



زراعات اللاندسكيب العضوية مزرعة جنة



1. الزراعة بدون تربة
2. نباتات الزينة
3. الاسمدة العضوية
4. التنمية المجتمعية
5. المشروعات



Organic fertilizer - Vermi compost - Landscaping design and maintenance
Call 01030411554 - 01098728283 - 01014457400

الزراعات المائية



تنمو النباتات بدون حاجة الى التربة في المراحل الاولى مما يوفر 90% من استهلاك المياه

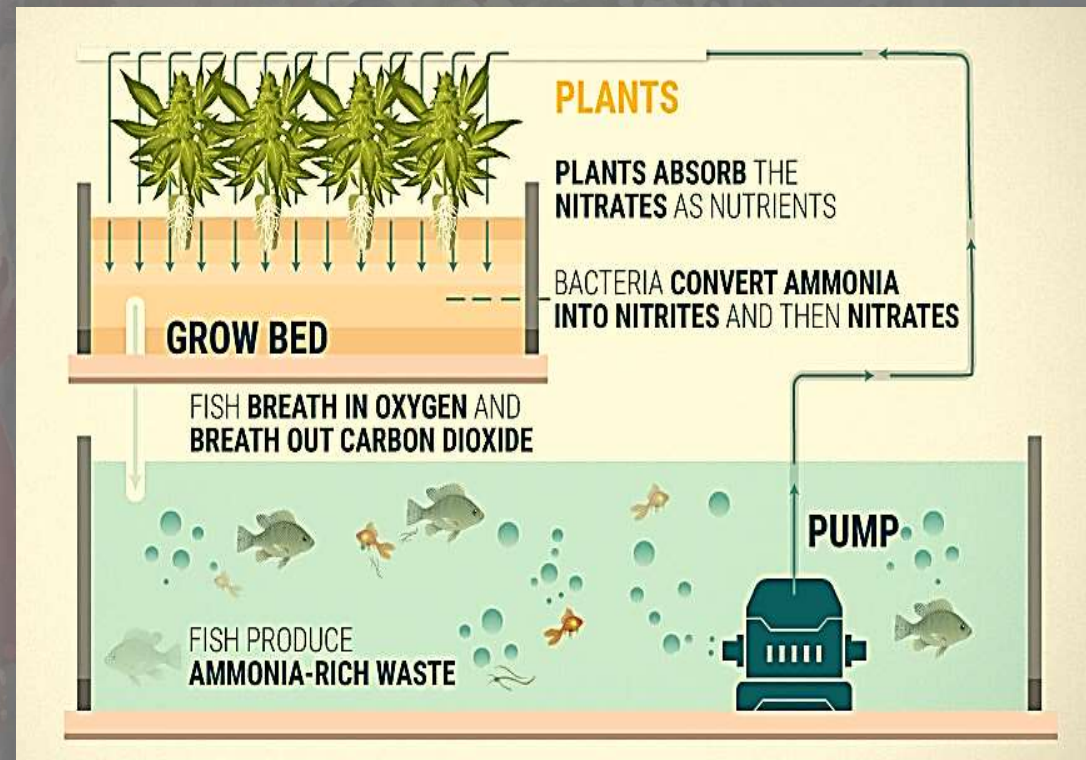
لعدم وجود تربة فهي خالية تماما من امراض التربة

يمكنه الانتاج بشكل صناعى لانتاج يتجاوز 100 الف شتلة شهريا على مساحة 600 م²

خالية من المبيدات و الكيماويات مخصصة للخضر و الفاكهة العضوية

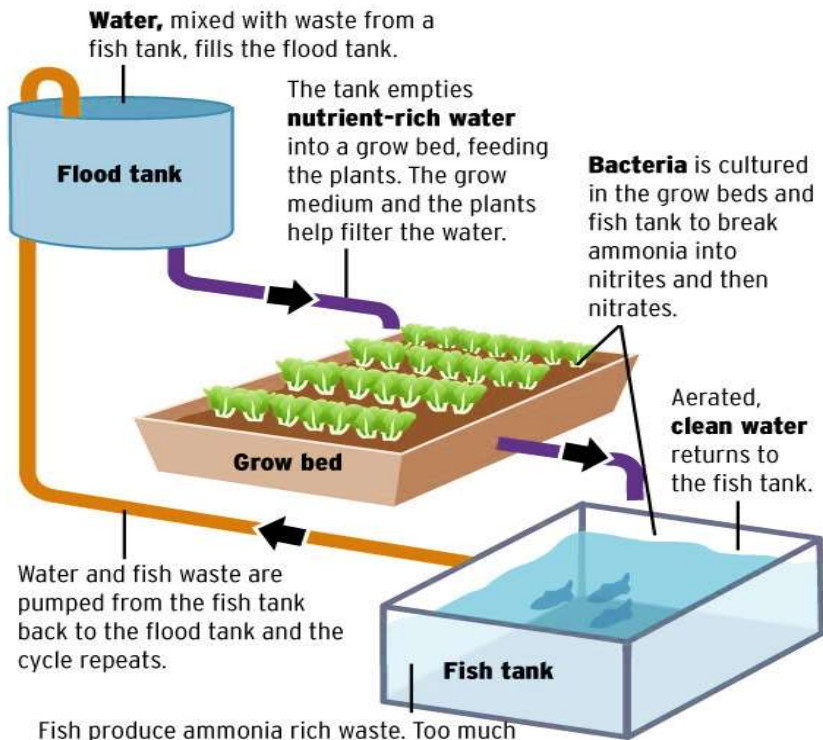
HOW ?

- ❖ Aquaponics recirculates water from a fish tank through a vegetable grow bed.
- ❖ Nutrients from the fish waste feed the plants, and the plants filter the water to keep the fish healthy.
- ❖ The two main components of the system are the fish tank and the grow beds with a small pump moving water between the two.
- ❖ The water passes through the roots of the plants before draining back into the fish tank.
- ❖ The plants extract the water and nutrients (fish waste) they need to grow, cleaning the water for the fish.



HOW ?

The Flow



Fish produce ammonia rich waste. Too much waste is toxic to the fish, but they can withstand high levels of nitrates.

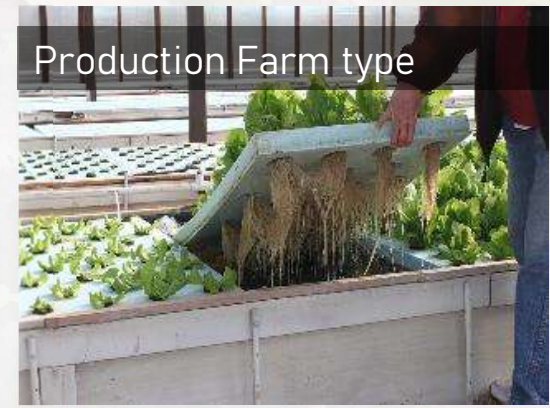
Home type



Backyard Pile-Up type



Production Farm type



WHY ?



Zero soil



2x growth rate



80% less water



No weeds



Nutrient efficiency



Fewer pesticides

- ❖ The main benefit from a system like this is the ability to grow fish and plants for consumption in the one system.
- ❖ Aquaponics systems use about 1/10th of the water used to grow plants in the ground.
- ❖ Relatively low energy consumption
- ❖ Faster growth rates and yields
- ❖ Eliminates the need for weeding and tilling of soil

- ❖ No soil borne diseases
- ❖ Plants are naturally fertilized
- ❖ No pesticides or chemicals
- ❖ The fish are a healthy source of protein
- ❖ No waste water run off in recirculating systems
- ❖ Systems can be established locally minimizing "food miles"

WHY ?



Plants that grown in Aquaponics successfully



Fish that grown in Aquaponics successfully



KOI



TILAPIA



BASA

WHAT ?

- Passive technique of Integrating landscape water features and plantations into one system that can be visually appealing and also productive, optimizing the running cost.



Private gardens

- Self sustained natural swimming pool that is naturally cleaned and require no added chemicals.

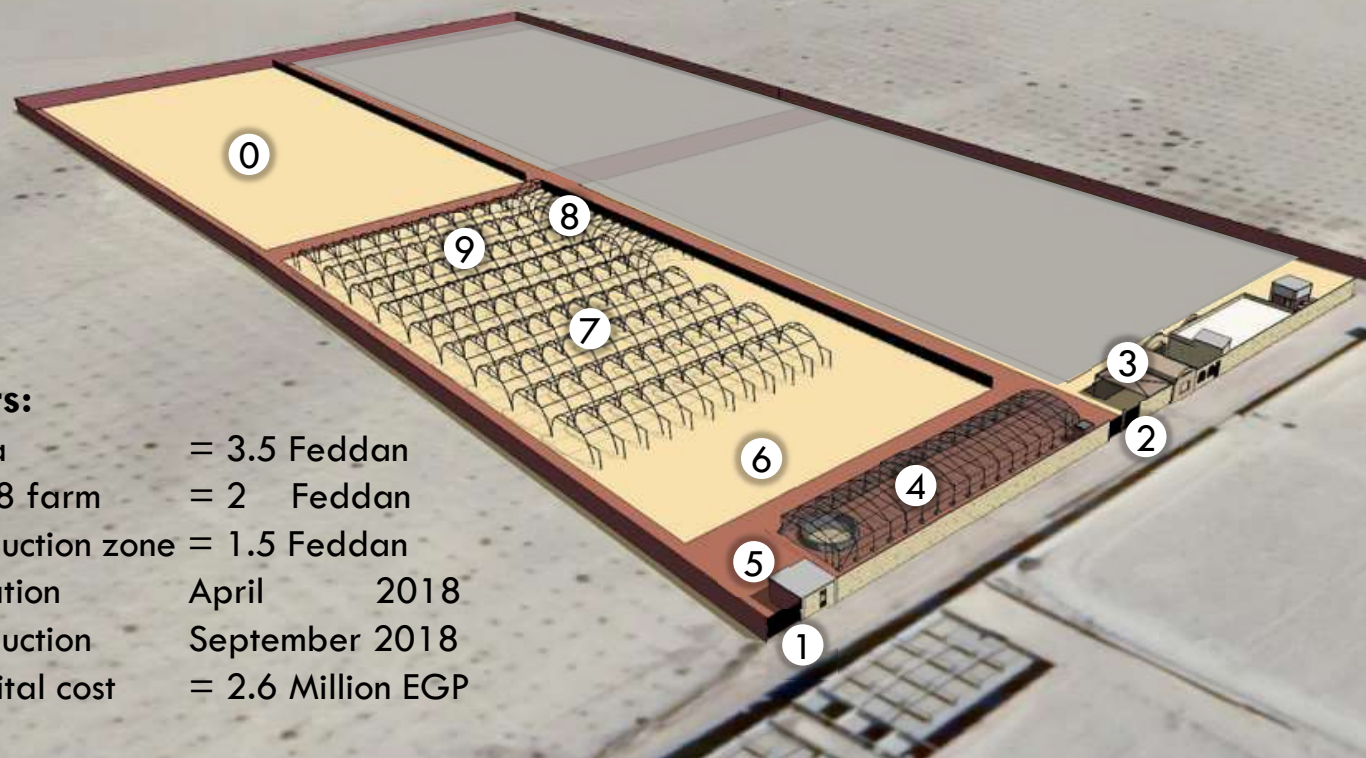


Public Landscape

PILOT FARM



NCI - 2018 INTEGRATED FARM



- 1 Entrance & Security
- 2 Service Entrance
- 3 Accommodation
- 4 Research Farm
- 5 Visitor Reception
- 6 Landscape model
- 7 Aquaponics production
- 8 Livestock
- 9 VERMI production
- 0 2019 Farm

Facts:

Area	= 3.5 Feddan
2018 farm	= 2 Feddan
Production zone	= 1.5 Feddan
Initiation	April 2018
Production	September 2018
Capital cost	= 2.6 Million EGP

المزرعة النموذج الاول

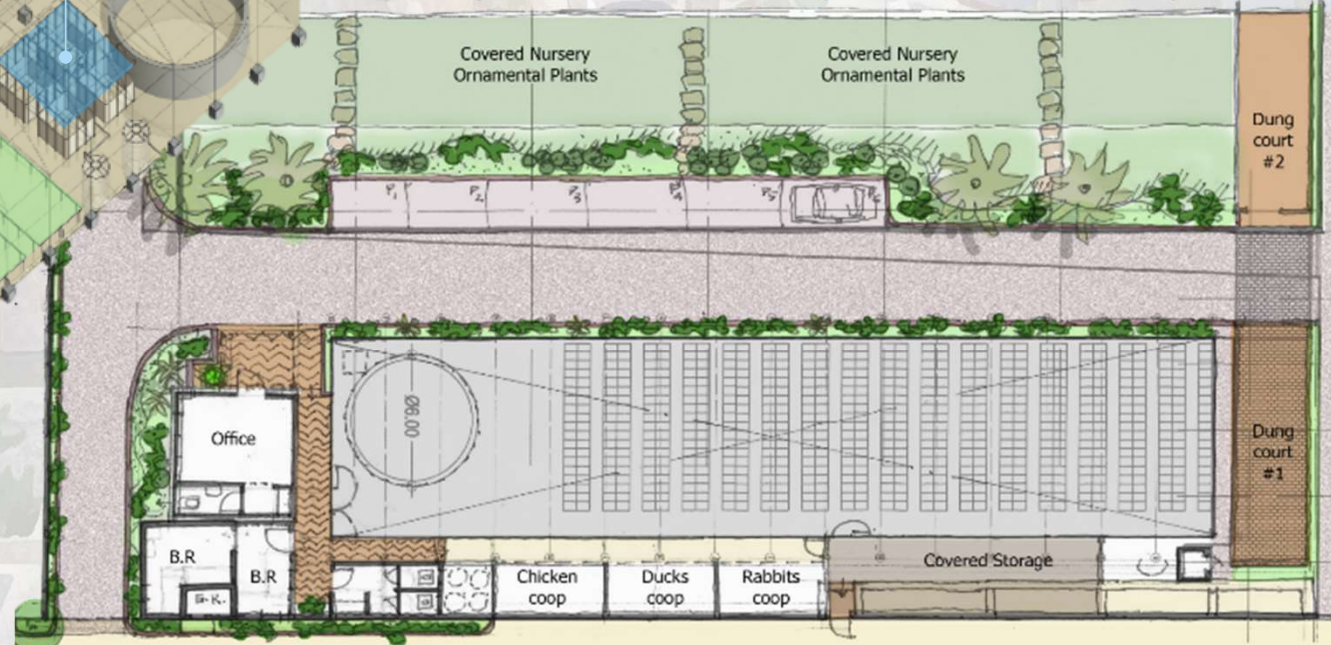
Research Farm Planning and Design

Mechanical and bio filters

2 Fish tanks

3 Vermicompost beds

1 Plant beds



Cooping with and making use of the site Loose sand soil & Slope in designing the system with minimal use of pumps.



Replacing the soil with more mechanical stable soil that is also good for plantations in terms of holding to moisture.



تحديات الانشاء و التجهيز

Construction process



System installation





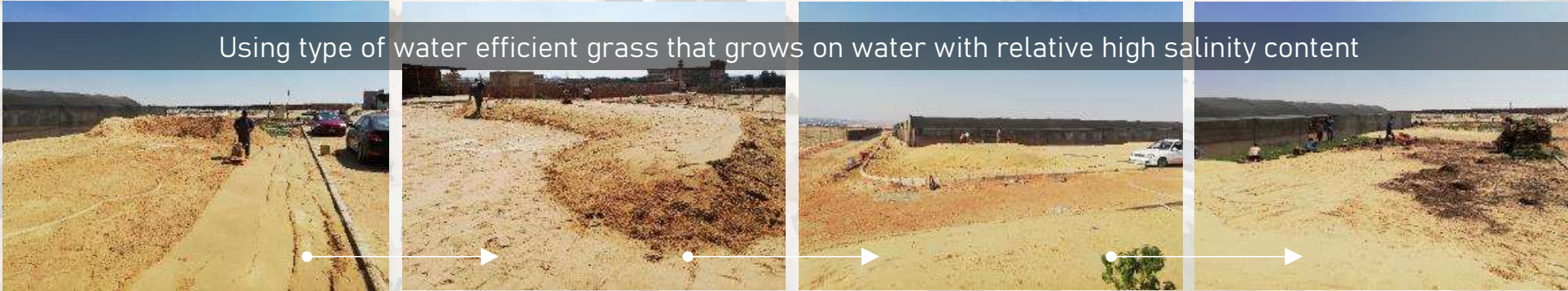
Growing Leaf Vegetables successfully, and reaching a good root size after 14 days of plantation



Azola is a good source of nutrition to fish at an early age



Using type of water efficient grass that grows on water with relative high salinity content



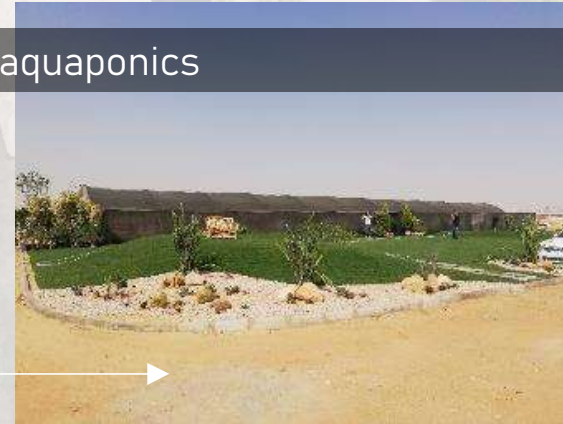
Irrigation of grass using recycled aquaponics mechanical filter flush water with high fertile content



Progress of Landscape Nursery



Cactus used in Landscape after growing in aquaponics



مشتل انتاج نباتات الزينة



تضم المزرعة كوادر من المهندسين المتخصصين في مجالات الاكثار و الهندسة الميكانيكية
و تحت اشراف عدد من الكوادر البحثية الاكاديمية في الجامعات
تتكامل مع سوق العمل من كبار المطورين لتوفير احتياجاتهم
يتم تطوير معدات لزيادة الانتاج بمعدلات اكثر

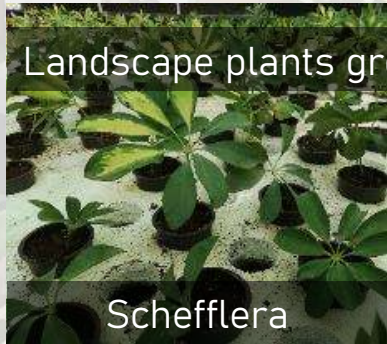
انتاج 7 ايام



1

WEEK

Landscape plants growing in Aquaponics after 7 days of planting



Schefflera



Flangum - Spider



Devil's ivy



Asparagus aethiopicus



Syngonium



Devil's ivy Roots



JANA FARM

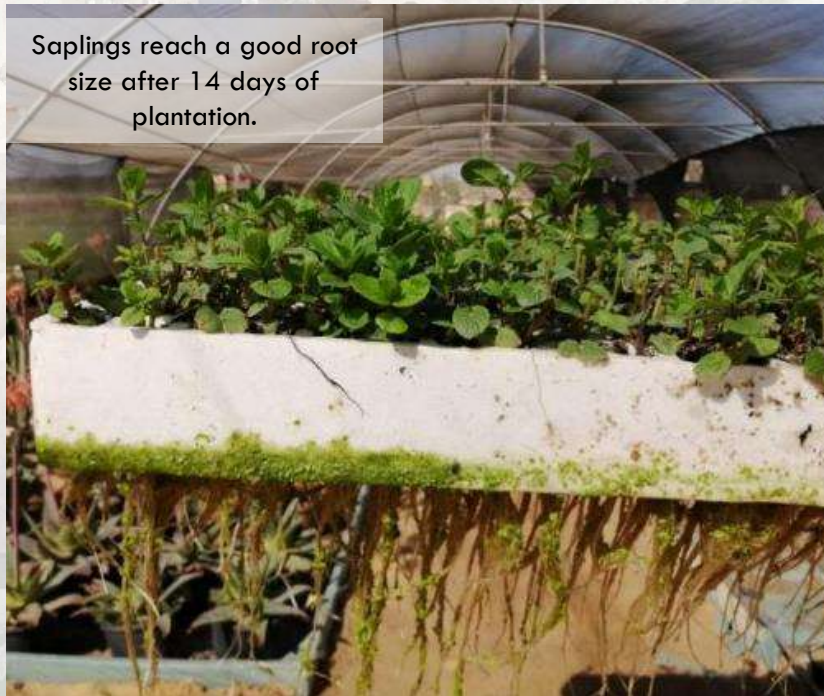
2. PLANTING PHASE

FIRST STAGE

Saplings first grow through Aquaponics System for 2 weeks.



Saplings reach a good root size after 14 days of plantation.



Azola is a good source of nutrition to fish at an early age.



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انتاج 21 يوم



3
WEEKS



Solenostemon



Syngonium



Cestrum nocturnum

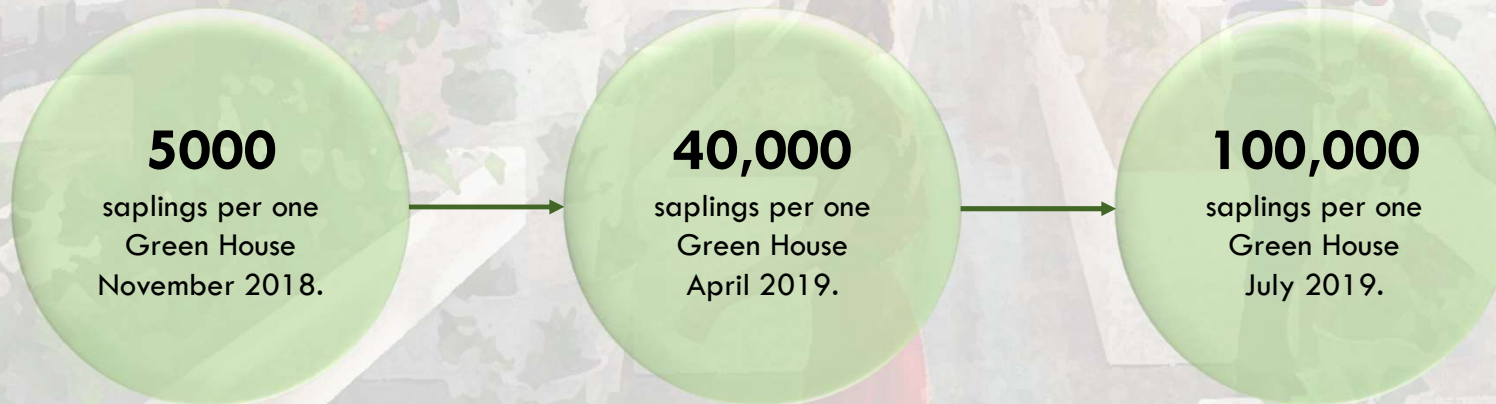


Devil's ivy



Solenostemon

Saplings Progress in the Farm



JANA FARM

2. PLANTING PHASE

Second Stage



The
saplings
are
planted
using
natural
Fertilizers

JANA FARM

4. PLANTS VARIETY



Klanchoe



Schefflera



Bougainvillea



Cactus



Gazania



Coleus



Lucite



Euphorbia



Lantana Kamara



Klanchoe



Duranta



Night Jasmine

GREEN WALL

Green wall in NCI office made from plants grown in Aquaponics



● Devil's ivy



● Spider plant



● Schefflera



● Red Dracaena



المسؤولية المجتمعية



Social

- ❖ Field trips on the importance of agriculture and new technology of Aquaponics.



Educational

- ❖ Scientific information cards presented on each plant .
- ❖ How to take care of plants and how its used in landscape design.



Economical

- ❖ House scale roof top Aquaponics system.
- ❖ Minimizing house running cost.



المشروعات



Landscape design
Maintenance
supervision

VILLA LANDSCAPE DESIGN



من جود الطبيعة



Decorative Floor Pattern

Colorful Ground Cover

Natural Rocks Water Fall

Proposed Tropical Bridge

Colorful Ground Cover

Natural Stone Walkway

LANDSCAPE PROJECT FOR PRIVATE VILLA ABO EL NOMROCE - GIZA

Owner: *Mr. Waheed Saleh*

GENERAL LAYOUT (Conceptual Project)

Landscape Consultant: **AHMA** (for reference & planing)

Alternative **(B)**

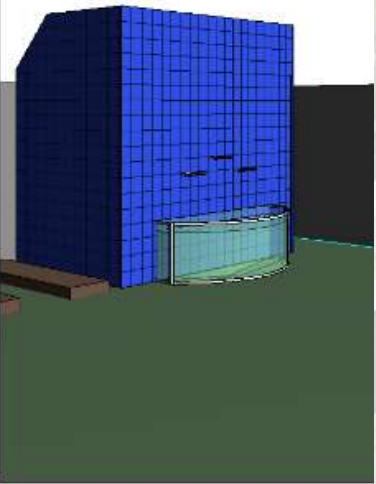


PRIVATE RESIDENCE LANDSCAPE DESIGN AND CONSTRUCTION

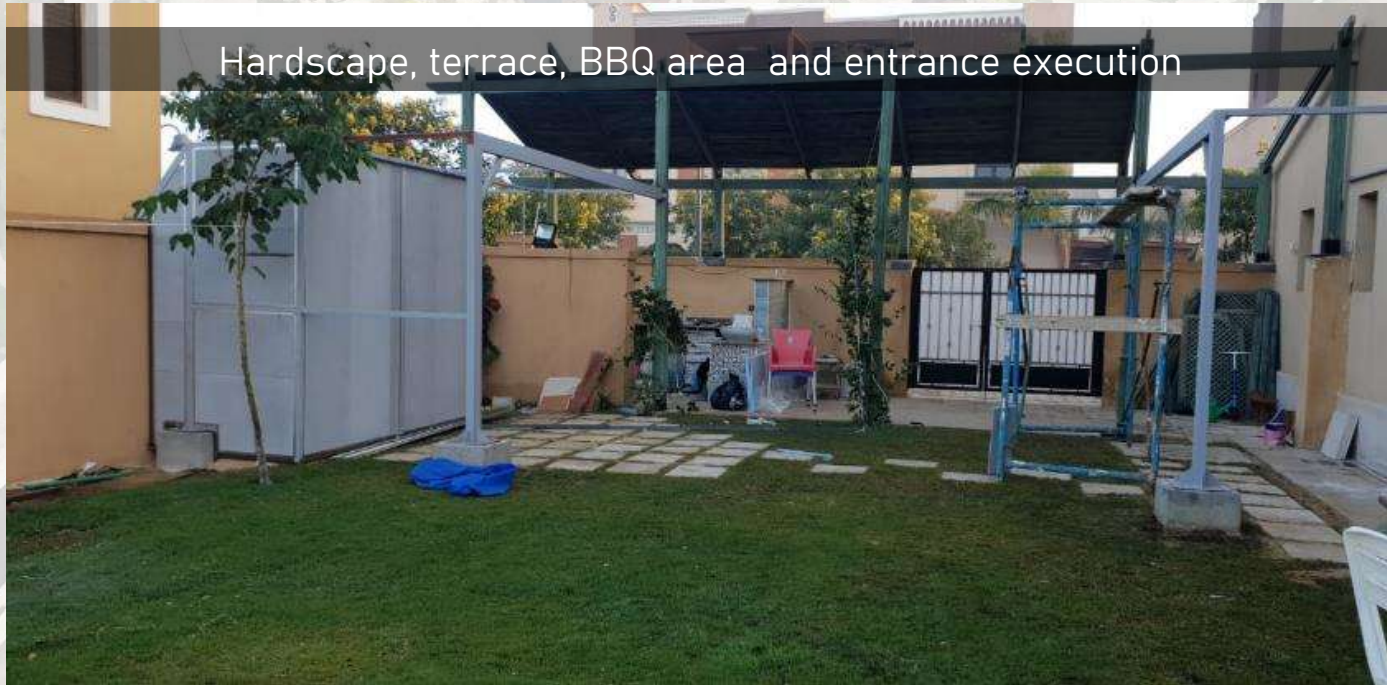


Hardscape execution and soft scape in progress

Fountain design



Hardscape, terrace, BBQ area and entrance execution



PRIVATE RESIDENCE LANDSCAPE DESIGN AND CONSTRUCTION



جنت

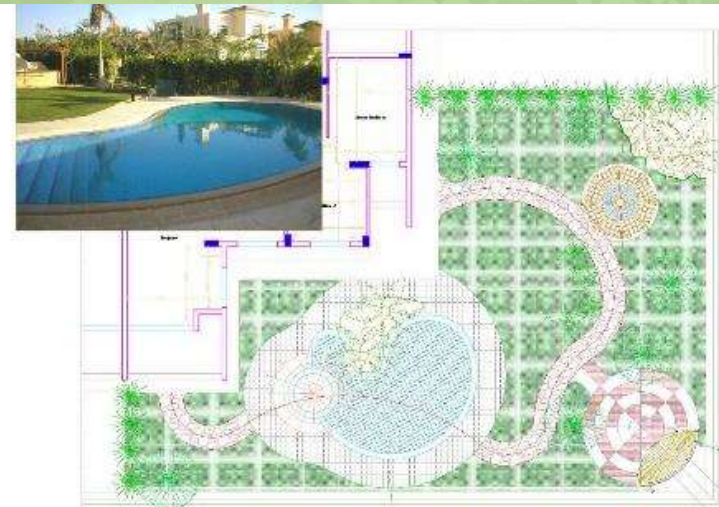
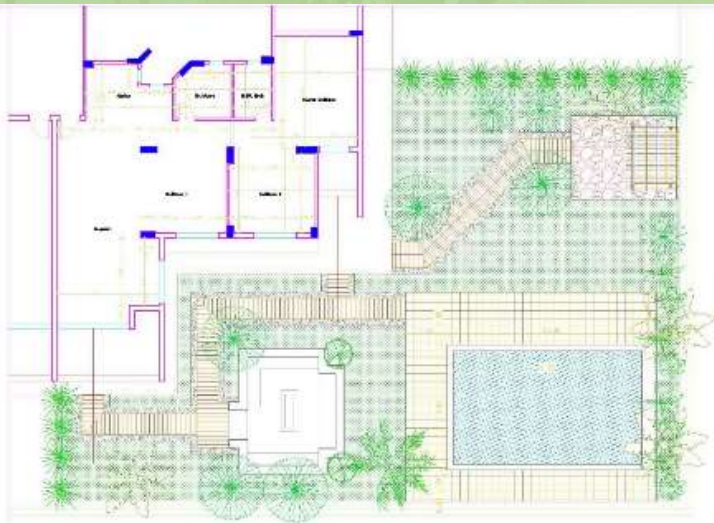
مركز امانه



PRIVATE RESIDENCE LANDSCAPE DESIGN AND CONSTRUCTION



VILLA LANDSCAPE DESIGN



Colorful Ground Cover



Decorative Plan



VILLA LANDSCAPE



Villa Back garden entrance and pool area



PRIVATE RESIDENCE LANDSCAPE DESIGN



من حدائق الطبيعة



PRIVATE RESIDENCE LANDSCAPE DESIGN



عناصر الزراعة



OUR MODEL



is to create Organic Landscape for the developers with

Better quality

Less maintenance cost

&

Revenue generating

اسمدة و انزيمات عضوية عالية الجودة



The conversion of Organic Waste Into Rich Plant fertilizers, Beneficial Bacteria & Enzymes by Red Wiggler Worms .

Vermi Worms

Composting Treating of organic waste into fertilizers

VermiComposting Using Worms to turn Organic waste to nutritious fertilizers

- ❖ We rely on the best types of animal waste in the production of Organic Fertilizer and possess about 600 tons of them.
- ❖ It is converted to organic fertilizers with rate: 100 tons/ month.
- ❖ It is planned to reach 300 tons/month in June 2019.



WHY ?



من جذور الطبيعة



Waste recycle



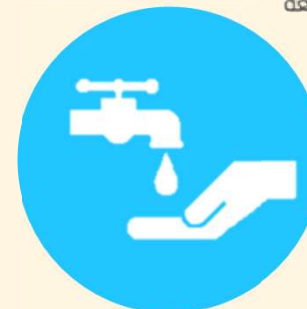
Low Energy



Eco-Friendly



No chemicals



Water efficiency



Min-Waste miles

- ❖ The main benefit from a system like this is the ability to Recycle Organic wastes to Organic fertilizer.
- ❖ Relatively low energy consumption.
- ❖ Clean solution to recycle Organic wastes.
- ❖ Eliminates the need for landfilling and burning.

- ❖ No added chemicals.
- ❖ Worms are naturally fed.
- ❖ No waste water run off in recirculating systems.
- ❖ Systems can be established locally minimizing waste miles.

PRODUCTS



Vermicompost

- ❖ Plants fertilizer.
- ❖ Liquids from the compost are useful (Compost tea).

Red wiggler worms

- ❖ Worms are responsible for making compost.
- ❖ Can be food for Fish and Birds.

Compost Tea

- ❖ Compost tea is the excess water from compost.
- ❖ Good anti bacterial and anti fungi for plants.



VERMI-COMPOST PRODUCTION PROCESS

Pile decomposition



Grinding



Bed layering



Adding worms + Water



Sieving vermicompost



Packing the product



معالجة و تدوير المخلفات الزراعية و العضوية

- ❖ It is Considered to product first cycle 10 ton
- ❖ Second Cycle: 25 tons (The end of May)
- ❖ It is planned to reach 60 tons in the next cycle in the end of August



SPECIFICATIONS

- ❖ More than 30% Organic Matter
- ❖ About 20% Organic Carbon
- ❖ More than 1% Nitrogen
- ❖ NO nematode
- ❖ Ne seeds



التحليل تجليل عينة سماد عضوي مقلعة من الزراعة جنة

Parameter	Symbol	Unit	Value
Acidity	pH		8.60
Electrical Conductivity	EC (e.c)	dS/m	2.98
Density	p	kg/m ³	747
Molasse	Thassa (%)		24.39
Ash		%	53.07
Organic Matter	OM (%)		33.91
Organic Carbon	OC (%)		16.72
Nitrogen	N (%)		1.40
Carbon : Nitrogen ratio	C/N ratio		18.25

مدير المعمل المركزي
د/ حسين جلال

الإشراف العلمي على وحدة الأبحاث والمياه
د/ مادل مزارك محمد

Central Lab., Faculty of Agriculture, Assiut University, El-Dokki, Ben Ali Badich, Assiut, 61542, Egypt.
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CASE STUDY
CAIRO FESTIVAL CITY



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CASE STUDY – CAIRO FESTIVAL CITY



Before



After 4 days



After 15 days

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SPECIFICATIONS

- ❖ More than 35% Organic Matter
- ❖ More than 20% Organic Carbon
- ❖ More than 1.5% Nitrogen
- ❖ NO nematode
- ❖ No seeds

نتائج تحليل عينة التربة كميوميت مضافة من مزرعة جنة

Parameter	Symbol	Units	Value/Comment
Acidity	pH		6.77
Electrical Conductivity	EC	dS/m	2.22
Density	ρ	kg/m ³	658
Mobility	Electro. μ		28.78
Ash	—	%	26.44
Organic Matter	OM	%	39.88
Organic Carbon	OC	%	23.14
Nitrogen	N	%	1.84
Carbon + Nitrogen ratio	C:N ratio	ratio	14.28

مدير المعمل المركزي:  / مائل سوكا عبد
 الإشراف الفني على وحدة الأراضين والمياه: 

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امكانية انتاج الخضروات العضوية

- Our Organic crops is grown in green houses without the use of synthetic pesticides, bioengineered genes (GMOs), petroleum-based fertilizers, and sewage sludge-based fertilizers.
- Organic fertilizers and vermicompost are used for better quality.



BENEFITS OF ORGANIC VEGETABLES

- **Organic produce contains fewer pesticides.** Chemicals such as fungicides, herbicides, and insecticides are widely used in conventional agriculture and residues remain on (and in) the food we eat.
- **Organic food is often fresher** because it doesn't contain preservatives that make it last longer.
- **Organic farming is better for the environment.** Organic farming practices reduce pollution, conserve water, reduce soil erosion, increase soil fertility, and use less energy. Farming without pesticides is also better for nearby birds and animals as well as people who live close to farms.
- **Organic food is GMO-free.** Genetically Modified Organisms (GMOs) or genetically engineered (GE) foods are plants whose DNA has been altered in ways that cannot occur in nature or in traditional crossbreeding, most commonly in order to be resistant to pesticides or produce an insecticide.
- **Antioxidants in Organic Food** Several studies have found that organic foods generally contain higher levels of antioxidants and certain micronutrients, such as vitamin C, zinc and iron.