



**UNIVERSITY OF DAR ES SALAAM**  
**BUSINESS SCHOOL**



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INSTRUCTOR: NELLY MALIVA

GROUP MEMBERS:

- |                     |               |
|---------------------|---------------|
| 1. MARTIN, VERONICA | 0000-04-08221 |
| 2. HASSAN, MALICK   | 0000-04-08228 |
| 3. ISMAILI, MBARAKA | 0000-04-08214 |

FRUITS MODERN FARMING (MANGOES AND ORANGES)

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## FRUITS MODERN FARMING (MANGOES AND ORANGES)



Fig. 1 & 2 Fruits modern farming, mangoes and oranges farm.

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## **EXECUTIVE SUMMARY**

Tanzania is the one of the East Africa country with strategic plan in industry development for the aim of making Tanzania to be the middle income state up to the year 2020, the emphasis of the industries is starting from small industries to large industries, among those industries in strategic plan are fruits processing industries for the productions of juices and other products originated from fruits.

Dar es salaam city and Mkuranga district are the among of the towns where the fruits processing industries are located, the richest businessmen in Tanzania Mohamed Dewji and Said Salim Bakhersa are the one who own the fruits processing industries and the population leaving in these towns are using fruits for their refreshments and sometimes used as the source of foods to the local people living in towns.

Fruits modern farming is the new business for fruits farming expected to start after presenting this business plan, the farm will be cultivated two cops (fruits), oranges and mangoes in a modern agriculture. This agro-business will be cultivated in a modern way to facilitate the high production. The farm will be located at Nyangunguti near Mwarusembe village in Mkuranga district about 50 km from Dar es Salaam city this will enable the customers around the coast region and Dar es Salaam city to have the fruits for low price and easy in access.

The farm will have two crops products which will be cultivated on the farm in modern which are mangoes and oranges in small farming and at the beginning the farm will start only with two hectares but expecting to be expanded in future, within the farm the main product will be mangoes while oranges will be as a supporting product for the business diversifications where by 1.5 hectares will be cultivated the mangoes and 0.5 hectares will be cultivated oranges.

With the high need of fruits from the people living in Dar es salaam city and mkuranga district but also fruits as the source of raw materials to the fruits processing industries, fruits modern farming will have the benefits to the people living in the areas around and industries, the advantages will be on low prices, easy to access in term of transportation from the farm to the market or industries.

The main objectives of the farm is to serve as the main sources of fruits at the areas and act as the sources of raw materials to the industries which are near located to the industries compared to farms located far away in Tanga regional, the other objectives are to maximize the owners wealth, profit oriented agribusiness and to become the modal leading fruits farming in Tanzania where the students and other Agricultural collages students will visit for study tour in the farm.

The farm will be equally owned by three owners in partnership way of ownership consist of Mbaraka Ismaili who will be in charge as a General Manager and among of top manager and is responsible of supervision of all operations team under operation manager, Mbaraka is highly experienced in managerial work and is capable of managing the agribusiness. Malick Hassani is experienced in agriculture work, will have the main supports in advice the agricultural activities and Veronica Martin is experienced in marketing and finance activities and will coordinates and find the market for the final products, interact with the intermediates agents who will find the external market.

The farm will be financed with total capital of Tsh 13, 217,500/= where by the tsh 6,000,000/= is the loan from financial institution and Ths 7,217,500/= is the capital available from the owners. The farm will start its production after two years; the first two years will be used to plants the seeds for the fruits of mangoes and oranges.

## **1. BUSINESS DISCRIPTION**

### **1.1 Business Opportunity**

In Tanzania there are many dealers of the fruits from the different regions, some of them are intermediates like agents and brokers and others are farmers who own the fruits farms. Many fruits farms which are the competitors are located in northern part of Tanzania especially in Tanga regional at Muheza, Lushoto, Mkinga and Pangani districts where the fruits farming are cultivated mainly, however in the areas around the farm there are some competitors farming fruits around.

The main opportunity to our business is that, the farming activities is done in a modern way compare to our competitors who cultivating in local ways but also our another uniqueness is that the products specializations where by only two products will be produced which are mangoes as a main product and oranges as the supporting product, mangoes and oranges are mostly fruits used in societies including in industry, so in using modern way of cultivations will lead to high efficiency and productivity hence increase business opportunity to the business and able to compete with competitors.

#### **1.1.1 Mission Statement**

Our mission is to be the leading fruits farm product which fit the needs of the societies, targeted to middle income earners, higher income earners and act as a source of raw materials to the fruits processing industry for the sustainable development in the societies.

#### **1.1.2 The Vision Statement**

To provide the good fruits farm products to the societies for the satisfying the needs of the societies in Tanzania.

### **1.2 Objectives/Goals of the business**

The main objectives of the farm is to serve as the main sources of fruits at the areas and act as the sources of raw materials to the industries which are near located to the industries compared to

farms located like in Tanga regional, the other objectives are to maximize the owners wealth, profit oriented agribusiness and to become the modal leading fruits farming in Tanzania where even the students and other Agricultural collages will visit for study tour in the farm.

In Dar es salaam city and Mkuranga district there is no proper fruits farms which are cultivated in the modern way which can be used as the part of case study for those students who study in different agricultural collages around the coast regional. Apart from other goals mentioned above but the fruits farming farm will be the leading example farm for the societies and students, in somehow that will be the sources of income because the visitors will pay some money for getting explanation.

Provides the education to the societies on how the fruits are cultivated in a modern ways, in real Tanzania has fruits farms but most of them are local cultivated. This will enable the local farmers to come and learn on how the modern farming is done. Mangoes and Oranges are the fruits which will be the products of the farm, one of the strategies is to sell in low price for making local peoples and industries to afford the products available. And generally another strategy is to expand the business in five years to come after starting the production, from 2 hectares to 5 hectares for the first phase.

### **1.3 Products and Location of the business**

The farm will have two crops products which will be cultivated on the farm in modern which are mangoes and oranges in small farming and at the beginning the farm will start only with two hectares but expecting to be expanded in future, within the farm the main product will be mangoes while oranges will be as a supporting product for the business diversifications where by 1.5 hectares will be cultivated the mangoes and 0.5 hectares will be cultivated oranges.

This agro-business will be cultivated in a modern way to facilitate the high production. The farm will be located at Nyangunguti near Mwarusembe village in Mkuranga district about 50 km from Dar es Salaam city this will enable the customers around the coast region and Dar es Salaam city to have the fruits for low price and easy in access.

The location of the business has considered macro and micro environment analysis conducted for the purpose of the finding the market and good location of the business.

#### **1.4 Micro and macro environmental analysis**

This is the environmental analysis concerning the internal factors and external factors which was made the analysis on the environmental. The fruits modern farming has both micro and macro environmental analysis.

##### **1.4.1 Micro environmental**

- i) Suppliers, the business are expected to have the different suppliers who will supply the seeds and consultations knowledge concerning the modern agricultural on fruits farming. Among of the suppliers are Naliendele Agricultural research institute from Mtwara and Msasani research institute in Dar es salaam. The suppliers will provide the consultations and seeds also they provide the training to the team of operation for the smooth operations. Other suppliers are MO agricultural equipments company and local agricultural equipment from Kariakoo shops.
- ii) Creditors  
The fruits modern farming will have the good relationship with the creditors and acquire the credits from the different creditors in financial institutions like FINCA Tanzania, TUJIJENGE Tanzania, NMB and CRDB bank.
- iii) Competition  
The business has the competitors around the Tanga regions especially in its district in Lushoto, Muheza and Pamgani. Most of the farms are local farms. But the main competitors are Bakhresa fruits farms in Tanzania and Mohamed Dewji fruits farms in Tanzania.



iv) Customers

The targeted customers is the middle income earners and fruits industry processing, this generally will enable them to be as a raw materials for their industries and home consumptions uses.

#### **1.4.2 Macro environment**

The regulatory frame of the law and policies of the business is under ministry of agriculture and livestock keeping which also observing different environment degradation policy settled by the government of united republic of Tanzania also practicing Corporate Social Responsibility (CSR) in the community around the farm as government policy of CSR emphasize.

Socio-economic ( cultural), the cultural patterns, values, beliefs, trends, styles and preferences of our customers can affect the purchasing behavior or capacity of our service however for the environment where the farm is located the socio economic cultural are in favour of the fruits, the people use the fruits as sources of income and food.

#### **1.5 Capitalization and ownership**

The farm will be equally owned by three owners in partnership way of ownership consist of Mbaraka Ismaili who will be in charge as a Managing director and among of top manager and is responsible of supervision of all operations team under project manager, Mbaraka is highly experienced in managerial work and is capable of managing the agribusiness. Malick Hassani is experienced in agriculture work, will have the main supports in advise the agricultural activities and Veronica Martin is experienced in marketing activities and will coordinates and find the market for the final products, interact with the intermediates agents who will find the external market.

The fruits modern farming will cost Tshs 13, 217,500/= in details cost breakdown is provided at the financial section of the business plan. Funding for the business will be provided by

contributions by the partners with an amount of Tsh 6,000,000/= and the rest will be loaned from a bank financing. The proposed funds sources are as follows;-

**Table 1:** Sources of funds

SOURCES OF FUNDS	AMOUNT
Mbaraka Ismaili	2,000,000
Malik Hassan	2,000,000
Veronica Martin	2,000,000
Bank Loan	7,217,500
TOTAL	13,217,500

## **2. MARKETING PLAN**

### **2.1 Industry assessment**

Fruits are the essential needs to the human being, increases the nutrients for the life and health of the peoples, the fruits can be used as the food and sources of income which generate the income to the peoples. The industry is still narrow because the number of new entrants in that kind of business in Tanzania is so slow, especially the fruits modern farming. Mostly of fruits processing industry in Tanzania are importing the raw materials (fruits) from abroad.

The number of the customers in industry is so many but with the few farms dealing with mangoes and oranges fruits, so if the business will operate in efficiency way the position of taking the marketing high because most of the suppliers worrying out the agribusiness activities especially from the original of cultivating.

### **2.2 The target market**

Agents around Nyangunguti village, Mkuranga districts and Dar es Salaam city area also targeting final consumers or individually living in Dar es salaam city and Mkuranga district at coast region. The most targeted from ifruits industries in Tanzania are Bakhressa Juice industries and Mohamed enterprises food industries.

### 2.3 Sales projections



Fig. 3 Oranges harvested ready for sales.

Sales projections are expected to increase yearly 15% for 3 years after starting the production, the farm will start the outputs after 2 years, the 3<sup>rd</sup> year is where the first harvesting will happen. The sales projection can be shown below in the table (the price at tsh):-

**Table 2:** Sales Projection

S/N	Product	Seeds	Output per tree	Total Harvest	Price at the farm	Sales year 1	Sales year 2	Sales year 3
1	Mangoes	104	2,500	260,000	100	26,000,000	29,900,000	34,385,000
2	Oranges	55	2,500	137,500	30	4,125,000	4,743,750	5,455,312.5
	<b>TOTAL</b>	<b>159</b>	<b>5,000</b>	<b>397,500</b>		<b>30,125,000</b>	<b>34,643,750</b>	<b>39,840,312.5</b>

## **2.4 Marketing Strategies**

### **2.4.1 Product Packaging and distribution strategies**

The products mangoes and oranges will be packed and delivery direct from the farm, once the order is place by the clients or other intermediates, the customer or agents will come to the farm and harvest the product direct and packaging it. When it happen the clients are not come on time the management of farm will harvest the products and find the market for sales or supply to the contracted fruits processing industry. The management of the farm will enter the contract with some industries which processing the fruits to be supplied some of the stock once the fruits are ripped.

### **2.4.2 Promotion Strategies**

The promotion strategies for the nature of the business which is the fruits modern farming will be based mostly in electronic marketing such as using website and e-mail, but also sometimes the physical marketing of person contact with the prospective clients will be done. As the one of the goal of business is to promote the farm to be the leading example farm for the societies where the students and other local farmers from Tanzania will come to learn, so by opening the website and display how the beauty farm is and its products will attracts the targeted peoples.

E-mail will used to close the deal provides some explanations when the customers need more clarifications before closing the deals. The e-mail and website is targeted more the high profiles customers especially who run the fruits processing industry, but for the local customers will use market drive to emphasize direct consumer purchase directly from the farm.

Referral is the one of strategy which will be used as the promotion strategy, when by if the customer saved well will tell other new customers concerning our good products.



**Fig. 4.** Picture which can be displayed in website as promotion strategy.

### **2.4.3 Corporate social responsibility (CSR)**

The management of the fruits modern farming will do the corporate social responsibility for helping the societies living along the villages near to the farm by provides the fruits to the schools or contributes some of the profits different contributions in the societies, and one of the main corporate social responsibility the management will do is to dig the well which will provide the fresh water and provided free to the societies around the farm.

### **2.4.4 Competitive Analysis**

No strong competitive analysis in the areas around the project however the business has the competitors around the Tanga regions especially in its district in Lushoto, Muheza and Pangani. Most of the farms are local farms. But the main competitors are Bakhresa fruits farms in Tanzania and Mohamed Dewji fruits farms in Tanzania.

### **3. OPERATIONAL PLAN**

#### **3.1 Location**

The fruits modern farming will be located at Mkuranga district about 25 km from Mkuranga town at Nyangunguti village in Mwarusembe. The location of the business was targeted in the area where the transportation of the products and other resources will be easy to access. Also the targeted location is where our market targeted, small income earners, the middle income earners and the fruits processing industries which mostly in Tanzania is located at Dar es salaam and Mkuranga district.

#### **3.2 Product design**

The fruits modern farming has design to cultivate only two types of fruits which are mangoes and oranges for the aim of fulfillment of the needs of the most population because these are famous fruits in societies and are used mostly in juice production. The farm at the beginning will start only with two hectares but expecting to be expanded in future, within the farm the main product will be mangoes and oranges will be as a supporting product for the business diversifications where by 1.5 hectares will be cultivated the mangoes and 0.5 hectares will be cultivated oranges.

The aim of putting mangoes to be main product in the farm by having many trees than oranges is that, oranges are low in price while mangoes are high price even though all have the same margin, so incase of revenue the mangoes will have high return compare to oranges but arranges remain as diversification product in case mangoes production in the season has dropped out due to unavoidable circumstance, oranges can cover the variable cost. The management will be responsible by ordering the seeds for mangoes and oranges and taking the care of the seeds from the beginning until it grow and start production after two years, the care includes irrigation when there is scarcity of rain.

### 3.3 Farm Capacity

The farm will have the capacity of having total of 159 trees for fruits where by the mangoes trees expected to be 104 and oranges trees to be 55. The distance between one tree to another tree is 6 meters and the farm will have 2 hectares. The farm will have approximately capacity to produce 260,000 mangoes fruits per season and 137,500 oranges fruits per seasons, see the table below for more clarification.

**Table 3:** Farm products capacity

S/N	Product	Tree/Seeds	Output per each tree	Total fruits per Season
1.	Mangoes	104	2,500	260,000
2.	Oranges	55	2,500	137,500
	<b>TOTAL</b>	<b>159</b>	<b>5,000</b>	<b>397,500</b>

### 3.4 Inventory and quality control

The main inventories of the farm will be the mangoes and oranges fruits produced, the inventory will be kept in the store which will be build at the farm but also other sock will be kept to the respective suppliers who will orders the fruits. The paste and disease medicines as the other inventories will be kept in that store also includes sulfate medicine and others to control the farm.

It is important to maintain the quality of the fruits, for the aim of maintaining the quality the management will make sure all medicines which are used to display to the fruits trees are approved with the concerned board and are not outdated(expired) in its use. Also during the harvesting time the management of the farm shall make sure all rotten fruits are separated from the flesh fruits to maintain the quality and insures the customers are getting fresh products.



### **3.5 Legal aspect**

The farm does not need official licensing but needs to obey some regulations and policies available from the laws of united republic of Tanzania which needs to protect the environment during the agricultures and protect land degradation. The management will obey all law of the united republic during its work and during agricultural activities.

### **3.6 Manpower required and Cost**

The manpower requires in the fruits modern farming will consist with six positions which are General Manager, Operation Manager, Finance/Accounting manager, Inventories team, Sales team and peasants' team. The cost required and wages for each employee will be detailed analyzed on the Organization Plan below.

## **4. ORGANIZATION PLAN**

### **4.1 Form of organization**

The fruits modern farming will be under the partnership form of organization where by the profits or loss will be divided equally and share capital are contributed equally. All law of Tanzania regarding the partnership deed will applied including paying tax according to the partnership requirements.

#### **4.1.1 Keys duties and responsibility of personnel**

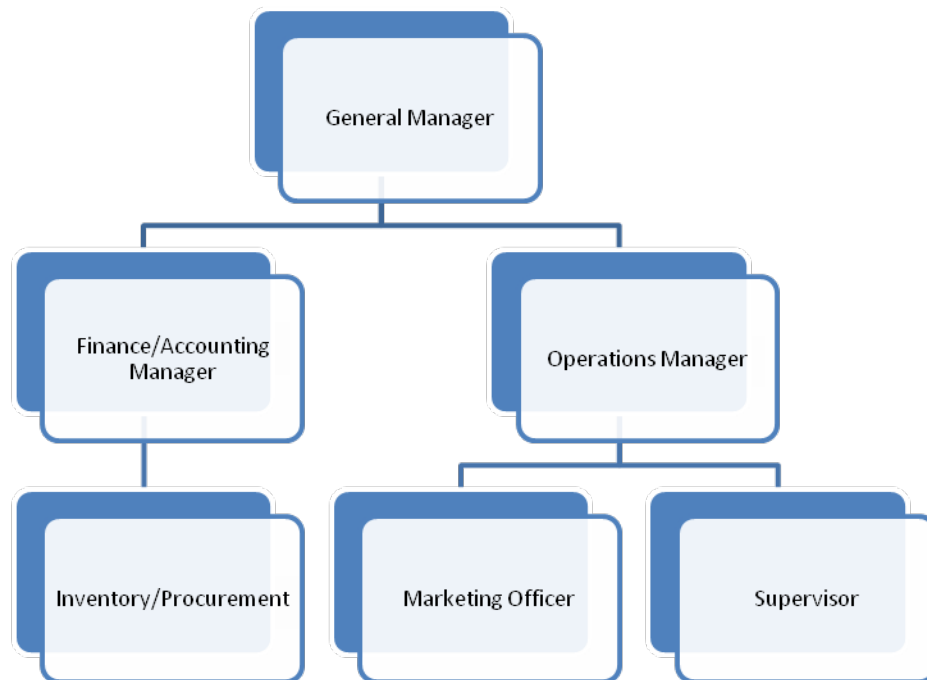
General Manager, is the head of the fruits modern farming will oversee all the operations, coordinate and monitoring all of the activities at the farm and manage the staffing daily routine and stakeholders relationship, other business, suppliers, regulatory bodies. The General Manager shall possess the degree bachelor in business administration or Accountancy or finance or any related business field education includes the experience of at least three years in managerial level of working.

Operation Manager, the head of operation who is responsible to oversee day to day activities conducted at the farm, the one who control the agricultural activities of the farm by reallocating the peasants team through their Peasant Supervisor to cultivate the farm where needed and also control Marketing Officers (sales team) to find the market of the products, Operation Manager is reporting to the General manager also this personnel is the key and among of three top managers in the partnership, in collaboration with finance manager enable to control the stocks and setting the different budget for the development of the partnership. Operation Manager possesses the diploma in general agriculture and having the experience of agricultural supervision of more than three years.

Finance Manager is the head of finance and accounting department. Its functionaries is receiving all payments done to the farms and purchasing different assets required in the process of productions, also is one who prepare the payroll for salaries and paying other bonus, is the main controller of the budget. Finance Manager is reporting direct to the General Manager. Finance

Manager will possess the degree in Accountancy or diploma in accountancy and having the experience in accounting practices not less than three years.

#### 4.2 ORGANIZATION STRUCTURE FOR FRUITS MODERN FARMING PARTNESHIP



#### 4.3 Salaries and Wages

The business will have total of 11 employees in which seven of them will be permanently as structure shown above and include one security guard and four of them will be temporary employees who will be paid according the work done by them, all four temporary employees will be the peasants' team who will report to Peasant supervisor. Below is the tables which shows how much for each employee will be paid a salaries per monthly basis.

**Table 4:** Salaries for employees

S/N	Title	Salary per Month	Salary per year
1.	General Manager	300,000	3,600,000
2.	Operation Manager	280,000	3,360,000
3.	Finance Manager	250,000	3,000,000
4.	Marketing Officer	200,000	2,400,000
5.	Peasant Supervisor	200,000	2,400,000
6.	Inventory	150,000	1,800,000
7.	Peasants (4)	4@50,000=200,000x 4 season	800,000
8.	Security Guard	120,000	120,000
	<b>TOTAL</b>	<b>1,700,000</b>	<b>17,480,000</b>

**Note:** The bonus will be paid according to the profits generated on the respective season; the quarter of the net profit will be retained as the bonus to the staff where by the staff bonus will be given by using the ratio of their salaries.

#### 4.4 Fixed assets

The fixed assets required for the Fruits modern farming are Plot 2 hectares, hurt (store) this will be built for storing, Hoe and Panga and motorcycles for transportation. The fixed asset will be contributing the expense to the business, but this expense will be only at the beginning but the expectation is to use the fixed assets in five years for some and others will be long term fixed assets. The cost to be incurred for fixed assets are detailed in the table below:-

**Table 5:** Fixed assets with cost required

S/n	Fixed Assets	Description	Total Cost
1.	Plot	2 hectors	2,000,000
2.	Hurt	Building for store and security	3,000,000
3.	Hoe and Panga	4 Hoe @30,000 2 panga@20,000	160,000
4.	Motorcycles	For transport	1,500,000
	<b>TOTAL</b>		<b>6,660,000</b>

#### 4.5 Other expenses

The other expenses including all expenses and unforeseen events some of them are paste diseases medicine for curing the plants, transport expenses, Consultants expenses this will consider the agricultural consultants from Naliendele agricultural research institute -Mtwara and Msasani agricultural research institute-Dar es salaam, the consultants will be outsourced mostly for the assessments and checking the progress of farm and providing the training to the staff. The estimated expenses are detailed as follows in the table below:-

**Table 6:** Other expenses

S/n	Other Expenses incurred	Description	Total per Year
1.	Paste diseases medicines	4 per term @100,000	400,000
2.	Transport	30,000 per month	360,000
3.	Consultants	2 @ 50,000 * 2 per year	200,000
4.	Others expenses	4 @ 200,000	800,000
	<b>TOTAL</b>		<b>1,760,000</b>

## **5. FINANCIAL PLAN**

The financial plan will include the source of capital where by all owners in the partnership will contribute the capital. The finance planning and accounting control will be under finance manager.

### **5.1 Source Funds**

The main source of funds will be under three partners, the bank loan and the collection of fees but in little for those who will come to visit the farm for learning this will start after production three years to come

### **5.2 Uses of Funds**

The uses of fund will include buying fixed assets, farming activities and administration expenses like paying salaries, bonus and other contingency expenses. Facilitate the advancement of technologies and staff training.

### **5.3 The farm Performance**

The farm performance will start two years after starting of the business, in the two years to come the production of mangoes and oranges will start. The production fruits will have two seasons within the year. The farm performance will be projected for three years by showing the three key financial statements which are Income statements, balance sheets and cash flow statement as shown below:-

### 5.3.1 Cash flow statement

**Table 7:** Projected Cash flow statement for 5 years 2017-2021

<b>DETAILS</b>	<b>Year: 2017</b>	<b>Year: 2018</b>	<b>Year:2019</b>	<b>Year:2020</b>	<b>Year:2021</b>
<b>Cash flow</b>					
<b>Sales</b>	-	-	30,125,000	34,643,750	39,840,312.5
<b>Cash</b>	13,217,500	2,207,500	-	-	-
<b>Total Cash receipts</b>	<b>13,127,500</b>	<b>2,207,500</b>	<b>30,125,000</b>	<b>34,643,750</b>	<b>39,840,312.5</b>
<b>Cash Outflow</b>					
<b>Purchases</b>	6,660,000	-	-	-	-
<b>Allowance</b>	2,500,000	2,500,000	1,000,000	1,000,000	1,000,000
<b>Salary</b>	-	-	17,480,000	17,480,000	17,480,000
<b>Other Expense</b>	1,760,000	1,760,000	1,760,000	1,760,000	1,760,000
<b>Total Cash out flow</b>	<b>10,920,000</b>	<b>4,260,000</b>	<b>20,240,000</b>	<b>20,240,000</b>	<b>20,240,000</b>
<b>TOTAL CASH BALANCE</b>	<b>2,207,500</b>	<b>(2,052,500)</b>	<b>9,885,000</b>	<b>14,403,750</b>	<b>19,600,312.5</b>

For two years the employees will not be paid salaries, only allowances should be paid. Tsh 1,500,000 for top management for every year and tsh. 1,000,000 will be the allowances for other employees every year. The projected sales for the other years will be 15% of sales increase per year.

### 5.3.2 Income Statement

**Table 8:** Projected Income statement for 5 years 2017-2021.

DETAILS	2017	2018	2019	2020	2021
<b>Sales</b>	-	-	30,125,000	34,643,750	39,840,312.5
<b>Cost of sales(10% of sales)</b>	-	-	(3,125,000)	(3,464,375)	(3,984,031.25)
<b>Gross Profits</b>	-	-	<b>27,000,000</b>	<b>31,179,375</b>	<b>35,856,281.25</b>
<b>Operating Expense</b>					
<b>Depreciation (5% of assets)</b>	333,000	316,350	300,532.5	285,505.875	271,230.58
<b>Allowance</b>	2,500,000	2,500,000	1,000,000	1,000,000	1,000,000
<b>Salary</b>	-	-	17,480,000	17,480,000	17,480,000
<b>Other expense</b>	1,760,000	1,760,000	1,760,000	1,760,000	1,760,000
<b>Total Operating Expenses</b>	<b>(4,593,000)</b>	<b>(4,576,350)</b>	<b>(20,540,532.5)</b>	<b>(20,525,505.88)</b>	<b>(18,751,230.58)</b>
<b>Earnings before Tax</b>	<b>(4,593,000)</b>	<b>(4,576,350)</b>	<b>6,459,467.5</b>	<b>10,653,869.12</b>	<b>17,105,050.67</b>
<b>Tax (0%)</b>	0	0	0	0	0
<b>NET INCOME</b>	<b>(4,593,000)</b>	<b>(4,576,350)</b>	<b>6,459,467.5</b>	<b>10,653,869.12</b>	<b>17,105,050.67</b>

Tax for the agricultural production harvested direct from the farm is exempted by the law of united republic of Tanzania, charged zero percentage.



### 5.3.3 Balance Sheet.

**Table 9:** Projected balance sheets for 5 years 2017-2021

DETAILS	2017	2018	2019	2020	2021
<b>Assets</b>					
<b>Cash</b>	6,557,500	6,192,500	6,703,750	10,653,869.12	17,105,050.67
<b>Equipment</b>	160,000	160,000	160,000	160,000	160,000
<b>Vehicle(5% depreciation)</b>	1,500,000	1,425,000	1,353,750	1,286,062.5	1,221,759.375
<b>Fixture</b>	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
<b>Total Assets</b>	<b>13,217,500</b>	<b>13,217,500</b>	<b>13,217,500</b>	<b>17,099,931.62</b>	<b>23,486,810.05</b>
<b>Liabilities and Owners equity</b>					
<b>Equity</b>	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000
<b>Loan</b>	7,217,500	7,217,500	7,217,500	7,217,500	7,217,500
<b>Retained Earnings</b>	-	-	-	3,882,431.62	10,269,310.05
<b>Total liability and equity</b>	<b>13,217,500</b>	<b>13,217,500</b>	<b>13,217,500</b>	<b>17,099,931.62</b>	<b>23,486,810.05</b>

### 5.3.4 Financial ratios

**Table 10:** Projected Financial ratio analysis

DETAILS	2017	2018	2019	2020	2021
<b>Gross Margin</b>	-	-	0.89	0.9	0.9
<b>Profits Margin</b>	-	-	0.21	0.31	0.43
<b>Current ratio</b>	0.91	0.86	0.93	1.48	2.37
<b>Business</b>					
<b>Efficiency ratio</b>					
<b>Sales to assets</b>	-	-	2.28	2.03	1.70
<b>Return on assets</b>	(0.35)	(0.35)	0.49	0.62	0.73

## **6. RISK ASSESMENT**

Fruits modern farming like other business has the risk behind the activities, the risk in the business is unavoidable but it analyzed to find the solution on how to overcome the risk concerned. Some of critical risks are listed as follows:-

### **6.1 Lack of rain**

The fruits farming need enough rain at the growing stages, the lack of rain fall will leads to the crops to die at early stage. To overcome this, the management will dig the well to get water from water table which will be used for irrigation.

### **6.2 Emergency occurrence of crops diseases**

The diseases for the crop is not a human expectation once it happen, this is the one of critical risk expected to happen but for the aim of overcoming such situation the management will make sure the medicines are used for prevention the crops tree before the occurrence of diseases.

### **6.3 Economical drop out**

The economical trend is dynamics, this can leads either in inflation or deflation sometimes the price of fruits can change to be low which will leads to the low sales. To overcome this the management will find out the fruits processing industries to be their main suppliers and enter with them the contract of fruits supplying of not less than 5 years so as even if the price is down but the price should be constant as the contract specify.

### **6.4 Lack of Market**

This can be one of the risk also, the market can not be easy to have due to the different reasons including many suppliers in the markets, to overcome this management will find out other plan of processing the fruits to be juice and sell the juices but also will sell in credits where by revenues will be collected with the months after suppliers to sell those products.

### **6.5 Risk within two years without outputs.**

This is the new business; the crops will start at the new. Refers the financial ratio analysis above shows that at the beginning of two years no there was no sales will be done, this is the one of risk where by the revenue is expected only from the capital or loan from bank. At this stage the turnover of employees can occur due to low of allowance provided because no salary will be given at this stage until the output starts. To overcome this the management will make sure the finance gets from loans are properly used and have the emergency money to overcome and find the employees who will be willing to work without salary at the beginning, only allowance will be given to them.

## 7. MILESTONE SCHUDULE

**7.1 Table 11:** Milestone on the first year of business startup

	Milestone on the first year startup.		
	<b>Activity</b>	<b>Responsible</b>	<b>Timeline</b>
1	Capital contribution	Partners	1/12/2016
2	Plot Purchase	Partners	5/12/2016
3	Fruits modern farming account opening	Partners	10/12/2016
4	Business plan presenting bank for loan request	General Manager	15/12/2016
5	Bank loan receiving	General Manager	1/2/2017
6	Farm Preparation	Operation Manger	10/2/2017
7	Assets, medicines and others Purchases	General Manager/Finance Manager	20/02/2017
8	Staff training	Consultants	28/02/2017
9	Seeds Planting	Operation Manger	5/3/2017
10	Well digging	Operation Manger	1/4/2017
11	Farm inspections	Consultants	1/8/2017
12	Normal operation activities	All staff	01/08/2017-31/12/2017
13	Prepare another Milestone for the next second year	General Manager	10/12/2017

## 8. APPENDICIES

6.6 Table 12: CV of promoters

S/N	NAME OF PROMOTER	ACADEMIC LEVEL	WORK EXPERIENCES
1	Mbaraka Ismaili	<p>Masters in Entrepreneurship and Enterprise Development</p> <p>Bachelor in Business Administration</p> <p>Ordinary diploma in Accountancy</p>	<p>1. Managerial administration over 8 years in reputable institutions.</p> <p>2. Marketing experience over 10 years in reputable institutions.</p> <p>3. Teaching, Research and Consultancy experience in reputable institutions.</p>
2.	Malick Hassan	<p>Bachelor of Business Administration</p> <p>Diploma in General agriculture</p>	Agricultural supervision experiences in a reputable agricultural institution over 7 years
3.	Veronica Martin	Diploma in Business administration	Marketing experiences over 5 years in acquire company.

## 6.7 Attachments of training notes on Mangoes and Oranges

**MADA ITAKAYOWASILISHWA KWA WAKULIMA KATIKA VIKUNDI VITAKAVYOHUSIKA NA KILIMO CHA MACHUNGWA NA MIEMBE KATIKA VIJILI VYA KATA YA BOSHA:**

**01: KILIMO BORA CHA MACHUNGWA.**

**A. Utangulizi.**

**B.** Michungwa ni moja ya matunda muhimu katika jamii ambayo hulimwa kwa madhumuni ya biashara katika mashamba makubwa na pia hulimwa kwa ajili ya kuimarisha lishe katika maeneo ambayo hulimwa miti michache kando kando ya nyumba na makazi au moja moja katika mashamba. **Pamoja na mahitaji yaliyoko hapo juu, matumizi hasa ya machungwa ni kama yafutayo:**

- ✚ Hutumika kuboresha afya kwa matumizi kama juisi,,orange oil kwa ladha katika vyakula kam biskuti,nk
- ✚ Matumizi ya madawa kama dawa za fangas,kuchanganya ili kutengeneza dawa, kuzuia ugonjwa wa ngozi, kupunguza magonjwa ya ngozi, nk.
- ✚ Huliwa kama tunda .
- ✚ Ganda la juu hutumika katika kutengeneza vyakula kama keki.

**B.Maeneo yanayolimwa Machungwa nchini Tanzania.**

Zao hili hustawishwa katika mikoa ifuatavyo; Pwani, Morogoro, Tanga na Visiwa vya Zanzibar.

**C:Mazingira yanayostawi michungwa.**

Michungwa hustawi zaidi katika maeneo yenye hali ya hewa ifuatayo;

- ✚ Hali ya joto kuanzia nyuzi joto 28 hadi 31 pia katika nchi zilizoendelea huweza kustawishwa katika nyuzu joto 15 °C.
- ✚ Udongo wenye rutuba ya kutosha
- ✚ Udongo usiotuwamisha maji.
- ✚ Mvua za kutosha.

Nb. Hali hii hupatikana maeneo mengi ya pwani.

**D. Aina za machungwa.**

Kuna aina nyingi za michungwa zinzolimwa na zinazopendwa, lakini zifuatazo zinapendwa sana nazo ni Jaffa, Washington Navel, Valencia, Havencia , Matombo Sweet, Binti Juma, Muheza local, Zanzibar, Matombo sweet Pineapple, Mediterranean Sweet, Blood Red na nyinginezo.

**E: Maadalizi ya kitalu cha miche na miche.**

Sifa za eneo linalofaa kuwa kitalu. Yafuatayo ni baadhi ya sifa za eneo linalofaa kuwa kitalu cha miche.

- ✚ Eneo lazima liwe karibu na chanzo cha kudumu cha maji.
- ✚ Eneo lazima liwe karibu na shamba litakalopandwa miche
- ✚ Eneo lazima liwe karibu na barabara /njia kwa usafiri rahisi wa miche kwenda shambani
- ✚ Eneo lazima liwe karibu na makazi kwa ajili utunzaji wa miche.
- ✚ Kwa zao la michungwa, mzizi utakaotumika (root stock) ni wa mlimao.
- ✚ Mbegu za milimao mizuri huchanganywa na majivu na hukaushwa kivulini

*Andaa mbegu mapelele*

1

Fig. 5

- ✚ Mbegu iliyokauka huoteshwa na kuwa tayari kuota ndani ya majuma mawili hadi manne.
- ✚ Miche hii huwa tayari kubebeshwa umri wa miezi sita.
- ✚ Wakati wa kubebeshwa, tawi zuri la michungwa wa msimu uliopita huchaguliwa.
- ✚ Lichaguliwe tawi lenye macho yaliyovimba
- ✚ Matawi haya hukatwa na kusafirishwa hadi kwenye eneo la milimao ya kubebeshwa.
- ✚ Wakati wa kubebeshwa alama T au I itengenezwe kwemye mche wa mlimao ambapo tawi hili hupachikwa.
- ✚ Baada ya kupachikwa ifungwe na utepe mweupe wa nailoni wa sm 45.
- ✚ Baada ya miezi miwili sehemu hii ifunguliwe
- ✚ Kijicho/ kitawi kilichopachikwa kilelewe hadi kuweza kutawala mzizi mkuu, kazi hii huendelea hadi shambani.

#### **F: Matayarisho ya shamba la michungwa.**

##### **Maadalizi ya mashimo.**

- ✚ Shamba lilimwe mapema kabla ya msimu wa mvua kuanza;
- ✚ Mashimo yaandaliwe kwa kuchimbwa urefu wa sm 60 chini na upana sm 60.
- ✚ Udongo wa juu wa sm 30 uwekwe upande wa kulia unaofuata wa sm 30 uwekwe upande wa kushoto.
- ✚ Inashauriwa udongo wa juu utakaorudishwa mwanzo kwenye shimo uchanganywe na mbolea za samadi kwa uwiano wa 50/50.

#### **Nafasi za upandaji shambani:**

Inapendekezwa michungwa ipandwe umbli wa mita 6 – 7 kati ya msatari na kati ya mimea pamoja na kuwa aina nyingine huweza kupandwa katika nafasi ya mita 8 – 9.

#### **MATUMIZI YA MBOLEA.**

Mazao ya michungwa huhitaji mbolea zote za viwandani na za asili, kwa matumizi ya mbolea ya viwandani unashauriwa mara zote umone mtaalamu wa Kilimo katika eneo lako. Mbolea za asili iliyokatika vizuri au iliyoiva vizuri kiasi cha debe moja huitajika kwa kila shimo kwa mwaka kwa miaka mitano hadi saba ya mwanzo, na unashauriwa kuweka hasa katika msimu wa mvua, mbolea iwekwe kuzunguka mmea au mche na itengenezwe sahani kuzuia mbolea kutawanyika na kusambazwa na maji ya mvua.

#### **G: Utunzaji wa shamba la michungwa:**

Utunzaji wa shamba la michungwa, ni kazi zote za kawaidia ambazo ni pamoja na upalizi, upigaji wa dawa za magonjwa na wadudu waharibifu, upunguzaji wa matawi (pruning), uvunaji na shughuli nyingine za kila siku.

##### **Palizi:**

Shamba la michungwa linatakiwa lipaliliwe angalu mara mbili kwa mwaka, hata na hivyo kila mara magugu yanapoonekana upalizi ufanyike mara moja. Vifaa kama majembe, slesha na madwa ya kuua magugu huweza kutumika katika palizi.

##### **H: Upigaji dawa:**

Michungwa kama mazao mengine huhitaji madawa kwa ajili ya kuzuia wadudu wasababishao magonjwa na kupambana na mgonjwa yanayotokana na virusi kama vile bakteria, virusi,

Fig. 6.



fangas na madhara mengine. Magonjwa huwa mengi sana hasa wakati wa masika na katika mashamba ambayo hayafanyiwi usafi kama upalizi na opogoleaji (pruning).

### I: Upogoleaji (pruning):

Upogoleaji au pruning kama ilivyozoeleka ni upunguzaji wa matawi yasiyo na mwelekeo mzuri, matawi dhaifu, yanatoa matunda kidogo au yasiyotoa matunda kabisa. Upogoleaji una faidha mbalimbali ikiwa ni pamoja:-

- ✦ Kurahisisha kazi za upigaji dawa.
- ✦ Kurahisisha kazi za upalizi
- ✦ Kutoa mzunguko wa hewa nzuri.
- ✦ Kurahisisha shughuli za uvunaji
- ✦ Kuongeza mapato kwa mkulima
- ✦ Kupunguza mashambulizi ya magonjwa.
- ✦ Kuwezesha mwanga wa jua kupenya kwa urahisi.

### J: Uvunaji.

Uvunaji ni mojawapo ya kazi muhimu katika Kilimo cha machungwa, mti wa machungwa huanza kuzaa ifikapo umri wa miaka mitatu na hufikia mzao mkubwa ufikapo umri wa miaka 10. wakati wa mavuno matunda yaliyokomaa hugeuka rangi kuwa ya njano hafifu. Katika nchi yetu wastani wa tani 13 hadi 26 hupatikana kwa msimu katika hekta moja.

**K: Upigaji wa dawa za kuangamiza wadudu na magonjwa.**

**1: Upigaji wa dawa za kuangamiza wadudu:**

Wadudu ni viumbe wanaosababisha madhara kwa mimea. Baadhi ya madhara hayo ni:-

- ✦ Kupunguza ubora wa mazao/matunda.
- ✦ Kupunguza uwingi wa mazao/matunda.
- ✦ Kuongeza gharama za uzalishaji.

Baadhi ya wadudu wasumbufu katika mashamba ya machungwa na namna ya kupambana nao ni kama ifuatavyo:-

Na	Jina la mdud	Dalili za uwepo wa	Maeneo yanay	Mbinu za kupamb
01	Inzi wa machungwa (Mediteranean fruit fly)	Matunda mbivu hubadilika rangi kama vile yameiva	Matunda, majani macha nga	Dawa aina za Karate, Malathion na Dudu all. Kwa matumizi, umwone mtaalamu wa Kilimo wa karibu au soma maelezo ya matuimi zi katika chombo cha dawa.
02	Nondoo wa machungwa (false codling moth)	Matunda mbivu hubadilika rangi kama vile yameiva	Matunda, majani macha nga	Dawa aina za Karate, Malathion na Dudu all. Kwa matumizi umwone mtaalam

Fig.7

- ✚ Miche isipandwe mahali panapotuwamisha maji.
- ✚ Unga mche sentimeta 20 – 30 kutoka usawa wa ardhi
- ✚ Miche ilishwe ipasavyo.

## 2: Ukungu mweusi:

Husababishwa na fangas

### Dalili zake:

- ✚ Jani kugeuka kuwa jeusi
- ✚ Kuonekana kwa inzi mafuta shambani.

### Kuzuia:

- ✚ Kunyunyuzia dawa za wadudu kama Karate na Ridomel kuzuia kusambaa kwa virusi vya ugonjwa.
- ✚ Kupiga dawa za fangas kuzuia ugonjwa kukua na pia kuzuia.

## 02: KILIMO BORA CHA MIEMBE.

### A: UTANGULIZI:

Miembe ni miongoni mwa matunda yanaupendwa sana katika nchi za kitropiki. Matunda yake ni matamu sana, na yana uwingi wa vitamini A, C na sukari, pamoja na kuwa hulimwa kama zao la biashara ni muhimu sana kwa afya ya binadamu. Miti ya miembe hustawi katika maeneo mengi ya Tanzania.

### B: Hali ya hewa na mazingira ya Kilimo cha miembe.

Yafuatayo ni mahitaji ya kimazingira kwa ustawi wa zao/miti ya miembe:-

- ✚ Miembe hustawi katika maeneo yenye mvua nyingi kuanzia mm1, 000 – 1,800 ambayo hufuatwa na kipindi cha ukame wakati wa kutoa maua na kutunga matunda Miembe hustwai kwa ujumla kuanzia usawa wa bahari hadi mita 1,500 juu ya usawa wa bahari, yaani 0 – 1,500. a.s.l.

- ✚ Katika udongo wenye rutuba na usiotuwamisha maji.
- ✚ Udongo wenye kina kirefu
- ✚ Joto la wastani wa nyuzi 26 - 30 za joto ridi.

Matumizi ya miembe:

#### 1. Lishe:

- ✚ Hukiwa kama matunda,
- ✚ Hutumika kutengeneza kinyawji baridi kam juisi nk

2: Kama kivuli, hutoa kivuli kizuri sana na hupendzesha mandhari ya nyumba.

3: Hutumika kwa ujenzi na mbao

4: Hutumika kutengeneza kuni na mkaa.

### C: Aina za mbegu za miembe zinzostawi

#### Tanzania:

Kuna aina nyingi sana za miembe ambazo hutofautiana kwa umbo na ukubwa mti, umbo na ukubwa wa matunda, rangi, mwonjo na utamu. Pamoja na kutofautiana huko, aina zifuatazo hulimwa kwa wingi hapa Tanzania, nazo ni Boribo, Batawi, Sindano, ngowe Dodo, Pairi Julie, Alphonso, Simmonds, Florida, Peach, Saber, Maya.

Zao hili linaweza kuzalishwa kwa kutumia

- mbegu
- Miche iliyongwa (graft).
- kitawi kiota mzizi (air layering).

### D: Upandaji wa miembe.

Upandaji wa miche ya miembe hufanyika kwa kupata mbegu kutoka kwenye miche isiyo na dosari, ambapo mbegu huweza kuoteshwa moja kwa moja kitaluni au sehemu nyingine kama vikapu. Mara nyingi mbegu ya embe huweza kutoa machipukizi zaidi ya moja au mche moja na baada miezi minne miche hupandikizwa shambani, pamoja na kupata miche ya miembe kwa kuanda moja kwa moja njia nzuri ya kutoa mimea mizuri ni kuunganisha miche ya miembe, kazi hii hufanyika

Fig. 8



mche utakapo kuwa na unene sawa na kalamu au kuwa na umri wa miezi 9 hadi 12.

Faidha za kuunganisha miche ya miembe ni kama ifuatavyo:-

- ↓ Kupata miche iliyo bora sana.
- ↓ Huchukua muda mfupi kupata matunda/kuzaa.
- ↓ Kutoa mavuno mengi.
- ↓ Kutoa mavuno bora.
- ↓ Mche utakaopatikana baada ya kuungnisha kupata mche imara zaidi kwa magonjwa, wadudu na madhara mengine ya kimazingira.

#### **E: Nafasi za upandaji wa miembe:-**

- ↓ Kwa maeneo yasiyo na rutuba nafasi ni mita 8-10 shimo hadi shimo.
- ↓ Kwa maeneo yenye rutuba nafasi ni mita 12 hadi 14 shimo hadi shim

Nb. Mashimo yanatakiwa yachimbwe ukubwa wa sentimenta 60 kwa upana, 60 kwa urefu na 60 kina. Miche ya michungwa huhitaji maji mengi wakati ikiwa midogo na namna ya kuhakikisha kuwa inapata maji ya kutosha ni kuzungushia visahani kwenya mashina na kuweka matandazo salama. Wakati wa upandaji udongo wa juu na samadi iliyoza vizuri au mboji huchanganywa, tandika majani na weka kivuli cha muda kama jua ni kali. Hakikisha sehemu iliyongwa isifukiwe na udongo.

#### **MATUMIZI YA MBOLEA.**

Mazao ya michungwa huhitaji mbolea zote za viwandani na za asili, kwa matumizi ya mbolea ya viwandani unashauriwa mara zote umone mtaalamu wa Kilimo katika eneo lako. Mbolea za asili iliyokatika vizuri au iliyoiva vizuri kiasi cha debe moja huitajika kwa kila shimo kwa mwaka kwa miaka mitano hadi saba ya mwanzo, na unashauriwa

kuweka hasa katika msimu wa mvua, mbolea iwekwe kuzunguka mmea au mche na itengenezewe sahani kuzuia mbolea kutawanyika na kusambazwa na maji ya mvua.

#### **F: Palizi wa mashamba ya miembe.**

Upalizi ni shughuli mojawapo muhimu katika Kilimo.

Shamba la miembe angalau lipaliliwe mara mbili kwa mwaka, hata na hivyo kila mara magugu yanapoonekana upalizi ufanyike mara moja. Vifaa kama majembe, slesha na madwa ya kuua magugu huweza kutumika katika palizi (kwa matumizi ya kutumia kua magugu kama mbinu ya kupambana na magugu ni vyema kupata ushauri wa mtaalamu wa Kilimo aliyeko karibu). Kwa miaka ya mwanzo mkulima anaweza kuchanganya mazao ya muda mfupi kama za jamii ya kunde, viazi, nafaka nk, hii itasaidia kupunguza gharama na kupunguza magugu

Nb. Mimea jamii ya kunde hurutubisha shamba.

#### **D: Upandaji wa miembe.**

Upandaji wa miche ya miembe hufanyika kwa kupata mbegu kutoka kwenye miche isiyo na dosari, ambapo mbegu huweza kuoteshwa moja kwa moja kitaluni au sehemu nyingine kama vikapu. Mara nyingi mbegu ya embe huweza kutoa machipukizi zaidi ya moja au mche moja na baada miezi minne miche hupandikizwa shambani, pamoja na kupata miche ya miembe kwa kuanda moja kwa moja njia nzuri ya kutoa mimea mizuri ni kuunganisha miche ya miembe, kazi hii hufanyika mche utakapo kuwa na unene sawa na kalamu au kuwa na umri wa miezi 9 hadi 12.

Faidha za kuunganisha miche ya miembe ni kama ifuatavyo:-

- ↓ Kupata miche iliyo bora sana.

Fig.9

- ✚ Huchukua muda mfupi kupata matunda/kuzaa.
- ✚ Kutoa mavuno mengi.
- ✚ Kutoa mavuno bora.
- ✚ Mche utakaopatikana baada ya kuungnishwa hupata mche imara zaidi kwa magonjwa, wadudu na madhara mengine ya kimazingira.

#### **E: Nafasi za upandaji wa miembe:-**

- ✚ Kwa maeneo yasiyo na rutuba nafasi ni mita 8-10 shimo hadi shimo.
- ✚ Kwa maeneo yenye rutuba nafasi ni mita 12 hadi 14 shimo hadi shim

Nb. Mashimo yanatakiwa yachimbwe ukubwa wa sentimenta 60 kwa upana, 60 kwa urefu na 60 kina. Miche ya michungwa huhitaji maji mengi wakati ikiwa midogo na namna ya kuhakikisha kuwa inapata maji ya kutosha ni kuzungushia visahani kwenya mashina na kuweka matandazo salama. Wakati wa upandaji udongo wa juu na samadi iliyoza vizuri au mboji huchanganywa, tandika majani na weka kivuli cha muda kama jua ni kali. Hakikisha sehemu iliyoungwa isifukiwe na udongo.

#### **MATUMIZI YA MBOLEA.**

Mazao ya michungwa huhitaji mbolea zote za viwandani na za asili, kwa matumizi ya mbolea ya viwandani unashauriwa mara zote umone mtaalamu wa Kilimo katika eneo lako. Mbolea za asili iliyokatika vizuri au iliyoiva vizuri kiasi cha debe moja huitajika kwa kila shimo kwa mwaka kwa miaka mitano hadi saba ya mwanzo, na unashauriwa kuweka hasa katika msimu wa mvua, mbolea iwekwe kuzunguka mmea au mche na itengenezewe sahani kuzuia mbolea kutawanyika na kusambazwa na maji ya mvua.

#### **F: Palizi wa mashamba ya miembe.**

Upalizi ni shughuli mojawapo muhimu katika Kilimo.

Shamba la miembe angalau lipaliliwe mara mbili kwa mwaka, hata na hivyo kila mara magugu yanapoonekana upalizi ufanyike mara moja. Vifaa kama majembe, slesha na madwa ya kuua magugu huweza kutumika katika palizi

#### **(H:Magonjwa na wadudu.**

Miembe kama matunda mengine hushambuliwa na wadudu, na baadhi wadudu hawa ni kama inzi wa matunda, viwavi na mchwa. Waduidu hawa hushambulia majani, matunda na matawi. Madawa yanayoshauriwa ni kama Dawa za karate. Malathion, dudu all. Kwa matumizi ya dawa hizi umwone mtaalamu wa Kilimo wa karibu na pia soma maelezo ya matumizi katika chombo cha dawa.

#### **I: Uvunaji wa miembe.**

Uvunaji hufanyika wakati tunda limekomaa na isiwe wakati limeiva sana na kutepeta, kwa masoko ya mabali matunda yachume mapema kusudi yasafirishwe bila kuharibika. Matunda ya miembe huchukua siku 105 hadi 130 tangu kutoa maua hadi kukomaa.

Mti wa mwembe wa umri miaka 20 huweza kutoa maembe 2,500 hadi 5,000 kwa msimu na matunda hupungua baada ya miaka 40.

#### **1: Magonjwa.**

Zao hili hushambuliwa sana na magonjwa ya kutu hasa wakati wa mvua na mashamba yaliyoko milimani. Yafuatyo ni magonjwa tuyaonayo katika mashamba yetu na namna ya kupambana nayo:-

Fig.10



				u wa Kilimo wa karibu na soma maelezo ya matuimi zi katika chombo cha dawa.
03	Buibu i (mites /spide rs)	Majani kujikunj a, matawi machan ga	Matun da na majani	Dawa aina za Karate, Malathi on na Dudu
04	Kipep eo wa mach ungw a (oran ge dog)	Majani ya machun gwa huliwa	Majani na mataw i macha nga.	Thiodan (kama ipo), Karate na Dudu all, Kwa matumiz i umwone mtaalam u wa Kilimo wa karibu na soma maelezo ya matuimi zi katika chombo cha dawa.
05	Viduk ari wa mach ungw a (Aphi)	Majani kujikunj a na matawi machan ga	Mataw i macha nga na majani	Thiodan (kama ipo), Karate na Dudu
06	Miny oo wa ardhi ni (Nem atode s)	Mafund o katika mizizi	Mizizi	Usipand e miche iliyosha mbuliwa na mimea iliyosha mbuliwa ing'olew e yote na kuchom a moto.

#### **L:Magonjwa ya Machungwa.**

Magonjwa mengi ya zao hili huletwa na vijimelea vya fangas, virusi na bacteria:

##### **1: Ugonjwa wa utomvu (Gummosis).**

Ugonjwa huu hupata njia ya kuingia katika mmea kupitia vidonda vinavyopatikana kwenye mmea.

#### **Namna ya kuzuia ugonjwa huu:**

- ↓ Miche isijeruhiwe wakati wa upalizi,

**Fig. 11**

N a	Jina la ugo njw a	Dalili za uwepo wa mdud	Mae neo yana yosh amb	Mbinu za kupambana/ kuthibiti wadudu matumizi ya
0 1	Kuo za kwa matu nda na maja ni	Matun da macha nga na maua huang uka kwa wingi	Mat unda na maja ni kuoz a	Dawa za Ridomill, Dithane na dawa zingine zote za fangas. ( fungicides) Kwa matumizi umwone mtaalamu wa Kilimo wa karibu na soma maelezo ya matumizi katika chombo cha dawa.

Mti wa mwembe wa umri miaka 20  
huweza kutoa maembe 2,500 hadi 5,000  
kwa msimu na matunda hupungua baada  
ya miaka 40.

Naomba kuwasilisha.

Asanteni sana kwa kunisikiliza.  
**IMEANDALIWA NA IDARA YA  
KILIMO, UMWAGILIAJI NA  
USHIRIKA, HALMASHAURI YA  
WILAYA YA MKINGA, TANGA.**

Maulid R. Chulangalanga  
Afisa Kilimo Kata ya Boshha  
0713938952.

## 2: Wadudu.

Miembe kama matunda mengine  
hushambuliwa na wadudu, na baadhi  
wadudu hawa ni kama inzi wa matunda,  
viwavi na mchwa. Waduidu hawa  
hushambulia majani, matunda na  
matawi. Madawa yanayoshauriwa ni  
kama Dawa za karate. Malathion, dudu  
all. Kwa matumizi ya dawa hizi  
umwone mtaalamu wa Kilimo wa karibu  
na pia soma maelezo ya matumizi  
katika chombo cha dawa.

## 1: Uvunaji wa miembe.

Uvunaji hufanyika wakati tunda  
limekomaa na isiwe wakati limeiva sana  
na kutepeta, kwa masoko ya mabali  
matunda yachume mapema kusudi  
yasafirishwe bila kuharibika. Matunda  
ya miembe huchukua siku 105 hadi 130  
tangu kutoa maua hadi kukomaa.

Fig.12