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'UFRoyal' Nectarine

José X. Chaparro and W. B. Sherman[1]

Abstract

'UFRoyal' nectarine, [*Prunus persica* (L.) Batsch], is released for grower trial in north central Florida by the Florida Agricultural Experiment Station. This nectarine cultivar is intended as a replacement for 'Sunraycer' nectarine. Trees of 'UFRoyal' produce an attractive, sweet tasting, yellow and non-melting flesh, clingstone nectarine intended for fresh use.

'UFRoyal' originated from a 1995 cross of [Fla. 86-28c {Fla.9-20c open-pollinated} x 'TropicBeauty'] open pollinated. It was selected and propagated in 1997, and tested as Fla. 97-17cn (Fig. 1). 'UFRoyal' fruit have been observed at Gainesville, Florida on trees budded onto Flordaguard seedling rootstocks and the following description of fruit summarizes 4 years of observation on 6 trees of 'UFRoyal' 5 to 8 years old and 4 trees of Sunraycer. Trees of 'UFRoyal' are estimated to require 250 chill units (hours below 7.7°C) based on full bloom occurring with the standard (3) of 'Sunred' nectarine, that blooms in early February at Gainesville. 'UFRoyal' has fruited well where the mean temperature of the coldest month averages 16 to 17° C (2) and in colder locations in the absence of spring frost. Thus, we expect 'UFRoyal' to be grown successfully where 'Sunraycer' and 'Sunbest' nectarines have been successful. This corresponds approximately to the region between Gainesville and Apopka, Florida as well as numerous locations in other countries. Fruit ripen in early May at Gainesville (Table 1), about 88 days from full bloom and about the same as 'Sunraycer' nectarine. Fruit set is high and thinning will be required in the absence of spring frost to attain an average of 5.7 cm diameter fruit weighing *ca.* 130 g. Fruit picked at the commercial harvest stage of maturity are 90 to 100% red over a yellow ground color with a skin relatively free of sugar speckles. Fruit shape is round with no suture bulge and rounded at the tip. The flesh may contain small red flecks, but has no red color at the pit. Flesh is firm, with good sweetness, and does not brown readily on bruised or cut surfaces. Pits are clingstone, small and have exhibited little tendency to split. Overripe off-flavors are minimal.

'UFRoyal' is released as a non-melting flesh replacement for 'Sunraycer', a melting flesh nectarine. 'UFRoyal' has a similar chilling re-

Table 1. Tree performance and fruit characteristics of 'UFRoyal' nectarine in Gainesville, Florida. (2003-2006).

	Tree			Fruit						
Year	Chill units	Crop[z]	Harvest date (mo/day)	FDP[y] (days)	Weight (g)	Shape[y]	Red color (%)	Tex.[y]	Taste[y]	Soluble solids (°Brix)
2003	200	100	5/4	85	92	10	100	6	7	11.0
2004	200	100	5/6	83	105	10	100	8	8	11.2
2005	250	90	5/6	85	135	9	90	9	9	15.0
2006	225	100	5/8	99	105	9	100	9	10	16.5
Avg.	218	97	5/6	88	109	9.5	97	8.5	8.7	13.4

[z] Percent crop load (Crop) is judged as percent of a full crop after thinning, i.e. fruit evenly spaced 10-15 cm apart throughout the canopy.

[y] Subjective ratings for shape, texture (Tex.), and taste: 1 = least desirable, 7 = commercially acceptable, 10 = most desirable. FDP is the fruit development period in days from 50% bloom to first commercial harvest.

[1] Univ. of Fla., Dept. of Hort. Sci., P.O. Box 110690, Gainesville, FL 32611-0690.

Table 2. Tree performance and fruit characteristics of 'UFRoyal' (2003-2006) and 'Sunraycer' (2003-04) nectarines at Gainesville, Florida.

	Tree			Fruit						
Cultivar	Chill units	Crop[z] (%)	Harvest date (mo/day)	FDP (days)	Weight[y] (g)	Shape[x]	Red (%)	Tex.[x]	Taste[x]	Soluble solids (°Brix)
UFRoyal	225	97	5/6	88	109±18	9	97	8	8.5	13.4
Sunraycer	250	100	5/4	78	97±18	8	83	7	8	14.0

[z] Percent crop load (Crop) is judged as percent of a full crop after thinning, i.e. fruit evenly spaced 10-15 cm apart throughout the canopy.
[y] The two cultivars are not significantly different (p = 0.49). Numbers after the ± sign are standard deviations of the mean.
[x] Subjective ratings for shape, texture (Tex.), and taste: 1 = least desirable, 7 = commercially acceptable, 10 = most desirable. FDP is the fruit development period in days from 50% bloom to first commercial harvest.

quirement, cropping ability, harvest date, fruit size and soluble solids content to 'Sunraycer' nectarine (Table 2).

Trees are semi-spreading, vigorous, and require summer pruning when grown in a vase training system, to permit light penetration for formation of strong fruiting wood in the lower half of the tree. Trees at Gainesville set a high number of flower buds, have few blind nodes (1), and exhibit little bud failure prior to bloom (5). Leaves have 4 to 6 large reniform glands. Flowers are non-showy and pink. Anthers are yellow with little anthocyanin and pollen is bright yellow, abundant and fertile. Leaves and fruit have shown no bacterial spot [*Xanthomonas campestris* pv. *pruni* (Sm.) Dye] in test plantings where known susceptible genotypes show typical symptoms.

A plant patent has been filed for 'UFRoyal' and a propagation agreement is available through Florida Foundation Seed Producers, Inc, P.O. Box 309, Greenwood, FL 32443. Bud wood is non-indexed, but peach genotypes originating at the University of Florida breeding program (4) have been found virus free in countries that routinely quarantine and index.

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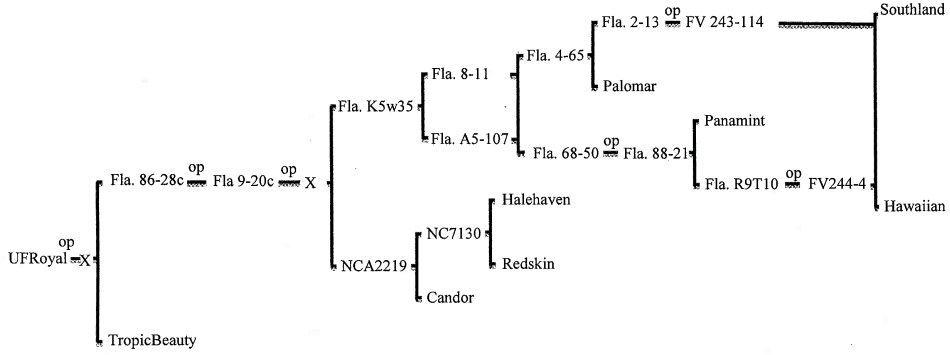

Fig 1. Pedigree of 'UFRoyal' nectarine. 'X' and 'op' correspond to unselected seedling and open-pollinated cross, respectively.