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# Red Table Grape 'Hongisul'

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'Hongisul' resulted from a cross between 'Campbell Early' (*Vitis labrusca*) and 'Himrod Seedless' (*Vitis* sp.) at the National Horicultural Research Institute (NHRI), RDA, Korea in 1981. It was preliminarily selected in 1995, tested in seven sites in the region from 1996-2000 as 'Wonkyo RA-06', and named in 2000. 'Hongisul' has good quality with high soluble solids (TSS), low titratable acidity, attractive red skin color, abundant bloom, and no skin cracking. 'Hongisul' has a mean budburst on 20 April, flowers on 3 June, and fruit matures on 31 August in Suwon, five days earlier than 'Campbell Early' in Suwon. It is considered an early season cultivar. The mean berry weight of 'Hongisul' is 5.9g, similar to 'Campbell Early', and mean TSS is 16.3°Brix, about 1~2°Brix higher than 'Campbell Early'. The flesh texture is medium and juicy. 'Hongisul' has good cold hardiness, fruiting, and disease resistance. It is recommended for planting as an alternative to 'Campbell Early', the leading table grape in Korea. 'Hongisul' is an early-season red table grape which produces fruits with pronounced varietal characters similar to 'Campell Early', one of its parents. It is distinguished by its superior fruit quality combined with good productivity, partial resistance to several diseases, and cold hardiness superior to its acclaimed parent, 'Campbell Early'. 'Hongisul', which means "red dew" in Korean, is the fifth table grape cultivar named by the NHRI. It followed the release of 'Cheongsoo' (1), 'Hongdan' (4), 'Tamnara' (2), and 'Heukgoosul' (3).

## Origin

'Hongisul' resulted from the cross 'Campbell Early' x 'Himrod Seedless' made in 1981 by D.K. Lee with the intention of producing high quality table grapes with the flavor of 'Campbell Early'. Seeds harvested were planted in 1982. Fruits were first observed in 1986 and the original vine was propagated in 1990 under the number 'A-98'. 'Hongisul' was finally selected in 2000 as a table grape. It was applied for a plant patent in Korea.

## Flowers

Flowers of 'Hongisul' are perfect and self-fertile, blooming at mid-season (on 3 Jun. in Suwon, Korea) following mid season budbreak.

## Fruits

Fruits of 'Hongisul' have red to scarlet skin when fully ripened. Fruits are medium in size averaging 5.9g and are round to slightly ovate (Fig. 1). When the grapes are fully ripened, the aroma of 'Hongisul' is very similar

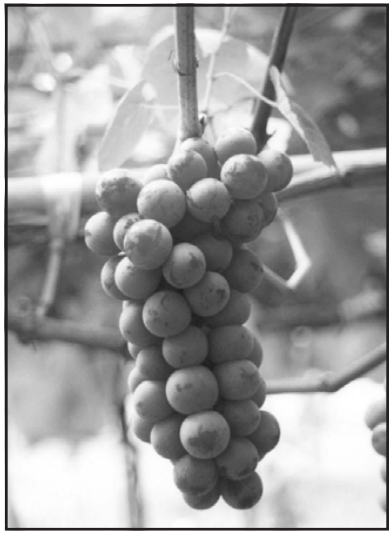

**Fig. 1.** Fruits of grape cultivar 'Hongisul'.

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**Table 1.** Fruit characteristics of grape cultivar 'Hongisul' and its parent "Campbell Early'.

| Cultivar | Maturing date | Cluster weight (g) | Berry skin color | Berry weight (g) | Soluble solids | Acidity (%) |
|---|---|---|---|---|---|---|
| Hongisul | 31 Aug. | 318 | Red to scarlet | 5.9 | 16.3 | 0.24 |
| Campbell Early | 5 Sept. | 324 | Black | 5.5 | 15.0 | 0.47 |

to that of 'Campbell Early' with pronounced balanced fox flavor. 'Hongisul' ripens between 31 Aug. and 3 Sep. in Suwon, Korea, five days earlier than 'Campbell Early'. It is considered an early season cultivar. Juice soluble solids are usually higher and pH is usually lower than 'Campbell Early' (Table 1). The balance between sugar (16.3°Bx), acidity (0.24% titratable acidity) and pH (2.89) is excellent. These data indicate that 'Hongisul' can accumulate satisfactory amounts of sugar while maintaining sufficient acidity and a low pH. Its skin is slip, pulpy, medium in thickness and there is no skin splitting in rainfall. It has 2 seeds of 7.0 mm length per berry.

These grapes are resistant to bunch rotting diseases and have long shelf life with constant quality even when overripe.

## Clusters

The clusters are medium in size (300 to 350g with 50-60 berries per each), conical, sometimes shouldered, and tight in berry setting. The cluster appearance is excellent with combined red to scarlet skin color. Incidence of berry drop is low during storage and transport after harvest.

## Vines

Own-rooted vines are vigorous, productive (18Mt/ha), and very cold hardy, with no bud damage at -20°C in Suwon, Korea. Vines have uniform cluster size and ripening period with excellent berry setting by spur pruning. The foliage is moderately resistant to anthracnose (*Elsinoe ampelina*) and downy mildew (*Plasmopara viticola*). The trunk is also moderately resistant to crown gall (*Agrobacterium vitis*). However, the possibility of early leaf fall requires appropriate soil management system of water drainage and application of completely decomposed manure in the vineyard. After fruit harvest, it is required to keep as many healthy leaves as possible on the vines to maintain sufficient nutrients for good plant growth in the following 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).

## Literature Cited

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