



2020 OKLAHOMA PEANUT VARIETY TRIALS

By Kelly D. Chamberlin and Rebecca S. Bennett, USDA-ARS; and John P. Damicone, Oklahoma State University Department of Entomology & Plant Pathology

2020 Progress Made Possible Through Oklahoma Peanut Commission and National Peanut Board Support

- Performance of runner varieties depended on location, but averages across locations in 2020 indicate that cultivar Lariat was the top entry in value per acre.
- Significant differences among Spanish entries across locations and years indicated OLé had the top yield, but the small-seeded, runner-type cultivars AT98-99 and Span17 were the leaders in value per acre.
- No significant differences were noted in Virginia entry yields across locations and years (2019-2020), but numerically, Contender and the breeding line NCEX17 led the entries in value per acre.
- Pod size distribution analysis reported for all variety trial locations, as well as the Caddo Co. Uniform Peanut Performance Test (UPPT), indicated that several breeding lines tested had significant increases in percent super jumbo pods when compared to cultivars currently in production.

Peanut production in Oklahoma is generally located in three geographical regions across the state: Southwestern, West Central and Far West. Each region differs from the others in environmental and biological stressors that affect crop production, so the same peanut cultivar will likely perform differently in each growing region. Therefore, the Oklahoma Peanut Variety Trials are conducted in each region annually and are designed to test the performance of commonly grown cultivars and potential cultivar releases against each other. Grades in 2020 were down from past years due to an unusually cool late season. Overall, yields were within averages from past years across locations. Results of these annual trials can serve as a guide for producers when choosing a cultivar to plant.

Variety Trial Methods

All entries (cultivars and advanced breeding lines) in the Oklahoma Peanut Variety Trials were high-oleic except for the Virginia-type cultivar Jupiter. The following entries were included in all locations in 2020: 18 runner types: Cultivars ACI080, ACI476, ACI3321, Georgia 09B, Georgia 14N, Lariat, Tamrun OL11 and Webb and breeding lines ARSOK R47A, ARSOK R90-12, ARSOK R91-2, ARSOK R92-13, ARSOK R93-1, ARSOK R93-10, ARSOK R94-4, ARSOK 95-1, ARSOK R96-7 and ARSOK R96-8; six Spanish types: Cultivars AT98-99, OLé, Tamnut OL06, Schubert and Span17 and breeding lines ARSOK S88-2 and 19 Virginia types: Cultivars

ACI 351, Contender, Jupiter and VENUS and breeding lines NCEX1, NCEX2, NCEX7, NCEX17, NCEX20, NCEX22, ARSOK V-98, ARSOK V99, ARSOK V100-1, ARSOK V100-2, ARSOK V101-1, ARSOK V103-1, ARSOK V103-3, ARSOK V103-4 AND ARSOK V103-5.

All variety trials were conducted under an extensive pest management program. The objective was to prevent as much outside influence from pest pressures (weed, disease and insect) on yield and grade as possible. The interaction between variety and location was significant, so the results were separated by location. Averages across locations and years were included to give producers a better estimate of line performance. Since the varieties and advanced lines response differed by location, growers may find the data for the county closest to their location to be the most useful in selecting a variety or varieties to grow. All test plots were planted using two 36-inch rows that were 15 feet long. Plots were seeded at a rate of five seeds per row foot (139,392 seeds per acre). Trials were conducted using randomized, complete block design with four replications. The entire plot was dug and then thrashed two to three days later. Peanuts were placed in a dryer until moisture reached 10%. Percent total sound mature kernels [% total sound mature kernels (TSMK)] were determined on a 200 g sample from each plot. Analysis of variance (ANOVA) and significance (LSD) were analyzed through the statistical analysis system (SAS) (ver. 9.1).

Value/acre was determined by converting estimated plot yields to tons/acre and using the 2019 contract price values for each market-type (\$475 for all types). No adjustments were made for damaged kernels or concealed damage. Virginia \$/A values may be underestimated, as grade is not as large a factor for in-shell peanuts; however, the extra-large kernels (ELK)bonus was added in the final value/A figure. Calculations of \$/A are based on yield and grade only and do not include possible input costs. The following formula was used: $\$/A = \text{yield (tons/A)} * \text{contract price (\$/ton)} * \text{grade}$.

Interpreting Data

Least significant differences (LSD) are listed at the bottom of all but the performance summary tables. Differences between varieties are significant only if they are equal to or greater than the LSD value. If a given variety out yields another variety by as much or more than the LSD value, then we are 95% sure the yield difference is real, with only a 5% probability the difference is due to chance alone. For example, if variety X is 500 pounds per acre higher in yield than variety Y, then this difference is statistically significant if the LSD is 500 or less. If the LSD is 500 or greater, then we are less confident that variety X really is higher yielding than variety Y under the conditions of the test.

The coefficient of variation (CV value) listed at the bottom of each table is used as a measure of the precision of the experiment. Lower CV values will generally relate to lower experimental error in the trial. Uncontrollable or immeasurable variations in soil fertility, soil drainage and other environmental factors contribute to greater experimental error and higher CV values. Results reported here should be representative of what might occur throughout the state but would be most applicable under environmental management conditions similar to those of the trials. The relative yields of all peanut varieties are affected by crop management and by environmental factors, including soil-type, summer conditions, soil moisture, disease and insects.

2020 Caddo County Peanut Variety Trial

- Location: Oklahoma Agricultural Experiment Station, Fort Cobb
- Date Planted: 5/19/2020
- Date Dug: 10/12/2020
- Date Threshed: 10/15-26/2020

The trial was planted on May 19, 2020. A conventional till seedbed was used and managed for foliar and soil-borne diseases throughout the season. Average yield for the runner test was 4,962 pounds per acre, and average grade was 70% TSMK (Table 1) with entries Lariat and ACI080 and breeding line ARSOK R93-1 having higher yields compared to other genotypes tested. Statistical differences in yield and grade were seen among entries, but overall grades were slightly lower than in immediate past years.

Among the Spanish entries tested, the average yield and grade were 4,162 pounds per acre and 70% TSMK, respectively. In Caddo County, no statistical differences among entries were reported for yield, but cultivar Span17 had the highest numerical yield at 4,439 pounds per acre. The small-seeded runner growth habit cultivars AT98-99 and Span17 are expected to have higher yields and grades, both grading highest at 71% and 74% TSMK, respectively.

Entries in the Virginia test averaged 4,519 pounds per acre with an average grade of 66% TSMK. Statistical differences were reported for yield and grade. Among the breeding lines tested, NC-17EX yielded comparably with released cultivars at 5,074 pounds per acre and had one of the top grades at 69% TSMK. Contender was the top yielding cultivar at 5,604 pounds per acre.

Table 5 contains Caddo County yield and grade data averaged for 2019 and 2020. Average yield among runner entries for the two-year period was 4,165 pounds per acre, while the average grade was 69% TSMK. Cultivar Lariat was the top yielder over the two-year period at 4,781 pounds per acre. Statistical differences in yield and grade were seen among runner entries. Significant differences in yield were not found among all Spanish entries over the two years. Numerically, cultivar OLé was the top yielder among Spanish entries averaging 4,008 pounds per acre. Statistical differences were reported for Spanish entry average grades over the two-year period. The average yield for Virginia entries in 2019-2020 was 4,454 pounds per acre, but no statistical differences in yield were seen among entries. Breeding line NCEX17 was numerically the top yielder over years, averaging 4,858 pounds per acre. Cultivars ACI351 and Jupiter were the top yielding at 4,792 and 4,742 pounds per acre, respectively. Statistical differences for average grade among Virginia-type entries were reported, with the average % TSMK reported at 66.

2020 Custer County Variety Trial

- Location: Les Crall Farms, Thomas
- Date Planted: 5/07/2020
- Date Dug: 10/05/2020
- Date Threshed: 10/08/2020

The trial was planted on May 7, 2020, into a conventional till seedbed and managed for weeds as well as foliar and soil-borne disease throughout the season. The average yield for the runner test (Table 2) was 4,558 pounds per acre with an average grade of 68% TSMK. Statistical differences for yield and grade were reported. Numerically, entry Lariat was the top performer, averaging 5,358 pounds per acre, followed by breeding line ARSOK R47A at 5,379 pounds per acre. Cultivar Webb and breeding

line ARSOK R91-2 were not statistically different from Lariat with respect to yield. Breeding line ARSOK 93-1 and Lariat had the top grades at 75% and 73% TSMK, respectively.

Table 2 shows no statistical differences for yield among Spanish entries, but grade differences were noted. The trial averaged 4,154 pounds per acre and 68% TSMK. Cultivar Span17 topped the entries in yield and grade at 4,586 pounds per acre, and breeding line ARSOK S88-2 had the highest grade at 70% TSMK.

Virginia entries averaged 4,996 pounds per acre and a grade of 65% TSMK. Slight significant differences in yield were noted among entries. Cultivar ACI351 and breeding line NCEX17 and cultivar ACI351 had the highest yields at 5,805 and 5,676 pounds per acre, respectively, while the breeding line ARSOK V100-1 had the lowest at 4,367 pounds per acre. Grade differences were significant among entries and ranged from 59% to 71% TSMK.

Table 6 contains 2019-2020 two-year averages in Custer County. Statistical differences were seen among runner entries for yield, with the average yield being 3,893 pounds per acre. Among runner entries, Tamrun Lariat was numerically the highest in average yield at 4,548 pounds per acre. Cultivar Georgia 14N had the lowest average yield over the two-year period at 3,314 pounds per acre.

No significant differences were seen among Spanish entries over the two-year period where the average yield was 3,592 pounds per acre and average grade was 66% TSMK. As is expected by small-seeded runner-type plants, yields were highest for cultivars AT98-99 and Span17, which averaged 3,978 and 4,029 pounds per acre, respectively. Cultivar Tamnut OL06 had the lowest average yield at 3,205 pounds per acre.

No statistical differences were reported for Virginia-type entries in 2019-2020 for average yield (4,330 pounds per acre). Slight differences in grade were seen among entries. Numerically, Contender was the top yielder at 4,750 pounds per acre. Breeding line NCEX17 had the highest average grade for 2019-2020 at 69% TSMK.

2020 Love County Variety Trial

- Location: Anthony Reed Farms, Thackerville
- Date Planted: 5/28/2020
- Date Dug: 10/19/2020
- Date Threshed: 10/22/2020

The trial was planted relatively late on May 28, 2020, into a conventional till seedbed and managed for foliar and soil-borne disease throughout the season. Table 3 shows the 2020 yield and grade data from Love County. Statistical differences were seen among entries. Average yield and grade for the runner test was 4,998 pounds per acre and 71% TSMK. Cultivar Lariat and breeding line ARSOK R47A had the top yields at 5,466 and 5,777 pounds per acre, respectively. Breeding line ARSOK R93-1 had the top grade at 73% TSMK. With respect to yield, the ACI13321 was the poorest performer among cultivars at 4,411 pounds per acre.

Spanish entries performed well in Love County in 2020, with the average yield being 4,304 pounds per acre and an average grade of 70% TSMK. Cultivar AT98-99 was the highest in yield at 4,791 pounds per acre and a grade of 72% TSMK. Cultivar Schubert was poorest in yield at 3,787 pounds per acre and a grade of 66% TSMK.

Average yield and grade in the Virginia-type test was 4,869 pounds per acre and 63% TSMK. The top yielder was breeding line ARSOK V101-1 at 5,653 pounds per acre and a grade of 67% TSMK. Grades of Virginia-type entries ranged from 54% to 68% TSMK, and statistical differences were found.

This was the first year to hold a variety trial in Love County, so no two-year average data could be calculated.

Performance Across Locations

Table 4 includes yield and grade data averaged across locations for 2020. Statistical differences for yield and grade were reported for all market types. Among the runner types tested, cultivars Lariat and breeding line ARSOK R47A were the top yielders, averaging 5,287 and 5,366 pounds per acre, respectively. The top yielding Spanish entry across locations was Span17 at 4,586 pounds per acre. Cultivar Schubert performed the worst across all locations in 2020, averaging 3,759 pounds per acre. Across locations in 2020, the top yielding Virginia-type cultivars were Contender, ACI351 and Jupiter. The top breeding lines were NCEX17 and ARSOK V101-1, averaging 5,391 and 5,159 pounds per acre, respectively.

Tables 5-7 show peanut yields and grades averaged across years (2019-2020) in Caddo county, Custer County and across the two locations in Oklahoma, along with estimated revenue for each entry. Averaged over years and across locations, the top performing runner entries was Lariat with a yield of 4,667 pounds per acre. Georgia 14N averaged 3,434 pounds per acre, making it the poorest performer overall. Among the Spanish entries, OLé was the top yielder (4,037 pounds per acre), and statistical differences in performance were found among entries for yield or grade. Significant differences in yield were not found among Virginia entries across years and locations, but breeding line NCEX17 was numerically the highest yielder at 4,694 pounds per acre. Among Virginia cultivars tested, Contender was numerically the top yielder across locations and years, averaging 4,689 pounds per acre.

Pod Size Distribution

Pod size distribution is an essential factor in determining the market value of any Virginia cultivar. Most Virginia lines have larger than average pods, but a high percentage of the largest pods, termed “super jumbos,” makes a cultivar more valuable since Virginia cultivars are sold in-shell. Table 8 shows the pod size distribution of Virginia-type entries in the 2020 UPPT Caddo County location, as well as the Oklahoma Variety Trials.

For the 2020 Caddo County UPPT trial, breeding line NCEX17 had the highest number of super jumbo pods at 50.7% at 9.0 per ounce. When compared to a larger set of Virginia entries in the Oklahoma Peanut Variety trials, NCEX17 remained among the top performers, averaging 47.3% super jumbo pods at 10.1 per ounce. This percentage of super jumbo pods is significantly higher than cultivars Contender, Jupiter and VENUS. NCEX17 is an advanced breeding line that arose from selections made from a set of breeding populations screened through a joint effort between North Carolina State University and the United States Department of Agriculture-Agricultural Research Service in Stillwater for early maturity. Breeding line NCEX17 does have an enhanced percentage of super jumbo pods and is approximately seven days earlier in maturity than most other cultivars. NCEX17 has been chosen as a potential joint cultivar release for the Southwestern U.S. in 2021. Future possible Virginia cultivar releases are listed among the 2020 variety trial entries, and several breeding lines also had notably high super jumbo pod composition, ranging from 22% to 59%. Selections from those breeding lines will be made and moved forward for further analysis in future years.

Acknowledgments

Special thanks to Lisa Myers and Angie Harting for technical support and to Bobby Weidenmaier, Harley Houston and Brennan Leighton at the Caddo Research Station for location support. Thanks also to farmer cooperators Les Crall and Anthony Reed. This research is supported by USDA-ARS CRIS Project No. 3072-21220-007-00D, the Oklahoma Peanut Commission and National Peanut Board, as well as the Oklahoma Agricultural Experiment Station. Mention of trade names or commercial products in this publication is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the USDA, which is an equal opportunity provider and employer.



Table 1. Yield, grade, average seed weight, seed size distribution and value per acre for entries in the Caddo County Oklahoma Agricultural Experiment Station in Fort Cobb, Oklahoma peanut variety trial in 2020.⁶

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Runner¹								
ACI080	5070a	108	70b	60ij	32hi	61a	4b-d	843
ACI476	4952ab	106	70ab	57ij	25i	57a-c	6a-d	823
ACI3321	4906ab	105	68bc	67f-i	25i	53a-d	8ab	792
Georgia 09B	3810cd	81	72ab	61h-j	51c-f	46d-f	4b-d	652
Georgia 14N	4109b-d	88	69a-c	56j	34hi	49c-e	9a	673
Lariat	5037a	107	70ab	69d-g	42e-g	48c-f	4b-d	837
Tamrun OL11	3506d	75	68bc	70c-e	42e-g	44e-h	7a-c	566
Webb	4788ab	102	69a-c	66g-i	42e-g	50c-e	4b-d	785
ARSOK R47A	4944ab	105	69a-c	70c-e	36hi	56a-c	3e-d	810
ARSOK 90-12	4766ab	102	72ab	70c-e	37gh	58ab	4b-d	815
ARSOK 91-2	4822ab	103	71ab	76b-d	56b-d	40f-h	3e-d	813
ARSOK R92-13	5090a	108	73a	74b-e	49	48c-f	3e-d	882
ARSOK R93-1	4882ab	104	72ab	74b-e	60bc	35hi	3e-d	835
ARSOK R93-10	4580a-c	98	70ab	68e-h	39f-g	46d-f	4b-d	761
ARSOK R94-4	4953ab	106	69a-c	79ab	53c-e	40f-h	3e-d	812
ARSOK R95-1	4900ab	104	72ab	74b-e	45d-g	53a-d	3e-d	838
ARSOK R96-7	4931ab	105	72ab	77bc	67ab	29i	2d	843
ARSOK R96-8	4406a-d	94	68bc	86a	79a	12j	2d	712
Mean	4692		70	70	45	46	4	
CV	13.8		2.7	5.1	9.7	6.7	3.5	
LSD (0.05)	919		4	7	12	9	4	
Spanish¹								
AT98-99	4367	105	71ab	51b	55c	37	8ab	736
OLé	4097	98	69bc	51b	66b	24	4bc	671
Schubert	3642	87	65c	49bc	42d	39	11a	562
Span17	4439	106	74a	60a	80a	22	3c	780
Tamnut OL06	4256	102	69bc	47c	56c	34	6bc	697
ARSOK S88-2	4232	101	70b	49bc	52c	35	4bc	704
Mean	4172		70	51	58	32	6	
CV	13.3		2.5	2.7	3.5	7.1	20.1	
LSD (.05)	823(ns)		4	4	4	7	4	
Virginia¹								
ACI351	4666bc	103	67a	95c	67e	24e	6c	766
Contender	5604a	125	70a	90d	75a	21f	4cd	958
Jupiter	4867bc	108	69a	81ef	61g	29c	5cd	819
VENUS	4580c	101	66bc	80ef	64f	29c	4cd	740
NCEX1	4774bc	106	68a	98b	72c	23e	4cd	796
NCEX2	4695bc	104	68a	100a	74b	20fg	2d	784
NCEX7	4699bc	104	65bc	91cd	67e	20fg	6c	749
NCEX17	5074b	112	69a	100a	76a	19g	4cd	858
NCEX20	4895bc	108	68a	101a	76a	18g	2d	817
NCEX22	4825bc	107	65bc	101a	72c	26d	2d	770
ARSOK V-98	4174cd	92	65bc	77g	59h	30bc	6c	665
ARSOK V-99	4331cd	96	64c	77g	67e	19g	8b	682
ARSOK V-100-1	3990d	88	69a	89d	70d	24e	5cd	678

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Virginia¹								
ARSOK V-100-2	4056d	90	65bc	83e	68e	7i	7b	650
ARSOK V-101-1	4617bc	102	66bc	68ij	60g	28c	5cd	745
ARSOK V-103-1	4260cd	94	64c	80ef	64f	24e	5cd	670
ARSOK V-103-3	4183cd	93	63cd	73h	58h	28c	7b	646
ARSOK V-103-4	3752d	83	61d	67j	61g	15h	24a	565
ARSOK V-103-5	3808d	84	64c	70i	53i	32a	7b	597
Mean	4519		66	85	67	22	6	
CV	11.1		4.2	15.7	8.8	2.0	7.5	
LSD (.05)	467		2.4	2.1	1.8	1.2	1.7	

¹Market Type.

²% TSMK = Percent total sound mature kernels.

³SdWt/100 = Weight of 100 SMK.

⁴ELK= % Kernels riding a 21.5/64" X 1" slotted screen for Virginia and 21/64" X 3/4" screen for runner and Spanish; MED=% Kernels riding a 18/64" but falling through a 21.5/64" or 21/64" screen; No.1=% Kernels riding a minimum grade screen (16/64" for runner and Spanish and 15/64 for Virginia) but falling through a 18/64".

⁵Calculated based on peanut market-type contract price 2020 (\$475). ELK bonus added for Virginias.

⁶Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.



Table 2. Yield, grade, average seed weight, seed size distribution and value per acre for entries in the Custer County (Weatherford/Les Crall Farms) Oklahoma peanut variety trial in 2020.⁶

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Runner¹								
ACI080	4549b-e	100	66b-d	49hi	24g	60a	12a-c	756
ACI476	4093de	90	70ab	48i	32fg	60a	10b-e	823
ACI3321	4499b-e	99	62d	66a-c	49b-f	30fg	8c-f	792
Georgia 09B	4682b-d	103	68a-d	61c-f	53a-e	39c-e	5fg	652
Georgia 14N	4003e	88	66b-d	61c-f	37e-g	47b	10b-e	673
Lariat	5358a	118	73ab	64a-d	39d-f	47b	11b-d	837
Tamrun OL11	4254c-e	93	68a-d	58d-g	33fg	50b	16a	566
Webb	4859a-c	107	63cd	57e-g	39d-f	40cd	9b-f	785
ARSOK R47A	5379a	118	66b-d	67ab	44c-f	39c-e	12a-c	810
ARSOK 90-12	4514b-e	99	69a-c	62b-e	37e-g	50b	13ab	815
ARSOK 91-2	4962ab	109	67b-d	64a-c	55a-d	34e-g	7c-f	813
ARSOK R92-13	4508b-e	99	69a-c	64a-c	48b-f	44bc	6e-f	882
ARSOK R93-1	4616b-e	101	75a	64a-c	62ab	34e-g	4g	835
ARSOK R93-10	4216c-e	92	69a-c	55fg	84b-f	44bc	7c-f	761
ARSOK R94-4	4557b-e	100	67b-d	63a-d	52b-e	36d-f	7c-f	812
ARSOK R95-1	4398b-e	96	69a-c	61c-f	45c-f	44bc	9b-f	838
ARSOK R96-7	4346b-e	95	66b-d	60c-g	56a-c	29g	8c-f	843
ARSOK R96-8	4262c-e	94	62d	68a	69a	14h	4g	712
Mean	4558		68	61	46	41	10	
CV	10.3		1.4	4.6	12.5	5.1	14.8	
LSD (0.05)	688		7	6	16	6	4	
Spanish¹								
AT98-99	4230	102	71a	44ab	51ab	37ab	12ab	713
OLé	4324	104	67ab	45ab	51ab	35bc	12ab	688
Schubert	3848	93	64b	40b	25c	49a	26a	585
Span17	4586	110	69ab	49a	62a	29c	8b	752
Tamnut OL06	3724	90	69ab	41b	40bc	47a	21a	610
ARSOK S88-2	4212	101	70ab	41b	51ab	42ab	7b	700
Mean	4154		68	43	46	55	13	
CV	10.7		3.6	6.5	10.4	11.2	28.2	
LSD (.05)	659 (ns)		6	6	16	15	9	
Virginia¹								
ACI351	5676a	114	66a-c	96b	61	29ab	7ab	913
Contender	5264ab	105	66-ac	86bc	74a	23b	2bc	848
Jupiter	5322ab	107	65a-c	79c	39b	47a	9a	844
VENUS	5093a-c	102	63a-c	85bc	57ab	32ab	7ab	784
NCEX1	5209a-c	104	65a-c	101b	72a	19b	3bc	827
NCEX2	5131a-c	103	65a-c	104a	77a	17b	3bc	815
NCEX7	4598bc	92	62bc	112a	74a	16b	2c	699
NCEX17	5805a	116	65a-c	103a	77a	18b	2c	919
NCEX20	4898a-c	98	66a-c	101b	72a	19b	6a-c	791
NCEX22	4805a-c	96	64a-c	102ab	73a	25ab	2c	753
ARSOK V-98	4554bc	91	63a-c	88bc	58ab	31ab	5ab	703
ARSOK V-99	4734a-c	95	68ab	82bc	6 ab	32ab	3bc	788
ARSOK V-100-1	4367c	87	63a-c	95b	59a	14b	2c	675

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Virginia¹								
ARSOK V-100-2	4784a-c	96	66ac	98b	79a	15b	2c	773
ARSOK V-101-1	5204a-c	104	71a	81c	79a	23b	2c	902
ARSOK V-103-1	4687a-c	94	73ac	95b	66ab	23b	4bc	723
ARSOK V-103-3	5153a-c	103	59c	83bc	62ab	23b	7ab	743
ARSOK V-103-4	4909a-c	98	61bc	92b	70a	19b	7ab	733
ARSOK V-103-5	4747a-c	95	66a-c	93b	51ab	30ab	9a	767
Mean	4996		65	94	68	23	4	
CV	10.1		5.3	7.2	12.1	20.3	34.5	
LSD (.05)	765		8	10	29	22	4	

¹Market Type.

²% TSMK = Percent total sound mature kernels.

³SdWt/100 = Weight of 100 SMK.

⁴ELK= % Kernels riding a 21.5/64" X 1" slotted screen for Virginia and 21/64" X 3/4" screen for runner and Spanish; MED=% Kernels riding a 18/64" but falling through a 21.5/64" or 21/64" screen; No.1=% Kernels riding a minimum grade screen (16/64" for runner and Spanish and 15/64 for Virginia) but falling through a 18/64".

⁵Calculated based on peanut market-type contract price 2020 (\$475). ELK bonus added for Virginias.

⁶Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.



Table 3. Yield, grade, average seed weight, seed size distribution and value per acre for entries in the Love County (Thackerville Anthony Reed Farms) Oklahoma peanut variety trial in 2020.⁶

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Runner¹								
ACI080	5175a-e	104	70a-c	56h	19g	57a	17a	756
ACI476	4844b-g	97	71a-c	31h	40c-f	52ab	7bc	817
ACI3321	4411fg	88	67cd	74a-d	38c-f	45cd	9bc	702
Georgia 09B	4836c-g	98	71a-c	66d-g	57ab	32h	6c	815
Georgia 14N	4854b-g	97	74a	63f-h	45b-e	46cd	9bc	853
Lariat	5466ab	109	72ab	67e-g	40c-f	50bc	9bc	935
Tamrun OL11	4949b-f	99	70a-c	64e-h	40c-f	46cd	10b	823
Webb	5040b-e	101	69a-c	64e-h	38d-f	46cd	10b	826
ARSOK R47A	5777a	116	68b-d	68e-g	36ef	47bc	7bc	933
ARSOK 90-12	5058b-e	101	72ab	75a-d	49a-d	44c-e	7bc	865
ARSOK 91-2	5411a-c	108	69a-c	77a-c	50a-d	40d-f	5c	887
ARSOK R92-13	5441a-c	109	70a-c	81a	43c-f	45cd	9bc	905
ARSOK R93-1	4563e-g	91	73a	73a-d	54ab	38e-g	7bc	791
ARSOK R93-10	4697d-g	94	71a-c	72b-e	1c-f	50bc	7bc	792
ARSOK R94-4	5203a-d	104	70a-c	77a-c	57ab	33gh	7bc	865
ARSOK R95-1	4872b-g	97	73a	71c-f	35f	57a	7bc	845
ARSOK R96-7	5078b-e	102	70a-c	70c-f	50a-c	34f-h	8bc	844
ARSOK R96-8	4287g	86	63d	80ab	60a	22i	6c	641
Mean	4998		71	69	44	44	9	
CV	2.0		3.6	6.0	9.0	5.0	21.0	
LSD (0.05)	625		5	9	11	6	5	
Spanish¹								
AT98-99	4791a	111	72a	52	59bc	33a	12a	819
OLé	4026bc	94	69b	55	76a	18b	3b	660
Schubert	3787c	88	66c	51	49c	33a	12a	594
Span17	4737ab	110	72a	58	76a	21b	4b	810
Tamnut OL06	4260a-c	99	69b	52	64ab	29ab	5b	698
ARSOK S88-2	4221a-c	98	69b	58	74a	19b	3b	692
Mean	4304		70	54	66	25	7	
CV	11.5		0.9	7.2	6.2	12.1	15.3	
LSD (.05)	739		1.5	9.6(ns)	14	11	4	
Virginia¹								
ACI351	5154ab	106	62ab	89ab	48b	38a	12a	781
Contender	5002ab	103	68a	88ab	73a	26a-c	1c	832
Jupiter	5198ab	107	65ab	89ab	66ab	28a-c	6bc	825
VENUS	4829ab	99	63ab	87ab	58ab	32ab	3c	745
NCEX1	4886ab	100	62ab	94ab	67ab	22bc	7ab	741
NCEX2	4816bc	99	62ab	98a	66ab	24a-c	7ab	731
NCEX7	4710bc	97	64ab	98a	68ab	23bc	8ab	738
NCEX17	5295ab	109	67ab	101a	74a	22bc	3bc	866
NCEX20	4694bc	96	65ab	89ab	74a	20bc	4bc	747
NCEX22	4969ab	102	62ab	93ab	54b	33ab	9ab	753
ARSOK V-98	4558bc	94	61ab	81b	49b	36ab	10ab	682
ARSOK V-99	4669bc	96	66ab	86ab	60ab	34ab	3bc	755
ARSOK V-100-1	4541bc	93	62ab	82b	60ab	29a-c	9ab	690

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Virginia¹								
ARSOK V-100-2	5204ab	107	62ab	94ab	67ab	22bc	7ab	788
ARSOK V-101-1	5653a	116	67ab	79b	78a	21bc	1c	923
ARSOK V-103-1	5001ab	103	62ab	92ab	63ab	25a-c	9ab	758
ARSOK V-103-3	4575bc	94	54c	82b	57ab	17c	10ab	606
ARSOK V-103-4	4498bc	92	60ab	87ab	55b	29a-c	9ab	662
ARSOK V-103-5	4378c	90	64ab	88ab	62ab	33ab	5bc	688
Mean	4869		63	90	63	27	8	
CV	11.7		6.6	7.3	13.5	20.6	23.8	
LSD (.05)	825		5	15	22	14	5	

¹Market Type.

²% TSMK = Percent total sound mature kernels.

³SdWt/100 = Weight of 100 SMK.

⁴ELK= % Kernels riding a 21.5/64" X 1" slotted screen for Virginia and 21/64" X 3/4" screen for runner and Spanish; MED=% Kernels riding a 18/64" but falling through a 21.5/64" or 21/64" screen; No.1=% Kernels riding a minimum grade screen (16/64" for runner and Spanish and 15/64 for Virginia) but falling through a 18/64".

⁵Calculated based on peanut market-type contract price 2020 (\$475). ELK bonus added for Virginias.

⁶Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.



Table 4. Yield, grade, average seed weight, seed size distribution and value per acre for entries averaged across all locations tested in the 2020 Oklahoma peanut variety trial.⁶

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Runner¹								
ACI080	4931a-c	104	68ab	55	24g	59a	11ab	735
ACI476	4629cd	97	70ab	65	32fg	56ab	8a-c	770
ACI3321	4605cd	97	65b	69	36ef	43d-f	8a-c	711
Georgia 09B	4442cd	94	70ab	63	53bc	38e-g	5bc	738
Georgia 14N	4322cd	91	69ab	57	39d-f	47cd	9a-c	708
Lariat	5287ab	111	71a	66	40d-f	48b-d	8a-c	892
Tamrun OL11	4236d	89	69ab	64	38d-f	46cd	10a-c	694
Webb	4895bc	103	68ab	62	39e-f	46c-e	8a-c	791
ARSOK R47A	5366a	113	67ab	68	39d-f	46cd	7a-c	854
ARSOK 90-12	4779bc	101	72a	69	41d-f	50b-d	7a-c	817
ARSOK 91-2	5077a-c	107	70ab	64	51bc	32	13a	844
ARSOK R92-13	5013a-c	106	70ab	73	46cd	46cd	6a-c	833
ARSOK R93-1	4687cd	99	73a	70	59b	36	4c	813
ARSOK R93-10	4497cd	95	70ab	65	42de	46cd	6a-c	748
ARSOK R94-4	4904a-c	103	68ab	73	53bc	36f-h	6a-c	792
ARSOK R95-1	4723bc	99	71a	68	41de	51bc	6a-c	796
ARSOK R96-7	4785bc	101	69ab	69	57b	30h	6a-c	784
ARSOK R96-8	4318cd	91	64b	78	69a	16i	4c	656
Mean	4749		69	66	45	43	8	
CV	10.2		5.2	13.2	11.7	10.9	47.8	
LSD (0.05)	462		6	10	12	10.6	8	
Spanish¹								
AT98-99	4463ab	773	71ab	48b	71a	39a	14a	106
OLé	4146ab	721	68c	50ab	63ab	36a	11ab	99
Schubert	3759b	652	65d	46b	59ab	36a	8bc	89
Span17	4586a	709	72a	56a	53b	31ab	6c	109
Tamnut OL06	4080ab	669	69bc	46b	53b	25b	5c	97
ARSOK S88-2	4222ab	625	70a-c	49ab	39c	23b	5c	100
Mean	4209		69	50	56	31	8	
CV	11.5		2.6	11.7	14.5	17.1	36.4	
LSD (.05)	425		2	7	14	9	5	
Virginia¹								
ACI351	5165a	108	65ab	93ab	59bc	30ab	8b	818
Contender	5290a	110	68a	88bc	74a	23bc	3d	880
Jupiter	5129a	107	66ab	83b-d	55c	35a	7bc	823
VENUS	4834ab	101	64ab	84b-d	60bc	31ab	5c	756
NCEX1	4956ab	103	65ab	98ab	70ab	21c	5c	790
NCEX2	4880ab	102	65ab	101a	72a	20cd	4cd	779
NCEX7	4669b	97	64ab	100a	70a	20cd	5c	734
NCEX17	5391a	112	67ab	92a	53cd	20cd	3d	876
NCEX20	4829ab	101	66ab	97ab	74a	19c	4cd	783
NCEX22	4866ab	102	64ab	99a	66ab	28b	4cd	763
ARSOK V-98	4428b	92	63ab	82b-d	55c	32ab	7bc	682
ARSOK V-99	4578b	95	66ab	82b-d	44d	28b	5cd	733
ARSOK V-100-1	4299b	90	65ab	89b	70a	22c	5cd	688

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Virginia¹								
ARSOK V-100-2	4681b	97	64ab	92ab	71a	15d	5cd	736
ARSOK V-101-1	5159a	108	68a	76c	72a	24b	3d	858
ARSOK V-103-1	4649b	97	63ab	89b	64bc	24b	6bc	718
ARSOK V-103-3	4779ab	99	59b	79cc	59bc	23bc	8b	690
ARSOK V-103-4	4386b	91	61b	82b-d	62bc	21c	13a	657
ARSOK V-103-5	4311b	90	65ab	84b-d	55c	32ab	7bc	685
Mean	4794		65	88	64	25	6	
CV	11.7		6.2	7.0	12.9	19.1	21.2	
LSD (.05)	685		5	9	9	5	2	

¹Market Type.

²% TSMK = Percent total sound mature kernels.

³SdWt/100 = Weight of 100 SMK.

⁴ELK= % Kernels riding a 21.5/64" X 1" slotted screen for Virginia and 21/64" X 3/4" screen for runner and Spanish; MED=% Kernels riding a 18/64" but falling through a 21.5/64" or 21/64" screen; No.1=% Kernels riding a minimum grade screen (16/64" for runner and Spanish and 15/64 for Virginia) but falling through a 18/64".

⁵Calculated based on peanut market-type contract price 2020 (\$475). ELK bonus added for Virginias.

⁶Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.



Table 5. Yield, grade, average seed weight and value per acre for entries averaged across years in the Caddo County Oklahoma Agricultural Research Station in Fort Cobb, Oklahoma peanut variety trial in 2019-2020.⁶

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Runner¹								
Georgia 09B	3447e	83	70a-c	57f	38b-e	35a-c	7a-c	756
Georgia 14N	3555de	85	72a	53f	26e	36a-c	9a	608
Lariat	4781a	115	72a	65b-d	29c-e	41ab	6b-d	818
Tamrun OL11	3707c-e	89	71ab	61de	21e	40ab	8ab	624
Webb	4233a-d	102	66cd	62c-e	30c-e	39a-c	6b-d	664
ARSOK R47A	4602ab	110	64d	65b-d	25e	43a	5cd	700
ARSOK 90-12	4039b-e	97	72a	65b-d	27de	42a	5cd	691
ARSOK 91-2	4256a-d	102	65b-d	70b	40b-d	35a-c	4de	657
ARSOK R92-13	4578ab	110	72a	69b	36b-e	35a-c	4de	783
ARSOK R93-1	4286a-c	103	69a-d	65b-d	42bc	29cd	4de	702
ARSOK R93-10	4068b-e	98	70a-c	63c-e	29c-e	36a-c	5cd	676
ARSOK R94-4	4418a-c	106	69b-d	70b	41b-d	30b-d	3ef	724
ARSOK R96-7	4304a-c	103	68a-d	68bc	49ab	21e	3ef	695
ARSOK R96-8	4042b-e	97	66cd	78a	61a	16e	2f	634
Mean	4165		69	65	36	34	6	
CV	17.2		6.2	8.7	23.5	18.5	24.2	
LSD (0.05)	711		5	7	14	10	2	
Spanish¹								
AT98-99	3876	101	72a	47b	36ab	30b	9ab	663
OLé	4008	105	64b	48b	49a	21c	6c	609
Schubert	3551	93	66ab	46b	26b	35a	12a	557
Span17	3920	102	72a	52a	50a	22c	6c	670
Tamnut OL06	3726	97	64b	45b	38ab	29b	8bc	566
ARSOK S88-2	3913	102	63b	46b	40ab	27bc	7bc	585
Mean	3882		66	47	40	28	8	
CV	16.3		7.7	7.5	27.1	12.1	22.8	
LSD (.05)	633(ns)		6	4	8	6	3	

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Virginia¹								
ACI351	4792	108	66a	93b	56a-c	21bc	5bc	774
Contender	4628	104	67a	84c	57a-c	21bc	3cd	760
Jupiter	4742	106	66a	78cd	41c	29a	7a	766
VENUS	4488	101	64ab	75d	43bc	29a	6ab	705
NCEX1	4257	96	55b	94b	53a-c	21bc	3cd	575
NCEX2	4325	97	67a	99ab	60a	12d	2d	712
NCEX7	4095	92	67a	105a	63a	15cd	2d	675
NCEX17	4858	109	69ab	96b	59ab	18b-d	3cd	820
NCEX20	4563	102	68a	97b	60a	15cd	2d	761
NCEX22	4083	92	68a	97b	52a-c	22ab	3cd	683
Mean	4454		66	92	55	20	3	
CV	19.8		11.7	6.7	20.0	24.1	33.1	
LSD (0.05)	882(ns)		9	7	16	7	2	

¹Market Type.

²% TSMK = Percent total sound mature kernels.

³SdWt/100 = Weight of 100 SMK.

⁴ELK= % Kernels riding a 21.5/64" X 1" slotted screen for Virginia and 21/64" X 3/4" screen for runner and Spanish; MED=% Kernels riding a 18/64" but falling through a 21.5/64" or 21/64" screen; No.1=% Kernels riding a minimum grade screen (16/64" for runner and Spanish and 15/64 for Virginia) but falling through a 18/64".

⁵Calculated based on peanut market-type contract price 2020 (\$475). ELK bonus added for Virginias.

⁶Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.



Table 6. Yield, grade, average seed weight and value per acre for entries averaged across years in the Custer County (Weatherford/Thomas, Les Crall Frams) Oklahoma peanut variety trial in 2019-2020.⁶

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Runner¹								
Georgia 09B	4258a-c	109	65a-c	57de	38ab	31bc	6ef	702
Georgia 14N	3314c	85	67a-c	53ef	25b-d	34a-c	12a-b	527
Lariat	4548a	117	71a	63bc	27b-d	36ab	9b-d	767
Tamrun OL11	4250a-c	109	71a	57de	23cd	40a	11bc	717
Webb	3819a-c	98	65bc	59cd	27b-d	31bc	9b-d	590
ARSOK R47A	4365ab	112	70ab	64b	31b-d	31bc	9b-d	726
ARSOK 90-12	3527bc	91	66a-c	62bc	28b-d	36ab	11bc	553
ARSOK 91-2	4096a-c	105	64b-d	51f	20d	32a-c	16a	623
ARSOK R92-13	3718a-c	96	67a-c	66b	28b-d	34a-c	8c-e	592
ARSOK R93-1	3874a-c	100	66a-c	62bc	40ab	29bc	6ef	607
ARSOK R93-10	3587a-c	92	69a-c	59cd	31b-d	34a-c	8c-e	588
ARSOK R94-4	3724a-c	96	68a-c	65b	38ab	26c	8c-e	601
ARSOK R96-7	3441bc	88	59d	63bc	28b-d	26c	10b-d	482
ARSOK R96-8	3976a-c	102	63cd	72a	53a	14c	4f	595
Mean	3893		66	61	31	31	9	
CV	25.3		7.8	6.5	30.7	16.4	22.8	
LSD (0.05)	979		6	5	15	8	4	
Spanish¹								
AT98-99	3978ab	111	67a	46ab	34a-c	30ab	12a-c	633
OLé	3532a-c	98	65ab	45b	39ab	26ab	9bc	545
Schubert	3267bc	91	66ab	42c	26c	35a	14a	512
Span17	4029a	112	66ab	48a	43a	24b	8c	632
Tamnut OL06	3205c	89	63b	40c	30bc	32ab	13ab	480
ARSOK S88-2	3539a-c	99	66ab	41c	39ab	31ab	8c	555
Mean	3592		66	43	35	30	10	
CV	20.7		6.4	5.2	19.2	19.2	24.2	
LSD (.05)	753		5	3	11	9	4	

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Virginia¹								
ACI351	4517	104	68a	91bc	55	22cd	4b	753
Contender	4750	110	67ab	84de	55	22cd	5ab	779
Jupiter	4168	96	67ab	78e	50	28b	5ab	687
VENUS	4110	95	64b	77e	46	34a	4b	647
NCEX1	4015	93	68a	89cd	55	22cd	7a	672
NCEX2	3974	92	66ab	100a	64	15f	4b	646
NCEX7	4116	95	67ab	94a-c	57	18d-f	5ab	678
NCEX17	4530	105	69a	99ab	64	17ef	4b	767
NCEX20	4717	109	66ab	92a-c	64	17f	4b	762
NCEX22	4325	100	67ab	91bc	50	24bc	5ab	712
Mean	4330		67	90	56	19	5	
CV	19.6		4.6	7.7	21.5	15.3	30.0	
LSD (.05)	847(ns)		4	8	16(ns)	5	2	

¹Market Type.

² % TSMK = Percent total sound mature kernels.

³SdWt/100 = Weight of 100 SMK.

⁴ELK= % Kernels riding a 21.5/64" X 1" slotted screen for Virginia and 21/64" X 3/4" screen for runner and Spanish; MED=% Kernels riding a 18/64" but falling through a 21.5/64" or 21/64" screen; No.1=% Kernels riding a minimum grade screen (16/64" for runner and Spanish and 15/64 for Virginia) but falling through a 18/64".

⁵Calculated based on peanut market-type contract price 2020 (\$475). ELK bonus added for Virginias.

⁶Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.



Table 7. Yield, grade, average seed weight and value per acre for entries averaged across all locations and years in the Oklahoma peanut variety trial in 2019-2020.⁶

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Runner¹								
Georgia 09B	3853cd	96	68a-d	57ef	38b-d	32b-d	6cd	735
Georgia 14N	3434d	85	69a-c	53f	26f	35a-c	11a	563
Lariat	4664a	116	71a	64b-d	29d-f	39ab	7b-d	786
Tamrun OL11	3979b-d	99	70ab	59e	24f	40a	10ab	662
Webb	4026b-d	100	66d-e	60de	29d-f	36a-c	7b-d	631
ARSOK R47A	4026b-d	100	67c-e	64b-d	28f	37ab	7b-d	641
ARSOK 90-12	4483ab	111	69a-d	64b-d	28f	39a	8a-c	735
ARSOK 91-2	4009b-d	100	65d-f	60de	30c-f	34a-d	10ab	619
ARSOK R92-13	3783cd	94	70ab	68b	33b-f	34a-d	6cd	629
ARSOK R93-1	4080a-c	101	68a-d	64b-d	41b	29c-e	5c-e	659
ARSOK R93-10	4148a-c	103	69a-c	61de	30c-f	34a-d	6cd	680
ARSOK R94-4	3828cd	95	68a-d	68b	39bc	28de	5de	618
ARSOK R96-7	4071a-c	101	63f	65bc	38a-c	24e	6cd	609
ARSOK R96-8	4009b-d	100	64f	75a	57a	15f	3e	609
Mean	4029		68	63	34	33	7	
CV	21.7		7.4	9.1	27.1	17.8	32.8	
LSD (0.05)	611		4	5	10	6	3	
Spanish¹								
AT98-99	3927ab	105	69a	46ab	34ab	29bc	11a	644
OLé	4037a	108	64ab	47ab	48a	23c	7b	614
Schubert	3409b	91	66ab	43ab	26b	36a	13a	534
Span17	3975ab	106	69a	50a	46a	23c	6b	651
Tamnut OL06	3465ab	93	63b	42b	34ab	31a-c	11a	518
ARSOK S88-2	3726ab	100	64ab	43ab	39ab	29a-c	7b	566
Mean	3738		66	45	37	29	9	
CV	17.6		7.3	7.7	23.5	16.4	25.1	
LSD (.05)	622		5	7	18	8	3	

Entry	Yield (lb/A)	% of Trial Average	Grade ² (%TSMK)	SdWt/100 ³ (g)	ELK ⁴ (%)	MED ⁴ (%)	No. 1 ⁴ (%)	Value ⁵ (\$/A)
Virginia¹								
ACI351	4654	106	67ab	92cd	55a-c	22bc	5ab	764
Contender	4689	107	67ab	84e	56ab	22bc	5ab	770
Jupiter	4455	101	66a-c	78ef	45bc	29a	6a	721
VENUS	4299	98	64bc	76f	43c	32a	5ab	676
NCEX1	4136	94	62c	91d	54a-c	22bc	5ab	631
NCEX2	4150	94	66ab	99ab	62a	13d	3c	674
NCEX7	4106	93	67ab	100a	60a	15d	4bc	677
NCEX17	4694	107	69a	97a-c	62a	18cd	3c	793
NCEX20	4640	106	69ab	94b-d	62a	15d	3c	750
NCEX22	4204	96	67ab	93cd	52a-c	24b	5bc	692
Mean	4392		66	91	55	20	4	
CV	19.4		9.1	7.4	19.2	19.2	36.9	
LSD (.05)	596(ns)		5	5	12	4	2	

¹Market Type.

²% TSMK = Percent total sound mature kernels.

³SdWt/100 = Weight of 100 SMK.

⁴ELK= % Kernels riding a 21.5/64" X 1" slotted screen for Virginia and 21/64" X 3/4" screen for runner and Spanish; MED=% Kernels riding a 18/64" but falling through a 21.5/64" or 21/64" screen; No.1=% Kernels riding a minimum grade screen (16/64" for runner and Spanish and 15/64 for Virginia) but falling through a 18/64".

⁵Calculated based on peanut market-type contract price 2020 (\$475). ELK bonus added for Virginias.

⁶Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.



Table 8. Pod size distribution of virginia-type entries in the 2020 Uniform Peanut Performance Test (UPPT) and the Oklahoma Peanut Variety Trials (PVT) in 2020.^{2,3}

UPPT - FORT COBB								
Entry	Super Jumbo¹ (%)	Super Jumbo¹ (#/oz.)	Jumbo¹ (%)	Jumbo¹ (#/oz.)	Fancy¹ (%)	Fancy¹ (#/oz.)	Total Fancy¹ (%)	Pass¹ (%)
Bailey	11.7e	11.3a	39.0ab	11.5bc	39.7ab	15.5bc	90.6	9.0
Contender	11.8e	10.3ab	35.2bc	11.0c	45.2a	15.0c	92.2	7.8
Jupiter	17.5de	10.3ab	42.7a	11.5bc	33.0b	16.3bc	93.2	7.0
VENUS	24.0cd	10.3ab	31.7cd	12.8a	35.0b	17.3ab	90.7	9.5
N14002	39.2b	9.5bc	28.2de	11.8bc	21.3c	18.5a	88.7	11.0
N14023	27.7c	10.5ab	39.5ab	12.3ab	24.5c	19.0a	91.7	8.0
NCEX17	50.7a	9.0c	23.5e	12.3ab	19.5c	18.5a	93.7	6.0
Mean	26	10	34	12	31	17		8.3
CV	23	9.9	13	5.5	17	7.3		44
LSD (0.05)	2.0	1.5	6.6	0.9	7.9	1.9		5.3(ns)
PVT - CADDO COUNTY³								
Entry	Super Jumbo¹ (%)	Super Jumbo¹ (#/oz.)	Jumbo¹ (%)	Jumbo¹ (#/oz.)	Fancy¹ (%)	Fancy¹ (#/oz.)	Total Fancy¹ (%)	Pass¹ (%)
ACI 351	45.0e-g	10.0de	35.5d-g	13.5cd	14.3e-g	23.3bc	94.8	4.0a
Contender	10.0j	9.5ef	31.3gh	10.8j	49.3a	15.3j	90.6	7.2b
Jupiter	18.2i	10.3cd	48.3a	11.8g-j	28.0bc	17.0ij	94.5	6.8b
VENUS	32.0h	10.3cd	37.5de	13.0c-f	25.5c	19.3f-g	94.5	4.0a
NCEX1	41.2fg	9.0fg	36.2d-g	12.5d-g	15.8e-g	22.0c-e	93.2	6.4b
NCEX2	62.0ab	8.5g	23.5j	13.3c-e	10.3ij	26.5a	95.8	3.9a
NCEX7	54.7b-d	8.5g	33.8e-h	12.3e-i	12.3gh	23.5bc	100	0.0a
NCEX17	46.7e-g	8.5g	36.8d-f	12.0f-i	12.3gh	22.8b-d	95.8	3.4a
NCEX20	40.2fg	8.5g	39.3cd	11.3ij	16.3ef	19.0gh	95.8	3.3a
NCEX22	25.5hi	9.0fg	45.0ab	11.5h-j	21.8d	19.0gh	92.3	4.6a
ARSOK V98	24.70hi	10.8bc	43.7a-c	12.8d-g	27.9bc	18.8hi	96.3	2.9a
ARSOK V99	25.0hi	11.5a	46.0a	13.3c-e	26.5bc	15.5hi	97.5	2.0a
ARSOK V100-1	50.8de	9.8de	40.1b-d	14.0bc	13.0f-i	19.8f-h	95.7	3.2a
ARSOK V100-2	62.5a	9.8de	23.8ij	13.5cd	11.0hi	20.8e-g	97.3	2.5a
ARSOK V101-1	24.3i	11.3ab	40.5b-d	14.0bc	15.0e-g	19.8f-h	79.8	16.9b
ARSOK V103-1	47.7d-f	9.5ef	31.8f-h	14.0bc	15.0e-g	21.0d-f	94.5	4.9a
ARSOK V103-3	51.8c-e	10.8bc	28.8h-j	15.8a	13.8e-i	24.3b	94.4	5.2b
ARSOK V103-4	65.3a	9.8de	24.5ij	14.8ab	7.0j	24.3b	96.8	2.7a
ARSOK V103-5	59.3a-c	10.0de	29.0hi	13.3c-e	10.5ij	19.0gh	90.8	6.2b
Mean	41.4	9.7	35.3	12.8	18.8	20.7		4.5
CV	12.9	5.4	10.7	6.4	13.9	6.2		20.3
LSD (0.05)	7.6	0.7	5.3	1.2	3.7	1.8		4.6

PVT - LOVE COUNTY³

Entry	Super Jumbo¹ (%)	Super Jumbo¹ (#/oz.)	Jumbo¹ (%)	Jumbo¹ (#/oz.)	Fancy¹ (%)	Fancy¹ (#/oz.)	Total Fancy¹ (%)	Pass¹ (%)
ACI351	56.8b-d	15.3bc	30.0de	15.0b-d	11h-j	24.8ab	97.8	1.9f-i
Contender	11.2k	3.0k	38.8bd	11.8h	45.0a	16.3e	95.0	4.6b-e
Jupiter	31.2h-j	7.5j	47.0a	12.0gh	20.0cd	15.5e	98.2	1.5g-i
VENUS	40.2fg	11.5e-g	37.2bc	13.4d-f	20.5cd	17.8e	97.9	1.7g-i
NCEX1	44.3ef	11.8ef	31.0de	14.5c-e	17.8de	23.3b-d	93.1	6.4a-c
NCEX2	61.8b	16.0b	27.5ef	14.0d-f	9.5j-l	20.8d	98.8	0.6i
NCEX7	61.8b	16.5ab	30.8de	14.8b-d	6.3l	24.5a-c	98.9	0.5i
NCEX17	54.0cd	12.3de	30.8de	13.8d-f	12.5f-j	24.3bc	97.3	1.9f-i
NCEX20	37.3f-h	9.5hi	34.8cd	12.8f-h	20.3cd	21.3d	92.4	7.2a
NCEX22	37.0gh	10.0f-h	41.5b	13.3e-g	15.5ef	21.8cd	94.0	4.9a-e
ARSOK V98	32.3g-i	10.0f-h	35.0cd	14.3de	22.3c	20.8d	89.6	5.9a-c
ARSOK V99	29.0ij	9.0h-j	38.5bc	14.3de	28.5b	20.8d	96.0	3.2d-g
ARSOK V100-1	55.0b-d	15.3bc	27.0ef	15.0b-d	13.5f-i	21.8cd	95.5	2.9e-h
ARSOK V100-2	55.5b-d	15.5bc	24.3f	16.8a	15.0e-g	23.3b-d	94.8	4.9a-e
ARSOK V101-1	28.0j	7.5j	38.5bc	14.5c-e	28.3b	21.8cd	94.8	4.1c-f
ARSOK V103-1	49.8de	13.8cd	30.8cd	14.8b-d	14.5e-h	23.3b-d	92.1	4.1c-e
ARSOK V103-3	59.5bc	16.8ab	22.8f	16.8a	11.5g-j	27.3a	93.8	5.3a-d
ARSOK V103-4	69.3a	18.3a	23.3f	15.8a-c	7.0kl	25.8ab	99.6	0.5i
ARSOK V103-5	62.0b	17.0ab	26.5ef	16.0ab	10.3i-k	24.2bc		0.7hi
Mean	45.8	12.4	32.6	14.3	17.6	22.3		3.5
CV	10.9	10.2	11.9	6.6	0.94	9.3		45.6
LSD (0.05)	7.1	1.8	5.5	1.3	3.9	0.2.9		2.3

PVT - CUSTER COUNTY³

Entry	Super Jumbo¹ (%)	Super Jumbo¹ (#/oz.)	Jumbo¹ (%)	Jumbo¹ (#/oz.)	Fancy¹ (%)	Fancy¹ (#/oz.)	Total Fancy¹ (%)	Pass¹ (%)
ACI351	25.7ef	10.3c	45.5a	12.5d-f	7.5d	18.8c-f	78.7	2.5f-h
Contender	4.3i	9.8cd	25.8f	10.5ij	17.3a	14.3i	47.4	8.5a
Jupiter	11.0h	10.3c	36.5c-e	13.0c-e	12.0bc	15.3hi	49.5	6.0a-d
VENUS	15.0gh	11.3b	39.3a-d	13.0c-e	11.3bc	17.8d-g	55.6	6.8a-c
NCEX1	30.8d-f	9.0ef	45.8a	11.0g-j	5.8d-f	17.8d-g	82.4	2.5f-h
NCEX2	50.5a	9.3de	35.0c-e	12.5d-f	3.8fg	22.0a	89.3	1.8gh
NCEX7	52.3a	8.5f	36.0b-e	12.3e-g	3.0g	21.5ab	91.3	1.0h
NCEX17	41.3bc	9.0ef	45.5a-c	11.5f-g	4.5e-g	18.0d-g	91.3	1.0h
NCEX20	27.5ef	8.8ef	44.0ab	10.0j	7.5d	15.3hi	79.0	2.5f-h
NCEX22	12.8gh	9.0ef	46.0a	10.5ij	10.3c	16.3f-i	64.3	6.5a-d
ARSOK V98	17.5gh	11.3b	37.0b-e	13.3b-e	10.5bc	18.8c-f	65.0	7.8ab
ARSOK V99	14.8gh	12.0a	41.7a-c	13.3c-e	11.0bc	16.5e-g	67.5	5.0c-g
ARSOK V100-1	43.0b	10.3c	42.0a-c	15.5a	6.3de	19.0b-e	67.8	3.3e-h
ARSOK V100-2	31.8d-f	10.0c	30.2ef	13.8b-d	5.8b-d	19.3b-d	67.8	5.0c-f
ARSOK V101-1	18.3g	10.3c	31.3d-f	14.3a-c	12.5b	19.0b-e	62.1	6.3a-d
ARSOK V103-1	32.3de	11.0b	37.3b-e	13.0c-e	7.3d	20.0b-d	76.9	5.3b-e
ARSOK V103-3	39.8bc	11.5ab	34.5c-e	14.8ab	5.8d-f	22.0a	80.1	6.3b-e
ARSOK V103-4	42.8a	10.3c	36.3b-e	13.8b-d	4.8e-g	22.3a	83.9	4.0d-f
ARSOK V103-5	35.8cd	11.5ab	32.3d-f	14.3a-c	7.0d	20.8a-c	75.1	5.3b-e
Mean	28.6	10.2	38.1	12.6	8.1	18.5		4.5
CV	16.1	5.1	15.1	7.1	18.5	9.9		42.6
LSD (0.05)	6.5	0.7	8.1	1.3	2.1	2.6		2.7

**PVT - ALL
LOCATIONS³**

Entry	Super Jumbo¹ (%)	Super Jumbo¹ (#/oz.)	Jumbo¹ (%)	Jumbo¹ (#/oz.)	Fancy¹ (%)	Fancy¹ (#/oz.)	Total Fancy¹ (%)	Pass¹ (%)
ACI351	42.5f-h	11.8a-c	37.0d-f	13.7c-g	10.9h-k	22.3b-e	90.4	2.8a
Contender	8.5m	7.4h	32.0g-j	11.0k	37.1a	15.3j	77.6	6.8a
Jupiter	20.2l	9.5d-g	43.9a	11.9i-k	20.0b-d	16.6ij	84.1	4.8a
VENUS	29.1jk	11.0a-f	38.0b-f	13.3e-h	19.1b-d	18.3hi	86.3	4.2a
NCEX1	38.8g-i	9.9c-f	37.6b-f	12.7g-i	13.1f-i	21.0d-f	89.5	5.1a
NCEX2	58.1a	11.3a-e	28.7i-k	13.3e-h	7.8jk	23.1a-d	94.6	2.1a
NCEX7	56.3ab	11.2a-e	33.5e-h	13.1f-h	7.2jk	23.2a-c	97.0	0.5b
NCEX17	47.3c-f	10.1c-f	36.7c-g	12.4h-j	9.8h-k	21.7d-f	93.8	2.1a
NCEX20	35.0h-j	8.9gh	39.3a-c	11.3k	14.7e-h	18.7e-g	89.0	4.3a
NCEX22	25.1kl	9.3e-h	44.2a	11.8i-k	15.8c-f	20.3e-h	85.1	5.3a
ARSOK V98	25.8kl	10.7c-e	38.6b-d	13.4d-h	20.4bc	19.8f-h	84.8	5.5a
ARSOK V99	22.9kl	10.8b-f	42.2ab	14.3b-d	22.0b	18.6g-i	87.1	3.4a
ARSOK V100-1	45.8d-g	10.3c-f	34.2e-g	14.3e-h	10.9f-k	20.2e-h	90.9	3.1a
ARSOK V100-2	53.7a-c	11.8a-c	26.1k	14.7bc	10.6g-k	21.1c-f	90.3	4.1a
ARSOK V101-1	23.5kl	10.3c-f	36.8c-g	14.3b-d	23.4b	20.2e-g	83.7	9.1a
ARSOK V103-1	43.3e-g	11.4a-d	33.3f-i	13.9b-f	12.3f-j	21.4c-e	88.9	4.8a
ARSOK V103-3	50.3b-e	13.0a	28.7e-h	15.8a	10.3g-j	24.5a	89.3	5.6a
ARSOK V103-4	59.1a	12.8ab	28.0jk	14.8ab	6.3k	24.1ab	93.3	2.4a
ARSOK V103-5	52.3a-d	12.8ab	29.4h-k	14.5bc	9.3i-k	21.3c-f	91.0	4.1a
Mean	38.6	10.7	35.3	13.2	14.8	20.5		4.2
CV	24.9	23.4	17.3	9.9	43.2	12.8		26.4
LSD (0.05)	7.7	2.0	4.9	1.1	5.1	2.1		7.0

¹Super Jumbo = % Pods riding a 40/64" X 1" slotted screen; Jumbo = % Pods riding a 36/64" X 1" slotted screen; Fancy = % Pods riding a 32/64" X 1" slotted screen; Total Fancy = % Total Sample Pods riding a 32/64" X 1" slotted screen; Pass = % Pods passing through all screens.

²Values within the same column followed by the same letter are not significantly different at P = .05; ns = non-significant.

³Trial Type/Location