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Journal of the American Pomological Society 64(1): 60-62 2010

'UFOne' Peach

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Abstract

'UFOne' peach {*Prunus persica* (L.) Batsch] is released for grower trials in central and north central Florida by the University of Florida Agricultural Experiment Station. Trees of 'UFOne' produce an attractive, sweet tasting, yellow and non-melting flesh, cling stone fruit intended for the fresh fruit market.

'UFOne' originated in Gainesville on the University of Florida fruit breeding facility, from a 1994 open pollination (out-crossed to an unknown peach) of Fla. 90-50cn (7), and was selected and propagated in 1997 as Fla. 97-30c (Fig. 1). Standards and methods used in this program to evaluate selections have been described (1, 2). Trees of 'UFOne' are estimated to require 150 chill units (6). This is based on full bloom occurring up to 3 days before 'UFBeauty' peach (200 chill hours) at Gainesville where full bloom occurs most seasons in late January (Table 1). 'UFOne' has fruited well where the coldest month averages 17 to 18º C (5) and in colder locations in the absence of spring frosts. Thus, we expect this new peach to be adapted in areas where 'UFBeauty' has been grown successfully. Fruits ripen just after the first week in May at Gainesville, about 95 days after full bloom (Table 1) and about 8 days after 'UFBeauty' (Table 2). Cropping at Gainesville has ranged from 70% to 90% of a commercial crop (Table 1) due to early bloom and spring frost injury. Trees have set a partial crop at the South West Florida Research and Education Center, Immokalee, Florida where 'UFBeauty' sets no crop due to night temperatures above 14°C during bloom. Observations relative to established cultivars such as 'Flordaprince' or 'UFO' that are growing in the same block indicate that 'UFOne' trees are vigorous, semi-spreading, productive and have not demonstrated alternate bearing. Observation of 4 trees propagated on 'Flordaguard' rootstock in each of 3 locations indicates that trees set a high number of flower buds, have few blind nodes (3), and exhibit little bud drop prior to bloom (8). Fruit thinning is required in areas lacking spring frost in order to maximize fruit size and prevent limb breakage. Leaves have globose glands. Flowers are showy and pink. Anthers are light red and pollen is bright yellow abundant, and fertile. Leaves have shown no bacterial spot [*Xanthomonas campestris* pv. *pruni* (Sm.) Dye] in test plantings where

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Table 1. Tree performance and fruit characteristics of 'UFOne' peach at Gainesville, Florida in 2003-2007.

	Tree			Fruit							
Year	Bloom (mo./day)	Crop[z] (%)	Harvest (mo./day)	FDP[y] (days)	Weight (g)	Shape	Red (%)	Attr.[x]	Taste[x]	Pub.[x]	Splits (%)
2003	2/09	70	5/9	87	140	9	40	8	8	7	0
2004	1/31	80	5/11	95	130	8	20	8	9	8	0
2005	1/22	80	5/10	101	100	7	30	8	9	7	0
2006	1/28	90	5/5	97	183	8	50	8	9	8	0
2007	1/04	80	-[w]	-[w]	163	8	30	8	9	8	0
Mean	1/25	80	5/9	95	143	8	34	8	9	8	0

[z] Percent crop load (Crop) is judged as percentage of a full crop after thinning, i.e. fruit evenly spaced 10 to 15 cm apart throughout canopy.
[y] FDP is the fruit development period from 50% bloom to first commercial harvest.
[x] Subjective ratings for shape, attractiveness (Attr.), taste, and pubescence (Pub.) are: 1 = least desirable, 7 = commercially acceptable, 10 = most desirable.
[w] Trees were used in making crosses so the data on harvest date are missing in 2007.

known susceptible genotypes show typical symptoms. Trees of 'UFOne' show excellent vigor and cropping ability, and are observed to have some resistance to rust incited by *Tranzschelia discolor* [(Fuckel) Tranzschel &Litvinov] (4).

'UFOne' fruit have been observed on the original seedling and budded trees since 1999. Fruit are large and attractive, averaging about 140 g (65 mm diameter) when thinned to ca.15 cm apart (Table 1). Commercially ripe fruit exhibit about 40% red over a deep yellow ground color. Fruit shape is nearly round with a slight tip. There is no red in the flesh at the pit. Flesh clings slightly to the pit when fully ripe. Flesh is firm with good sweetness (10.6 to 13° Brix), and does not brown readily on bruised or cut surfaces. Pits are medium small and have shown no tendency to split even when crop loads are low.

'UFOne' offers consistent cropping when flowering occurs under minimum night temperatures above 14°C (Table 2). A plant patent has been filed for 'UFOne' and a propagation agreement is available through Florida Foundation Seed Producers, Inc., P. O. Box 309, Greenwood, Fl 32443. Budwood has not been indexed, but no viruses have been found

Table 2. Average tree and fruit characteristics of 'UFOne' and 'UFBeauty' peaches at Gainesville, Florida in 2003-2007.

	Tree			Fruit							
Cultivar	Bloom (mo./day)	Crop[z] (%)	Harvest (mo./day)	FDP[yw] (days)	Weight (g)[yw]	Shape[x]	Red (%)	Attr.[x]	Taste[x]	Pub.[x]	Splits (%)
UFOne	1/25	80	5/9	95 (5.9)	143 (43)	8	34	8	9	8	0
UFBeauty	1/28	60	5/1	85 (8.5)	108 (25)	9	88	9	8	8	0

[z] Percent crop load (Crop) is judged as percentage of a full crop after thinning, i.e. fruit evenly spaced 10 to 15 cm apart throughout canopy.
[y] FDP is the fruit development period from 50% bloom to first commercial harvest.
[x] Subjective ratings for shape, attractiveness (Attr.), taste, and pubescence (Pub.) are: 1 = least desirable, 7 = commercially acceptable, 10 = most desirable.
[w] The two cultivars are not significantly different (p = 0.11). Numbers in parentheses are standard deviations of the mean.

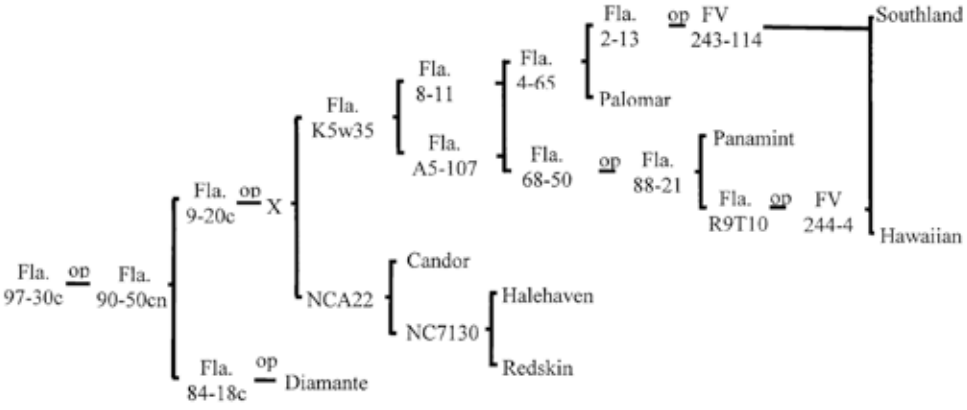

Fig. 1. Pedigree of 'UFOne' peach (Fla. 97-30c). 'X' and 'op' represent unselected seedling and open-pollinated cross, respectively.

in the University breeding and test plots, and budwood from these plots has been found to be virus free in countries that routinely quarantine and index.

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What Makes 'Marion' Blackberries Taste So Good?

'Black Diamond' is a recently developed thornless blackberry with large fruit size, high yield, and good processed fruit quality that has rapidly become an industry standard. However, its flavor is not the same as 'Marion', which is regarded by the industry as having the ideal flavor. Volatile composition analysis demonstrated that the overall volatile profile in 'Marion' and 'Black Diamond' were very similar, but the concentrations of some aroma compounds varied greatly. The major difference between the cultivars was that 'Marion' had a 5 times higher odor-activity value (OAV) of furaneol than 'Black Diamond', while 'Black Diamond' had a 3 times higher OAV of linalool than 'Marion'. The chemical analysis results matched with the descriptive sensory evaluation that 'Marion' had more berry, fruity, strawberry aroma while 'Black Diamond' had more floral aroma. Paraphrased from X.F. Du et al. 2009. Food Chemistry 119(3):1127-1134.