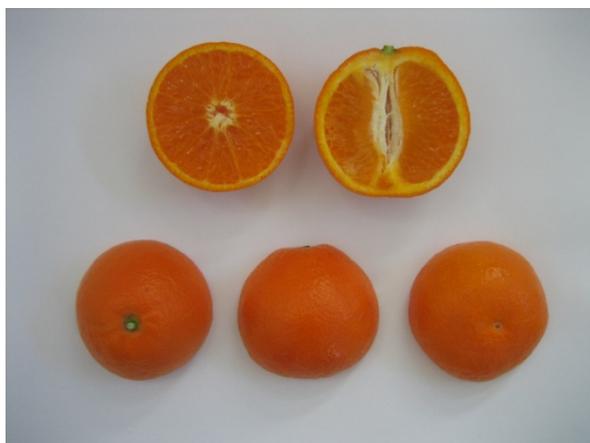


'FairchildLS' Mandarin

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'FairchildLS' is a mandarin selection developed at the University of California Riverside by mutation breeding of 'Fairchild', a mid-season maturing variety. The primary distinguishing attribute of 'FairchildLS' is that it is low seeded (2.4 seeds/fruit) in all situations of cross-pollination, differing from 'Fairchild' which will set up to 15-25 seeds/fruit in cross-pollinated situations. In Riverside, California 'FairchildLS' matures in winter (early January) and holds its fruit quality characteristics through late March. Maturity in the San Joaquin Valley is about 2 weeks later than in Riverside. In the Coachella Valley, it is about 1 month earlier than in Riverside. The medium sized fruit are deeply oblate in shape with a deep orange rind color and a moderately smooth rind texture. Flesh color is deep orange and finely textured, fruit are juicy, with a rich, sweet flavor when mature, and are moderately easy to peel. Tree growth habit is rounded producing a dense, compact tree crown with excellent production commencing in the third year after planting. 'FairchildLS', like its parent 'Fairchild', may need a pollinizer for best production. 'FairchildLS' is well adapted to growing in all California climate zones normally associated with citrus, including hot desert areas (where maturity and marketing occur in November-December), a rare and distinct advantage for a mandarin. Alternate bearing does occur but can be controlled with appropriate pruning practices.

Fruit Characteristics. Fruit of 'FairchildLS' are deeply oblate to slightly oval in shape with no neck. The fruit is medium sized for a mandarin (classed as Large by State of California standards) averaging 2.5 in (64mm) in diameter and 2.2 in (56 mm) in height with a smooth, deep orange rind color and relatively inconspicuous, slightly depressed oil glands. The rind is of medium adherence at maturity and relatively thin averaging about 0.13 in (3.5 mm) in thickness, making the fruit only moderately easy to peel. The fruit interior has a moderately fine flesh texture with 10-11 segments. The fruit are juicy averaging 47% juice and average 0.24 lb (110 g) in weight. Fruit from trees on Carrizo citrange rootstocks averaged 12.1-13.0% soluble solids and 0.85-1.17% acid in January at four trial locations in California with soluble solids increasing to 13.2-14.5 % and acid decreasing to 0.76-0.93% by mid-March. Fruit from trees on C35 citrange rootstocks averaged 11.2-12.8% soluble solids and 0.94-1.23% acid in January at four trial locations in California with soluble solids increasing to 13.1-14.0% and acid decreasing to 0.78-1.01% by mid-March. Fruit average 2.4 ± 0.6 seeds per fruit in the presence of substantial cross-pollination pressure at all trial locations. Seeds, when present, are polyembryonic.



Fruit of 'FairchildLS' and 11-year-old mother tree on Carrizo citrange rootstock

Tree Characteristics. Tree size and growth characteristics of 'FairchildLS' are similar to those of 'Fairchild', with rounded and somewhat spreading canopies in the first four years followed by a tendency to grow into a more compact, dense rounded crown. The eleven-year-old 'FairchildLS' mother tree at Riverside on Carrizo citrange rootstock is 8.8 ft (2.7 m) high and 9.3 ft (3.0 m) wide with a rounded compact growth habit. Bud unions show moderate rootstock overgrowth as is typical for mandarins on Carrizo. Five-year-old 'FairchildLS' trees on Carrizo rootstock average 8.1 ft (2.5 m) in height and 7.8 ft (2.4 m) in diameter. The selection lacks thorns. Flowers of 'FairchildLS' are typically borne in clusters. Pollen viability for 'FairchildLS' is low (25-35% germination) in comparison to 'Fairchild' (84% pollen germination) and pollen production is significantly reduced (about 20% of the quantity of pollen grains as is produced by 'Fairchild'). These pollen characteristics indicate low potential to produce seeds in adjacent varieties. Fruit production of 'FairchildLS' begins in the third year after planting similar to 'Fairchild'. Fruit production on four-year-old trees averaged 62-88 lb (28.2-40.1 kg), and on five-year-old trees averaged 92-108 lb (41.6-49.2 kg). As the original tree aged some alternate bearing became apparent in years seven and eight. This is similar to 'Fairchild' mandarin which has a history of alternate bearing. Optimal pruning practices to minimize alternate bearing have not yet been developed but are likely to involve annual hand pruning.

Release and Distribution: Release of 'FairchildLS' for propagation in California is expected to be approved during winter of 2010, and budwood will be available in January 2010. 'FairchildLS' has been submitted for patenting by the Regents, University of California. A license to propagate and sell the variety will be available to any CDFA licensed California citrus nursery that purchases said license. Budwood for 'FairchildLS' will be distributed from registered screen-protected trees by the University of California Citrus Clonal Protection Program to those licensed nurseries. A three year exclusive propagation period for California nurseries will be enforced. Licenses for propagation outside the USA are being negotiated, but will not take effect until January 2013.