

Table 11. Least square means for lint yield, yield components, oil and protein content, and fiber quality traits in the 2019 RBTN at Mississippi State (USDA), Mississippi (Cooperator: Jack McCarty).

Entry	Lint Yield	Lint Percent	Lint Index	Boll Size	Seed per Boll	Seed Index	Seed Oil ¹	Seed Protein ¹	MIC	UHM	UI	STRN	ELO	SFC	QS1 ²	QS2 ²	QS3 ²
	lb/A	%	grams	grams	#	grams	%	%	mic	inch	%	g/tex	%	%			
Ark 1102-55	1126	41.57	8.10	5.57	28.69	11.40	19.30	21.24	5.09	1.22	85.30	32.48	6.10	7.05	53.75	59.50	60.00
GA2016103	1116	41.92	6.50	4.91	31.75	9.00	19.71	15.34	5.07	1.21	84.65	36.18	5.70	6.80	49.50	54.75	59.25
Ark 1115-36	1107	45.54	8.28	5.23	28.89	9.90	20.16	16.20	5.13	1.22	85.43	34.28	6.55	6.88	53.50	61.00	59.75
Ark 1114-21	1102	43.41	7.44	5.54	32.38	9.70	19.91	14.84	4.66	1.20	84.70	32.10	6.08	7.15	54.25	55.75	63.25
DP 493 CK	1102	43.97	6.91	5.16	32.96	8.80	20.03	16.56	5.19	1.13	83.75	34.58	5.58	7.53	24.50	37.75	38.25
Ark 1112-59	1069	41.64	7.85	5.91	31.34	11.00	19.14	19.11	4.68	1.22	85.60	37.38	6.13	6.70	62.00	67.25	69.25
MS 2010-87-37	1049	43.87	7.89	5.45	30.31	10.10	19.10	14.31	5.15	1.21	85.08	35.43	5.78	6.90	47.75	56.75	56.50
UA 222 CK	999	41.70	8.16	5.86	29.99	11.40	18.82	20.48	5.01	1.23	85.05	33.53	7.13	6.95	56.50	59.25	63.75
13AFX13-12-5	996	39.87	6.71	5.32	31.71	10.10	18.37	18.92	4.68	1.22	85.30	37.75	5.65	6.70	60.50	65.00	69.50
Ark 1117-60	975	42.43	8.92	6.23	29.67	12.10	18.05	18.74	5.33	1.22	85.60	37.20	5.98	6.88	49.50	62.25	57.00
GA2016024	963	42.91	7.67	5.95	33.28	10.20	19.34	15.32	4.79	1.24	85.28	35.40	5.98	6.60	65.75	65.25	72.00
DP 393 CK	940	42.25	7.76	5.60	30.58	10.60	18.53	18.24	4.97	1.19	85.45	35.40	6.75	6.73	48.50	59.25	56.25
TAM 12J-39	925	42.42	8.40	6.27	31.72	11.40	19.36	19.21	5.18	1.18	85.83	41.33	5.93	6.83	45.00	64.25	54.25
Ark 1124-50	871	42.50	7.47	5.42	30.94	10.10	18.93	14.83	4.70	1.27	85.53	35.00	5.70	6.70	74.50	70.25	80.00
TAM 13S-03	870	40.73	7.85	5.33	27.84	11.40	20.18	19.63	4.63	1.21	85.38	33.75	6.90	6.63	57.25	61.25	63.75
TAMLBB16507	863	39.13	7.90	6.05	29.99	12.30	17.31	18.97	4.42	1.25	84.48	36.53	5.70	6.95	70.75	62.50	80.00
GA2016099	862	43.20	7.92	5.63	30.74	10.40	18.89	14.74	5.21	1.23	84.78	35.43	6.20	7.03	51.50	56.50	60.25
CSX8308	855	45.75	7.00	4.69	30.67	8.30	18.79	13.85	4.60	1.26	84.95	36.83	5.43	6.85	72.25	66.75	80.00
FM 958 CK	842	40.18	7.33	5.67	31.21	10.90	18.54	18.44	4.77	1.23	85.48	37.83	5.50	6.88	64.75	68.25	72.50
13AFX6-27-2	819	37.92	7.51	5.77	29.28	12.30	19.54	18.93	4.72	1.32	87.08	40.50	7.13	6.18	91.75	91.25	93.50
TAMLBB15905	582	39.05	6.98	5.27	29.54	10.90	19.14	15.10	4.45	1.31	86.48	36.88	5.88	6.13	91.75	85.00	93.75
Mean	954	42.00	7.64	5.56	30.64	10.59	19.10	17.29	4.88	1.23	85.29	35.99	6.08	6.81	59.31	63.32	66.80
LSD (.05)	184	0.94	0.66	0.23	2.42	0.84	1.77	0.98	0.29	0.04	1.06	1.87	0.19	0.43	14.10	11.74	11.77
Entry (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	0.0016	<0.0001	0.2054	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
CV(%)	13.65	1.58	6.08	2.88	5.59	5.58	6.54	4.01	4.21	2.13	0.88	3.66	2.22	4.50	16.81	13.11	12.46
R-Square	0.68	0.93	0.69	0.90	0.48	0.82	0.38	0.94	0.71	0.77	0.58	0.82	0.95	0.60	0.77	0.72	0.78
Reps	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

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

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

² 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).