Press Release

News Release
Business Development of the “Vegetable Factory™” Vol.2

August 3rd, 2015
SPREAD Co., LTD

SPREAD will construct the world’s first fully automated, large-scale Vegetable Factory

SPREAD Co., LTD. (Head Office: Shimogyo Ward, Kyoto City. President & CEO: Shinji Inada) has begun construction of the world’s first large-scale Vegetable Factory that is fully automated from seeding to harvest and capable of producing 30,000 heads of lettuce per day as the second phase for the business development of SPREAD’s vertical farm using artificial lighting called a Vegetable Factory.

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1. SPREAD’s History

SPREAD Co., LTD. was founded in 2006 and operates the world’s largest Vegetable Factory using artificial lighting in Kameoka in Kyoto Prefecture. Currently four types of lettuce are produced totaling 21,000 heads per day that are shipped in a stable manner to approximately 2,000 stores throughout the year in the Tokyo metropolitan area and the Kansai region as the brand “Vege-tus”. SPREAD’s strength is that it has the technical capabilities to maintain a high standard with production yield at “97%” and has achieved profitability in the Vegetable Factory business, which has been said to be difficult.

In addition, we have taken advantage of the accumulated know-how and have been considering the construction of a new factory in an effort to further create high quality products that can provide a peace of mind in a stable manner.

“Vege-tus” Brand

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2. The Concept and Needs of the New Factory Construction

【Concept】

There are water and food shortages due to extreme weather events accompanied by the increasing global population. Amid these problems, SPREAD has effectively managed energy through the Vegetable Factory business and has been working to lay the foundation for a more secure and sustainable society.

This time, SPREAD has specific environmentally friendly measures focused on global expansion and embarked on the construction of a next-generation Vegetable Factory.

【Needs Required for the Next-generation Factory 】

SPREAD believes that the following needs are required for the next-generation Vegetable Factory:

1. Environmental Friendliness
2. Low Cost

For environmental friendliness, an expandable cultivation environment control technology was developed that can recycle water resources and be used anywhere in the world. Low cost was achieved by the full automation from seeding to harvest and the optimization of the energy used for the lighting and air conditioning. Low cost was achieved from the increasing efficient use of optimized energy for automation, lighting, and air conditioning from seeding to harvest.

3. Overview of SPREAD's New Factory

（1） Type of Vegetable Factory ・・・Vertical Farm completely using artificial lighting (featuring R&D and testing facilities)

（2） Planned Construction Location ・・・Kansai Science City, Kizugawa, Kyoto

（3） Building Dimensions・・・Approximately 4,800m^2

（4） Production Items/Scale ・・・30,000 heads of lettuce per day (10 million heads per year)

（5） Start of Construction ・・・Spring, 2016

（6） Start of Shipments ・・・Summer, 2017

（7） Total Investment・・・Approximately 1.6 to 2 billion yen (this estimated amount also includes R&D and testing facilities)

（8） Annual Sales・・・Approximately 1 billion yen (estimated amount)

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【Exterior of the New Factory】

4. Innovations Implemented in the New Factory

【Environmental Friendly】

- Recycling of Water ・・・recycling of 98% of the water used for cultivation in the factory has been made possible
- Cultivation Environment Control Technology ・・・a system capable of stable production that is possible in any environment around the world has been developed

【Low Cost】

- Complete Automation of the Cultivation Process ・・・labor cost has been reduced by 50% by fully automating the processes from seeding to harvest[1]
- Energy Efficiency・・・reduced the energy cost of lettuce per head with LED lights specifically created for SPREAD and the development of a unique air conditioning system[1]
- Initial Investment Cost・・・the initial investment cost per head of lettuce was reduced by 25%[2]

In addition, productivity per unit volume has been doubled in comparison with our factory in Kameoka as the result of our efforts to save space in the cultivation area.

[1]Compared to our factory in Kameoka

[2]The initial investment for the new factory per head of lettuce is 60,000yen while it was 80,000yen in the factory in Kameoka

5. Consortium for the Promotion of the Vegetable Factory™ Business

The new factory is being positioned as the mother factory playing the core role for SPREAD's franchise business. Also, a consortium with SPREAD consisting of companies with strengths in various fields has been established in order to promote technological development with the aim of global expansion.

Field	Consortium Member	Scope of Technological Cooperation
Construction, Engineering	OBAYASHI Corporation	General Construction Engineering and Environmental Control Technology
Automated Equipment	Tsubakimoto Chain Co.	Automated Equipment related to Cultivation
Water Treatment	Toray Industries	Recycling Treatment of Water related to Cultivation
ICT	WIT Corporation	Development of the Vegetable Factory total management system that implements the functions to forecast demand, sales, logistics, quality, and cultivation required for the Vegetable Factory business

6. Future Plans

SPREAD will start the sequential shipment of goods from 2017 with the construction of our new factory while working with OBAYASHI Corporation on the franchise business and plan to have a production system of 80,000 heads of lettuce per day. In addition, we will expand the scale of production to 500,000 heads of lettuce per day in five years and will continue to expand our Vegetable Factory business domestically and internationally.

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【Overview of Spread】

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【Inquiry】

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