Table 1. Least square means for lint yield, yield components, oil and protein content[1], and fiber quality traits over 10 locations[2] in the 2019 RBTN.

Entry	Lint Yield	Lint Percent	Lint Index	Boll Size	Seed per Boll	Seed Index	Seed Oil[3]	Seed Protein[3]	MIC	UHM	UI	STRN	ELO	SFC	QS1[4]	QS2[4]	QS3[4]
	lb/A	%	grams	grams	#	grams	%	%	mic	inch	%	g/tex	%	%			
Ark 1102-55	**1346**	41.51	7.40	4.80	27.06	10.17	**21.36**	**21.75**	4.69	1.20	84.34	30.64	6.38	7.47	62.15	63.40	66.55
MS 2010-87-37	**1331**	43.48	**7.51**	5.16	**30.08**	9.39	16.66	18.14	4.83	1.19	84.29	33.43	6.01	7.15	58.70	63.35	64.75
Ark 1112-59	**1308**	41.99	**7.53**	5.35	**29.84**	10.16	19.50	20.29	4.65	1.17	84.32	34.28	6.32	7.22	54.88	62.35	61.73
Ark 1114-21	**1307**	43.15	7.22	5.17	**30.87**	9.25	17.20	19.29	4.44	1.19	83.63	30.75	6.48	7.48	59.63	57.95	66.38
Ark 1115-36	**1284**	**45.38**	**7.61**	4.81	28.80	8.91	17.09	19.88	**4.86**	1.21	84.71	32.13	6.72	7.06	64.85	68.03	68.73
DP 393 CK	**1278**	41.53	7.37	5.09	28.98	9.90	18.17	19.86	**4.86**	1.15	83.95	32.97	6.81	7.31	46.38	55.83	54.48
UA 222 CK	**1276**	41.05	7.38	5.16	28.86	10.27	20.38	20.56	4.73	1.19	83.98	32.25	**7.19**	7.41	59.25	60.83	65.68
Ark 1117-60	1270	41.68	**7.79**	5.29	28.51	10.66	19.36	19.34	**4.93**	1.20	84.48	34.27	6.21	7.16	60.53	65.75	65.95
GA2016099	1258	42.68	7.31	5.21	**31.39**	9.53	16.65	18.34	**4.89**	1.21	83.96	33.97	6.40	7.29	61.83	62.63	68.50
TAM 13S-03	1253	40.02	6.97	4.80	28.10	10.09	20.03	20.53	4.57	1.16	83.98	31.32	**7.15**	7.35	52.58	58.03	59.85
Ark 1124-50	1252	43.21	7.45	5.03	29.20	9.52	16.96	18.89	4.68	1.22	84.41	33.14	5.97	7.18	71.13	68.90	75.85
CSX8308	1235	**45.05**	6.86	4.50	29.80	8.15	16.47	18.43	4.65	1.21	83.05	33.95	5.92	7.44	61.50	56.28	70.93
DP 493 CK	1223	43.26	6.52	4.66	**31.51**	8.27	17.99	19.63	**4.88**	1.10	82.10	30.44	6.07	**8.25**	28.85	35.80	42.45
GA2016024	1214	42.77	7.37	5.29	**30.97**	9.59	17.02	19.61	4.67	1.19	84.01	33.37	6.22	7.32	60.70	62.18	67.48
FM 958 CK	1189	40.39	7.45	5.32	29.10	10.68	19.83	20.44	4.74	1.18	83.68	33.40	5.84	7.39	54.40	56.98	62.30
TAM 12J-39	1181	41.33	**7.62**	**5.75**	**31.27**	10.53	20.65	20.15	**4.94**	1.14	84.44	37.17	6.06	6.97	44.25	61.40	53.28
GA2016103	1177	42.34	6.65	4.49	28.81	8.80	17.39	18.95	**4.94**	1.18	83.82	33.98	6.14	7.34	53.55	58.53	61.48
13AFX13-12-5	1162	38.75	6.32	4.78	29.36	9.77	19.26	20.10	4.35	1.21	84.11	34.27	5.96	7.29	68.65	66.85	74.90
13AFX6-27-2	1131	37.36	6.89	5.49	**29.87**	**11.30**	19.88	19.89	4.67	**1.30**	**85.70**	**37.93**	6.88	6.52	**90.10**	**88.95**	**92.40**
TAMLBB15905	943	39.41	6.88	4.97	28.66	10.38	17.52	19.56	4.60	1.26	**85.31**	35.85	6.07	6.70	**85.55**	82.73	87.85
TAMLBB16507	923	38.67	7.03	5.38	29.67	10.94	20.10	19.59	4.35	1.20	83.03	33.81	6.13	7.63	61.13	56.35	70.85
Mean	1216	41.67	7.20	5.07	29.56	9.82	18.55	19.68	4.71	1.19	84.06	33.49	6.33	7.28	60.03	62.53	66.78
Entry LSD (.05)	74	0.59	0.32	0.18	1.69	0.35	0.65	1.09	0.10	0.01	0.39	0.68	0.10	0.17	4.79	4.34	4.08
Entry (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	<0.0001	<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	<0.0001	0.0334	0.2157	0.0001
Entry x Loc. (P>F)	<0.0001	0.0001	<0.0001	0.0038	0.0019	<0.0001	<0.0001	<0.0001	<0.0001	0.0025	0.2724	0.0014	<0.0001	<0.0001	0.0009	0.0646	0.0004
CV(%)	13.82	3.23	9.99	8.12	13.02	8.18	5.00	7.94	4.91	2.38	1.07	4.63	3.68	5.42	18.17	15.80	13.91
R-Square	0.82	0.86	0.66	0.84	0.62	0.77	0.89	0.70	0.81	0.87	0.81	0.78	0.92	0.87	0.71	0.66	0.71
Reps	40	40	40	40	40	40	16	16	40	40	40	40	40	40	40	40	40

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

[1] Seed oil and protein content was measured at four locations only (Florence,SC, Lubbock,TX, Mississippi State (USDA), MS and, Tallassee, AL.

[2] Alexandria, LA, omitted from over location analysis due to variability in lint yield.

[3] Percent oil and protein determined by low-field ^{1}H time-domain nuclear magnetic resonance (TD-NMR) methodology (Horn, et al, 2011, J Am Oil Chem Soc, 88: 1521-1529)

[4] QS1, QS2, and QS3 (Quality Score) - 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).