PEANUT

Introduction

Peanuts generate about $900 million in farm gate value annually in the United States. In Florida, peanut is grown on 140,000 to 190,000 acres, producing a crop worth $60–80 million. Florida has been producing peanuts for more than 100 years, and the University of Florida has the oldest breeding program in the nation. Since 1920, research at the Florida Agricultural Experiment Station (FAES) has been responsible for many improvements to the crop and the industry in Florida, the United States, and all over the world where people grow and enjoy peanuts.

From the Beginning

One of Florida's first peanut breeders was Fred Hull, a University of Florida agronomist. In 1928, Hull was the first person to artificially hybridize peanuts successfully. He went on to collaborate with William Carver in 1943 to release the peanut cultivar 'Dixie Runner', a popular cultivar that was grown widely in the southeast. 'Dixie Runner' was the first cultivar developed by artificial hybridization.

After 'Dixie Runner' came 'Florunner', released by Allen Norden, who joined the peanut breeding team in 1958. 'Florunner' quickly beat out competing cultivars because of its superior yield (up to 20 percent more than other contemporary cultivars). For nearly 20 years, 'Florunner' dominated the market throughout the peanut-growing world, especially in the United States, where it occupied at least 80 percent of the peanut acreage.

Daniel Gorbet joined the program in 1970 and began breeding peanuts for disease resistance, a new focus for peanut breeding. His effort resulted in a new class of peanut cultivars with disease resistance that can be said to have saved the peanut industry when 'Florunner' succumbed to Tomato Spotted Wilt Virus. Today, all of the major cultivars in the southeastern United States trace a large portion of their parentage to these disease-resistant cultivars.

In the 1980s, Allen Norden isolated the natural compound in peanuts that keeps them fresh and delicious—called the "high oleic trait." Manufacturers of peanut confectionary products such as candy bars and other peanut-based products of course prefer fresh-tasting peanuts with a long shelf life. Peanuts have the added advantage of being good for the heart.

Today and Tomorrow

Today, the FAES program, part of UF's Institute of Food and Agricultural Sciences, is developing new methods to make breeding superior peanut cultivars even faster and more efficient. One of these methods, called near infrared spectroscopy, allows breeders to test single seeds (peanuts) for fatty acids, enabling scientists to determine relatively quickly which peanut cultivars have the high oleic trait. Another area of research is in genetic markers. DNA marker technology promises to expedite cultivar development, but perhaps more importantly, it will allow breeders to assemble important traits into a single genetic line.

And that is the focus of the University of Florida's peanut breeding program: to combine as many desirable traits as possible into a single cultivar. The aim is to produce top-grade, disease-resistant peanut plants with excellent yield and the healthy high oleic trait that dramatically improves shelf-life of peanuts and peanut products. New cultivars released recently include 'Spain' (US PVP 201200394), a high oleic Virginia peanut type that produces particularly large seeds, top yield, and grades; FloRun™ '107' (US PVP 201100459), a high oleic runner peanut type that promises to do well in the United States' growing regions; and TUFRunner™ '727' (US PVP 201300199), another high oleic runner peanut with larger seeds, top yield, and grades, and very good resistance to two major fungal diseases: white mold and leaf spot. The future of the peanut is bright: UF/IFAS continues to deliver promising new cultivars, ensuring a product that is easier to grow, more profitable to produce, and healthier and more delicious to eat.

UF UNIVERSITY of FLORIDA IFAS

Peanut Varieties Released from 2002			
Release Date	**Type**	**Cultivar**	**High Oleic**
2/21/2002	Runner	'Andru II' (US PVP 200300179)	Yes
2/21/2002	Runner	'Carver' (US PVP 200300204)	No
2/21/2002	Runner	'DP-1' (US PVP 200300206)	No
2/21/2002	Runner	'GP-1' (US PVP 200300321)	Yes
2/21/2002	Runner	'Hull' (US PVP 200300207)	Yes
2/21/2002	Runner	'ANorden' (US PVP 200300205)	Yes
4/7/2003	Runner	'AP-3' (US PVP 200300320)	No
1/26/2006	Runner	'McCloud' (US PVP 200800232)	Yes
1/26/2006	Runner	'York' (US PVP 200800186)	Yes
1/26/2006	Runner	'Florida-07' (US PVP 200800069)	Yes
2/1/2007	Runner	'AP-4' (US PVP 200800158)	No
2/1/2007	Virginia	'Florida Fancy' (US PVP 200800231)	Yes
4/28/2008	Runner	'Page' (AU PBR 4114)	Yes
4/28/2008	Runner	'Chifley' (AU PBR 2008/106)	Yes
4/28/2008	Runner	'Holt' (AU PBR 2806)	Yes
4/28/2008	Runner	'Forde' (AU PBR 2807)	Yes
4/22/2010	Runner	FloRun™ '107' (US PVP 201100459)	Yes
6/26/2011	Runner	TUFRunner™ '727' (US PVP 201300199)	Yes
6/26/2011	Runner	Florida EP™ '113' (US Patent 8,178,752)	No
1/10/2012	Virginia	'Spain' (US PVP 201200394)	Yes

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