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**MATRIC NUMBER: 18/LAW01/039**

**COURSE: AFE 202**

QUESTION:

Prepare a business plan on a chosen agricultural enterprise following the guideline in the note. spiral bind and submit upon resumption. Minimum of five pages, times new roman size 12 with double spacing.

ANSWER:

A BUSINESS PLAN FOR THE DEVELOPMENT OF A TWO HUNDRED HECTARES SUGAR CANE PLANTATION AND ESTABLISHMENT OF 20 TONNES PER DAY CAPACITY SUGAR REFINERY AT AFE BABALOLA UNIVERSITY FARM, ADO EKITI, EKITI STATE, NIGERIA BY DANGOTE SUGAR REFINERY PLC.

Signature:

Name:

Date:

**CONTENTS OF A FEASIBILITY REPORT**

1. Executive Summary/ Brief Description of the Project

2. Sponsorship, Management and Technical Assistance

3. Market and Sales

4. Technical Feasibility, Resources and Environment

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**PROJECT DESCRIPTION**

Dangote Sugar Refinery Plc is a household name in the sugar refining sector of the Nigerian Food and Beverage Industry. Their entry into the sugar business is dated back to the 1970s with the import and sale of sugar by the parent company, Dangote Industries Limited.

Today, Dangote Sugar is a leading brand that has made a remarkable impact on the Nigerian sugar sector. The sugar refining facility at Apapa is the largest in Sub-Saharan Africa, with 1.44MT per annum installed capacity.

This business plan examines the economic viability of the development of a 200 hectares plantain plantation and the establishment of a sugar refinery plant in Ado Ekiti by Afe Babalola University and Dangote Sugar Refinery PLC. The farm will produce about 80 to 100 bunches of sugarcane in a production cycle. The sugar refinery will produce Vitamin A fortified refined granulated fine white sugar, produced to the highest quality packaged in 50kg, 1kg, 500grams and 250grams sizes. An all-purpose white sugar for direct consumption, and as an addition to baked foods, sweetening of cereals, beverages etc., & Bagasse is another by product of sugarcane used as fuel in sugar factories, in paper manufacturing, cardboard, fiber board, wall board and plastic, cattle feed and in producing furfural. Nigeria imports a significant amount of sugar canes (the raw material for sugar production) from places like Brazil, e.tc.

**SPONSORSHIP**

The project will be sponsored by Aare Afe Babalola himself, a Senior Advocate of Nigeria, and the founder of Afe Babalola University. Aare Afe Babalola is promoting the productivity of home-friendly goods in partnership with Dangote Sugar Refinery PLC. Dangote sugar refinery will be responsible for the overseeing the projects.

**MANAGEMENT**

Dangote sugar management: At Dangote Sugar Refinery, the actions and interactions with consumers, employees, regulators, suppliers, shareholders, and other stakeholders reflect its values, beliefs, and principles. Management Team. The Board of Directors is responsible for the oversight of the business, determining the strategies, policies, and objectives. In addition, the oversight of the Company’s risks while evaluating and directing the implementation of controls and procedures including maintaining a sound system of internal controls to safeguard shareholders ‘investments and the Company’s assets. The executive committee are responsible for running the day-to-day business activities of the company, and to ensure that the Board of Directors decisions are implemented in accordance with the mandates given to it.

**TECHNICAL ASSISTANCE**

The university has working relationship with IITA. IITA also produces Sugarcane and they also do processing and will provide technical assistance in this regard. We are collaborating with Aare Afe Babalola Annual Agric Expo where the founder appreciates Ekiti Farmers through monetary award to the best 3farmers in each L.G.A and the overall best farmer in the state. Bank of Agriculture has agreed to finance production of the 200hectares of Sugarcane 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 sugar refining equipment from BOI (Bank of Industry). 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 working relationships with and linkages to industry players in the project area who will offtake products through a purchase and sale contract agreement. The bagasse will be sold to players in the paper, plastic making & board making industry.

**MARKET & SALES**

Market orientation: domestic; All regions of Nigeria and Sub-Saharan Africa.

Market Share: 60% niche market, sub-Saharan Africa

Users of Products: edible sugar for human consumption, an addition to baked foods like Cakes, Donuts e.tc, sweetening of cereals, beverages etc. Bagasse (by product of sugarcane) used as fuel in sugar factories, paper manufacturing, cardboard, fiber board, wall board and plastic, cattle feed and in producing furfural.

**Competition analysis**

The top sugarcane producing states in Nigeria include: Kwara, kano, Niger, Jigawa, Taraba, katsina, Sokoto, and Kaduna states, respectively. Commercial cultivation of sugarcane did not start until 1950 while industrial production of refined sugar started in the early 1960s with the establishment of the Nigeria Sugar Company (NISUCO), at Bacita, Kwara State in 1964. Since then another mill, the Savannah Sugar Company (SSCL) has taken off at Numan, Adamawa State in 1980 and smaller one in Lafiagi in 1983. Similarly, National Sugar Development Council, Abuja, is installing a medium-size 250 ton-cane-day Mini sugar plant at Sunti, Niger State. Based on this above analysis, competition in terms of production is non- existent compared to the demand for produce.

**Tariff and import restriction**

There is no forex restriction ban on agricultural equipment & sugarcane imports which favors the project under consideration.

**Market potential**

There is strong demand for sugarcane products in the Southern and Eastern/ south eastern part of Nigeria. The state of infrastructure though not perfect, still supports production and trade within Nigeria.

**Profitability**

Harsh weather conditions or other anti- agricultural factors such as temperature, sunlight, water, air, soil conditions, varieties of seed, pests, diseases, price fluctuations and other risks e.g. locust invasion could affect profitability. However, technical, scientific, and financial based solutions will be employed to flatten the curve against risks and safeguard profit rates. Appropriate measures like land, sett, labor, fertilizer, and water will have positive influence on sugarcane production. It was also found that labor has a negative of -0.0833 which implies that any increase in labor supply by man a day will lead to decrease in sugarcane output by -0.0833. A percent increase in sugarcane sett increases the yield of sugarcane by 59.31% and 5% increase in land increases the yield of sugarcane by 56.12%.

**TECHNICAL FEASIBILITY**

The projects (production of sugarcane and sugar refining) are technically feasible. In terms of technology, Sugar production involves two distinct operations: (a) processing [sugar cane](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/sugar-cane) or [sugar beets](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/sugar-beet) into raw sugar and (b) processing the raw sugar into refined sugar. Sugar refining is a highly energy-intensive process; hence, a [membrane technology](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/membrane-technology) is highly attractive and we have highly trained specialists in this field, who have at least 10 years of experience. The needed equipment for sugar refining such as: **Steam Transformer, Clarification System, Evaporators System, Vacuum Pans, Centrifugal Machines, Sugar Drying Equipment’s, Surface Condenser and Bagacillo Tumbler** are readily available and our experts have hand on experience in the usage and maintenance of the equipment.

On the Sugarcane production, we have specialists in mechanization, farm management, crop production, weed science, market development, and accounting as part of our team. We also have specialists in quality & pest control as part of our management team. General condition of infrastructure around the University and generally in Ekiti is adequate and suitable for the location of the farm & is efficient for agribusiness to strive. Raw materials will be produced and stored locally.

**GOVERNMENT SUPPORT AND REGULATION**

The project mainly supports foreign exchange and import reduction conservation of government. It creates economic opportunities, market access and improved income for farmers. 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. The project will also widen market opportunity. The project will also contribute to employment increase, output increase, stable price and stable exchange rate**.**

**PROJECT TIMELINE**

By estimation, the project should be completed within 5/6 months. Preferably between October 2020 to March 2021 mainly because we are targeting the dry season. Land clearing is easier done in the dry season. Also, by the time the land is cleared, and the sugarcanes are planted, rainy season would be near to aid the growth of the crops.

**7.0 ESTIMATED PROJECT COSTS AND REVENUE**

**Fixed Cost**

1. **LAND CLEARING**

|  |  |  |  |
| --- | --- | --- | --- |
| **ACTIVITY** | **QTY** | **NAIRA** | **KOBO** |
| LAND CLEARING | 1 HECTARE | 300,000 | 00 |
| CROSS CUTTING | 1 HECTARE | 30,000 | 00 |
| PLOUGHING | 1 HECTARE | 350,000 | 00 |
| **Sub total** | **1 HECTARE** | **680,000** | **00** |
| **Total** | **200 HECTARES** | **1,360,000** | **00** |

1. **EQUIPMENT**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NAME** | **QTY** | **MODEL** | **USD ($)** | **NAIRA** | **K** |
| **Tractor** | 1 | YTO-904 (90hp) | 24,405 | 8,802,000 | 00 |
| **Steam transformer** | 3 | IBJ -10.9 | 120,504 | 4,876,560 | 00 |
| **Clarification systems** | 4 | IGSF -500W | 300,000 | 117,000,000 | 00 |
| **Evaporators system** | 5 | 4FYX-300L | 560,000 | 218,400,000 | 00 |
| **Vacuum pans** | 15 | 4W-4000L-8 | 45,000 | 17,550,000 | 00 |
| **Centrifugal machines** | 4 | 2BFY-6V | 350,000 | 136,500,000 | 00 |
| **Sugar drying equipment’s** | 3 | SDE7809-900A | 280,000 | 109,200,000 | 00 |
| **Surface condenser** | 1 | 7CX-90 | 65,000 | 25,350,000 | 00 |
| **Bagacillo tumbler** | 1 | BT-GroupL-40 | 40,000 | 15,600,000 | 00 |
| **SUBTOTAL** |  |  | **1,784,909** | **696,114,510** | **00** |

1. **VEHICLE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TYPE** | **MODEL** | **QTY** | **NAIRA** | **K** |
| Pickup truck | ford | 3 | 32,445,000 | 00 |

1. **IRRIGATION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TYPE** | **QTY** | **USD** | **NAIRA** | **K** |
| PVC pipe | 1x5mm | 2 | 1,000 | 00 |
| **Total** | **15** | **30** | **15,000** | **00** |
| Hose reel | 1 | 15,000 | 5,407,500 | 00 |

1. **OPERATING COST**

|  |  |  |
| --- | --- | --- |
| **WORKING CAPITAL** | **NAIRA** | **K** |
| Ploughing/ha | 30,000 | 00 |
| Harrowing/ha | 25,000 | 00 |
| subtotal | 55,000 | 00 |
| **For 200 hectares** | **11,000,000** | **00** |
| Mechanization & storage | 102,000 | 00 |
| **For 200 hectares** | **20,400,000** | **00** |
| Input/ha | 90,860 | 00 |
| **For 200 hectares** | **18,172,000** | **00** |
| Area yield insurance | 12,000 | 00 |
| Produce aggregate | 4,500 | 00 |
| Geo spatial service | 5,500 | 00 |
| Subtotal | 22,000 | 00 |
| **For 200 hectares** | **4,400,000** | **00** |
| Interest per hectare | 45,000 | 00 |
| **For 200 hectares** | **9,000,000** | **00** |
| Total cost per hectare | 314,860 | 00 |
| **Total cost for 200 hectares** | **62,972,000** | **00** |
| Loan principle & interest  (cost per hectare | 250,000 | 00 |
| **Total for 200 hectares** | **50,000,000** | **00** |
| **Irrigation cost for 400Ha (excluding fixed cost)** | **23,480,780** | **00** |

1. **AMORTIZATION**

|  |  |  |
| --- | --- | --- |
|  | **NAIRA** | **K** |
| **Land clearing amortization (per hectare)** | **35,000** | **00** |
| **Land clearing amortization (200 hectares)** | **7,000,000** | **00** |

1. **REVENUE**

|  |  |  |
| --- | --- | --- |
| **Yield per hectare 3tonnes@ ₦145000 per ton** |  |  |
|  | **NAIRA** | **K** |
| Revenue per hectare | 430,000 | 00 |
| **For 200 hectares** | **86,000,000** | **00** |
| Net revenue for 200 hectares (without amortization) | 57,400,100 | 00 |
| Net revenue with amortization (200 hectares clearing) | 56,000,190 | 00 |
| **2nd production cycle** |  |  |
| Net revenue | 44,080,190 | 00 |
| Net revenue with amortization (200 hectares land) | 56,900 | 00 |
| **Annual Net Revenue (1st + 2nd Cycle)** | **100,080,380** | **00** |

**Currency conversion rate: ₦390.00 to 1USD**

**FUNDING MECHANISM**

ABUAD will provide 200 hectares of cleared farmland beside the university and lease it to members of the cooperative. ABUAD will also lease 7,000MT capacity silo’s as an equity contribution. The equity investor will go ahead to provide money for equipment and vehicles purchase and working capital or apply for loan from banks.

**CONCLUSION**

The project portrayed above is technically feasible & economically and commercially viable. Therefore, is recommended for funding.