'Gulfcrimson' Peach

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'Gulfcrimson' peach is jointly released for grower trials by the U.S. Department of Agriculture–Agricultural Research Service (Byron, GA), Georgia Agricultural Experiment Station, and Florida Agricultural Experiment Station. The "Gulf" prefix indicates this variety was developed for the lower coastal plain, which is largely the Gulf of Mexico region, but also includes a small portion of the Atlantic Coast from North Carolina to Florida.

Trees of 'Gulfcrimson' are vigorous, semispreading, and produce an attractive, sweet-tasting, yellow, and nonmelting flesh fruit intended for the fresh fruit market. It is expected to produce fruit with tree-ripened taste while retaining firmness for longer shelf life than fruit from conventional melting flesh cultivars. 'Gulfcrimson' is suggested for trial as an alternative to 'June Gold' peach in north Florida and south Georgia.

Origin

'Gulfcrimson' originated in Attapulugus, GA, from a 1999 cross of AP96-8 × AP98-5 and was selected and propagated in 2001 and tested as AP01-7 at Attapulugus. Both parents are of complex origin (Fig. 1).

Description

Standards and methods used in this program to evaluate selections have been described (Beckman and Krewer, 1999; Beckman et al., 1995). Trees of 'Gulfcrimson' are estimated to require 400 chill units (Sherman and Lyrene, 1998). This is based on full bloom consistently occurring just before 'Sunlite' nectarine at Attapulugus where full bloom occurs most seasons in mid-February (Table 1). 'Gulfcrimson' has

fruited well where the coldest month averages 12 to 14 °C (Sharpe et al., 1990) and in colder locations in the absence of spring frosts. Thus, we expect this new peach to be adapted in areas where 'Flordaking' and 'Sunlite' nectarine have been grown successfully. Fruit ripen in mid- to late May at Attapulugus, ≈90 to 95 d after full bloom (Table 1) and usually with 'June Gold' peach (Table 2). Trees are vigorous, productive, and without alternate bearing. Trees set a high number of flower buds, have few blind nodes (Richards et al., 1994), and exhibit little bud failure (bud drop) before bloom (Weinberger, 1967). Fruit thinning is required in the absence of thinning by spring frost to size fruit and prevent limb breakage.

'Gulfcrimson' fruit have been observed on the original seedling and budded trees

since 2001. Fruit are medium size, round to slightly elongated, and attractive (Fig. 2), averaging ≈138 g (67 mm diameter) when thinned to ≈15 cm apart. Buttons have not been observed in fruit of 'Gulfcrimson'. Commercially ripe fruit exhibit 80% red over a deep yellow to orange ground color. Fruit shape is round with a recessed tip. The flesh contains, in some years, red-pigmented flecks in the outer flesh on the sun-exposed side of the fruit, but there is little or no red in the flesh at the pit. Flesh texture is smooth and without strings but is clingy to the pit even when fully ripe. Flesh is firm with good sweetness (10% to 12% soluble solids) and does not brown readily on bruised or cut surfaces. Pits are medium small and have not been observed to split even when crop loads were low.

Leaves have small reniform glands. Flowers are showy and pink. Anthers are light red and pollen is bright yellow and abundant. Leaves have shown no bacterial spot [*Xanthomonas campestris* pv. *pruni* (Sm.) Dye] in test plantings where known susceptible genotypes show typical symptoms.

Comparable in size to 'June Gold', 'Gulfcrimson' offers some significant advantages over the industry standard. These include superior cropping reliability, fruit shape, red skin blush, appearance, eating quality, firmness, and a significantly reduced incidence of split pits.

Availability

A plant patent has been filed for 'Gulfcrimson' and a propagation agreement is available through Florida Foundation Seed Producers, P.O. Box 309, Greenwood, FL 32443.

Fig. 1. Pedigree of 'Gulfcrimson'.

Table 1. Tree performance and fruit characteristics² of 'Gulfcrimson' (Attapulugus, GA, 2002 to 2006).

Year	Tree			Fruit							
	Full bloom (Julian)	Crop ^y (%)	Harvest (Julian)	Diam. (mm)	Wt. (g)	Shape	Red (%)	Attr.	Qual.	Firm.	Splits (%)
2002	52	100	147	67	130	8	80	8	8	9	0
2003	49	80	139	61	114	7	80	8	6	9	0
2004	63	80	145	65	147	7	80	7	7	8	0
2005	48	100	150	70	147	8	80	8	7	9	0
2006	40	90	135	71	150	7	80	8	7	9	0
Avg.	50	90	143	67	138	7.4	80	7.8	7.0	8.8	0

² Subjective shape, attractiveness (Attr.), quality (Qual.), and firmness (Firm.) ratings: 1 = least desirable; 7 = commercially acceptable; 10 = most desirable.

³ Percent crop load (Crop) is judged as percent of a full crop, i.e., fruit evenly spaced 10 to 15 cm apart throughout the canopy.

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Table 2. Tree performance and fruit characteristics² of 'Gulfcrimson' and 'June Gold' (Attapulgos, GA, 2002 to 2006).

Cultivar	Tree			Fruit							
	Full bloom (Julian)	Crop (%)	Harvest (Julian)	Diam. (mm)	Wt. (gm)	Shape	Red (%)	Attr.	Qual.	Firm.	Splits (%)
Gulfcrimson	50	90	143	67	138	7.4	80	7.8	7.0	8.8	0
June Gold	74	46	147	63	140	3.6	36	4.6	5.2	7.0	55
Prob (F) ³	0.04	0.03	0.28	0.18	0.72	0.0005	0.0001	0.005	0.0008	0.0008	0.02

²Subjective shape, attractiveness (Attr.), quality (Qual.), and firmness (Firm.) ratings: 1 = least desirable; 7 = commercially acceptable; 10 = most desirable.

³Significance of difference of means in each column, F-test. Percent crop load (Crop), red skin color (Red), and split pit (Split) data were transformed as arcsine (square root) before analysis (Gomez and Gomez, 1984). Untransformed means presented. Data analyzed by general linear models program of the Statistical Analysis System for personal computers (SAS Institute, Inc., 2003). Years were treated as blocks.

Fig. 2. Typical fruit of 'Gulfcrimson'.

Budwood is indexed free of Prunus Necrotic Ringspot Virus and Prune Dwarf Virus.

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