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'Mihong', An Early Maturing White Peach

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Even though the total planted area of peach and nectarine trees in South Korea has increased since the early 1990s, that of early maturing cultivars has decreased (3,4). In general, most early maturing cultivars that ripen during the rainy season have small fruit size and low sugar content compared to mid or late maturing cultivars. Since 'Yumyeong' was bred in 1977 (2) by the National Horticultural Research Institute (NHRI), an affiliated institution of the Rural Development Administration (RDA) in Korea, the cultivar has been used as a parent for the development of new early maturing cultivars with improved fruit size and firmness.

'Mihong' originated from a cross between 'Yumyeong' (late maturing white-fleshed cultivar) and 'Chiyomaru' (early maturing yellow-fleshed cultivar) at NHRI, RDA Korea in 1995. It was selected in 2000, tested at seven sites from 2001-2005 as 'Wonkyo Da-18' and named in 2005. Trees of 'Mihong' produce an early-maturing, attractive and white melting flesh fruit for the fresh market (Figure 1).

Trees are moderately vigorous and productive. Growing habit of the trees is spreading and main fruit production is on medium size branches and spurs. Leaves have reniform glands. Flowers are large, showy and pink. Anthers are purple and pollen is bright yellow and abundant (Table 1). The full bloom date is mid-April at Suwon, its breeding site, and is similar to that of 'Baekmijosang', also bred by NHRI (1). Fruits ripen 77 days after full bloom, typically in early July at Suwon, and 10 days after 'Baekmijosang' which is the earliest maturing peach cultivar in Korea. Fruit

Figure 1. Fruit of peach cultivar 'Mihong'.

shape is oblate. Fruit skin is light red and flesh color is cream white. Fruit size is small with an average fruit weight of 177 g. In order to improve fruit size and prevent limb breakage, flower and fruit thinning are required. Juice soluble solids and titratable acidity are similar to 'Baekmijosang'. Unlike 'Baekmijosang', an astringent taste does not develop under drought conditions during the preharvest period. Quality is better than 'Baekmijosang'. Flesh is soft and clings to the pit. Red pigmentation is absent in both the outer flesh and near the pit. Pits are medium size and have a weak tendency to split. Preharvest drop rarely occurs. Removal of paper bags 3 to 4 days before harvest increases fruit coloring. 'Mihong' is superior in attractiveness and quality to 'Baekmijosang'.

Literature Cited

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Table 1. Tree performance and fruit characteristics of 'Mihong' and 'Baekmijoseang' peaches (Suwon, Korea, 2003-2005).

Cultivar	Bloom date (Julian day)	Harvest date (Julian day)	Stone Splits (%)	Fruit weight (g)	Soluble solids (°Brix)	Titratable acidity (%)	Quality[z]
Mihong	108	185	13	177	10.6	0.28	4.3
Baekmijosang	107	174	70	171	10.3	0.27	3.3

[z]Subjective quality rating: 1 = least desirable, 3 = commercially acceptable, 5 = most desirable

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Gibberellic Acid May Reduce Manual Thinning Costs in Plum

The application of gibberellic acid during flower bud induction significantly reduced flowering of 'Black Diamond' and 'Black Gold' Japanese plums. The response depended on the concentration applied and on the type of shoot. Mixed shoots had a similar response in both varieties, flowering being reduced by 40% or more, depending on the concentration of GA_3 applied. On spurs, GA_3 at 50 mg l(-1) reduced flowering intensity by 40% and 25% in 'Black Gold' and 'Black Diamond', respectively, and GA_3 at 75 mg l(-1) or higher concentrations reduced flowering by 70% and 50%, respectively. The partial inhibition of flowering significantly reduced the cost of manual thinning. The best GA3 concentration was found to be 50 mg l(-1), because it reduced the cost of thinning by 45-47% and increased final fruit weight by 7-33% for 'Black Diamond' and 'Black Gold', respectively. No significant differences in yield or fruit characteristics of treated trees were found compared to untreated trees. From: D. Gonzalez-Rossia et al. 2006. Scientia Hort. 110(4):319-323.