

Stone Fruit



Cross-pollinating peach

Peach, nectarine, plum, apricot and cherry are called stone fruit because of their central hard pit. Because of Florida's warm climate, breeding programs for stone fruit have focused on developing "low-chill" varieties – those that can grow and produce fruit with very few hours of chilling or cold weather in the winter. Florida's low-chill stone fruit breeding program was initiated in the early 1950s and has succeeded thanks to two plant breeders, Ralph Sharpe and Wayne Sherman.

Peach

FAES peach breeding began with southern China varieties that had been imported originally into South Carolina, Hawaii, and Okinawa. These were crossed with the best commercial genotypes from the USDA in Ft. Valley, Georgia, and then they were backcrossed to provide the

melting flesh (soft flesh) varieties upon which the low-chill industry was founded.

Recent work has focused on the development of firm flesh (non-melting) fruit for the fresh market. Nonmelting flesh peach was introduced as seed and pollen from Mexico (1969),

North Carolina (1972), and Brazil (1982). Semifreestone, low-chilling genotypes also have been obtained from these three sources. Breeding has continued to select for early ripening and for elimination of the undesirable characteristics associated with nonmelting flesh, such as long fruit development period, high chill requirements, lack of red skin, off flavor, and low aroma. Since nonmelting flesh fruit is allowed to ripen on the trees, more improvements to flavor, skin color, and shape were made. Advances in tree structure, resistance to bacterial spot and leaf rust, and development of an ornamental flowering tree and novel fruit types also have been successful.

Nectarine

Nectarine is actually a waxy-skin peach. A nectarine is obtained

when a single gene change causes the absence of fuzz on the skin. Nectarine varieties for Florida have been developed in the peach breeding program.

Plum

Subtropical plum varieties were developed by crossing a low-chill Japanese plum from Taiwan with high-chill genotypes at USDA, Byron, Georgia. Because of self-incompatibility, they were carried through 5 polycross generations to produce the Gulf series of varieties.

Apricot

The search for a subtropical apricot has centered on a low-chill variety from Thailand [*(P. mume Sieb. & Zucc. x apricot) F2*], and has produced two selections that were open pollinated and backcrossed again to apricot. These seedlings produced the first home garden apricot genotypes in 2002.

Cherry

Development of a subtropical sweet cherry is less promising than that of the other stone fruits, but a low-chill selection of interspecific hybridization has been crossed with sweet cherry and the resulting seedlings may produce a home garden variety.

Stone Fruit Varieties Produced at FAES

Fruit Variety		Date of Release	Fruit Variety		Date of Release
Peach	Flordaking	1978	Nectarine	Sunhome (red ornamental)	1985
	Flordaprince	1982		Sunraycer	1993
	TropicBeauty	1986		UF Queen	1998
	Flordacrest	1988		Sunmist	1994
	Gulfprince	1999		Sunbest	2001
	UF-2000	2000	Plum	Gulfblaze, Gulfbeauty	1997
	UFO	2002		Gulfrose	2000