



Reviving Biomass. Powering Sustainable Agriculture



Social Enterprise | Lebanon & UAE | Circular Agriculture

Three Crises Undermining Lebanon's Food System



Inefficient Waste Systems

Lebanon loses up to 30% of its GDP due to inefficient waste management



Soil Degradation

Over **45% of soils** are degraded and have lost biodiversity from chemical overuse



Imported Inputs

90% of agricultural inputs are imported — draining local value

Turning Biomass into Agricultural Solutions



**Collected Biomass from
Markets & Farms**



**Regenerative Inputs for
Healthy, Local Harvests**

**We transform biomass into valuable agricultural inputs,
driving local sustainability and closing the loop on food systems.**

HADUM Slashes Waste Costs & Transforms Collection



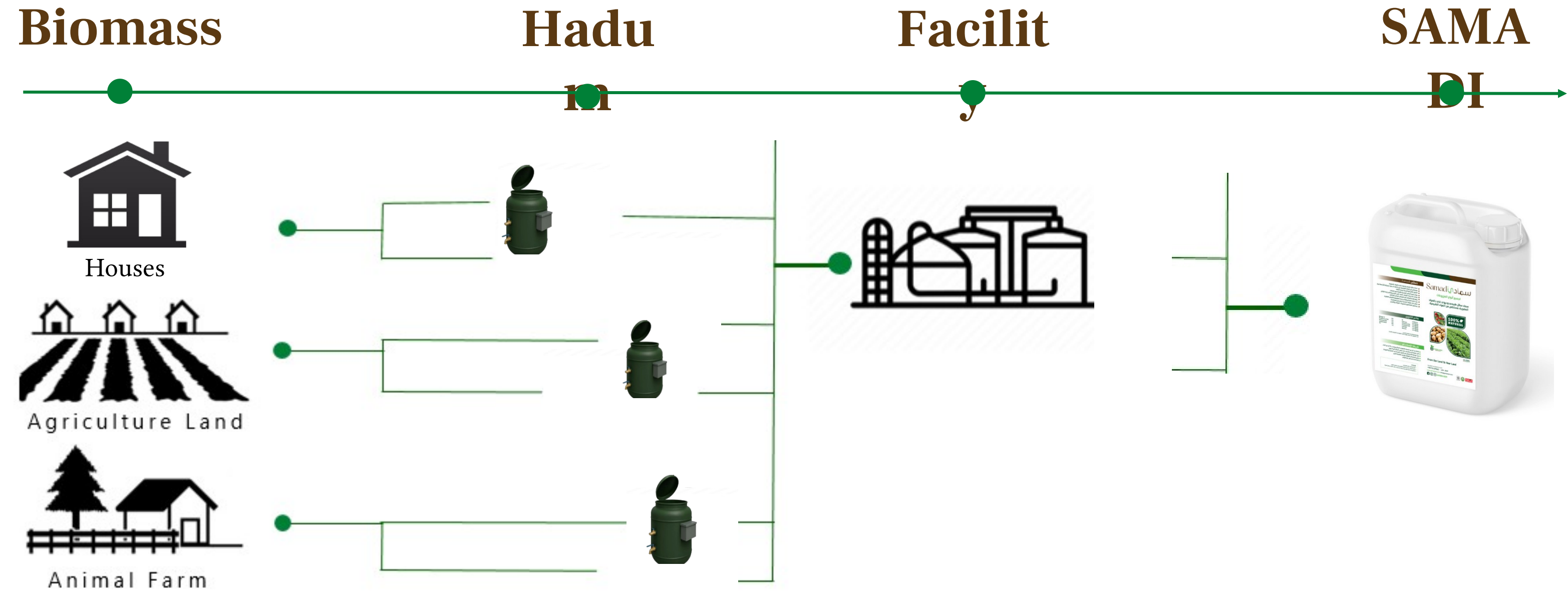
HADUM optimizes household and farm-level sorting, cutting trips and costs by over 90%.

- ✓ **93% lower collection costs**
- ✓ **Just 1 trip needed instead of 16**
- ✓ **No smell, no power, just drop and close**



**HADUM: Decentralized
Biomass Collector**

Smart, Decentralized Biomass Conversion

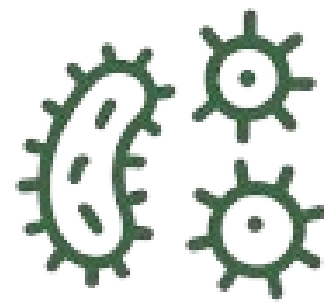


**Local biomass in, organic value out with lower cost,
lower carbon, and less import reliance.**

What Makes SAMADI Special



Crafted through a 12-stage bioprocess that ensures quality, consistency, and stability in formulation



Microbial-rich



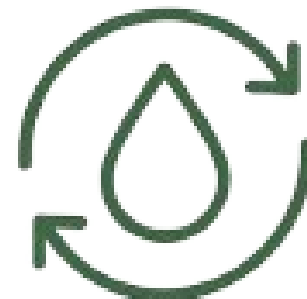
Balanced nutrition



Shelf-stable



Chemical-free



Water-efficient



Hormone activation

SAMADI: Circular Solutions for Smarter Plant Growth



- ✓ Enhances yield by 35% and improves crop quality
- ✓ Cuts irrigation needs by up to 20%
- ✓ Delivers 5x return on investment
- ✓ 100% safe, residue-free & certified



SAMADI: Liquid Plant Growth Promoter

Side-by-Side: SAMADI vs. Chemical Fertilizers



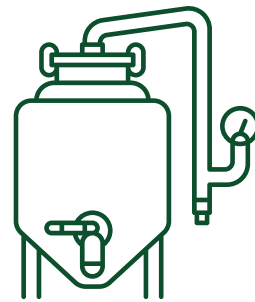
SAMADI drives plant health, environmental impact, and local economic growth.

Proven Results. Growing Momentum.



1400♦

Farmers using SAMADI
70% report higher yields.



360♦

HADUM units deployed
for local biomass
collection and sorting.



80k♦

Kg of biomass recycled.



80K♦

Liters of SAMADI produced
and reused locally.

Real adoption before any official launch — 70% return rate from satisfied users.

Our Business Model



SAMADI – Plant Growth Promoter

Target Customers: Farmers & Agr. Stores

Sales Channels: B2B and B2C

Price: \$5/L

Distribution: Distributor partnerships, Agr. stores



HADUM – Decentralized Biomass Collection Unit

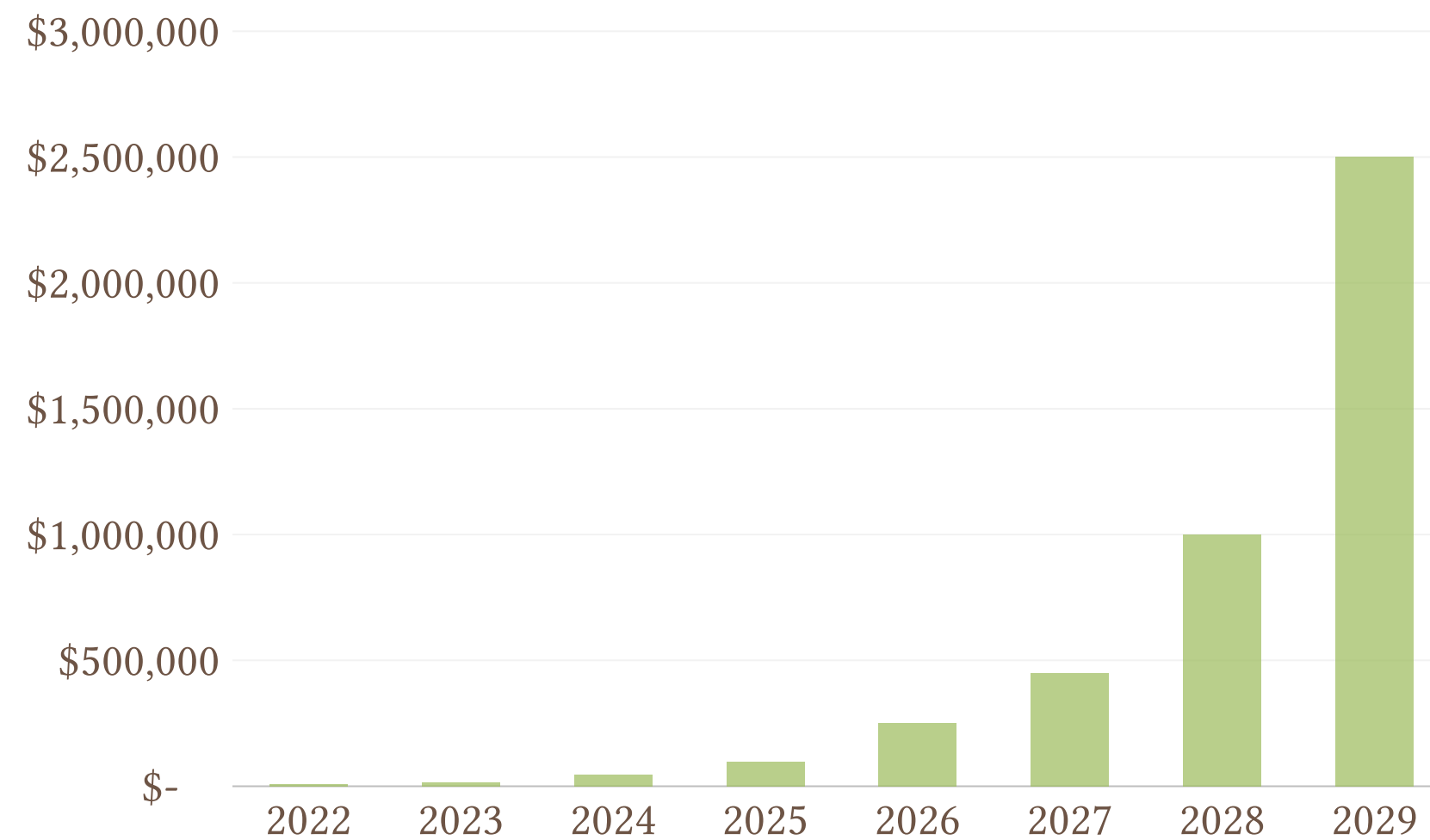
Target Customers: Municipalities, Waste Management Companies

Sales Channels: B2B

Price: \$500/Unit

Distribution: Institutional partnerships

Projected Revenue (2022–2029)



Early traction from pilots (2022–2025) with official product launch starting 2026.

45% Profit margin projected by 2027

145\$ Average farmer spend per season

70% Revenue from recurring customers

2.5M\$ Revenues reached in 2029

Our Ecosystem of Supporters



Programs & Accelerators

- Ma'an Social Incubator
- Rank 1 at Watermedyin Program.
- Cluster4green
- Rank 2 Boost Program
- Clean energy program



Media Coverage

Media presence (Dubai Tv, Reuters, Hadah, Alarabi, LBC, BBC, and other visual and audio-visual agencies.



Field Collaborations

- 10+ Agricultures Companies
- 15+ Agriculture Stores
- 10+ Collaborations « NGOs »
- 10+ Municipalities
- 5+ Schools



Public Recognition

- Shark Tank UAE
- COP28
- Expo28
- TWE Book.
- University Students Articles.



The Hands Growing Our Impact



Hanan Ismail
General Manager



Zeinab Ismail
Operations Manager



Ahmad Issa
Business Development



Zainab Massri
MarCom Manager.



Mohanad Alalloul
R&D & Quality Control



Hosne Ismail
Production Manager



Ghadir Ismail
Community Resource Coordinator



Katrine Ismail
Customer Service

Together, our team combines field expertise, technical know-how, and a deep commitment to sustainability, agriculture, and community-driven change.

Rooted in Results, Grown Through Impact



2000+ farmers

**Sustainable farming
awareness raised**



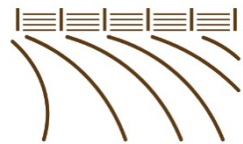
3,000+ dunams

**Enriched using
SAMADI**



500k+ Liters

**Water saved
through
improved practices**



12 000+ tons

**Healthy food
produced and
delivered**



12 000+ beneficiary

**Trained in biomass
sorting and circular
practices**



5000+ m³

Methane captured

**Be part of an innovative, sustainable future
for agriculture.**



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MILESTONES ACHIEVED AND GOALS



2022



- Concept & MVP development
- Field testing with 2 farmers

2023



- Factory launched
- Installed 32 HADUM units
- Field test with 80 farmers

2024



- Expanded to 200 HADUM units
- Finalized SAMADI product
- Reached 600 farmers

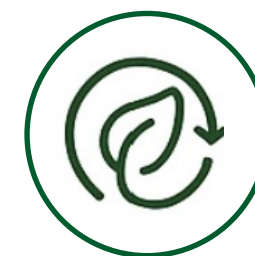
2025



- Soft launch of SAMADI in Lebanon
- Reached 1200 farmers
- Installed 364 HADUM units



In 2026, we aim to reach 2,000+ farmers and expand across Lebanon.



By 2027, our goal is to serve 3,000+ farmers and triple our impact.

Operational sustainability



- ✓ Economical Refill Model
- ✓ Zero-Waste Circularity
- ✓ Renewable Energy

From energy to packaging — our operations are built to last, and to care.



Why Hadum Outperforms Other Waste Solutions



	Control Carbon Emission	Generate Passive Income	Produce Agriculture Product	Lower Disposal Fee	Benefit from all Biomass	30-Days Production	Improved Sanitation	Control Methane Gas	Small Space Required
Aerobic Technology									
Anaerobic Technology									
Rearing Insect									
GARBALISER (Hadum)									

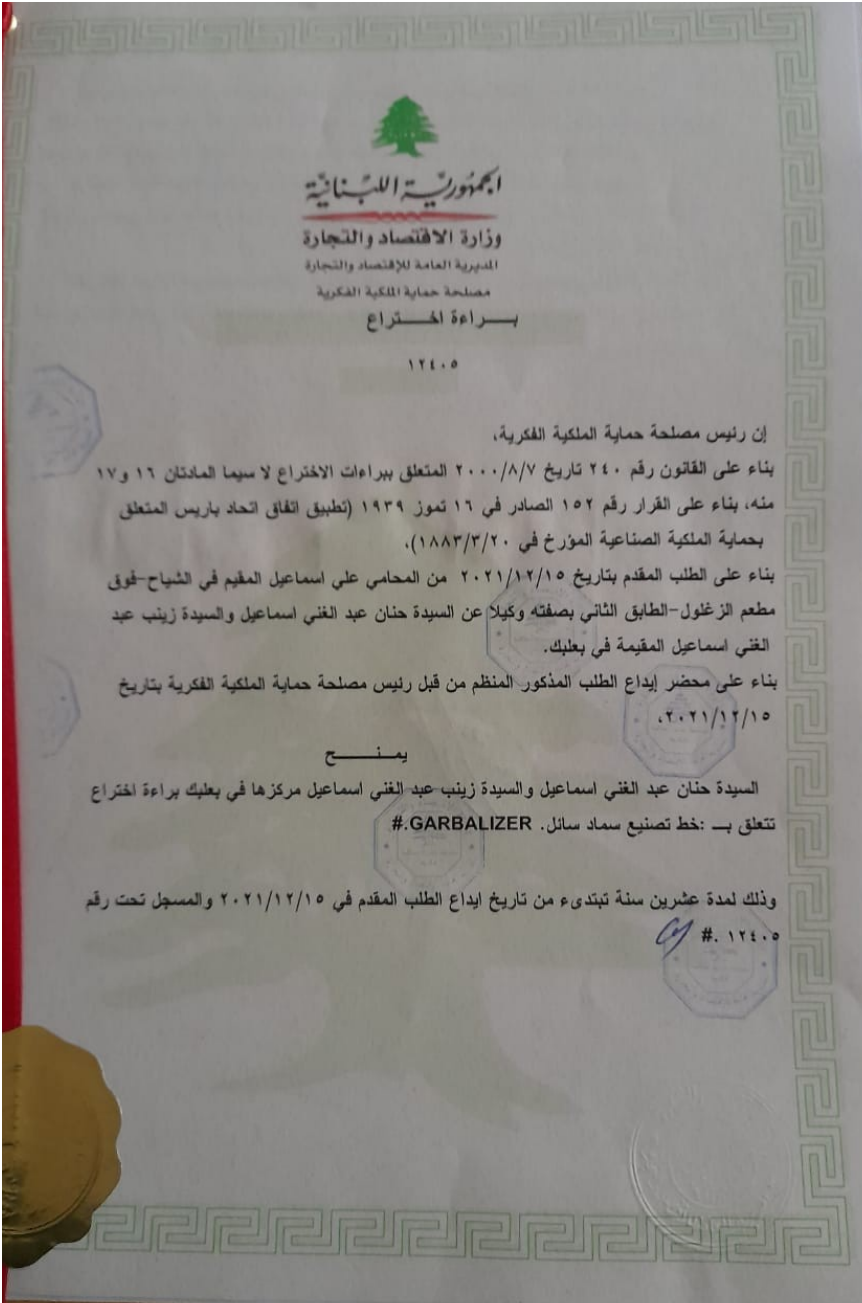
Only HADUM offers a clean, income-generating, space-efficient, and climate-smart solution — all in one decentralized system.

Investment Rationale: Key Reasons to Back Garbaliser



- ✓ **Growing Market:** Increasing demand for sustainable agri-waste solutions in MENA
- ✓ **Innovative Tech:** Proprietary, efficient bio-composting system (SAMADI & HADUM)
- ✓ **Diverse & Skilled Team:** Engineers, agriculturists, business developers
- ✓ **Strong Financial Projection:** 45% profit margin by 2027, 70% recurring revenue
- ✓ **Real Impact:** Serving 2,000+ farmers, reducing waste, improving soil health

Tested, Certified, and Protected



INDUSTRIAL RESEARCH INSTITUTE

Report

Site: 27/12/2021
Reference: 5221/1500/586009/2021

Name: MRS. ZAINAB ISMAIL BEIRUT - LEBANON

Received as: "Liquid fertilizer" (in a plastic bottle)
Reception voucher: 55112
Received on: 08/12/2021

Results

Testing duration: From 14/12/2021 to 27/12/2021 Unless otherwise specified, the sampling was done by the client.

CHEMICAL ANALYSIS*

IRI Code No:	Sample your reference:	Reference Method
301 - 1	Total phosphorus, as P ₂ O ₅	19.2 g/l Spectrophotometric
275 - 2	Total Nitrogen, as N	29.4 g/l Kjeldahl
299 - 2	pH at 25°C	5.2 pH-meter
260 - 2	Total solids	11.0 g/l IT-me/CHI/06
026 - 1	Ash content	45.5 % IT-me/CHI/08
-	Organic matter	54.5 % By calculation
411 - 1	Potassium, as K	1.9 g/l IT-me/CHI/03
411 - 2	Chromium, as Cr	Not detected** AAS-furnace
411 - 2	Cadmium, as Cd	Not detected** AAS-furnace

* Results are reported on oven dry basis.
** Detection limit: 0.1 mg/kg.
"Results relate only to the sample tested".
CK/EM/ny

1/1

Professor Joseph MATTA
Applied Research & Testing
Acting Director

IRI

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ACERTA Middle East

Acerta Me - US Office
"When you want to be sure! "

CERTIFICATE

Awarded to
GARBALISER
Britel - taybeh - dorra al baydaa - Lebanon

In recognition of the Organization's Quality Management System which complies with:

ISO 9001 : 2015
EA Code: 12

For the scope of activities described below:
Production of natural fertilizers

Acerta ME US. Office

This certificate is issued by: Managing Director

THINKING GLOBALLY , ACTING LOCALLY

The validity of this certificate can be checked asking by phone or email to ACERTA, or visiting the section ISSUED CERTIFICATES on our website: www.acerta-me.com
Further clarifications regarding the scope of this certificate or the applicability of the management system requirements can be obtained by consulting directly ACERTA by phone or email.

GARBALISER Impact



- Reduce carbon footprints.
- Promote healthy crop production.
- Open the chance for students internships.
- Lower the cost of producing nutritious food.
- Increase income for farmers, and households
- Raise awareness among farmers, students and households.

8 SDGs

Hadum: A Sustainable Waste Management Solution



**An approved pilot system by the
UNHCR , OXFAM, Nabad and Save the children organizations for
treating organic waste in Syrian refugee camps in Beqaa -
Lebanon.**

SAMADI Demonstrated Effectiveness on

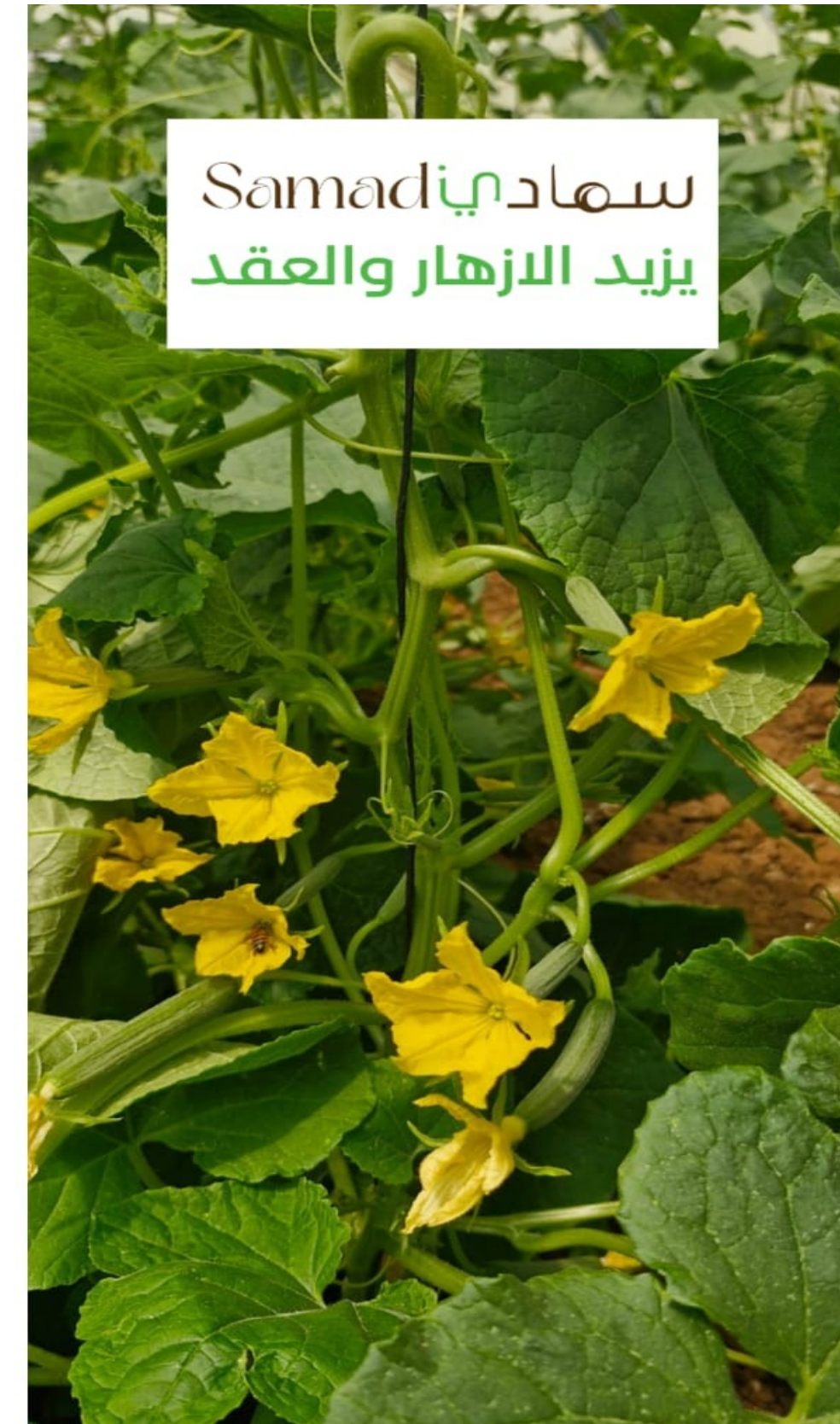


1. Provides plant immunity



2. Protects the plant from diseases

SAMADI nourishes and boosts growth.



SAMADI enhances productivity and quality.



Without



With



SAMADI Test Results: Insights from Biomass Company



SAMADI Results on aphids

Before



After

