Department of Agrobiological Resources Laboratory of Horticultural Science

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TEACHING	Pomology Postharvest Biology and Technology Plant Physiology Advanced Horticultural Physiology(MC)

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Vegetable Crop Science Protected Horticulture Advanced Horticultural Production Science (MC)







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Research

The Science of Horticultural Plants

Horticultural plants such as fruits, vegetables, and flowers are important plants that enrich our lives. We research them from production to storage in order to provide consumers with better horticultural plants.

To Grow Better Plants



To Breed Better Plants

To establish environmentally friendly cultivation methods for plant factories.



To create new plants with biotechnologies, such as genetic modification.



To develop energy-saving and cost-effective storage technology as an alternative to refrigeration storage.

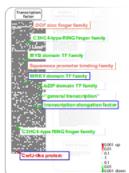
To Understand Plant Mechanisms



Analysis of emitting aroma components of plants with gas chromatography.



Analysis of inorganic components absorbed by plants with atomic absorption spectrophotometer.



Gene expression analysis with microarray.

Recent Publications

- Y. Suzuki and Y. Nagata (2019) Postharvest ethanol vapor treatment of tomato fruit stimulates gene expression of ethylene biosynthetic enzymes and ripening related transcription factors, although it suppresses ripening. Postharvest Biol. Technol. 152;118-126.
 Y.Suzuki, E.Yamada, K.Ishihara, M.Kajita, S.Fujishiro, A.Okada, Y.Hobo, R.Katayama and A.Kitamura (2020) Effects of postharvest ethanol treatment on the gene expression of ethylene biosynthetic enzymes and ripening
- *K.Koembuoy, S.Hasegawa, S.Otagaki, H.Takahashi, S.Nagano, S.Isobe, K.Shiratake and S.Matsumoto (2020) RNA-seq analysis of meristem cellsidentifies the FaFT3 gene as a common floral inducer in Japanese
- cultivated strawberry. The Horticulture J. 89: 138-146.

 M.Tsuro, K.Tomomatsu, C.Inukai, S.Tsujii and S.Asada (2019) RNAi targeting the gene for 1,8-cineole synthase induces recomposition of leaf essential oil in lavandin (*Lavandula x intermedia* Emeric). In Vitro Cell. Develop. Biol. Plant 55: 165-171.