



Characteristics of Runner Market-Type Peanut Varieties Produced in Texas

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Variety selection is one of the most important (if not the most important) decisions a grower will make during the season. Due to numerous varietal releases over the past five years, growers have more runner market-types available than ever before. Commercial varieties have been released that possess various degrees of tolerance/resistance to numerous diseases attacking peanut. Also, older varieties that were once tolerant to specific diseases may now show susceptibility. With increased emphasis on host plant resistance, the number and specificity of varieties will continue to increase. The Texas A&M breeding program is addressing several production issues such as tomato spotted wilt virus (TSWV), root knot nematode, sclerotinia blight, improved oil quality (high oleic acid/linoleic acid ratio), and early maturity.

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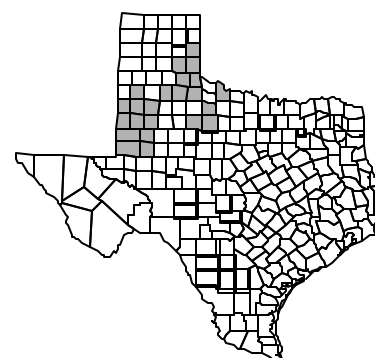
Texas is much different than other peanut producing states because the state can be divided into three primary production regions — south, central and west Texas. The key factors (soils, climate, disease, irrigation, etc.) impacting production in these areas vary considerably and as a consequence the best varietal choices for one area may not be well suited for another. About ten commercial varieties currently are grown in Texas. In 1998 the runner market-types comprising the largest acreage percentage were Florunner, AT 120, Flavor Runner 458, Tamrun 88, Tamrun 96, and Georgia Green.

Several factors must be considered when making a varietal decision. First, it is extremely important to evaluate varieties based on regional performance. Yield and grade attributes must be given top priority, but disease tolerance, growth habit, maturity, and seed quality and availability should also be

considered. The “perfect variety” possessing all the necessary traits for the diverse environments of Texas does not exist, so it is practical to plant a couple of different varieties to reduce the production risk.

West Texas

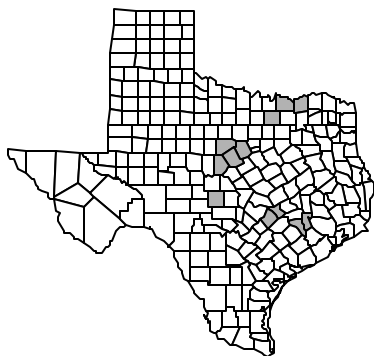
The west Texas region can be characterized as a high yielding environment, utilizing center pivot irrigation and having low disease pressure. The semi-arid climate is not favorable for foliar disease development in most years; however, the soil-borne, pod rot complex (*Rhizoctonia* and *Pythium*) is present and can be moderate to severe in some fields. Traditional runner types such



as Florunner and Tamrun 88 have performed very well in the region. Flavor Runner 458 (high O/L variety) and AT 120 (about seven days earlier than Florunner) have gained rapid acceptance over the past couple of years. Keep in mind that AT 120 is earlier and should be harvested accordingly. Timely harvest is critical to insure the highest yield and grade from this variety. In fields that have not been properly rotated and have a history of moderate to severe pod rot problems, Tamrun 96 may be a good choice. This variety, released primarily because of its tolerance to TSWV, also tends to suffer less loss from pod rot problems.

Central Texas

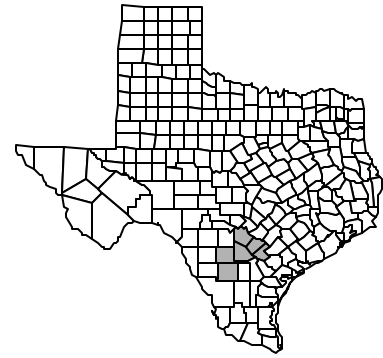
The central Texas area is a traditional production region and experiences most problems associated with peanut production (southern blight, pod rot complex, limb rot, leaf spot, root knot nematode, sclerotinia blight). Also, TSWV became a problem in



some portions of the region in 1996. Florunner continues to be grown in the region, but Tamrun 96 and Georgia Green have become very popular over the past two years. Tamrun 96 has performed very well under disease and non-disease conditions. Tamrun 96 has a robust growth habit, producing very large vines, especially in comparison to Georgia Green which develops a smaller canopy than other runner types. The Texas A&M breeding program recently released two new varieties – Tamrun 98 which is tolerant to sclerotinia blight and COAN which is resistant to root knot nematode. Tamrun 98 seed should be generally available in 2000. Limited amounts of COAN seed will be available in 2000, with general availability in 2001.

South Texas

The south Texas region is a traditional area that has experienced various levels of TSWV over the past 15 years. The past few seasons have been characterized by reduced incidence of the virus and yields across the region have been very good. GK7 was a popular choice in the past, but Tamrun 96 and Georgia Green have gained rapid favor with producers. These varieties have produced high yields and grades and possess appreciable tolerance/resistance to TSWV. It is important to note



that Tamrun 96 will show visible symptoms of TSWV, but the variety remains sturdy. Due to the potential influence of hurricanes during the harvest season, it is a good policy to select varieties that are sturdy, and that have a secure peg attachment to prevent loss during inclement weather.

Characteristics of Runner Market-Type Varieties

Florunner

Florunner was released by the University of Florida in 1969 and has had insurmountable influence on the peanut industry and continues to be the standard of performance in west Texas. It produces high yields, excellent grades, and develops an excellent “root crop”. In most other peanut growing regions, Florunner is being replaced by newer, more disease resistant varieties. However, Florunner remains an excellent variety for west Texas. Most varieties will be compared in growth habit and maturity to Florunner.

Tamrun 88

Tamrun 88 was released by Texas A&M University in 1988. It is very similar to Florunner in most agronomic characteristics. Emergence is more uniform and stand establishment is faster than any other runner type grown in Texas, which is a good characteristic for the western region. Tamrun 88 is extremely susceptible to TSWV. It also produces excellent yields and grades in west Texas.

AT 120

AT 120 was released by AgraTech Seeds in 1994. It is an early maturing runner and depending on conditions may be seven to ten days earlier than Florunner. It has runner growth characteristics, but flowers like a spanish. AT 120 generally produces high yields and earliness in west Texas and develops an excellent “root crop”. The variety initiates “cutout” at about 120 days after planting and shows more micronutrient deficiency in new growth than other varieties. Growers should be aware of the early maturity and dig accordingly to avoid losses from over-mature pods. Pepper spot (*Leptosphaerulina crassiasca*) was found on this variety in 1998. Late-season foliar fungicide applications may be warranted to maintain healthy vines.

Flavor Runner 458

Flavor Runner 458 was released by Mycogen. It is a high oleic variety and similar to Florunner in agronomic characteristics. Performance in west Texas has been very good with high yields and grades. Flavor Runner acreage increased significantly in 1999.

Georgia Green

Georgia Green was released in 1995 by the University of Georgia. It has resistance to TSWV and southern blight (*Sclerotium rolfsii*). Georgia Green maturity is similar to Florunner. Its vine growth is less than other runner market-types and does not show prominent mainstem as do typical runner-types. Georgia Green is a small seeded runner variety, about 825 seed per pound. Web blotch (*Didymella arachidicola*) was found on this variety in 1998 in south Texas and the Rolling Plains production regions. Georgia Green has not yielded as well as standards in west Texas, but it is a good variety for central and south Texas.

Tamrun 96

Tamrun 96 was released by Texas A&M University in 1996. It has good tolerance to TSWV and maturity is similar to Florunner. Tamrun 96 has performed better than most varieties in fields having

sclerotinia blight (*Sclerotinia minor*) problems and has some tolerance to southern blight (*Sclerotium rolfsii*). It has a very robust vine growth, especially on more fertile peanut soils. Tamrun 96 has performed very well across all Texas production regions, but especially in central and south areas. Tamrun 96 also is a good choice for pod rot problem fields in west Texas. It develops a very sturdy vine and has good peg attachment.

Virugard

Virugard was released in 1997 by AgraTech Seeds. It possesses tolerance to TSWV. It is a runner x Virginia cross and appears to be seven to ten days earlier than Florunner. Virugard has a virginia growth habit, does not show prominent main stem and very large kernel size. Late-season micronutrient deficiencies have been observed similar to AT 120. Growers should be aware of the earliness in this variety to prevent losses from over-mature pods. Pepper spot (*Leptosphaerulina crassiasca*) was found on this variety in 1998 in Texas. Virugard may need late-season foliar fungicide applications to maintain healthy vines.

Florida MDR 98

Florida MDR 98 is the most recent release from the University of Florida. The “MDR” stands for multiple

disease resistance. MDR 98 has tolerance to late-leafspot (*Cercosporidium personatum*), southern blight (*Sclerotium rolfsii*), TSWV and rust (*Puccinia arachidis*). Most of its disease resistance is derived from Southern Runner, one of its parents. Like Southern Runner, MDR 98 matures later than all other commercial runner varieties (at least two to three weeks) and is classified as a mid-oleic variety with about 65% oleic acid. The late maturity of this variety makes it very questionable for central Texas, but has potential in south Texas.

Georgia Bold

Georgia Bold was released by the University of Georgia in 1997. It has a larger kernel size than Florunner and has performed very well in Georgia. Georgia Bold possesses moderate tolerance to TSWV and is similar in maturity and growth habit to Florunner. It does not resemble Georgia

Green in canopy development or kernel size. The variety performed very well in 1998 tests.

Sunoleic 97R

Sunoleic 97R is a University of Florida release to replace Sunoleic 95R. It is a high oleic variety of about 80% oleic and 2 to 3% linoleic fatty acids, based on total fat/oil content. Its yield is higher than Sunoleic 95R and it does not have as much podsplitting as Sunoleic 95R. Sunoleic 97R has yielded very well in central and west Texas.

AT 108

AT108 was released in 1994 by AgraTech Seeds. It is similar to GK 7 in growth characteristics. However, its mainstem is not as prominent as GK 7. The seed size is similar to GK 7, but it has a higher percentage of jumbo runner grade. AT 108 matures earlier than GK 7 and is primarily grown in the south Texas region.

GK 7

AgraTech Seeds released GK 7 in 1984. Its agronomic characteristics are similar to Florunner and develops a prominent main stem. GK 7 does show some tolerance to TSWV; primarily planted in south Texas.

GK 7 High Oleic

GK 7 High Oleic was released by AgraTech Seeds in 1997. It is a high oleic variety with agronomic characteristics similar to GK 7.

Okrun

Okrun was released in 1986 by Oklahoma State University and USDA-ARS. Its agronomic characteristics are similar to Florunner. It is, however, slightly more resistant to leaf spot and pod rot. Okrun is primarily grown in the eastern Texas and Panhandle regions.

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