

Table 1. Least square means for lint yield, yield components, and fiber quality traits over 11 locations¹ in the 2017 RBTN.

Cultivar	Lint Yield	Lint Percent	Lint Index	Boll Size	Seed per Boll	Seed Index	MIC	UHM	UI	STRN	ELO	SFC	QS1 ²	QS2 ²	QS3 ²
	lb/A	%	grams	grams	#	grams	mic	%	%	g/tex	%	%			
Ark 0912-18	1551	42.34	8.14	5.66	29.59	10.73	4.92	1.24	85.75	32.34	7.29	7.09	67.68	76.12	68.41
LA14063083	1536	42.86	7.66	5.64	31.67	9.88	4.66	1.23	84.42	32.21	6.89	7.55	65.48	66.95	70.34
Ark 0911-13	1457	41.75	7.77	5.47	29.41	10.52	4.79	1.25	84.37	30.61	7.15	7.47	68.54	67.07	72.25
LA14063101	1451	44.57	7.90	5.12	28.98	9.48	4.83	1.22	84.31	32.34	6.18	7.59	58.59	63.45	64.10
Ark 0908-60	1447	42.80	7.63	5.32	30.02	9.69	4.87	1.24	84.14	31.24	6.41	7.70	63.02	63.88	68.26
LA14063001	1442	43.20	7.89	5.55	30.39	9.98	4.57	1.23	83.84	31.97	6.32	7.69	63.32	61.77	69.74
LA14063046	1433	42.34	7.68	5.57	30.80	10.14	4.66	1.24	84.25	32.34	6.66	7.52	64.80	65.39	69.85
LA14063038	1417	41.48	6.97	5.54	39.12	9.52	4.66	1.26	83.65	33.33	5.59	7.60	70.93	64.37	77.48
Ark 0921-31ne	1412	40.48	7.09	5.30	30.27	10.12	4.60	1.21	84.54	31.44	7.41	7.33	60.06	65.20	64.91
GA 2015073	1397	43.25	7.71	5.53	31.07	9.75	4.77	1.20	84.10	31.43	6.08	7.41	54.96	60.23	61.55
DP 393 CK	1384	41.49	7.58	5.62	30.88	10.40	4.85	1.19	84.39	32.02	6.84	7.49	49.75	60.08	55.68
UA 222 CK	1375	41.54	7.83	5.50	29.33	10.71	4.74	1.23	83.83	30.62	7.13	7.61	59.83	60.15	66.35
TAM 13Q-51	1357	39.45	6.96	5.12	29.06	10.37	4.71	1.29	85.01	33.75	6.58	7.06	80.20	77.28	82.31
FM 958 CK	1353	40.36	7.53	5.69	30.55	10.77	4.71	1.21	84.01	32.70	5.23	7.69	58.22	61.13	64.68
GA 2015032	1349	42.36	7.11	5.34	31.96	9.34	4.75	1.22	84.30	31.92	5.86	7.59	61.45	64.11	66.67
Ark 0921-27ne	1345	39.90	6.88	5.37	31.20	10.09	4.64	1.20	84.30	32.59	6.16	7.46	57.54	63.02	63.48
AU 90098	1338	43.81	7.79	5.14	28.92	9.64	4.65	1.21	83.96	31.17	5.44	7.82	58.44	60.66	64.89
GA 2012141	1335	41.84	7.60	5.29	29.28	10.29	4.68	1.22	84.34	31.03	6.05	7.63	60.78	64.09	65.89
PD 07040	1325	39.08	7.11	5.61	30.96	10.77	4.65	1.21	84.06	31.16	6.03	7.66	58.57	61.53	64.84
DP 493 CK	1316	43.90	7.07	5.02	31.49	8.78	4.87	1.14	82.36	30.24	5.34	8.70	31.25	38.25	43.80
TAM 13S-03	1304	40.03	7.35	5.31	28.97	10.70	4.50	1.20	84.33	30.83	7.07	7.53	58.15	63.02	63.82
Tamcot G11	1276	39.32	7.82	6.14	30.97	11.75	4.32	1.31	83.27	31.74	5.37	7.41	81.24	65.44	87.49
GA 2015090	1274	42.03	7.25	5.20	30.17	9.67	4.60	1.23	84.20	33.12	6.21	7.54	65.27	65.79	70.98
PD 08028	1236	38.69	6.79	5.81	33.31	10.50	4.57	1.22	84.54	33.57	6.06	7.27	63.97	67.91	69.38
TAM 13Q-18	1223	39.96	7.05	5.45	30.97	10.33	4.58	1.19	82.68	31.38	6.04	8.17	48.84	48.76	59.69
TAM WK-11L	1208	39.73	6.92	5.36	30.85	10.20	4.59	1.17	84.27	30.75	6.49	7.68	46.23	57.74	52.98
NM 13R1015	1176	40.02	6.72	5.04	30.07	9.76	4.77	1.18	84.07	32.95	5.91	7.20	47.73	57.54	55.20
Acala 1517-08	1133	39.40	6.90	5.27	30.19	10.25	4.67	1.20	84.20	33.53	6.01	7.38	56.03	62.14	62.94
TAM LBB131001	1131	41.13	6.69	5.11	31.59	9.23	4.19	1.24	83.03	32.51	5.85	8.10	64.92	57.08	73.66
PD 2013016	1127	41.25	7.31	5.52	31.31	10.10	4.63	1.26	84.12	33.84	5.18	7.51	71.17	67.58	76.61
PD 09046	1065	36.11	6.08	5.19	30.93	10.46	4.22	1.28	83.44	33.28	5.04	7.56	78.03	65.60	84.72
TAM LBB130218	1062	38.11	6.78	5.40	30.59	10.73	4.37	1.19	82.95	32.31	5.36	7.99	51.40	51.35	61.57
NM 16-13P1088B	967	38.68	6.99	5.52	30.58	10.75	4.47	1.19	84.29	33.62	6.32	7.36	57.20	63.29	63.95
Mean	1309	41.01	7.29	5.42	30.77	10.16	4.64	1.22	84.04	32.12	6.17	7.59	60.71	62.36	66.92
Cultivar LSD (.05)	65	0.51	0.24	0.22	3.82	0.29	0.09	0.01	0.39	0.54	0.14	0.18	4.76	4.12	3.98
Cultivar (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	0.0032	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Location (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0695	<0.0001
Cult. x Loc. (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	0.5052	<0.0001	<0.0001	0.1774	0.0023	<0.0001	<0.0001	<0.0001	0.0210	0.0135	0.0170
CV(%)	12.09	2.91	7.57	9.58	28.89	6.50	4.13	2.48	1.02	3.71	5.15	5.42	17.38	14.67	13.18
R-Square	0.87	0.86	0.68	0.64	0.33	0.76	0.87	0.83	0.80	0.75	0.94	0.84	0.65	0.57	0.67
Reps	44	42	42	42	42	42	38	38	38	38	38	38	38	38	38

Values in bold not significantly different from highest value according to LSD(0.05).

¹Means for fiber traits based upon 10 locations. Fiber data not available for LasCruces NM location; Data from Tallassee, AL and Tifton, GA locations were excluded from over location analysis due to excess variability.

²QS1, QS2, and QS3 = Represent values for "Qscore", a measurement very similar to a selection index, adds the weighted values of selected fiber traits (length, mic, UI, strength) to provide a single measure (0-100) of desirable fiber qualities, and was calculated by weighting selected fiber traits as follows:

QS1 - fiber length (0.50), mic (0.25), UI (0.15), and strength (0.10)

QS2 - fiber length (0.20), mic (0.10), UI (0.40), and strength (0.30)

QS3 - fiber length (0.45), mic (0.25), UI (0.00), and strength (0.30).