Fruit Quality Characteristics of New Peach and Nectarine Varieties: Selena and Silverglo

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Two exciting new peach and nectarine cultivars have been released from the Rutgers Stone Fruit Breeding through Adams County Nursery. These new varieties were created and selected by Joseph Goffreda at the Rutgers Fruit and Ornamental Research Extension Center in Cream Ridge, New Jersey. To understand how best to select and market these varieties, growers need to better understand the characteristics of their fruit. We performed several studies to estimate fruit qualities, both chemical and physical, that determine much of the value of peaches.

For each study fruit were harvested from three-to-five-year-old trees established in commercial orchards in southern New Jersey. Harvesting at the time of commercial maturity for each cultivar was based on ground color change and size. After picking, fruit were transported to the laboratory at Rutgers Agricultural Research and Extension center where all analyses were performed. Fruit were evaluated for firmness, size, total soluble solids (°Brix), total titratable acidity, and pH.

These two varieties yielded attractive fruit with good commercial potential (Figures 1 and 2). 'Selena' is a late-season yellow peach with excellent firmness, and fruit can hang well on the tree. It has a traditional color (red-on yellow background skin) and taste (high sugar with acidity, Table 1 and 2). Three-year average for physical and chemical properties were firmness (9.9 lbs), diameter (3.1 in), mass (244 g), total titratable acidity (5.7 g/l), and total soluble solids (12.1 °Brix). 'Silverglo' is firm, and larger and more attractive than other white nectarines during their early-harvest window (Table 1 and 2). Three-year average physical and chemical properties were firmness (10.1 lbs), diameter (2.7 in), mass (191 g), total titratable acidity (7.4 g/l), and total soluble solids (10.5 °Brix). Harvest dates (all harvest dates are from southern New Jersey) for 'Selena' ranged from September 5 to 20 and for 'Silverglo' ranged from August 5 to 20.

These two varieties are available through Adams County Nursery and can be recommended for trial plantings (see inserted text Box).

- **Selena (NJ 358)** – Late season yellow peach with excellent firmness. Ripens between 'Jersey Queen' and 'Encore'. Very large fruited with attractive 50-80% red-on- yellow background. Hangs well on tree and has excellent flavor and coloring. Low susceptibility to bacterial spot and productive.
- **Silverglo (NJN 103)** – White fleshed nectarine with clingstone/semi free stone. It ripens between 'Artic Sweet' and 'Artic Jay'. It has larger and more attractive than other white nectarines in this season. Nice traditional acidic flavor. Attractive color, lots of pinkish red color and very low skin blemishes. Tree moderately vigorous and low susceptibility of bacterial spot.

Figure 1. Fruit of Selena peach from the Stone Fruit Breeding Program of Rutgers/NJAES (photograph credit: Jerry Frecon).

Table 1. Physical properties of fruit harvested from new varieties of peach and nectarine. Each value came from samples of approximately 24-30 fruit taken on each of 2-4 harvest dates in each year.

		2015		2016		2017	
Variety	**Property**	**Average**	**Standard deviation**	**Average**	**Standard deviation**	**Average**	**Standard deviation**
Selena	Fruit firmness (lbs)	10.9	3.1	-	-	8.8	3.8
(NJ 358)	Fruit diameter (in)	3.2	0.1	-	-	3.0	0.7
	Fruit mass (g)	261.8	26.8	-	-	225.5	37.6
Silverglo	Fruit firmness (lbs)	11.9	3.1	10.8	2.4	7.5	4.4
(NJN 103)	Fruit diameter (in)	2.8	0.2	2.6	0.1	2.6	0.1
	Fruit mass (g)	206.0	30.5	21.5	21.5	170.2	19.4

Figure 2. Fruit of Silverglo a new nectarine from the Stone Fruit Breeding Program of Rutgers/ NJAES (photograph credit: Jerry Frecon).

Table 2. Chemical properties of fruit harvested from two new varieties of peach and nectarine. Each value came from samples of approximately 24-30 fruit taken on each of 2-4 harvest dates in each year (no data for 2016).

		2015		2017	
Variety	Property	Average	Standard deviation	Average	Standard deviation
Selena	TTA (g/l)	1.62	0.10	9.71	0.46
(NJ 358)	pH	3.51	0.02	3.7	0.02
	TSS (°Brix)	13.03	0.48	11.1	0.58
Silverglo	TTA (g/l)	1.51	0.07	13.2	1.9
(NJN 103)	pH	3.46	0.05	4.6	0.09
	TSS (°Brix)	10.98	0.41	10.1	0.01

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