DEMETRA

by GRATIT

Growing everywhere.

Controlled-environment facilities for plant research, breeding and agricultural innovation.



PLANT SCIENCE · ENGINEERING · SCALE-UP

WHO WE ARE

The tailors of controlled agriculture.

GREATIT is an Italian company specialising in the design and development of advanced controlled-environment facilities for plant research, breeding and agricultural innovation. Powered by Gruppo MIS and SICOM S.p.A.

Plant physiology

We design every environment around how the plant responds.

Agronomy

Crop protocols, fertigation and growing know-how built in from day one.

Environmental engineering

Climate, light and air management sized for the experiment.

Automation

DEMETRAcontrol and an infrastructure ready to automate.

WHY CONTROLLED ENVIRONMENTS

Research that doesn’t wait for the season.

Year-round cultivation and experimental trials, independent of external climatic conditions, with reproducible conditions cycle after cycle.

THE DEMETRA PLATFORM

One platform, endless applications.

Modular

Starts from a configuration already tested with sector players.

Customisable

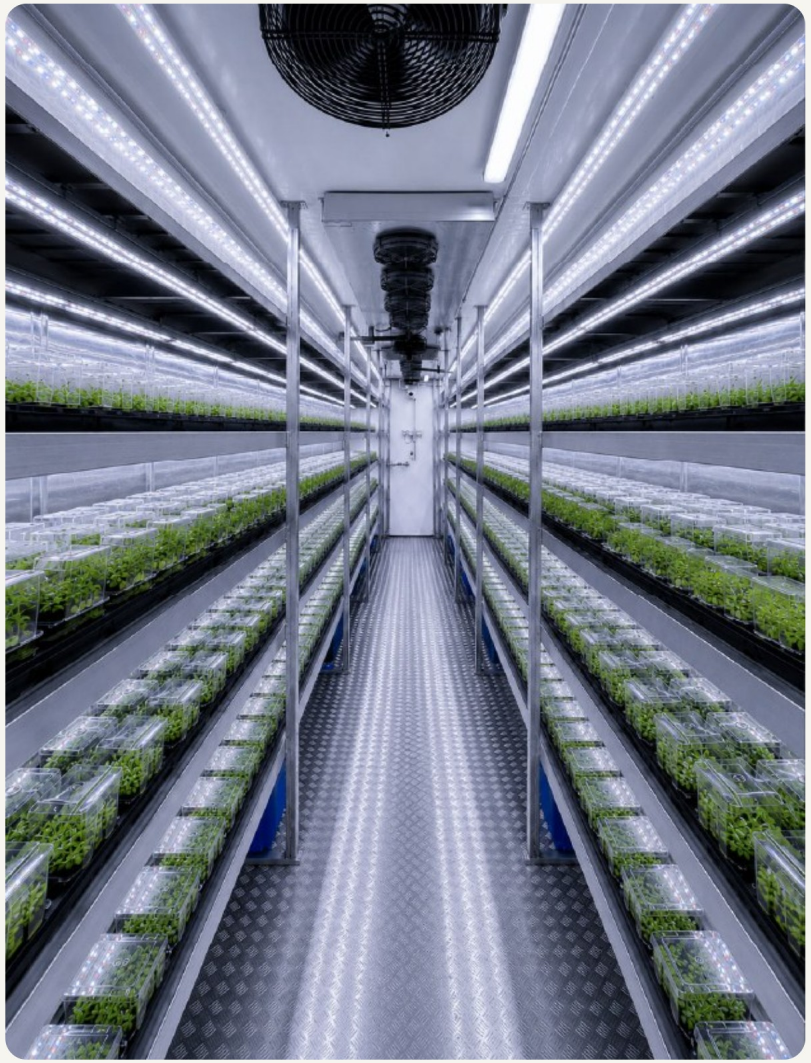
Integrated with agronomic, engineering and digital technologies.

Self-sufficient

A complete, transportable unit, ready to install where it is needed.

For research and production

From the first trial to a commercial growing operation.



APPLICATIONS

Eight sectors. One tailored platform.



Micropropagation



Grafting and acclimatisation



Germination



Multi-tier cultivation



Medicinal plants



Speed breeding



Research and special crops



Alternative proteins and insects

PRECISION CONTROL

Light, climate and nutrients, exactly as the trial needs.

Photoperiod
Programmable day length for every phase

Light spectrum
Programmable LED, tuned to the species

Temperature and humidity
Stable, repeatable climate

CO2 and air
Managed air exchange and enrichment

Fertigation
pH and EC under control

Data
Monitoring, data logging and alerts

DEMETRAcontrol, our cloud platform, lets teams monitor and adjust every parameter remotely: reproducible conditions, less water and fewer pesticides.



PLANT BREEDING

Speed breeding, built around your programme.

Phytotrons that accelerate generation advancement, support the plants used for crossing and follow protocols tailored to each species and research objective.

Cereals · strawberries · berries · vegetables · other crops

DEDICATED ENVIRONMENTS

Every growth stage gets its own environment.

01

Propagation

Rooting, germination and young-plant establishment under gentle, stable conditions.

02

Vegetative growth

Light intensity, photoperiod and fertigation tuned to build vigorous plants.

03

Reproductive development

Flowering and seed set triggered and timed for crossing and generation advancement.

Separate, independent chambers let different phases or trials run side by side.

FROM PILOT TO SCALE

Start from a defined solution. Grow into a complete infrastructure.

01

Experiment

Test crops and processes in a dedicated environment.

02

Validate

Measure protocols, yields, resource use and quality before investing.

03

Scale up

Grow into a full greenhouse or indoor facility, on infrastructure ready for automation.

Grow with GreatIT. The pilot is the decision-making vehicle: you scale on data, not assumptions.

WE GROW TOGETHER

We stay with you at every step.

1. **Co-design**
2. **Training**
3. **Delivery**
4. **Installation**
5. **Start-up**
6. **First harvest**

From the first conversation to the first harvest, agronomists, engineers and technology partners work with your team. DEMETRA is available to **buy or rent**.

CHOOSE YOUR DEMETRA

From modular units to integrated infrastructures.

Model	External size	Internal size	Typical use
DEMETRA 20	6 × 2.5 × 2.8 m	4.9 × 2.29 × 2.25 m	Trials, teaching, single-species research
DEMETRA 40	12.2 × 2.5 × 2.8 m	11 × 2.29 × 2.5 m	Multi-chamber research, pilot production
Integrated facility	Multiple units or a dedicated building	Breeding programmes, production at scale	

Every configuration is sized around the experimental programme.

WHY GREATIT

Five reasons to work with us.

01	**Plant science expertise**	We start from plant physiology, not from the hardware.
02	**Agronomy and engineering, together**	One team designs the crop protocol and the facility.
03	**From pilot to industrial scale**	A clear path from the first unit to full infrastructure.
04	**Modular, flexible CEA environments**	Configured, extended and reconfigured as needs change.
05	**Ready for automation**	Infrastructure built to integrate data and automation.

PROJECTS IN PRACTICE

Already working with leading Italian institutions.

PIACENZA

Università Cattolica del Sacro Cuore

Two containers with four independent chambers for agronomy, plant pathology and entomology.

PISA · AGRITECH

Scuola Superiore Sant'Anna

A tailored DEMETRA unit for studying how vegetable and ornamental species respond to growing conditions.

ORISTANO, SARDINIA

EAS Tibia

Indoor systems for saffron and hemp, from a single module to an eight-container facility.

Full case studies at **greatit.it/demetra**

OUR NETWORK

Industrial partners and scientific institutions.

COMPANIES

Gruppo MIS

MONTI&C

Magli Idroterm

INSTITUTIONS

Università Cattolica

Scuola Superiore Sant'Anna

Forschungs Land Bayern

Associazione Italia Eritrea

EAS Tibia

YOUR PROJECT STARTS NOW

Let’s design your next facility together.

We would be pleased to arrange a brief introductory meeting to explore how we can support your programme.

info@greatit.it · +39 324 903 4218

greatit.it/demetra

Via Papa Giovanni XXIII 85/A, Rezzato (BS), Italy

