

COMPETE-network

June 2008, Arusha

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Presentation Outline



- The company Diligent
- Jatropha
- Products from Jatropha processing
- Activities Diligent Tanzania Ltd.
- Farming system
- Challenges
- Conclusions, lessons learnt from experience

- Diligent Energy Systems

- Location: Eindhoven, Netherlands

Active in the production and trade of sustainable energy (carriers)

- Diligent Colombia

- Location: Cali, Colombia

Production of ethanol from waste material

- Diligent Tanzania Ltd.

- Location: Arusha, Tanzania

3 locations in Arusha



Why Jatropha?



- Exists already
- Not edible
- Drought resistant
- Low maintenance, easy to grow
- Perennial crop, productive for over 40 years
- Oil content seeds < 35%
- Yield after app. 3 years

→ beyond 1st generation fuel?

Products from Jatropha



- Jatropha oil (SVO)
- Jatropha biodiesel
- Seedcake
 - Fertilizer
 - Biogas
 - Charcoal
 - Briquettes



- Active since 2005
- Located in Arusha (office, lab, press unit)
- Active in different regions of Tanzania to establish outgrowers network
- Create awareness
- Guarantee the market
- Produce biofuel (SVO and biodiesel)
- Cultivation tests
- Technology research (biogas, efficiency, modifying etc.)
- Gained a lot of experience, research and testing continuously



Diligent Tanzania Ltd.



Quality Control



- FFA
- Phosphorous content
- Viscosity
- Etc.

Farming System



- Outgrowers model / contract farming

Why outgrowers?



- Easier to meet sustainability criteria (no land ownership conflicts)
- Better use of entrepreneurial capacities of Tanzanian farmers
- Lower initial investment
- Less sensitive to external factors
- No limitations in growth
- Guaranteed additional income for farmers

Experiences outgrowers model



- Important to develop close contacts with the farmers
- Important to guarantee market
- Takes a lot of time and efforts to create awareness
- Farmers can use intercropping system

Challenges



- Convince farmer to grow perennial crop
- Realistic prices for seeds
- Competition from other buyers
- Market distortions
- Transport constraints
- Sustainability should be guaranteed
- Government policies, taxation, unclear

Six relevant themes:

- Greenhouse gas emissions
- Competition with food and other local applications
- Biodiversity
- Environment
- Prosperity
- Social Well-being



Regulation for diesel taxation in Tanzania

Diesel: 1600 Tsh/l

- Excise duty: per liter: 312 Tsh
- VAT: 0%
- Road toll/fuel levy: 200 Tsh

For biofuel taxation is unclear

Conclusions



- Knowledge on biofuel system and technology essential
- Farmers need to receive training on cultivation
- Takes a lot of effort, time and money, to create awareness, with indigenous crops it becomes easier
- Farmer is easily disappointed, long term commitments needed
- Important to be competitive with fossil diesel fuel, thus realistic prices for seeds
- Uniformity in seed purchase prices, to minimize disappointment with farmers
- Sustainability issues have to be taken into account
- Government guidelines not ready, no policy on taxation, necessary quickly

More research is needed on the following aspects:

- Agronomy
- Technical issues concerning conversion engines (modifications) or oil (quality)
- The byproducts of jatropha

End



Asante Sana!

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