Kiyohide KOJIMA, Ph.D.

Professor

Program: Life and Food Sciences

Area: Agriculture and Bioresources

Lab. of Horticulture

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Research Fields of Interest

Pomology and vegetable in horticulture from molecular to physiological level

- Instrumental analysis of plant hormones using HPLC and LC-MS.

Fruit ripening of edible fruits: pear

- Non-destructive analysis of fruits of internal characteristic e.g. fruit firmness by vibration analysis

Education and Professional Career

1997- : Professor at Niigata University
1994-1997: Associate Professor of Fac. of Agriculture at Kyoto Prefectural University
1993-1994: Postdoctoral fellow at National Institute of Fruit Tree Science
1993: Ph.D., Graduate School of Biosphere Science, Hiroshima University, Japan
1990: M.S., Graduate School of Biosphere Science, Hiroshima University, Japan
1982: B.S., Faculty of Integrated Arts and Science, Hiroshima University, Japan

Professional Societies and Activities

1. Editor, Japanese Society for Horticultural Science (JSHS)
2. The Japanese Society for Chemical Regulation of Plants
3. Chair, Hokuriku Branch of JSHS

Awards

1. Young Investigator Award of the Japanese Society for Chemical Regulation of Plants

Major Publication

Papers

Plant hormones

[1] K. Kojima, S. Kuraishi, N. Sakurai, T. Itou, K. Tsurusaki (1993): Spatial distribution of abscisic acid and 2-trans-abscisic acid in spears, buds, rhizomes and roots of asparagus (Asparagus officinalis L.). Scientia Horticulturae, 54: 177-189.

[2] K. Kojima, S. Kuraishi, N. Sakurai, K.Fusao (1993): Distribution of abscisic acid in different parts of the reproductive organs of tomato. Scientia Horticulturae, 56: 23-30.

[3] K. Kojima and N. Sakurai (1994): IAA distribution in etiolated spears of asparagus. HortScience, 29: 822.

[4] K. Kojima, Y. Yamada, and M. Yamamoto (1994): Distribution of ABA and IAA within a developing Valencia orange fruit and its parts. J. Japan. Soc. Hort. Sci., 63: 335-339.

[5] K. Kojima, N. Sakurai and K. Tsurusaki (1994): IAA distribution within tomato flower and fruit. HortScience, 29: 1200.

[6] K. Kojima, Y. Yamada, and M. Yamamoto (1995): Effects of abscisic acid injection on sugar and organic acid contents of citrus fruit. J. Japan. Soc. Hort. Sci., 64: 17-21.

[7] K. Kojima. (1995): Simultaneous measurement of ABA, IAA and GAs in citrus - role of ABA in relation to sink ability. JARQ, 29: 179-185.

[8] K. Kojima, A. Goto, and S. Nakashima (1996): Effects of uniconazole-P on abscission and endogenous ABA, IAA and GA-like substances levels of satsuma mandarin fruitlet. Biosci. Biotech. Biochem., 60: 901-902.

[9] K. Kojima (1996): Changes of abscisic acid, indole-3-acetic acid and gibberellin-like substances in the flowers and developing fruitlets of citrus cultivar Hyuganatsu. Scientia Horticulturae, 65: 901-902.

[10] K. Kojima, M. Yamamoto, A. Goto and R. Matsumoto (1996): Changes of ABA, IAA and GAs contents in reproductive organs of Satsuma mandarin. J. Japan. Soc. Hort. Sci., 65: 237-243.

[11] K. Kojima, K. Shiozaki, Y. Koshita and M. Ishida (1999): Changes of endogenous levels of ABA, IAA and GA-like substances in fruitlets of parthenocarpic persimmon. J. Japan. Soc. Hort. Sci., 68: 242-247.

[12] K. Kojima. (2001): Property of HPLC column and mass spectrum of LC-MS for phytohormone analysis. JARQ, 35, 149-154

[13] K. Kojima, E Ohtake and Yu Z (2002): Distribution and transport of IAA in tomato plants. Plant Growth Regul. 37(3)：249-254.

[14] K. Kojima, Y. Tamura, M. Nakano, D. Han and Y. Niimi (2003): Distribution of indole-acetic acid, gibberellin and cytokinins in apoplast and symplast of parthenocarpic tomato fruits. Plant Growth Regul. 41(2)：99-104.

[15] K. Kojima, Y. Tamura, M. Nakano, D. Han and Y. Niimi (2003): Distribution of indole-acetic acid, gibberellin and cytokinins in apoplast and symplast of parthenocarpic tomato fruits. Plant Growth Regul. 41(2)：99-104.

[16] T. Oikawa, M. Koshioka, K. Kojima, othes 2 (2004) A role of OsGA20ox1, encoding an isoform of gibberellin 20-oxidase, for regulation of plant stature in rice. Plant Molecular Biology, 55: 687-700.

[17] K. Kojima. (2005): Phytohormones in shoots and fruits of tomato; apoplast solution and seedless fruit. JARQ, 39, 77-81

[18] Rong-Yan Xu · Yoshiji Niimi· Kiyohide Kojima（2007）Exogenous GA3 overcomes bud deterioration in tulip (Tulipa gesneriana L.) bulbs during dry storage by promoting endogenous IAA activity in the internodes, Plant Growth Regulation, 52

Fruit ripening

[1] K. Kojima, N. Sakurai, S. Kuraishi, R. Yamamoto, and D. J. Nevins (1991): Novel technique for measuring tissue firmness within tomato (Lycopersicon esculentum Mill.) fruit. Plant Physiology, 96: 545-550.

[2] K. Kojima, N. Sakurai, S. Kuraishi, R. Yamamoto and A. Inaba (1992): Physical measurement of firmness of banana fruit pulp: determination of optimum conditions for measurement. Postharvest Biology and Technology, 2: 41-49.

[3] K. Kojima, N. Sakurai and S. Kuraishi (1994): Fruit softening in banana: correlation among stress-relaxation parameters, cell wall components and starch during ripening. Physiologia Plantarum, 90: 772-778.

[4] K. Kojima, N. Sakurai S. Kuraishi and A. Kokubo (1994): Changes in firmness and chemical constituents of banana fruit during ripening. Japan. J. Trop. Agri., 38: 293-297.

[5] K. Kojima, N. Sakurai and S. Kuraishi (1994): Changes in firmness and chemical constituents of plantain fruit during ripening after ethylene treatment. Japan. J. Trop. Agri., 38: 323-327.

[6] N. Muramatsu, T. Takahara, K. Kojima and T. Ogata (1996): Relationship between texture and cell wall polysaccharides of fruit flesh in various species of citrus. HortScience, 31: 114-116.

[7] S. Chino, T, Matsumoto, K. Kojima（2007）: Effects of ethylene or low-temperature treatment on fruit characteristics of ‘Le Lectier’ pear during ripening. Horticural Research. 6（2）295-299.

[8] S. Chino, T. Matsumoto, K. Kojima (2009) Evaluation of fruit characteristics in ‘Le Lectier’ pears during ripening using a nondestructive method. Horticural Research. 8（1）109-114

[9] S. Chino, A. Futatsugi, Y, Saitou, S, Kurosaka, T, Matsumoto, K. Kojima (2010); Change in fruit characteristics during ripening and effect of film packaging on fruit ripening in ‘Koshisayaka’ pears. Horticural Research. 9（1）99-105.

[10] S. Chino, M. Tokuda, T, Ohishi, K, Koshikizawa, T, Matsumoto, K. Kojima (2010); Effect of low-temperature periods on fruit characteristics of ‘Le Lectier’ pears during ripening. Horticural Research. 9 (2): 235-241.

Books

K. Kojima, 2005, Hormones in Fruits; Ultra-micro World in Mystic Phytohormones. Niigata–Nippou-Jigyousya

Book Chapters

K. Kojima (2000): Role of PGRs in citruculture. In Plant Growth Regulators in Agriculture and Horticulture (ed) A. S. Basra, p.194-210, Food Product Press, NY.