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'Contender' Peach

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'Contender' peach [*Prunus persica* (L.) Batsch] is being released to fulfill the need for a high-quality, consistent-cropping, yellow-fleshed freestone cultivar ripening between 'Loring' and 'Elberta'.

Origin

'Contender', tested as NCT 544, originated from a cross of 'Winblo' x 'NCX 64' (Fig. 1) made by F. Correll in 1974. The seedling tree was first selected in 1977, and then tested in advanced selection and grower trials from 1980 through 1987.

Description

'Contender' ripens ≈7 days before 'Elberta' and 21 days after 'Redhaven', about the same time as 'Cresthaven'. 'Contender' has a chilling requirement of ≈1050 hr and blooms later than most commercial peach cultivars, thus reducing the risk of freeze injury to flower buds at bloom. 'Contender' is very bud-hardy. Trees of 'Contender' set a crop of fruit in 1985 when most other commercial peach cultivars set no crop due to -20.5°C freeze on 20 Jan. (Table 1). Flower bud survival and fruit set of 'Contender' generally exceed that of most commercial cultivars following exposure to freezing temperatures during bloom (Table 2). In addition to superior flower bud hardiness, trees of 'Contender' set a high number of flower buds (Table 3), thus increasing the probability of crop production after freeze injury (3). Fruit size is large, consistently averaging 64 to 70 mm diameter (2.5 to 2.75 inch) and fruit are firm and round (Fig. 2). We judge skin and flesh color to be excellent. A bright-red overcolor covers ≈70% of the fruit at maturity. The ground color is yellow. No

red pigmentation has been observed in the flesh. The melting flesh is fully free from the pit at maturity. Flowers of 'Contender' are non-showy, and leaf glands are reniform. Pollen is bright yellow and abundant. Trees are self-fertile. Flesh of 'Contender' is very resistant to browning after exposure to air, averaging 24.1 on a Hunter colorimeter scale

Table 1. Flower bud survival of 'Contender' and various peach and nectarine cultivars following a -20.5°C freeze on 20 Jan. 1985. Data taken 3 Apr. 1985 at the Sandhills Research Station, Jackson Springs, N.C.

Cultivar	Flower bud survival rating ^a
Contender	2
Encore	3
Mericrest ^b	3
Reliance	4
Other commercial cultivars	0

^aRated on a scale of 0 to 5: 0 = no flower bud survival; 3 = sufficient bud survival for a commercial crop; 5 = sufficient bud survival for three times a commercial crop or greater.

^bNectarine cultivar.

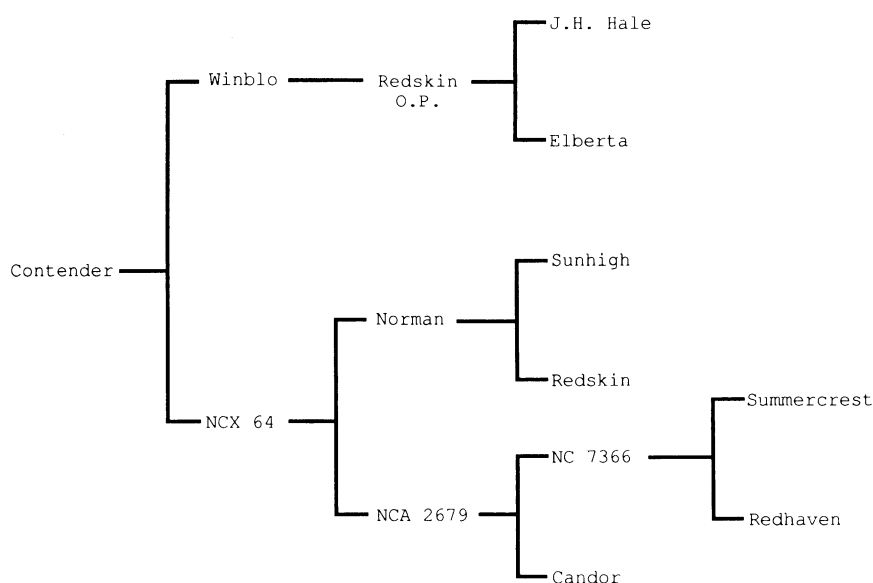


Fig. 1. Pedigree of 'Contender' peach.



Fig. 2. Fruit of 'Contender' peach.

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Table 2. Crop load ratings of 'Contender' and various peach and nectarine cultivars after a 2 Apr. 1987 freeze of -2.7°C . Ratings taken prior to fruit thinning at the Sandhills Research Station, Jackson Springs, N.C.

Cultivar	Crop rating ²
Contender	8
Clayton	5
Cullinan	1
Encore	10
Fantasia ³	1
Hardired ³	8
Mericrest ³	2
Nectared 4 ³	8
O'Henry	1
Ouachita Gold	3
Redgold ³	6
Redhaven	7
Redskin	1
Reliance	10
Ruston Red	6
Sentry	0
Summer Pearl	4
Sunprince	1
Topaz	1

²Crop load rating code: 0 = no crop, 5 = commercial crop, 10 = three times a commercial crop or greater.

³Nectarine cultivar.

Table 3. Number of flower buds per node of 'Contender' and various other peach cultivars. Data taken Feb. 1986 at the Sandhills Research Station, Jackson Springs, N.C.

Cultivar	Buds per node ²
Contender	1.26
Biscoe	1.08
Encore	1.39
Redhaven	0.72
Reliance	1.23
Sunprince	0.76
Topaz	0.37
Winblo	0.64

²Mean value of two to three trees per cultivar. Five shoots randomly selected from each tree.

of 11 to 28 (high to low browning, respectively) over 4 years of measurement, making it one of the latest-ripening non-browning

Table 4. Susceptibility of 'Contender' and various other peach cultivars to bacterial spot (*Xanthomonas campestris* pv. *pruni*). Data taken Aug. 1982 during a moderate disease epiphytotic and Aug. 1984 during a severe disease epiphytotic at the Sandhills Research Station, Jackson Springs, N.C.

Cultivar	Fruit infection rating ² , 1982	Percent defoliation		Leaf infection rating ³	
		1982	1984	1982	1984
Contender	1.6	5	20	2	5
Biscoe	1.2	5	5	2	3
Clayton	1.9	5	25	1	3
Harvester	2.4	5	20	3	4
Loring	2.2	---	20	---	4
O'Henry	4.6	---	85	---	5
Redhaven	3.5	35	35	4	4
Redskin	4.8	20	20	4	3
Sentinel	0.9	---	20	---	4
Sunhigh	4.6	40	40	4	5
Winblo	2.4	25	25	3	5

²Rated on a 0 to 5 scale: 0 = no lesions; 1 = up to 1% fruit surface affected, lesions not more than skin deep; 2 = 1% to 10% fruit surface affected, lesions not more than 3 mm deep; 3 = 11% to 30% fruit surface affected, lesions not more than 3 mm deep; 4 = >30% fruit surface affected, lesions not more than 3 mm deep; and 5 = >30% fruit surface affected, majority of lesions more than 3 mm deep and 5 mm in diameter. Fruit infection severity determined on about 35 randomly picked fruit from each cultivar. Sampled within 3 weeks of fruit maturity.

³Rated on a scale of 1 to 5: 1 = trace (a few leaves with lesions observed); 2 = up to 5% foliage with lesions; 3 = 6% to 15% foliage with lesions; 4 = 16% to 40% foliage with lesions; 5 = >40% foliage with lesions.

selections commercially available (1). Foliage of 'Contender' has moderate resistance to bacterial spot (*Xanthomonas campestris* pv. *pruni*), equivalent to that of 'Winblo' (2) (Table 4). Fruit, although susceptible, have not been observed to be severely affected. Under conditions of a severe bacterial spot epiphytotic, fruit of 'Contender' showed limited disease symptoms and foliage exhibited acceptable field-tolerance (Table 4). Trees of 'Contender' are similar to 'Redhaven' in growth habit, but are slightly more vigorous.

Response to 'Contender' has been favorable in grower trials in both the piedmont and sandhills of North Carolina. 'Contender' has performed well in trials at Clarksville, Mich. Performance of 'Contender' in trials in central Georgia have been satisfactory; however, fruit have shown a tendency to develop a pointed tip under growing conditions there. This tendency is commonly observed on high-chilling peach cultivars when grown

in the deep south. Thus, 'Contender' is not recommended for culture in southern Georgia and similar climatic zones.

Availability

Limited amounts of non-indexed budwood may be obtained from D.J. Werner. Trees are available from commercial nurseries.

Literature Cited

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