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**18/SMS09/033**

**AFE 202**

**INTRODUCTION TO AGRICULTURAL SCIENCE FOOD AND SECURITY**

**INTERNATIONAL RELATIONS AND DIPLOMACY**

**SOCIAL AND MANAGEMENT SCIENCES**

**13TH APRIL, 2020.**

**QUESTION: Prepare a business plan on a chosen agricultural enterprise following the guideline in the note. Minimum of five pages, times new roman size 12 with double spacing.**

**A FEASIBLITY REPORT AND BUSINESS PLAN FOR THE PROCESSING OF STANDARD CASSAVA (manihot esculenta crantz) WITH THREE YEARS FINANCIAL ANALYSIS IN JOS, PLATEAU STATE BY RICHARDS AGRICBUSINESS VENTURES.**

**Executive Summary/ Project Description**

The standard business plan for cassava has been developed in order to be processed into various products including garri, flour, starch and many more. The cassava processing business is developed to help entrepreneur raise funds from investors, apply for a bank loan or grant. Nigeria is the highest cassava producer in the world, producing a third more than Brazil and almost double the production capacity of Thailand and Indonesia. She currently produces about 42 million metric tonnes (MT) per annum; a figure expected to double by 2020. Although the world leader in cassava production, Nigeria is not an active participant in cassava trade in the international markets because most of her cassava is targeted at the domestic food market. Her production methods are primarily subsistence in nature and therefore unable to support industrial level demands. That is why recent and past governments came up with policies to encourage commercial cassava production and processing for both local and international market. The vision of cassava is that cassava will spur rural industrial development and raise incomes for producers, processors and traders.

**Introduction/Sponsorship**

Cassava can grow and produce dependable yields in places where cereals and other crops will not grow or produce well. It can tolerate drought and can be grown on soils with low nutrient capacity, but responds well to irrigation or higher rainfall conditions, and to use of fertilizers. Cassava is vegetatively propagated, using stem cuttings taken at harvest of the previous crop. Stem cuttings taken at harvest of the previous crop. Stem cuttings are bulky, do not store well and are costly to cut and handle. It is often relegated to marginal lands due to competition with higher-value and more respected crops. This trend is likely to continue as such crops are further improved to adapt them to marginal conditions. The project is sponsored by Nweke Augustine Chima, a legal luminary and founder of Chimi’s Chambers and Co. Nweke Augustine Chima is promoting the productivity of smallholder farmers in Jos, Plateau State. Richards Agricbusiness ventures will be responsible for the management consultancy of the projects.

**Management, Technical Assistance/Partners**

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 standard cassava 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.

**Market and Sales**

Cassava is a source of food security, not only because it can be grown on less productive land, but because it is a source of income for producers and generally a low cost source of food. These relationships suggest that the development of market opportunities for cassava can contribute substantially to poverty alleviation, especially for resource-constrained households, and can increase household food security. Processes cassava products must compete in markets with grain products; so lowering costs of production is essential to its survival as an industrial crop. Also there tends to be less research and development devoted to developing and improving cassava-based products than there is for the competing grain-based products.

MARKET SHARE/SIZE: USD 40.53 billion in 2018 and is projected to reach USD 66.84 billion by 2026, exhibiting a CAGR of 6.50% during the forecast period in the world.

USERS OF THE PRODUCT: In South East (Garri, Fufu/Akpu), in South West (Garri, Lafun, Fufu/Akpu).

**Competition analysis**

1. World cassava output is 282 million tons, with 7% increase from the level of 2012.
2. International prices of chips and starch is stable.
3. Markets for cassava are mainly in the area of starch and starch based products, for domestic animal feed products and for processed food.
4. Production of ethanol is rapidly developing in Thailand, China and the Philippines.
5. Great potential in developing ‘high-value’ cassava varieties for human consumption, animal feeding, commercial production of animal feed, starch and ethanol.
6. Cassava compete with other more valuable crops, such as maize soybean, and vegetables.
7. Cassava compete mainly with tree crops such as rubber in Thailand, coconuts in the Philippines, oil palm and rubber in Malaysia and Indonesia , and cashew nuts and rubber in Vietnam.

Benue and Kogi state in the North central zone are the largest producers of cassava. Cross River, Akwa Ibom, Rivers and Delta dominate state cassava production in the South South. However, even among those 24 states that are involved in the production of cassava, there are states in the highest production. They are Anambra state, Delta State, Edo State, Benue State, Cross River State, Imo state, Oyo State, Taraba state, and Rivers state.

**Market Potential**

Nigeria is the largest producer of cassava in the world but unfortunately, despite the high volume of production, the yield is very poor. Nigeria has one of the worst yield in world records. In Nigeria, cassava consumption for food is about 65% of production. The remaining 35% all goes to the industry, because industries are very few. Infrastructure is another big challenge. Where you are going to build your factory, you need to generate your own water, electricity, road and virtually everything! 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. Commercial cassava farming has been a very profitable farming venture for Nigerian farmers. Cassava tubers which is in very high demand is the raw material for producing garri which is a staple food for the Nigerians. Cassava farming venture is known for its low input-high output nature.

**Technical Feasibility**

Cassava production is generally thought to require less labor per unit of output than other major staples. Cassava is able to grow and give reasonable yields in low fertile soils. In terms of technology, to improve cassava processing, the CGIAR Research Program on Roots, Tubers and Bananas (RTB) conducted a benchmarking study of cassava starch and flour technologies in several countries. On the cassava production, we conducted 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 in Richards Agribusiness Ventures.

**Government Support and Regulation**

The project conforms 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 and 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 favorable policy of zero duty for agricultural and equipment import. The governments initiative on cassava which was launched in 2003 brought cassava and its potentials to the nation limelight. Recent and past governments came up with policies to encourage commercial cassava production and processing for both local and international market.

**Financial Evaluation**

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| --- |
|  **Normal cutting (RM) Mini-cutting(RM)**  |

|  |  |  |
| --- | --- | --- |
| 1. Labour costs(RM/ha)
 | 3,140 | 4,240 |
| Land preparation | 1,000 | 1,000 |
| Planting  | 300 | 300 |
| Fertilizer application | 180 | 180 |
| Weeding  | 360 | 360 |
| Harvesting  | 1,300 | 1,300 |
| Pre-sprout in polybag |  | 300 |
| Pre-sprout(weeding, watering)Pre-sprout(transportation to the field and preparations of planting holes) |  | 300500 |
| 1. Agricultural input costs (RM/ha)
 | 4,000 | 3,200 |
| Planting material  | 2,000 | 400 |
| Fertilizers, herbicides | 2,000 | 2,000 |
| Poly bags  |  | 800 |
| 1. Non-variable costs (RM/ha)
 | 500 | 500 |
| Land rental, machinery  | 500 | 500 |
| 1. Total production costs (RM/ha)
 | 7,640 | 7,640 |
| Cassava yield (t/ha) | 101.48 | 92.91 |
| Cassava root price (RM/t) | 280 | 280 |
| Gross income (RM/ha) | 28,414.40 | 26,014.80 |
| Net income (RM/ha) | 20,774.40 | 18,074.80 |
| Production cost per tonne | 75.28 | 85.45 |
|  |  |  |

**\*AVERAGE COST OF CASSAVA PRODUCTION PER HECTARE**

**Funding Mechanism**

Equity investor will provide equity for equipment and vehicles purchase and 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. The loan or grants will be used to buy plots of land for the standard cassava production by Richards Agricbusiness Ventures.

**Conclusion**

The cassava processing business is developed to help entrepreneurs raise funds from investors, apply for a bank loan or grant. Commercial cassava farming has been a very profitable farming venture for Nigerian farmers. The project is technically feasible and commercially viable and therefore recommended for funding.