Journal American Pomological Society 54(2):82-83 2000

'Gulfprince' Peach

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Abstract

'Gulfprince,' a moderate chill peach (400 chill units), is expected to be adapted where 'Flordaking' has been grown successfully. Trees have reniform leaf glands and showy flowers and produce large, attractive fruit, with 50% red skin over a deep yellow ground color, that ripen during early June in north Florida and south Georgia. Fruit have sweet, yellow, firm, non-melting, clingstone flesh.

'Gulfprince' peach is jointly released for grower trials by the Florida Agricultural Experiment Station, U.S. Department of Agriculture - Agricultural Research Service (Byron, GA), and Georgia Agricultural Experiment Station. The Gulf prefix indicates this cultivar 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 'Gulfprince' produce an attractive, sweet tasting, yellow, and non-melting flesh fruit intended for the fresh fruit market. It is expected to produce fruit with tree-ripened aroma and taste while retaining firmness for longer shelf life than fruit from conventional melting flesh, fresh market cultivars.

'Gulfprince' is the first non-melting flesh cultivar released from the 3 agency regional moderate chill breeding program based at the UGA Attapulgus Research Farm in Southwest Georgia (30.7° W long., 84.4° N lat.). It originated in Gainesville, Florida, from a 1990 cross of 'Aztecgold' x 'Oro A,' and was selected and propagated in 1993 and tested as Fla. 93-14C at Gainesville, FL and Attapulgus, GA. 'Aztecgold' originated from ('Mexican Cling' x 'Sunred')F2 and 'Oro A' originated from a seed importation from Brazil.

Standards and methods used in this program to evaluate selections have been described (1). Trees of 'Gulfprince' are estimated to require 400 chill units (cu). This is based on full bloom consistently occurring between the standards of 'Early Amber' peach (350 cu) and 'Sunlite' nectarine (450 cu) at Gainesville (4) and with 'Flordaking' peach (400 cu) at Attapulgus where full bloom occurs most seasons in mid-February (Table 1). 'Gulfprince' has fruited well where the coldest month averages 13 to 14 C (3) and in colder locations in the absence of spring frosts. Thus, we expect this new peach to be adapted in areas where 'Flordaking' has been grown successfully. Fruit ripen in early June at Attapulgus, about 105 to 115 days after full bloom (Table 1) or about 3 weeks after 'Flordaking' and about 1 week after 'June Gold' (Table 2). Trees are vigorous, semi-spreading, and require summer pruning to permit light penetration for formation of strong fruiting wood in the lower half of the tree. Trees set a high number of flower buds, have few blind nodes (2), and exhibit little bud failure (bud drop) prior to bloom (5). Fruit thinning is required in the absence of thinning by spring frost, in order to size fruit and prevent limb breakage.

'Gulfprince' fruit have been observed on the original seedling and budded trees since 1993. Fruit are large and attractive ranging from 140 to 160 grams ($2^1/2$ to $2^3/4$ inches diameter) when thinned to about 6 inches apart. Commercially ripe fruit exhibit 45 to 55 percent red (with no stripes) over a deep yellow to orange ground color.

Florida Agricultural Experiment Station Journal Series No. R-07238.

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Fruit shape is symmetrical and the flesh contains some red pigment mostly in the exterior half. There is no red in the flesh at the pit. Flesh clings to the pit even when fully ripe. Flesh is firm with good sweetness and does not brown readily on bruised or cut surfaces. Pits are medium small and have little tendency to split even when crop loads are low.

Leaves have small reniform glands. Flowers are showy and pink. Anthers are yellow with little anthocyanin 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.

A plant patent has been filed for 'Gulfprince' and a propagation agreement is available through Florida Foundation Seed Producers, Inc., P. O. Box 309, Greenwood, Fl 32443. Budwood is indexed free of Prunus Necrotic Ringspot Virus (PNRSV) and Prune Dwarf Virus (PDV).

Literature Cited

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Table 1. Tree performance and fruit characteristics[z] of 'Gulfprince' at Attapulgus, GA (1997-1999).

	Tree			Fruit						
Years	Bloom (Jul)[y]	Crop (%)[x]	Harv. (Jul)	Diam. (mm)	Wt. (g)	Shape	Red (%)	Attr.	Qual.	Firm.
1997	49	70	146	70	156	7	55	7.5	6	8.5
1998	48	55	164	66	140	8	45	8	7.5	8
1999	46	100	150	72	179	8	55	8	7.5	8

[z]Shape, Attractiveness (Attr.), Quality (Qual.) and Firmness (Firm.) ratings: 1 = least desirable, 7 = commercially acceptable, 10 = most desirable.
[y]Julian date.
[x]Crop load is judged as percent of a full crop, i.e. fruit evenly spaced 10-15 cm apart throughout canopy. Significant spring freeze reduced crop load in 1998, striking as 'Sunfre' (550 cu) approached full bloom, i.e. after full bloom of 'Gulfprince,' but before that of 'June Gold' and 'Juneprince.

Table 2. Tree performance and fruit characteristics[z] of 'June Gold,' 'Gulfprince,' and 'Juneprince' at Attapulgus, GA (averaged over 3 years, 1997-1998).

	Tree			Fruit						
Cultivar	Bloom (Jul)[y]	Crop (%)[x]	Harv. (Jul)	Diam. (mm)	Wt. (g)	Shape	Red (%)	Attr.	Qual.	Firm.
June Gold	64	40	146	61	147	4.8	45	5.2	6.5	6.7
Gulfprince	48	80	153	69	158	8	50	8	7	8
Juneprince	62	25	160	62	114	5.5	45	6	6.3	7.2

[z]Shape, Attractiveness (Attr.), Quality (Qual.) and Firmness (Firm.) ratings: 1 = least desirable, 7 = commercially acceptable, 10 = most desirable.
[y]Julian date.
[x]Crops of all cultivars listed were significantly reduced in 1998 by spring frost injury prior to full bloom. Crops of 'June Gold' and 'Juneprince' were reduced in 1999 by inadequate chilling (<400 cu total) which caused trees to bloom late during warm weather. Moreover, 'Juneprince' has consistently produced a large number of "buitons" preventing it from achieving a full crop in any of these 3 years.