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**COURSE:FOOD SECURITY**

**COURSE CODE:AFE 202**

**A BUSINESS PLAN FOR THE DEVELOPMENT OF A EIGHT HUNDRED HECTARES OF MANGO PLANTATION AND ESTABLISHMENT OF 40 TONNES PER DAY MANGO JUICE EXTRACTION PLANT AT DICKSON FARMS, PORT HARCOURT, RIVERS STATE, NIGERIA BY PAMSELE AGRICULTURAL BUSINESS ENTERPRISE AND CONSULTANCY.**

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It is acknowledged by the reader that information furnished in this business plan is in all respect confidential in nature, other than information which is in the public domain through other means and that any disclosure or use of same by the reader, may cause serious harm or damage to the promoters of the proposed business.

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**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
5. Government Support and Regulation
6. Timelines of Projects
7. Estimated Project Cost and Revenue
8. Funding Mechanism
9. Conclusion

**Executive Summary/ Project Description**

This business plan examines the feasibility of and indeed economic viability of the development of a 800hectares mango plantation and the establishment of a mango juice extraction plant at Port Harcourt by Dickson farms, Dickson and Elumelu Farmers Cooperative Society Limited. The farm will produce about 2,400tonnes of mango in a production cycle. The mango juice extraction plant will process about 8,400tonnes of mango into edible mango juice, mango essence and mango sludge for soap, body butter and cosmetics. There is high domestic demand for these products because of our huge population and production constraints leading to shortage of the commodity. Production is most popular in the North Central with Benue State as the lead producers.

The proposed project will create economic opportunities, impact positively on the people and help conserve scarce foreign exchange. The entire mango to be processed will be sourced locally through direct production, contract farming in Rivers 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 Madighi Dickson, one time Caretaker chairman Abua/Odual LGA, Treasurer Gokana and Tony Elumelu, an economist, entrepreneur and philanthropist, chairman of Heirs Holdings, the United Bank of Africa, Transcorp and founder of the Tony Elumelu foundation. Madighi Dickson and Tony Elumelu are promoting the productivity of smallholder farmers in Port Harcourt through the Dickson and Elumelu Farmer’s Cooperative Limited. Pamsele Agricultural Business Enteprise & 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 member 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 complied 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 association has working relationship with IITA (International Institute of Tropical Agriculture, Ibadan) through an executed MOU. IITA has mandate in Mango production and processing and will provide technical assistance in this regard. The association also has a working relationship with BOA (Bank of Agriculture) and we are collaborating on Dickson and Elumelu Annual Agric Expo where the founder appreciate rivers Farmers through monetary award to the best 3farmers in each local government area of the 23 L.G.A in Rivers State and the overall best farmer in the state. Bank of Agriculture has agreed to finance production of the 800hectares of mango through a loan at 9% interest rate (anchor borrower’s scheme) given to the cooperative

The association will fund the processing factory and access finance for the mango juice 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 association 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 association has a working relationship with Rivers State Government, Rivers State Ministry of Agric, Farmers’ Union, Agric Cooperatives and individual farmers. The association will get technical support from this relationship in the area of production through contract farming or outgrower scheme.

The association 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 mango juice will be sold through cooperatives and other distribution channels. The mango sludge will be sold to players in the 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 juice for human, mango cake for the livestock industry, mango sludge for cosmetics industries in South East.

**Competition analysis**

Benue State alone have produced majority of mangoes in the country followed by Jigawa, Plateau, Yobe, Kebbi, Niger, Kaduna, Kano, Bauchi, Sokoto, Adamawa, Taraba and FCT. The eleven states mentioned above produced 94% of national output within the period. Based on this above analysis, competition in terms of production in South West, South South and South East Nigeria is non- existent Compared 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 mango and mango 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 four cycles of production in a year.

**Technical Feasibility**

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

On the mango 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 association and generally in Rivers state 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.

Dickson 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 4months preferably between November, 2020 to March, 2020 because land clearing is mostly done in the dry season.

**Estimated Project Costs and Revenue**

**Fixed Cost**

1. **Land Clearing**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **QTY** | **₦** | **K** |
| Land Clearing | 2Hectare | 460,000 | 00 |
| Cross cutting | 2Hectare | 40,000 | 00 |
| Rome ploughing | 2Hectare | 100,000 | 00 |
| **Sub total** | 2Hectare | **600,000** | **00** |
| **Total** | 800 Hectare | **240,000,000** | **00** |

**(B) Equipment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **QTY** | **MODEL** | **USD** | **₦** | **K** |
| Tractor | 2 | YTO-904(90hp) | 48,900 | 17,604,000 | 00 |
| Disc harrow | 2 | IBJ- 3.0 | 7,040 | 2,534,400 | 00 |
| Sub soiler | 2 | IS-200G | 6,500 | 2,340,000 | 00 |
| Soy seeder | 2 | 2BFY-6C | 9,900 | 3,564,000 | 00 |
| Tripper | 2 | 7CX-8T | 18,900 | 6,804,000 | 00 |
| Combine Harvester | 2 | 4YZ-6 | 207,000 | 74,520,000 | 00 |
| Boom sprayer | 2 | 3W-1000L-18 | 13,900 | 5,004,000 | 00 |
| Front loader | 2 | TZ10D | 13,140 | 4,730,400 | 00 |
| **Sub total** |  |  | **318,780** | **114,760,800** | **00** |

**(C) Vehicle**

**Type Model QTY ₦ K**

|  |  |  |  |
| --- | --- | --- | --- |
| **Pick up Truck** | **HILUX** | **4** | **60,000,000 : 00** |

**(D) Irrigation**

**Type QTY Model USD ₦ K**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hose Reel** | **2** | **140 – 440MT** | **28,186** | **20,293,920 : 00** |

**Operating Cost**

|  |  |  |
| --- | --- | --- |
| **Working Capital** |  |  |
|  | **₦** | **K** |
| Ploughing/Ha | 30,000 | 00 |
| Harrowing/Ha | 20,000 | 00 |
| Sub total | 50.000 | 00 |
| **For 800 Ha** | **20,000,000** | **00** |
| Mechanization and storage | 210,000 | 00 |
| **For 800Ha** | **84,000,000** | **00** |
| Input / Ha | 183,650 | 00 |
| **For 800Ha** | **73,460,000** | **00** |
| Area yield insurance | 27,000 | 00 |
| Produce aggregation | 11,000 | 00 |
| Geo Spatial Service | 9,000 | 00 |
| Sub total | 47,000 | 00 |
| **For 800Ha** | **18,800,000** | **00** |
| Interest per hectare | 44,158 | 25 |
| **For 800Ha** | **17.663,400** | **00** |
| Total cost per hectare | 490,650 | 00 |
| **Total cost for 800Ha** | **196,260,000** | **00** |
| Loan principal and interest (cost per Hectare) | 534,808 | 25 |
| **Total for 800Ha** | **213,923,400** | **00** |
| **Irrigation cost for 800Ha (excluding fixed cost)** | **48,036,240** | **00** |

**Amortization**

**₦ K**

|  |  |
| --- | --- |
| **Land clearing amortization (per hectare)** | **60,000 : 00** |
| **Land clearing amortization (800hectare)** | **24,000,000 : 00** |

**REVENUE**

|  |  |
| --- | --- |
| **Yield per hectare 6tonnes@ ₦145000 per tonne** |  |
|  | **₦ K** |
| **Revenue per hectare** | **870,000 : 00** |
| **For 800Ha** | **348,000,000 : 00** |
| **Net revenue for 800Ha(without amortization)** | **134,076,600 : 00** |
| **Net revenue with amortization(800ha clearing)** | **110,076,600 : 00** |
| **2nd Production Cycle** |  |
| **Net revenue** | **86,040,360 : 00** |
| **Net revenue with amortization(800ha land)** |  |
| **Annual Net Revenue ( 1st + 2nd Cycle)** | **196,116,960 : 00** |

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

**Funding Mechanism**

Dickson farms will provide 800Ha of cleared farmland and lease it to members of the cooperative. Dickson farms will also lease 12,000MT 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.