



[Available Issues](#) | [Japanese](#)

Author: [ADVANCED](#) | Volume Page

Keyword:



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

Horticultural Research (Japan)

Vol. 9 (2010) , No. 2 209-213

Effects of Water Stress on Leaf Water Potential, Flower Carbohydrate Content and ABA Content in 'Meiwa'

[Takuo Ono](#)¹⁾, [Hiroyuki Hagiwara](#)¹⁾ and [Naoto Iwasaki](#)²⁾

1) Graduate School of Agriculture, Meiji University

2) School of Agriculture, Meiji University

(Received June 29, 2009)

(Accepted November 19, 2009)

'Meiwa' kumquat (*Fortunella crassifolia* Swingle) trees were subjected to water stress in order to increase first-flush flowers by withholding water until the soil moisture was about 30% and was maintained for 10 or 20 days. The water potential was measured only after 20 days of water stress. Twenty days of water stress increased leaf carbohydrate content compared with that in non-treated control trees. The ABA level increased in the roots subjected to 10 and 20 days of water stress. Total sugars were measured in trees undergoing 10 or 20 days of water stress, while those in the le

increase only after 20 days of water stress. However, starch content tended to decrease in water-stressed trees. These findings indicate that sugars in the root and a continuous high ABA level under water stress new shoot growth significantly increases the number of first-flush flowers.

Key Words: [first-flush flower](#), [starch](#), [total sugar](#)

[\[PDF \(411K\)\]](#) [\[References\]](#)

Download

To cite this article:

Takuo Ono, Hiroyuki Hagiwara and Naoto Iwasaki. 2010. Effects of Water Potential, Flowering, Carbohydrate Content and ABA Content on Trees. Hort. Res. (Japan) 9: 209-213 .

doi:10.2503/hrj.9.209