

'Baekhyang', a Rich-flavor, White-fleshed, Late-maturing, and Freestone Peach

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ABSTRACT 'Baekhyang' was released by National Horticultural Research Institute in 1994 as a white-fleshed, late-maturing, and freestone peach variety, which originated from open-pollinated seeds of 'Garden State' nectarine collected in 1978. This variety was tested as 'Wonkyo Da-05' at 4 areas for 4 years from 1991. 'Baekhyang' is the latest maturing among white-fleshed peach varieties in Korea. Fruits mature 10 to 15 days after 'Yumyeong' and have rich-flavor and good quality.

Additional key words: freestone, fruit breeding, new variety

Introduction

In 1997, annual production of peaches and nectarines was 146,793 metric tons in Korea and 81.5% of the total production was occupied by peaches (Ministry of Agriculture and Forestry, 1997). Four major peach varieties such as 'Yumyeong', 'Kurakatawase', 'Okubo', and 'Hakuto', are occupying 46% of total cultivation area (including nectarines). Such phenomenon is not desirable in view of variety composition. Moreover, peach growers had to depend on foreign varieties, mainly Japanese ones.

In spite of these situations, only 2 varieties, 'Yumyeong' and 'Baekmijosaeng', were released by peach breeding programs of Horticultural Experiment Station, the former organization of current National Horticultural Research Institutes (NHRI) (Kang et al., 1986; Kim et al., 1978).

In 1994, NHRI released a new peach variety named 'Baekhyang'. 'Baekhyang' is a late ripening (early September at Suwon), rich-flavor, white-fleshed, and freestone peach. It was released to meet the demand of consumers for high quality and to extend production season.

Material and Methods

Open-pollinated seeds of 'Garden State' nectarine were collected by W. C. Kim at Horticultural Experiment Station in 1978. Young seedlings were transplanted at breeding block in 1980.

78-GSN OP-5(1) was preliminarily selected by S. J. Kang in 1990 and then further tested as 'Wonkyo Da-05' for

regional adaptability. Three top-grafted trees were used for the test at Suwon, Chuncheon, Eumseong, and Yeonki from 1991 to 1994.

Data on fruit and ecological characteristics and resistance to bacterial leaf spot and brown rot were gathered yearly from each test site. Other characteristics of fruits and tree were investigated at breeding block in Suwon.

For final selection and releasing, breeders, related scientists, and peach growers participated in an evaluation meeting at NHRI in 1994.

Results and Discussion

Origin

'Baekhyang' [*Prunus persica* (L.) Batsch] originated from open-pollinated seeds of 'Garden State' collected in 1978 at Horticultural Experiment Station in Suwon (Fig. 1). In 1990, 'Baekhyang' was selected preliminarily and then tested as 'Wonkyo Da-05' at 4 areas for 4 years from 1991. In 1994, 'Baekhyang' was

named and released.

Description

'Baekhyang' ripens 130 to 140 days after full bloom, typically in early September and 10 to 15 days after the shipping of 'Yumyeong' and 'Hakuto' (Table 1). Except for two yellow-fleshed peach varieties, 'Changhowonhwangdo' and 'Nishio Gold', which ripen in mid September to early October, 'Baekhyang' is the latest maturing white-fleshed peach variety in Korea.

Flower is non-showy and self-fertile with abundant pollen grains. The shape of leaf glands is reniform. Trees are more vigorous than other white peach varieties because it has genetic background of yellow-fleshed 'Garden State' nectarine.

Fruit size is a little large, above 300 g in fruit weight. Soluble solid content is about 12.5 °Bx (Table 2). At maturity, fruit is blushed with light red over pale green ground color (Fig. 2). Coloration of fruit skin, however, is weak. Fruit shape is widely ellipsoid. Flesh is white with red around pit. The melting flesh is of rich-flavor and good quality.

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

Availability

Limited amounts of virus non-indexed budwood may be obtained from National Horticultural Research Institute. Trees are also available from commercial nurseries in Korea.

추가 주요어 : 과수육종, 신품종, 이핵성

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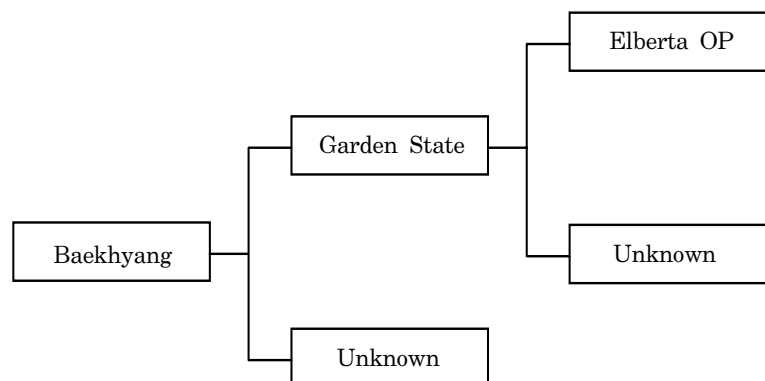


Fig. 1. Pedigree of 'Baekhyang' peach.

Table 1. General characteristics of 'Baekhyang' peach.

Variety	Full bloom date	Flower type	Flower size	Leaf glands	Fruit maturity	Flesh adherence to pit	Pollen grains
Baekhyang	17 Apr.	non-showy	large	reniform	early Sept.	freestone	abundant
Yumyeong	22 Apr.	showy	large	reniform	late Aug.	clingstone	abundant

Table 2. Fruit characteristics of 'Baekhyang' peach.

Variety	Fruit weight (g)	Soluble solids (°Bx)	Texture	Acidity
Baekhyang	300	12.5	melting	medium
Yumyeong	300	12.0	non-melting	low



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

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高香氣性 白肉系 晩熟 端境期 出荷用 복숭아 '白香'

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초 록

'白香'은 농촌진흥청 원예연구소에서 1978년에 천도 품종인 'Garden State'의 자연교잡종 자로부터 유래된 백육, 만생, 이핵성 복숭아 품종으로 1991년부터 4년간 '원교 다-05' 계통명으로 지역적응성을 검토하여 1994년에 최종선발 및 명명된 품종이다. 이 품종은 모본인 'Garden State'를 닮아 산미가 적당하고, 향기가 많은 감산조화형 품종으로 식미가 우수하다. 숙기는 백육계 복숭아로서는 가장 늦은 9월 상순이다.