

The **whole** indoor farm, from one supplier.

Eight engineered system families that combine into any project — from a single microgreens room to a sovereign food-security farm.

01 Aeroponic systems

02 Microgreens & sprouts

03 Vertical farm modules

04 Climate & automation

05 LED grow lights

06 Nutrient & water

07 Off-grid & autonomous

08 Deep processing

01 · MIST

Aeroponic Systems

High-pressure misting racks that suspend roots in a nutrient fog — the highest-yield, lowest-water growing method. Engineered for continuous, robotic-harvest operation.

Frame · **anodized aluminium, 60×30**

Misting · **high-pressure, dual line**

Tiers · **4 × 6 running-metres, 60 cm pitch**

Lighting · **dimnable LED, 160 W/m²**

Harvest · **robotic cassette (15×15 cm)**

Crops · **greens, strawberry, saffron, roots**

02 · SEED

Microgreens & Sprouts

A retail-proven microgreens line: modular grow rooms, germination chambers and a library of recipes. The lowest-capital, fastest-payback way to enter — our recommended beachhead.

Germination · **PIR-panel chambers, 144×2 cassettes**

Recipes · **salad mixes + single-culture**

Output · **retail packs & wholesale kg**

Payback · **fastest of the range**

Automation · **seeding, wash, cut lines**

Crops · **broccoli, pak-choi, kale, radish, arugula...**

03 · STACK

Vertical Farm Modules

Automated, soilless modular farms for year-round production of greens, berries and medicinal plants — with a fraction of the staff a conventional operation needs.

Yield · **up to 60 kg/m² · month**

Medium · **soilless (aeroponic / hydroponic)**

Operation · **automated, minimal staff**

Format · **modular, scalable footprint**

Control · **integrated climate & software**

Crops · **greens, berries, medicinal plants**

04 · CTRL

Climate & Automation

The brain of the farm: PLC controllers, a full sensor network and farm-management software that keeps every crop identical, month after month — controlled from a touchscreen or a phone.

Control · **PLC, closed-loop**

Sensors · **temp / RH / CO₂ / substrate**

Access · **local touchscreen + remote/phone**

Dosing · **automatic nutrient modules**

Software · **farm-management, data logging**

Ownership · **no forced subscription**

05 · LIGHT

LED Grow Lights

Liquid-cooled horticultural fixtures with crop-tuned spectra and a decade-long service life — efficient, dimmable, and matched to each recipe.

Cooling · **liquid-cooled**

Service life · **10+ years**

Spectrum · **crop-tuned, dimmable**

Density · **from 160 W/m²**

Efficiency · **high $\mu\text{mol/J}$**

Options · **three-sided emission**

06 · WATER

Nutrient & Water

Automatic nutrient dosing and mixing, reverse-osmosis preparation and closed-loop recirculation — precise feed with roughly 95% less water than field farming.

Dosing · **automatic mix units**

Prep · **RO / water treatment**

Loop · **recirculating, low-waste**

Saving · **≈95% vs field**

Monitoring · **EC / pH controlled**

Scale · **small room → industrial**

07 • GRID

Off-grid & Autonomous

Growing that survives isolation: solar-powered irrigation, battery backup and fail-safe redundancy for mining camps, islands, off-grid residences and shelters — a segment no specialist yet serves.

Power • **solar + battery backup**

Valves • **autonomous irrigation**

Resilience • **fail-safe / redundant feed**

Use • **remote camps, islands, shelters**

Water • **minimal, recirculating**

Status • **open niche**

08 • VALUE

Deep Processing

Beyond fresh produce: convert biomass into functional green powders and extract bioactive compounds for pharma, food-additive and cosmetic buyers — the high-margin layer competitors don't offer.

Powders • **functional green powder**

Extraction • **bioactive compounds (BAS)**

Method • **supercritical CO₂ / lyophilised**

Markets • **pharma, nutraceutical, cosmetic**

Margin • **highest of the range**

R&D • **university-backed recipes**

SOLUTIONS BY CROP

We engineer the farm around the crop

01 Leafy greens

02 Microgreens

03 Herbs

04 Strawberries

05 Saffron

06 Berries

07 Medicinal plants

08 Tomatoes

From sovereign programs to a single remote camp

The same core technology, configured and hardened for very different buyers.

GOVERNMENT

Food Security & GCC Programs

Desert & import-substitution agriculture for national food-security strategies and public procurement.

COMMERCIAL

Farms & Investors

Bankable unit economics, ROI models and yield data — a farm you can finance and scale.

HOSPITALITY

Hotels & Restaurants

Hyper-local produce grown on-site for Gulf hotels, resorts and fine dining.

REMOTE SITES

Mining & Oil & Gas Camps

Fresh greens for crews far from supply chains — the technology, hardened for isolation.

AUTONOMY · OPEN NICHE

Off-grid & Shelters

Food modules for bunkers, islands and off-grid residences, with power redundancy and fail-safe growing.

KNOWLEDGE

Education & Research

Teaching farms and R&D units for schools, universities and institutes.

AEROPONICS .FARM

Next step Tell us the crop, climate and area → indicative configuration & price band within 24 h. aeroponics.farm · hello@aeroponics.farm