

# Cultivar Differences in Vegetative Bud Break, Flowering Time, and New Root Growth Period Among Japanese Peach Cultivars<sup>®</sup>

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## INTRODUCTION

Japanese peaches, *Prunus persica* (syn. *Amygdalus persica*) cultivars, which were introduced from China about 2000 years ago are distributed in Japan from Aomori to Okinawa prefectures. We investigated vegetative bud break, flowering, and new root growth periods of these Japanese peaches for rootstock breeding.

## MATERIALS AND METHODS

In 2003, eight peach and related species were used in the investigation. Six to seven plants from each taxon, obtained by rooting softwood cutting, were planted in small plastic pots and moved to 25 °C condition on 12 Dec. and 13 Jan. and kept in a non-heated greenhouse for control. Vegetative bud break and new root growth were observed and recorded from December to April. In 2005, 25 Japanese peach cultivars, 17 ornamental types, 5 rootstocks, 11 introduced peaches, and 2 related species and 8 cultivars of related species were used for the investigation.

## RESULTS AND DISCUSSIONS

Two Japanese peach cultivars ('Okinawa' and 'Coral') and *P. japonica* Thunb. ex Murr., that were moved to 25 °C at 12 Dec. 2003, started vegetative bud break at the beginning of Jan. 2004 and many roots elongated at the beginning of February. The other five taxa did not exhibit vegetative bud break and their root growth was very poor. In the group heated from 13 Jan. 2004, all cultivars achieved bud break, but the period differed by cultivars. The root growth was delayed but occurred. In nonheated group, all cultivars showed ordinary bud break and root growth, however the period differed among the cultivars.

In the results in 2005, there were large differences in bud break, flowering time, and root growth among Japanese peach cultivars. The peaches from subtropical areas — Okinawa, Amami, Thailand, and Taiwan — showed the earliest bud break, flowering, and root growth. However, peaches from Canada, some Japanese cultivars, and some ornamental taxa showed late bud break and root growth.