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PEACH VARIETY PERFORMANCE AND QUALITY IN EAST TEXAS

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Summary

Production and fruit quality data averages from 1976-79, for 65 peach varieties are presented. Attributes used to judge potential for commercial production included yield, fruit size, attractiveness, flavor, and firmness. Top-rated varieties, according to the month in which they ripened, were: late May - Springcrest, Springold; early June - Sentinel, Surecrop; late June - Harvester, Velvet, Norman, Troy; early July - Summergold, Denman, Milam; late July - Fayette, Redskin; August - Tyler, Marqueen.

Introduction

In the early 20th century, East Texas was reputed to be the top peach-producing area in the United States with nearly 15,000 acres. Acreage has diminished considerably since that time, largely the result of marketing and production problems. Prices have been exceptionally good in recent years, and acreage is presently increasing from an estimated 3,000 acres in East Texas.

Varieties produced in East Texas ripen over a period usually beginning in early May and ending in early August. Several good varieties are grown, but no variety is without weaknesses that make it subject to replacement. Good quality early-season varieties are especially lacking. The present study was established to evaluate new varieties and breeding selections developed at various locations in the United States and Canada for production and quality attributes in East Texas.

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Materials and Methods

An open-ended planting of 65 peach varieties was made in three tree plots beginning in 1973. Trees were spaced 18 feet apart in 20-foot rows. Cultural care included mechanical tillage of weeds in the row middles and spring and fall applications of 2.0 pounds of Simazine per acre in 5-foot bands on either side of the tree row. Paraquat was used for control of weeds that escaped the Simazine.

Trees were fertilized by surface applications of 12-12-12. Trees received 0.5 pound each in the spring after planting. This rate was increased to 3.0 pounds per tree at 3 years of age and 4.0 pounds per tree each succeeding year. Insects and diseases were controlled by standard commercial practices. Trees were irrigated with a drip system beginning in 1974, receiving a weekly maximum of 60 gallons of water in three applications.

All varieties were rated on the basis of attractiveness, flavor, and firmness. Attractiveness was judged strictly on the basis of eye appeal. Flavor ratings, although carefully evaluated, were based strictly on the opinions of the author and his assistant. Firmness was evaluated simply by handling mature fruits.

Results and Discussion

Production for the 4 years reported--1976, 1977, 1978, and 1979--was not adversely affected by late winter weather. Bloom occurred in February 1976 and early March 1977, but no frost damage occurred. A freeze in late March 1975 destroyed what would have been a light crop on the 7-year-old trees (Table 1).

The 1978 crop was very heavy and most varieties were not thinned sufficiently to develop good size. Undetermined spray damage occurred in 1978 and some of the crop was lost--particularly on late-ripening varieties. Twigs and small branches on many trees were killed by the spray which may have resulted in the poor performance of some varieties in 1979.

Variety Evaluation

Late May -- No variety ripening in this period was clearly outstanding. Springold, considered to be the standard, had reasonable production and quality for an early peach (Tables 1 and 2). Springcrest quality and yield were equal to Springold and ripened an average of 2 days earlier. Bicentennial appears promising, but trees in the test were young and had not had sufficient evaluation.

Early June -- Sentinel, with production of 247 bushels per acre, was easily the top variety in this period. Sentinel's quality was only average and it was a little soft for shipping, but it was a reliable producer. Surecrop, ripening 1 week earlier than Sentinel, displaying promising commercial potential.

Late June -- Harvester, with 268 bu/ac and an average ripening date of June 19 was one of the top varieties in the test. It combines consistent production, excellent firmness, and acceptible quality to rate as a definite commercial variety. Velvet and Norman (June 23) and Troy (June 29) also showed good potential. Red Globe, a widely planted commercial variety, failed to produce well in this test (Table 1).

Early July -- Summergold, Denman, and Milam all exhibited good production and quality and appear to have excellent commercial potential. Loring, a popular, good quality, large-fruited variety, did not produce well (Table 1). Harmony and La Premiere showed good promise. Harmony was consistently the largest peach in the trial.

Late July -- Madison, Fayette, and Redskin with 254, 231, and 207 bu/ac, respectively, were the top-yielding varieties in this period. Madison had poor quality with soft, poorly shaped fruit. Fayette had the best overall production and quality of this group.

August -- Tyler and Marqueen were the most promising selections in the period when considering both quality and production. Reported production figures for all of these selections are low because of late-season pest control problems. A spray program was maintained throughout the season, but a buildup of curculio and brown rot significantly reduced the crop of late-season varieties.

September -- Marsun, Pair Pride and Fairtime all ripened in September, but none were outstanding. Curculio, green june bug, and brown rot combined to destroy much of the crop before harvest. Quality of Marsun and Fairtime was good.

Table 1. Bloom and production data of peach varieties at Overton, averaged for 1976-79.

Variety	Yield (bu/ac)	Ripe Date	Full Bloom	Years Evaluated	Tree Age(yrs)	Composite Rating[2/]
Camden	135	5/18	3/10	4	6	✓✓
Springcrest	153	5/19	3/12	4	7	✓✓✓
Springold	158	5/21	3/11	4	7	✓✓✓
Earlired	151	5/28	3/14	4	7	✓
Bicentennial	91	5/30	3/24[1/]	2	4	✓✓✓
Harrow 719	174	5/30	3/13	4	7	✓✓✓
Candor	141	5/31	3/15	4	5	✓✓
Dixired	111	6/3	3/17	4	6	✓✓
Marglow	126	6/5	3/13[1/]	4	6	✓
Redcap	85	6/6	3/13	4	7	✓
Harbelle	167	6/7	3/15	4	6	✓✓
Surecrop	174	6/7	3/15	4	6	✓✓✓
Legacy	155	6/7	3/13	4	7	✓
Rubired	86	6/9	3/16	4	7	✓
Coronet	86	6/12	3/11	4	6	✓
Sentinel	247	6/13	3/13	4	7	✓✓✓✓
Pekin	114	6/14	3/14	4	6	✓✓
FV4-4506	81	6/15	3/12	4	6	✓✓
Suwanee	103	6/16	3/11	4	6	✓
Harvester	268	6/19	3/12	4	6	✓✓✓✓
Harrow 2043	166	6/21	3/14	4	7	✓✓
Harbrite	197	6/21	3/14	4	7	✓✓
FV4-7140	140	6/21	3/13	4	7	✓✓
Harrow 593	101	6/22	3/15	4	7	✓✓
Velvet	184	6/23	3/11	4	6	✓✓✓
Sunshine	141	6/23	3/16	4	6	✓✓
Norman	190	6/23	3/11	4	6	✓✓✓
Harrow 4219	86	6/23	3/14	4	6	✓
La Gold	164	6/25	3/11	4	6	✓✓
La Red	144	6/26	3/16	4	6	✓✓
Glohaven	87	6/27	3/15	4	6	✓
Red Globe	100	6/27	3/13	4	7	✓✓
Marland	100	6/28	3/22[1/]	4	6	✓✓
Troy	194	6/29	3/12	4	6	✓✓✓
Harrow 2091	130	7/2	3/14	4	7	✓✓
La Premiere	175	7/4	3/17	4	6	✓✓✓
Winblo	148	7/4	3/15	4	7	✓✓
Summergold	285	7/5	3/14	4	6	✓✓✓✓
Harmony	181	7/5	3/14	4	6	✓✓
Babygold 6	227	7/6	3/11	4	7	✓
Milam	222	7/7	3/12	4	7	✓✓✓
Denman	286	7/9	3/13	4	7	✓✓✓✓
Loring	116	7/10	3/11	4	7	✓✓
Babygold 5	160	7/10	3/16	4	7	✓
Cresthaven	124	7/19	3/17	4	6	✓✓
Blake	102	7/19	3/14	4	7	✓✓
Madison	245	7/20	3/18	4	6	✓✓✓
Babygold 7	166	7/20	3/15	4	7	✓
Fayette	231	7/21	3/10	4	7	✓✓✓✓
Redskin	207	7/24	3/11	4	7	✓✓✓✓
Babygold 8	156	7/26	3/16	4	7	✓
Marhigh	163	7/26	3/10	4	6	✓✓
Jefferson	128	7/27	3/14	4	7	✓✓
Jersey Queen	114	7/28	3/19	4	6	✓✓
Babygold 9	202	7/29	3/14	4	7	✓
Monroe	61	8/1	3/15	4	7	✓
Marqueen	161	8/1	3/12	4	6	✓✓✓
Marpride	124	8/3	3/12	4	6	✓✓
Douthits Cling	87	8/4	3/22[1/]	4	5	✓
Tyler	118	8/5	3/23[1/]	4	6	✓✓✓
So Good	130	8/6	3/17	4	6	✓✓
Jim Bowie	23	8/23	3/15	4	6	✓
Fairtime	30	9/3	3/13	4	7	✓
Marsun	43	9/5	3/12	4	6	✓
Pair Pride	30	9/16	3/22[1/]	4	5	✓

[1/] These selections did not bloom in 1976, a year with very early bloom and consequently these bloom dates are misleadingly late.

[2/] Based on the overall potential of each cultivar; ✓ = no potential, ✓✓ = slightly promising, ✓✓✓ = promising, ✓✓✓✓ = strongly promising for commercial production.