OKENABIRHIE OGHENEMERU NITA

BIOMEDICAL ENGINEERING

18/ENG08/015

AFE 202 ASSIGNMENT

BUSINESS PLAN FOR THE DEVELOPMENT OF A 20FT PER CUBIC YARD OF FISH FARM IN RIVERS STATE, NIGERIA BY BEDAZZLE FISH AND SEAFOOD AQUAECULTURE LLC.

Signature:

Name:

Date:

**Table of Content**

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 Timeline of projects

7 Estimated project costs and revenue

8 Funding mechanism

9 Conclusion

**Executive Summary**

Bedazzle Fish and Seafood Aquaculture, LLC is a world – class and licensed Fish and Seafood Aquaculture Company that will be based in a riverine area in Port-Harcourt, Rivers state – Nigeria. We have done our detailed market research and feasibility studies and we were able to secure a hundred hectares of land to start our fish and seafood aquaculture business.

Our fish and seafood farm is going to be standard fish and seafood farm hence will be involved in raising and harvesting finfish (e.g. catfish, trout, tilapia and minnows), raising and harvesting shellfish (e.g. clams, oysters, crustaceans, mollusks and shrimp), raising and harvesting ornamental fish (e.g. goldfish and tropical fish), raising and harvesting aquaculture species to augment or replenish wild habitats, and raising and harvesting other aquaculture (e.g. seaweed, alligators, frogs and turtles) et al.

We are in the Fish and Seafood Aquaculture industry because we want to leverage on the vast opportunities available in the agriculture industry, to contribute our quota in growing the Nigerian economy, in national food production, and also to fish and seafood from the Nigeria to other countries and over and above to make profit.

Bedazzle Fish and Seafood Aquaculture, LLC is well positioned to become one of the leading fish and seafood farming business in Nigeria, which is why we have been able to source for the best hands and machines to run the company with.

We have put process and strategies in place that will help us employ best practices when it comes to fish and seafood farming processes as required by the regulating bodies in Nigeria. At Bedazzle Fish and Seafood Aquaculture, LLC, our customer’s best interest will always come first, and everything we do will be guided by our values and professional ethics.

We will ensure that we hold ourselves accountable to the highest standards by meeting our client’s needs precisely and completely. We will cultivate a working environment that provides a human, sustainable approach to earning a living, and living in our world, for our partners, employees and for our clients.

Bedazzle Fish and Seafood Aquaculture, LLC is a private registered fish and seafood farming company that is owned by Vincent Denis and his immediate family members.

The fish and seafood farm will be fully and single handedly financed by the owner – Nita and her immediate family members at least for a period of time. Nita studied Fishery and she has well over 5 years of hands on experience in the fish and seafood aquaculture industry.

**SPONSORSHIP**

Bedazzle Fish and Seafood Aquaculture, LLC is a privately owned and managed fish and seafood business that intend starting small in fishing community in Port-Harcourt – Rivers State, but hope to grow big in order to compete favorably with leading fish and seafood farming companies in the industry both in Nigeria and on an international stage. It is sponsored by the owner alone.

**MANAGEMENT**

The management would consist of St Vincent aquaculture firm that consists of shareholders and members of the firm. The firm would be in charge of all the expenses and marketing work, they have different teams for different sections of the business. The managing director of this firm would be in charge of the management of the daily activities of the business. His main focus would be to make sure that there is profit made and that the business is successful.

**TECHNICAL ASSISTANCE**

AquaSol, Inc. is prepared to stand behind any project we develop. Our team can train a select group of local skilled and unskilled laborers and aquaculture experts, with the ultimate goal of handing the project off to the local management team once the aquaculture operation is running smoothly. A typical transition period is anywhere from 6-12 months depending on the species and situation. As an alternative, we are prepared to manage the entire operation of any commercial fish or seafood farming project we develop or any existing operation that passes our initial audit. Our farm management contracts can be negotiated on an annual or multi-year basis.

**MARKET AND SALES**

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

Market Share: 45% niche market in Nigeria, Sub-Saharan Africa

Users of Products: edible seafood for individual consumption or for restaurants nationwide, is used in food production, can be sent to markets to be sold for profits, the oil extract can be used for medicinal purposes. Some fish can also be sold in pet stores as pets.

**COMPETITON ANALYSIS**

Seafood includes Mainly Fish (which is the sea dwelling specie harvested annually), but also, shrimps, periwinkles, clams, oysters, Crayfish Etc. Of the 36 states in the country (Nigeria), 9 (Lagos, Ogun, Ondo, Edo, Bayelsa, Rivers Akwa Ibom and Cross River) are located in the coastal zone.

Nigeria’s coastal zone is endowed with numerous living and non-living resources. The most important living resources are fin and shellfish including shrimps. Nigeria's domestic fish production hovers around 400,000-500,000 metric tonns annually. Osun, Kwara, Delta, Cross River, Benue, Ogun and Oyo have the highest amount of fish farms in the country, while The largest marine seafood producing states are: Akwa Ibom, Rivers, Ondo, Delta, Bayelsa, Lagos, Cross River and Ogun states. Based on this it would be seen that the competition for the number of states producing fish is not as much.

**TARRIF AND IMPORT RESTRICTION**

There is no forex restriction ban on agricultural produce and seafood imports which favors the project under consideration.

**MARKET POTENTIAL**

There is high demand for fish and seafood all over Nigeria and Africa at large. . The state of infrastructure though not perfect still supports production and trade within Nigeria and outside.

**PROFITABILITY**

One of the biggest challenges facing the future world aquaculture industry is the access to proteins, minerals and omega 3 fatty acids. More than 85% of the world’s fish stocks are already fully exploited, hence increasing the use of wild caught fish as ingredients in the aquaculture fish feed is no longer possible. 70% of the ingredients in the feed fed to Atlantic salmon have already replaced by plant sources. Climate changes could also reduce the agricultural production of soy, corn and other ingredients that today’s fish feeds rely upon, hence the industry has to search for new and sustainable resources to produce cultured fish, such as algae, in the future. The industry is in need of innovative solutions to solve this urgent challenge.

Infrastructure for marine farms will be another area for investigation, particularly given the pressure to develop ‘off-shore’ facilities for fish, closed systems and IMTA farming as well as species at lower trophic levels. However, lower trophic level species may be more affected by climate changes. Currently, there is evidence for the dependency on stable climate conditions for mussel settlement, growth rate and quality (meat yield). Climate changes may affect production through differences in nutrition, frequency and intensity of harmful algal bloom events while ocean acidification may reduce growth through reduced calcification of mussels in general. Thus, the technology for closed systems, more robust systems, and systems for new species and new operating conditions for offshore farms raise new challenges and risks, while knock-on effects will be reflected in assuring worker safety and insurance rates. New technologies for distance management (with new ICT solutions and satellite monitoring) of farms are anticipated.

**TECHNICAL FEASIBILITY**

The products (rearing of fish and seafood) are very feasible. Site selection is a key component in the overall process of determining feasibility. Water and soil quality are also critical variables that will significantly influence our opinion on feasibility and are discussed elsewhere on our website. Meteorological and oceanographic analysis (when relevant) is also closely investigated, as we leave no stone unturned. At its most basic level, our meteorological analysis will involve the collection and analysis of meteorological data from the region, with emphasis on seasonal patterns of rainfall and temperature. A natural disaster risk assessment will also be performed.

An assessment of the existing infrastructure in close proximity to the targeted site is also very important. Traditional infrastructure that must be properly assessed and analyzed includes access to local farm labor, access to reliable and low cost sources of energy, transportation networks, logistical support, and communications networks. Non-traditional infrastructure, or aquaculture infrastructure, also needs to be properly assessed and analyzed. Proper access to high quality feeds, seed (fry/fingerlings/nauplii/post larvae), and the proximity and capabilities of local seafood processing plants all require careful investigation.

**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 both farmers and market women/men. The project will benefit from government intervention fund in the agricultural sector. The project will also benefit from the favorable policy of zero duty for agricultural and equipment imports. The project will also widen market opportunity. It will also contribute to employment increase, output increase, stable price and stable exchange rate.

**PROJECT TIMELINE**

The project will be completed in about ultimately 4 or 5months depending on how long it takes for all the fish tanks and ponds to be made and put in the right water to accommodate the fish and seafood. So it should be done by December 2020.

**7 ESTIMATED PROJECT COSTS AND REVENUE**

**(A)Fixed Cost**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **QTY** | **₦** | **K** |
| Land Clearing | 1Cubic yard | 350,000 | 00 |
| Excavation | 1Cubic yard | 100,000 | 00 |
| Tightclay installation | 1 Cubic yard | 75,000 | 00 |
| **Sub total** | 1Cubic yard | **525,000** | **00** |
| **Total** | 400 Cubic yard | **925,000,000** | **00** |

**(B) Equipment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **QTY** | **MODEL** | **USD** | **₦** | **K** |
| Excavator | 1 | YTO-702(90hp) | 50,000 | 18,000,000 | 00 |
| Dozer | 1 | 7CX- 90 | 3,000 | 1,080,000 | 00 |
| Scraper | 1 | 2BFY-6V | 10,000 | 3,600,000 | 00 |
| **Sub total** |  |  | **63,000** | **22,680,000** | **00** |

**(C) Vehicle**

**Type Model QTY ₦ K**

|  |  |  |  |
| --- | --- | --- | --- |
| **Pick-up Truck** | **FORD** | **3** | **50,000,000 : 00** |

**Operating Cost**

|  |  |  |
| --- | --- | --- |
| **Working Capital** |  |  |
|  | **₦** | **K** |
| Excavating/Cy | 20,000 | 00 |
| Dozing/Cy | 30,000 | 00 |
| Sub total | 50,000 | 00 |
| **For 400 Cy** | **100,000** | **00** |
| Mechanization and storage | 200,000 | 00 |
| **For 400Cy** | **16,000,000** | **00** |
| Input / Cy | 80,000 | 00 |
| **For 400Cy** | **32,000,000** | **00** |
| Area yield insurance | 12,500 | 00 |
| Produce aggregation | 4,500 | 00 |
| Geo Spatial Service | 5,500 | 00 |
| Sub total | 22,000 | 00 |
| **For 400Cy** | **8,800,000** | **00** |
| Interest per Cubic yard | 30,000 | 00 |
| **For 400Cy** | **12,000,000** | **00** |
| Total cost per Cubic yard | 200,000 | 00 |
| **Total cost for 400Cy** | **80,000,000** | **00** |
| Loan principal and interest (cost per Cubic yard) | 300,000 | 00 |
| **Total for 400Cy** | **120,000,000** | **00** |

**Amortization**

**₦ K**

|  |  |
| --- | --- |
| **Land clearing amortization (per cubic yard)** | **50,000 : 00** |
| **Land clearing amortization (400cubuc yard)** | **20,000,000 : 00** |

**REVENUE**

|  |  |
| --- | --- |
| **Yield per cubic yard 5tonnes@ ₦150000 per tonne** |  |
|  | **₦ K** |
| **Revenue per cubic yard** | **400,000 : 00** |
| **For 400Cy** | **160,000,000 : 00** |
| **Net revenue for 400Cy(without amortization)** | **70,000,000 : 00** |
| **Net revenue with amortization(400Cy clearing)** | **85,000,000 : 00** |
| **2nd Production Cycle** |  |
| **Net revenue** | **50,000,100 : 00** |
| **Net revenue with amortization(400cy land)** |  |
| **Annual Net Revenue ( 1st + 2nd Cycle)** | **150,000,000 : 00** |

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

**FUNDING MECHANISM**

Aquasol will provide 400cy of cleared farmland around the riverine area in ph and lease it to members of the cooperative. Aquasol will also lease 8,000MT capacity silo’s as equity contribution. The equity investor will go ahead to provide equity for equipment and vehicles purchase and working capital or apply for a loan at the bank of agriculture, through the help of the government.

**CONCLUSION**

The project shown above is very feasible and economically and commercially viable. Therefore is recommended for funding.