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GRAPE VARIETY PROFILE: SOUTHERN SENSATION SEEDLESS

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Southern Sensation Seedless is a Pierce's Disease (PD) tolerant table grape cultivar that was bred by the University of Arkansas in 1973 (Fig. 1). It resulted from a cross between Dunstan 210 (*Vits vinifera* Black Rose × Aurelia, an interspecific cultivar) and Black Monukka (*V. vinifera*). After 38 years of trialing and observation in several locations in Central Texas and the Texas Gulf Coast, it was cooperatively released by Texas A&M University and the University of Arkansas Division of Agriculture in 2021 as the second PD-tolerant table grape.



Figure 1. Southern Sensation Seedless grape.

Southern Sensation Seedless is medium vigor with a semi-upright growth habit that is suitable for training systems that facilitate upright growth, such as Mid-wire Cordon with vertical shoot positioning (VSP) or downward growth like the High-wire Cordon or Watson Training System (Fig. 2). Southern Sensation Seedless responds well to both spur pruning and cane pruning. Although grafting may provide a more favorable nutritional status in alkaline soils, own-rooted Southern Sensation Seedless is generally more vigorous and healthier compared to own-rooted Victoria Red, which was the first PD-tolerant table grape—released in 2012, between Texas A&M University and the University of Arkansas Division of Agriculture.

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Figure 2. Second leaf Southern Sensation Seedless vines trained to the Watson Training System.

The leaves of Southern Sensation Seedless are medium-sized, which allows for high shoot densities (Fig. 3). However, over-cropping can occur due to large cluster size. Dense canopies should be avoided to encourage air flow through the canopy and around the fruit—a necessary factor to decrease humidity and drying time after a rain or dew event. Low humidity and a short drying time may reduce the incidence of fungal diseases.

Although Southern Sensation Seedless is tolerant to PD, it is susceptible to a number of fungal diseases such as black rot, Phomopsis, and anthracnose. Southern Sensation Seedless appears to have better powdery mildew resistance than Victoria Red, but it may be



Figure 3. Southern Sensation Seedless leaves.

more susceptible to downy mildew. Under commercial production, Southern Sensation Seedless benefits from a well-planned fungal disease control program. Fruit loss from these diseases may be acceptable to homeowners if they choose not to spray fungicides, but such a loss in yield may not be economically feasible on a commercial scale.

The most common insect pest of Southern Sensation Seedless is the grape berry moth, although other insects can cause damage on occasion. Like other grapes, birds can be a problem—thus, netting (or other means of protection) may be required.

Winter injury has been observed in Southern Sensation Seedless when temperatures reached the low-teens to single-digits. Therefore, Southern Sensation Seedless should be planted in U.S. Department of Agriculture (USDA) cold hardiness Zone 7b and warmer.

In trials in North Texas and the Texas Gulf Coast, Southern Sensation Seedless vines spaced at 8 feet apart averaged 12.2 to 17.4 pounds of fruit per vine, due to its large cluster size and overall fruitfulness. Average cluster size ranged from one-half to well over 1 pound. However, over-cropping can reduce fruit quality and overall vine health, and can be avoided with proper crop control, fertilizer, and irrigation regime. Due to the vine's overall precocity and tendency to over-crop, it is recommended—at a minimum as a standard practice—to thin fruit from shoots that are shorter than 18 inches soon after flowering to maximize fruit quality.

Southern Sensation Seedless produces large, attractive clusters of medium-sized seedless berries that have a bright green color that turns golden with advanced maturity (Figs. 4 and 5). To improve the size of the fruit, research at Texas A&M University has shown a positive response to gibberellic acid applications near bloom, which is a practice that may be a consideration for commercial production.

The flavor of Southern Sensation Seedless is especially pleasant, featuring a mildly distinguishable fruity characteristic. Berries have a thin, palatable skin that goes unnoticed when consumed. Minimal cracking has been observed in Southern Sensation Seedless, which is a desirable feature—particularly in humid regions where damaged berries are at a greater risk of common infection from rot organisms.



Figure 4. Southern Sensation Grape cluster at maturity.



Figure 5. Southern Sensation Seedless clusters with advanced maturity.

The balance of sugar and acid is appealing, and the texture is both crisp and crunchy. As the fruit ripens, it becomes increasingly sweet and less tart in flavor. Fruit is often harvested from 16 to 22 percent soluble solids (°Brix) based on taste preference. For the backyard grower, this means that fruit may be picked over several weeks. Southern Sensation Seedless is also well-suited as a backyard grape, and possibly as a niche crop in local markets such as a farm stand, "U-pick" operation, or farmers market.