



TAFTIRIUM

GROWING ECO MATERIALS

**Growing Sustainable Materials
That Benefit Humanity And The Planet**

The Team



Shahar Smuliansky

Co-founder, CEO
Sustainability Entrepreneur
Former Gaia-Eco Solutions
Co-Founder, 'GreenBiz' Alumni



Meir Langer

Co-founder, COO
Former 'Palziv' CEO
with +30 years experience in
the insulation materials industry



Achiya Livne, PhD

Materials Engineer, CTO
Specializes in production of
mycelium materials from
Agri-waste for insulation



**Misha Selinger
Bubnov**

Manufacturing Manger,
Mycologist

Key Partnerships



The Problem

Pollution from **non-biodegradable materials** harms ecosystems and contributes to climate change.

Agricultural waste is underutilized, often burned, releasing harmful emissions.

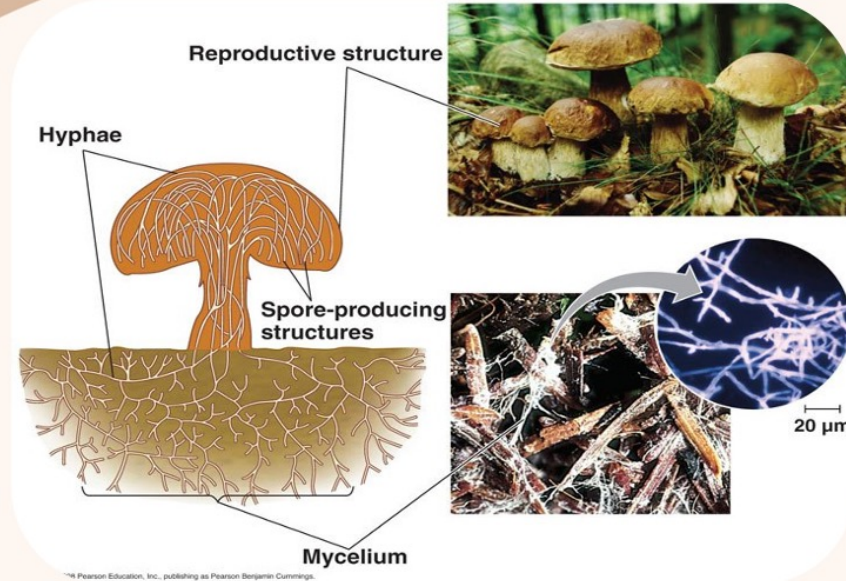
Industries lack scalable, sustainable alternatives to plastics, synthetic insulation, and other high-impact materials.

This creates an urgent need for eco-friendly solutions to reduce waste, emissions, and resource depletion.



The Solution

Mycelium-based Materials



- Mycelium are fungi's vegetative structures composed of white colored long threads.
- The role of Mycelium in nature is to regulate organic matter and turn residues into nutrients in a circular manner.
- Under suitable conditions, the Mycelium functions as a binding material and enables the growth of products for various industries.

The Growth Process



**Local Organic Waste Streams
such as: Date Palm Trees**



Mycelium Strain



Modular Growth



Manufacturing Technology

- **Circular Economy-** Agricultural Waste is Transformed Into Raw Material
- **Growth Duration** – 7 days
- **Low Energy Consumption-** Natural Process
- **Flexible Design-** Modular Growth
- **Carbon Capture-** Fixates Carbon from Agri-waste



**Agricultural
Waste**

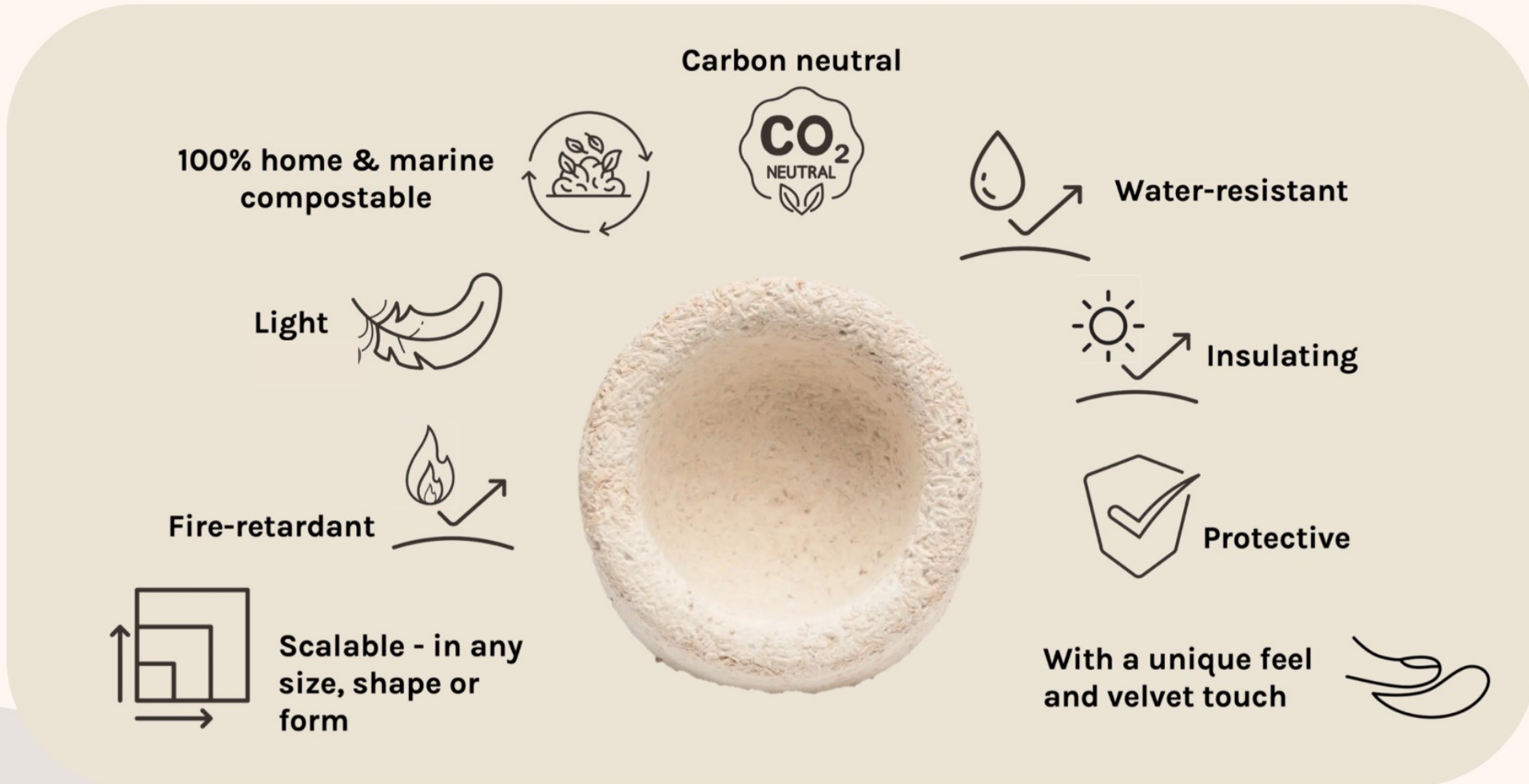


**Fungal
Mycelium**



**Mushroom®
Materials**

Product Properties



Material	Density [kg m ⁻³]	Thermal Conductivity [W m ⁻¹ K ⁻¹]	Sound Absorbance Coefficient <1500hz (5 cm) [%]	Fire Safety Level	Cost [NIS m ⁻³]	Compression strength [MPa]	Embodied Energy [MJ/ m ²]	Embodied Carbon [kg CO ₂ eq /m ²]
Myco-Panels (10 cm)	125-150	0.039-0.0426	0.3-0.6	A-B	600-900	0.06-0.1	73.7	-5.7
Ashbond (10 cm)	720	0.22-0.25		A1				
Yitong Insulating Board (10 cm)	450	0.066-0.074		A1	~900	0.8-1	468	38.5
EPS 30 (9 Cm)	30	0.032-0.04		E	500-600	0.1-0.2	314	16.2
Poly-Esh (5.72 cm)	120-200	0.0572		B		0.9	76	6?
Rockwool (10 cm)	80	0.033-0.036	0.5-0.9	A1	1450	-	400	26.4
Glass wool (10 cm)	24	0.033-0.039	0.4-0.85	A1	358	-	144	10.1
Cork (10 cm)	185	0.05		C	6620			

Applications – Packaging



Market Overview:

- Size: \$20 Billion in 2023 Globally
- CAGR: 3-5% by 2030

Trends and Opportunities:

- Sustainability growing need
- Environmental Regulations
- Customization and Premiumization
- E-Commerce and shipping growth

Mycelium-based Packaging can replace: Styrofoam, Foam, Wood, Cardboard, Paper, and various Plastic Packaging.

Applications – Insulation



Market Overview:

- Size: \$50 Billion in 2023 Globally
- CAGR: 5-6% by 2030
- IL Market- ₪900M direct (2% Market)
+ ₪800M Indirect

Trends and Opportunities:

- Energy efficiency regulations
- Search for Eco-friendly materials
- Insulation properties demand
- Raising Construction activity

Mycelium-based Insulation is a high-performance material, fire resistant, acoustic, temperature insulating. Can be combined with other materials as a modular unit.





We Contribute To

SUSTAINABLE DEVELOPMENT GOALS



Our Added Value

**Zero Waste
100%
Biodegradable**

**Competitive
Market Price
Low Production
Costs**

**CO₂ Reduction
1-1 Ton**

**Carbon
Capture Net
Zero Buildings**

**Insulating
Temperature,
Impact, Fire
Resistant**

**Local
Manufacturing
Circular
Economy**

**Energy Efficiency
Utilities
Reduction**

**ESG
Improvement
Marketing
& Branding**

Scaling Up



From a pilot facility to full production plant:

- Modular growth, to a space of 7,000m².
- Processing of 10,000 tons of agricultural waste annually
- Production of 75,000 cubic meters of products annually
- 20 production floor workers operating in 2 shifts a day
- Integration of automation processes and machinery

Average Selling Price	₹800 / m ³
Annual Revenue (Year 5)	₹55–60 Million
Payback Period	4 Years
10-Year IRR	27%
Gross Margin	30%
Operational Margin	20%

Company Timeline

2025

- PoC Development
- Tests & Standards
- IP Registration
- Raise Pre-seed Investment

2026

- Complete PoC
- Full-Scale Dev.
- Continue R&D
- Raise Seed Investment

2027-28

- Full-Scale Facility
- Insulation & Packaging
- Sales 75K m³ Annually
- R&D Innovation

BY 2034

- Israeli Facility X2
- Overseas Expansion
- Mycelium R&D Hub

Come Visit Us At Our Pilot Facility
[@Kfar Ruppin, Emek Hamaayanot](#)

Or Let's Set Up A Conversation

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