Using Science and Technology as tools to increase biofuels feedstock productivity in Ghana

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Projected National Petroleum Products Consumption: 2005-2015

(all figures are in tonnes)

Product	Annual Growth Rate (%)	2005	2010	2015
Gasoline	2.0	574,242	632,622	696,938
Kerosene	1.65	74,372	80,730	87,632
Gas Oil	5.5	895,576	1,170,483	1,529,777
LPG	9.1	71,698	111,258	172,645
Total		1,615,889	1,995,095	2,486,993

Source: Consultant's estimates. See Annex ...

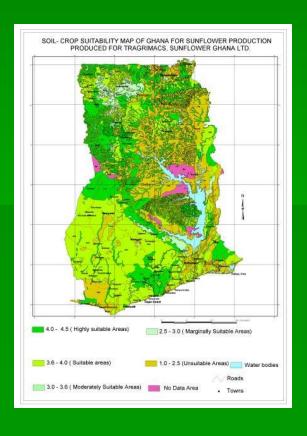
Why improve feedstock productivity?

- Real time feedstock supply needs
- Methods crude, preparation
- Cost effectiveness
- Comparative advantage

Soil-Crop suitability maps for Ghana

- Identify appropriate agro-ecological zones for each feedstock
- Increase yield





Land use map for Ghana (Land Administration Project, LAP). Agricultural lands

- Need to demarcate agricultural lands for each feedstock
- Facilitate land acquisition procedures
- Make large farms possible

Soil health improvement methods

- Correct soil deficiencies
- Safe and effective application of fertilizers and other agro-chemicals

Land Preparation techniques

- Land topography and plowing patterns
- When to prepare land for feedstock planting
- Plowing machineries and their effective use

Biotechnology and improved planting materials

- High yielding varieties
- Disease and pest resistance
- Short gestation period
- Drought resistance
- Other crop desirable traits

GPS and plant population establishment

- Appropriate planting distance
- Maintaining maximum plant population
- Crop refills, crop protection methods, and other good agronomic practices
- Use of environmentally friendly agro inputs

Agro climatology and planting periods

- Interpretation of meteorological data
- Obtaining onset of rainfall data
- Calculating gestation periods of feedstock and planting periods
- Obtain meteor information/data

Post harvest technology

- Moisture content determination
- Harvesting methods
- Processing equipment
- Storage infrastructure
- Transportation and other services

Transportation and other services

- Appropriate handling
- Appropriate vehicles
- Storage

Processing and distribution

- Use of efficient extraction equipment
- Use of efficient biodiesel processors
- Efficient Storage

Human resources

 Young graduates with basic understanding of agriculture and biochemistry