Table Grape ‘Suok’

Hae Keun Yun, Kyo Sun Park, Jeong Ho Roh, Yong Bum Kwack, Ji Hae Jun, Seok Tae Jeong, Seung Hui Kim, Han Ik Jang, and Yong Uk Shin
National Horticultural Research Institute, Rural Development Administration, 475 Imok-dong, Jangan-gu, Suwon, Kyunggi 440-706, Republic of South Korea

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‘Suok’ (‘Kyoho’ × ‘Benizu’) is a tetraploid (4x) table grape cultivar showing large berries with high quality. ‘Suok’ has a mean bud burst on 17 Apr., flowering on 31 May, and fruit maturity on 15 Sept. The mean berry weight is 10.9 g, and mean soluble solids are 18.5 °Brix. The skin color is black with abundant bloom and the flesh is soft and juicy.

Origin

‘Suok’ resulted from a cross between ‘Kyoho’ (4x) and ‘Benizu’ (4x) with the intention of producing high-quality table grapes with the taste of ‘Kyoho’ at the National Horticultural Research Institute (NHRI), RDA, Korea, in 1992 (Fig. 1). It was preliminarily selected in 2000, tested in seven sites from 2001 to 2004 as ‘Wonkyo RA-18’, and named in 2004. Three randomized vines were planted and tested to evaluate characters of vines and fruit production in each site for 4 years.

Description

Flowers. Flowers of ‘Suok’ are perfect and self-fertile, blooming at midseason (on 31 May in Suwon, Korea) after midseason bud burst (17 Apr.).

Fruits. Fruits of ‘Suok’ have black-blue color when fully ripened. Fruits are large in size averaging 10.9 g, similar to ‘Kyoho’, and are round to slightly ovate. When the grapes are fully ripened, the aroma of ‘Suok’ is very similar to that of ‘Kyoho’ with a pronounced foxy flavor. ‘Suok’ ripens between 22 Sept. and 25 Sept. in Suwon, Korea, 8 d later than ‘Kyoho’. It is considered a late-season cultivar. The mean total soluble solids (TSS) of ‘Suok’ are 18.5 °Brix, ≈2.1 °Brix higher than ‘Kyoho’, and pH is usually similar to ‘Kyoho’ (Table 1). The balance between sugar (18.5 °Brix) and acidity (0.62% titratable acidity, pH 3.12) is excellent. These indicate that ‘Suok’ can accumulate satisfactory amounts of sugar while maintaining sufficient acidity. Its berry has two to four seeds of 8.0 mm in length, and its skin is slip, pulpy, and medium in thickness. The flesh texture is soft and juicy. ‘Suok’ is a late-season grape variety, which produces fruits with long shelf life compare with ‘Kyoho’. It is possible to produce seedless berries by the gibberellic acid treatment (25 ppm in full bloom) in ‘Suok’, like in ‘Kyoho’.

Clusters. The clusters of ‘Suok’ are large in size (400 to 450 g with 35 to 40 berries each), conical, and sometimes shouldered. The berries are set very tightly with no shattering, which causes their low marketability with bad appearance of clusters in ‘Kyoho’ grape. The cluster appearance is excellent with a uniform shape and black skin color (Fig. 2).

Vines. Own-rooted vines are vigorous and more productive than 20 Mt−1 in total yield ‘Kyoho’ (18 Mt−1) in randomly designed blocks. Vines show uniform clusters in size and ripening period with excellent berry setting by cane pruning. Vines are moderately hardy to cold with 40% to 50% survival of buds at –20 ºC in Suwon, Korea.

Diseases. The foliage is moderately susceptible to anthracnose (Elsinoe ampelina Shear) and downy mildew (Plasmopara viticola Berl. & de Toni). However, the trunk is moderately resistant to crown gall (Agrobacterium vitis). After fruit harvest, it is required to keep as many healthy leaves as possible on the vines to maintain sufficient nutrient for good plant growth in the next year.

Availability

Requests for cuttings for research purposes may be addressed to Haekeun Yun (hekeun@rda.go.kr). Vines are available for sale at the Korean Society for Fruit Tree Nursery (4-38 Seonghwang-dong Cheonan, 330-130, Korea).

![Fig. 1. Pedigree of ‘Suok’ grape.](image)

![Fig. 2. Fruit cluster of grape cultivar Suok at full maturity.](image)

Table 1. Fruit characteristics of grape cultivar Suok and its parent ‘Kyoho’.

| Cultivar | Maturing date | Cluster wt (g) | Berry skin color | Berry wt (g) | Soluble solids (°Brix) | Acidity (%) |
|----------|---------------|---------------|-----------------|--------------|-----------------------|-------------|
| Suok     | 23 Sept.      | 407 ± 86°     | Black           | 10.9 ± 1.1   | 18.5 ± 0.9            | 0.62 ± 0.06 |
| Kyoho    | 15 Sept.      | 466 ± 82°     | Black           | 11.4 ± 1.2   | 16.4 ± 0.8            | 0.49 ± 0.05 |

*Mean ± so.
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