



PROJECT PROPOSAL

Project Implementer:	Tsa Rona Social Development Company
Project Name:	Maphutsaneng Mixed Agriculture Project
Implementing Partner:	Solgreen srl - Italy
Registration NO.:	<i>ID.: 225731920 - TIN. NO.: 200040653-4</i>
Project FUNDRAISER:	INDENER.Org an Italian Non Profit Association
General contractor:	Solgreen International Group with European Companies.
Duration of the Project:	ON GOING
Financial Status:	Assets worth of M24,700,000.00 -
Project Implementation Location:	<i>Braakfontein in Mhahleshoek District.</i>

1.0. Background Information

Tsa Rona Social Development Company a fully registered Lesotho company owned by a Mosotho; which one of its mandate is to source funds by means of legal fundraising from donors and partner with appropriate legal community developing companies being locally and Internationally to raise funds for projects that empowers rural communities by implementing developmental projects, especially focusing more on agriculture and health projects. **Tsa Rona Social Development Company**; has partnered with INDENER.Org an Italian Non-Profit Association and Solgreen International Group an Italian Company as the head of a team of associated companies; to implement The Dryland Survival Agriculture Centre an innovative ethical project to be implemented at Braakfontein in Mhahleshoek District; where we already have **seven plus [7+]** hector fields to implement the project.

Project Description

The Dryland Survival Agriculture Centre project aims to improve the health of the community of Braakfontein and the surrounding Villages by creating the most needed jobs especially focusing on youth and women in order to curb migration and poverty which are in most cases the root course of human-trafficking and un-lawful border crossing to South Africa.

The innovative Project we are presenting is a new cultivation method in a protected space by adverse weather conditions, to plant 'Super Food' and Food Supplements with advanced technologies, it has a production of water for irrigation and drinkable water which is cultivated from air/well or river. The Dryland Survival Agriculture Centre generate its electrical power by renewable energies, it suitable for the location as we are well aware that Mhahleshoek is a very dry land.



The food security in Lesotho is a challenging factor due to the result of El-Nino which induce drought, the situation has been made worse by successive years of crop failures, which most of the vegetables are important from the neighbouring South Africa and impacts negatively to the low incomes as vegetables prices come with a high price and 41% of rural families [WFP] are spending over half or their income on food. Maphutsaneng Mixed Agriculture Project is implementing the innovative agriculture model; which will have production of all kinds of vegetables throughout the year.

The project further will curb the high demand of importation of vegetables and introduce the uncommon goat dairy products to the market throughout the year. Maphutsaneng Mixed Agriculture Project will venture into agro-processing of the products produced in their farm. We are targeting to employ twenty [20] + full time employees at the start of the project.

MISSION

We work with purpose to deliver exceptional value to our clients; and to make a meaningful contribution to the development of the country.

VALUES

We believe in working with purpose; we are committed to using our skills and talents in services to a better Lesotho.

EXCELLENCE

We uphold the highest standards of professionalism and effectiveness.

ETHICS

We work in a way that is always principled; just and honourable.

DEVELOPMENT

We have faith in the potential for growth, improvement and advancement of both the individual and society.

EXPERTISE

We are ongoing learners and appreciate being knowledgeable specialists in our field and we are committed to being a responsible company in the work of community-based and non-profit organisations.



1. PROJECT OBJECTIVES

[i]. To increase food security in Lesotho.

[ii]. To Improve the standard of living and welfare with the hope of reducing abject poverty in Braakfontein and Villages in Mhaleshoek.

[iii]. To contribute to the development of ethical and sustainable global supply chains to improve project operations

1a EXPECTED OUTCOMES:

- ⇒ Sustained agricultural production
- ⇒ Sustained productivity and efficiency of the projects
- ⇒ Ensure projects are self-sustaining
- ⇒ 30% of our produce being Exported.
- ⇒ 70% of our produce being consumed locally.

1.0 Project Implementation Plan

Implement innovative mixed farming project which consist of a

- ✦ Milking Goat Breeding with a Dairy;
- ✦ A Dryland Greenhouse for super food and supplements with botanic laboratory.
- ✦ Innovative Greenhouse
- ✦ Creating employment for the local people to be part of the project and compensating them with decent salaries and benefits.

1.1 Information dissemination –who are the stakeholders who need to know about the project?

[a] Government

[b] Commercial people

[c] Villager Chiefs and Councillors around Braakfontein and neighbouring villages

[d] Consumers around Lesotho and Internationally.



1.2 Beneficiaries –

1.2a Direct Beneficiaries:

15% of Braakfontein Population and the nearest villages.

1.2b Indirect beneficiaries:

85% of Braakfontein Population and the nearest villages.

[a] The second beneficiaries are the population at large and international customers

2. Procurement of equipment – procedure and items to purchase.

In the presence of the purchase order for the special structure called “*The Desert Greenhouse*” the General contractor, Solgreen international Group, for advertising and future developments, will invest in this project with a structure called “mobile dairy” delivering it complete with equipment in Lesotho to its own expenses. The Items will be

- Milking goat breeding house
- A fully equipped mobile dairy with a dairy shop
- The Dry Land Innovative Greenhouse

3. Project Components

3.1 Dryland Greenhouse for goat breeding and dairy production.

[i] GOAT BREEDING

ia A resistant and solid structure that is easy to install for sheltering a minimum of **100 milking goats** and a milking area. The structure has a removable cover for when it is hot.

ib Integrated solution for goat farming with a mini mobile dairy for milk processing; cheese production; and independent drinking water, heating and electricity through solar energy systems.



i.c Shelter for breeding and milking goats

[4] MOBILE DAIRY AND PRODUCTION HOUSE



4a SAMPLE PRODUCTION



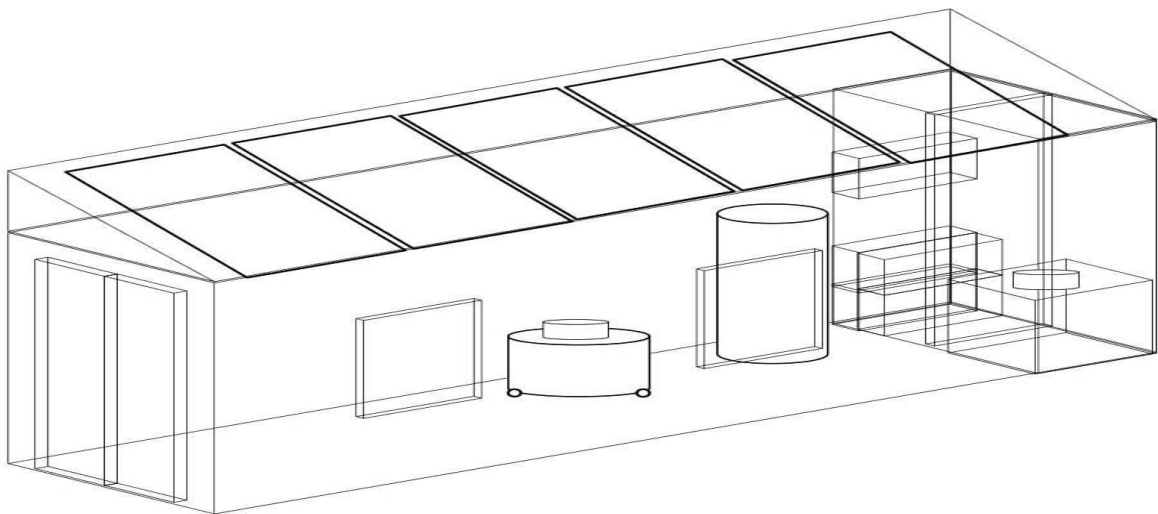
4b **OFFICES**



4c **PRODUCTION ROOM**



4d **MOBILE DAIRY**

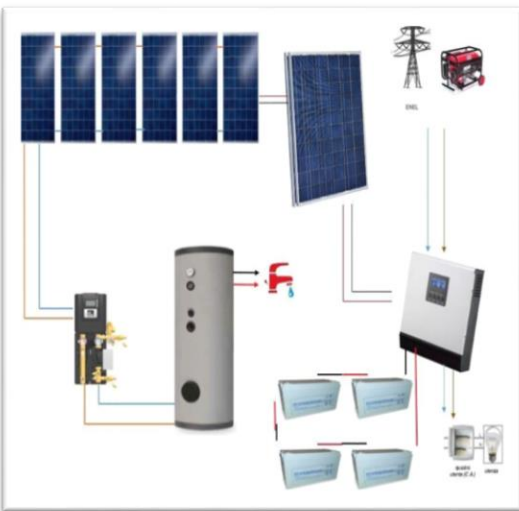


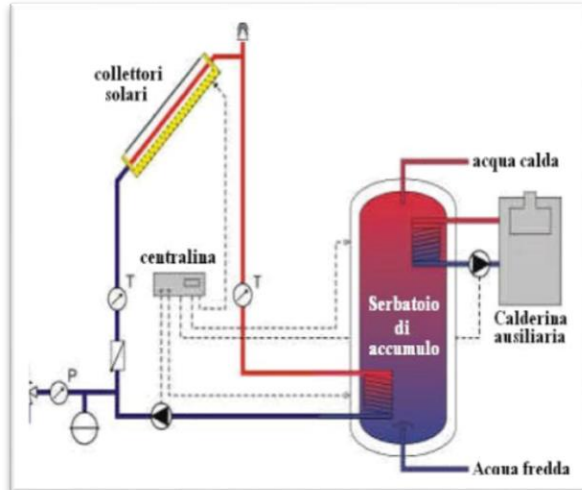
4e **MOBILE DAIRY – INSIDE SKETCH**



4f **DAIRY PRODUCTION EQUIPMENT**

4g Photovoltaic system complete with panels, batteries, inverters and solar thermal system for the production of hot water for washing of dairy products





4h **DAIRY SHOP**

4i **TECHNICAL DESCRIPTION OF MONOBLOCKS CM2 SERIES BASEMENT DAIRY MILK**

4j **PERIMETER FRAME**

Made with galvanized metal profiles thickness. Mm. 2 joined by welding. External sides (visible) painted in light colour.



4k **CORNER COLUMNS:**

Made with galvanized press-folded profiles sp. 20/10; they connect the base to the covering frame and ensure the fixing of the ends of the wall panels.

4l **FRAME COVER:**

Made with perimeter profiles in galvanized steel thickness. 2 mm. External sides (visible) painted in light colour.

4m **MOBILE DAIRY CONTENTS**

Mobile dairy come complete with: -

No 1 Sandwich panel structure measuring 7380 cm x 2460 cm with insulated doors and windows and with washable internal materials.

- ◆ No 1 Stainless steel bowl of 115 l
- ◆ No 1 200 l milk refrigerator
- ◆ No 1 Stainless steel table for working on wheels
- ◆ No 1 Stainless steel sink with pedal
- ◆ No 1 Sliding hanging wardrobe with shelves
- ◆ No 1 700 litter refrigerated cabinet 0 ° -10 ° C No 1 2-door locker room
- ◆ No 1 Wall-mounted washbasin with mixer
- ◆ No 1 Manual milk stirrer in stainless steel
- ◆ No 1 Osmosis and mineral salts water treatment system
- ◆ No 1 photovoltaic kit complete with structure, batteries, inverter, cables and connectors, electrical panel, led lighting.
- ◆ No 1 Silenced emergency generator.
- ◆ No 1 Professional emergency battery charger.
- ◆ No 1 solar thermal panel kit to heat the water
- ◆ No. 2 Tank kit of 100 litres each for drinking water storage complete with pipes, electric pump.

5. PRODUCTION ESTIMATE

MIXED BREED: Alpine, Saanen, Toggenburg

5a ONE GOAT- CHEESE PRODUCTION

NO	DESCRIPTION	ESTIMATES AND AMOUNT IN MALOTI
1.	1 X goat milk production per day	2 litre
2.	Production of milk 300 days per annum	600 litres
3.	Average Production of 500 litres for cheese per annum	100kg Cheese
4.	Price of goat milk Cream Cheese per kg	M380.00
5.	Annual Price per kg of goat milk Cream Cheese	M380 x 100kg =M38,000.00
6.	Annual Production price of 100 goats before taxes	M3,800,000.00

5b ONE GOAT- MILK PRODUCTION

NO	DESCRIPTION	ESTIMATE AND AMOUNT IN MALOTI
1.	1 X goat milk production per day Price	2 litre
2.	Production of milk in 300 days per annum	600 litres
3.	Price of goat milk per litre.	M9.00
3.	Average 600 litres per annum per goat	M5,400.00
4.	Total annual price for 100 goats before taxes	M540,000.00

5c NARRATION

Mobile Dairy

The **MOBILE DAIRY** has a duration of over 15 years with proper maintenance.

5d Goats

The average life of a goat 15-18 years

6 DESSERT GREENHOUSE

Dessert greenhouses are built to last over time, with innovative technological systems and solutions to have the best performance in agricultural production.

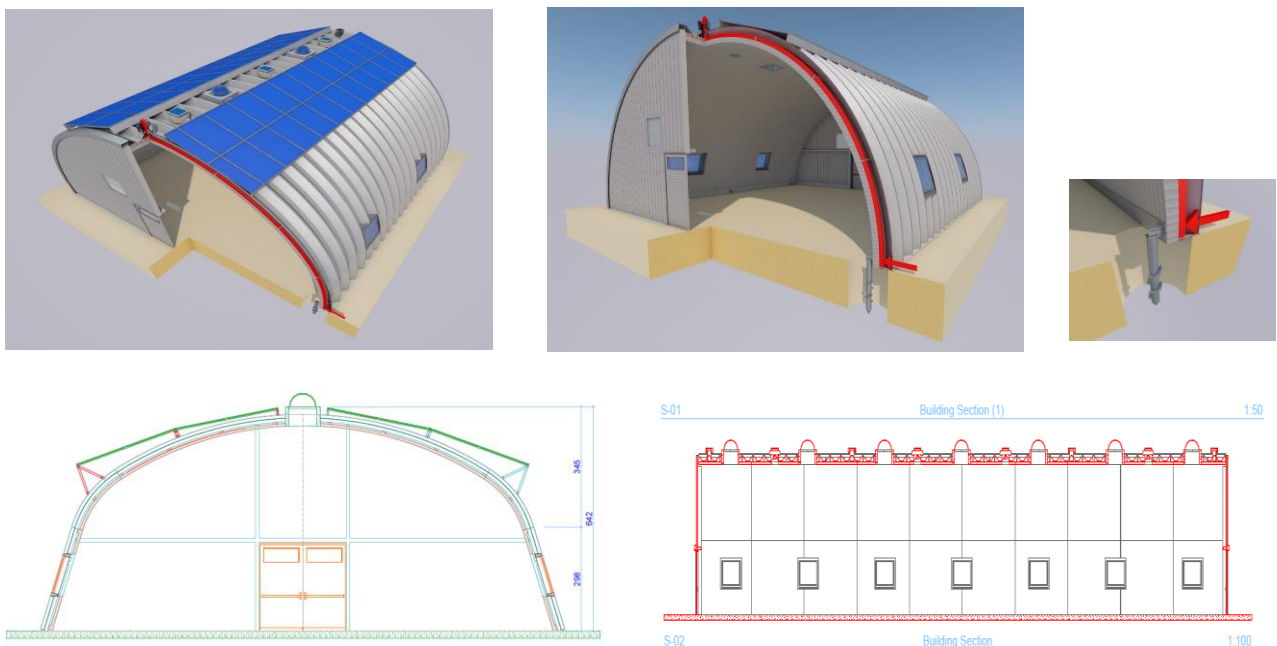
6.a Description:

- ◆ Easy to install. Double sheet with air chamber for perfect hot / cold insulation.
- ◆ Air extractors for controlling the humidity in the greenhouse.
- ◆ Air circulators to have a uniform temperature throughout the greenhouse.
- ◆ Photovoltaic system complete with batteries, inverter, structure.
- ◆ Training of staff on site with agronomists for an optimal cultivation technique.

6.b Production

- ❖ To produce leafy; fruity, allium and root vegetables in hydroponic technology.
- ❖ To cultivate organic vegetables with minimal use of soil and water and supply the ideal nutritional environment for optimum plant performance for long term project sustainability.
- ❖ To contribute to the prosperity of vulnerable and less privileged communities of Braakfontein and near villages by offering decent jobs through a well implemented Hydroponic project.

6.1 GREENHOUSE ILLUSTRATION



6.2 ILLUSTRATION OF THE INSIDE OF “THE DESERT GREENHOUSE”

The “Desert Greenhouse” has a surface available with hydroponic system and led lamp as **mq 350**, like 3.5 hector of field.



The vertical cultivation system allows to harvest a quantity of vegetables 8 times higher than that of a traditional field, each square meter of vertical agricultural greenhouse produces as 100 square meters of field and with the hydroponic system it is possible to save 95% of the water needed to traditional cultivation.

6.3 Dryland Greenhouse Botanic Laboratory



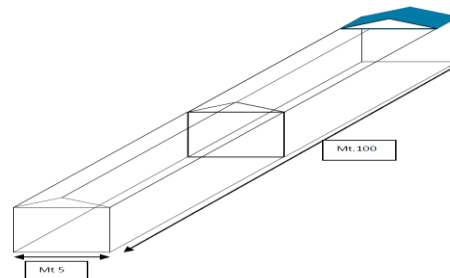
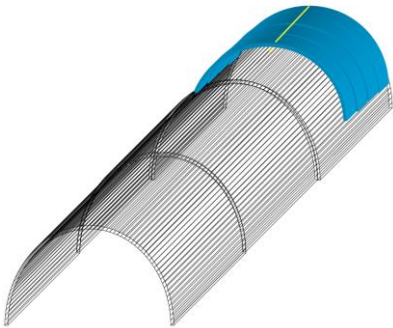
6.4 Desert Greenhouse Production Estimates

NO	DESCRIPTION	MONTHLY production for 1 m ² of field.	AMOUNT PER KG M	ANNUAL PRODUCTION ON 1m ² of field	ANNUAL production for 1 m ² -DG Desert greenhouse	AMOUNT PER KG M	TOTAL INCOME P/A
1	TOMATOES	15,8 kg	20.00	3,793.00	1580 KG	20.00	6,000 000.00
2	LETTUCE	0.80	3.00	2,880.00	80 KG	3.00	600,000.00
3	CUCUMBAR	2k	20.00	480.00	100 KG	20.00	4,000 000.00
4	PEAS	0.5kg	35.00	210.00	60 KG	35.00	3,500 000.00
5	SPRING ONION	2kg	7.00	168.00	200 KG	7.00	1,400 000.00
6	OKRA	2kg	25.00	600.00	200 KG	25.00	5,000 000.00
7	CABBAGE	2 kg	5.00	120.00	200 KG	5.00	1,000,000.00
8	SPINACH	1	8.00	96.00	200 KG	8.00	1,600 000.00
9	GREEN PEPPER	2kg	25.00	600.00	200 KG	25.00	6,250 000.00
10	CARROTS	3kg	6.00	216.00	300 KG	6.00	600,000.00
11	BEETROOT	3	20.00	720.00	300 kg	20.00	6,000 000.00
12.	POTATOES	3	3.00	10,800.00	300 KG	3.00	600,000.00
13	MORINGA(dried leaves)	0.45 gr/m ²	7.00	37.80	On the field	7.00	700,000.00
14	GINGER	4	45.00	2,160.00	400 KG	45.00	500,000.00
15	ONION	2	15	360.00	200 KG	15.00	1,500 000.00
16	GARLIC	1,5	45.00	810.00	150 KG	45.00	1,500 000.00
17	TOTAL	43.14	289.00	24,050.00	4470KG	289.00	52,450,000.00

7. The “Innovative Greenhouse”, self-energetic, inside structures.

Innovative Greenhouse is a 1 Complete greenhouse with a surface of 480 m² and double cloth 1 Complete photovoltaic system 2 Circulators 2 Extractors 1 Drip irrigation system complete with pumps 2 Inflatable tanks with water 1 Silenced generator and electronic battery charger 1 Pumps water 1 Agricultural equipment kit

7.1 Innovation Greenhouse illustrations



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7.3 Continues

PICTURES OF WATER SYSTEMS

DRINKING WATER STORAGE

Drinking water storage tank pipes and pump



7.4

PICTURE OF A GENERATOR AND BATTERY

Silenced generator and electronic battery charger.



8. WATER SYSTEM

Our treatment system for well or river water to make it drinkable with osmosis technology. It is able to produce 216 liters daily of drinking water with mineral salts.

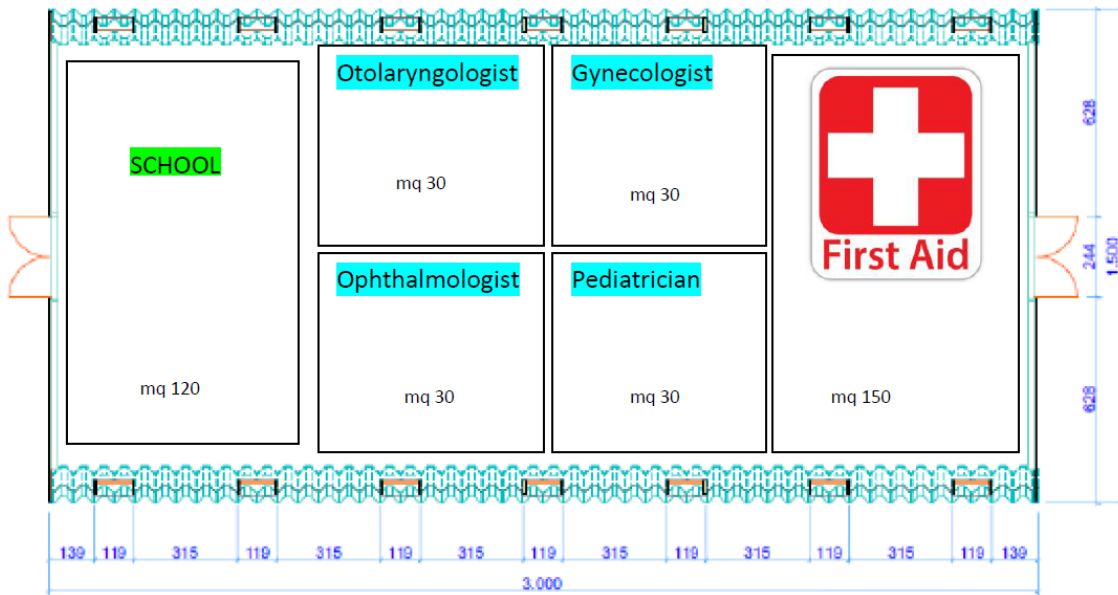


Optional: Special machine producing water from the air, for drought areas

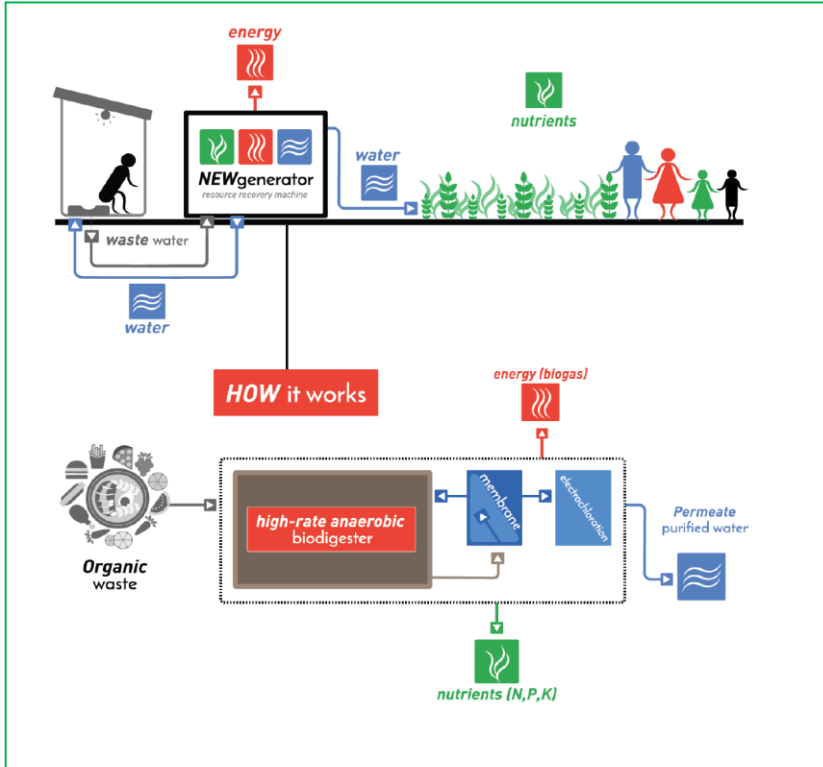
9. PRODUCTION OF INNOVATION GREEN HOUSE

NO	DESCRIPTION	MONTHLY production for 30 m2 of field.	AMOUNT P/KG	TOTAL INCOME PER ANNUM	Monthly production for 10m2 – Innovation Greenhouse	AMOUNT PER KG M	TOTAL INCOME P/A M
1.	Baby Beetroot	2,400 kg	M20.00	M576,000	12000 KG	M20.00	2,880,000.00
2.	Baby Carrots	2,400kg	M20.00	M576,000	12000 KG	M20.00	2,880,000.00
3.	Baby Butternut	30	M30.00	M10,600	1000 KG	M30.00	360,000.00
4.	Baby Brinjals	15kg	M30.00	M64,000	600 KG	M35.00	215,000.00
5.	Baby Cabbage	60kg	M40.00	M28,000	2000KG	M50.00	126,000.00
6	Baby Potatoes	3000kg	M30.00	M90,000	12000kg	M40.00	480,000.00
6.	Baby Jam Squash	60kg	M60	M43,000	200 KG	M70.00	168,000.00
7.	Baby Leaf	50kg	M60.00	M36,000	300kg	M70.00	252,000.00
8.	Cocktail Tomatoes	100kg	M30.00	M38,000	2000 KG	M40.00	960,000.00
9	Cucumber	60	M10.00	M7,200	600 KG	M20.00	144,000.00
10.	Kale	60kg	M20.00	M14,400	300 KG	M30.00	108,000.00
11.	Leak	90kg	M35.00	M37,000	450 KG	M40.00	216,000.00
12.	Blackberry	90kg	M300.00	M327,000	300 kg	M350.00	1,260,000.00
13.	Blueberry	90kg	M300.00	M327,000	300 KG	M350.00	1,260,000.00
14	Strawberry	100KG	M200.00	M240,000	300kg	M250.00	900,000.00
15.	Broccoli	20KG	M50.00	M12,000	100kg	M60.00	72,000.00
16.	Cauliflower	10KG	M60.00	M7,200	400 KG	M70.00	336,000.00
18.	Red Lettuce	50KG	M50.00	M30,000	500 KG	M60.00	360,000.00
19.	Red Peppers	100KG	M40	M48,000	2000KG	M50.00	1,200,000.00
20	Red Cabbage	50KG	M100	M60,000	600KG	M110.00	792,000.00
21.	Chillies	20KG	M40.00	M9,600	10000KG	M50.00	M6 000,000.00
22	TOTALS	8855kg	M1655	14,655,025.00	57,950kg	M1840	M106 628 000.00

10. Dryland Greenhouse for a Clinic-first aid and School

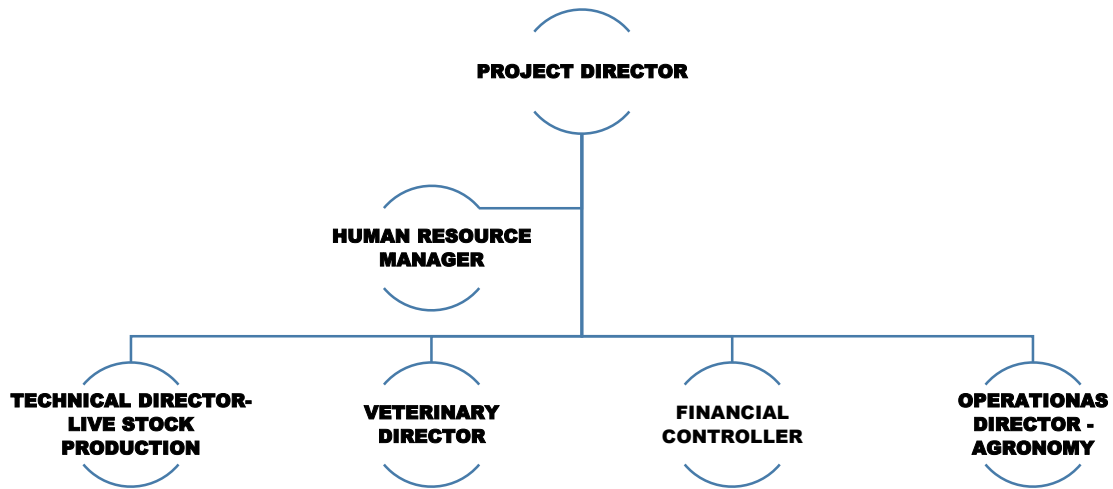


10.1 Eco-Toilet Illustration

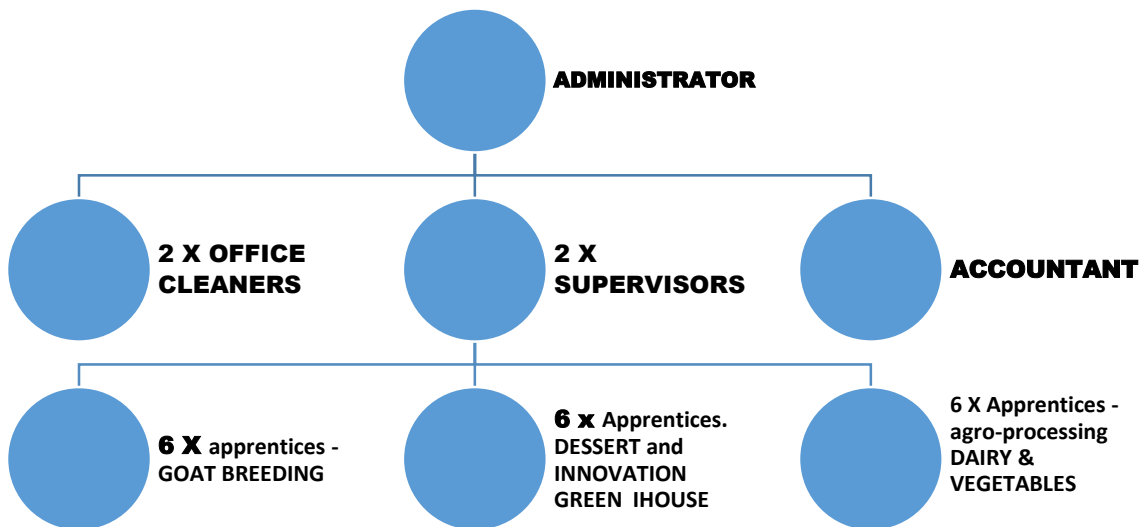


10.2 ECO-TOILET

11. MANAGEMENT STRUCTURE



11.1 OPERATIONS STAFF



12. PROJECT START UP EXPENSES

12.1 START UP – COST

NO	DESCRIPTION	AMOUNT M
PROJECT ASSETS		
1.	Shelter for goats; Complete Mobile Dairy and A shop	2,598,000.00
2.	Dessert greenhouses	15,210,906,00
3.	Dryland Greenhouse Botanic Laboratory	1,899,424,00
4.	The “Innovative Greenhouse	291,023,00
5	Procuring of 100 goats for start up	1,300,000.00
TOTAL		21,299,353.00
ADMINISTRATION COSTS		
1.	12 x months Procuring of Goats Feeds [Sheep Pallets, Lucern bails, Molatek; Winter Lick	72,000.00
2.	12 X months Procuring of Goats Medicine	30,000.00
3.	Annual Maintenance of Mobile Dairy Per annum	5,000.00
4.	Annual Office Administration: Furniture, Electronics; Stationery; Communications : data; airtime	300,000.00
4.	25 X Annual Salaries Operations staff	444,000.00
5.	7 x Managers Annual Salaries	1,763,000.00
6.	Electricity	0
7.	Water	0
8	Rent	0
9.	Transport	60,000.00
10.	Packaging of dairy products and vegetables for twelve months	100,000.00
11	Marketing	50,000.00
12.	Protective Clothing	20,000.00
13	Staff Training - Agronomy for Innovative Greenhouse	291,025.00
14.	Training on Breeding and Zoo technology - online	0
TOTAL EXPENSES		3 136 025.00
TOTAL BUDGET		24,435,378.00