PRIVATE AND CONFIDENTIAL

BioFuel AS

Information Memorandum

in connection with the Private Placement for NOK 81.5 million

Financial Advisor:

FIRSTSECURITIES

25 November 2008

Important Information

This Information Memorandum has been prepared by BioFuel AS ("BioFuel") in connection with an issue of new common equity (the "Transaction").

This Information Memorandum shall not be construed as an offering of shares or securities, but is solely issued in order to provide information about BioFuel AS and the Transaction.

The Information Memorandum is not a prospectus and has neither been inspected nor approved by Oslo Børs in accordance with the rules that apply to a prospectus.

Parts of this Information Memorandum relate to future events, including projections and expectations. Future events involve risk and uncertainty, and may therefore vary materially from the predictions provided herein. No assurance can therefore be given that the projections will be fulfilled. We refer to section 2 "Risk factors" for an account of some of the risks related to BioFuel AS and the Transaction.

The content of this Information Memorandum must not be construed as legal, business or tax advice. This Information Memorandum is subject to Norwegian law. Any dispute arising in the respect of or in connection with this Information Memorandum is subject to the exclusive jurisdiction of the Norwegian Courts, with Oslo District Court as legal venue.

All inquiries relating to this Information Memorandum must be directed to BioFuel AS. No other person is authorised to give any information about or to make any representations on behalf of the Company in connection with the Transaction. If any such information is given or made, it must not be relied upon as having been authorised by BioFuel AS.

The information contained herein is at the date hereof and is subject to change, completion and amendment without further notice.

The delivery of this Information Memorandum shall not imply that there has been no change in BioFuel's affairs or that the information set forth herein is correct as of any date subsequent to the date hereof.

Table of contents

1 Executive Summary

This summary should be read as an introduction to the Information Memorandum and is qualified in its entirety by the more detailed information and the appendices appearing elsewhere in the document. Any decision to invest in the transaction detailed in this document should be based on consideration of the Information Memorandum as a whole by the investor, including the risks of investing in the Company set out in section 2.

1.1 BioFuel AS

BioFuel AS is an independent Norwegian company focusing on upstream biofuel production. The Company was founded in 2005 by Finn Byberg, Arne Helvig and Steinar Kolnes.

The Company, through its subsidiary BioFuel Africa Ltd., will be an upstream producer of jatropha crude oil, with production based on jatropha feedstock cultivated in Ghana. BioFuel will sell environmentally friendly biofuel to the European market.

BioFuel operates under the key principles of low cost and sustainable production, encompassing profitable return, social responsibility and environmental consciousness.

The Company has a signed Lease Agreement for 13,000 ha in the Northern Region near Tamale where current operations take place, and additional Contracts for a Lease agreements for approximately 142,000 hectares, giving a total of 155,000 ha [1]of own managed land in Ghana. The Company aims to establish itself as a large scale producer of jatropha oil for the international biodiesel industry. The agreements can be executed upon BioFuel's request.

Environmental approval is granted for 23,000 ha within the Contract for a Lease and Lease Agreements.

BioFuel's vision is to become a 4,000 bopd (213,000 MT/annum) upstream jatropha oil producer from own managed land in Ghana in 6-8 years.

Biofuel's plan for implementing large-scale jatropha oil production in Ghana consists of two phases:

Phase One: *Development of 23,000 hectares near Tamale in the Northern Region*

Phase Two: *Long-term goal for development of 100,000 – 150,000 hectares in Ghana*

For more information about BioFuel AS, please refer to section 5 of this document and www.biofuel.no.

[1] 1 hectare = 10 decare = 10 "mål" = 2.47 acres = 0.01 km^2

1.2 Financial information

BIODIESEL NORGE AS: PROFIT & LOSS ACCOUNT FOR 2006 AND 2007

(NOK)	2007	2006
OPERATING REVENUES AND EXPENSES		
Revenue	6 842 342	342 094
Total Revenue	**6 842 324**	**342 094**
Cost of goods	1 680 881	280 106
Personnel Expenses	4 702 369	383
Depreciation	17 713	0
Other operating Expenses	2 952 236	161 522
Total Expenses	**9 353 199**	**442 011**
Operating Income	**-2 510 857**	**-99 917**
FINANCIAL INCOME AND EXPENSES		
Interest Income	322 010	66
Other financial income	977	0
Interest Expenses	159 524	13 545
Other financial expenses	1 167 422	0
Net Financial Items	**-1 003 959**	**-13 479**
Income before taxes	-3 514 816	-113 396
Income taxes	31 751	-31 751
Net Income	**-3 546 567**	**-81 645**

Note that this is not a consolidated profit and loss account for the Company.

For further financial information about the Company, refer to section 5.11 of this Information Memorandum.

1.3 Overview of the Market

World biofuel output in 2007 was approximately 8.4 million Metric Ton (MT), valued at about USD 7 billion. By 2010, total biofuel production could be as high as 20 million MT.

At USD 60-70 per bbl, crude oil price, the Company believes biofuel based on jatropha feedstock is profitable without economic incentives.

European Norm (CEN) allows 5% bio-diesel blend in EN590 compliant fossil diesel without labelling. Synthetic fuel made from renewable plant oils can be made fully compliant with conventional mineral fuel.

It is the Company's understanding that current biofuel targets are:

- EU Commission proposal: 10% biofuel by 2020 (200 million Metric Ton).
- China target: 15% by 2020
- Brazil target: 20-25% Ethanol in petrol and 5% in diesel by 2010
- German mandate: 6.75% by 2010, rising to 8% by 2015 and 10% by 2020
- USA mandate: 36 billion gallons by 2022, 21 billion gallons from advanced biofuels

There are de-taxation measures and mandates for biofuel in most EU/EAA countries but the trend is towards mandate instead of de-taxation and penalty for not compliance.

For an in-depth view of the market, please refer to section 11 of this document.

1.4 The Transaction

The Company is contemplating a financing transaction to fund its business plans going forward (the "Transaction"). A description of these business plans is presented in section 5.3 and the planned uses of funds are presented in section 5.12 of this Information Memorandum.

The transaction is expected to take the form of an issue of new common equity. Other types of securities and structures may be considered by the Company. The specific terms and conditions of the contemplated transaction are not presented in this Information Memorandum. A summary description of the main terms and conditions will be distributed to interested investors ("Term Sheet").

1.5 Summary of Risk Factors

Investing in the Company involves risk. The Company's future development and economic situation will be influenced by a number of risk factors. Investors should ensure they evaluate such risks before making an investment.

A presentation of the main risk factors that may affect the Company's operations is provided in section 2 of this document.

2 Risk Factors

Before investing in the Company, investors should carefully consider all the information contained in this Information Memorandum, and in particular the following risk factors which may affect some or all of the Company's activities and the industry in which it operates. The risk factors below are not the only ones that will be faced by the Company, other risks and uncertainties may impair the Company's business.

2.1 Internal Risk Factors

- Rights to land
- Capability to establish and run large plantations in Ghana
- Establishment of a self driven local unit
- Pest and disease control and combating
- Plantation yields
- Oil extraction yields
- Intentional or accidental pollution or destruction of environment and bio-culture and local communities
- Infrastructure
- Fire and flooding
- Strike
- Accidents and injury
- Contractual liability
- Product liability
- Liability in negligence

2.2 External Risk Factors

- Political stability
- Increase of taxation level
- Decrease in oil price on global market
- Change in western climate politics and taxation of green fuel / removal of direct and indirect subsidies
- Competition from other feedstock alternatives
- Change in regulative incentives in downstream market.
- Fire and flood
- Road and infrastructure
- Terrorism and military coup
- Government land confiscation
- Religious fanaticism/turmoil

3 Responsibility Statement

This information memorandum has been prepared in connection with the Transaction described herein.

The Board of Directors of BioFuel AS hereby declares that having taken all reasonable care to ensure that such is the case, the information contained in this Information Document is, to the best of our knowledge, in accordance with the facts and contains no omission likely to affect its import.

25 November 2008

The Board of Directors of BioFuel AS

Jan Reinås
Chairman

Finn Byberg
Director

Arne Helvig
Director

Odd Even Bustnes
Director

Stian Vemmestad
Director

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The Manager for the possible transaction will be First Securities AS, Fjordalléen 16, Aker Brygge, PO Box 1441 Vika, 0115 Oslo, Norway.

5 Company Description

BioFuel AS is an independent Norwegian company focusing on upstream biofuel production. The Company was founded in 2005 by Finn Byberg, Arne Helvig and Steinar Kolnes.

The Company, through its subsidiary BioFuel Africa Ltd., will be an upstream producer of jatropha crude oil, with production based on jatropha feedstock cultivated in Ghana. BioFuel will sell environmentally friendly biofuel to the European market.

BioFuel operates under the key principles of low cost and sustainable production encompassing profitable return, social responsibility and environmental consciousness.

The Company has Contracts for a Lease agreements for approximately 142,000 hectares of own managed land in Ghana and aims to establish itself as a large scale producer of jatropha oil for the international biodiesel industry. A Lease Agreement has been signed for 13,000 ha in the Tamale area where current operations take place. The remaining agreements can be executed upon BioFuel's request.

5.1 Company History

The three founders initially spent two years on research before the company was founded in 2005 through Biodiesel Ltd and BioFuel Ltd registered in the Seychelles. A branch was opened in Ghana through BioFuel Ltd. Thereafter BioDiesel Norge AS was established in 2006 to handle planned downstream biodiesel sales in Norway. Further, BioFuel AS was established when Norfuel AS (today Perennial Bioenergy AS) entered as shareholder in 2007. The funding provided by Norfuel enabled the Company to secure land, develop the test farm and carry out early stage project development for large-scale farming.

During 2006 and 2007 the company identified and secured land areas in Ghana suitable for the production of jatropha oil. The Company now has Contracts for a Lease agreements for approximately 142,000 hectares.

In addition to securing areas of suitable land, the Company has focused its efforts on research and development into the cultivation of the jatropha plant, mechanisation of the harvesting process and training of agricultural workers. At Sugakope located 110km from Ghana's largest port, Tema, BioFuel has developed a test farm of 850 hectares. Plant varieties, fertilisers and pest and disease prevention along with training practices have been rigorously tested in order to ensure best practice within cultivation of the jatropha feedstock.

BioFuel will initially pursue a business model of own managed land. This will secure jatropha oil traceability, quality and "best practice" plant-to-oil-experience in the company

In November 2007, the Company raised USD 6 million from new investors and from Perennial AS. These funds were used to purchase farming equipment and to start large-scale clearing of land and farming in the Tamale area.

BioFuel was the first company in Ghana to receive approval from the Environmental Protection Agency (EPA) for a jatropha oil plantation in Ghana. Approval was received for cultivation of 23,000 hectares in February 2008 in two separate areas: the Gonja and Yendi districts, east and west of Tamale, in the Northern region.

In order to achieve EPA approval the Company has had to put in place a programme of social responsibility and environmental protection initiatives.

For further information on BioFuel's social responsibility initiatives, please refer to sections 5.8.1 and 5.8.2 of this document.

In March 2008 the large-scale farming in the Northern region started. The Company cleared 1,100 hectares in the period March to June and has planted 400 hectares of jatropha by August 2008. The further cultivation program is put on hold until a sufficient funding is in place. Currently the focus is to assure that the existing plantation areas are being well managed and to use the experience to secure efficient expansion during 2009 and beyond.

During 2008 the company has been restructured into three entities with BioFuel AS as a holding company, BioFuel Africa AS as a single purpose company owned 100% by BioFuel AS which again owns 100% of BioFuel Africa Ltd in Ghana. The purpose of the restructuring was to assure an adequate legal structure in Ghana and to demarcate foreign operations through a single purpose company in Norway. BioFuel Africa AS assures Norwegian tax compliance rules are followed (NOKUS) and opens up for later expansion into other markets through separate legal entities. A thorough analysis of the future company structure was performed by legal advisors in PWC Norway and PWC Accra in advance of the final decision. The restructuring will be completed during November 2008.

Overview of significant events

2003 Presence by founders in Ghana commenced. Important network established both locally and centrally.

2004 Started feasibility tests and studies of jatropha on degraded land in co-operation with AngloGold Ashanti

2005 BioDiesel Ltd and Biofuel Ltd established in the Seychelles

2006 Branch established in Ghana, BioFuel Africa Ltd.

2007 BioFuel AS established
Cultivation of 850 hectares at test and research farm in January 2007
First ripe fruit from test farm October 2007
Funding of USD 6.0 million in November

2008 Company restructured into three companies, BioFuel AS, BioFuel Africa AS and BioFuel Africa Ltd. Operations started in the Tamale region in Northern Ghana. By the end of 2008 the Company has 1,100 ha of cleared land and 400 ha of planted area.

5.2 Company Description

5.2.1 *Vision and strategy*

5.2.1.1 Vision

BioFuel's vision for Ghana is to become a 4,000 bopd (213,000 MT/annum) upstream jatropha oil producer from own managed land. In the longer term the Company wishes to expand its operations into other suitable areas.

In order to realise the vision for Ghana the Company has set the following list of goals:

- to produce 650 bopd (34,600 MT/annum) in 2013 from the EPA approved area near Tamale in the Northern Region
- to survey, register and gain environmental approval for additional leased land
- to reach between 100,000 – 150,000 ha of cultivated land within six to eight years based on up to 10 separate farms in Ghana
- to develop cultivation techniques that enable planting of up to 20,000 ha per year
- to be viewed as a sustainable company with proven results as a contributor to better livelihood for communities and people involved

5.2.1.2 Strategy

The Northern Region of Ghana has large unused areas which are well suited for a jatropha plantation. Proximity to the equator and stable precipitation of around 1,000 mm per year provides ideal conditions to grow the jatropha tree. Western Africa is also favourable due to its proximity to the European biodiesel market. Ghana was chosen due to the genuine interest from Ghana to welcome foreign investments in the country. Ghana has in addition the added benefits of political and regional stability and good road and harbour infrastructure. BioFuel's strategy will focus strictly on the opportunities in Ghana during the first three years.

In the longer term the Company will consider establishing operations in other countries to expand and diversify risk. Many of the most of important risk elements, political risk, disease risk, land rights risk, will be diversified by establishing operations in different countries. Access to land is not a restricting factor in the foreseeable future, and is not a reason in itself to move outside of Ghana.

It is also the Company's strategy to operate in accordance with the highest foreseeable future global standard of biofuel production. This includes:

- No deforestation, use of food-crop land or destruction of unique bio-diversity
- Traceability of all jatropha oil
- Environmental, social and economic sustainability
- Producing jatropha oil with a proven reduction in greenhouse gases compared to fossil fuel that meets EU and other international legislation targets
- The Company being a contributor to improved standards of living locally

In addition, the Company's commercial strategy will incorporate the following elements:

- Secure off-take agreements for part of production
- Large scale operations by the use of mechanical cultivation and harvesting
- Land lease agreements for own-managed land

5.3 Implementation Plan

Biofuel's business plan for implementing large-scale jatropha oil production in Ghana consists of a two-phase expansion project:

Phase One: *Development of 23,000 hectares near Tamale in the Northern Region*

Phase Two: *Long-term goal for development of 100,000 – 150,000 hectares in Ghana*

5.3.1 *Phase One – Development of 23,000 hectares near Tamale in the Northern Region*

Current status

BioFuel currently has Contract for a Lease agreements for 142,000 hectares of arable land in Ghana.

In Tamale in the Northern Region of Ghana, BioFuel has two separate land lease agreements comprising a potential of 70,000 ha. (see section 5.6 for a full description of the land lease agreements).

The two contracts cover land areas partially surveyed and verified through official statutory declarations. Within the two contracts BioFuel has obtained environmental approval for the cultivation of 23,000 hectares (obtained from the Ghana Environmental Protection Agency, EPA) for land areas located east and west of Tamale city.

A final lease agreement has been signed for 13,000 hectares in the Yendi district east of Tamale city. This is the area in which BioFuel currently operates.

The remaining 10,000 hectares under EPA approval are located west of Tamale city and will be cultivated subsequently.

Of the 23,000 hectares approved for cultivation, it is estimated that 17,900 hectares can be cultivated effectively. The reduction reflects the need for service roads, storage and processing facilities, and cultivated farmland in the vicinity of local settlements.

Since operations started in March 2008 BioFuel has cleared 1,100 hectares of land and has planted out 400 hectares of Jatropha plants. The start up period can be recognised as entrepreneurship where machinery and equipment as well as clearing and planting techniques have been explored and tested.

Training of employees has also been an important activity during first half of 2008 to assure that workers have sufficient skills and licences for the use and handling of machinery and equipment. In addition it has been important to ensure that adequate safety measures are incorporated for the Ghanaian workers. To accomplish the training BioFuel has used skilled personnel from Norway as coaches on site.

Based on the experience from 2008 the company is now planning on scale up for the 2009 season targeting in excess of 1,000 ha of cleared, cultivated and planted land on average per month. In total the ambition is to cultivate the 17,900 hectare by 2010. The cultivation campaign from 2008 is expected to yield first juvenile oil by Q4 2009 with a successive growth reaching a plateau yield of 35,000 metric tons per annum (680 bopd) by 2013.

During Q1 and Q2 2009, the Company will focus on preparation for the cultivation campaign and a thorough review of planting methods and operational best practice will be performed before recommencing operations using external competence along with own resources.. The identified projects to be undertaken post funding and pre cultivation are:

- A review of the contracted land of 13,000 ha to identify how to prepare the land for cultivation
- A review of planting techniques, plant nursing and harvesting methods to secure that best practice is incorporated
- Review of necessary machinery and equipment for the cultivation campaign.
- Planning of works buildings and service functions to accommodate day to day operation post planting and to secure pressing and storage of oil
- A plan for handling, transportation and storage in Tema port in advance of shipment

In addition BioFuel will immediately start a recruitment process to strengthen the organisation both in the short term and long term.

Review of contracted land of 13,000 ha.
The cleared and planted areas in the Yendi District represent a small part of the potential 13,000 ha. Experience from 2008 shows that the preparation of land is important in advance of planting to avoid water accumulation during the rainy season and to ensure that soil types not appropriate for jatropha cultivation are avoided.

During Q1 Biofuel will organise a thorough review of the land areas to map and describe necessary preparation steps.

A consecutive review of the contracted land areas in the Gonja District west of Tamale will be performed after the review of land areas in the Yendi District.

Cultivation of parcels within the lease contracts must be approved on an individual basis by the Biofuel Board.

Planting techniques, nursing of plants and harvesting

BioFuel has planted out jatropha seedlings both manually and by the use of planting machines. The experience is that planting machines increase the speed considerably. At the same time it is important that seedlings are given good growth conditions the first months including correct fertilisation regimes and plant placement.

The Jatropha plants have currently grown to a size where they now can give answers to whether to continue current practice or if the methods should be altered. An example of an important measure to evaluate is if the plants develop necessary vertical root taps. Without a vertical root tap the future yield potential can be reduced due to inadequate nutritional and precipitation uptake.

Another important factor for higher yield is how the plants are being pruned. As with any other fruit producing plant Jatropha must be pruned in several steps for the development of a sufficient plant canopy. Through the review of plant nursing activities a best practice method will be incorporated in advance of further development.

Before the commencement of the expansion plan a review of favourable seed types will be also be conducted to secure a best possible yield for the future.

Machinery and Equipment

BioFuel has purchased heavy machinery for the clearing and planting activities taking place in Ghana. This includes; three bulldozers, 16 crawler tractors, 12 x 4WD tractors, 13 planting machines (total 25 rows), an advanced GPS system and autopilots for use in the cultivation and planting processes.

In addition, one prototype jatropha harvester has been tested out on the test farm. Experience from 2008 shows that clearing of land represents a bottleneck and must be thoroughly reviewed before the scale up of activities.

ABOVE: MACHINERY IN USE AT THE TEST FARM IN SUGAKOPE

Experience from the first eight months is that additional machinery is now required to enable increased clearing and planting capacity in line with business goals. An evaluation of favoured solutions must be conducted in advance of new purchases. The Company's current expectations for required additional equipment are shown in section 5.7.

BioFuel is co-operating with the Finnish company Rakennus Tempo–Joonas to develop a purpose-built harvesting machine for jatropha based on existing machines from the soft fruit business (blackcurrant). BioFuel has up until today made two separate tests of the harvesting machine with positive results. Based on experience from the latest test round of testing in August Rakenhuus Tempo is now modifying the machine. It will be an important activity during first half of 2009 to assure that the machine is able to harvest in accordance with its intended use and also to benchmark the Rakennus Tempo solution with other suppliers.

ABOVE: MACHINERY IN USE AT THE TEST FARM IN SUGAKOPE

Planning of works buildings and service functions

The plantation areas in Tamale must be supported by necessary service functions as decentralised collection points with fruit de-shellers, centralised seed dryers, seed storage facilities, oil press solutions, offices and garages for maintenance of machinery and equipment. The planning and design for an efficient and purpose built infrastructure solution must also be conducted during Q1 2009.

Handling, transportation and storage in Tema port in advance of shipment.

The principal framework for the later transportation, storage and shipment of oil is based on trucking from Tamale to Tema and intermediate storage at Ghana Oil Palm Development Corporation's (GOPDC) tank facilities at Tema Port. In total these tanks can store up to 6,000 m^3 (5,500 MT) of oil and a separate pipeline is built from the tanks to accommodate the final vessel loading.

GOPDC is currently building new tanks and the existing tanks will become vacant. Biofuel has had preliminary discussions with GOPDC about renting the tanks for future oil production. GOPDC has responded very positively to our request.

During Q1 Biofuel must formalise eventual rental agreements with GOPDC or decide on other and more suitable solutions for the future production of oil. Whether or not GOPDC is a favoured alternative the objective for Biofuel is to ensure that necessary storage capacity is in place in advance of future production volumes.

Organisation and recruitment – short term

Today the operation in Ghana is managed by Mr Steinar Kolnes who does not reside permanently in Ghana but commutes between Ghana and Norway on a monthly basis. In Ghana BioFuel has two Norwegian second-in-charge managers with responsibility for the test farm in Sugakope and the farming operations in Tamale. This has been organised as a short term solution for them all. An important an immediate activity post funding will be to supplement Mr Kolnes and the second-in-charge managers with personnel with more extensive experience and background from plantations and large scale agricultural activities. Candidates for such positions are already identified and will be engaged on a consultancy basis.

Recruitment – long term
A long with the support from consultants during first part of 2009 a recruitment process for residential managers will be initiated as soon as possible. The following management positions and responsibilities have been identified for the future Ghana organisation: Country Manager, Operation Manager, Plant Science and Development Manager, and Controller.

Country Manager: with responsibility for securing external conditions for business operations in Ghana, contact with public authorities, lease agreements for existing and new land, public relations as well as reporting to Norway.

Operation Manager: with responsibility for land management, plantation operations, harvesting and logistics, the expansion plan and land selection, as well as operational implementation.

Plant Science and Development Manager: with responsibility for plantation management (soil, land and water), plant management (planting, pruning, fertilising, pest and disease control) and plant science (hybridisation and selective breeding).

Social and Environmental Responsibility Manager: with the responsibility for sustainability and environmental and social community obligations.

Controller: with responsibility for cost control, reporting, and transactions and tax payments.

Funding Requirements for Phase One:
The business plan has identified a total investment requirement of USD 11.5 million for 2009 and a further additional capital requirement of USD 5.7 million for 2010 to be able to accomplish phase one of the business plan. BioFuel has based the plan on equity investments for the 2009 activities and external funding as loans and leasing agreements for the completion of the full investment.

The investment requirements identified are based on today's best knowledge on yield, oil price and investments related to operations. A risk evaluation of the selective investment parameters is as follows:

Yield
The BioFuel yield potential projection is based on both findings from international research and from the test farm in Sugakope. Since the Jatropha business is still in its infancy projections have a large spread ranging form 1 to 5 metric tons of oil per hectare. As with any other biological growth process, factors such as radiance, precipitation and nutrients will determine the final outcome. What has been learned from the test farm in Sugakope is that Jatropha is a hardy and tough plant that has the ability to grow in extremely poor soil. With sufficient fertilisation and precipitation the plant shows an impressive ability to recover and to produce a considerable amount of perennial fruits. Today the Company has samples that show yields above its own projections after one year of growth.

The financial model is based on a plateau yield (after four years) of 2 metric tons per hectare which is a conservative estimate when comparing to other jatrohpa projects. Even though it will take time to take out the full potential of the jatropha plant it is believed that the projection is a realistic target for the years to come.

Oil price
An important driver for investment requirements is future oil prices. Today there is still not a jatropha oil commodity market in place and price assumptions must be based on substituting products such as palm oil and rape seed oil. As a reference, palm oil as feedstock for biodiesel production has been traded at an average of USD 960 per metric ton during 2008 and crude rapeseed oil at USD 1,170 per metric ton (F.O. Licht, World Biodiesel Price Report). Today rapeseed oil prices are approximately USD 1,000 per metric ton while palm oil prices have dropped down to around USD 600 per metric ton as a consequence of reduced fossil fuel prices in combination with reduced food prices (palm oil is still mostly used in the food sector).

It is believed that the current drop in fossil fuel prices is an intermediate situation due to reduced demand related to the global financial crisis. In the longer term the Company believes economies will recover giving increased energy prices going forward. In addition the EU will enforce targets for biofuel blend for the coming years and whether they turn out to be 5, 10 or 20% it will create a large demand for sustainable and environmental friendly feedstock globally. The Company's projection for 2009 and beyond is therefore a jatropha price level of USD 700 per metric ton.

5.3.2 *Phase Two – Long-term goal for development of 100,000 – 150,000 hectares*

A key element for the long term plan is the establishment of separate plantations (maximum 15,000 ha.) with individual organisations operating the farms. Synergies have been identified in using specialised teams doing the clearing and planting activities and the Company will evaluate either to establish an in-house solution or to outsource these activities.

The Company intends to replicate an operational model based on best practice to new farms in other parts of Ghana. The establishment of new farms must be based on:

- Suitable land areas
- Adequate infrastructure
- Available work force

An estimate for a 100,000–150,000 ha investment over a five year period is as follows:

- 1 new farm - start up 2010
- 2 new farms - start up 2011
- 2 new farms - consecutive 3 years

Phase one of the plan, in the Northern Region, indicates a total investment of USD 1,500 per ha. Through the introduction of more efficient planting methods, gained experience and the opportunity to select more suitable land areas it is believed that a 50% reduction from that level is achievable for future plantation investments.

The Phase two implementation plan will be prepared in detail at a later stage based on best practice model from the Tamale operations.

Key areas to focus for the long term plan are:

<u>Land areas</u>
Selection of land areas suitable for jatropha

<u>Agriculture</u>
- Climate and precipitation, water availability for irrigation
- Drainage and erosion
- Current land use
- Clearing - bush and crop percentages
- Village land reservation

<u>Sociology</u>
- Permanent communities
- Nomadic shifting cultivators
- The land concession
- Land tenure

<u>Infrastructure and logistics</u>
- Access to logistical areas
- Road requirements / maintenance
- Power access and communication

Funding requirements for Phase Two:

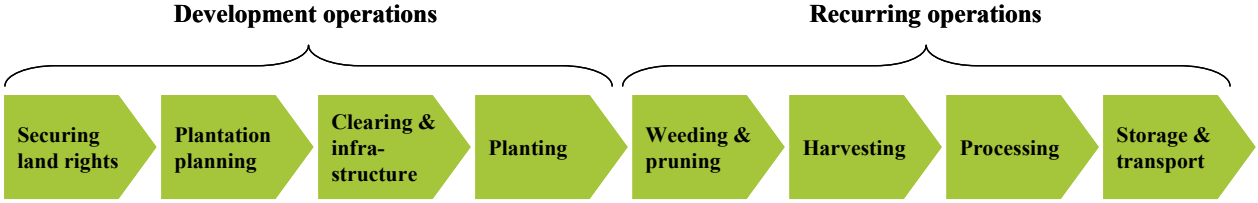
Based on the above, a rough calculation indicates annual investments of around USD 15-20 million per annum for the next five years to reach the target of 4,000 bopd day (213,000 MT/annum) within a six–eight year time horizon. However this is a projection that must be revised during the development of the Tamale project.

5.4 Operations

A part of the Company's strategy is to only focus on the upstream jatropha value chain. The Company's operations end when the oil is sold at export port or to the local market.

The main elements of the upstream jatropha value chain are securing land rights, plantation planning, clearing and ploughing, planting, weeding and pruning, harvesting, crushing and transportation.

UPSTREAM JATROPHA VALUE CHAIN



5.4.1 *Plantation development operations*

5.4.1.1 Securing land rights

The Company follows a strategy of producing jatropha oil from own managed land and the development of a jatropha plantation therefore begins with securing the land area. Land rights are secured for 25 years with a first right of refusal for an additional 25 years. The process of securing legal rights to the land area is described in section 5.6.

5.4.1.2 Plantation planning

After acquiring land rights, the Company plans the plantation including road access, service centres and other service functions. A significant portion of the planning includes finding the most preferable locations for jatropha. This includes minimisation of soil erosions, construction of small dams, adaptation of fertiliser program for local soil and environment, preserve protected areas and optimise logistics and supply lines.

Large volumes of material have to be handled in a large-scale jatropha plantation, and the lifetime of the trees is very long (expected to be >40 yrs). The up-front planning of efficient logistics is therefore important for the future economics of the operation.

5.4.1.3 Clearing and infrastructure

The next stage of development is the cultivation of the land area. This begins with the clearing of land. Clearing, ripping and harrowing is an integrated operation. The land near Tamale in the Northern Region consists of relatively dry and flat savannah terrain, where the limited vegetation is mostly shrubs and bushes and some trees.

The Company has gained experience with large-scale clearing of land from the spring 2008 campaign when 1,100 hectares were cleared in the Yendi district of the Northern Region, the area for which the company has environmental approval.

During 2008, land was cleared at an average rate of 220 hectares per month. The main equipment used for the clearing of land are one bulldozer and crawler tractors. When working on the clearing operations in the spring one Shantui SD22 (equivalent to Caterpillar class: D7) bulldozer was used for clearing, 12 (on average) crawler tractors where used for ripping, and three 4-wheel drive tractors were

used for harrowing. A maximum of approximately 300 unskilled workers and three expatriates were employed on the site.

During the few months of the spring campaign the site team managed to reach a maximum clearing rate of more than 300 hectares per month. The Company expects that this rate can be increased to more than 1,000 hectares per month when clearing recommences in 2009. This will require new heavy dozers to tackle different types of soils and vegetations.

Our estimate of necessary equipment to meet business targets are as follows:

- 1 x Cat D6 or equivalent size w/ripper and GPS navigation
- 2 x Cat D7 or equivalent size w/ripper and GPS navigation
- 1 x Cat D8 or equivalent size w/ripper and GPS navigation
- 1 x Cat D10N w/ripper and GPS nav
- 3 x ROME/Cat "Terra-Riser" EAH-20 Heavy duty harrows
- 2 x Lemken Rubin Disch cultivator, high speed harrows

A detailed list of equipment can be found in section 5.7.

Economic trees
Prior to clearing of new land, a representative of the local community selects out the "economic trees" in the plantation area that will not be cut down. These economic trees have a benefit to the local communities through nuts that they sell on the local market. Especially the Shea nut and the Dawadawa trees are of interest for the local communities. The first one is the most important since it also represents potential sales to the international market.

In addition to the conservation of economic trees Biofuel will support the local communities by supplying high yield Shea-nut tree seedlings for increased local production.

ABOVE FROM LEFT: WOMAN COOKING SHEA NUTS FOR SHEA NUT BUTTER. YOUNG BOYS WITH TODAY'S CATFISH CATCH FROM THE WATER DAM.

5.4.1.4 Planting

After clearing and harrowing land the land areas can be planted out. Today the Company is planting out seedlings produced at the Company test farm at Sugakope. Going forward we plan to build a local

nursery in the Yendi district to reduce the cost of transportation and to secure plants to be grown in similar soil types.

The current seeds for production of seedlings have been imported from SVM Exoort in Tamil Nadur, India. In the future they may be sourced locally or from the Company's own jatropha trees or purchased from other external suppliers.

ABOVE: PICKING SEEDLINGS FROM THE SUGAKOPE NURSERY.

The main equipment used for the planting is planting machines with GPS assisted steering systems in addition to manual planting. When working on the planting operations in the spring one planting machine with three rows was used, and 40 unskilled workers out of the total 300 were dedicated to both machine and manual planting. For details of the equipment owned by the Company, please refer to section 5.7.

The Company expects that the planting rate can be increased to in excess of 1,000 hectares per month when planting recommences in 2009. The company has already invested in planting machines which are sufficient for the planting campaign. The supplier is Checchi & Magli from Italy.

5.4.2 *Plantation recurring operations*

5.4.2.1 Weeding and pruning

Weeding is necessary between the rows and for protection against bush fire. A lawn remover, connected to a tractor will be used for this purpose. To control weeds, reduce soil erosion, keep it moist, and fix nitrogen the company is planning to plant low growing legumes between the jatropha trees.

Pruning will be done manually. This will be done to ensure that the jatropha tree, branches out (typically 4-8 new branches for each cutting) in addition to removing dead branches to give way to fresh ones.

The possibility of using fully or semi-mechanically pruning will also be investigated. Pruned branches can be used as organic soil improvement.

Weeding and pruning will be the main activities in maintaining the plants. The Company will seek to reduce the use of chemical pesticides to a minimum. Instead organic pesticides such as neem oil (which is completely harmless and used in cooking) will be among favoured types to use.

5.4.2.2 Harvesting

Harvesting of jatropha fruit can be done both mechanically and manually. The Company plans for mechanical harvesting in order to optimise the economics of the operation in the long-term.

As an example, one person may be able to manually harvest the equivalent of 6-8 kg dry seeds per hour compared to a harvesting machine where experience shows a harvesting rate of more than 0.8 ha/hour or the equivalent of 2,400 kg dry seeds per hour (based on 6,000 kg per annum per ha).

BioFuel is co-operating with the Finnish company Rakennus Tempo–Joonas to develop a purpose-built harvesting machine for jatropha based on existing machines from the soft fruit business (blackcurrant). A test machine has been in operation for BioFuel this year with positive results, and BioFuel is determined to extend the co-operation with Rakennus in 2009.

We expect two harvesting periods with the main harvesting period from December to February and a secondary harvesting period in July – August. Estimates for phase one of the plan indicate the need for up to 40 machines to be in operation during harvesting of 17,000 hectares.

ABOVE: THE "JOONAS" HARVESTER.

5.4.2.3 Processing

Harvested Jatropha fruits are transported directly from the field by tractors on small tractor trailers to a nearby collection point for de-hulling which removes the fruit cover around the seeds. The fruit shells can then be used as organic fertilizer. From the collection and de-hulling point, fresh seeds are stored for a short period of time before it is loaded either onto trucks or tractor trailers for transportation to the drying, storage and oil extraction facility. Large seed storage tanks may be built to allow for a continuous 24/7 year-round oil extraction.

Different solutions for fruit drying, seed decorticator and seed press units have been evaluated but no final conclusion has been made. A thorough analysis is needed prior to any final decisions being taken.

The number of crushing units may vary depending on the selected strategy. One option is to build several self-contained oil extraction units that can process the harvest from approximately 1,500 hectares of land each, which equates to 15-18 metric tons of jatropha crude oil per day. Here excess heat from the electrical diesel power-generators which runs on diesel or jatropha crude oil can be used for drying and pre heating the seeds.

The solution allows for pressing in near proximity to the field with the advantage of keeping mass transportation low, especially if the unprocessed seedcake also is brought back to the fields as organic fertiliser. Another benefit is that processing facilities can be scaled up as yield and land is increasing.

Another option to the above is a centralised seed drying, seed storage and oil crushing facility that can be can built and will cover all our activity in the Northern Region.

If the seedcake (which accounts for 2/3 of the mass) is either consumed or in other ways processed centrally, there will be no need for large return quantities except of ash in case of burning. Another advantage could be the use of more technically advanced oil extraction process, e.g. solvent extraction.

The jatropha seedcake which is the residue after oil extraction can also be used as fuel for heat and power generation in the future, if the necessary infrastructure is put in place.

> ***Example - Business opportunity from the use of seedcake and husk for energy production:*** *The seedcake/husk will, after oil extraction, have a minimum heat value of 19MJ/kg. The seedcake is therefore an excellent substitute for coal. A plantation of 17,000 hectares may produce more than 68,000 Metric tons/annum of seedcake, which in turn represents a total heat energy of 6,46PJ or 358,8 GW/h/year. Given an efficiency of 36% from thermal power plants, more than 129 GW/h/year of electricity may be produced. This equates to 2.1% of Ghana's national hydropower production. Therefore the installation of a generator with the capacity of 15MW can easily be justified it the centralised option is favoured.*

5.4.2.4 Transportation and storage

Alternative solutions and options explored for logistics are:

- 20 feet steel tank containers for transport on truck directly to container harbour for shipment (readily available). Alternatively the tank containers can be emptied and stored at the tank farm in Tema.
- Same as above but with a flexible bag for up 24m^3 liquid inside a standard 20 feet shipping container.
- Bulk and container barges for transport on the Volta basin. Each dry barge can take up to 750MT or 24 x 20 feet containers on the deck. Each bulk oil barge can take up to 1,000m^3.
- Tanker trucks and/or barges (cost efficiency for barges investigated for larger volumes).
- Tank storage and pumping facilities at port (negotiations with GOPDC for rental agreement entered).

From the Northern Region there are a number of different logistics options. The easiest one, especially in the first years of production, is to truck by road the oil from the oil extraction units to Tema tank farm. In case of trucking 20 feet tank or flexi-tank containers there is also the option of shipping the containers without further reloading or interim storage.

The distance from the farms in Gonja and Yendi districts to Tema tank farm is approximate 750 km. As an alternative, one can truck tank containers to the Buipe port, and use liquid bulk or container barge transport to Akosombo where tank containers are offloaded for truck transport to Tema tank farm. This alternative route can cut the road transport with more than 600 km.

ABOVE: GHANA OIL PALM DEVELOPMENT COMPANY (GOPDC) TANK FARM AT TEMA PORT.

5.4.3 *Impact of the seasons on operations*

The rainy season lasts from March through to October in the project area. Most of the rainfall occurs during August and September and sometimes extends into October. Historical observations of actual rainfall are included in the EIA which is available upon request from the Company.

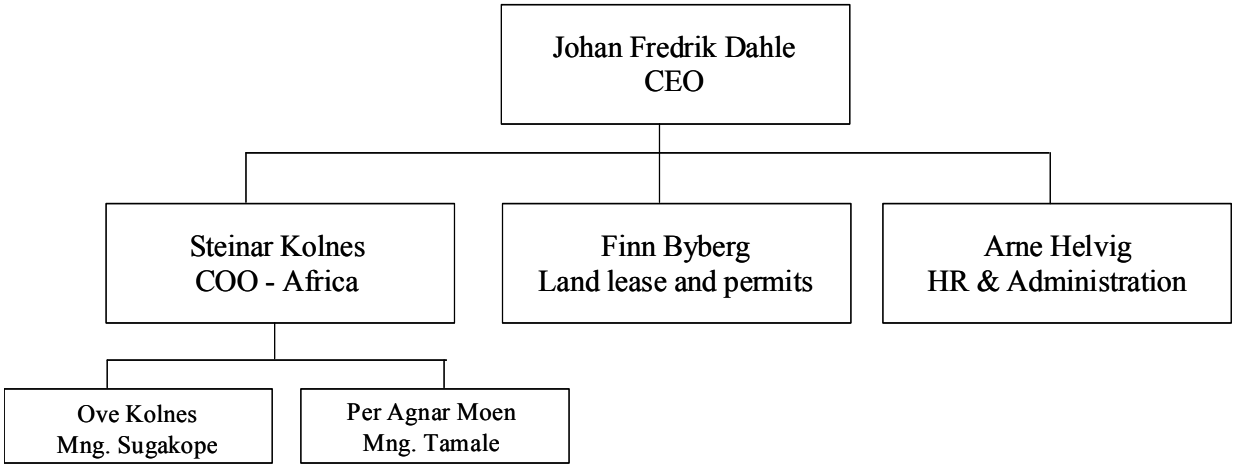
During the rainy season in August and September operations become much more challenging due to difficult conditions for tractors, vehicles, peoples and newly planted seedlings. The Company anticipates that the rate of clearing and planting new land must be reduced during those months. In this period the operational sites must be carefully selected to secure that clearing and planting activities are not obstructed.

5.5 Employees

The Company currently employs approximately 250 people. Four are employed at head office in Stavanger and another three expatriates are paid from the head office in Norway, but work in Ghana. Fifty two are employed at the test farm in Sugakope where one is an expatriate from Norway. One hundred and eighty nine are employed at the plantation site in Tamale, two are expatriates from Norway. One local person is currently working as a secretary in Tamale.

During the planting campaign in the spring, the Company employed a maximum of 380 people.

BIOFUEL AS, ORGANISATIONAL MANAGEMENT STRUCTURE



5.6 Property

5.6.1 *Land legislation in Ghana*

Biofuel's lease agreements in Ghana are based on long term relation and thorough discussions with land owners and other stakeholders involved. As legal advisor BioFuel has used Bentsi-Enchill Letsa & Ankomah ("Letsa") in Accra who is a reputable lawyer with references from lease agreements from the mining industry in Ghana.

On the advice of Letsa, Biofuel has based contracts on initial Contract for a Lease agreements to be followed by final Lease Agreements. Conditions precedent for the Contract for a Lease agreements are:

- Trial farming for six to twelve months to ensure that no adverse claims or challenges would be made against the Lessor's title
- The production of a Statutory Declaration of the Lessor's title and the filing of same with the Lands Commission
- The Lessor obtaining the consent and concurrence of the Regional Lands Commission and the consent of the Traditional Council

The reason for such initial contract is that land rights in Ghana are based on prescriptive rights with chieftaincies managing the land rights on behalf of communities. In many cases land areas are not

surveyed and registered. Precedent to a final lease agreement it is therefore important that land rights have been verified and registered.

BioFuel has so far a final lease agreement in the Yapei district east of Tamale whereas the other agreements are still based on the Contract for a Lease form.

Primarily it is important to stress that it is not difficult to sign land lease agreements in Ghana. Ghanaian authorities welcome foreign investors in Ghana and local chieftaincies are to some extent outbidding each other to attract investors.

On the contrary the real challenge is to go live and to secure necessary support from the local communities once in operation. Ghana is still a very poor country and it is challenging to establish a large scale production influencing vast areas of land.

5.6.2 *Current property portfolio*

BioFuel currently has Contracts for a Lease and a Lease Agreement for a total of 155,000 hectares of own managed land in Ghana. Of these, 55,161 hectares have been surveyed and an EPA permit has been received for an area in excess of 23,000 hectares.

LAND AREAS WITH ENVIRONMENTAL APPROVAL

No	District	Communities (Nearby)	Cultivable Area (Hectares)
1	Yendi	Kpachaa South	5,139.00
		Kpachaa North	1,858.00
		Kpalkori	3,576.00
		Chegu	1,812.00
		Not Surveyed	4,501.00
2	Gonja	Yapei North	2,202.00
		Yapei South	4,674.10
		Not Surveyed	3,124.00
Total			**23,762.00**

The contract potential in accordance with Contract for a Lease agreements in the Yendi and Gonja districts alone is 69,599.00 ha.

5.6.3 *Permitting required for farming activities (EPA)*

The terms and conditions of environmental approval which must be observed in order obtain approval include the following requirements:

- Works Programme (comprehensive to EPA Northern Region)
  - *Survey of land*
  - *Plan for Land clearing*
  - *Processes of public information prior to clearing*
  - *System of inventory taken and recording*
  - *Measure for preservation of cultural resources*
  - *Measures for preservation of community farmlands*
  - *Waste management (of logs and branches and other organic waste)*
- Protection of Economic trees (Dawadawa and Shea nut trees)
- Biological and Cultural Resources Preservation/Management
- Waste Management
- Public Health and Occupational Health and Safety
- Soil Fertility Analysis and Land use map
- Fire Prevention and Protection
- Livelihood Enhancement Programmes
- Honey Production and Harvesting
- Preservation of Community Farmlands, Improved Productivity and Food Security
- Support to Schools

- Annual Carbon Fluxes
- Monitoring Plan

Full detailed terms and conditions of environmental approval are listed in Appendix 5 of this Information Memorandum.

5.7 Equipment

The Company currently owns the following equipment. Following the spring 2008 cultivation campaign at Tamale, most of the equipment has been moved to the sites in the Yendi district.

CURRENT EQUIPMENT

Type of equipment	Number
130 hp crawler tractors with dozer and front root rake	16
130 hp 4WD tractors with front loaders and additional fork lifters	4
80 hp 4WD tractors with front loaders and additional fork lifters	8
6 ton net load tractor trailers	12
Rollover ploughs	10
Semi-ploughs	10
Rotor cultivators	6
Heavy duty 3.8m wide harrows. 600mm wheels	3
Light duty 7.2m wide harrows. 440mm wheels	8
Sowing machines for Jatropha nuts	2
Row making cultivators	2
Pesticide sprayer for tractor	1
Automatic roll-in-water-spray guns with tubes and tractor mounted pumps	4
Small Massey Ferguson tractors (used)	6
213 to 400hp Case and Massey Ferguson heavy duty tractors for harrowing and ploughing	6
Shantui SD 22 Dozer. (Cat 7 class).	1
Seedling and seed planting machines 1 row	5
Seedling and seed planting machines 2 rows	4
Seedling and seed planting machines 3 rows	4
Jatropha harvester (prototype)	1
GPS High accurate navigation systems for use in pilot tractors (better than ±1")	3
Chainsaws and protection devices.	20
A number a handheld or tractor mountable tools	N/A

Experience from the first eight months is that additional machinery is required to enable increased clearing and planting capacity in line with business goals. The current expectation of required new equipment for the phase one cultivation campaign is shown below.

NEW PLANNED CULTIVATION EQUIPMENT

Type of equipment	Number	Unit price (USD)
Bulldozer equivalent to Caterpillar D7	2	219,000
Excavator	1	60,000
Trailers heavy duty	10	20,000
Lemken 6m Wide heavy duty harrow	2	66,130
Pickup Nissan Harbody	5	25,000
Swarai Mazda 6 ton capacity	1	27,000

In addition the Company expects to purchase the following equipment for the operation of the area planted in phase one:

NEW PLANNED FARMING EQUIPMENT

Type of equipment	Number	Unit price (USD)
Tractors	25	30,000
Tractor trailers	15	4,000
Lawn movers	10	3,000
Tractor pruning equipment	10	5,000
Cars	5	30,000
Fire truck (used)	2	30,000
Ambulance (used)	2	20,000
Fertiliser distribution wagon	5	8,000
Other equipment	N/A	500,000

The prices on the equipment are indicated contractor prices for one unit. Significant price reductions are expected when the company place orders for several units.

5.8 Environmental and Social Impact

In early 2008 the Company engaged local consultants Centre for Environmental and Health Research and Training to conduct an Environmental Impact Assessement (EIA), which also included a social impact assessment. This is a pre-requisite for obtaining an Environmental Approval from the EPA. The EIA is included as 6 to this memorandum.

5.8.1 *Social impact and mitigation*

In order to obtain a permit the Company must have in place social responsibility initiatives that ensure its operations in Ghana make identifiable contributions to the local population and the environment.

BioFuel has undertaken a programme of positive action to ensure not only the success of its own operations but also the prosperity and social and economic development of the local community. Some of the initiatives encompassed by the programme are:

- *Company-Community Committees.* Committees formed in each community including representatives from tribal and governmental bodies, youth and women's groups as well as the Company in order to avoid conflict, monitor success of activities and ensure fair distribution of benefits to affected communities.
- *Employment opportunities/Economic growth.* Providing almost year-round employment with wages 70 per cent higher than the country's minimum wage in an area where wage-paying jobs are almost non-existent.
- *Hiring of women.* Empowering women by hiring them to do the same jobs as men and ensuring they are adequately represented in community committees.
- *Preservation of farmland.* The Company undertakes to ensure that farm locations within its plantations are preserved land available for agriculture and livestock is not significantly reduced.
- *Fire prevention and control.* Providing fire fighting training and equipment to workers and organisation of land into blocks to avoid the spread of fire it they occur.
- *Protection of culturally sensitive and heritage sites.* Identification and preservation of culturally sensitive sites within the proposed cultivation areas in accordance with community requirements.
- *Healthcare services, including HIV/AIDS prevention.* Establishing small local community medical facilities with a doctor or nurse providing medical care, heath awareness programmes and counseling for HIV/AIDS affected community members.

COMMUNITY PROJECTS: ABOVE: FROM LEFT, CLOCKWISE; WATER DAMS, MAIZE MILL, JATROPHA AND MAIZE INTERCROPPED.

5.8.2 *Environmental impact and mitigation*

The potential environmental impacts of the Company's operations are significant. BioFuel has implemented or will implement measures in order to mitigate the impact on the local environment and to ensure that the project is socially acceptable, environmentally sound and sustainable. Some of the potential environmental impacts are:

- *Loss of flora and fauna*. Important wildlife habitats could be destroyed in the clearing of over 20,000 hectares of grass and woodland savannah for jatropha cultivation and construction of access routes. The project areas may also cut through ecosystems and thereby compromise their integrity.

- *Impact on air quality.* Vegetation clearing, land preparation, construction of access routes and haulage of heavy machinery from one location to another may impact negative on air quality. Air pollution may adversely affect the health of people engaged directly or indirectly in the project activities as well as nearly communities.

- *Impact of waste generation.* Solid wastes, such as vegetable matter, wooden crates and empty containers, and waste from jatropha plants are expected to be generated. These wastes must be properly handled to avoid or minimise potential adverse effects on the environment.

- *Impact of erosion.* Vegetation clearing over large areas, land ploughing and construction of seedbeds and excavation among other things have the potential to expose the soil to erosion agents.

- *Potential spread of HIV/AIDS.* Findings of international studies of HIV/AIDS in work places suggest that projects and activities that attract large number of migrant workers become breeding grounds and a vehicle for the spread of HIV/AIDS.

- *Impact on national greenhouse gas emission.* Greenhouse gas emissions will principally emanate from carbon dioxide emission from transport use, as well as from use of nitrogen fertilisers during nursery and planting periods. However, since it is an afforestation project, the project on a net scale should not contribute to greenhouse emissions.

Some of the mitigation measures implemented, or to be implemented by the Company are:

- *Water pollution prevention and erosion control.* Ploughing and planting of land shall be across slopes so as to serve as silt-traps and avoid potential sediment run-off into the water course, as well as erosion.

- *Investment in rain water harvesting.* The area experiences water scarcity during the dry season and flooding during the rainy season. Therefore, the Company sees water harvesting as a promising option for water conservation and land management. It will also ensure both the Company and community have sufficient water available during the dry season.

- *Promotion of health care services and HIV prevention.* The Company has a policy to establish and maintain high standard of occupation and community health. BioFuel will also develop specific plans in line with the national strategic plan for HIV.

- *Air quality management.* The Company will develop air quality management plans aimed at facilitating use of cleaner fuels in machinery and promoting a culture of machinery maintenance amongst other things.

- *Preservation of community farmlands.* The Company plans to reverse declining soil fertility by assisting with organic fertiliser, which is a by-product of the Company's operations. Biofuel will also support communities with appropriate technology for sustainable rural agriculture. It is also against the Company's policy to trespass, interfere or encroach on community farmlands.

- *Installation of bee hives and promotion of honey harvesting*. To take advantage of the large bee population attracted by jatropha plantations, the Company shall assist communities to construct and install bee hives in strategic locations as a potential source of additional income.

ABOVE: LEFT - BEE POLLINATING JATROPHA. RIGHT - HARVESTING HONEY

5.9 Test Farm and Identification of Yields

The Company is currently operating a test farm in Sugokope where 850 hectares of land are being cultivated for research and development purposes. The farm has been used for testing of plant varieties, fertiliser combinations, pest and disease control as well being a test-bed for harvesting machinery and training practices. There are currently 75 workers employed on the farm which is located 110 km from Tema, Ghana's largest port.

One of the key purposes of the test farm has been to enable accurate estimation of future yields of jatropha. A yield study was carried out taking into account the following parameters.

- Soil quality including acidity and absolute and available nutrition values and variations in these
- Precipitation, structure of soil and following waterlogging of soil
- Impact of pests and spread of disease on plant growth

- Age and quality of trees

The yield study found that given the conditions at the test farm or better, a yield for the first year after planting of between 420 kg oil per hectare or 1,008 kg of oil per hectare could be achieved. After loss in chosen pressing technology still to be determined, this is above the yield projections for this stage in development. The expected production steady yield is expected at 2000 kg oil after pressing.

Based on the common trade numbers as well as observations the predominant number of seeds per jatropha fruit is three with an average of 1,300 to 1,500 seeds per kilo. The oil content of the fruit for this region given the climate and agricultural conditions is within the range of 35-39.1% wt. The number was tested by Intertek Caleb Brett 7 December 2006 for Toprank.

At our test farm in Sugakope, 41% wt. jatropha oil of whole seed (including seed shell) has been found in yellow fruits, harvested August 2008, 16 months after planting in March 2007.

Based on these observations the yearly yield is expected to lie between 1,008 kg and 420 kg of oil per hectare in the second year after planting before pressing. And the production yield after 4 years is expected to be approximately 2,010 kg oil per hectare.

The full report on Yield of the Jatropha Curcas Plantation can be found in Appendix 6 of this Information Memorandum.

5.10 Expected biological parameters

For the performance of the plantation, the yield of jatropha oil for a given land area in a given time is critical. Yield is a product of the number of harvests per year, the number of trees per area, the number of fruits per tree in a harvest, the number of seeds per fruit, the mass of the seeds and the oil content of the seeds.

The trees grow and give greater harvests over time and some of the trees die and will be replanted. Therefore yield of the plantation will develop over time.

The plantation uses a distance between trees in same row of 0.84m, and a distance between rows of 2.8m. This gives a number of trees of 4,407 per hectare. The Company expects that each tree will yield a seed harvest of 1.75 kg annually. Each tree has 120 productive branches, 6 fruits per branch, 2.52 seeds per fruit, 1400 fruits per kg, 1.3 harvests per year and net oil content of 28%. This gives a yearly yield of 2,079 kg oil per hectare after the tree has reached its stable plateau production after about 5 years. This is the net amount harvested after any losses in the harvesting process have been taken into account. The development over time of harvest per tree is shown in the table below.

The Company, as an approximation, expects that 5% of the trees will die in the first year, 1% in each of the second and third years and 0% thereafter.

The Company estimates that 28% of the mass of seeds will be extracted as oil, with approximate 4-6% oil residue in the seedcake in case of mechanical oil extraction. A significantly higher extraction rate can be achieved in case of solvent (hexane) extraction; this factors in a small efficiency loss in the extraction process.

BIOLOGICAL PERFORMANCE

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mortality of trees	5%	1%	1%	0%	0%	0%
Number of trees remaining per hectare	4,297	4,165	4,121	4,099	4,099	4,099
Seed harvest per plant (kg)	0.00	0.32	0.90	1.48	1.75	1.75
Seed harvest per hectare (MT)	0.00	1.32	3.71	6.08	7.17	7.17
Oil extraction rate [1]	28%	28%	28%	28%	28%	28%
Oil yield per hectare (MT) [2]	0.00	0.37	1.04	1.70	2.01	2.01

Sources:
[1] University of Hohenheim: Oil content of seed 35.2 %

[2] ESV BIO AFRICA – Mozambique: 1,680 kg oil per hectare in year 5 from 3 x 4 metre spacing or 833 plants per hectare.

5.11 Historical Financial Information

Consolidated accounts have not been prepared for BioFuel AS and its subsidiaries for 2007 and no interim accounts are as yet prepared for 2008. Figures are provided for BioDiesel Norge AS for 2006 and 2007 and for BioFuel AS for 2007.

Full reports can be found in Appendices 2-4.

5.11.1 *Profit and Loss Account*

The following tables show the audited profit and lost accounts for the Company.

BIOFUEL AS: PROFIT & LOSS ACCOUNT FOR 2007

(NOK)	2007
OPERATING REVENUES AND EXPENSES	
Revenue	382 970
Total Revenue	**382 970**
Cost of goods	348 155
Other operating Expenses	482 849
Total Expenses	**831 004**
Operating Income	**-448 034**
FINANCIAL INCOME AND EXPENSES	
Interest Income	360 002
Interest Expenses	16 799
Other financial expenses	58 189
Net Financial Items	**285 015**
Income before taxes	-163 020
Net Income	**-163 020**

BIODIESEL NORGE AS: PROFIT & LOSS ACCOUNT FOR 2006 AND 2007

(NOK)	2007	2006
OPERATING REVENUES AND EXPENSES		
Revenue	6 842 342	342 094
Total Revenue	**6 842 324**	**342 094**
Cost of goods	1 680 881	280 106
Personnel Expenses	4 702 369	383
Depreciation	17 713	0
Other operating Expenses	2 952 236	161 522
Total Expenses	**9 353 199**	**442 011**
Operating Income	**-2 510 857**	**-99 917**
FINANCIAL INCOME AND EXPENSES		
Interest Income	322 010	66
Other financial income	977	0
Interest Expenses	159 524	13 545
Other financial expenses	1 167 422	0
Net Financial Items	**-1 003 959**	**-13 479**
Income before taxes	-3 514 816	-113 396
Income taxes	31 751	-31 751
Net Income	**-3 546 567**	**-81 645**

5.11.2 *Balance Sheet*

The following tables show the audited Balance Sheet for the Company.

BALANCE SHEET FOR BIOFUEL AS FOR 2007

(NOK)	2 007
ASSETS	
Financial Fixed Assets	
Other receivables	17 672 548
Total Financial Fixed Assets	**17 672 548**
Current Assets	
Cash and cash equivalents	14 879 901
Total Current Assets	**14 879 901**
Total Assets	**32 552 449**
EQUITY & LIABILITIES	
Paid in Capital	
Share Capital	231 743
Own Shares	-2 600
Share Premium	32 143 373
Total Paid in Capital	**32 372 516**
Uncovered loss	-163 020
Total Retained Earnings	-163 020
Total Equity	32 209 497
Current Liabilities	
Trade Creditors	312 703
Other Current Liabilities	30 249
Total Current Liabilities	**342 952**
Total Liabilities	342 952
Total Equity and Liabilities	**32 552 449**

BIODIESEL NORGE AS: BALANCE SHEET FOR 2006 AND 2007

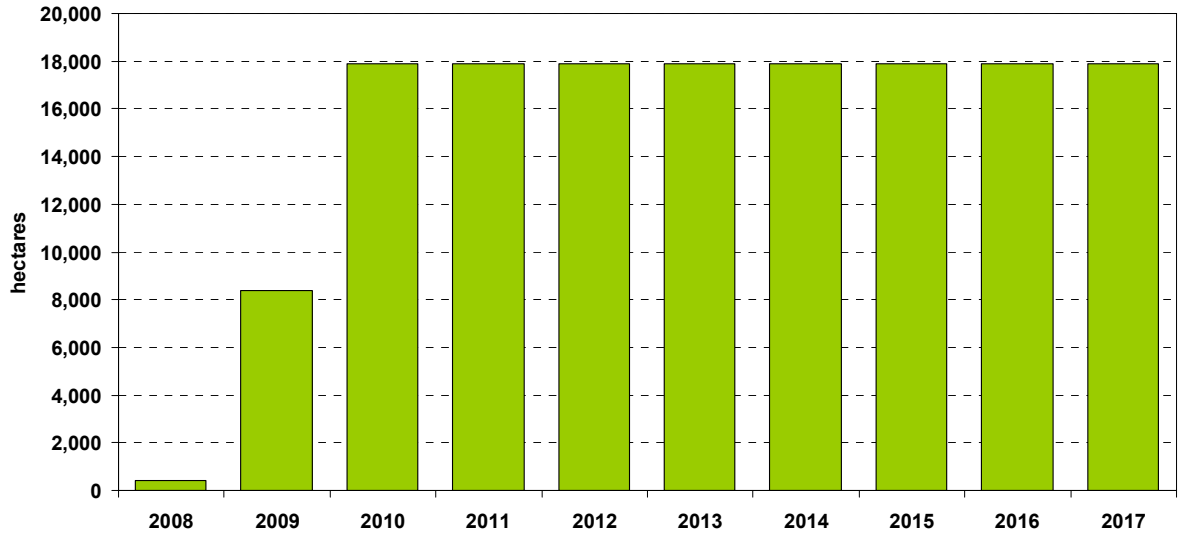
(NOK)	2007	2006
ASSETS		
Fixed Assets		
Intangible Assets	0	0
Deferred Tax Assets	0	31 751
Total Intangible Assets	**0**	**31 751**
Tangible Fixed Assets		
Inventory, equipment etc	54 150	168 190
Total Tangible Fixed Assets	**54 150**	**168 190**
Financial Fixed Assets		
Other receivables	19 312 644	0
Total Financial Fixed Assets	19 312 644	0
Total Fixed Assets	**19 366 794**	**199 941**
Current Assets		
Stock and other reserves	0	347 107
Receivables		
Accounts receivable	29 472	66 147
Other receivables	1 813 952	101 505
Total receivables	**1 843 423**	**167 652**
Investments		
Cash and cash equivalents	1 155 295	177
Total Current Assets	**2 998 718**	**514 936**
Total Assets	**22 365 512**	**714 877**
EQUITY & LIABILITIES		
Share Capital	133 333	100 000
Share Premium	5 966 667	0
Total Paid in Capital	**6 100 000**	**100 000**
Uncovered loss	-3 624 212	-77 645
Total Retained Earnings	**3 624 212**	**-77 645**
Total Equity	**2 475 788**	**22 355**
Other Long term liabilities	18 124 266	0
Current Liabilities		
Credit institution liabilities	1 294	621 423
Trade Creditors	3 481 982	67 999
Public duties payable	876 743	0
Other current liabilities	539 230	3 100
Total Current Liabilities	**1 765 458**	**692 522**
Total Liabilities	19 889 724	692 522
Total Equity and Liabilities	**22 365 512**	**714 877**

5.12 Operational and Financial Forecasts for 17,900 hectares operation in the Northern Region near Tamale

5.12.1 *Production Forecasts*

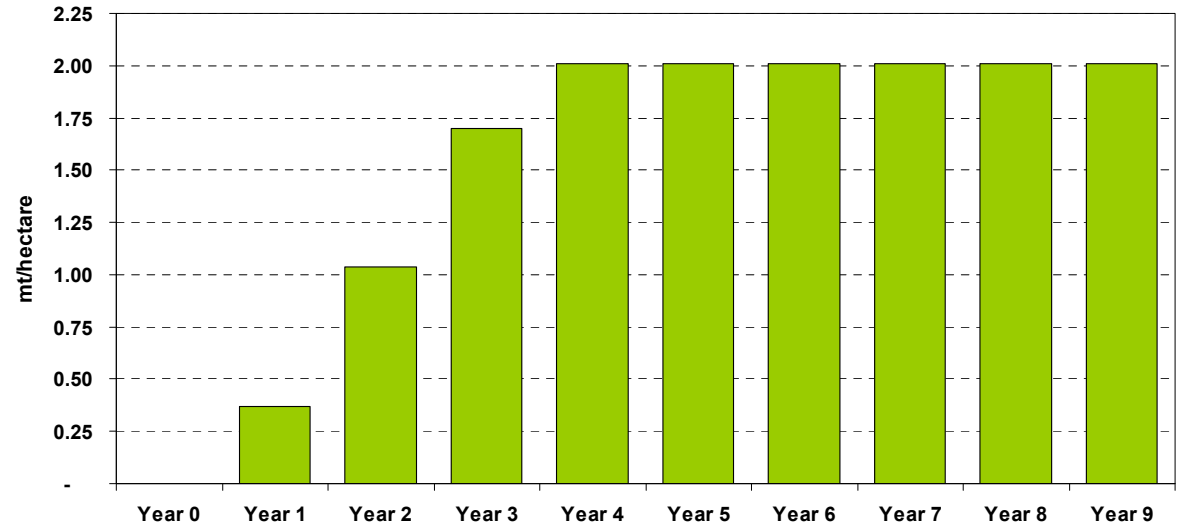
The following production forecasts are based upon 17,900 hectares of land under active cultivation in the Northern Region near Tamale by 2010. Figures used for yield capacities are based upon research undertaken at the test farm and from pilot testing. For more information about how the yield capacities have been identified, please refer to section 5.9 of this document.

ACCUMULATED CULTIVATED LAND AREA (BEGINNING OF YEAR)



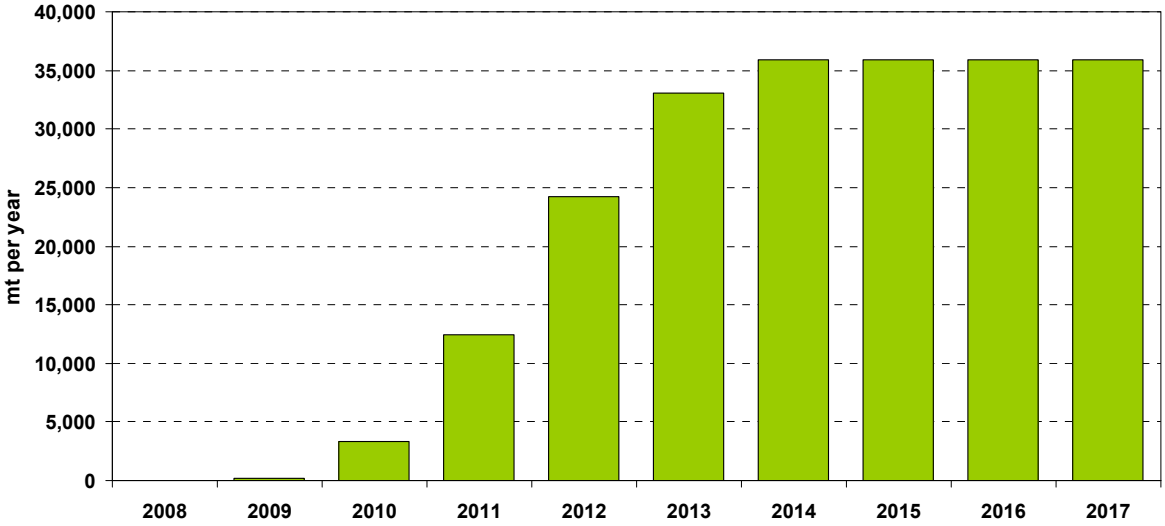
The yield of jatropha trees are expected to reach full maturity four years after planting. The research undertaken at the test farm indicates a yield capacity of approximately one metric ton of jatropha oil per hectare after two years rising to a maximum of two metric tons in year four and beyond.

LAND YIELD (TREE PLANTED BEGINNING OF YEAR 0)



Based on cultivation of 17,900 hectares of land with a yield capacity of two metric tons of oil per hectare, a production rate of 36,000 metric tons per annum of jatropha oil is forecasted by 2013. This is equivalent to 680 bopd oil production.

JATROPHA OIL PRODUCTION (MT/YR)



5.12.2 *Long Term financial forecast*

The Company's long term financial forecasts based on cultivation of 17,900 hectares of land are given in the tables below. Numbers are based on an FOB Tema price of NOK 700 per metric ton of oil.

Consolidated historical financial figures shown below have not been audited.

FORECAST HARVEST SCHEDULE AND CASH FLOW SUMMARY FOR THE PERIOD Q1 2009 – Q4 2011

HARVEST SCHEDULE

	Q1 09	Q2 09	Q3 09	Q4 09	Q1 10	Q2 10	Q3 10	Q4 10	Q1 11	Q2 11	Q3 11	Q4 11
Harvest (mt oil)	0	0	103	44	0	0	2,354	1,009	0	0	8,735	3,744
Value of harvest	0	0	72,224	30,953	0	0	1,647,873	706,231	0	0	6,114,767	2,620,614

CASH FLOW SUMMARY

	Q1 09	Q2 09	Q3 09	Q4 09	Q1 10	Q2 10	Q3 10	Q4 10	Q1 11	Q2 11	Q3 11	Q4 11
Cash revenue												
	0	**0**	**0**	**72,224**	**30,953**	**0**	**0**	**1,647,873**	**706,231**	**0**	**0**	**6,114,767**
Opex												
Overhead	500,000	500,000	500,000	500,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000
Opex farm - cultivation and plantation	186,478	186,478	186,478	186,478	328,207	328,207	328,207	328,207	414,207	414,207	414,207	414,207
Harvesting	2,000	2,000	11,796	11,796	16,000	16,000	99,265	99,265	34,000	34,000	472,122	472,122
Processing	2,125	2,125	10,189	5,581	4,250	4,250	20,378	11,162	10,625	10,625	50,945	27,905
Storage	30,000	30,000	30,000	30,000	48,000	48,000	48,000	48,000	54,000	54,000	54,000	54,000
Logistics	0	0	9,658	6,439	0	0	206,035	90,140	0	0	766,193	328,369
Sum opex	**720,603**	**720,603**	**748,121**	**740,294**	**821,457**	**821,457**	**1,126,885**	**1,001,774**	**937,832**	**937,832**	**2,182,467**	**1,721,603**
Cost of planting team	**0**	**360,000**	**600,000**	**90,000**	**405,000**	**625,800**	**0**	**0**	**0**	**0**	**0**	**0**
Capex												
Buildings, storage and training facilties	125,000	125,000	125,000	125,000	0	0	0	0	0	0	0	0
Additional cultivation equipment	982,260	0	0	0	0	0	0	0	0	0	0	0
Equipment and machinery - farm	1,680,000	0	0	0	0	0	0	0	0	0	0	0
Harvesters	0	120,000	0	0	0	840,000	0	0	0	1,080,000	0	0
Processing	0	170,000	0	0	0	170,000	0	0	0	510,000	0	0
Sum capex	**2,787,260**	**415,000**	**125,000**	**125,000**	**0**	**1,010,000**	**0**	**0**	**0**	**1,590,000**	**0**	**0**
Net cash flow before financing and tax	**-3,507,863**	**-1,495,603**	**-1,473,121**	**-883,069**	**-1,195,503**	**-2,457,257**	**-1,126,885**	**646,098**	**-231,600**	**-2,527,832**	**-2,182,467**	**4,393,164**
Accumulated cash	7,230,851	5,735,248	4,262,127	3,379,057	2,183,554	-273,702	-1,400,587	-754,489	-986,089	-3,513,921	-5,696,388	-1,303,224

FORECAST CASH FLOW STATEMENT FOR TH E PERIOD 2009 – 2016 (17,900 HECTARES)

Million USD	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E
EBITDA	(2,6)	(1,8)	1,6	7,9	13,6	16,4	17,5	17,8
Net financial items	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Change in working capital	(0,3)	(0,3)	(0,6)	(0,4)	(0,3)	(0,1)	0,3	0,0
Cash tax	0,0	0,0	0,0	(1,0)	(3,8)	(4,5)	(4,9)	(5,0)
Cash flow - operating activities	**(2,9)**	**(2,1)**	**1,0**	**6,6**	**9,5**	**11,7**	**12,9**	**12,8**
Capex	(4,5)	(2,0)	(1,6)	(0,7)	(1,5)	(0,2)	0,0	0,0
Cash flow - investing activities	**(4,5)**	**(2,0)**	**(1,6)**	**(0,7)**	**(1,5)**	**(0,2)**	**0,0**	**0,0**
Cash flow - financing activities	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Cash flow of period	(7,4)	(4,1)	(0,5)	5,9	8,0	11,6	12,9	12,8
Opening balance cash	10,7	3,4	(0,8)	(1,3)	4,6	12,6	24,2	37,1
Closing balance cash	**3,4**	**(0,8)**	**(1,3)**	**4,6**	**12,6**	**24,2**	**37,1**	**49,9**

FORECASTS FOR EBITDA, EBIT AND NET INCOME FROM OPERATIONS FOR THE PERIOD 2007 – 2016 (17,900 HECTARES)

Million USD	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E
Revenues	**0,1**	**1,7**	**6,8**	**14,5**	**21,3**	**24,5**	**25,2**	**25,2**
SG&A	(2,0)	(1,7)	(1,7)	(1,7)	(1,7)	(1,7)	(1,7)	(1,7)
COGS	(0,7)	(1,7)	(3,5)	(4,9)	(6,0)	(6,5)	(5,9)	(5,7)
EBITDA	**(2,6)**	**(1,8)**	**1,6**	**7,9**	**13,6**	**16,4**	**17,5**	**17,8**
D&A	0,0	(0,5)	(0,7)	(0,9)	(1,0)	(1,2)	(1,2)	(1,2)
EBIT	**(2,6)**	**(2,2)**	**1,0**	**7,0**	**12,6**	**15,2**	**16,3**	**16,5**
Financial income	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Financial expense	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Net income before tax	**(2,6)**	**(2,2)**	**1,0**	**7,0**	**12,6**	**15,2**	**16,3**	**16,5**
Tax	0,8	0,7	(0,3)	(2,1)	(3,8)	(4,5)	(4,9)	(5,0)
Net income	**(1,8)**	**(1,6)**	**0,7**	**4,9**	**8,8**	**10,6**	**11,4**	**11,6**

Financial ratios	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E

FORECAST BALANCE SHEET FOR THE PERIOD 2007 – 2016 (17900 HECTARES)

Million USD	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E
Deferred tax asset	0,8	1,4	1,2	-	-	-	-	-
Fixed assets	8,2	9,8	10,7	10,5	11,0	10,0	8,7	7,5
Financial non-current assets	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Inventories	0,3	0,6	1,2	1,6	1,9	2,0	1,7	1,7
Accounts receivable	-	-	-	-	-	-	-	-
Other receivables	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1
Cash and eqvivalents	3,4	(0,8)	(1,3)	4,6	12,6	24,2	37,1	49,9
Total assets	**13,8**	**12,2**	**12,9**	**17,8**	**26,6**	**37,2**	**48,6**	**60,2**
Equity	13,6	12,1	12,8	17,7	26,5	37,1	48,5	60,1
ST interest bearing debt	-	-	-	-	-	-	-	-
Accounts payable	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Other current liabilities	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
Total equity and liabilities	**13,8**	**12,2**	**12,9**	**17,8**	**26,6**	**37,2**	**48,6**	**60,2**

Balance sheet - assumptions	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E

Balance sheet - financial ratios	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E

5.12.3 *Financing requirements*

Based upon the current business plan and cash flow projections, BioFuel has identified a total funding requirement for the 17,900 ha planting campaign for the Northern Region near Tamale of NOK 110-130 million. The remaining NOK 30-50 million after the Private Placement may be financed either through additional equity issues, debt financing, lease arrangements or other financing solutions.

5.13 Non-core Opportunities

A large scale plantation of jatropha curcas will have a wide range of alternative non-core products that could be utilised for optimal economic result.

5.13.1 *Carbon credits*

Use of carbon credits gives two alternative options:

- Carbon sequestration (about 80% of total emission reduction)
- Fuel switching requires about 20% reduction in comparison to current use

5.13.2 *Phorbol Ester*

Jatropha crude oil contains the phorbol ester (PE) Phorbol-12-myristate-13-acetate. This chemical has a value of approx USD 3,000 pr kg.

With a potential yield of 2010 kg oil pr ha 61.25% kernel meal *0.279% PE = USD 10,305 per hectare.

5.13.3 *Glycerine*

After producing the methyl ester in a transesterification process one is left with a by-product of glycerine. This can be sold as a raw product.

A 1:10 ratio of glycerine to raw oil with a value of EUR 100-120 per ton, gives a value of approximately EUR 20-24 per hectare.

When selling crude oil the glycerine value will be a part of the value for the raw oil since the by-product will be part of the transesterification process to produce a methyl ester to blend in biodiesel.

5.13.4 *Kernel pressed seedcake as animal feed*

Kernel meal from the Jatropha Curcas contains toxic substances that need to be removed, as well as anti-nutrients that need to be converted by heating before use for animal feed. Every kilo of oil extracted yields about 0.75 kg of kernel meal of 60% high biological value protein

Jatropha meal valued for protein content could be valued at USD 400 MT^1. Per hectare this would then give an additional value of 2010 kg oil*0.75 kg kernel meal pr oil kg* USD 400 = USD 60,300 per hectare.

5.13.5 *Power generation*

Another by-product of the production process are cuttings and other biomass, such as the husk and shell

Husk

Properties 14.5 MJ/kg
26.5% of fruit weight

Shell

Properties 19.5 MJ/kg
38.75% of fruit weight

Total biomass would be 3,641kg of shell and husk per hectare.

6 Legal structure

6.1 About the Company

BioFuel AS is a Norwegian company incorporated under the laws of Norway and subject to Norwegian law. The Company is registered with the Norwegian Register of Business Enterprises under the registration number 991 537 201.

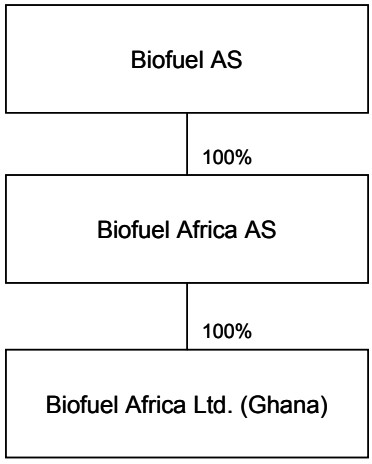
The registered address of the Company is:

BioFuel AS
Verven 12C
NO-4014 Stavanger
Tel: +47 51 89 13 13
Web site: www.biofuel.no
E-mail: info@biodiesel.nu

6.2 Company Structure

The BioFuel group is today organised through BioFuel AS as a holding company with a 100% ownership of BioFuel Africa AS (a single purpose company in Norway) that again owns BioFuel Africa Ltd 100% in Ghana.

BIOFUEL AS, LEGAL STRUCTURE



7 Board and management

7.1 Board of Directors

The board of directors of BioFuel AS comprises the following persons.

Jan Reinås (64) – Chairman BioFuel AS (0 shares. 500,000 options at strike price NOK 6)
Mr Reinås became Chairman of the Board of BioFuel in October 2007. He was Chairman of Hydro ASA from 2004 to 2007. He was CEO of the paper group Norske Skog from 1994 to the end of 2003, and has also worked as CEO of Scandinavian Airlines.

Arne Helvig (35) – Board member and VP Business development, BioFuel AS (1,871,667 shares)
Mr Helvig is a co founder of the Company. He has 12 years experience as sales and marketing manager for several companies, the last six years of which as area representative for AstraZeneca in Rogaland and Agder

Finn Byberg (47) – Board Member and Responsible for land contracting BioFuel AS (2,199,267 shares)
Mr Byberg is a co founder of the Company. He worked for 20 years in Telenor before becoming Sales and Marketing Manager for Comuniq, a position he held for five years.

Odd Even Bustnes (38) – ***Board member, BioFuel AS (0 shares)***
Mr Bustnes is administrative director of Perennial Bioenergy AS. He previously worked for McKinsey where he focused on energy projects and at the Rocky Mountain Institute in the USA.

Stian Vemmestad (36) – ***Board member, BioFuel AS (0 shares)***
Mr Vemmestad is Managing Director of Såkorninvest II AS. His previous experience includes the position on CFO in SAGA Oil ASA and Allianse ASA. He has also worked as Manager of Allianse Provider ASA and in sales and sales management for Telenor, Compaq Computers and NBC.

7.2 Management

The Company's Management team in Norway comprises the following persons:

Johan Fredrik Dahle (44) – CEO BioFuel AS (0 shares)
Mr Dahle joined BioFuel AS in May 2008. He is the former CEO of EWOS Group, an international producer of fish feed and has also worked as CFO in NorAqua, Head of Finance and business development in Fasett (media), Controller in Schlumberger and Controller in Norsk Hydro.

Steinar Kolnes (43) – COO BioFuel AS (2,165,167 shares)
Mr Kolnes is a co-founder of the Company. He is an automation engineer and has over 20 years experience in IS / IT. He has worked as CEO of Comuniq and has long experience within farming and complex sales to third world countries. Mr Kolnes holds four approved patents.

8 Share capital and shareholder matters

8.1 Share capital

There is only one class of shares in Biofuel AS, and one share carries one vote at the Company's General Meeting. The Company's shares are registered in the Norwegian electronic shares registry, VPS, with the securities number ISIN NO 001 0397888.

As of the date of the Information Memorandum, there are 17,826,402 shares outstanding in Biofuel AS. Par value is NOK 0.013 per share and NOK 231,743.23 in total.

There are also 500,000 options outstanding with a strike price of NOK 6.00 and an expiry date of 28 February 2010. All of the options are held by the Chairman of the Board, Jan Reinås.

In the private placement of shares to new investors in November 2007, there were 3,350,001 new shares subscribed for and issued at a price of NOK 6.00 per share. The subscribers in that private placement were granted a dilution protection mechanism, which will take effect if the Company should decide to conduct a subsequent issue of shares with a subscription price lower than NOK 6.00 per share prior to 31 December 2008. In any such share issue the November 2007 subscribers will be issued a number of new shares at no cost such that the value of the new shares they receive, valued at the new lower subscription price, is equal to the November 2007 subscribers' loss, where their loss is equal to the number of shares they subscribed for in November 2007 multiplied by the difference between NOK 6.00 and the new subscription price, up to a maximum of NOK 2.00 per share.

As an example, for clarification purposes only, if a share issue was conducted at NOK 4.00 per share in November 2008, the November 2007 new investors would be awarded 1,675,000 shares at no cost, consequently diluting other shareholders.

8.2 Transferability

Biofuel AS is a stock company ("AS") governed by the Norwegian stock company law ("Aksjeloven"), as opposed to a public stock company (an "ASA"), which would be governed by the Norwegian public stock company law ("Almennaksjeloven"). "Aksjeloven" dictates that existing shareholders have a first right of refusal in any share trade unless otherwise is specified in the company's articles of association. In the case of Biofuel AS, the Company's Articles of Association state that the Company's shares shall be freely transferable without first right of refusal for existing shareholders. The Articles of Association are presented in Appendix 1.

There is a shareholder agreement in place between the Company, Perennial, Arne Helvig, Steinar Kolnes and Finn Byberg. This shareholder agreement has articles that restrict the trading of shares for the parties. If the contemplated Transaction takes place, this shareholder agreement will be terminated.

The Term Sheet, which will be distributed to interested investors, will include the terms relating to transferability of shares to be put in place after the transaction.

The shares are not listed on any regulated marketplace. The Company has not entered into any market-making agreements.

8.3 Authorisations

The Board of Directors has been granted authority by the General Meeting on 23 November 2007 to resolve share issues of a size up to NOK 115,871.61 in par value, which corresponds to approximately 8.9 million shares. This authorisation expires on 23 November 2009.

Larger share issues than what the Board of Directors has authorisation to resolve must be resolved by the General Meeting of shareholders with a supermajority vote.

8.4 Shareholder Structure

BioFuel AS currently has 52 shareholders. The largest shareholder is Perennial AS with as shareholding of 6,352,233 shares (35.63%). A list of the largest shareholders as of the date of this Information Memorandum is shown in the table below.

SHAREHOLDER STRUCTURE OF BIOFUEL AS PER 25 NOVEMBER 2008

Shareholder	No. of shares	% shareholding
PERENNIAL AS (formerly Norfuel AS)	6,352,233	35.63%
DISCOVERY CHANNEL INVEST (Finn Byberg)	2,199,267	12.34%
KOLCON (Steinar Kolnes)	2,165,167	12.15%
HELCON (Arne Helvig)	1,871,667	10.50%
L GILL-JOHANNESSEN AS	830,000	4.66%
VICAMA AS	500,000	2.80%
ARNE MARTINSEN	500,000	2.80%
BJARTE TUNOLD	400,000	2.24%
IVENTURE AS	360,000	2.02%
KLOSTERGÅRDEN AS	200,000	1.12%
ALTO INVEST AS	200,000	1.12%
BIOFUEL AS	200,000	1.12%
Total 12 largest shareholders	**15,778,334**	**88.51%**
Others	2,048,068	11.49%
Total	**17,826,402**	**100.00%**

The founders of the company hold a total of 6,236,101 shares, equivalent to 34.98% through the companies Discovery Channel Invest, Kolcon, and Helcon.

Historical Share Transactions

The table below sets forth the changes in the Company's share capital for the past 3 years.

HISTORICAL SHARE TRANSACTIONS

Date	New shares	Total Outstanding	Price (NOK)	Paid in capital (NOK)	Comment
Nov. 2005	5,965,000	5,965,000	0.015	89,475.00	Founding shares
Feb.-Apr. 2006	898,500	6,863,500	1.015	911,977.50	Diverse private investors
May. 2006	150,000	7,013,500	2.015	302,250.00	Private investor
Aug.2006-Jun.2007	1,110,668	8,124,168	3.018	3,352,064.00	Diverse private investors
Jun.-Aug. 2007	2,708,056	10,832,224	2.231	6,040,620.80	Perennial AS
Nov. 2007	320,521	11,152,745	3.139	1,006,045.83	Converted loan by Perennial
Nov. 2007	322,019	11,474,764	3.139	1,010,747.73	Converted loan by Perennial
Nov. 2007	3,350,001	14,824,765	6.000	20,100,006.00	Various private investors including NOK 3 mill from founders
Nov. 2007	3,001,637	**17,826,402**	3,998	11,999,999.93	Option exercised by Perennial AS
Total				**44,813,186.79**	

Patents

The Company has ownership in one pending patent 'Invention entitled device for a fuel system at an engined powered vehicle'. This patent is not expected to have significant value for the Company.

8.5 Auditors and Advisors

8.5.1 *Auditor*

The Company's auditor is PricewaterhouseCoopers AS, Forus Atrium, 4313 Sandnes, Norway. PricewaterhouseCoopers AS has been the Company's auditor since July 2007. The Company has never changed its auditor.

8.5.2 *Financial Advisor*

The Manager for the Transaction described in this document is First Securities AS, Fjordalléen 16, Aker Brygge, P.O. Box 1441 Vika 0155 Oslo, Norway.

8.5.3 *Legal counsel*

The Company's legal counsel is PricewaterhouseCoopers Legal and Bentsi-Enchill Letsa & Ankomah in Ghana.

Due diligence counsel in connection with the Transaction is Arntzen de Besche Advokatfirma AS in Norway engaged by First Securities.

8.6 Shareholder loan

In July 2008, the main shareholder, Perennial, granted a short-term loan of NOK 7.5 million to the Company to fund its operations while finding new quality investors.

The loan matures on 1 February 2009 and the Company pays 10% interest.

8.7 Related party transactions

The Company has engaged the services of Bjørn Tjomsland and Odd Even Bustnes from Perennial Bioenergy AS as consultants in connection with preparation for the Transaction.

The Company rents offices owned by Finn Byberg and storage facilities from Steinar Kolnes at market terms.

9 Technical Properties of Jatropha Oil

The European Norm (CEN) allows 5% biodiesel blend in EN590 compliant fossil diesel without labeling. With some exceptions car manufacturers do not guarantee higher than 5% (B5) biodiesel blend. The European Automobile Manufacturers Association has committed that by 2010 all new European car models will run on B7 allowing 7% biodiesel blend or E10.

Synthetic fuel made from renewable plant oils can be made fully compliant with conventional mineral fuel. Soy Methyl Ester is the most used stock for biodiesel in US and Rapeseed Methyl Ester is the most used stock for Bio diesel in EU. Therefore, these two have been used as comparison to Jatropha Methyl Ester.

Criteria for a diesel for use in a modern high pressure direct injection turbo diesel engine:

- Iodine number (IN) indication for fuel stability. Jatropa and rapeseed are both satisfactory. Soybean is poor on this point.

- Net calorific value indication for energy content. Here jatropha seems to be lower then the other two, but this is still under consideration.

- Cold filter plugging point (CFPP) indication for winter operability. Jatropha is equal to soy bean, but less good then rapeseed. But even diesel has to be blended with karosene and other media in the winter.

- Cetane number indication for ignition behaviour. Jatropha is better then its competition.

- The distillation curve indication for smoothness of combustion. Rapeseed has big problems here, with starting ignition point at 300C, versus diesel with an ignition point at 100C rising linearly until 320C. Jatropha is not ideal here, but better then rapeseed and soy.

Performance of all fatty acid methyl esters are lower then diesel. But using jatropha gives least power loss with 4.7% better performance then soy, and 13.8% higher engine performance then rapeseed.

Weighting the different properties for all relevant Methyl Esters from fatty acids from bio oils can be summarised from in the words of Austrian Biofuels Institute ”The single “ideal” fatty acid profile is not (yet) fully defined although Jatropha comes very close to the ideal one.”

10 Sustainability

BioFuel's vision and business plan both emphasise the need for a sustainable operation and management of the company.

BioFuel must follow and exceed the international relevant standards for sustainability as well as its internal sustainability standards. BioFuel's ambition is to comply with Round table on Sustainable BioFuel and is part of a selected group of companies that are used for evaluating the proposals in an operational context. BioFuel also needs to exceed the Proposal of the European Commission (Renewable Energies Directive) demands on biofuel sustainability.

The Roundtable on Sustainable Biofuels is an international initiative bringing together farmers, companies, non-governmental organisations, experts, governments, and inter-governmental agencies concerned with ensuring the sustainability of biofuel production and processing. The Roundtable's aim is to of achieve global, multi-stakeholder consensus around the principles and criteria of sustainable biofuel production. UNCTAD (United Nations Conference on Trade and Development) is supporting this initiative in order for the trade to have a tool for verification of sustainability in biofuel projects.

BioFuel is actively working together and in collaboration with Environmental Protection Agencies (EPA) in its operations and has met and exceeded the demands from the EPA within the Ghana operation in their recent evaluation in autumn 2008.

11 Market Overview and Framework

11.2 The International Market

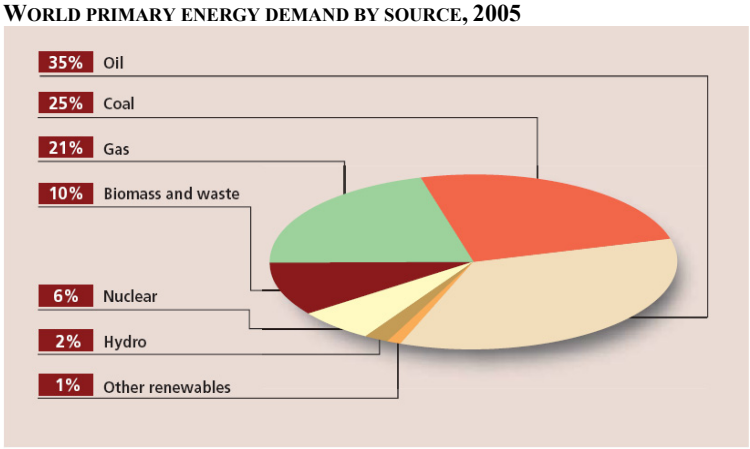
11.2.1 *Market size*

The world's total primary energy demand amounts to about 11,400 million tonnes of oil equivalent per year. Fossil fuels are by far the dominant source of primary energy with oil, coal and gas together supplying more than 80% of the total. Biomass, agricultural, forest and organic wastes and residues, accounts for 10%.

Within the 10% of energy coming from biomass, liquid biofuels account for only 1.9%, this mainly within the transport sector. However, this represents a rapid growth in terms of both volume and demand for biofuel usage as transport energy which is expected to growing significantly over the coming years due in large part to a strong political motivation to reduce greenhouse emissions.

In 2007, world output of biodiesel was approximately 8.4 million metric tons with a value of approximately USD 7 billion. By 2010 total biodiesel production could be as high as 20 million metric tons, reaching 24 billion litres by 2017. This growth will be driven by the implementation of mandates and tax concessions created to promote biofuel usage.

WORLD PRIMARY ENERGY DEMAND BY SOURCE, 2005



Source: IEA, 2007.

11.2.2 *Legislation*

Around the world legislation is being passed to ensure that usage of biofuels will increase rapidly over the next 10-15 years. Two of the main driving forces behind the policies promoting biofuel development have been concerns over energy security and a desire to reduce greenhouse gas emissions.

Some examples of legislation are:

- EU targets: 10% biofuel by 2010, mandatory target proposed by the EU commission
- China target: 15% by 2020
- Brazil target: 20-25% Ethanol in petrol and 5% in diesel by 2010
- German mandate: 6.75% by 2010, rising to 8% by 2015 and 10% by 2020
- USA mandate: 36 billion gallons by 2022, 21 billion from advanced biofuels
- De-taxation and mandate for biofuel in most EU/EEA countries:
- The trend is mandate instead of de-taxation and penalty for not complying

Given the expanding legislative framework for a shift away from fossil fuels to use of biofuels, high quality and cost effective sources of biofuel must be identified and developed.

11.3 Overview of Non-fossil Fuels

11.3.1 *The Market for Biofuels*

Liquid biofuel development is being driven by a combination of economic and policy factors. Policy support to the production and use of ethanol and biodiesel and the rapid rise in petroleum prices have made biofuels more attractive as substitutes for petroleum-based fuels. In the period 2000-2007, production of biodiesel increased more than ten-fold to over 10 billion litres, whilst ethanol production tripled during the same period.

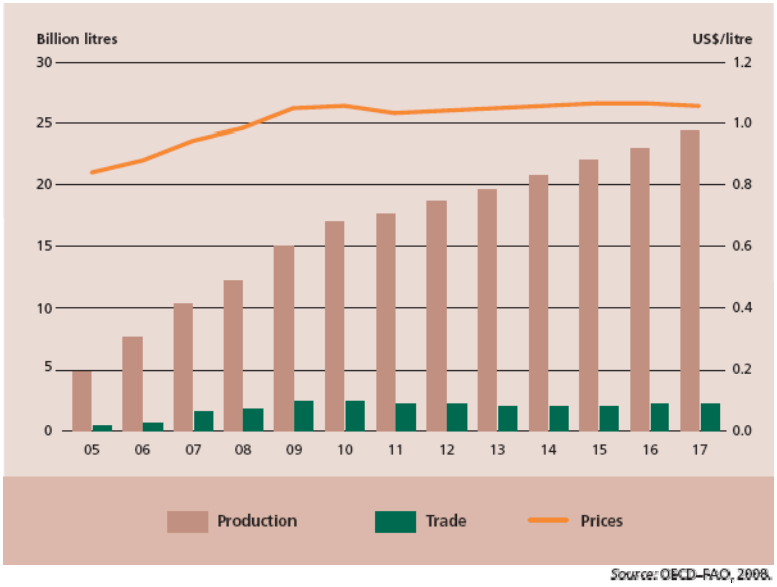
The International Energy Agency ("IEA") foresees a significant expansion of the role of liquid biofuels for transport. Nevertheless, when viewed in the context of both total energy use and total energy use for transport, it will remain relatively limited.

Transportation currently accounts for 26% of total energy consumption, 94% of which is supplied by petroleum and only 0.9% by biofuels. The IEA foresees an increase of this share to 2.3% by 2015 and 3.2% by 2030, corresponding to an increase in the total biofuels used in transport sector from 19 million mtoe in 2005 to 57 million in 2015 and 102 million in 2030. These projections are however surrounded by a high degree of uncertainty mainly because of uncertainties concerning fossil fuel prices, biofuel policies and technological developments.

Biodiesel

World biodiesel prices are expected to remain well above the production costs of fossil diesel, in the range of USD 104-106 per hectolitre for most of the period up to 2017.Global production is set to grow, reaching 24 billion litres by 2017. The main producers of liquid biofuels are expected to remain Brazil, the EU and the USA but production is also expected to expand in a number of developing countries such as Indonesia and Malaysia. In some African countries and India there has also been investment directed towards stimulating biodiesel production from jatropha curcas on marginal lands.

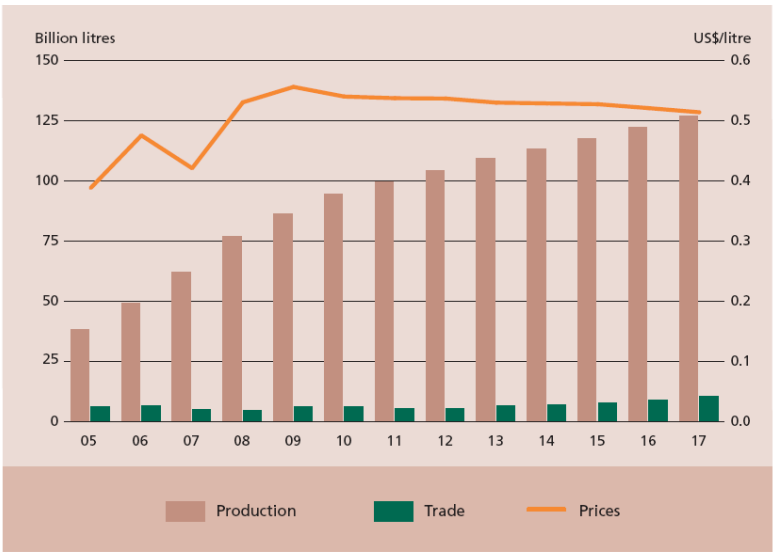
GLOBAL BIODIESEL PRODUCTION, TRADE AND PRICES, WITH PROJECTIONS TO 2017



Ethanol

Production of ethanol is projects to more than double by 2017, reaching 127 billion litres compared with 62 billion litres in 2007. Global ethanol prices are expected to rise in the short term levelling off to around USD 51 per hectolitre as production capacity expands. Brazil and the USA will retain their positions as the largest ethanol producers during the period to 2017 at the same time as other countries see rapid expansion in production. In the EU, total ethanol production is projected to reach 12 billion litres by 2017, still well below projected consumption of 15 billion litres.

GLOBAL ETHANOL PRODUCTION, TRADE AND PRICES, WITH PROJECTIONS TO 2017



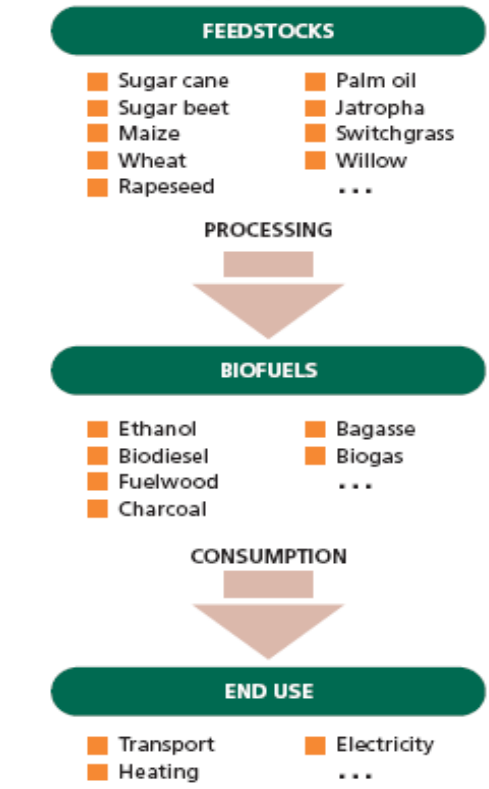
Source: OECD–FAO, 2008.

11.3.2 *Biofuel feedstocks*

Biofuels are energy carriers that store the energy derived from biomass. A wide range of biomass sources can be used to produce bioenergy in a variety of forms, including the residues from industry, agriculture and forestry. Primary biofuels, unprocessed biofuels, are directly combustible organic materials. Secondary biofuels, processed biofuels, take the form of solids, liquids or gases and can be used for a wider range of applications.

These secondary biofuels are produced from a range of feedstocks. See the diagram for an overview of agricultural feedstocks and the resulting biofuels.

BIOFUELS FROM FEEDSTOCK TO END USE



Source: FAO.

Biodiesel feedstocks

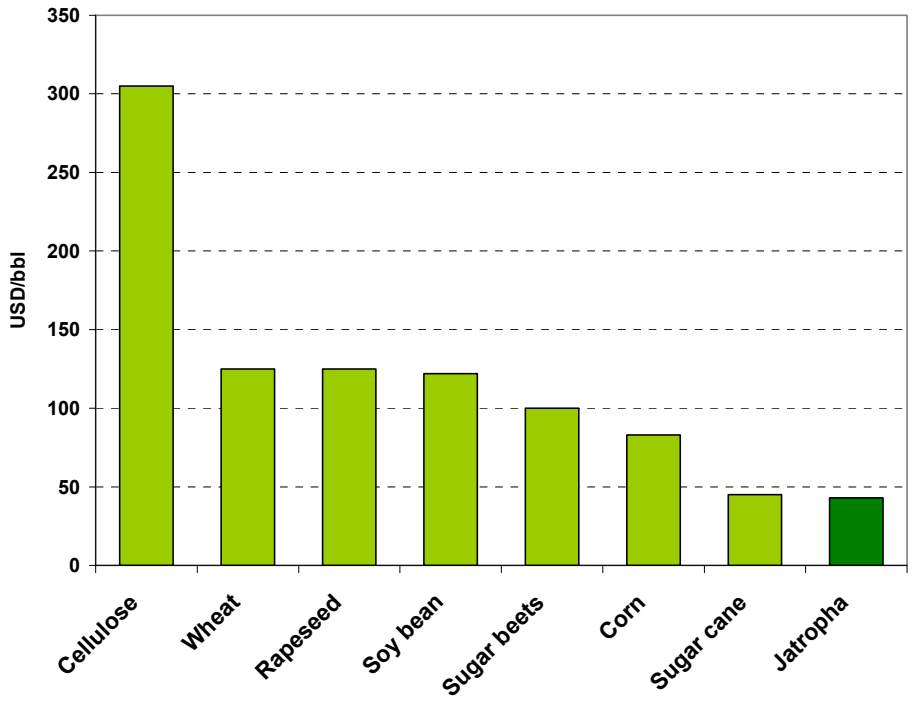
Liquid biofuels used for transportation are mostly produced using agricultural and food commodities as feedstocks. Oil for biodiesel production can be extracted from almost any oilseed crop; the most popular sources are rapeseed in Europe and soybean in Brazil and USA. In tropical and subtropical countries, biodiesel is produced from palm, coconut and jatropha oils.

Source: FAO.

11.4 Cost of Production

Production of biodiesel is dominated by the EU, followed by the USA and with significant growth projected for Brazil, Indonesia and Malaysia.

ESTIMATED FUEL PRODUCTION COST FOR SELECTED BIOFUEL FEEDSTOCKS (NOT ADJUSTED FOR ENERGY CONTENT)



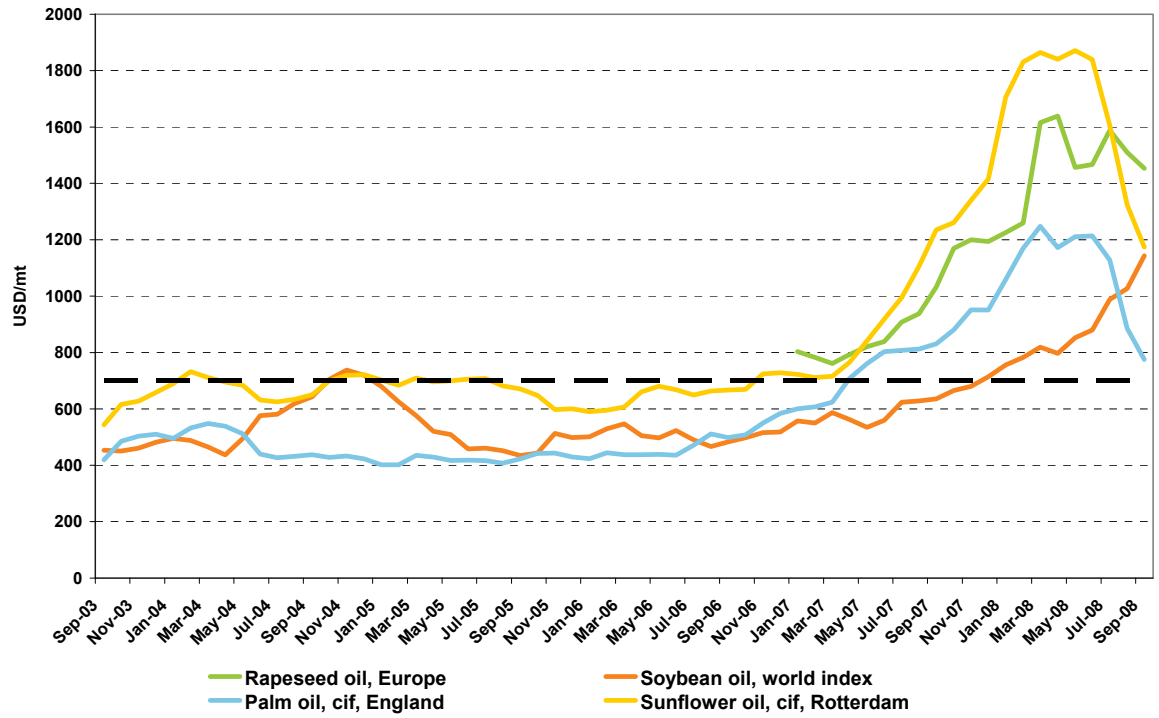
Source: Goldman Sachs

Jatropha's cost advantage over other biodiesel producing crops may be explained by:

- 2 (3) harvests per annum
- Annual sowing not required
- High land yield relative to rapeseed and soy bean
- Possible to grow jatropha on low cost land
  - Use land not suitable for other agriculture

- Bi-products:
  - Organic fertiliser
  - Carbon Credits
  - Biogas (Bio-Methane)
  - Firewood, charcoal, pellets and briquettes

MARKET PRICE OF BIODIESEL FEEDSTOCK, LAST 5 YEARS



Source: Ecowin

Reasons for price differentials

- Cold-flow temperatures
  - Jatropha better than soy oil and palm oil, but worse than rapeseed oil
- Compliance with EN14214 biodiesel standard
  - Jatropha, palm and rapeseed oil is 100% EN14214 compliant, unlike soy oil
- Ethical considerations
  - Jatropha does not compete with food production, unlike soy, palm and rapeseed oil

It is expected that jatropha oil price will be at premium price relative to soy and palm oil, but discount relative to rape seed oil

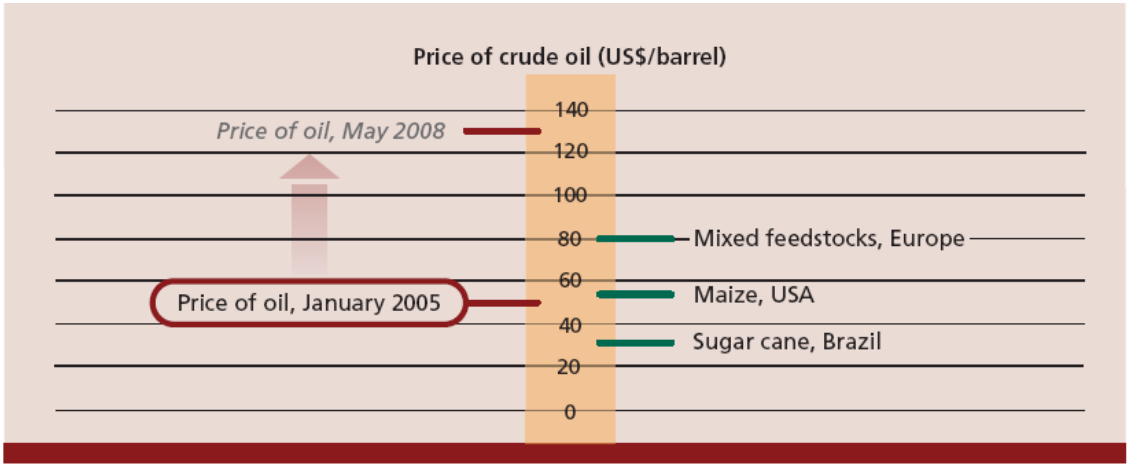
11.5 Key Market Drivers

Price of oil

Today there is still not a jatropha oil commodity market in place and price assumptions must be based on substituting products such as palm oil and rape seed oil. As a reference, palm oil as feedstock for biodiesel production has been traded at an average of USD 960 per metric ton during 2008 and crude rapeseed oil at USD 1,170 per metric ton (F.O. Licht, World Biodiesel Price Report). Today rapeseed oil prices are approximately USD 1,000 per metric ton while palm oil prices have dropped down to around USD 600 per metric ton as a consequence of reduced fossil fuel prices in combination with reduced food prices (palm oil is still mostly used in the food sector).

It is believed that the current drop in fossil fuel prices is an intermediate situation due to reduced demand related to the global financial crisis. In the longer term the Company believes economies will recover giving increased energy prices going forward. In addition the EU will enforce targets for biofuel blend for the coming years and whether they turn out to be 5, 10 or 20% it will create a large demand for sustainable and environmental friendly feedstock globally. The Company's projection for 2009 and beyond is therefore a jatropha price level of USD 700 per metric ton.

BREAKEVEN PRICES FOR CRUDE OIL AND SELECTED FEEDSTOCKS IN 2005



Source: based on data from FAO, 2006a.

Yield per hectare

Different crops vary widely in terms of biofuel yield per hectare, both across feedstocks and across countries and production systems. Variations are due both to differences in crop yields per hectare across crops and countries and to differences in conversion efficiency across crops. This implies vastly different land requirements for increased biofuel production depending on the crop and location. Currently, ethanol production from sugar cane and sugar beet has the highest yields, with sugar-cane-based production in Brazil topping the list of in terms of biofuel output per hectare and India not far behind. Yields per hectare are somewhat lower for maize, but with marked differences between yields, for example, in China and in the United States of America. The cost of producing biofuels based on different crops in different countries may show very different patterns.

The following table shows biofuel yields for different feedstocks by geographical area.

BIOFUEL YIELDS FOR DIFFERENT FEEDSTOCKS AND COUNTRIES

CROP	GLOBAL/NATIONAL ESTIMATES	BIOFUEL	CROP YIELD	CONVERSION EFFICIENCY	BIOFUEL YIELD
			(Tonnes/ha)	*(Litres/tonne)*	*(Litres/ha)*
Sugar beet	Global	Ethanol	46.0	110	5 060
Sugar cane	Global	Ethanol	65.0	70	4 550
Cassava	Global	Ethanol	12.0	180	2 070
Maize	Global	Ethanol	4.9	400	1 960
Rice	Global	Ethanol	4.2	430	1 806
Wheat	Global	Ethanol	2.8	340	952
Sorghum	Global	Ethanol	1.3	380	494
Sugar cane	Brazil	Ethanol	73.5	74.5	5 476
Sugar cane	India	Ethanol	60.7	74.5	4 522
Oil palm	Malaysia	Biodiesel	20.6	230	4 736
Oil palm	Indonesia	Biodiesel	17.8	230	4 092
Maize	United States of America	Ethanol	9.4	399	3 751
Maize	China	Ethanol	5.0	399	1 995
Cassava	Brazil	Ethanol	13.6	137	1 863
Cassava	Nigeria	Ethanol	10.8	137	1 480
Soybean	United States of America	Biodiesel	2.7	205	552
Soybean	Brazil	Biodiesel	2.4	205	491

Sources: Rajagopal *et al.*, 2007, for global data; Naylor *et al.*, 2007, for national data.

12 Definitions and Glossary of Terms

The following definitions and glossary apply throughout this Information Memorandum unless otherwise dictated by the context.

B5	A 95/5 mix of conventional diesel to biodiesel
B7	A 93/7 mix of conventional diesel to biodiesel
Bbl	Barrel of oil. 6.9 barrels = one metric ton
BioFuel	BioFuel AS and its subsidiaries
Board	The board of directors of the Company
Board of Directors	The board of directors of the Company
Bopd	Barrels of oil per day
CEN	European Committee for Standardisation
Company	BioFuel AS and its subsidiaries
E10	Fuel that is 10% percent ethanol mixed with 90% petrol
EN590	EU/EEA EN590 directive describing physical properties that all diesel fuel must meet if it is to be sold within the region
EPA	Environmental Protection Agency, Ghana
EU	European Union
First Securities AS	Manager and Financial Advisor for the Transaction
FOB	Free-on-board
Ha	Hectare of land
IFRS	International Financial Reporting Standards
Information Memorandum	This document, including all appendices hereto
Manager	First Securities AS
MNOK	Million Norwegian kroner
MT	Metric Ton = 1,000,000 g = 1,000 kg = 1 Mg
Mtoe	Million tons of oil equivalent
NGAAP	Norwegian Generally Accepted Accounting Principles
NOK or Norwegian kroner	Norwegian Kroner, the lawful currency of Norway
Norwegian Code of Practice for Corporate Governance	Norwegian Code of Practice for Corporate Governance dated 8 December 2005
Register of Business Enterprises	The Norwegian Register of Business Enterprises, in Norwegian "Foretaksregisteret"
Share Capital	The total amount of registered and outstanding Shares in BioFuel AS
Shareholder	Owner of shares in BioFuel AS
Shares	Ordinary shares of the Company
The Transaction	The financing transaction as described in this document
The Company	BioFuel AS and its subsidiaries
USD	United States Dollar

13 Appendices and Additional Information

13.1 Appendices

The following appendices are included in this document:

Appendix 1: Articles of Association
Appendix 2: Balance Sheet and Profit and Loss Account for BioFuel AS for 2007
Appendix 3: Balance Sheet and Profit and Loss Account for BioDiesel Norge AS for 2007
Appendix 4: Balance Sheet and Profit and Loss Account for BioDiesel Norge AS for 2006
Appendix 5: Terms and Conditions of Environmental Approval
Appendix 6: Yield of Jatropha Curcas plantation report

13.2 Third Party Information

The information in this Information Memorandum that has been sourced from third parties has been accurately reproduced and as far as the Company is aware and able to ascertain from information published by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading.

All information included herein has been provided by the Company unless otherwise stated. Information provided by Perennial Bioenergy AS, has been produced at the Company's request when preparing this Information Memorandum.

Appendix 1: Articles of Association

VEDTEKTER

Oppdatert 23. november 2007
for
BioFuel AS

§ 1 Selskapets firmanavn er BioFuel AS.

§ 2 Selskapets forretningskontor er i Stavanger kommune.

§ 3 Selskapets formål er: Fremstilling, Kjøp og Salg av biodrivstoff og biobrensel, samt eie og investere i andre selskaper innenfor fornybar energi.

§ 4 Selskapets aksjekapital skal være NOK 231.743,23 fordelt på 17.826.402 aksjer å kr. 0,013

§ 5 Selskapets aksjer skal være registrert i Verdipapirsentralen

§ 6 Selskapet skal ha 2 – 7 styremedlemmer etter generalforsamlingens nærmere bestemmelse. Selskapet tegnes av minst to styremedlemmer i felleskap. Styret kan meddele prokura.

§ 7 Aksjene er fritt omsettelige uten krav til samtykke fra selskapet og uten forkjøpsrett for aksjeeiere.

§ 8 Hvert år innen utgangen av juni måned skal ordinær generalforsamling avholdes. Innkalling skjer skriftlig med to ukers varsel. Varselet skal angi de sakene som skal behandles. Den ordinære generalforsamling skal behandle:

1. Fastsettelse av resultatregnskap og balanse.
2. Anvendelse av overskuddet eller dekning av underskudd i henhold til den fastsatte balanse, samt utdeling av utbytte.
3. Valg av styre og styreformann ved utløp av funksjonstid.
4. Andre saker som i henhold til lov eller vedtekter hører under generalforsamlingen.

§ 9 For øvrig vises det til den enhver gjeldende aksjelovgivning.

Appendix 2: Balance Sheet and Profit and Loss Account for BioFuel AS for 2007

Balanse

BioFuel AS

Eiendeler	Note	2007
Finansielle anleggsmidler		
Andre fordringer	3	17 672 548
Sum finansielle anleggsmidler		17 672 548
Sum anleggsmidler		17 672 548
Omløpsmidler		
Bankinnskudd, kontanter o.l.		14 879 901
Sum omløpsmidler		14 879 901
Sum eiendeler		32 552 449

BioFuel AS Side 2

Balanse

BioFuel AS

Egenkapital og gjeld	**Note**	**2007**
Innskutt egenkapital		
Aksjekapital 17826402 á 0	2	231 743
Egne aksjer		-2 600
Overkursfond		32 143 373
Sum innskutt egenkapital		**32 372 516**
Opptjent egenkapital		
Udekket tap		-163 020
Sum opptjent egenkapital		**-163 020**
Sum egenkapital	1	**32 209 497**
Gjeld		
Kortsiktig gjeld		
Leverandørgjeld		312 703
Annen kortsiktig gjeld		30 249
Sum kortsiktig gjeld		**342 952**
Sum gjeld		**342 952**
Sum egenkapital og gjeld		**32 552 449**

Stavanger, den

Jan Audun Reinås
Styrets leder

Arne Helvig
Styremedlem

Stian Vemmestad
Styremedlem

Odd - Even Bustnes
Styremedlem

Finn Byberg
Styremedlem

Resultatregnskap

BioFuel AS

Driftsinntekter og driftskostnader	**Note**	**2007**
Salgsinntekter		382 970
Sum driftsinntekter		**382 970**
Varekostnader		348 155
Annen driftskostnad		482 849
Sum driftskostnader		**831 004**
Driftsresultat		**-448 034**
Finansinntekter og finanskostnader		
Annen renteinntekt	**3**	360 002
Annen rentekostnad		16 799
Annen finanskostnad	7	58 189
Resultat av finansposter		**285 015**
Resultat før skattekostnad		-163 020
Ordinært resultat		**-163 020**
Årsunderskudd		**-163 020**
Overføringer		
Overført til udekket tap		163 020
Sum overføringer		**-163 020**

BioFuel AS Side 1

PRICEWATERHOUSECOOPERS

PricewaterhouseCoopers AS
Forus Atrium
Postboks 8017
NO-4068 Stavanger
Telefon 02316
Telefaks 23 16 10 00

Til generalforsamlingen i BioFuel AS

Revisjonsberetning for 2007

Vi har revidert årsregnskapet for BioFuel AS for regnskapsåret 2007, som viser et underskudd på kr 163 020. Vi har også revidert opplysningene i årsberetningen om årsregnskapet og forutsetningen om fortsatt drift. Årsregnskapet består av resultatregnskap, balanse og noteopplysninger. Regnskapslovens regler og norsk god regnskapsskikk er anvendt ved utarbeidelsen av regnskapet. Årsregnskapet og årsberetningen er avgitt av selskapets styre og daglig leder. Vår oppgave er å uttale oss om årsregnskapet og øvrige forhold i henhold til revisorlovens krav.

Vi har utført revisjonen i samsvar med lov, forskrift og god revisjonsskikk i Norge, herunder revisjonsstandarder vedtatt av Den norske Revisorforening. Revisjonsstandardene krever at vi planlegger og utfører revisjonen for å oppnå betryggende sikkerhet for at årsregnskapet ikke inneholder vesentlig feilinformasjon. Revisjon omfatter kontroll av utvalgte deler av materialet som underbygger informasjonen i årsregnskapet, vurdering av de benyttede regnskapsprinsipper og vesentlige regnskapsestimater, samt vurdering av innholdet i og presentasjonen av årsregnskapet. I den grad det følger av god revisjonsskikk, omfatter revisjon også en gjennomgåelse av selskapets formuesforvaltning og regnskaps- og intern kontroll-systemer. Vi mener at vår revisjon gir et forsvarlig grunnlag for vår uttalelse.

På grunn av svakheter i selskapets forretningsrutiner og interne kontroll, har det ikke vært mulig å utføre de revisjonshandlinger vi anser nødvendige for å kunne uttale oss om fullstendigheten av andre fordringer og annen kortsiktig gjeld. Selskapet har ikke etablert rutiner for nødvendig og tidsriktig registrering av regnskapsposter eller dokumentasjon av bilag som tilfredsstiller bokføringslovens krav. Disse forhold er behandlet i brev til selskapets administrasjon og styre.

Vi mener at

- årsregnskapet, med unntak for virkningene av en eventuell justering som vi kunne ansett nødvendig hvis vi hadde hatt mulighet til å utføre de revisjonshandlinger vi anser nødvendige for å kunne uttale oss om fullstendigheten av andre fordringer og annen kortsiktig gjeld, er avgitt i samsvar med lov og forskrifter og gir et rettvisende bilde av selskapets økonomiske stilling 31. desember 2007 og av resultatet i regnskapsåret i overensstemmelse med god regnskapsskikk.
- ledelsen, med unntak av etablering av tilfredsstillende rutiner for registrering av regnskapsposter eller dokumentasjon av bilag som tilfredsstiller bokføringslovens krav, har oppfylt sin plikt til å sørge for ordentlig og oversiktlig registrering og dokumentasjon av regnskapsopplysninger i samsvar med norsk lov og god bokføringsskikk

Kontorer: Arendal Bergen Drammen Fredrikstad Førde Hamar Kristiansand Mo i Rana Molde Måløy Narvik Oslo Stavanger Stryn Tromsø Trondheim Tønsberg Ålesund
PricewaterhouseCoopers navnet refererer til individuelle medlemsfirmaer tilknyttet den verdensomspennende PricewaterhouseCoopers organisasjonen
Medlemmer av Den norske Revisorforening | Foretaksregisteret: NO 987 009 713
www.pwc.no

PRICEWATERHOUSECOOPERS

- opplysningene i årsberetningen om årsregnskapet og forutsetningen om fortsatt drift er konsistente med årsregnskapet og er i samsvar med lov og forskrifter.

Uten at det har betydning for konklusjonen i avsnittet over, vil vi presisere at:

- selskapet har ervervet egne aksjer i strid med aksjelovens kapittel 9
- selskapets årsregnskap og årsberetning ikke ble avlagt innen lovens frist.

Stavanger, 8. juli 2008
PricewaterhouseCoopers AS
Torbjørn Larsen
Statsautorisert revisor

Appendix 3: Balance Sheet and Profit and Loss Account for BioDiesel Norge AS for 2007

Balanse

BIODIESEL NORGE AS

Eiendeler	Note	2007	2006
Anleggsmidler			
Immaterielle eiendeler			
Utsatt skattefordel	4	0	31 751
Sum immaterielle eiendeler		**0**	**31 751**
Varige driftsmidler			
Driftsløsøre, inventar o.a. utstyr	8	54 150	168 190
Sum varige driftsmidler		**54 150**	**168 190**
Finansielle anleggsmidler			
Andre fordringer	3	19 312 644	0
Sum finansielle anleggsmidler		**19 312 644**	**0**
Sum anleggsmidler		**19 366 794**	**199 941**
Omløpsmidler			
Lager av varer og annen beholdning		0	347 107
Fordringer			
Kundefordringer		29 472	66 147
Andre fordringer		1 813 952	101 505
Sum fordringer		**1 843 423**	**167 652**
Investeringer			
Bankinnskudd, kontanter o.l.	9	1 155 295	177
Sum omløpsmidler		**2 998 718**	**514 936**
Sum eiendeler		**22 365 512**	**714 877**

BIODIESEL NORGE AS Side 2

Balanse

BIODIESEL NORGE AS

	Note	2007	2006
Egenkapital og gjeld			
Innskutt egenkapital			
Aksjekapital 13333333 á 0	2	133 333	100 000
Overkursfond		5 966 667	0
Sum innskutt egenkapital		**6 100 000**	**100 000**
Opptjent egenkapital			
Udekket tap		-3 624 212	-77 645
Sum opptjent egenkapital		**-3 624 212**	**-77 645**
Sum egenkapital	1	**2 475 788**	**22 355**
Gjeld			
Øvrig langsiktig gjeld		18 124 266	0
Sum annen langsiktig gjeld		**18 124 266**	**0**
Kortsiktig gjeld			
Gjeld til kredittinstitusjoner		1 294	621 423
Leverandørgjeld		348 192	67 999
Skyldig offentlige avgifter		876 743	0
Annen kortsiktig gjeld	3	539 230	3 100
Sum kortsiktig gjeld		**1 765 458**	**692 522**
Sum gjeld		**19 889 724**	**692 522**
Sum egenkapital og gjeld		**22 365 512**	**714 877**

Stavanger, den

Finn Byberg
Styrets leder

Odd-Even Bustnes
Styremedlem

Stian Vemmestad
Styremedlem

Arne Helvig
Styremedlem

Balanse

BIODIESEL NORGE AS

	Note	2007	2006
Egenkapital og gjeld			
Innskutt egenkapital			
Aksjekapital 13333333 á 0	2	133 333	100 000
Overkursfond		5 966 667	0
Sum innskutt egenkapital		**6 100 000**	**100 000**
Opptjent egenkapital			
Udekket tap		-3 624 212	-77 645
Sum opptjent egenkapital		**-3 624 212**	**-77 645**
Sum egenkapital	1	**2 475 788**	**22 355**
Gjeld			
Øvrig langsiktig gjeld		18 124 266	0
Sum annen langsiktig gjeld		**18 124 266**	**0**
Kortsiktig gjeld			
Gjeld til kredittinstitusjoner		1 294	621 423
Leverandørgjeld		348 192	67 999
Skyldig offentlige avgifter		876 743	0
Annen kortsiktig gjeld	3	539 230	3 100
Sum kortsiktig gjeld		**1 765 458**	**692 522**
Sum gjeld		**19 889 724**	**692 522**
Sum egenkapital og gjeld		**22 365 512**	**714 877**

Stavanger, den

Finn Byberg
Styrets leder

Odd-Even Bustnes
Styremedlem

Stian Vemmestad
Styremedlem

Arne Helvig
Styremedlem

Resultatregnskap

BIODIESEL NORGE AS

Driftsinntekter og driftskostnader	**Note**	**2007**	**2006**
Salgsinntekter		6 842 342	342 094
Sum driftsinntekter		**6 842 342**	**342 094**
Varekostnader		1 680 881	280 106
Lønnskostnader m.m.	**5**	4 702 369	383
Avskrivning på driftsmidler og immaterielle eiendeler	**8**	17 713	0
Annen driftskostnad	**6**	2 952 236	161 522
Sum driftskostnader		**9 353 199**	**442 011**
Driftsresultat		**-2 510 857**	**-99 917**
Finansinntekter og finanskostnader			
Annen renteinntekt		322 010	66
Annen finansinntekt	**7**	977	0
Annen rentekostnad		159 524	13 545
Annen finanskostnad	**7**	1 167 422	0
Resultat av finansposter		**-1 003 959**	**-13 479**
Resultat før skattekostnad		-3 514 816	-113 396
Skattekostnad på ordinært resultat	**4**	31 751	-31 751
Ordinært resultat		**-3 546 567**	**-81 645**
Årsunderskudd		**-3 546 567**	**-81 645**
Overføringer			
Overført til udekket tap		3 546 567	77 645
Overført fra annen egenkapital		0	4 000
Sum overføringer		**-3 546 567**	**-81 645**

PRICEWATERHOUSECOOPERS

PricewaterhouseCoopers AS
Forus Atrium
Postboks 8017
NO-4068 Stavanger
Telefon 02316
Telefaks 23 16 10 00

Til generalforsamlingen i BioDiesel Norge AS

Revisjonsberetning for 2007

Vi har revidert årsregnskapet for BioDiesel Norge AS for regnskapsåret 2007, som viser et underskudd på kr 3 546 567. Vi har også revidert opplysningene i årsberetningen om årsregnskapet, forutsetningen om fortsatt drift og forslaget til dekning av underskuddet. Årsregnskapet består av resultatregnskap, balanse og noteopplysninger. Regnskapslovens regler og norsk god regnskapsskikk er anvendt ved utarbeidelsen av regnskapet. Årsregnskapet og årsberetningen er avgitt av selskapets styre og daglig leder. Vår oppgave er å uttale oss om årsregnskapet og øvrige forhold i henhold til revisorlovens krav.

Vi har utført revisjonen i samsvar med lov, forskrift og god revisjonsskikk i Norge, herunder revisjonsstandarder vedtatt av Den norske Revisorforening. Revisjonsstandardene krever at vi planlegger og utfører revisjonen for å oppnå betryggende sikkerhet for at årsregnskapet ikke inneholder vesentlig feilinformasjon. Revisjon omfatter kontroll av utvalgte deler av materialet som underbygger informasjonen i årsregnskapet, vurdering av de benyttede regnskapsprinsipper og vesentlige regnskapsestimater, samt vurdering av innholdet i og presentasjonen av årsregnskapet. I den grad det følger av god revisjonsskikk, omfatter revisjon også en gjennomgåelse av selskapets formuesforvaltning og regnskaps- og intern kontroll-systemer. Vi mener at vår revisjon gir et forsvarlig grunnlag for vår uttalelse.

På grunn av svakheter i selskapets forretningsrutiner og interne kontroll, har det ikke vært mulig å utføre de revisjonshandlinger vi anser nødvendige for å kunne uttale oss om fullstendigheten av andre fordringer og annen kortsiktig gjeld. Selskapet har ikke etablert rutiner for nødvendig og tidsriktig registrering av regnskapsposter eller dokumentasjon av bilag som tilfredsstiller bokføringslovens krav. Disse forhold er behandlet i brev til selskapets administrasjon og styre.

Vi mener at

- årsregnskapet, med unntak for virkningene av en eventuell justering som vi kunne ansett nødvendig hvis vi hadde hatt mulighet til å utføre de revisjonshandlinger vi anser nødvendige for å kunne uttale oss om fullstendigheten av andre fordringer og annen kortsiktig gjeld, er avgitt i samsvar med lov og forskrifter og gir et rettvisende bilde av selskapets økonomiske stilling 31. desember 2007 og av resultatet i regnskapsåret i overensstemmelse med god regnskapsskikk.
- ledelsen, med unntak av etablering av tilfredsstillende rutiner for registrering av regnskapsposter eller dokumentasjon av bilag som tilfredsstiller bokføringslovens krav, har oppfylt sin plikt til å sørge for ordentlig og oversiktlig registrering og dokumentasjon av regnskapsopplysninger i samsvar med norsk lov og god bokføringsskikk

Kontorer: Arendal Bergen Drammen Fredrikstad Førde Hamar Kristiansand Mo i Rana Molde Måløy Narvik Oslo Stavanger Stryn Tromsø Trondheim Tønsberg Ålesund
PricewaterhouseCoopers navnet refererer til individuelle medlemsfirmaer tilknyttet den verdensomspennende PricewaterhouseCoopers organisasjonen
Medlemmer av Den norske Revisorforening | Foretaksregisteret: NO 987 009 713
www.pwc.no

PRICEWATERHOUSECOOPERS

- opplysningene i årsberetningen om årsregnskapet, forutsetningen om fortsatt drift og forslaget til dekning av underskuddet er konsistente med årsregnskapet og er i samsvar med lov og forskrifter.

Uten at det har betydning for konklusjonen i avsnittet over, vil vi presisere at:

- selskapet ikke har behandlet skattetrekksmidler i samsvar med bestemmelsene i skattebetalingsloven § 11
- selskapet har gitt lån til aksjonær i strid med aksjeloven §8-7, vi viser til omtale i note 5
- selskapets årsregnskap og årsberetning ikke ble avlagt innen lovens frist.

Stavanger, 8. juli 2008
PricewaterhouseCoopers AS

Torbjørn Larsen
Statsautorisert revisor

Appendix 4: Balance Sheet and Profit and Loss Account for BioDiesel Norge AS for 2006

Balanse pr. 31. desember 2006
Biodiesel Norge AS

EGENKAPITAL OG GJELD	Note	2006
Egenkapital		
Innskutt egenkapital		
Aksjekapital (10000000 aksjer a kr.0,01)	3	100.000
Sum innskutt egenkapital		**100.000**
Opptjent egenkapital		
Udekket tap		(77.645)
Sum opptjent egenkapital		**(77.645)**
Sum egenkapital		**22.355**
Gjeld		
Kortsiktig gjeld		
Gjeld til kredittinstitusjoner		621.423
Leverandørgjeld		67.999
Annen kortsiktig gjeld		3.100
Sum kortsiktig gjeld		**692.522**
Sum gjeld		**692.522**
Sum egenkapital og gjeld		**714.877**

Stavanger, 30. juni 2007

Finn Byberg
Styrets leder

Arne Helvig
Styremedlem

Steinar Kolnes
Styremedlem

Resultatregnskap

Beløp i: NOK	Note	2006	2005
Inntekter			
Salgsinntekt		342 094	
Sum inntekter		**342 094**	
Kostnader			
Varekostnad		280 106	
Lønnskostnad	4	383	
Annen driftskostnad		161 522	
Sum kostnader		**442 011**	
Driftsresultat		**-99 917**	
Finansinntekter			
Annen finansinntekt		66	
Sum finansinntekter		**66**	
Finanskostnader			
Annen finanskostnad		13 545	
Sum finanskostnader		**13 545**	
Netto finans		**-13 479**	
Ordinært resultat før skattekostnad		**-113 396**	
Skattekostnad på ordinært resultat	2	-31 751	
Ordinært resultat etter skattekostnad		**-81 645**	
Årsresultat		**-81 645**	
Overføringer og disponeringer			
Udekket tap		-77 645	
Overføringer til/fra annen egenkapital		-4 000	
Sum overføringer og disponeringer		**-81 645**	

Inter revisjon

INTER REVISJON AS
SOLAVEIEN 88
4116 SANDNES

Medlemmer av
Den norske Revisorforening
Revisjonskh Eurogroup

TELEFON: 47-51605460
TELEFAX: 47-51605461
E-MAIL: sandnes@interrevisjon.no
REVISOR / ORG. NR.: NO 989 006 665

REGISTRERTE REVISORER:
EINAR ENDRESEN
ROLF MAGNUS MÆLAND
FRANK TVEITA

Til generalforsamlingen i

BIODIESEL NORGE AS

REVISJONSBERETNING FOR 2006

Vi har revidert årsregnskapet for BioDiesel Norge AS for regnskapsåret 2006, som viser et underskudd på kr 81.645. Vi har også revidert opplysningene i årsberetningen om årsregnskapet, forutsetningen om fortsatt drift og forslaget til dekning av underskuddet. Årsregnskapet består av resultatregnskap, balanse og noteopplysninger. Regnskapslovens regler og god regnskapsskikk i Norge er anvendt ved utarbeidelsen av regnskapet. Årsregnskapet og årsberetningen er avgitt av selskapets styre og daglig leder. Vår oppgave er å uttale oss om årsregnskapet og øvrige forhold i henhold til revisorlovens krav.

Vi har utført revisjonen i samsvar med lov, forskrift og god revisjonsskikk i Norge, herunder revisjonsstandarder vedtatt av Den norske Revisorforening. Revisjonsstandardene krever at vi planlegger og utfører revisjonen for å oppnå betryggende sikkerhet for at årsregnskapet ikke inneholder vesentlig feilinformasjon. Revisjon omfatter kontroll av utvalgte deler av materialet som underbygger informasjonen i årsregnskapet, vurdering av de benyttede regnskapsprinsipper og vesentlige regnskapsestimater, samt vurdering av innholdet i og presentasjonen av årsregnskapet. I den grad det følger av god revisjonsskikk, omfatter revisjon også en gjennomgåelse av selskapets formuesforvaltning og regnskaps- og intern kontrollsystemer. Vi mener at vår revisjon gir et forsvarlig grunnlag for vår uttalelse.

Vi mener at

- årsregnskapet er avgitt i samsvar med lov og forskrifter og gir et rettvisende bilde av selskapets økonomiske stilling 31. desember 2006 og for resultatet og kontantstrømmene i regnskapsåret i overensstemmelse med god regnskapsskikk i Norge
- ledelsen har oppfylt sin plikt til å sørge for ordentlig og oversiktlig registrering og dokumentasjon av regnskapsopplysninger i samsvar med lov og god bokføringsskikk i Norge
- opplysningene i årsberetningen om årsregnskapet, forutsetningen om fortsatt drift og forslaget til dekning av underskuddet er konsistente med årsregnskapet og er i samsvar med lov og forskrifter.

Sandnes, den 30.06.2007

Inter Revisjon AS

Frank Tveita

Frank Tveita
Registrert revisor

Appendix 5: Terms and Conditions of Environmental Approval

TERMS AND CONDITIONS IN THE ENVIRONMENTAL APPROVAL
BFA Environmental Management Planning(Works Programme)

1.0 Introduction

The Biofuel Africa Limited (BFA) was granted its Environmental Permit by the EPA on 28th February, 2008. In line with the Environmental Permit requirements, BFA has developed its Works Programme for the period March to December 2008.

The Works Programme provides:

1. An outline of the plan of activities for the Jatropha plantation development;
2. A scheduled framework for implementing mitigation measures and monitoring commitments;
3. A guide to fulfilling the relevant conditions of the Environmental Permit; and
4. A scheme to facilitate follow-up and enforcement by the Statutory (Regulatory) Agencies, especially the EPA.

The Works Programme covers the following main areas:

1. Survey of the land to determine plantation block sizes;
2. Plan for land clearing;
3. List of equipment to be deployed;
4. Protection of economic trees (Dawadawa and Shea nut trees);
5. Rain water harvesting;
6. Measures for preservation of cultural resources;
7. Production of firewood for communities;
8. Soil fertility analyses
9. Fire prevention and protection;
10. Formation and function of Community Committees

2.0 Highlights of main areas of the Works Programme

1. Survey of the land to determine and/or facilitate:

- Farms within area to be cleared and the owners
- Culturally sensitive areas
- Type and number of trees (including Dawadawa, Shea nut and medicinal trees)
- System of marking trees to be preserved or taken down
- Number of Hectares of land to be cleared per period
- Total land area earmarked for the plantation blocks

2. Plan for land clearing

- Number of equipment and types to be deployed
- Number of workers to be involved
- Duration of clearing of each block and time schedules

3. List of equipment to be deployed

4. Protection of economic trees (Dawadawa and Shea nut trees)

- Develop a system of pre-recording trees to be preserved
- Take inventory of trees to be felled
- Develop measures for economic tree preservation

5. Rain water harvesting

6. Measures for preservation of cultural resources

7. Production of firewood for communities

8. Biological resources preservation/management

- Design mechanism for identification of biological (including medicinal) and related cultural resources
- Develop measures for preservation
- Provide training

9. Soil fertility analyses

- Conduct soil analysis of the plantation land
- Show soil conditions/classification and fertility per plantation block

10. Fire prevention and protection

- Identify all potential fire risk areas in consultation with the GNFS and Community Committees
- Institute appropriate and adequate fire prevention buffers
- Create fire risks and dangers awareness and related alertness programme in communities
- Record all fire incidents and causes

11. Formation and function of Community Committee

Identify potential challenges and risks between the local communities and the company

Contribute to make solutions on all challenges for the local communities and the company

***12.* Other Outstanding Issues**

Road safety measures
Road safety measures to be taken to prevent vehicular accidents along the main Yendi Road (passing) between the Jimle and Kpachaa farms. BFA to liaise with the Ghana Highway Authority to advice and to create speed ramps as appropriate.

Signage (sign post) for the Plantation Blocks
Appropriate sign posts to be erected to identify the Plantation Blocks.

Planned radio programmes
BFA plans to organise quarterly radio information programmes on the jatropha plantation project, which could involve the relevant stakeholders including the EPA, communities, etc.

Suggestion Boxes
Suggestion boxes to be created and placed at identified vantage locations within communities under the Community Liaison manager.

Appendix 6: Yield of the Jatropha Curcas plantation report

Yield of Jatropha Curcas plantation

September 2008
Prepared for BioFuel AS
Author: Bjørn Tjomsland, Consultant - Perennial Bioenergy AS

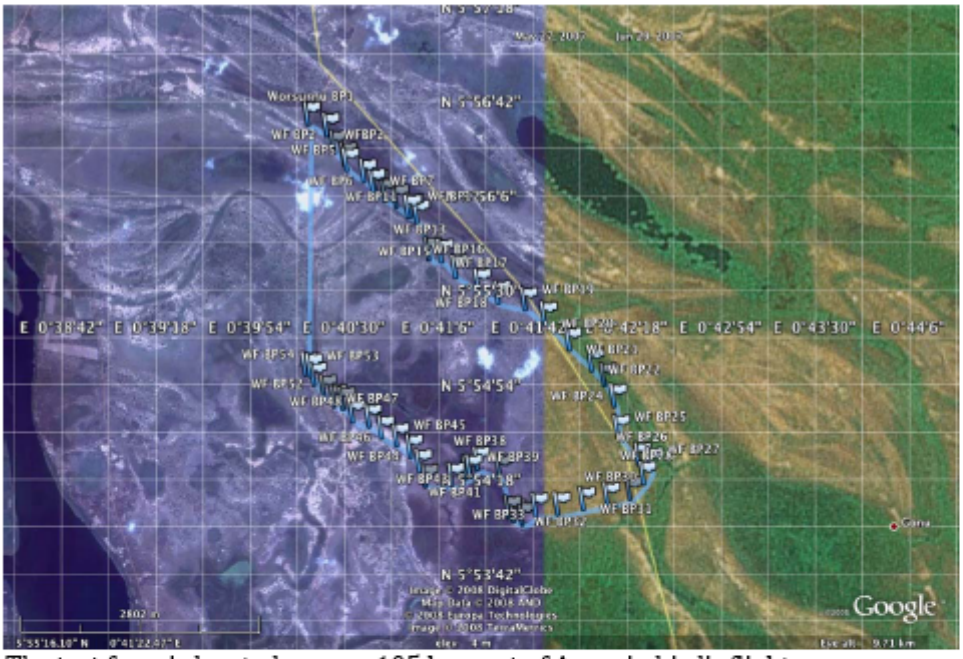
Introduction

I have been asked to give estimations of yield numbers for the coming harvest of Jatropha Curcas for Biofuel Africa Ltd. The numbers will have to be based on assumptions as well as on the facts as far as we know them.

The factual numbers we have for estimation are the plants at the Sugakope test farm. There we have Jatropha plants planted in 2001. These plants are of unknown origin, but grown from seeds. We also have plants planted in what is termed the Big Field along the access road before entering the test farm.

We know that the test farm has very poor soil quality for growing the Jatropha as well as less precipitation then the plantation area in the Tamale region. We have evaluated the soil from direct visual inspection as well as a soil test. The following will explain our yield estimates.

The test farm



The test farm is located approx 105 km east of Accra in bird's flight.

Facts of the plants and farm area used for data collection

"Big field" is an area that was first planted in September 2007. The plants were then pruned in February 2008.

The planting space was initially 2 x 2.5metres. This is because mechanical harvesting needs 2.5 metres between rows in order to have access to the plants in between rows with the harvesting machine.

In February 2008 there was introduced another set of plants such that the spacing became 1 x 2.5 meters. Some dead plants were also replaced.

Age of plants: at the time of counting half of the plants are a little more then one year and the other half being approx. 6 months old.

Soil treatment: when planted the soil at the site was not disturbed much, but was ploughed once.

Plant treatment at planting was close to none. The plants were planted as seedlings, but given no fertiliser or water when planted.

The influence of the parameters

The reasons for these numbers being very wrong for estimations for yield. We know this for many reasons. The soils are of very poor quality, in all relevant elements.

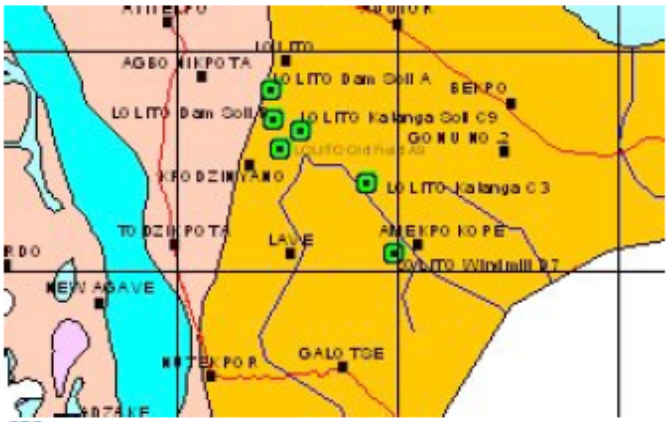
Soil

Big Field

The soils are from just visual inspection done by external agronomic consultants, was found to very variable. Visual proof of waterlogging was found in the area. Also visual proof of lack of nitrogen was found in some areas.

The soil was sent to Soil Research Institute, Accra Centre, for analysis of relevant measures and we found the following.

Figure 1: Soil Office - analysis results



GPS COORDINATES FOR THE SOIL SAMPLES

Acidity

External soil tests have given us a soil acidity of 4.2. This is a very acid soil. The normal acidity would be from 6-8. The following consequence would be a soil of less nutrition and a soil where iron and aluminium binds to nutritions such that they are far less accessible for the plants. And a following lack of growth of root system, branches and foliage.

Table 1: Soil analysis for Big Field

Location	pH (H_20)	Interpretation	O/C (%)	Interpretation
Dam Soil A	4.28	Strongly acid	2.13	Medium
Dam Soils B	4.27	Strongly acid	2.01	Medium
Location	**Total N (%)**	**Interpretation**	**Avail. P (mg/kg)**	**Interpretation**
Dam Soil A	0.09	Very Low	11.85	Moderate
Dam Soils B	0.07	Extremely low	9.76	Low to moderate
Location	**Avail. K (mg/kg)**	**Interpretation**	**Exch Ca (cmol(+)/kg**	**Interpretation**
Dam Soil A	57.04	Moderate	4.02	Low
Dam Soils B	144.9	High	2.30	Very Low
Location	**Exch Mg (cmol(+)/kg**	**Interpretation**	**Exch K (cmol(+)/kg**	**Interpretation**
Dam Soil A	3.52	Moderate	0.25	Moderate
Dam Soils B	1.70	Moderate	0.14	Low
Location	**Exch Na (cmol(+)/kg**	**Interpretation**	CEC(cmol(+)/kg	**Interpretation**
Dam Soil A	1.43	High	18.45	Medium
Dam Soils B	0.21	Moderate	9.12	Low
Soil reaction (pH) for Lolibi (Dam Soils) A are strongly acid to neutral in both top and sub soils. Organic carbon and total nitrogen are however, generally low. Whereas available P levels are low to moderate and available K levels are generally low very low. The exchangeable cations are generally low to moderate.				

Explanation to elements in Table 1

pH (H2O) The pH is a measure of the active acidity in the soil solution. The pH determination is useful for indicating when too much lime has been applied and for evaluating micronutrient availability, particularly manganese.

O/C - Organic carbon is a measure of the organic matter level of a soil. This in turn is very important for soil structure and plant nutrient intake.

Total N% - Nitrogen is the essential constituent of proteins, which plants need to fabricate the chlorophyll responsible for plants' green foliage.

Aval. P (mg/kg) – Phosphorous is the key element plants need for flowering, fruiting and rooting. It is normally found in nature combined with calcium in the form of calcium phosphate. In this form, the P tends to remain "locked up" with calcium (not available to plants) so it must be "unlocked" in the soil through natural microbial and chemical processes. So, it is crucial to have phosphorous in adequate quantity and a healthy, balanced, bio-active soil to make it available to the plants.

Avail. K Potassium, or Potash, exists in most types of organic matter and is critical for plant vigor as it regulates metabolism. Too much potassium can lead to a high pH.

Exch Ca - Calcium is a critical element in cell wall structure. When calcium is too high, you end up with an "alkaline" condition (high pH), which can impede plant absorption of some nutrients.

Exch Mg - Magnesium is naturally found in some types of clay soils. Clay soils with extremely high magnesium are the type of clay that can be used for pottery because the magnesium binds the clay together. One old timer story says you can tell how much magnesium there is in your soil by the thickness of the soil that sticks to your boots!

Exch K - Available K of soils includes the readily exchangeable K plus the structural (non-exchangeable) K released during growth of the crop.

Exch Na -?

CEC - CATION EXCHANGE CAPACITY (CEC)
The cation exchange capacity is a relative measure of the nutrient-holding capacity of a soil. It is measured in meq/100 cm3. CEC is determined by summation of the extractable calcium, magnesium, potassium, and exchangeable acidity (Ac). The CEC ranges from low (less than 2.0 meq/100 cm3) for sandy soils to as high as 25 meq/100 cm3 for clay and organic soils. A high CEC is desirable because nutrients are less subject to leaching and adequate quantities of nutrient reserves can be maintained. However, sandy soils, by nature, have a low CEC, and little can be done to change this phenomenon. The CEC will vary with changes in soil pH, organic matter, and clay content.

Nutrition

The nutrition's N is low especially in the low sub soil. This would end up in limited growth and foliage. We have later in the season seen that areas within the Big Field show a yellowing of the foliage, which probably is the result of nitrogen deficiency. The current level means that we need to bring in more nitrogen for a stress free level. For Phosphorous, which is very important for root growth we have not looked for any deficiency. In different corn (US grain) the P is essential for the yield as well as the maturing of the spike. We have no proof of similar importance in Jatropha, but we intend to test such influence. Kalium (potassium) is very low.

It is very difficult to establish a specific level of nutrition as low or high, good or bad since these are relevant numbers dependant of what you want to grow and what the plant needs. But in order to have a comparison we use the numbers used in a research experiment from India in 2004-6 "Response of Jatropha Curcas grown on wasteland to N and P fertilization" by Central Salt & Marine Chemicals Research institute, India, by Patolia et al.

Here the soil was described as wasteland and the nutrition level at start up was described as sandy loam, pH 7.8, 0.2% organic carbon O/C, N: 125 kg/ha, Exch N: 7.3 kg/ha, K: 427 kg/ha.

Soil structure

Table 2: Soil structure from soil analysis

Table A PHYSICAL ANALYSIS

Description	Depth	% Sand	% Silt	% Clay	Texture
No Number(No Location)		69	30	1	Sandy Loam
Lolito (Dam Soils) A		**8**	**63**	**29**	**Silty Clay Loam**
Lolito (Dam Soils) B		16	47	37	Silty Clay Loam
Sege A1		93	5	2	Sand
Sege B2		82	16	2	Loamy Sand
Sege A3		90	7	3	Sand
Lolito (Old Field) A1		53	37	10	Sandy Loam
Lolito (Katanga Soils) C1		**59**	**20**	**21**	**Sandy Clay Loam**
Lolito (Katanga Soils) C2		**9**	**46**	**45**	**Silty Clay**
Lolito (Katanga Soils) C3		**55**	**43**	**2**	**Sandy Loam**
Lolito (Wind Mill) D1		72	26	2	Loamy Sand
Lolito (Wind Mill) D2		64	25	11	Sandy Loam

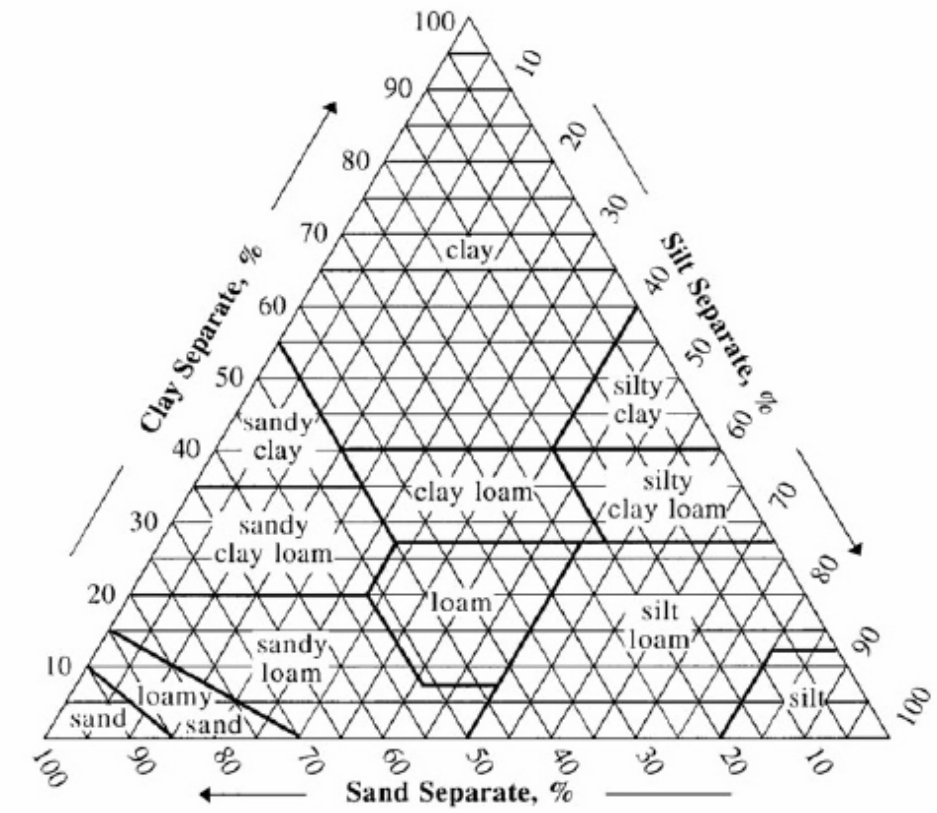
In all literature we have found the importance of a well drained soil has been stressed (e.g. Heller 1996, Univ Tamil Nadu 1995). Since the roots are susceptible for root rot if having the roots in water for longer period. Not knowing how long time "long" is.

Literature gives the loamy sand to Sandy loam to be the preferred soil structure for Jatropha Curcas.

The area where we have done our counting has the definition from the soil analysis of Silty Sandy Loam. This is a structure with more clay and silt then preferred. Silt and clay have particle size which is much smaller then preferred and probably keeps water for a longer period than the more sandy soil structures.

We believe this as well contributes to a stressed plant with less then optimal growth.

Figure 2: Soil Structure Triangle



Waterlogging

Several areas of the area of the Big Field have standing water and water saturated soil for longer periods. We have seen the soil to have layers and spots of iron oxide which is typical for waterlogged soil. As well as observing water on and in the ground. This is a condition that is very bad for plants and especially bad for the Jatropha plant (Heller).

Root system

The general knowledge is that the Jatropha Curcas grown from seeds develop one tap root and 4 side shoots. If developed from cuttings the Jatropha Curcas will not develop the tap root. The tap root is the root that goes vertical and buries deep into the soil to get access to water even in a dry period. This is very typical for a dry area type of plant.

Old field: two tests have shown us that it is probably such that the rooting system lacks the tap root in this field. This is possibly due to two reasons. First the soil compactness makes for a nearly impenetrable soil for the tap root.

Also the seedlings we have seen been planted so far have had its tap root bent as the planters have dug a very shallow rooting hole and that they then bend the tap root as the plant is being set and planted. This will lead to a tap root not growing vertically and less ability for the plant to utilise the water in the lower layers of soil. This in turn will lead to less ability to grow and set flowers and have fruits.

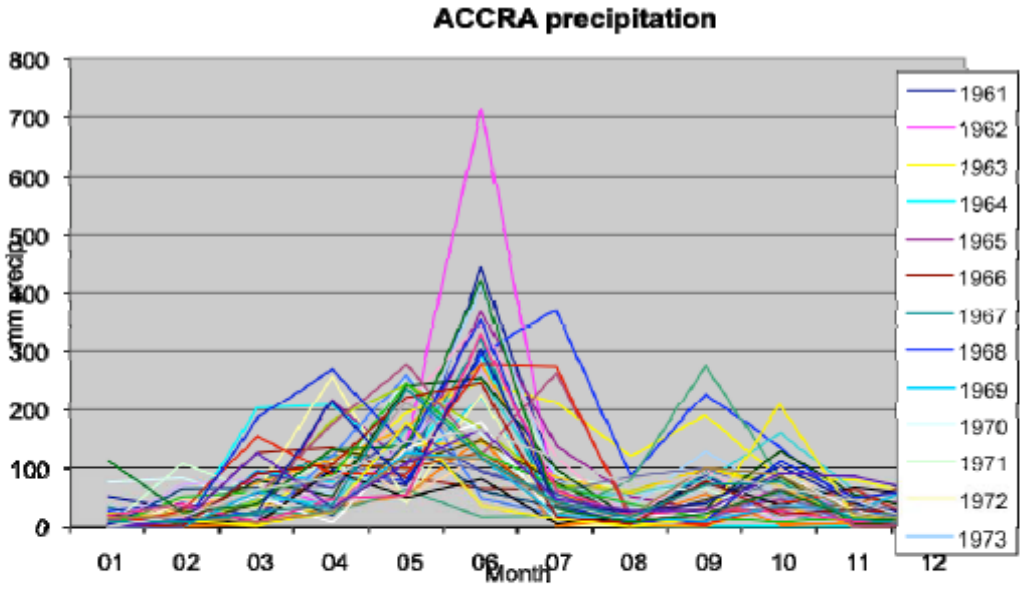
From our data gathering there is a potential for many of the seedlings we have planted at the test farm to have a bent tap root and following that this is a reason for less developed plants and less fruits.

Figure 3: Bent tap root

Precipitation

The level of precipitation is low at below 800mm per year. We have precipitation data for Accra (see at 799mm per year for a 40 year average, and Lolito has lower precipitation than Accra. See below. This is rather low for the Jatropha plant. Low in the sense that the ability to thrive and produce oil seems to be correlated to water availability (ISRA 2007) From the chemistry there will be the need of 1 liter of water to chemically produce 0.345 liter of oil.

Figure 4: Yearly precip



Variability – indication of soil quality

We see by observation that the trees on the fields have a very varying growth pattern. In some areas the seedlings have died and in others the plants have grown to above 1.5 meters, have branched very well and seem very healthy. From the agronomists we have introduced to this they claim this to be due to growth conditions and not the plant genome. For any testing and estimation we then have to pick and choose single plants that look similar as an estimate for plants that have similar growth conditions. As a consequence we have looked at the data gathered and checked for similar indications and we see a clear pattern of fruits and branches

being more correlated to the placing on the field. There are clear clusters of plants being better performing.

Also the soil analysis show great variability in many elements from the different soils samples which are all from the test farm. This supports our observations and conclusions.

Quality of Data collection

We suspect the collected data to be of less then accurate quality. But we have no indication as to if the numbers are skewed in any particular way. We have done some test counting and we have found some differences. But we still think that any such difference in accuracy would be naturally to be on the low side since it is difficult to find all fruits of a Jatropha tree. And that we did not find repeatedly over representation of trees with less fruits then counted.

Input from alternative location at test farm

In the parts of the Katanga area where we have done intercropping with melon we have seen by observation that the soil quality as well as growth from the plants at this area.

Table 3: Soil analysis from test farm

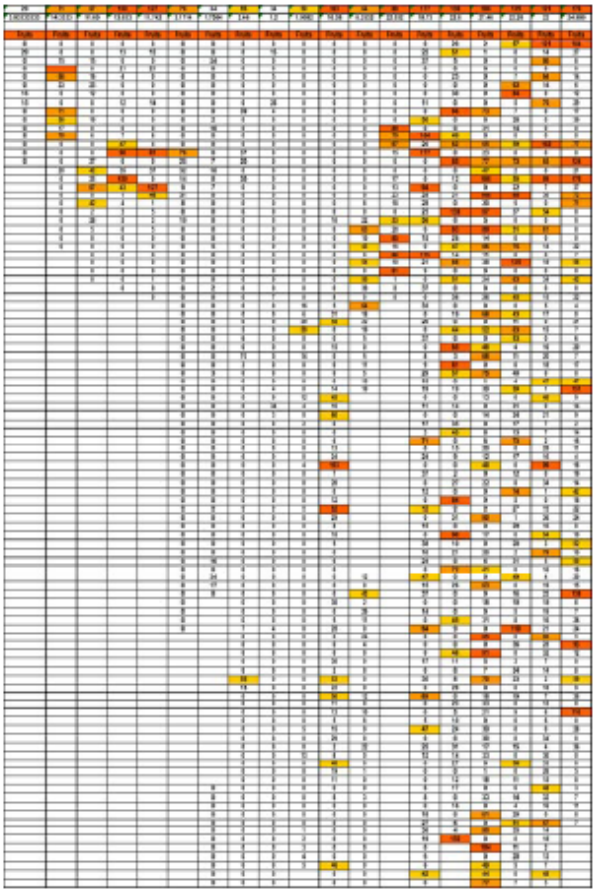
Location	pH (H_20)	Interpretation	O/C (%)	Interpretation
Katanga C1	6.04	Medium	1.30	Low
Katanga C2	7.09	High	1.09	Low
Katanga C3	7.11	High	0.52	Low
Location	**Total N (%)**	**Interpretation**	**Avail. P (mg/kg)**	**Interpretation**
Katanga C1	0.10	Very low	12.56	Low
Katanga C2	0.06	Very low	13.25	Low
Katanga C3	0.03	Very low	10.46	Low
Location	**Avail. K (mg/kg)**	**Interpretation**	**Exch Ca (cmol(+)/kg**	**Interpretation**
Katanga C1	119.6	High	4.90	Low to medium
Katanga C2	177.1	High	4.06	Low to medium
Katanga C3	154.1	High	3.70	Low
Location	**Exch Mg (cmol(+)/kg**	**Interpretation**	**Exch K (cmol(+)/kg**	**Interpretation**
Katanga C1	2.26	Medium	0.39	Medium
Katanga C2	3.90	Medium	0.28	Medium
Katanga C3	3.90	Medium	0.42	Medium
Location	**Exch Na (cmol(+)/kg**	**Interpretation**	CEC(cmol(+)/kg	**Interpretation**
Katanga C1	0.48	Low	14.19	Low
Katanga C2	1.76	High	15.92	Medium
Katanga C3	0.21	Low	8.23	Low

Lolito Katanga soils have slightly acid to neutral pH and have very low to moderate organic carbon and nitrogen. Available P levels are low to moderate whereas available K levels are generally low. Exchangeable cations are generally moderate with the exception of calcium which is low.

Estimation

We have counted the number fruits in two different sessions. From the numbers we have an average seed count that is very low for the Big Field field as a whole. As mentioned above, this will not be relevant as a background for estimation of the yield in an area of relevant growth conditions.

Figure 5: Fruit count formatted by no. of fruits



We can see the pattern of higher yielding bushes (number of fruits) spread across the field. As we have anticipated there are areas where more plants have died and areas where there are no fruits as well as areas where there are more plants with high number of fruits. The format of the spreadsheet is such that the deeper colour the higher number of fruits.

We do expect that the variability of number of fruits of the bushes to be such that not all of them have a given number of fruits. This would be based on lack of pollinating insects, variability in weather during maturing period, and others.

Selection for yield numbers

Selecting areas of plants

We are very wary as to the method for selecting the bushes for estimating yield. Firstly the reasons mentioned above, but then to the actual selection of trees. Should we choose only single plants based on number of fruits or are there such that several plants growing close together have similar growing conditions and that we should choose a ring of trees around one higher yielding specimen to select an area of similar growing condition.

First of all the planting scheme is originally 2m between plants in the columns by 2.5-2.8 between rows. Then later there has been interplanting such that we now have 1m by 2.5-2.8m. Likely the higher yielding plants will be the ones that are the original oldest plants and not the interplanted species due to the time for the plants to mature and set fruits.

But every second plant would then be more relevant in terms of selecting the plants with a similar condition. What we have observed is that the raised parts of the field have a clear tendency to have better growing, branching, healthy plants. But the areas that are such are small and would be hard to find more then a couple of plants with any such similar growth condition with the current planting scheme. Therefore we do not pick smaller areas where we count all the bushes as relevant for selection for yield. This is done in understanding and suggestions by agronomists as well.

"Pick and choose" selection

After the above consideration and feedback from agronomists we feel that we can use the higher yielding plants as representative for the whole population under better growth conditions. The most important issue is then that we aim to estimate the yield for plants that are in much better growing conditions then the plants we use, but we still use our better yielding plants that still have very poor growth conditions.

The plants we choose are not selected freely among the full Big Field, but are in rows that are harvestable for the mechanical harvester. This means that the plants are in areas that are flat. We have seen on inspection that the plants that are situated on more elevated areas like old ant hives are of much better growth and also have plentiful of fruits. We believe that if we selected freely from these elevated areas we would of course get a higher yield number. The elevation seems to be important in this field and that is probably due to the soil quality with clay content that makes water logging a problem for the roots of the plant. Our rows selected are then in less elevated areas then a local best condition and we again think this supports our selection method as being representative.

Planting scheme

As described above every second plants are newly planted and also that the other every second are the original plants. In some areas there are larger areas of plants that have died of both new and old plants.

Data collection

There has been two different counting of fruits from the Big Field at the test farm. One general count of all trees starting from the access road and counting 100 plants inwards from the road.

Secondly before a test of a mechanical harvester we have had a detailed counting of fruits in the plants in the rows where we later did the harvesting test.
The counting has been done by two different groups of people and at different parts of the field.

In the numbers below we use both sets of data.

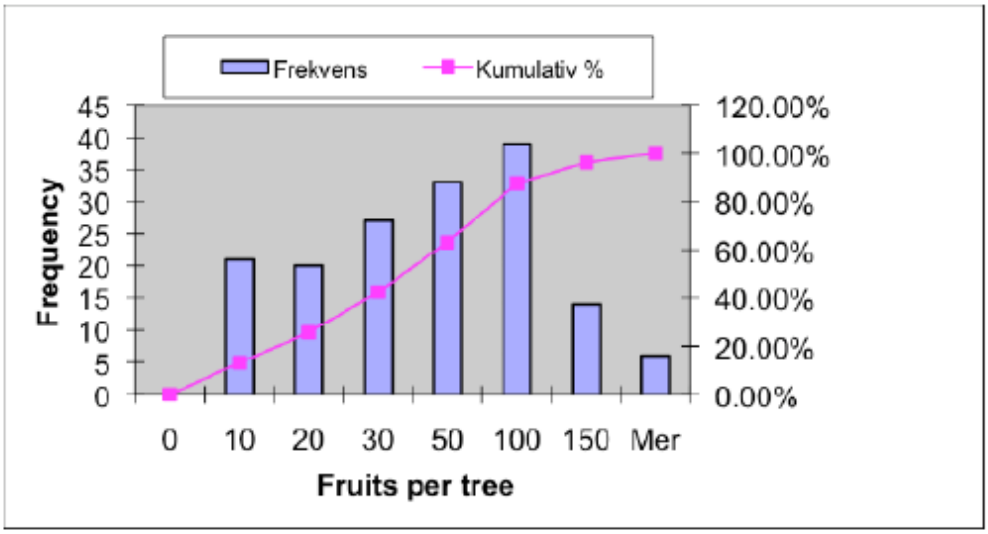
The numbers

We have found trees with very much variation as described earlier and the reasons for this have already been described. We are selecting the few plants that have relatively good growing conditions and have as a result a growth and fruits. But we need to find a few plants and find how many fruits the best yielding plants have.

We have found 2 plants over 200 fruits and 12.5% of the counted plants have above 100 fruits with 3.75% being above 150 fruits.

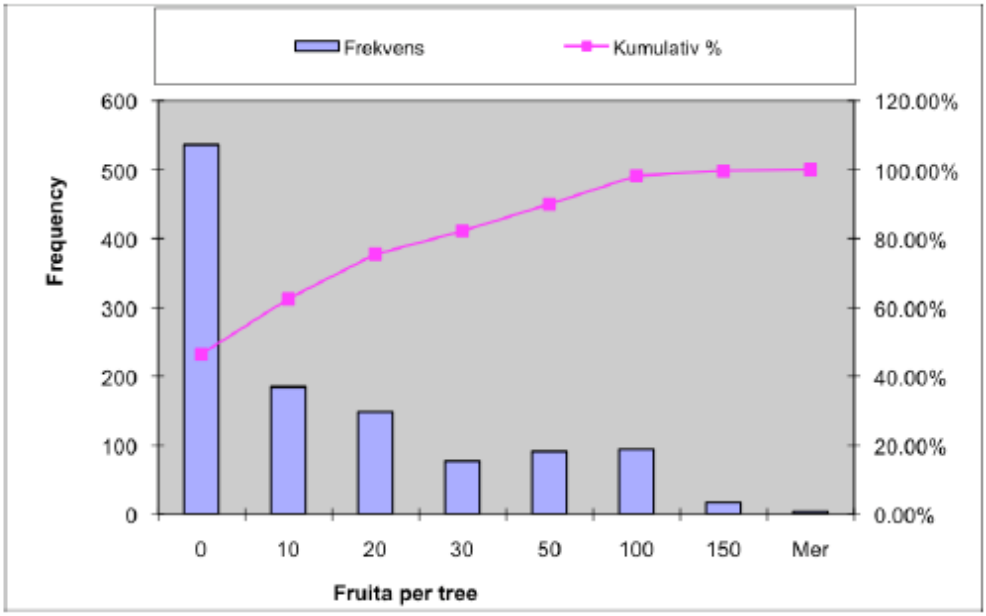
From the deliberations above we think we have a good growing conditions somewhere in and around for a little less then 4 % of the plants. We find that we can use the counting of fruits for the upper 4% of the plants with the highest yield as representative for a plant with rather well growing conditions.

Figure 6: Fruit count from harvesting test



Maximum number of fruits per plant is 238. The 4% of the plants with the highest yield have an average of 176 fruits, with a median of 167. We are then using 6 of the total of 160 plants in the small area of the field that was counted when testing the mechanical harvesting.

Figure 7: Fruit count for Big Field



Second flowering

All plants with more then 100 fruits per bush have flowers at the time of counting. This should mean that there is the possibility of a second maturing of fruits. We do not have accurate numbers for how much flowering we could get for second harvest.

Precipitation and climate

The precipitation is still some months before dry season. The time should be sufficient to see additional growth, flowering as well as maturing fruit.

Pests and diseases

Some of the stressed plants that have less than good growing conditions have been attacked by leaf spot by fungi. Also the different bugs that are leaf suckers or otherwise suck sap or spread diseases are now developed.

We know that such diseases are seasonal, but we have at the moment no specific connections between time and spread of such diseases.

Second flowering summary

From the observations of the bush we have seen that at the moment of counting there are less flowers then the fruits we counted represent. But the plants are still growing and new growth will represent new flowering and potentially fruits. At the moment of flowering the foliage is established and we believe the remaining time until the dry season will have sufficient time for a second harvest. But we have estimated that half or one third of the first harvest can be harvested in the second harvest.

Harvesting percentage

We have at this stage not used a specific harvesting index or percentage. At this stage we do not have mechanized harvester techniques that are reliable. We have run a couple of tests and the harvester has been reengineered once. But we are still not there when it comes to defining the harvesting percentage that is definite. Still we can use the underlying numbers from this

counting and reduce by the percentage we have at the moment. At this time these numbers are still to be defined by the producer of the harvester.

Yield estimation

Seeds per fruit, Seed weight, Oil content

We have observed that we have some fruits with 3 seeds per fruit and some with 2. But we have observed that predominantly the number of seeds per fruit is 3.

The seed weight we have seen from literature (Heller, 1996) that a range is 1300 to 1500 seeds per kilo. This also corresponds with our observations of approx 0.7 grams per seeds.
The oil content would be in the region of 32-38% in the seeds. We have tested some of seeds from our farms and they are in the region of NN % oil.

Oil extraction

Since oil extraction is a matter of investments we have not yet done and where you could get different numbers dependant upon what kind of machinery you invest in we have not shown numbers for extraction, but used gross oil content.

	High	Low
Fruits per tree	238	152
Seeds per fruit	2.95	2.7
Seeds per kilo	1300	1500
Oil content	35%	30%
Second harvest	½	1/3

The calculation
(Fruits per tree x seeds per fruit) / seeds per kilo x oil content * (1+ second harvest) = kilo oil per plant

Kilo oil per plant x plants per hectare = kg oil per hectare

High yearly yield:
1265 kg oil per hectare or 3616 kilo seeds per hectare

Low yearly yield:
452 kg oil per hectare or 1628 kilo seeds per hectare

Validity test

We also have a counting of fruits done at the bigger parts of the Big Field. Here we have counted an area of very poor soil, very acidic, with almost no nutrients where we also have big problems with water logging since this is the mower part of the area adjacent to the river. From this area I have selected the 4% of the upper performing plants.

Again the selecting 4% of such an area with such poor soils should be relevant if we choose soils for our plantations with some care at all.

Choosing average of the fruit counts from the 4% and then the lower number range from above we still come up with

Test from larger area yield:
404 kg oil per hectare or 1349 kg seeds per hectare

Plantation potential yield

We try to project from the numbers above what to expect from our plantation at Tamale area in the north of Ghana. We have above explained the different elements that influence the yield from the Jatropha plant. Some of these elements are not defined as to the level we need in order to optimize yield. We do know some of the ranges that they need to be within in order for the plant to improve from the conditions at the test farm.

Starting with what we know as to the soil quality, we have received soil analysis results from the plantation area of Tamale.

Table 4: Soil analysis Kpachaa - Tamale plantation

Soil analysis Kpachaa

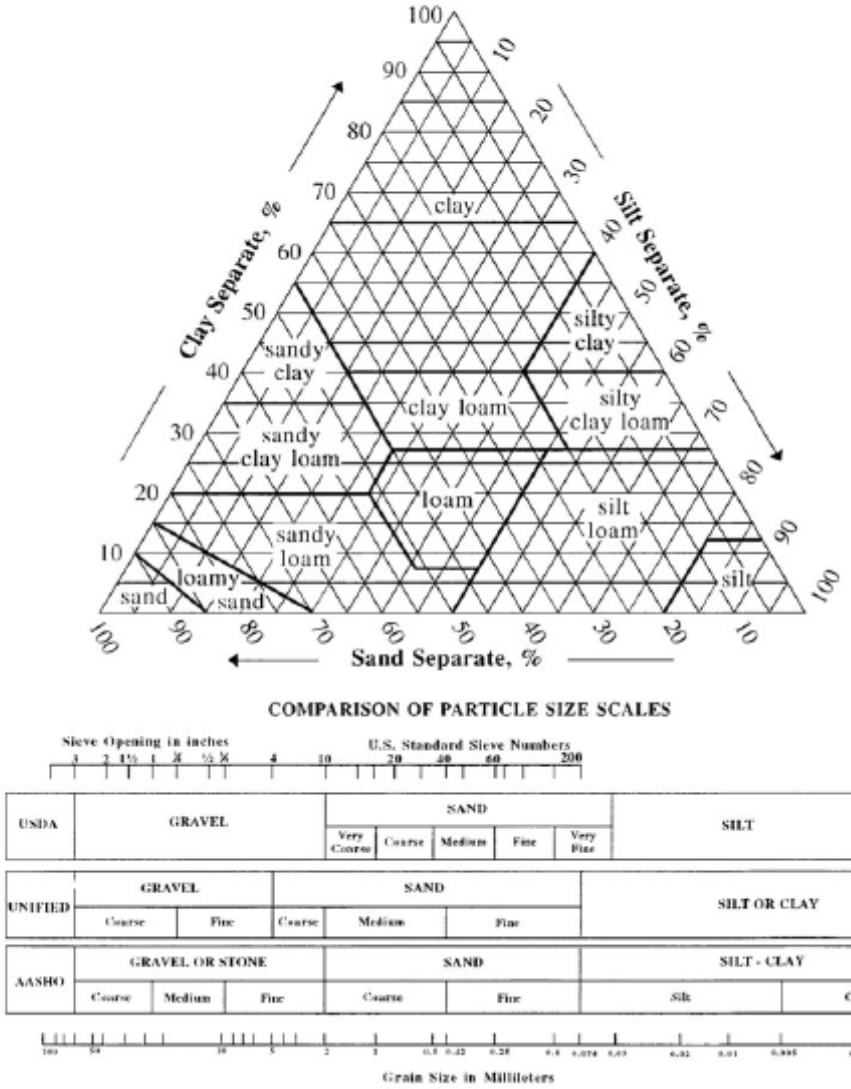
Lab #	Labels	pH Water	% Nitrogen	mg/kg Phosphorus	mg/kg Potassium	% Org Carb.	% Org M	Ca+ mg Cmol/kg	Exch K Cmol/kg	Sodium Cmol/kg	TEB Cmol/kg	CEC Cmol/kg	% Base saturation
8051	1	5,840	0,116	4,250	121	1,346	2,320	4,600	0,310	0,005	4,915	5,109	96,190
8052	2	5,900	**0,150**	2,821	114	**1,759**	**3,032**	**7,500**	0,292	0,008	**7,800**	**7,997**	**97,541**
8053	3	5,890	0,124	**5,309**	125	1,479	2,550	6,200	0,320	0,005	6,526	6,772	97,097
8054	4	5,580	0,098	2,836	76	1,151	1,983	5,500	0,195	0,006	5,701	5,887	96,841
8055	5	5,620	0,096	4,952	**128**	1,106	1,907	5,700	**0,328**	0,007	6,035	6,223	96,990
8056	6	5,200	0,071	1,584	75	0,086	1,479	3,500	0,192	0,008	3,700	3,874	95,525
8057	7	5,770	0,089	1,347	73	1,109	1,912	4,700	0,187	0,005	4,893	5,085	96,218
8058	8	5,500	0,099	2,603	78	1,184	2,040	5,000	0,200	0,009	5,209	5,392	96,600
8059	9	**6,500**	0,129	1,321	94	1,595	2,749	7,300	0,241	**0,010**	7,551	7,768	97,211
8060	10	5,870	0,088	2,324	83	1,073	1,849	4,500	0,213	0,007	4,720	4,916	96,020
	Max	6,500	0,150	5,309	128	1,759	3,032	7,500	0,328	0,010	7,800	7,997	97,541
	Min	5,200	0,071	1,321	73	0,086	1,479	3,500	0,187	0,005	3,700	3,874	95,525
	Spread	25 %	111 %	302 %	75 %	1950 %	105 %	114 %	75 %	100 %	111 %	106 %	2 %
	Median	5,805	0,099	2,712	89	1,168	2,012	5,250	0,227	0,007	5,455	5,640	96,721
	Avg	5,767	0,106	2,935	97	1,189	2,182	5,450	0,248	0,007	5,705	5,902	96,623

Comparison
pH: much better suited then test farm. In the lower range of the most suited. 6-8 is a range we expect and here we have 5.2-6.5 with a low spread.

% Nitrogen: fairly low

Appendix

Figure 8: Soil Structure Triangle



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