



## Spread's Large-Scale Vertical Farming Partnership with ENEOS Group's J Leaf Starts Operations near Tokyo

July 14, 2021

Spread Co., Ltd. (HQ: Kyoto, Japan; CEO: Shinji Inada, hereinafter "Spread")'s partner, and a member of ENEOS Group, J Leaf Corporation (HQ: Chiba, Japan; President: Jun Uehara, hereinafter "J Leaf") started operating the automated vertical farm "Techno Farm Narita" (Chiba, Japan) on 30<sup>th</sup> of June.

Spread owns and operates two vertical farms in Western Japan (Kyoto), the Kameoka Plant and Techno Farm Keihanna. Techno Farm Narita is Spread's first partnership project, and the first to be located in Eastern Japan. The most significant feature of Techno Farm Narita is the increased efficiency in the use of land. This has been achieved by increasing the number of cultivation racks levels to 28, double that of Techno Farm Keihanna.

Techno Farm Narita will produce 30,000 heads of lettuce daily, building on the know-how accumulated through the operation of Techno Farm Keihanna to deliver increasingly sustainable food production.

### Unique Features of Techno Farm Narita

- Even more efficient land saving through 28-level cultivation rack system (roughly 2 times more efficient than Techno Farm Keihanna)
- Located in the Greater Tokyo Area, allowing for local production and consumption
- Transforming idle land to efficient and sustainable agriculture
- The utilization of renewable energy generated from solar panels

Techno Farm Narita also retains other features of Spread's next generation food production system, *Techno Farm™*, including pesticide-free, stable cultivation, integrated automation, specialized LED lighting, and Spread's proprietary IoT-based cultivation management system, Techno Farm Cloud.

### About the Partners

ENEOS Group is one of Japan's leading corporate groups, with revenue in excess of 10 trillion yen.\*1

The Group has the largest market share in oil refinery and petrochemicals distribution in Japan, and is centered around ENEOS Holdings.

Spread's vision is to create a sustainable society where future generations can live with peace of mind. On the way to this objective, Spread plans to reach total production capacity of 100 tons per day domestically by 2030, through the expansion of its *Techno Farm*™. With the collaboration at Techno Farm Narita as a foundation, both parties are considering further partnership projects. The green business market is expected to continue growing, and Spread strives to become a leading vertical farming company globally.

Spread will continue to pursue further business opportunities through technological innovation both in Japan and overseas. Spread aims to provide solutions for the global problems of climate change and food security, and the delivery of a truly sustainable society.



Techno Farm Narita's Cultivation Room



Opening Ceremony

**Overview of Techno Farm Narita**

Location	2700-72, Koike, Shibayama-machi, Sanbu-gun, Chiba, Japan
Farm type	Indoor Vertical Farm using Artificial Lighting
Site area	Approx. 8,000 m <sup>2</sup>
Product	Leafy greens (Lettuce)
Production capability	30,000 heads of lettuce per day / Approx. 11 million heads of lettuce per year
Start of operations	June 30, 2021

**Overview of J Leaf Corporation**

President	: Jun Uehara
Established	: July, 2018
Capital	: 80 million yen
Location	: 2700-72, Koike, Shibayama-machi, Sanbu-gun, Chiba, Japan
Investment	: ENEOS Techno Materials Corporation 68% *2 Nissin Shoji Co., Ltd. 32%
Business	: Production and sale of indoor vertically farmed products

**Overview of Spread Co., Ltd.**

Chief Executive Officer	: Shinji Inada
Established	: January, 2006
Capital	: 87.4 million yen
Location	: Kyoto Research Park #8, 90 Chudojiawata-cho, Shimogyo-ku, Kyoto, Japan
Business	: Vertical farming operation, management and sales of the products

\*1 FY2019 results (announced on May 20, 2020)

\*2 ENEOS Techno Materials Corporation is a member of ENEOS Group

## ABOUT SPREAD

### ◆ Kameoka Plant, the Profitability Pioneer of Vertical Farming

**Capacity : 21,000 heads/2.1t/day**

Spread's Kameoka Plant cracked one of the toughest challenges in commercial vertical farming. Since starting operations in 2007, Spread has developed sophisticated environmental control technologies, and significantly improved the overall operational efficiency at the Kameoka Plant.

Together this has brought the operating rate to 97% and enabled Kameoka Plant become profitable for the first time in 2013.



### ◆ Techno Farm Keihanna. Stable Production via Innovative Technologies

**Capacity : 30,000heads/3t/day**

Started operations in 2018. The first vertical farm to utilize next generation food production system *Techno Farm*<sup>TM</sup>. At the R&D facility attached to the farm, development of the new cultivation techniques, as well as IoT and AI systems is underway. As the mother plant of *Techno Farm*<sup>TM</sup>,

Techno Farm Keihanna will serve as the foundation for the never-ending evolution of new technologies.

Innovative technologies, allowing for simultaneous increase in productivity and environmental sustainability:

- Automated cultivation
- Saving over 16,000 liters of water per day via water recycling
- Advanced environmental control
- Energy saving due to LED lighting, tailored for vertical farming usage
- Upgrade in operational efficiency due to IoT-based management system



### ◆ Next Generation Food Production System *Techno Farm*<sup>TM</sup>

Developed by Spread with the help of partner companies,

*Techno Farm*<sup>TM</sup> builds on the know-how developed at the Kameoka Plant in more than 10 years of its operation.

Automated cultivation, water recycling and environmental control technologies, specialized LED lighting as well as IoT and AI make for simultaneous increase in productivity and environmental sustainability.

Spread will continue to promote this technology as an essential part of sustainable agriculture.

URL : [www.technofarm.com/en](http://www.technofarm.com/en)



## ◆ Over 70 Million Packs Sold in Total <sup>\*1</sup>.

### Vertically Farmed Vegetables Brand *Vegetus*

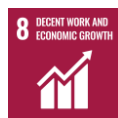
Under the concept of “Sustainable Vegetable”, *Vegetus* strives to be healthy for both Earth and people. Spread’s current lineup includes 3 unique varieties: crunchy Frilly Lettuce, smooth and sweet Pleated Lettuce, soft yet crispy Fringe Lettuce. Each of these delivers a clean and fresh taste and is rich in beta-carotene. <sup>\*2</sup> *Vegetus* is a favorite of children, easy to prepare and fits into any meal, not only salads or sandwiches.

URL : [www.vege-tus.com](http://www.vege-tus.com) (Japanese only)

 ベジタス



## ◆ Contribution to the United Nations’ Sustainable Development Goals



Examples of Spread’s contribution

- Goal 2: Promotion of sustainable food production
- Goal 3: Preventing food poisoning risk via hygiene and cultivation management practices
- Goal 8: Labor saving through automation and digital transformation
- Goal 9: IoT-based management system for efficient cultivation
- Goal 12: Helping to reduce food loss due to most part of lettuce being edible
- Goal 13: Promoting resilient agriculture
- Goal 15: Efficient usage of land resources and pesticide-free cultivation
- Goal 17: *Techno Farm*<sup>TM</sup> partnership business

<sup>\*1</sup> Actual numbers of lettuce, produced and sold by Spread

<sup>\*2</sup> Vegetus clears Japanese Ministry of Health, Labor and Welfare standards for the “beta-carotene rich” vegetables (equal or more than 600μg/100g)

[Contact information]

Spread Co., Ltd. Corporate Communication Department

E-mail : [info@spread.co.jp](mailto:info@spread.co.jp)

URL : [www.spread.co.jp/en](http://www.spread.co.jp/en)