

'Jinmi', a High-sugar, Mid- to Late-maturing, White-fleshed Peach

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ABSTRACT 'Jinmi' was released by National Horticultural Research Institute in 1998 as a white-fleshed, mid- to late-maturing, and clingstone peach variety, which originated from the crossing of 'Hakuho' and 'Nunomewase' in 1982. The selection was tested for regional adaptability as 'Wonkyo Da-09' at 5 areas for 4 years from 1995. Fruits mature 5 to 7 days before 'Yumyeong' and have high sugar content, above 13.0 °Bx.

Additional key words: clingstone, fruit breeding, new variety

Introduction

During the last few years, total planted area of peach and nectarine trees has considerably increased because of relatively high fruit price in fresh fruit market. Annual production of peaches and nectarines was 146,793 metric tons in 1997, and 81.5% of total production was occupied by peaches (Ministry of Agriculture and Forestry, 1997). Cultivation areas of four major varieties are 1,682 ha (15.7% of total peach and nectarine cultivation area) for 'Yumyeong', 1,456 ha (13.6%) for 'Kurakatawase', 934 ha (8.7%) for 'Okubo', and 859 ha (8.0%) for 'Hakuto'. However, fruit qualities of these varieties do not meet consumer's demand. 'Yumyeong' is crispy and too firm in fruit texture, 'Kurakatawase' as well as 'Okubo' are low in sugar content, and 'Hakuto' has too soft flesh for picking, grading, and transportation.

Much effort has been focused on solving these problems related to fruit qualities in many peach breeding programs. Until now, only 3 peach and 1 nectarine varieties were released by National Horticultural Research Institute (NHRI) at Suwon (Kang et al., 1986; Kim et al., 1978). In 1998, NHRI released a new peach variety named 'Jinmi', characterized as mid to late maturing (mid August at Suwon) with high sugar content, white-fleshed, and clingstone peach. Low level of decrease in fruit sweetness caused by rain just before harvest is the main merit of this variety.

Material and Methods

To develop new varieties with low level of decrease in sugar content by rain just before harvest, a cross of 'Hakuho' × 'Nunomewase' was made in 1982. Whole blossoms within female parent trees were emasculated at balloon state. Activity of collected pollen grains for artificial pollination were tested. Pollinated trees were not prevented from visiting of pollen-mediating insects.

Young seedlings resulted from the cross were transplanted at breeding block in 1984. 'Wonkyo Da-09' was preliminarily selected in 1994 and then further tested for regional adaptability at Suwon, Chuncheon, Taegu, and Chinju from 1995 to 1998.

In the test, three top-grafted trees were used for evaluation.

Origin

'Jinmi' [*Prunus persica* (L.) Batsch] originated from cross of 'Hakuho' and 'Nunomewase' in 1982 at Horticultural Experiment Station in Suwon (Fig. 1). In 1994, 'Jinmi' was preliminarily selected and then tested as 'Wonkyo Da-09' at 5 areas for 4 years from 1995. In 1998, 'Jinmi' was named and released.

Description

'Jinmi' ripens 110 to 120 days after full bloom, typically in mid to late August and 5 to 7 days before the shipping of 'Yumyeong' and 'Hakuto' (Table 1).

Flower is showy and self-fertile with abundant pollen grains. Petal is pink and medium in size. The shape of leaf glands is globose. Tree is rather vulnerable and has a spreading growth habit.

Fruit size is medium, above 270 g in fruit weight, and smaller than other late maturing varieties. Average soluble solid content is 13.0 °Bx, but sometimes exceeds 17 °Bx mainly under hot and non-rainy weather conditions (Table 2). At maturity, the fruit is blushed with red over creamy white ground color, but the coloration of fruit skin is weak (Fig. 2). Fruit shape is globose, and fruit suture is clear. Flesh is creamy white, and coloration around the pit is dark purplish red. The melting flesh has good quality.

'Jinmi' is not resistant to brown rot [*Monilinia fructicola* (Wint.) Honey] and bacterial leaf spot [*Xanthomonas campestris* pv. *pruni* (Smith) Dye].

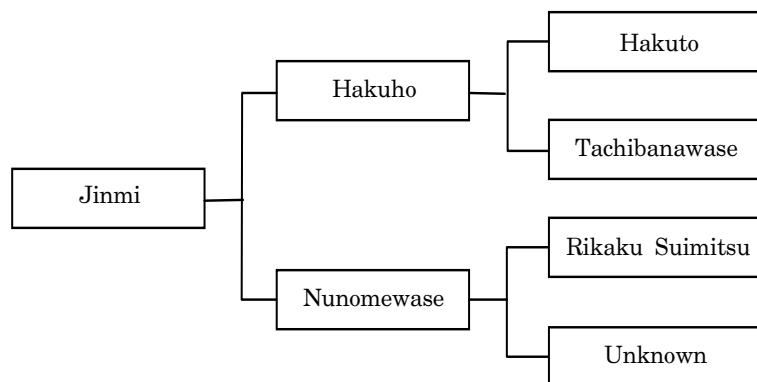


Fig. 1. Pedigree of 'Jinmi' peach.

Table 1. General characteristics of 'Jinmi' peach.

Variety	Full bloom date	Flower type	Flower size	Leaf glands	Fruit maturity	Flesh adherence to pit	Pollen grains
Jinmi	22 Apr.	showy	medium	globose	mid~late Aug.	clingstone	abundant
Yumyeong	22 Apr.	showy	large	reniform	late Aug.	clingstone	abundant

Table 2. Fruit characteristics of 'Jinmi' peach.

Variety	Fruit weight (g)	Soluble solids (°Bx)	Texture	Acidity
Jinmi	270	13.0	melting	low
Yumyeong	300	12.0	non-melting	low



Fig. 2. Ripe fruit of 'Jinmi' peach.

Availability

Limited amounts of virus non-indexed budwood of research purposes will be available from K. H. Chung from 2002.

추가 주요어 : 과수육종, 신품종, 접핵성

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중만생, 고당도 백육계 복숭아 '珍美'

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초 록

'珍美'는 농촌진흥청 원예연구소에서 1982년에 '白鳳'에 '布目早生'을 교배하여 얻은 실생으로부터 유래된 백육, 중만생, 접핵성 복숭아 품종으로 1994년에 1차선발하고, 1995부터 4년간 '원교 다.09' 계통명으로 지역적응성을 검토한 결과 품질이 우수하여 1998년에 최종선발 및 명명된 품종이다. 이 품종은 유명 이전에 출하가 가능한 품종으로 당도가 13 °Bx 이상으로 매우 높아 식미가 우수하며, 수확전 강우에 의한 당도저하가 낮아 안정적인 고품질과 생산이 가능하다.