# High-performance seedling production system **NAE Terrace**<sup>TM</sup>

# NAE Terrace<sup>™</sup> is famous for its high-quality seedlings and high productivity in the main bed!

NAE Terrace<sup>™</sup> is a seedling production system developed based on technology for closed vegetable production systems with artificial lighting.

Control of temperature, light, water management, and other factors is automatic, so anyone can easily produce healthy, uniform seedlings.



# High-quality seedlings ensure high productivity in the main bed!

NAE Terrace<sup>™</sup> raises healthy seedlings. The end-product seedlings are sturdy, with a stout hypocotyl, thick mesophyll, and dark leaf color.

Growth after planting is excellent, and the result is high productivity.





Tomato scion root seedlings, 72 cells, 19 days after seeding

#### 2 Cucumber graft, 17 days after seeding

# Seedling production not affected by climate or the seasons!

NAE Terrace<sup>™</sup> is a closed seedling production system. It employs seedling-raising technology developed at the Faculty of Horticulture, Chiba University. In this artificial environment surrounded by insulating walls that do not let light through, seedlings can be raised according to a scheduled plan, without being affected by the climate or seasons.

# Automation of temperature, light, and water management for easier work!

The concept of NAE Terrace<sup>TM</sup> is to enable growing by "anytime, anywhere, anyone." When cell trays with germinated seedlings are lined up on the seedling-raising shelves of NAE Terrace<sup>TM</sup>, the necessary temperature control, electric lighting, watering, and CO<sub>2</sub> gas supply are performed automatically, and seedlings suitable for planting or potting are finished in the specified number of days. Anyone—from those with little experience raising seedlings to veterans—can easily produce healthy seedlings.

# Y Modular units for shorter construction time

Construction time has been dramatically reduced by using a module-based construction method. Modules include the control panel, main unit, air-conditioner, and piping.

# Easy-to-understand display of operating status

A large, color operation panel can display graphs of air temperature, humidity, and  $\rm CO_2$  concentration.



# A mode can be customermized for each seedling cultivation application

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The system supports control settings with 1 day divided into 6-hour periods, and separate watering for each shelf.

# Our customers and their success stories

Berg Earth Co., Ltd.; No.1 supplier of seedlings in Japan Berg Earth's primary focus is rootstock and scion seedling raising, using NAE TerraceTM in 21 rooms. Four million uniform seedlings are shipped each year, one of the largest scale operations in Japan. Tomato graft seedlings are shipped as 100% pesticide-free cultivated seedlings.





# Michisaki Co., Ltd.

Cultivation of salad spinach

As a reconstruction project for the Great East Japan Earthquake, Michisaki has introduced hydroponic cultivation of salad spinach using a 5,775 m2 NapperlandTM facility. NAE TerraceTM has been introduced for raising the needed seedlings. Since the system was first adopted, Michisaki has produced superior seedlings on a par with those produced by veteran growers, and cultivation is going smoothly and trouble-free in the main beds.



(butterhead lettuce)



Inside of NAE Terrace

# **ZEN-NOH Tochigi Seed and Seedling Center**

This is the first example in Japan of full-scale adoption by the JA Group. By stably supplying high-quality seedlings, the center aims to achieve tomato sales of ¥10 billion

within Tochigi Prefecture.



Appearance of NAE Terrace<sup>™</sup>

# Plants Factory Inzai Co., Ltd.



Well-known grafted seedling production company As a group company of Jardin Co., Ltd., Plants Factory Inzai primarily sells tomato grafted seedlings to agricultural producers all over Japan. NAE TerraceTM enables precise setting

of the environment. and that's essential for producing high-quality seedlings.

Inside of NAF Terrace™

# Amela Club Inc.

No1 supplier of tomatoes with high sugar content Today, Amela tomatoes are recognized throughout Japan as a brand of tomatoes with high sugar content. Amela Club is stably producing healthy seedlings in 2.4 ha of main beds.

Seedling





### Inside of NAE Terrace™

## Academias

Since uniform seedlings can be produced pesticide-free, without being affected by the environment, these systems are at work in all sorts of research.



Appearance of NAE Terrace™ at Chiba University

Inside of NAE Terrace™ at Chiba University

# Growth comparison of raised seedlings between NAE Terrace<sup>™</sup> and a greenhouse

Red lettuce

With NAE Terrace<sup>™</sup>, red lettuces exhibit strong red pigment



Seedlings raised with NAE Terrace<sup>™</sup>, 288 cells Seedlings raised in a greenhouse 144 cells





NAE Terrace<sup>™</sup> 288-cell seedlings

Greenhouse 144-cell seedlings

Cabbage

Comparison of cabbage seedling quality between seedlings raised in NAE Terrace™ and seedlings raised in a greenhouse



Seedlings raised in NAE Terrace<sup>™</sup>, 14-day seedlings



Seedlings raised in a greenhouse, 14-day seedlings



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Examples of seedlings raised at high density (lettuce) From left 200-cell seedling raised in NAE Terrace™ 200-cell seedling raised in a greenhouse 288-cell seedling raised in NAE Terrace™ 288-cell seedling raised in a greenhouse Variety: "Smiley"