'La Belle' Peach

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'La Belle' is a yellow flesh, freestone peach [*Prunus persica* (L) Batsch] for fresh-market use requiring about 600 h below 7.2 °C to satisfy dormancy in buds. 'La Belle' is the twenty fourth cultivar released from the Louisiana State University Agricultural Center (LSU AgCenter), Clinton, peach breeding program. The peach breeding project was initiated in the 1940s to develop cultivars adapted to the lower and Gulf southern U.S. region. Fruit of this cultivar are freestone with melting flesh suitable for local sales and long-distant shipping. This selection ripens about 3 July in central Louisiana about 10 d after 'La Feliciania' (Hawthorne et al., 1980).

Origin

'La Belle' first fruited in 1976 and was tested as L73-A20-17. This selection was evaluated at the LSU AgCenter's Idlewild Research Station, Clinton (lat. 30° 49'08" N and long. 90° 58'40" W). Additional evaluations were made at grower locations in southern Louisiana and research stations in Georgia. The original tree was selected by P.L. Hawthorne (professor emeritus) from a group of seedlings derived from a 1973 cross of 'Dixiland' and L63-17-13. A complete pedigree is presented in Fig. 1.

Description and Performance

Trees of 'La Belle' were grown in a research orchard at the LSU AgCenter Idlewild Research Station. Annual evaluations were made on the original tree and on additional trees budded to 'Lovell' rootstock. Data were also obtained from trees growing in two tree plots replicated three times in an orchard alongside elite selections and locally recommended cultivars. Trees in the orchard were trained to an open center form. Recommended cultural practices and nutrients were applied to the entire orchard according to extension service recommendations (Puls et al., 1994). When properly thinned to 15 cm apart, 'La Belle' produces 75-mm-diameter fruit (125 to 225 g) with yellow flesh and some red flesh near the suture and pit areas. The primary surface color is yellow with about 70% bright red over-

color. Fruit are round to slightly oval in shape (Fig. 2). The fruit shape and size is similar to 'Dixiland' cultivar. The fruit is uniformly firm on cheek at suture and side opposite suture. Pubescence is short and nonobjectionable for marketing field-packed fruit for local markets. A uniform rating system of recording information was used to rate fruiting characteristics of each cultivar and selection independently. Over a 10-year period 'La Belle' consistently produced firm, attractive fruit with a mean score 8.2 ± 0.7 and 8.3 ± 0.6 respectively, out a possible 10. There were no notations of split pits in the records of this selection for

the 12-year period of 1988–2000. Fruit of this selection ripens first week of July or about 10 d after 'La Feliciania' (Hawthorne et al., 1980) in Clinton (Table 1).

This selection has been observed to have excellent internal color retention with a very slight amount of browning after 1 h at room temperature (22 °C). The pit completely separates from the flesh when ripe.

Pubescence is short and nonobjectionable for marketing field-packed fruit for local markets. In ratings and observations made from 1990–2000, 'La Belle' consistently scored high for quality attributes such as texture and taste (Table 3). The sugar to acid ratio of this selection is comparable and sometimes higher than other cultivars in the same ripening season. The fruit would be considered an acid type for processing purposes.

Leaves are medium large with small serration on margins. Two to four small reniform-shaped glands are located at the leaf base and petiole. Trees are vigorous and have shown no tendency toward excessive sun scald or cold damage. Fruit and leaf buds require about 600 h below 7.2 °C during the dormant period to

Fig. 1. Pedigree of 'La Belle' peach. O.P. = Open Pollinated.

Fig. 2. 'La Belle' peach.

Table 1. Comparison of full bloom and fruit ripening dates of 'La Belle' with 'La Feliciania' and 'La White' cultivars 1990–2000, Clinton, La.

Selection	Years of observation (no.)	Mean harvest date ^a	Mean date of full bloom ^b	Estimated chill hours required ^c
La Feliciania	10	176 ± 7.2	60 ± 5.5	550
La White	10	161 ± 5.2	78 ± 7.1	650
La Belle	10	184 ± 7.7	74 ± 5.2	600

^aDates of full bloom are over the same ten year period for all cultivars.

^bJulian calendar dates

^cChilling hour requirement was estimated by comparing the time of full bloom to cultivars of known chilling requirement, i.e., 'La Feliciania' and 'La White' for the same 10-year period.

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Table 2. Comparison of 'La Belle' fruit to standard cultivars in total sugar and acid composition, Clinton, La. Five uniformly ripe fruit were harvested from each of three trees in Summer 2000. Each tree was a replication. Five fruit from each tree were peeled, macerated, and blended together before samples were taken.

Variety	pH	Soluble solids ^z (%)	Titrateable acidity ^y (%)	Solids to acids ratio
Hawthorne	4.1	14.6 a ^x	0.6 a	24.3.0 a
Dixiland	4.29	18.1 b	0.7 a	25.4 a
La Belle	4.40	15.9 a	0.5 a	31.2 a

^zSoluble solids were determined by bench type refractometer.

^yTitrateable acidity was determined by titrating a 10-mL sample to an end point pH 8.1.

^xMeans followed by the same letter within a column are not significantly different according to Duncan's test ($P \leq 0.05$).

satisfy the chilling requirement during dormancy (Table 2).

Disease Characteristics

Trees of 'La Belle' were grown in a research orchard alongside cultivars that were susceptible to bacterial spot caused by *Xanthomonas campestris* pv *pruni* (Smith) Dye. 'La Belle' has shown slight susceptibility to bacterial spot on both leaves and fruit in years when the incidence of disease was high on surrounding trees of susceptible cultivars.

Recommendations

'La Belle' is recommended for commercial and home orchard planting where a good quality, large fruited freestone cultivar is needed that ripens about 5 d before 'Dixiland' (Table 2) requiring about 600 h of chilling, which

is slightly less than 'Dixiland'. This cultivar will help to fill a gap between 'La Feliciano' and 'Dixiland' with a moderate chill requirement.

Availability

Nursery trees of this cultivar are not available from the LSU AgCenter. Commercial nurseries will be furnished bud wood on a first-come basis for the production of nursery trees.

Literature Cited

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