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Performance of

Recommended Varieties

in

Peanut Variety Trials

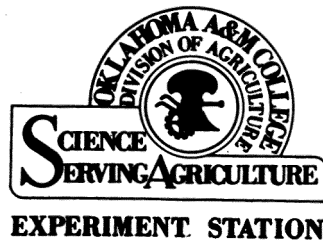
1952-1956

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Performance of Recommended Varieties
in Peanut Variety Trials, 1952-1955

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Argentine, Spantex and Dixie Spanish are three outstanding peanut varieties for Oklahoma. This publication reports the performance of these three varieties, as compared to check varieties, in experiment station trials during the past four years.

Table I summarizes results obtained at the station's Perkins Farm south of Stillwater and its Peanut Research Station near Stratford in the four years 1952 through 1955. Table II gives data from experiment station variety trials conducted in 1955 in cooperation with growers at several locations in the peanut area of the State.

ARGENTINE

In tests conducted since 1946, Argentine has given superior performance over other Spanish varieties. The variety, tested as P. I. 121070, was recommended for release in Oklahoma during 1951. A large quantity of certified seed is now available for distribution. Greater returns and lower production costs through increased yields of high quality nuts can be expected by growing the Argentine variety.

Argentine produced six percent more shelled nuts per acre than the check variety, Improved Spanish, in 15 tests summarized in Bulletin No. B-404, by L. L. Ligon. The seed of Argentine contain slightly more oil and protein than other Spanish varieties, according to analyses made by the Agricultural Chemistry Department at Oklahoma A. and M. Argentine seed contains an average of 49.7 percent oil and 33.1 percent protein as compared with 48.7 and 30.4 percent for the Improved Spanish check. The seed of the variety were rated excellent when shelled, dry roasted, and ground into peanut butter, and when shelled and cooked in oil and then salted, in quality tests made in the U. S. D. A. laboratories at Beltsville, Maryland.

In 8 subsequent tests conducted at Stratford and Perkins from 1952 to 1955, Argentine has averaged 21 percent more nuts per acre than Improved Spanish check (Table I). It should be noted that Table I presents yields as unshelled nuts rather than on shelled basis as reported in B-404. Argentine was first in yield of nuts in comparison with 6 other varieties in 6 variety tests conducted during 1955 in Bryan, Caddo, Hughes, LeFlore, and McIntosh counties (Table 2). Argentine averaged 2130 pounds of unshelled clean nuts per acre compared with 2086 and 2067 for two check varieties, Local Spanish and Stratford Spanish. The variety tests were

conducted under a wide range of conditions, ranging from low rainfall, and including an irrigated test and tests on soils ranging from low to high fertility.

The plants of Argentine are vigorous and upright with medium coarseness. The pods are borne primarily in a cluster at the base of the plant. The pods are typically two-seeded, the same as other white Spanish types. The variety can best be distinguished from other Spanish varieties by having only a slight pod constriction between the kernels.

The Kernels are oval, light flesh-colored, and packed fairly snugly in the pod after curing. Shelling percentages range from 65.0 to 78.2 per cent with an average of 71.1 percent in 6 tests from 1952 to 1955. Argentine consistently produces more No. 1 kernels, or conversely, fewer small shriveled kernels, than other Spanish varieties (Table 2). The kernels of both Argentine and Dixie Spanish are uniform and are generally slightly larger than those of Spantex and Improved Spanish, though seed size in all Spanish varieties is influenced by seasonal variations. Both Argentine and Dixie Spanish have more than 70 percent of their kernels riding the 18/64- and 20/64-inch slotted screens, while a similar proportion of Spantex and Improved Spanish kernels ride on the 16/64- and 18/64-inch slotted screens. Shellers desire a high percentage of kernels within 4/64-inch. The average number of seed per pound at 6 locations during 1955 was 1212 for Argentine, 1194 for Dixie Spanish, 1364 for Spantex, and 1428 for Spanish 18-38.

DIXIE SPANISH

Dixie Spanish has been tested for several years under the designation of Spanish 146. The seed size, plant characteristics, and performance are very similar to those of Argentine. The yield of nuts are slightly less than Argentine. (Table 1 and 2). Certified seed of Dixie Spanish will not be available in Oklahoma for the 1956 planting season. Limited quantities of certified seed are expected to be available for planting in 1957.

SPANTEX

Spantex was developed by the Texas Agricultural Experiment Station and was first recommended for planting in Oklahoma in 1950.

Though the yields of good quality nuts have been high for Spantex, they have not been as high as those of Argentine in Oklahoma tests. The majority of the Spantex kernels are 1/32-inch smaller than those of Argentine and Dixie Spanish. The pods of Spantex can be distinguished from Argentine by the deeper constriction between the kernels. Spantex will yield about one percent fewer No. 1 kernels than Argentine.

Certified seed of Spantex are now available in Oklahoma and Texas for general distribution.

Table 1 - Performance of Recommended Peanut Varieties and Check Varieties at Perkins and Stratford

Variety	Yield of Unshelled Nuts		Shelling Percentage ^{2/}	Oil Content ^{3/} (Pct.)	Protein Content ^{3/} (Pct.)	No. of Seeds Per Pound ^{4/}	Hay yield T. per A. ^{5/}
	Lbs. per Acre ^{1/}	As Pct. of Improved Spanish					
Argentine	1103	121	71.1	49.7	33.1	1318	1.7
Dixie Spanish	1024	112	70.8	47.7	32.5	1297	1.7
Spantex	1029	113	73.4	48.0	31.7	1430	1.7
Spanish 18-38	984	108	73.7	48.1	32.3	1444	1.9
Improved Spanish 2B (Ck)	914	100	--	48.7	30.4	1535	1.7

^{1/} Average of 8 tests, 1952-1955 at Stratford and Perkins.

^{2/} Average of 6 tests, 1952-1955 at Stratford, 1952-1953 at Perkins.

^{3/} Oil and protein taken from Oklahoma Agricultural Experiment Station Bulletin B-404.

^{4/} Average of 2 tests, 1955 at Stratford and Perkins.

^{5/} Average of 7 tests, 1952-1955 at Perkins; 1952, 1954, 1955 at Stratford.

Table 2 - Summary of Cooperative Variety Tests, 1955

Variety	Yield of Unshelled Nuts (lbs/A) <u>1/</u>	Hay <u>1/</u> (T/A)	Shelling Percentage <u>2/</u>	Percentage of No. 1 Kernels <u>2/</u>	Percentage of Kernels Within 4/64-inch <u>2/</u>	No. of Seeds per Pound <u>2/</u>
Argentine	2130	1.9	68.7	98.2	74.3	1106
Dixie Spanish	2102	1.9	73.6	97.9	76.4	1092
Spantex	1948	1.9	71.1	97.2	67.3	1299
Spanish 18-38	1870	1.8	72.1	96.9	67.9	1412
Local Spanish (Ck)	2086	2.0	72.0	96.7	71.7	1402
Stratford Spanish (Ck)	2067	1.9	71.9	97.0	68.4	1375

1/ Average of 6 tests (Caddo County Agent and grower Carrol Smith at Lookeba, both irrigated and nonirrigated tests; Byran County Agent and grower Bill Worthy at Bokchita, test at Achille with J. H. Cox not included in average because of erratic stands; Hughes County Agent and grower C. H. Black at Atwood; McIntosh County with Vernon Emerson at Stidham; and LeFlore County at Heavener Station).

2/ Average of three locations (Atwood, Bokchita, and Lookeba, nonirrigated.)