

'Fortune' Plum

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The Agricultural Research Service, U.S. Dept. of Agriculture, stonefruit breeding program in Fresno, Calif., is developing fresh-market Japanese-type plums (*Prunus salicina* Lindl.). The fruit crosses among plums were made in 1955. Since then, >62,000 seedlings have been grown and five cultivars released: 'Queen Rosa', 'Frontier', 'Friar' (Weinberger, 1975), 'Calita', and 'Blackamber' (Ramming and Tanner, 1981). Currently, 'Friar' and 'Blackamber', both black plums, make up 25% of the 222,000 tons of fresh plums produced in California [California Tree Fruit Agreement (CTFA), 1990]. As a result, black plum prices usually are depressed during midseason, when 'Blackamber' and 'Friar' are ripe. Therefore, growers have been looking for red plum cultivars that command a higher market price. 'Fortune' plum (Fig. 1), a large, red, Japanese-type plum hybrid, has been released to provide an attractive, shiny, bright-red plum for the midseason market to complement the abundant supply of black plums.

Origin

'Fortune', tested as C36-107, originated from a 1967 cross of 'Laroda' × 'B65-11' (Fig. 2) made at the U.S. Horticultural Field Station, Fresno, in cooperation with California State Univ., Fresno. The seedling first fruited in 1971 and was one of three seedlings selected from a family of 842 by John H. Weinberger. 'Santa Rosa', 'Gaviota', and 'Eldorado', the ancestors of 'Fortune', were developed by Luther Burbank, reportedly from crosses of *P. salicina* with other diploid *Prunus* species (Howard, 1945). 'Fortune' was not released when it was found because, at that time, the market demanded black plums such as 'Blackamber' and 'Friar'. 'Fortune' has been accepted by the California stone fruit industry, and 15,000 (10% of all plum trees sold) and 58,000 (27%) trees were sold by nurseries in the 1988-89 and 1989-90 seasons, respectively (CTFA, 1990).

Description

The main advantage of 'Fortune' is its shiny, bright-red pigmentation, which makes it the most attractive red plum on the market, relative to 'Santa Rosa', 'Simka', 'Casselmann',

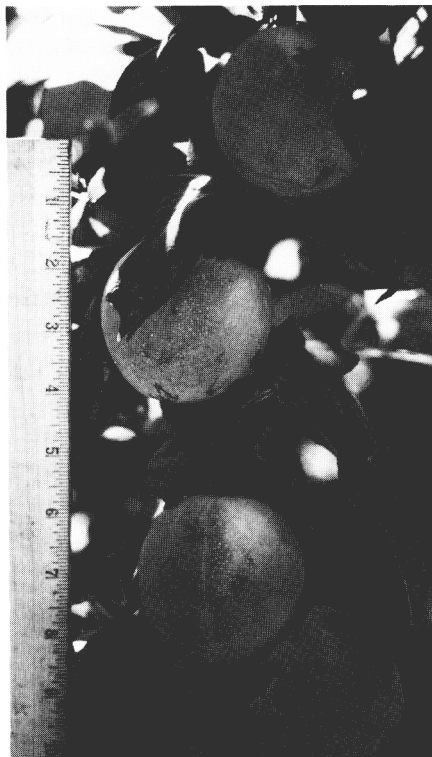


Fig. 1. 'Fortune' plum (scale is in inches 1 inch=2.54 cm).

and other red plums, as judged by us. 'Fortune' ripens the third week of July in Fresno with 'Friar'. Fruit development from full bloom to first harvest is ≈ 105 days. Fruit are round and large. In 1990 commercial packouts, >75% of the fruit averaged 5.4 to 6.4 cm in diameter (CTFA, 1990). Fruit from a commercial planting of 13-year-old trees in Fresno averaged 6.9 mm in suture diameter and 6.7 mm in cheek diameter, and were an average of 6.5 mm high and weighed 175.6 g, with a pit weight of 2.1 g (n = 30). The pit is small, comprising <2% of

the fruit weight. The flesh clings to the pit until the flesh is fully ripe.

The external fruit color is a candy-apple red with slightly yellow shoulders that turn fully red during storage. The red color is 46G7 with the bloom and 6K6 without bloom (Maerz and Paul, 1930). The flesh is light yellow (11K5) and firm.

Firmness measured 8 July 1988 with a Magness (D. Ballauf Manufacturing Co., Washington, D. C.) pressure tester with an 8-mm tip was 19.1N for 'Fortune' and 22.2 N for 'Friar'; soluble solids concentration was 12.4% and 10.9%, respectively. The flavor, as judged by us, is good, and the flesh is medium-juicy with fine texture. In storage tests, 'Fortune' had a 6-week storage life at 0°C compared to 3 to 4 weeks for 'Friar' (Mitchell et al., 1979). Other storage traits such as firmness, ripening rate, and water loss were as good as, or better than, those of 'Friar' in these tests.

'Fortune' trees are of average vigor and are upright to slightly spreading in growth habit. They are not as upright in habit as 'Friar', but more so than 'Santa Rosa'. Flower buds contain one or two flowers. The flowers produce pollen, but are self-incompatible and require a pollinizer. 'Fortune' blooms with 'Friar' and is cross-compatible with 'Friar', 'Laroda', and 'Santa Rosa'. Because fruit set readily, thinning is required in most years. 'Fortune' is recommended for planting in areas where Japanese-type plums are grown.

Availability

'Fortune' has been indexed by Foundation Plant Material Service, Univ. of California, and found free of virus. Budwood and trees are available from commercial nurseries.

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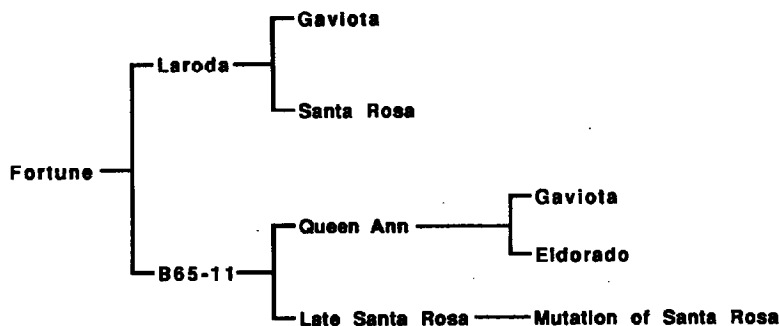


Fig. 2. 'Fortune' plum pedigree.

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