

Science of Maturation of Fruit – After-ripening of Mango Fruit Grown in a Plastic Greenhouse –

a) Motoko Ueda

Faculty of Agriculture, Kinki University

3327-204, Nakamachi, Nara 630-8505, Japan

b) Toshio Mitsunaga

Professor Emeritus of Kinki University

101-3, Kashiwabe-cho, Shimogamo, Sakyo-ku, Kyoto 606-0815, Japan

Summary

After-ripening of 'Chiin Hwang No.1' fruit, a kind of mango, was investigated. Fruits were harvested at 13, 15, 17 weeks after full bloom, and change in properties relating to maturation were determined to choose the appropriate fruit stage for after-ripening. Clear changes in physical and chemical properties were not observed during the maturation, but the results suggested that fruit at 17 weeks after full bloom may be before the climacteric period. The respiratory rate of fruits taken at this stage increased remarkably during after-ripening at 25 °C, 58~84% RH for 12 days, after which period the fruits were fully ripened. Marked changes in physical and chemical properties were also observed.

These results suggested that 17 weeks after full bloom may be the optimum harvest stage for after-ripening of 'Chiin Hwang No.1' fruits, and that it may be possible to control the periods of storage and circulation of the fruits by adjustment of the after-ripening conditions.