fertilisers & Water.
- Use of Traditional Feedstocks Creates PR Problems



PROFILE OF JATROPHA

- A Perennial tree, found in the tropics worldwide
- Widely present in Africa since 16th century
- Provides its first crop within a year after planting.
- Investment rewarded with 40 years cropping life
- Avoids *food vs fuel* issues
 - Can be cultivated on land not suited to food crops
 - Oil is non-edible
- Technical specifications of Jatropha oil are excellent
 - Low waxing temperature can be 'winterised'
 - As with all biofuels, low Sulphur
 - Can be used as direct fuel (with additives) in engines



Merits:

- Versatile Tropical Plant (Wide Growth Areas)
- Use of Relatively Cheap Labour Force
- Non Compete With Food (↓Price)
- Can Support Intercrop (Better Cash Flow)



- **Growing Jatropha in Luxor, a desert area**
- www.thedailynewsegypt.com/article.aspx?ArticleID=17819
- <http://af.reuters.com/article/investingNews/idAFJOE57C0K020090813>



- **Application of Jatropha**
- **Non energy:** erosion control, soap, etc.
- **Energy:** Bio-oil, biogas, etc.
- multi functional platforms (MFP)
- for rural electrification
- for water pumping
- local cooking fuel
- for rural tractors and trucks
- biodiesel for national transport
- bio oil/diesel for export



Jatropha produces considerable biomass

30% oil is expelled from jatropha seed

70% of seed remains as seedcake =
biomass or fertiliser

Charcoal can be produced from pyrolysis
of seedcake





Why Investing in Ghana?

- Vegetation and the Climate support the growth Jatropha cultivation.
- There are abundant land in Ghana and water resources.
- People with skills
- There is a political Will and Stability
- Potential use of Biofuel at all level
- Fairly developed Infrastructure
- Tax breaks for Investors
- Simply Investment system



- **Jatropha for Wealth Creation.**
- Biodiesel Business Model (Least Cost Producer)
- Rural Development (Infrastructure Development)
- Agricultural Renaissance (Employment & Income)
- Environmental Sustainability (Improvement of Soil)
- Energy Generation for rural households.



- Other Projects of Jatropha Africa
- Bee Hives
- Proposed bridge



- Fish Farming



- **Problems Encountered**
- Funding Problem
- Regulation Framework
- Low level of Technical Education on the use of Biofuel
- Inadequate Scientific Data – Field Trials



- **Conclusion**

Long high crude oil prices will make jatropha based biofuel business profitable but profits can only be realized by having the correct business model and government support.



• Thank You.

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