

# **SABLE HILLS FARM LIMITED**

## **FEASIBILITY STUDY REPORT**

**on**

## **MIXED SUSTAINABLE FARMING PROJECT**

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## CONTENTS

1	PROJECT DESCRIPTION	1
2	BUSINESS OVERVIEW	3
	2.2 Citrus	3
	2.3 Cheese	4
3	IMPLEMENTATION SCHEDULE	5
	3.1 Cheese	5
	3.1 Citrus	5
4	OPERATIONS PLAN	7
	4.1 Cheese 7	
	4.2 Citrus	8
5	MARKET ANALYSIS	9
	5.1 Cheese	9
	5.2 Citrus	10
	5.3 Citrus seedlings	11
6	SALES AND MARKETING	12
	6.1 Cheese	12
	6.2 Citrus	12
	6.3 Citrus seedlings	12
7	COMPETITIVE ANALYSIS	13
	7.1 Cheese	13
	7.2 Citrus	14
	7.3 Citrus seedlings	14
8	BUSINESS ENVIRONMENT AND ASSESSMENT OF RISKS	16
	8.1 General	16
	8.2 Internal risks	16
	8.3 External risks	17
9	INVESTOR PROFILE AND LEGAL STRUCTURE	20
10	FINANCIAL PLAN	21
	10.1 Source of capital	21
	10.2 The investment cost	21
	10.2 PROJECTED SALES REVENUE	22

11	POSITIVE IMPACT ON TANZANIA, THE LOCAL COMMUNITIES AND ENVIRONMENT	23
	11.1 Social and economic	23
	Expected employment schedule	23
	11.2 Environment	24
	11.3 Gender impact	25
12	CONCLUSION AND RECOMMENDATION	26

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## 1 PROJECT DESCRIPTION

We hope to be a part of the agricultural development which is currently taking place in Tanzania, and contribute to ways of ensuring that the productivity and output of the agricultural land is increased for the benefit of Tanzania while enabling the preservation of remaining natural ecosystems for the benefit of future generations of Tanzanians. We want to introduce sustainable farming practices that not only increase the financial output of the land, but also ensure its long-term productivity. At the same time, we strive to develop models that provide income for local communities from the natural habitats, without degrading them, and which ideally encourage to their preservation.

Our intention is to create a holistic model, which provides financial incentives to preserve natural habitats and to produce agricultural products in a sustainable and natural manner, taking into consideration the preservation and regeneration of biodiversity, climatic effects, sustainable use of water resources, the long term increase and preservation of the productivity of farming land; while providing a financial return to our investment, providing income to the local communities and tax revenue to the Tanzanian state.

In our model, the various enterprises support each other in accordance with the principles of circular economy.

In the short to medium term, our goal is to secure a suitable piece of land, of which the majority is still in its natural state. In the initial stage of our project, we would plant **citrus orchards** and establish a **citrus nursery** on part of the cultivated land, while running **dairy cows** on the cover crops in the inter-rows between the citrus trees and process the **milk into cheese** on site. This business plan covers these above-mentioned initial activities.

The rest of the land which is ill suited for agricultural production would either be preserved in its natural state or be reforested in the case of cleared land. This is partly to increase the biodiversity surrounding the orchards, thus lowering pressure from pests and disease (lowering the need for pesticides and costs) and in the long term to enable us to add other enterprises, including in the **wellness and agro-tourism** sector. The land and our model should also be suitable for **carbon and biodiversity credits**, which would provide significant income to both the local community and the Tanzanian state. We will also take measures to



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increase the productivity of **beekeeping** in the area, which will result in more revenue from the land. These future enterprises are not dealt with in detail in this business plan.

As the land is situated along a major entry route by poachers, the presence of Sable Hills Farm would also have a wider-reaching positive impact on neighboring conservation areas, including the Ruaha National Park. By establishing a presence in the area, it is hoped that we can aid in decreasing the current poaching levels and that numbers of wildlife will increase also in the neighboring WMA which would make the area more attractive for tourism in general.

The total investment into the business in the initial stage is estimated to be around **USD 700,000** bringing a significant influx of capital into Tanzania. The citrus enterprise concerns the production of a high value product for the export market, hence providing foreign exchange for many years to come. The cheese enterprise aims at replacing a currently imported product with one made in Tanzania.

The enterprise will require a substantial number of employees and the local community is expected to benefit not only from employment opportunities, but also from gaining access to quality citrus seedlings and experience in growing high quality citrus, which has the potential of becoming a very valuable crop in the area.



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## 2 BUSINESS OVERVIEW

The planned operations comprise a number of separate but interlinked enterprises. The initial enterprises are:

1. Citrus fruit and seedling production
2. Dairy and Cheese production

These will be carried out on a part of the land that has previously been farmed or where the original habitat (Miombo woodlands) has been seriously disturbed through logging and charcoal burning.

### 2.2 Citrus

In Tanzania, citrus is grown mainly on the coast where the climate is too hot to produce a high-quality crop for the high-end export market. There have been some attempts in Morogoro to produce oranges (*Machungwa*) for juice. However, there seem to have been only limited attempts to grow citrus at higher altitudes (higher than Morogoro), although in places the climate seems to be suitable for e.g., soft citrus (*Chenza*), for which the global demand is booming. For example, Kenya currently imports 80% of its soft citrus, mainly from South Africa. Tanzania should be well suited to enter that market.

Even in the Tanzanian urban centers, demand for quality citrus is growing, supermarkets selling imported fruit for as high as 16,500 Tsh (USD 6.50) / kg.

For smallholder farmers a significant barrier is the unavailability of quality seedlings of modern varieties that are required to produce a high-quality product suitable for e.g., the Kenyan market. There is also an obvious lack of knowledge of what to plant where. Our intention is to import seedlings of 10-20 modern varieties for a trial to confirm their suitability for the local climate and to find out their cropping seasons here. Based on these trials we would be able to advise on the suitability of different varieties for different localities and to produce seedlings locally, both for Tanzanian farmers in general and for our own orchards. This would create the foundation for what could potentially be a valuable new export crop for the Tanzanian agricultural sector.

For the smallholder farmers in the surrounding area, we would also be able to provide an access to market by either buying their crop directly, or coordinating logistics to wholesale buyers. We would also offer training to smallholder farmers to increase their chances of success.



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The trial plots are estimated to generate USD 250,000 – 500,000 in annual revenue 4 – 5 years after planting.

Citrus are perennial tree crops that sequester carbon and citrus orchards qualify for carbon credits.

### 2.3 Cheese

In Tanzania there is currently only very small-scale production of western style cheese (hard cheese, semi hard cheese, cream cheese etc.) and the existing production does not meet the growing demand of the urban centres and from the tourism and hospitality sectors, mainly in Zanzibar and the northern circuit. Consequently, the vast majority is imported, mainly from Kenya, New Zealand and Denmark and local prices are very high.

In order to utilize the year-round green cover crops between the rows of citrus (which would otherwise have to be mowed mechanically), we intend to run dairy cows there and process the milk into cheese on site.

This will both provide a high value product, and the cows in the orchard system will contribute towards healthier soils, carbon sequestration, and overall greater biodiversity in the orchards. Daily processing of the milk into cheese will incur substantial savings as there will be less need for cold storage and transport costs will be lower as the milk is processed into a higher value more compact product.

The cheese production will start at our current premises on Miombo Farm, once we have obtained the necessary government clearances. At Miombo Farm we have access to high quality milk from pastured Jersey cattle enabling us to buy milk according to our day-to-day production needs. This makes starting up the production significantly easier as we do not have to transport the milk and do not have to invest in our own dairy herd in the beginning.

Once the enterprise starts generating income and we know the volumes of cheese we can sell, we can size our own dairy herd accordingly. The cheese enterprise is expected to bring precious cash flow in the early years, before the citrus orchards produce a crop.

The annual revenue from the cheese enterprise is estimated to be **USD 30,000** in one years' time from startup and **USD 170,000** in year five. The profit margins of cheese processing are excellent.



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### 3 IMPLEMENTATION SCHEDULE

#### 3.1 Cheese

##### *Year 1*

***i) Market Research:*** Assessment of the demand for cheese in Tanzania, including questions such as which types of cheese are in demand, current sales channels, prices and volumes. The research is focused on Dar-es-Salaam, Zanzibar and Arusha.

***ii) Commencement of production:*** Production facilities at Miombo Farm are built and production methods are developed, first for fresh cheeses (feta, halloumi, cream cheese, ricotta) and next for aged cheeses (cheddar, gouda, camembert). Initially the production is based on a 200L cheese vat, which limits production to about 140kg of cheese per week.

***iii) Commencement of sales:*** First product samples are distributed to potential buyers, both under own brand and as private label products with partners. Fresh cheese will become available first, while aged cheeses will become available approximately 3-4 months later.

##### *Years 2-3*

During years 2-3 the new production facilities on Sable Hills Farm's own land will be built and a dairy herd will be established. The capacity of production facilities and size of the dairy herd will be based on the experiences of the initial year of business.

##### *Years 4-5*

Cover crop pasture will be further developed to optimize for milk production. Dairy herd will grow every year and when required size has been reached, heifers will be sold for additional revenue.

#### 3.1 Citrus

##### *Year 1*

***Market research:*** Assessment of the demand for high quality citrus in Tanzania and Kenya. Which types are in demand (soft citrus, oranges, lemons) and what characteristics does the market appreciate, how do the current sales channels look, prices, price fluctuations Research is focused on Dar-es-Salaam and Nairobi.



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**Identification of suitable varieties:** Varieties suited to the local climate are assessed as well as the expected timing of their harvest season in the local conditions. In the initial stages this would include collection of climatic data, soil analyses and discussions with experts at South African nurseries.

**Preparation of the land:** During the first year, construction of the access road and preparation of land for planting will commence, depending on how long it takes the government to grant land rights. Even before the access road has been completed, small numbers of seedlings will be planted to give early indications.

**Years 2-3**

**Planting of orchards:** Land will be prepared and irrigation systems will be installed. Seedlings will be imported as half grown and will be grown out under shade cloth for 6 months before planting out.

**Maintenance of orchards:** IPM-system will be developed and staff trained to it, staff trained for pruning and fertilizing.

**Marketing:** Suitable buyers in Tanzania and Kenya will be identified and contacts established.

**Years 4-5**

**Harvest:** First harvest estimated 3 years from planting.

**Establishment of nursery:** Rootstock will be planted for seedling production.



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## 4 OPERATIONS PLAN

### 4.1 Cheese

In the first year cheese will be made at Sable Hills Farm's facilities on Miombo Farm where we have access to fresh milk twice a day. The basic equipment includes a 200L cheese vat, drain table, cheese presses, molds, cold room for aging, and refrigerators for storing fresh products.

We will be producing cheese right next to the milking parlour of Miombo Farm and the milk is pumped directly into the cheese vat from milking.

In the first stage, the milk may be pasteurized, depending on the type of cheese produced. Next cultures are added so that the milk ferments and becomes more acidic. The next step is curdling the milk by adding rennet. Then the curd is cut to separate the curds and whey. The curd is processed by stirring, cooking and washing to acidify it and then the whey is drained, leaving only the curd. The cut curd is placed into molds where it is pressed and finally the cheese is aged for days up to years depending on the type.

Fresh cheese, such as feta, halloumi, mozzarella, cream cheese and ricotta are delivered to customers immediately after manufacture. Aged cheese such as cheddar, gouda and camembert require aging at 10-13C before they are supplied to buyers.

For transport to customers, Sable Hills Farm will initially work with a nearby vegetable farm, which supplies vegetables to the same customers in Dar-es-Salaam, Zanzibar and Arusha and has an existing cold chain in place.

Once operations move to Sable Hills own land about 20km away, a new larger production facility and aging room will be built to match the expected volume of production. At this stage Sable Hills Farm will establish its own dairy herd.

The dairy herd is estimated to be **40-50 cows** and milking will be done using small movable milking parlours. Milk will be processed into cheese every day in order to minimize the need to invest in cold tanks. Direct processing on site also avoids having to first chill down the milk and then heat it up for processing.



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#### **4.2 Citrus**

Preparing the land and planting will be done manually, using local labour. A gravity-based irrigation system will be installed taking advantage of the year-round water sources at higher elevation. Irrigation will be required only during the dry season. Local labour will be used for irrigation as well as for other orchard tasks such as pruning, fertilizing, slashing of undergrowth and pesticide applications.

We will import seedlings of modern high-quality varieties from South Africa. To save on transport costs, the seedlings will be imported as half grown and will be grown out at our site under shade cloth for 6 months before planting out into the orchards. In the orchard the seedlings are planted into 70x70x70cm holes, that are filled with a mixture of topsoil and well burnt cattle compost.

In the initial stage approximately 10 varieties will be planted on 10-20 hectares. The varieties are chosen based on an assessment on which ones are likely to be suited to the local conditions and produce a fruit that travels well and corresponds to the market demand. Harvests are projected to commence in year three after planting. Harvesting and packaging will be carried out by hand using local labor. Customers will be responsible for collection at the farm, but loading will be done by Sable Hills employees.

The orchards will be fertilized with cattle manure purchased from the local pastoralists and by the manure of our own dairy cows. The seedlings will be produced similar to other fruit trees by growing rootstock from seed and grafting scions from the desired variety onto the rootstock.



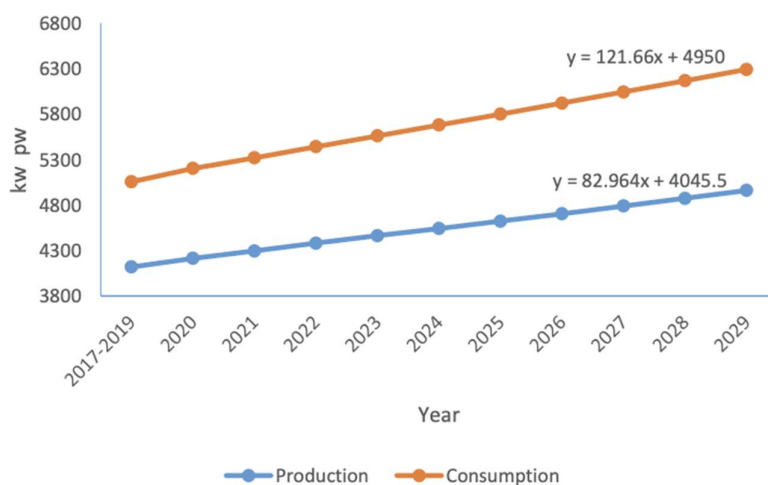
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## 5 MARKET ANALYSIS

### 5.1 Cheese

‘In developing nations such as Tanzania, cheese production and consumption are projected to increase (Figure 1) due to population growth, dynamic economic developments, urbanization, income increase, and changing eating habits and lifestyle (Ndambi & Hemme, 2009; OECD-FAO, 2015). There is also a shift in the structure of people’s diets towards value-added dairy products such as cheese (Ronquest et al., 2015). This is having a positive influence on the growth of artisanal cheese markets (Mulder & Wasserfall, 2013; Mikkelsen, 2014). However, most of the predominant artisanal cheeses in East Africa and northern Africa are soft and are consumed fresh without ripening or are ripened for a few days and thus have a limited shelf-life.<sup>1</sup>

The artisanal cheese industry is a relatively young and uncrowded market in Tanzania. Artisanal cheese companies in the neighboring country Kenya such as Brown’s Cheese is seeing a huge increase in demand since their establishment in the 1970’s.<sup>2</sup> This trend is anticipated to follow in Tanzania due to a growing



**Figure 1** Projected trends of cheese production and consumption in developing nations (OECD-FAO, 2020)

<sup>1</sup> “A review of artisanal cheese making: An African perspective” by F. Nyamakwere, G. Esposito, K. Dzama & E. Raffrenato, South African Journal of Animal Science 2021, 51 (No. 3)

<sup>2</sup> <https://www.businessdailyafrica.com/corporate/Brisk-business-for-cheese-makers-in-Kenya/539550-3186406-12y8q7i/index.html>



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tourism sector and an increase in purchasing power amongst a growing middle-class. The production of cheese in the United Republic of Tanzania increased from 500 tonnes in 1971 to 21,026 tonnes in 2020 growing at an average annual rate of 9.05%.<sup>3</sup>Currently, most cheeses found on the Tanzanian market are imported from Denmark, New Zealand and neighboring countries and are very expensive and low quality.

## 5.2 Citrus

The target markets are the urban centers of Kenya and Tanzania. The Tanzanian fruit and vegetable market is growing constantly. In 2020 it was estimated at USD 1.8 billion and it is expected to grow by 6.5 % annually, reaching USD 2.8 billion by 2028. In Tanzania citrus farming is concentrated to Tanga and Morogoro. The majority of the produce is sold for export to Kenya. Citrus production is currently mainly by smallholder farmers, without access to either high quality seedlings of specific varieties or irrigation. As a result, the quality of the produce is relatively low, with high seediness, thick rind and green rind color. Furthermore, the harvest season is highly concentrated to June-August, resulting in low prices during that period and price peaks during March-April and October. As a result, there is low competition for high quality citrus of any species and outside of the main harvest season there is low competition for any quality.

Kenya is a large market for quality citrus and the market is growing. In Kenya the urban middle class has grown to prefer fruits similar to those sold in the west. For citrus, this means a nice orange colour, even shape, thin rind and few seeds. Especially soft citrus (mandarins, clementines, tangerines etc.) are popular due to them being easy to peel. The Kenyan agricultural sector cannot meet the demand and the majority is imported from South Africa. As the Tanzanian middle class becomes wealthier, its tastes often follow the same path as can be observed in Kenya and there is a growing demand for quality fruit especially in the urban areas of Tanzania. As more and more consumers are demanding easily peeled and attractive looking citrus with low seed content, there is a market opportunity for domestic Tanzanian production.

Street vendors in the cities sell large quantities of fruit as snacks to drivers. This fruit must be easily consumable by drivers and imported South African apples have become popular despite their high price. In 2021 Tanzania imported apples worth USD 3 million. High quality Tanzanian produced oranges or soft skinned citrus such as mandarins and clementines could easily be sold in a similar manner. Currently

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<sup>3</sup> <https://knoema.com/data/united-republic-of-tanzania+agriculture-indicators-production+cheese>



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imported quality citrus command premium prices in Tanzania. For example, in April 2023, South African navel oranges cost USD 3.60 / kg (8,500 Tsh / kg) in a supermarket in Dar-es-Salaam, while Tanzanian oranges cost USD 0.56/kg. In January 2024 Egyptian tangerines were sold for USD 6.50/kg (16,500 Tsh / kg) in a supermarket in Dodoma.

### **5.3 Citrus seedlings**

The target market is Tanzanian farmers. Tanzania has vast areas that would be suitable for growing quality citrus, but a major threshold is the availability of seedlings.



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## **6 SALES AND MARKETING**

### **6.1 Cheese**

The main end market is expected to be the supermarkets and hotel and restaurant sector catering western tourists and expats in Dar-es-Salaam, Zanzibar and the northern circuit centered on Arusha. The expatriate community is another market. Cheese will be marketed both under the Sable Hills brand via the existing marketing and distribution network of Masifio Estates.

In the beginning Masifio Estates is expected to buy a large portion of the produce. However, Sable Hills will also market the cheese directly. The marketing efforts will emphasize our strengths: high quality, made in Tanzania, sales terms, price-quality ratio, healthiness. In the future, as volumes allow investing in an own cold-chain, the plan is to shift part of the sales to be direct.

### **6.2 Citrus**

A market study on the Kenyan and Tanzanian citrus markets will be commissioned to gain a better understanding of the supply chains and demand. The various levels of actors will be identified to assess suitable buyers for our operation. A survey will be conducted to investigate what characters are in demand, such as color, form, seediness, taste and size, as well as the seasons. The results of this survey will be used in selecting the varieties for the initial trial plots.

### **6.3 Citrus seedlings**

Initially the plan is to market the seedlings primarily in the Southern Highlands, where the farming community is rather tight and word spreads quickly. Social media will be used so a wide audience can follow our progress from the beginning and by the time seedlings are available, there should be good awareness. We will also supply seedlings to surrounding farmers at a reduced price with the target of being able to coordinate marketing efforts. The citrus seedlings could potentially even be sold for export, as nurseries in the neighboring countries do not produce seedlings of as good varieties as Sable Hills Farm is planning to produce. It is to be expected that the seedlings that can be produced at Sable Hills Farm are superior to those produced in Zambia and Kenya due to the better genetics of the varieties.



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## **7 COMPETITIVE ANALYSIS**

### **7.1 Cheese**

Currently there are few Tanzanian cheese manufacturers who would compete in the market of Sable Hills Farm. The competition is made up of importers of cheese from Kenya, New Zealand and Denmark and to some extent Tanzanian makers. The imported cheese is very expensive, due to long distances and bureaucracy. Sable Hills should be able to produce cheese at a lower cost than in Kenya, New Zealand and Denmark and our delivery costs are at an entirely different level than for imported cheese.

A major difficulty for potential cheese manufacturers in Tanzania is the access to quality milk. A clear advantage for Sable Hills Farm is the access to milk at demand in the production facility. As we will be making cheese literally next to the milking parlour, there are no transport costs as the milk is pumped directly into the cheese vat. This also means the milk does not have to be first chilled and then again heated up in the cheese vat.

The Sable Hills cheese will be made to 100 % from pasture bred Jersey cow milk. Jersey cow milk is very high in healthy fats and beta-carotene, also giving the cheese a deep yellow colour. Jersey cow milk is widely considered the best milk for cheese and is a clear marketing advantage. The imported cheese is made from bulk milk.

In the Tanzanian hospitality sector, there is a strong push to use as few imported ingredients as possible. As there are currently no Tanzanian makers of cheese, we have been met by very strong interest in our coming product.

Our disadvantages compared to the competing products is our small size and that we are in an early stage of development, which makes us more vulnerable to the effects of potential problems and which from buyers' perspective may be interpreted as a risk compared to larger established actors. As we are only starting to develop the production facility and processes, any potential problems may have an impact on deliveries. Logistics is also a major difficulty in Tanzania and for a small starting enterprise, it can be challenging to cover transport costs until big enough volumes are attained.



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## **7.2 Citrus**

In the Kenyan market the competition is mainly composed of Kenyan and South African producers. In Kenya the domestic sector is unable to meet more than approximately 20 % of the demand. In Tanzania the production costs should be lower than in Kenya and South Africa. The transport costs should be significantly lower compared to freight from South Africa. Compared to Kenya, we should be able to produce crop at times of the year when production is low in Kenya. However, South Africa is able to supply fruit virtually throughout the year (because it is a hub of also northern hemisphere fruit), although at times at very high prices.

In the Tanzanian market, the competition is composed of both Tanzanian grown citrus and imported citrus, as well as other fruit such as imported apples. Compared to the Tanzanian citrus, we should be able to produce both a much higher quality fruit and also be able to produce it when production is low in the current production areas. Compared to imported citrus, we should be able to be price competitive, due to the high freight costs from South Africa.

Clear disadvantages include the fact that we are starting a green field operation in an area and conditions where these citrus have not been grown before. Compared to South African producers, we are at a clear disadvantage in that there is a very strong tradition and knowledge of growing citrus in South Africa, whereas there is virtually none in Tanzania. There is no manual or extension officer in Tanzania who can tell us what varieties to grow and where and when they will produce a crop. Furthermore, there are no seedlings available in Tanzania, meaning that seedling cost will be higher. Because of this, it will be necessary to do trials before investing in an increase of the area of the orchards.

Potential disadvantages include our relative remoteness and roughness of the roads. The success of especially soft citrus may partially depend on the government fulfilling its promise to put tarmac on the Iringa-Ruaha Road, which is currently in such a bad shape it may inflict serious damage to soft citrus during transport.

## **7.3 Citrus seedlings**

There are no nurseries in Tanzania producing seedlings of modern citrus varieties. In Zambia and Kenya there are nurseries producing mid-level seedlings. Compared to those, the seedlings marketed by Sable Hills Farm would be of globally recognized modern varieties, which we can show local Tanzanian performance



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data for importing seedlings across borders is not only expensive but very bureaucratic, giving us an additional edge. The comparative advantage of the competition is that they have an established base market, while we will have to create the market in Tanzania.



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## **8 BUSINESS ENVIRONMENT AND ASSESSMENT OF RISKS**

### **8.1 General**

Since we are able to buy milk at the production site based on day-to-day need, the cheese production can be started with relatively low startup costs. The initial investment in the production facility and equipment is approximately **USD 20,000**. However, the cheese will start incurring revenue from year one and during year two we should be able to reach “full capacity”. This is intended to balance the citrus enterprise, which is a longer-term investment.

Depending on the variety, citrus trees start generating a crop 3-5 years from planting, i.e. at least 4-5 years from today (as we will not be in a position to plant for at least another year). The crop then gradually grows from there reaching a full crop in year 7-8 from planting.

The citrus enterprise is associated with risks typical of tree crops, i.e. risks associated with the duration of time until a crop can be harvested. Amongst others, this makes us dependent on the farming land, as the orchards cannot be moved once they have been established. The investment is tied to the land.

The risk can be managed legally by striving to ensure the strongest possible land tenure, but eventually it will be crucial to maintain good relations with the local communities and the success or failure of the enterprises will ultimately be dependent on the relationship with the local community and Kisilwa village in particular.

### **8.2 Internal risks**

The plan is to hire labour from all surrounding communities. These communities currently live somewhat isolated from each other and suspicious attitudes can be observed. It is to be expected that HR issues and village politics will require substantial efforts. The risk has been managed since the beginning by engaging in an open dialogue with the villages which will continue so all parties have a mutual understanding of each other’s expectations and so any concerns can be taken into account.



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### 8.3 External risks

#### *i) The markets*

In order to ensure maximum profitability, it is essential to gain a correct understanding of the target markets, exactly what type of product there is demand for, and how supply chains look like. However, domestic competition seems to be very limited, so this risk mainly concerns the maximization of profitability.

#### *ii) Suitability of the citrus varieties*

There have not been any previous attempts at our altitude in Tanzania to grow citrus on a commercial scale. Because there is no prior knowledge of the suitability of different varieties for the local conditions, there is an obvious risk associated with the choice of varieties. This risk is managed by getting consultation from the leading citrus experts in South Africa to help identify the 10-20 most promising varieties. These varieties will then be planted in trial plots, the results of which will confirm which varieties are best suited. However, if some of the chosen varieties were to fail, this would affect the income from the trial plots.

#### *iii) Water*

Both the cheese and citrus enterprises depend on irrigation during the dry season. Water is a sensitive issue everywhere and it is essential to carefully assess potential risk scenarios and prepare accordingly. Without water, our project will fail. Our plan is to use drip-irrigation, which is the most conservative method available. The pasture in the inter-rows functions as a cover crop, improving water penetration and further reducing evaporation. The manure from the cows also constantly increases the organic content of the soil, further improving water penetration. Three permanent rivers meet on the land we are acquiring. The topography enables the taking of irrigation water at 50 meters higher altitude than the irrigated fields, giving 5 bar pressures in the pipes. This allows the irrigation to operate entirely by gravity instead of using generators.

**a) Risk scenario 1:** Climate change causes the rivers to dry up in the future. This risk has been accounted for. The area has very rich ground water and bore holes should be able to cater for our water needs even if the rivers become insufficient.

**b) Risk scenario 2:** Three villages 12-20 km downstream are dependent on the river flowing down from Sable Hills Farm. During two dry seasons in the recent past, the river has nearly dried up downstream in the villages. The villages get their drinking water through a pipe from a dam higher up the river and this water



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supply has not been compromised as there is plenty of water higher up in the river throughout the year. The farmers in the villages do not irrigate their crops during the dry season.

The activities of Sable Hills Farm would probably use less water than the wasteful flood irrigation currently taking place there, but it is possible that in the future some people would blame Sable Hills Farm for any water shortage.

As the project proceeds, this risk will be managed primarily by a continuing open dialogue where potential concerns are addressed and by gathering data on the actual development of the water levels and the water used by Sable Hills Farm.

Currently, the land where Sable Hills Farm plans its farming enterprises is partly being cultivated by farmers from another village, Ihomasa, who apparently are encroaching on Kisilwa's land. Also wasteful flood irrigation is being used. If Sable Hills Farm does not establish itself on the land, it is to be expected that more of the land will be cultivated by Ihomasa, whereby Kisilwa would only receive the negative impact of a potentially worsening water situation without any benefits.

The farming practices of Sable Hills Farm are based on regenerative farming methods, conserving water and minimizing the need of water by progressively improving the organic matter in the soil and using cover crops and mulching. The planned tree crops require relatively little water.

If needed in the future, there are suitable sites for a water reservoir on the land. It would be possible to save enough water in a reservoir during the rainy season to cover the entire water needs of Sable Hills Farm during the dry season, so no water from the river would be needed during the dry season. There is bound to be some leakage from a reservoir, whereby there would be more water flowing in the dry season than would be the case without the reservoir.

However, it is of great importance to engage in an active dialogue with the village to ensure that the local community understands this.

In reality, the reason for the water shortage in Kisilwa during the dry season is the river's 12 km journey down from the planned farming land to Kisilwa. During this journey a great amount of water is lost to



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evaporation and seepage into the soil. Sable Hills Farm plans to engage in discussions with the village to understand what the real needs are and investigate ways by which the company can help Kisilwa solve such problems.

**iv) Pests**

There is always the risk of pests associated with farming and this applies very much to citrus. An Integrated Pest Management (IPM) program will be developed for the orchards, structuring the continuous monitoring of pests. As part of the wider IPM-model, the orchards will not be large monocultures, but between the orchards there will be natural habitat, limiting the growth of pest populations and maintaining a balance between pest species and their natural predators. The citrus trees will be planted with wide spacings. This in combination with correct irrigation and the aforementioned natural fertilization and high organic content of the soil, keeps the trees strong and healthy, increasing their protections against pests. All this aims at the minimization of the use of expensive pesticides that also have a negative impact of the natural balance the IPM aims to maintain.




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 SABLE HILLS FARM LTD
 

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## 9 INVESTOR PROFILE AND LEGAL STRUCTURE

The shares in Sable Hills Farm Limited are held as follows:

<b>Name</b>	<b>No of shares</b>	<b>%age</b>
Mawalla Ventures Ltd	105 shares	51 %
Tom Ehrström	80 shares	39 %
Maxine Ehrström	20 shares	10 %
<b>Total</b>	<b>205 shares</b>	<b>100 %</b>

**Mawalla Ventures Ltd.** (inc. nr. 70741) is a Tanzanian company, based in Arusha. It is a private company limited by guarantee and its two members are Wilfred Mawalla and Lemmy Bartholomew Kimariyo, both citizens of Tanzania. **Tom Ehrström** and **Maxine Ehrström** are both citizens of Finland and are the directors of the company. Tom Ehrstrom is the managing director and Maxine Ehrstrom the CFO. Maxine is also head of the cheese production. **Tom Ehrström** grew up on his family's farm in Finland and is a lawyer by training. He worked in Sweden and Finland as an attorney from 2010-23 representing large corporate clients. Simultaneously he has been involved in real estate development projects and in managing the family-owned farm with associated game management projects.

**Maxine Ehrström** has an MBA in Branding and Marketing and a degree in circular economy. She has a background in business development and marketing, and she has a broad experience from the food & health sector as well as hospitality sector. Maxine heads the cheese enterprise and brings vital understanding of sustainable food production to the project.




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## 10 FINANCIAL PLAN

### 10.1 Source of capital

The initial stage of the project (until the citrus plots produce crop) are to be financed entirely with own equity coming from the the shareholders. Hopefully, the cheese sales will provide revenue, which can be used to further finance the project, but we have prepared for having to finance the startup entirely with equity. Further expansion may be partly financed by external means.

### 10.2 The investment cost

The required Investment cost for phase one of the project is estimated at **USD 700,000**. **USD 65,000** is for the cheese production and **USD 635,000** for citrus. In the budget for citrus is included the fixed costs of land and infrastructure which will also be used for the cheese.

Until today, **USD 60,000** has been invested into incorporating the company, land assessment, negotiations, consultants, cheese production facility, equipment and motor vehicles.

#### PROJECTED INVESTMENT COST

<b>Summary of investment USD</b>	
Land including civil works	191 500
Machinery & Equipment	116 000
Vehicles	20 000
Furnitures	5000
Pre operational expenses	40 000
Others such as generators	1000
Working capital	326 500
<b>Total</b>	<b>700,000</b>



SABLE HILLS FARM LTD

**10.2 PROJECTED SALES REVENUE**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sales for citrus	-	-	-	51,300	102,600	205,200	273,600	456,000	592,800	592,800
Sales for cheese	30,000	65,000	100,000	135,000	170,000	205,000	205,000	205,000	205,000	205,000
<b>Total revenue</b>	<b>30,000</b>	<b>65,000</b>	<b>100,000</b>	<b>186,300</b>	<b>272,600</b>	<b>410,200</b>	<b>478,600</b>	<b>661,000</b>	<b>797,800</b>	<b>797,800</b>

**10.4 PROJECTED OPERATION COSTS**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7	Year8	Year9	Year 10
Operat. Exp. For citrus	8,820	8,370	8,423	9,307	15,641	20,002	20,002	20,002	20,002	20,002
Operat. Exp.	19,500	42,250	65,000	87,750	110,500	133,250	133,250	133,250	133,250	133,250
<b>Total operation</b>	<b>28,320</b>	<b>50,620</b>	<b>73,423</b>	<b>97,057</b>	<b>126,141</b>	<b>153,252</b>	<b>153,252</b>	<b>153,252</b>	<b>153,252</b>	<b>153,252</b>




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## 11 POSITIVE IMPACT ON TANZANIA, THE LOCAL COMMUNITIES AND ENVIRONMENT

### 11.1 Social and economic

#### Foreign exchange benefits

The initial investment is estimated at USD 700,000, generating a substantial influx of currency into Tanzania and the local community. The citrus enterprise aims at producing a high value product for the export market, generating foreign exchange for Tanzania; while the cheese enterprise aims at replacing imported goods, again helping Tanzania balance its forex.

#### Job creation

In the early stages of the project, a total of 200-300 employees will be needed for building the access road, buildings and preparing land. Subsequently, the number of employees will drop to around 20 during the time when cheese production is started and the first citrus orchards are established and maintained until the first crop. When the first trial plots start producing a crop 3-4 years from planting, the need for labour increases to 50-70 people. Thereafter the citrus orchards are planned to be expanded every few years in phases, every expansion requiring an addition of 20-30 employees. When possible, the labor will be hired from the surrounding communities, bringing also indirect benefit to the communities, by creating increased purchasing power. In addition, the honey project is expected to create 10-20 full time job opportunities in the short term.

We aim at providing good working conditions and fair wages for the employees on the farm. We hope to be employing all our staff from the surrounding local area. Citrus harvesting and processing traditionally employ many women, contributing to woman empowerment in the community.

#### **Expected employment schedule**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
Nr employees	200-300	20	20	50	60	70

#### Skills transfer

At the moment, the local farmers are mainly growing low value crops such as beans and maize. By starting a citrus nursery, we hope to be able to start a smallholder program, whereby we can offer seedlings and



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training to farmers in the surrounding communities and either buy their crop or coordinate the marketing efforts to secure a good income from the crop.

### **Youth Support Programs**

Sable Hills Farm has already participated in Kisilwa's efforts to improve the education of its children by contributing to the building of its school buildings. Sable Hills Farm intends to continue this participation. The Sable Hills Farm management has personal connections to the managing director of the NGO organization Lyra in Africa, based in Iringa. Working together with them, we hope to establish a collaboration with the school of Kisilwa and introduce programs to support the youth development in the area. Examples of programs are courses in digital learning and financial help such as loans and village savings. Another program Lyra is engaged in is the 'Imrika Kijani' – pathway out of poverty for rural youths. It is a youth entrepreneurship course creating new opportunities for youth aged 15-28 who have dropped out of school or with limited employment options.

## **11.2 Environment**

The aim of SHF farm is to produce crops as sustainably as possible. By mixed species planting and silvopastures we are creating a diverse farming landscape, where natural habitats are included and where pest and disease pressures are kept low through natural means.

The citrus orchards and pastures grazed through rotation will sequester carbon, contributing to countering climate change. The same applies to the vast areas of land where we would prevent the cutting down of the woodlands for charcoal.

By preventing the deforestation and by controlling poaching on the land, we hope to enable starting wellness and agro-tourism enterprises on the land. Poachers from other parts of Tanzania are currently using the land as a major route into the Waga and Imbomipa WMA, as well as into the Ruaha National Park. Simply by establishing a presence on the land, Sable Hills Farm is likely to significantly lower the traffic of poachers, hopefully having a positive impact on the animal numbers in the wider surrounding area, including the Ruaha, which would benefit the Ruaha National Park. Sable Hills Farm wishes to work together with TANAPA on these issues for mutual benefit.



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SABLE HILLS FARM LTD

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Currently, Kisilwa village is unjustly receiving part of the blame for the ongoing poaching and the village has expressed a desire to participate in the anti-poaching efforts in order to clear its name and to work for more sustainable ways to obtain income from the wildlife.

### **11.3 Gender impact**

Our intention is to hire men and women as equally as possible. Men and women perform farming jobs rather equally anyway in the area, and women should not be less suited for the required jobs. Our understanding is that one barrier for the improvement of women's position, is that they do not have access to their own money, which can be changed by creating job opportunities.

Our partner organization Lyra in Africa has particular experience from supporting girls and women entrepreneurs. Lyra is also involved in setting up programs such as digital learning and village savings and loans programs to enable entrepreneurs in the area to allocate funds towards projects. The intention is to collaborate with Lyra to bring such programs to the area.



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## **12 CONCLUSION AND RECOMMENDATION**

The project is promoted by strong sponsors who have the ability to manage all the activities efficiently. The short implementation period combined with the envisaged financial returns makes the proposal highly attractive and ideal for supporting. This study recommends timely implementation of the proposal



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# ***ANNEXTURES***



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## SABLE HILLS FARM LIMITED

### PROJECTED INVESTMENT COST

Land including civil works	191 500
Machinery & Equipment	116 000
Vehicles	20 000
Furnitures	5000
Pre operational expenses	40 000
Others such as generators	1000
Working capital	326 500
<b>Total</b>	<b>700,000</b>

## SABLE HILLS FARM LIMITED

### FINANCING PLAN

S/NO	SOURCE	FOREIGN	LOCAL	TOTAL
1.	Equity	700,000	-	700,000
	<b>Total</b>	<b>700,000</b>		<b>700,000</b>



SABLE HILLS FARM LTD

## SABLE HILLS FARM LIMITED

### DEPRECIATION SCHEDULE

	Rate	Value	1	2	3	4	5	6	7	8	9	10
1. Land & buildings	5.0	191,500	9,575	9,575	9,575	9,575	9,575	9,575	9,575	9,575	9,575	9,575
Equipment & Fittings	12.5	116,000	14,500	14,500	14,500	14,500	14,500	14,500	14,500	14,500	-	-
Motor Vehicles	25.0	20,000	5,000	5,000	5,000	5,000	-	-	-	-	-	-
Preoperational Expenses	20	40,000	8,000	8,000	8,000	8,000	8,000	-	-	-	-	-
<b>Total</b>			37,075	37,075	37,075	37,075	32,075	24,075	24,075	24,075	9,575	9,575

## SABLE HILLS FARM LIMITED

### Projected Revenue Schedule

USD

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sales for citrus	-	-	-	51,300	102,600	205,200	273,600	456,000	592,800	592,800
Sales for cheese	30,000	65,000	100,000	135,000	170,000	205,000	205,000	205,000	205,000	205,000
<b>Total revenue</b>	<b>30,000</b>	<b>65,000</b>	<b>100,000</b>	<b>186,300</b>	<b>272,600</b>	<b>410,200</b>	<b>478,600</b>	<b>661,000</b>	<b>797,800</b>	<b>797,800</b>



SABLE HILLS FARM LTD

## SABLE HILLS FARM LIMITED

### Projected Profit & Loss Account

USD

	1	2	3	4	5	6	7	8	9	10
<b>Revenue</b>	<b>30,000</b>	<b>65,000</b>	<b>100,000</b>	<b>186,300</b>	<b>272,600</b>	<b>410,200</b>	<b>478,600</b>	<b>661,000</b>	<b>797,800</b>	<b>797,800</b>
Cost of Sales	<b>28,320</b>	<b>50,620</b>	<b>73,423</b>	<b>97,057</b>	<b>126,141</b>	<b>153,252</b>	<b>153,252</b>	<b>153,252</b>	<b>153,252</b>	<b>153,252</b>
Gross Profit	1,680	14,380	26,577	89,243	146,459	256,948	325,348	507,748	644,548	644,548
<b>Operating Profit</b>	1,680	14,380	26,577	89,243	146,459	256,948	325,348	507,748	644,548	644,548
Less: Depreciation	37,075	37,075	37,075	37,075	32,075	24,075	24,075	24,075	9,575	9,575
Profit Before tax	(35,395)	(22,695)	(10,498)	52,168	114,384	232,873	301,273	483,673	634,973	634,973
Profit for taxation	(35,395)	(22,695)	(10,498)	52,168	114,384	232,873	301,273	483,673	634,973	634,973
Corporation Tax 30%	-	-	-	15,650	34,315	69,862	90,382	145,101	190,492	190,492
<b>Profit After Tax</b>	(35,395)	(22,695)	(10,498)	36,518	80,069	163,011	210,891	338,572	444,481	444,481
Profit Brought forward	-	(35,395)	(58,090)	(68,588)	(32,070)	47,999	211,010	421,901	760,473	1,204,954
<b>Profit Carried forward</b>	<b>(35,395)</b>	<b>(58,090)</b>	<b>(68,588)</b>	<b>(32,070)</b>	<b>47,999</b>	<b>211,010</b>	<b>421,901</b>	<b>760,473</b>	<b>1,204,954</b>	<b>1,649,435</b>



SABLE HILLS FARM LTD

## SABLE HILLS FARM LIMITED

Projected Cash Flow USD

	0	1	2	3	4	5	6	7	8	9	10
<b>Cash Inflow</b>											
Owners' equity	700,000	-	-	-	-	-	-	-	-	-	-
Sub Total	700,000	-	-	-	-	-	-	-	-	-	-
<b>Revenue Inflows</b>											
Profit Before Tax	-	(35,395)	(22,695)	(10498)	52,168	114,384	232,873	301,273	483,673	634,973	634,973
Depreciation	-	37,075	37,075	37,076	37,075	37,075	24,057	24,057	24,057	9,575	9,575
Sub Total	-	1,680	14,380	26,577	55,873	151,459	256,930	325,330	507,730	644,548	644,548
<b>Cash Outflow</b>											
Investment & Re-investment											
Sub Total	700,000	-	-	-	-	-	-	-	-	-	-
<b>Revenue Outflows</b>											
Corporation	-	-	-	-	15,650	34,315	69,862	90,382	145,101	190,492	190,492
Sub Total	-	-	-	-	15,650	34,315	69,862	90,382	145,101	190,492	190,492
<b>Net Cash Flows</b>	-	<b>1,680</b>	<b>14,380</b>	<b>26,577</b>	<b>40,223</b>	<b>117,144</b>	<b>187,068</b>	<b>234,948</b>	<b>362,629</b>	<b>454,056</b>	<b>454,056</b>