

**ADETORO MAYOWA SOLA**

**18/ENG04/005**

**ELECTRICAL/ELECTRONICS ENGINEERING**

**AFE 202**

**FOOD SECURITY**

**FEASIBILITY REPORT FOR THE BEANS PLANTATION**

**BUSINESS PLAN FOR THE DEVELOPMENT OF A TWO HUNDRED HECTARES GROUNDNUT PLANTATION AND ESTABLISHMENT OF 20 TONNES PER DAY CAPACITY GROUNDNUT OIL EXTRACTION PLANT AT ADETORO AND SONS FARMS, ILE-IFE, OSUN STATE, NIGERIA BY ADEGOKE AGRIBUSINESS VENTURES AND CONSULTANCY CONFIDENTIALITY AGREEMENT.**

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### **Executive Summary/ Project Description**

This business plan examines the feasibility and economic viability of the development of a 200 hectares groundnut plantation and the establishment of a groundnut oil extraction plant in Osun state by Adetoro and sons. The farm will produce about 1,200 tonnes of Ground nut in a production cycle. The extraction plant will process about 4,200 tonnes of ground nut into edible groundnut oil, groundnut cake for livestock and processed groundnut jam. There is high domestic demand for these products because of our huge population and production constraints leading to shortage of the commodity. Production is currently popular in the North Central and North West with Kaduna and Kano as the lead producers. Nigeria imports significant quantity of groundnut and its derivatives to augment domestic shortages.

The proposed project will create job opportunities, impact positively on the people and help conserve scarce foreign exchange. The entire groundnut to be processed will be sourced locally through direct production, contract farming in Osun State and direct purchase from smallholder farmers in other production areas. The project will create market access, improve income of farmers and contribute significantly to food security. It will also generate satisfactory returns for sponsors and investors.

### **Sponsorship**

The project is sponsored by Bamidele Coker, a legal luminary and founder of Adekunle Coker university. Bamidele Coker is promoting the productivity of smallholder farmers in Ile-Ife through the Bamidele Poverty eradication scheme. The University has a Department of Agriculture and experts with many years of experience in the project being proposed. Adegoke Agribusiness Ventures & Consultancy will be responsible for the management consultancy of the projects.

### **Management**

The management will comprise of a democratically elected Board of Directors at the apex of the organization structure. This will be made up of shareholders and members of the cooperative who have stake in the survival, growth and profitability of the business as well as distinguished agribusiness professionals of proven integrity and vast experience in the project area. The prime objective of the board will be to give strategic directions and policies that will ensure long term success of the organization. The board will ensure that the organization complies with all standards set by regulatory authorities.

The Managing Director/President shall be responsible for the co-ordination of the day to day management of the cooperative business. He is accountable to the Board of Directors; he will mobilize organization resources to achieve set goals. He will manage business risks and focus on wealth creation.

### **Technical Assistance**

The university has working relationship with IITA (International Institute of Tropical Agriculture, Ibadan) through an executed MOU. IITA has mandate in groundnut production and processing and will provide technical assistance in this regard. The University also has a working relationship with BOA (Bank of Agriculture) and we are collaborating on Bamidele Coker Annual Agric Expo where the founder appreciate Osun Farmers through monetary award to the best 3 farmers in each local government area of the 30 L.G.A in Osun State and the overall best farmer in the state. Bank of Agriculture has agreed to finance production of the 200 hectares of groundnut through a loan at 9% interest rate (anchor borrower's scheme) given to the cooperative.

The university will fund the processing factory and access finance for the groundnut oil extraction equipment from BOI (Bank of Industry) at the rate of 9% . The cooperative will also seek grant from United State Africa Development Foundation(USADF). The University has relationship with commercial banks and will approach one for loan to clear the land which will be leased to members of the cooperative.

The University has a working relationship with Osun State Government, Osun State Ministry of Agric, Farmers' Union, Agric Cooperatives and individual farmers. The university will get technical support from this relationship in the area of production through contract farming or out grower scheme.

The university has working relationships with and linkages to industry players in the project area who will offtake products through a purchase and sale contract agreement. They include Flour Mill of Nigeria Limited, Obasanjo Farms Ltd, Animal Care, Amo Farms, Farm Support and others. The groundnut oil will be sold through cooperatives and other distribution channels. The groundnut sludge will be sold to players in the paints and cosmetics industry.

### **Market and Sales**

Market orientation: domestic; South West & South East, Nigeria

Market Share: 5% niche market in South West, South East Nigeria

Users of Products: edible oil for human, groundnut cake for the livestock industry.

### **Competition analysis**

Benue State alone produced 44% of national output between 1999 and 2017. Kaduna State followed with 27% of national output within the period. Taraba, Plateau, Kano, Niger and Katsina produced 6% and below in the period. The seven state mentioned above produced 94% of national output within the period. The only places where significant production took place in South West, Nigeria was in Saki West L.G.A. in Oyo State and Akure North L.G.A in Ondo State. Based on this above analysis, competition in terms of production in South West, Nigeria is non-existent Compare to the demand for produce.

### **Tariff and Import Restriction**

Forex restriction on food importation and zero duty on imported agricultural equipment will favour the project under consideration.

### **Market Potential**

There is strong demand for groundnut and groundnut derivatives in the Southern part of Nigeria. The state of infrastructure though not perfect still supports production and trade within Nigeria.

### **Profitability**

Weather, biological, chemical, physical and environmental factors such as temperature, sunlight, water, air, soil conditions, varieties of seed, pests, diseases, price fluctuations and other risks e.g. cow invading the farm could affect yield and profitability. However, technical, scientific and financial based solutions will be employed to hedge against risks and safeguard profit. Irrigation option will be factored in to ensure two cycle of production in a year.

### **Technical Feasibility**

The projects (production of groundnut and groundnut oil extraction) are technically feasible. In terms of technology, which involve the crushing of groundnut seed and extraction of oil, the industrial processes are simple and a specialist in oil extraction with more than 20years experience is part of our team. The needed equipment for oil extraction are readily available and our experts have hand on experience in the usage and maintenance of the equipment.

On the groundnut production, we have specialists in mechanization, irrigation, farm management, crop production, weed science, market development, Agric extension and accounting as part of our management team. We also have specialists in quality control as part of our management team. The state of infrastructure around the University and generally in Osun is adequate and suitable for the location of the farm/firm for efficient production, processing and marketing. Raw materials will be produced and sourced locally.

The major competitors in the South West are GRAND CEREALS and JOF with the Grand Groundnut oil brand and Executive Chef brand. Grand Cereal has an installed capacity of 150tonnes per day in Lagos and 100tonnes per day in Jos While JOF has a capacity of 120tonnes per day in Akure, Adetoro farms will target a market niche and penetrate through cooperative societies to make our brand popular. From our analysis, integration of production and processing will give us a competitive advantage.

We are implementing our project using best international practices, sustainable production and due consideration for the environment. Although some degree of deforestation will occur, the EIA (Environmental Impact Assessment) report shows little or no damage to the environment as it relates to the issue of climate change. Organic fertilizer will be substituted for chemical fertilizer within three years of farm operations.

### **Government Support and Regulation**

The project conform with the economic diversification objective of the government. It also supports foreign exchange and import reduction conservation of government. It creates economic opportunities, market access, improved income for farmers and support food security objective of government. The project will benefit from government intervention fund in the agriculture sector. The project will also benefit from the favourable policy of zero duty for agricultural and equipment import. Restriction of forex for all food products will also widen market opportunity. The project will contribute significantly to employment, output increase, stable price and stable exchange rate.

### **Project Timeline**

The project will be completed within 6 months preferably between November, 2020 to April, 2021 because land clearing is mostly done in the dry season.

### **Estimated Project Costs and Revenue**

#### **Fixed Cost**

#### **(A) Land Clearing**

<b>ACTIVITY</b>	<b>QUANTITY</b>	<b>₦</b>	<b>K</b>
Land clearing	<b>1 Hectare</b>	<b>230,000</b>	<b>00</b>
Cross Cutting	<b>1 Hectare</b>	<b>20,000</b>	<b>00</b>
Rome ploughing	<b>1 Hectare</b>	<b>50,000</b>	<b>00</b>
<b>Sub total</b>	<b>1 Hectare</b>	<b>300,000</b>	<b>00</b>
<b>TOTAL</b>	<b>200 Hectares</b>	<b>60,000,000</b>	<b>00</b>

**(B) Equipment**

<b>NAME</b>	<b>QTY</b>	<b>MODEL</b>	<b>USD</b>	<b>₦</b>	<b>K</b>
Tractor	<b>1</b>	<b>YTO-904</b>	<b>24,450</b>	<b>8,802,000</b>	<b>00</b>
Disc Harrow	<b>1</b>	<b>IBJ- 3.0</b>	<b>3,520</b>	<b>1,267,000</b>	<b>00</b>
Sub soiler	<b>1</b>	<b>IS-200G</b>	<b>3,250</b>	<b>1,170,000</b>	<b>00</b>
Soy seeder	<b>1</b>	<b>2BFY-6C</b>	<b>4,950</b>	<b>1,782,000</b>	<b>00</b>
Tripper	<b>1</b>	<b>7CX-8T</b>	<b>9,450</b>	<b>3,402,000</b>	<b>00</b>
Combine harvester	<b>1</b>	<b>4YZ-6</b>	<b>103,500</b>	<b>37,260,000</b>	<b>00</b>
Boom sprayer	<b>1</b>	<b>3W-1000L-18</b>	<b>6,950</b>	<b>2,502,000</b>	<b>00</b>
Front loader	<b>1</b>	<b>TZ10D</b>	<b>6,570</b>	<b>2,365,200</b>	<b>00</b>
<b>Sub-Total</b>			<b>159,390</b>	<b>57,380,400</b>	<b>00</b>

**(C) Vehicle**

<b>TYPE</b>	<b>MODEL</b>	<b>QTY</b>	<b>₦</b>
<b>Pick-Up Truck</b>	<b>Hilux</b>	<b>2</b>	<b>30,000,000</b>

**(D) Irrigation**

<b>TYPE</b>	<b>QTY</b>	<b>MODEL</b>	<b>USD</b>	<b>₦</b>
<b>Hose Reel</b>	<b>1</b>	<b>140-440MT</b>	<b>28,186</b>	<b>10,146,960</b>

**Operating Cost**

<b>WORKING CAPITAL</b>	<b>₦</b>	<b>K</b>
Ploughing/ha	15,000	00
Harrowing/ha	10,000	00
Sub-Total	25,000	00
<b>For 200 Ha</b>	<b>10,000,000</b>	<b>00</b>
Mechanization and storage	105,000	00
<b>For 200 Ha</b>	<b>21,000,000</b>	<b>00</b>

Input/Ha	91,285	00
<b>For 200 Ha</b>	<b>18,257,000</b>	<b>00</b>
Area Yield Insurance	13,500	00
Produce aggregation	5,500	00
Geo Spatial Service	4,500	00
Sub-Total	23,500	00
<b>For 200 Ha</b>	<b>4,700,000</b>	<b>00</b>
Interest Per Hectare	22,079	00
<b>For 200 Ha</b>	<b>4,415,700</b>	<b>00</b>
Total Cost Per Hectare	245,325	00
<b>Total Cost For 200 Ha</b>	<b>49,065,000</b>	<b>00</b>
Loan Principle and interest (cost per hectare)	267,404	00
<b>Total for 200 Ha</b>	<b>53,480,800</b>	<b>00</b>
<b>Irrigation cost for 200 Ha</b>	<b>24,018,120</b>	<b>00</b>

#### Amortization

	<b>N</b>
<b>Land Clearing amortization (per hectare)</b>	<b>30,000</b>
<b>Land Clearing amortization (per hectare)</b>	<b>12,000,000</b>

#### REVENUE

<b>YIELD PER HECTARE 3 TONNES @N145000 PER TONNE</b>	
	<b>N</b>
<b>Revenue Per Hectare</b>	<b>435,000</b>
<b>For 200 ha</b>	<b>87,000,000</b>
<b>Net Revenue with amortization (200ha clearing)</b>	<b>55,020,180</b>
<b>2<sup>nd</sup> Production cycle</b>	
<b>Net Revenue</b>	<b>43,020,180</b>
<b>Net Revenue with amortization (200ha land)</b>	
<b>Annual Net Revenue (1<sup>st</sup> + 2<sup>nd</sup> Cycle)</b>	<b>98,040,360</b>

**Currency conversion rate: ₦360.00 to 1USD**

#### Funding Mechanism

ADEKUNLE UNIVERSITY will provide 200 Ha of cleared farmland around the university and lease it to members of the cooperative. ADEKUNLE UNIVERSITY will also lease 6,000MT capacity silo as equity contribution  
Equity investor to provide equity for equipment and vehicles purchase

Where possible equity investor to provide equity for working capital or otherwise secure loan at the rate of 9% through government intervention window at the Bank of Agriculture, Bank of Industry and Commercial banks.

**Conclusion**

The project is technically feasible and commercially viable. It is therefore recommended for funding.