

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
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and

TEXAS AGRILIFE RESEARCH AND EXTENSION
Texas A&M University System
College Station, TX

and

OKLAHOMA AGRICULTURAL EXPERIMENT STATION
Oklahoma State University
Stillwater, OK

NOTICE OF RELEASE OF RED RIVER RUNNER

Red River Runner is a high oleic runner-type peanut cultivar developed cooperatively with Texas A&M University, Oklahoma Agricultural Experiment Station (OAES), and the USDA-ARS. Red River Runner is derived from a three-way cross among "Tamrun 96," breeding line TX 901639-3, and "Sunoleic 95R," the donor of the high O/L genes (O = oleic fatty acid; L = linoleic fatty acid). This cultivar was first tested in Oklahoma in 2002 as TX 994313, and selected for further development based on its moderate resistance to Sclerotinia blight (when compared to Okrun and Florunner), and its acceptable resistance to leaf spot as compared with the susceptible Southwest Runner.

This cultivar will be jointly released by Texas A&M University, Oklahoma Agricultural Experiment Station (OAES), and USDA-ARS. Ownership of the high O/L genes resides with the University of Florida. Early advanced line trials in replicated plots with Red River Runner and "Tamrun OL02" were conducted in Oklahoma in 2004, 2005, and 2006, where the grade of Red River Runner out-performed that of "Tamrun OL02". Red River Runner, along with "Tamrun OL07", was tested in replicated plots in Oklahoma and Texas in 2007 and 2008. In 16 Oklahoma trials, over 2 years, yield of Red River Runner ranged from 2545 to 6309 lb/acre, with a mean of 4155 lb/acre, whereas yield of "Tamrun OL07" ranged from 2278 to 7402 lb/acre, with a mean of 3998 lb/acre. Yield difference of Red River Runner and "Tamrun OL07" in Oklahoma was not statistically significant at $P = 0.05$. Grade of Red River Runner ranged from 65 to 79, with a mean of 72.6, whereas grade of "Tamrun OL07" ranged from 61 to 76, with a mean of 68.3. Grade difference of Red River Runner and "Tamrun OL07" was significant at $P = 0.05$, with a least significant difference of 1.2. In 83% of trials in Oklahoma, Red River Runner statistically ($P = 0.05$) out-graded "Tamrun OL07." Crop value in dollars per acre was calculated based on the loan rate in 2008. Mean crop values for Red River Runner and "Tamrun OL07" were \$730 and \$661, respectively.

In 26 trials in Texas, over 2 years, yield of Red River Runner ranged from 1710 to 6584 Lb/acre, with a mean of 4857, whereas yield of "Tamrun OL07" ranged from 3153 to 7437, with a mean of 5187. Yield difference of Red River Runner and "Tamrun OL07" was statistically significant at $P = 0.05$, with a least significant value of 277. Grade of Red River Runner ranged from 68 to 79, with a mean of 75.2, whereas grade of "Tamrun OL07" ranged from 67 to 78, with a mean of 72.7. Grade difference of Red River Runner and "Tamrun OL07" was significant at $P = 0.05$ with a least significant difference of 0.9. In 57% of trials in Texas, Red River Runner statistically ($P = 0.05$) out-graded "Tamrun OL07." Crop value in

dollars per acre was calculated based on the loan rate in 2008. Mean crop values for Red River Runner and "Tamrun OL07" were \$884 and \$912, respectively.

Red River Runner has a typical green foliage with a slightly more open canopy than "Tamrun OL07." The mean height of the main stem in Red River Runner is 50.1 cm, whereas the height for "Tamrun OL07" was 53.4 cm. Red River Runner peanut matures in 145-150 days after planting, similar to that of "Tamrun OL07," under Oklahoma growing conditions. In Oklahoma, pod constriction of Red River Runner is similar to "Tamrun OL07," with most pods being two seeded, and one hundred seed weight in g for Red River Runner was 65 while "Tamrun OL07" was 63. During the 2008 growing season in Oklahoma, Red River Runner peanut had 65% incidence of Sclerotinia blight as compared with 50% in "Tamrun OL07."

The following individuals have contributed data to support the release of Red River Runner peanut: H. A. Melouk, K. D. Chamberlin, (USDA-ARS, Stillwater, OK); C. Godsey, (Plant and Soil Science, Oklahoma State University, Stillwater, OK); J. Damicone, (Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK); M. Burow, M. Baring, C. Simpson, (Texas A&M University, College Station, TX); and K. Dashiell, (USDA-ARS, Brookings, SD).

Signatures:

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4/15/11
Date