

Public symposium

“Prospective of horticulture contributing to regional carbon neutrality: Promising collaborative development between the Netherlands and Japan”

Supported by

Agricultural Affairs Department of the Embassy of the Netherlands in Japan, Toyohashi City, Tokai Biocommunity, Japan Facilities Horticulture Association, Ehime Prefecture Agricultural DX Co-Creation Association, Science and Technology Exchange Foundation

Japan’s agriculture has been shrinking because of the aging of farmers and the lack of a young generation. Furthermore, in greenhouse horticulture, a strict goal has been set to eliminate the use of fossil fuels by 2050. To satisfy such a social demand, we need to discuss carbon neutrality (CN) throughout the region, but at the same time, there is also a need for technological innovation to realize greenhouse horticulture and smart greenhouses that contribute to CN. In this symposium, we will share the current situation in the Netherlands, where they are also facing similar social requirements on CN. Furthermore, some promising innovations in regional CN through electrification, higher CO₂ utilization, and energy efficiency, which are conducted by collaborative R&Ds with industry, government, and academia in Japan would be introduced.

Moderator: Dr. Naomichi Tonai (Assistant Professor, Graduate School of Agriculture, Ehime University)

14:00 Opening remarks

Prof. Kazuhiko Terashima (President, Toyohashi University of Technology)

14:05 Purpose of the symposium

Prof. Kotaro Takayama (Professor, Graduate School of Engineering, Toyohashi University of Technology / Professor, Graduate School of Agriculture, Ehime University)

Part 1 International Seminar: State-of-the-art Development Trends in the Netherlands and Japan for Carbon Neutrality and Automation

14:10 Greetings “Expectations for cooperation between Japan and the Netherlands in greenhouse horticulture”

Denise Lutz (Agricultural Counsellor, Embassy of the Netherlands in Japan)

14:20 “Trends in technological development towards automation and intelligence in the Netherlands”

Prof. dr. Eldart van Henten (Professor, Farm Technology Group, Wageningen University),

Dr. Sun Congcong (Assistant Professor, Farm Technology Group, Wageningen University) [Online from the Netherlands]

14:45 “Development and prospects of rural energy management systems (VEMS) and zero energy greenhouses (ZEG) towards a decarbonized society”

Masahisa Ishii (Head of Regional Resource Utilization and Management Group, Resource Utilization Research Area, Rural Engineering Research Division, NARO), Eiji Goto (Professor, Graduate School of Horticulture, Chiba University)

15:10 “Development trends of all-electric pipe houses with SPA (Speaking Plant Approach) implementation”

Prof. Kotaro Takayama (mentioned above), Dr. Naomichi Fujiuchi (mentioned above)

Part 2 Industry-Academia Collaboration Seminar: Industry Strategies Driving Cutting-Edge Greenhouse Horticulture in Japan

15:50 “Inochio’s state-of-the-art greenhouse horticulture”

Mr. Nobuo Ishiguro (Representative Director of Inochio Agri Co., Ltd.)

16:05 “Measurement and control challenged by Sinfonia Technology”

Mr. Mitsuo Tsume (Sinfonia Technology Co., Ltd. Controller Development Sales Office Manager)

16:20 “New development of pipe house proposed by Watapai”

Mr. Masayoshi Taguchi (Watanabe Pipe Co., Ltd. Green Division Product Development Manager)