

West Texas Spanish Peanut Variety Trial Summary, 2004-2008



Dr. Calvin Trostle, Extension agronomy, Texas AgriLife Extension Service & TAMU Dept. of Soil & Crop Sciences, Lubbock, (8906) 746-6101, ctrostle@ag.tamu.edu

Jim Barber, Extension assistant, Lubbock (retired)

Sean Wallace, Extension assistant, Lubbock, (806) 746-6101, smwallace@ag.tamu.edu



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Summary

Extension testing of Spanish peanuts in West Texas is conducted as new peanut varieties are introduced to the market, which may be offered by peanut buying points for planting and shelling. For the most part shellers designate which Spanish peanut varieties they wish to contract, and they provide the seed. Producer planting of varieties that are not tied to sheller contracts is not recommended. Producers, however, can still choose among different varieties that are available for contracting. Thus Extension testing can aid producer choice of variety among Spanish market types.

Spanish market types represent about 15% of planted acreage in the Texas High Plains production region. The peanuts are smaller than runner peanuts and are used mostly in the confectionary and candy market. Spanish peanuts in recently years have been priced comparably to runner peanuts per ton and trailed the conversion of runner peanuts to high oleic fatty acid profile by a couple of years. Most Spanish peanuts contracted now are high oleic, and an effort is underway to largely phase out conventional, or non-HO, Spanish peanuts.

For additional information resource for Texas peanut production, visit <http://peanut.tamu.edu>

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Spanish Peanut Variety Descriptions

The following varietal descriptions have been prepared for each variety. Spanish peanuts in general are susceptible to leaf spot and other foliar diseases. Spanish peanuts produce mostly close to the tap root, a 'bunch crop,' in contrast to runner peanuts. Typical Spanish maturity historically has been about 140 to 145 days (in contrast to runner peanuts at 160-170 days to digging). Spanish maturity for digging purposes is generally targeted at 75 to 80% (brown + black) using a standard hull scrape.

AgraTech AT 9899-14 (high oleic)—AgraTech release in production since 2004 with Spanish flowering and podding habit but grows like a miniature runner peanut that has desirable nut characteristics and is desired in the confectionary and candy market. Yields have not kept pace with Tamspan 90 (-16%) or OLin (-11%) in Texas AgriLife variety trials. Maturity is 10-14 days longer than Tamspan 90. Placement was a concern in Spanish variety trials (early digging), however, numerous trials experienced delayed digging by at least 7 days thus diminishing the concern that AT9899-14 was at a disadvantage. Very weak pod/peg attachment. Some farmers report potentially several hundred pounds of losses in the field either at the digger or at the pickup attachment. Peanut growth habit is conducive to twin row planting. AT9899-14 appears to have higher yield than OLin under high input conditions due to runner like growth habit and prolific pegging.

Flavor Runner 458 (runner peanut, high oleic)—Mycogen and Hershey Food Corporations release, 1997. Standard runner peanut in West Texas, which emerges slow. Flavor Runner 458 has performed well in high yielding environments with excellent grade characteristics. Flavor Runner 458 will be susceptible to most diseases affecting peanut. In spite of earlier digging due to being located in Spanish tests, has yielded 10% above OLin with comparable grade when dug with Spanish timing.

GENTEX 110 (conventional)—Spanish variety developed by Harper & Wilson, Sudan, TX. Yield and grade similar to Tamspan 90 in two years of testing in West Texas.

Georgia GA 04S (high oleic)—Univ. of Georgia, 2004. Spanish-type variety developed in Georgia with later maturity but similar pod and seed size similar to other Spanish-market types. Limited testing in West Texas found intermediate yield between Tamspan 90 and OLin. Field appearance and growth habit is similar to Flavor Runner 458 in the field.

OLin (high oleic)—Texas A&M release, 2002. Derived from a cross of Tamspan 90 and a high O/L parent. Disease package similar to Tamspan 90, however, yields have typically been 5 to 10% less than Tamspan 90 in West Texas with maturity ~5 days longer than Tamspan 90. OLin has graded 1.0-1.5% better than Tamspan 90 in West Texas trials.

Pronto (conventional)—Older Oklahoma State release. A large-seeded Spanish variety, Pronto has a growth habit typical of Spanish varieties, except that it exhibits more yellow-green color. Pronto has yielded 9% less than OLin in West Texas but with similar grade. Pronto has been touted as a short maturity Spanish peanut (as little as 125 to 130 days), but hull scrape observations do not suggest it is significantly earlier than Tamspan 90.

Spanco (conventional)—Oklahoma State University/USDA-ARS release, 1981. Spanco is earlier maturing (~5 days) than Tamspan 90. It has good yield potential, but does not possess the Pythium pod

rot or Sclerotinia blight resistance found in Tamspan 90. May yield better relative to Tamspan 90 and OLin at northerly locations.

Tamnut OL06 (high oleic)—Texas A&M release, 2006. Spanish line is large-podded, large-seeded high-oleic with potential use in the runner market. Maturity and yield potential are similar to or slightly lower than Tamspan 90. Initial yield results in runner production systems appear much less than Flavor Runner 458, but with earlier maturity. Yields about the same as OLin but grades have been 2% lower than OLin in West Texas. Disease tolerance similar to Tamspan 90.

Tamspan 90 (conventional)—Texas A&M release, 1990. Typical Spanish growth habit. Resistant to pod rot and Sclerotinia blight. Excellent yield potential that responds well to irrigation. After 20 years this peanut variety is still the one to beat for Spanish peanut production, yielding about 5% more than Olin and ~5 days shorter than OLin in maturity.

Summary of 2004-2008 Variety Trial Results

This set of Spanish trials commenced in 2004 when AT9899-14 was introduced to Spanish growers and at a time when only one other high oleic peanut, OLin, was planted on any significant number of acres. Individual tables for each trial site are provided (except 2005, both on same page). Consult the above varietal descriptions for key notes about relative yields and grades among the varieties.

Individual trial reports may include ratings of early season vigor and plant stand, readings which were taken 2 to 3 weeks after planting. Also, selected hull scrapes were collected at some trials to highlight differences among varieties as they matured.

One key consideration—and the reason Flavor Runner 458 was placed in this trial—is that the higher yield potential of runner peanuts vs. Spanish would make Runner peanut production more favorable in all conditions if there is sufficient irrigation water available, time in the fall to properly mature the crop, and minimal need to spread the harvest season out (Spanish will harvest 2 to 3 weeks earlier than Runner).

Summary of 2004-2008 West Texas Spanish Variety Trials.

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Trial results represent up to 9 replicated farm-field variety tests conducted in the Texas High Plains from 2004 to 2008. Multi-year averages are calculated based the total number of trials for each range of years.



Range of Years (# of trials)				2005-2006 (4)		2007-2008 (4)		2006-2008 (6)		2005-2008 (8)		2004-2008 (9)	
Average Days to Digging				158		149		152		153		152	
Variety	Market Type	Market Use	High Oleic?	Grade %TSM K	Yield Lbs./ A	Grade %TSM K	Yield Lbs./ A	Grade %TSM K	Yield Lbs./ A	Grade %TSM K	Yield Lbs./ A	Grade %TSM K	Yield Lbs./ A
AgraTech AT9899-14	Spanish/Runner †	Spanish	Yes	74.6	4,271	71.5	3,330	72.5	3,823	72.5	3,800	71.9	3,898
Flavor Runner 458‡	Runner	Runner	Yes			71.9	4,210	73.4	4,685				
GENTEX 110	Spanish	Spanish	No	74.1	5,217								
Georgia GA 04S	Spanish	Spanish	Yes	75.5	5,065								
OLin	Spanish	Spanish	Yes	75.9	4,834	71.2	3,820	72.8	4,258	72.8	4,327	73.0	4,390
Pronto	Spanish	Spanish	No			72.3	3,464						
Spanco	Spanish	Spanish	No	73.3	4,694	72.2	3,704	72.5	4,245	72.5	4,199		
Tamnut OL06	Spanish	Runner/Spanish ¶	Yes			69.3	3,682	70.6	4,267				
Tamspan 90	Spanish	Spanish	No	74.1	5,237	69.7	3,840	71.2	4,411	71.2	4,538	71.5	4,619
Multi-Year Average				74.6	4,886	71.2	3,721	72.2	4,281	72.3	4,216	72.1	4,303

†Variety has Spanish flowering habit and physiological parameters, but the growth habit is like a miniature runner peanut plant.

‡Common runner peanut used in West Texas to demonstrate comparative yield vs. Spanish peanuts when fields were dug as Spanish.

Potential yield differential in given time to runner digging will help producers evaluate the pros & cons of higher yield potential of growing runner vs. Spanish in terms of economic potential.

¶Variety is a Spanish peanut but with larger seed hence used in the Runner market albeit shorter maturity than typical Runner varieties.

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