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'Flordadawn' Peach

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'Flordadawn' peach [*Prunus persica* (L.) Batsch] has been released by the Florida Agricultural Experiment Station as the earliest ripening peach with commercial potential in the United States (Fig. 1). 'Flordadawn' bears attractive fruit with yellow flesh and ripens before 'Flordaking' (Andrews et al., 1979) in northern Florida.

Origin

'Flordadam' is the result of a 1976 cross of 'Flordagold' × 'EarliGrande'. It was designated G9-1 as the first seedling selected in 1979. Budded trees have been observed in Univ. of Florida test sites and in grower locations in Gainesville and Monticello, Fla., southern Georgia, southern Texas, southern Louisiana, and in various countries of the world with subtropical climates.

Description

Major advantages of 'Flordadawn' are early ripening, attractiveness, degree of firmness, and resistance to bacterial spot [*Xanthomonas campestris* pv *pruni* (Smith) Dye]. 'Flordadawn' trees have an estimated winter chilling requirement of 300 chill units (cu), in relation to established chill units of known cultivars based on the model of Weinberger (1956). Full bloom at the AREC-Monticello from 1982 to 1988 averaged 25 Feb., ≈ 3 days before 'Flordaking' (Table 1). Full bloom

during 1989, an unusually mild winter, was 7 days before 'Flordaking'. 'Flordadawn' has fruited well where the coldest month averages 14 to 17C, and in colder locations in the absence of spring frosts. 'Flordadawn' is best adapted where 'Flordaking' or 'Flordagold' production has been proven reliable. A protracted bloom period of 'Flordadawn', as in 'Flordagold', may contribute to successful production in the northern limits of its range. 'Flordadawn' should be planted in areas of low frost potential in northern Florida because of early bloom. Blossom hardiness in the presence of spring frosts appears to be about equal to 'Flordaking'. Trees are spreading and are easily trained to an open

center. 'Flordadawn' trees must be trained to facilitate maximum light interception by the fruit. 'Flordadawn' sets a moderately high number of flower buds, compared to other peach cultivars grown in northern Florida, and requires a high amount of fruit thinning in the absence of spring frosts.

First commercial harvest has averaged 25 Apr., ≈12 days before 'Flordaking' (Table 1). Fruit development period from full bloom to first harvest is ≈ 60 days. Fruit size has averaged 5.1 cm in diameter and 90 g in weight. Fruit shape is round with a slight suture bulge and a slightly pointed tip. An 80% red blush covers an attractive yellow ground color. Pubescence is medium-short. Flesh is yellow, nonbrowning, melting in character, and is classified as semi-cling, with little separation of the flesh from the pit when ripe. 'Flordadawn' is sweet for an early season peach. Pits are relatively small and have a moderately high incidence of split pits (about equal to 'Flordaking'). 'Flordadawn' fruit greatly increase in size if left on the tree beyond the stage for commercial harvest.

Fig. 1. Fruit of 'Flordadawn' peach.

Table 1. Characteristics of 'Flordadawn' at commercial picking stage from 1982 to 1989 at the AREC-Monticello.^a

Year	Full bloom		First harvest			Red overcolor (%)	Fruit size		
	Date	Days before Flordaking	Date	Days before Flordaking	Crop load ^b		Wt (g)	Diam (cm)	Fruit shape ^c
1982	17 Feb.	0	19 Apr.	18	10	80	90	5.1	NA
1983	27 Feb.	2	5 May	11	6	80	84	5.0	NA
1984	NA	NA	23 Apr.	NA	NA	NA	NA	NA	NA
1985	27 Feb.	4	25 Apr.	9	8	75	116	5.5	8
1986	19 Feb.	0	16 Apr.	13	8	80	94	5.1	8
1987	1 Mar.	1	1 May	12	9	80	78	5.0	8
1988	27 Feb.	5	30 Apr.	10	7	75	93	5.1	8
1989	1 Feb.	7	24 Apr.	NA	2	90	82	5.0	7

^aNA = Information is not available.

^bCrop load rating: 0 = no crop to 10 = full crop; optimum crop load for 'Flordadawn' = 8.

^cShape ratings: 1 = least desirable; 10 = best or most desirable.

'Flordadawn' trees are vigorous, and, in the absence of spring frosts, yields have been observed to be high for an early season peach. Leaves are moderate in size with globose petiolar glands. Leaves and fruit are highly resistant to bacterial spot, about equal to that of 'Flordaking'. 'Flordadawn' is self-fertile, with showy flowers and yellow pollen.

Availability

Inquiries regarding budwood availability may be directed to the Florida Foundation Seed Producers, Inc., P.O. Box 309, Greenwood, FL 32443. Limited quantities of non-indexed budwood may be obtained from AREC-Monticello, Rt. 4 Box 4092, Monticello, FL 32344.

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Rutabaga Germplasm TuMV-R Possessing Resistance to Turnip Mosaic Virus

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Turnip mosaic virus (TuMV) is the most important and widespread virus infecting cruciferous crops. In certain years, this virus can be a serious problem for late-season commercial rutabaga [*Brassica napus* ssp. *rapifera* (Metzg.) Sinsk] production in Ontario and Quebec, Canada. For example, in 1985, an outbreak of TuMV on rutabagas in southern Ontario resulted in severe production losses (Shattuck and Stobbs, 1987). Plants infected with TuMV suffer premature leaf-drop and reduced root yields. The rutabaga industry in Canada (Shattuck and Proudfoot, 1990) is based on the cultivar Laurentian, which is very susceptible to TuMV (Shattuck and Stobbs, 1987). Furthermore, all other North American-grown rutabaga cultivars are susceptible to TuMV infection. TuMV-R is being released because it has value as germplasm for the development of TuMV-resistant rutabaga cultivars.

Origin

TuMV-R originated from selections made in the segregating generations from the cross 'Laurentian' and a TuMV-resistant selection of 'Macomber' in 1969. For 10 generations, a conventional phenotypic recurrent selec-

tion program was used in Quebec to select TuMV-resistant segregants possessing acceptable foliage and root morphology. During the early generations, the populations were field-inoculated with TuMV before selection; later screening relied on natural field infection. TuMV-R is the product of bulking the intercrossed and selfed seed of plants that were field-selected in Ontario, Canada, from 1986 through 1989, under heavy natural TuMV-infection pressure, for absence of

visual TuMV symptoms during root development and acceptable plant characteristics.

Description

Plants of TuMV-R have robust growth with dark-green foliage and an upright rosette of leaves. Foliage growth of TuMV-R is more abundant than 'Laurentian', and maturity time is similar to this cultivar. When grown under optimal conditions, roots at maturity vary from 10 to 20 cm in diameter and are spherical to flat-round in shape, with a violet top, white bottom, and pale-yellow internal flesh (Fig. 1). Roots of TuMV-R store as well as 'Laurentian' and can be waxed for the fresh market. We have conducted several formal sensory evaluations on TuMV-R that indicated that the flavor of raw or cooked roots is fully acceptable to consumers. Our results have further shown that the raw root flesh of TuMV-R possesses a distinctly different flavor from that of 'Laurentian'; the flavor being less pronounced. Plants of TuMV-R are fully self-fertile.

Plants of TuMV-R, when infected with the S₁ or S₃ strains of TuMV (Stobbs and Shattuck, 1989) by aphids in the field or through manual inoculation in the greenhouse, typically lacked visual disease symptoms during root development. Enzyme-linked immunosorbent assays (ELISA) (Stobbs and Shattuck, 1989) revealed the presence of trace amounts of virus in symptomless plants. However, TuMV symptoms usually become

Fig. 1. Harvested roots of TuMV-R.

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