Smooth Delight Three, an Early Ripening, Medium Chill Subacid White Nectarine

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The ‘Smooth Delight Three’ nectarine is being released for trial by Texas A&M AgriLife to provide a firm, well-sized, early-ripening, attractive, subacid, high-quality, white-fleshed nectarine for the medium-chill zone. The new nectarine ripens in late May to early June in the medium chill zone of Texas and similar regions.

Origin

The ‘Smooth Delight Three’ nectarine [Prunus persica (Batsch) L.] originated in the Stone Fruit Breeding Program within the Department of Horticultural Sciences at Texas A&M University. It was selected from the high-density seedling selection in 2006 from a population derived by selfing the selection TX4C188LN, TX4C188LN originated from a cross between ‘Summist’ (Sherman et al. 1995), a white-fleshed, acid-flavored nectarine released by the University of Florida, and ‘Arctic Star’ a white-fleshed nectarine with a subacid flavor release by Zaiger Genetics (Zaiger et al. 1995). ‘Summist’ is derived from a cross between ‘Fiordaglio’ and ‘Mayfire’, whereas ‘Arctic Star’ is a hybrid between an unknown white nectarine and ‘Magylo’ nectarine. Resulting seed from this ‘Summist’ × ‘Arctic Star’ cross were planted in 2000 in a high-density breeding orchard at the Texas A&M University Horticultural Farm in College Station, TX, USA. In 2003, the selection TX4C188LN was marked for subsequent observation and was noted as having exceptional characteristics. In 2004, selfed seed was collected and the embryo rescued. The resulting seedlings were planted in the high-density seedling selection field in 2005. In 2006, TX3B232LN was selected for its attractiveness, low acidity, high soluble solids, and productivity. It was propagated asexually by budding and has been evaluated in Texas and California, USA.

Table 1. Fruiting characteristics of ‘Smooth Delight Three’ nectarine in Texas (College Station and Fairfield) and California (Fowler), USA.

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peach and within a few days of ripens about 1 week before fruit development. In the medium chill zone, it fruit development period in the higher chill re-

nine nectarines, three medium-chill early-season yel-

teres (Table 1). The fruit flesh does not brown readily, nor has it shown a tendency to develop split or shattered pits during the final stage of fruit swelling.

Tree characteristics. The trees are vigorous with the typical semisparse growth habit similar to ‘TexPrince’ (Byrne and Bacon 2004b), ‘TexKing’ and ‘TexRoyal’ (Byrne and Bacon 1991). No observations have been made on resistance for either peach rust (Tranzschelia discolor) or bacterial leaf spot [Xanthomonas campestris pv. pruni (E. F. Smith) Dye]. This peach has moderately large leaves that are lanceolate with acuminate apices, and crenate margins.

Fruit quality. This nectarine has low acidity (varies from 2.1 to 4.5 meq/mL), excellent quality and attractiveness (Fig. 1), and a simi-

lar size to other early ripening nectarines such as the Smooth Texan (Byrne and Anderson 2014b) or Smooth Delight series when properly managed and thinned. It has a mean soluble solid content similar to or better than ‘Smooth Texan One’, ‘Smooth Texan Two’, ‘Smooth Delight One’, and ‘Smooth Delight Two’ when picked mature. This new nectarine has a nice white ground and flesh color and an attractive red blush of 80% to 90% of the fruit skin surface depending on the environmental conditions (Table 1). The fruit flesh does not brown readily, nor has it shown a tendency to develop split or shattered pits during the final stage of fruit swelling.

Flowers are showy with a diameter between 32 to 44 mm and petal length of 20 to 22 mm. The five petals are light pink when young, becoming slightly darker near the petal claw. The sepals are brownish red to maroon with green and gray. The reddish-orange anthers are on filaments (13 to 15 mm length) that are equal to or slightly longer than the pistil (15 to 16 mm including ovary). The filaments are white when young and darken to medium pink with advanced maturity. Pollen is yellow and abundant. The tree is self-fertile.

The stones are of medium size (30 to 35 mm in length, 20 to 23 mm in width, and ~16 to 17 mm in thickness). The dry-stone surface is a light brown color.

Availability

This peach is patented (PP30122, 22 Jan 2019) and can be propagated under license. Requests for budwood should be directed to the Texas A&M Innovation office at innovation@tamu.edu

References Cited


