

## AgriLife Research peanut breeding program offers new varieties

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Sclerotinia blight, as pictured here, is a disease of peanuts. Tamrun OL11, developed and released in 2011, has a level of resistance bred into it, as does Webb, which was released this year, according to Texas A&M AgriLife Research peanut breeders. Credit: Texas A&M AgriLife Research photo by Dr. Mark Burow

The Texas A&M AgriLife Research peanut breeding program has been busy, releasing four new varieties in the past two years to meet producers' needs, according to the breeders.

The AgriLife Research peanut breeding team is led by Michael Baring, AgriLife Research assistant research scientist in College Station; Dr. Mark Burow, AgriLife Research peanut geneticist in Lubbock; and Dr. Charles Simpson, AgriLife Research professor emeritus and peanut breeder, Stephenville.

Tamrun OL11 was released last July, led by Baring's team in College Station. Also submitted were three new lines for release as cultivars this year, Tamrun OL12 and Schubert led by Burow's team in Lubbock, and Webb, led by Simpson's team in Stephenville.

All four of the varieties are high oleic, meaning longer shelf life because of reduced tendency towards rancidity, Burow said. The oil is similar in composition to olive oil, which is known to reduce the incidence of heart disease.

Tamrun OL11, developed and released in 2011, has a much higher total of sound, mature kernels, which equate to grade, than any variety previously released by AgriLife Research, Baring said. It also has as good or better resistance to sclerotinia blight than other varieties.

This release was aimed at the West Texas peanut-growing regions, he said. About 300 acres of foundation seed were grown this past year. It will be available to growers on a registered-seed basis next year and in the commercial market in 2014.

AgriLife Research grows out the foundation seed through the Texas A&M Foundation Seed Service, which signs licenses with one or more of four peanut seed companies in the state to grow the registered seed

and further market it as certified seed, said Steve Brown, Foundation Seed Service program director.

"Due to poor production weather the past two seasons, the new varieties described below will be under breeder seed/foundation seed increase in 2013 and will not be commercially available in large quantities until 2015," Brown said.

Tamrun OL12 was released on the merit of it being about two-weeks earlier in maturing than any other commercial runner-type peanut being grown currently, Burow said.

He said Tamrun OL12 was released in response to the shift in peanut acreage to West Texas, which is higher in latitude and elevation than southern peanut-growing regions. The West Texas environment has cooler nighttime temperatures despite warm daytime temperatures.

"These environmental factors cause later crop maturity in peanuts, which can affect all commercial runner types in the West Texas production area," Burow said. "In some years, there is a tendency for off-flavors, notably a fruity-fermented flavor that results from drying immature peanuts under warm daytime temperatures."

The earlier maturity of Tamrun OL12 is expected to reduce the flavor problem, he said, adding tests by flavor panels have demonstrated reduced off-flavors in this variety compared to other varieties.

Schubert is a variety named after the late Dr. Mike Schubert, a longtime AgriLife Research plant physiologist in Lubbock. This variety offers increased yield potential, averaging 500 pounds per acre better than current Spanish varieties available, as well as grading approximately 2 percentage points higher, Burow said.

While Schubert can be grown across the state, the Spanish-type peanuts are limited in markets and are typically grown in the West Texas region on about 30,000 acres, primarily for the candy market, Baring said.

Webb, also in the breeder seed-increase stage, is the first high oleic nematode-resistant peanut released by the AgriLife Research program, Simpson said. It has moderate resistance to sclerotinia blight and can be grown across the state's peanut regions. This variety was named after Mary Webb, a longtime executive officer of the Texas Peanut Producers Board.

The breeders say their efforts to meet producers' needs will continue at all three [breeding](#) locations.

Baring said he plans to have another line to release in the next year, and Burow expects to release the first high-oleic Valencia peanut next year and a high-oleic Virginia type in a couple of years. Simpson's work currently revolves around transferring desirable genes from the wild [peanut](#) collection for improvement of cultivated varieties.

"It seems the producers' biggest push now is drought tolerance, and while we are working hard on that, it is a long process to get varieties that address decreased water availability," Baring said. "In the next few releases, our main focus will still be on disease resistance and increasing yields."

Provided by Texas A&M University

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