

INTRODUCTION

Peanuts generate about \$900 million in farm-gate value annually in the United States. In Florida, peanuts are grown on 140,000 to 190,000 acres, producing a crop worth \$115 million to \$154 million. Florida has been producing peanuts for more than 100 years, and the University of Florida has the oldest peanut-breeding program in the nation. Since 1920, research at the Florida Agricultural Experiment Station (FAES) has been responsible for many improvements to the crop.

FROM THE BEGINNING

One of Florida's first peanut breeders was Fred Hull, an agronomist at the University of Florida. In 1928, Hull was the first person to successfully artificially hybridize peanuts. He then collaborated with William Carver to release the cultivar 'Dixie Runner' in 1943, which was grown widely in the southeastern U.S.

After 'Dixie Runner' came 'Florunner', released by Allen Norden, who joined the peanut-breeding team in 1958. 'Florunner' quickly beat out competing cultivars because its yield was 20 to 25 percent higher. For more than 20 years, 'Florunner' dominated the market throughout the peanut-growing world, especially in the U.S. where it occupied more than 80 percent of the peanut acreage.

Daniel Gorbet joined the program in 1970 and began breeding peanuts for disease resistance. His efforts resulted in a new class of peanut cultivars that saved the industry when 'Florunner' succumbed to tomato spotted wilt virus. Today, all of the major cultivars in the southeast U.S. trace a large portion of their parentage to these disease-resistant cultivars.

In the 1980s, Allen Norden discovered the "high-oleic trait" which keeps peanuts fresh and delicious much longer than other peanuts. Manufacturers of peanut-based products prefer this trait.

TODAY AND TOMORROW

Today, the UF/IFAS peanut-breeding program is developing new methods to breed superior peanut cultivars even faster and more efficiently. One of these methods, called near-infrared spectroscopy, allows breeders to test single peanut seeds for fatty acids, enabling scientists to determine relatively quickly which peanut cultivars have the high-oleic trait. Another area of peanut-breeding research is the use of genetic markers. DNA-marker technology promises to expedite cultivar development, but more importantly, it will allow breeders to assemble important traits into a single genetic line.

The focus of the UF/IFAS peanut breeding program is to combine as many desirable traits as possible into a single cultivar to produce top-grade, disease-resistant peanut plants with excellent yield and the healthy, high-oleic trait.

The UF/IFAS peanut-breeding program will continue to deliver promising new cultivars that allow farmers to produce a product that is easier to grow, more profitable, healthier, and more delicious to eat.



PEANUT VARIETIES RELEASED SINCE 2006

Release Date	Cultivars	High-Oleic Trait
Virginia type		
02/01/07	'Florida Fancy' (US PVP 200800231)	Yes
01/10/12	'Spain' (US PVP 201200394)	Yes
08/22/2018	'Walton' (US PVP filed)	Yes
Runner type		
01/26/06	'McCloud' (US PVP 200800232) 'York' (US PVP 200800186); 'Florida-07' (US PVP 200800186)	Yes
02/01/07	'AP-4' (US PVP 200800158)	No
02/22/10	FloRun™ '107' (US PVP 201100459)	Yes
06/26/11	TUFRunner™ '727' (US PVP 201300199)	Yes
06/26/11	Florida EP™ '113' (US Patent 8,178,752)	No
07/30/13	TUFRunner™ '511' (US PVP 201400249)	Yes
04/28/14	TUFRunner™ '297' (US PVP 201500201)	Yes
04/16/15	FloRun™ '157' (US PVP 201600140)	Yes
04/26/16	FloRun™ '331' (US PVP 201700120)	Yes

HIGH IMPACT RELEASES

Florunner (1969): This dominated the market, especially in the U.S. where it occupied more than 80 percent of the peanut acreage for two decades by out-yielding other varieties by 20 to 25 percent.

Southern Runner (1986): This was used as a parent to develop Georgia Green (released by the University of Georgia), a variety that dominated the market after Florunner succumbed to the tomato spotted wilt virus disease.

SunOleic 95R and SunOleic 97R (1994 and 1996): These were the first high-oleic peanut varieties released. SunOleic 97R was the foundational variety for high-oleic varieties grown around the world.

C-99R (1999): Because of its disease resistance, this has been used extensively as a parent in commercial varieties that have accounted for more than 90 percent of the southeastern U.S. peanut acreage in the past decade.

Florida-07 (2006): This disease-resistant, high-yielding, high-oleic variety has been the most widely planted high-oleic runner variety in the U.S. in the past decade.

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