'DURADO'—A New Fresh

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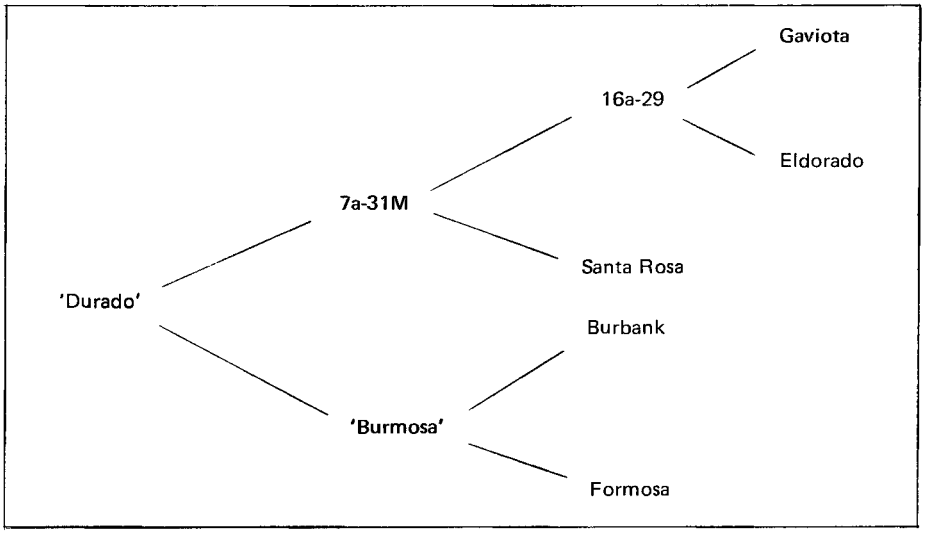
Durado, an early maturing Japanese plum, resulted from a cross made in 1966 (see figure). It was selected in 1969, propagated at the Kearney Horticultural Field Station in the same year, and placed in several authorized grower-cooperative trial plantings in Fresno, Tulare, Kings, and Kern counties in 1972 and 1973. Several of these test plantings bore fruit in 1975. It was tested as Selection 9,27-58.

'Durado' trees are moderately vigorous, upright-spreading, with dark green foliage. The clone forms numerous spurs, with many flower buds. It is apparently congenial with the common rootstocks used for plums: peach (including Nemaguard seedlings) and myrobalan or Marianna 2624 plums.

'Durado' blooms heavily, and over a rather prolonged period. As shown in table 1, first bloom has been from 4 to 9 days earlier than for 'Santa Rosa.' Full bloom for 'Durado' has usually occurred at the same time as 'Santa Rosa,' but in 1974 was 7 days earlier. First leaf has been from 1 to 7 days before first leaf of 'Santa Rosa.' These observations indicate that 'Durado' has a slightly lower chilling requirement than 'Santa Rosa,' and that in some years, such as 1974, the bloom of 'Durado' and 'Santa Rosa' might not overlap sufficiently to provide good pollination for 'Durado.'

'Durado' fruit is of medium size. In 1974 a random sample of fruit from a thinned limb was of the following dimensions: axial length 44.7 ± 2.0 mm (1.77 inches), by 57.0 ± 2.2 mm (2.25 inches) cheek diameter, by 54.9 ± 2.4 mm (2.16 inches) suture diameter. An average weight was 82.7 ± 10.5 grams (5.5 fruits/pound). The fruit is oblate (flat) in shape. With proper thinning it readily attains a 4 x 5 pack (2-inch diameter) size, or longer. Upon maturation the fruit takes on a full red blush on all exposed fruit, and nearly so for shaded fruits. This is deemed to be the proper stage for harvest for shipping. At full maturity, all fruits become very dark red to almost blue-black.



The fruit is firm, and remains so during the ripening process. The flesh is amber in color, with no red from the skin permeating the flesh. The stone is medium-small for the fruit size. Edible quality is excellent: rich, aromatic, and sprightly.

The main defect noted to date has been a tendency for some fruits to show a slight cracking at the stylar end. This is especially noticeable in fully exposed fruit.

'Durado' matures early, as shown in table 1. It has ripened from 23 to 27 days before 'Santa Rosa' at the Kearney Horticultural Field Station. No direct comparison with 'Red Beaut' is available, but 'Durado' appears to ripen from 2 to 3 days ahead of that variety in some years, and about the same time in others, as in 1975. 'Durado' has an extended ripening period, probably associated with its extended bloom period. For that reason, it is believed that at least two pickings will be necessary to secure all of the fruit.

Pollination

Attempts to determine the pollination requirements, and suitable pollinizers for 'Durado' have been made, as shown in table 2. In 1973 all flowers used in the pollination tests were emasculated, except for those used in determining self-fruitfulness of the new clone, which were bagged to prevent cross-pollination. All results were negative. In 1974 and 1975 blooms were bagged before emergence,

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and the unemasculated flowers were pollinated with the selected pollens at approximately full bloom, the bags being replaced following pollination.

Because of the observation of early blooming of 'Durado' only early-blooming clones were used in the pollination tests. 'Mariposa' and 'Roseheart' proved to be adequate pollinizers for 'Durado.' 'Burmosa' pollen gave a low percent set in the best test, but is considered inadequate as a pollinizer for 'Durado' because of the low production of viable pollen in 'Burmosa.' 'Frontier' appeared to be cross-unfruitful in the single test of that clone in 1974.

'Santa Rosa' was used only in 1975, and gave no set in the controlled tests. However, observations in the test plots, isolated from other plum varieties, showed full sets where 'Santa Rosa,' 'Late Santa Rosa,' or 'Casselman' were the only available pollinizers. A sister seedling selection, 9,20-60, has given negative results in controlled pollination tests, and has not shown any cross-fruitfulness in trial tests where the two clones, 'Durado' and 9,20-60, were interplanted and isolated from other plum varieties.

'Durado' produces an abundance of viable pollen, and bees visit the trees as readily as they do other pollen fertile clones. Therefore, planting to provide pollination can be done according to the usual plans. There is no need to provide pollinizers in every tree, as has become common with the pollen sterile 'Red Beaut' clone.

It is recommended that if but one pollinizing variety is to be used to set fruit of 'Durado,' it be 'Mariposa.' Perhaps a better plan would involve two pollinizers, 'Mariposa' and 'Santa Rosa,' 'Late Santa Rosa,' or 'Casselman.' 'Roseheart' could be substituted for the latter clones. This recommendation is based on the 1974 blooming pattern, which indicated that only the last emerging blooms of 'Durado' would have been receptive when the other, later blooming clones were in full bloom. It may also be important to have pollen of a cross-fruitful variety available for fruit setting during the earlier part of the rather extended 'Durado' bloom period.

'Durado' is recommended as an early maturing, high quality fresh dessert plum.

Patent rights to 'Durado' were assigned to the Regents of the University of California. Qualified nurserymen may obtain commercial licenses for propagating and selling 'Durado' plum from the University of California Board of Patents, 485 University Hall, 2200 University Avenue, Berkeley, California 94720, phone (415)642-4777. The royalty for nursery-propagated trees will be 75 cents per tree.

TABLE 1. PHENOLOGICAL DATA COMPARING 'DURADO' TO OTHER PLUM CLONES.

		'DURADO'	'Mariposa'	'Santa Rosa'	'Roseheart'
First bloom	1972	2/22	–	2/26	2/28
	1973	2/7	–	2/12	2/10
	1974	2/5	2/5	2/14	2/11
	1975	2/21	2/24	2/25	2/25
Full bloom	1972	3/4	–	3/4	3/7
	1973	2/19	–	2/25	2/24
	1974	2/23	2/20	3/2	3/2
	1975	3/4	3/5	3/4	3/6
First leaf	1972	2/26	–	2/29	3/3
	1973	2/15	–	2/19	2/19
	1974	2/17	–	2/24	2/26
	1975	2/28	3/8	2/28	2/28
Tree ripe*	1972	5/22	–	6/16	–
	1973	5/27	–	6/23	–
	1974	5/27	–	6/20	–
	1975	6/10	–	7/3	–

*Shipping maturity is reached 4-6 days before given dates.

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TABLE 2. POLLINATION TEST RESULTS OF 'DURADO.'

Pollinizer	Best set recorded (%)
Mariposa	6.1
Burmosa	0.8
Frontier	0.0
Roseheart	6.4
9,20-60	1.2
Santa Rosa	0.0
Durado (self)	0.0