

Table 4. Least square means for lint yield and fiber quality traits in the 2023 RBTN at Florence, SC. Planted on 10 May 2023 and harvested on 5 October 2023. (Cooperator: Todd Campbell).

Genotype	LINT YEILD	LINT PERCENT	MIC	HVI data				Fibrogram Data								QS1 ¹	QS2 ¹	QS3 ¹
				UHM	UI	STR	ELO	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Uif	SFCf			
units	lb/acre	%	units	in	%	g/tex	%	%	in	in	in	in	in	%	%			
Ark 1510-28	1592	43.9	5.1	1.21	85.8	33.5	6.2	5.70	1.179	0.912	1.147	0.678	0.764	77.40	16.70	67.25	75.50	69.25
OA-23106	1509	46.0	4.9	1.21	84.4	33.0	5.6	6.45	1.152	0.869	1.121	0.609	0.663	75.40	19.10	56.75	64.50	65.00
OA-23104	1487	48.0	4.9	1.16	83.3	35.6	5.6	6.78	1.096	0.831	1.065	0.585	0.642	75.80	19.40	54.75	68.75	61.25
Ark 1512-32	1463	47.3	5.0	1.18	84.7	31.6	7.1	6.33	1.130	0.865	1.103	0.614	0.688	76.60	18.30	56.75	67.00	62.25
Ark 1510-31	1442	46.4	5.4	1.17	83.9	32.9	6.5	6.63	1.116	0.847	1.084	0.600	0.652	75.80	19.80	46.25	60.50	55.00
OA-23105	1425	48.7	4.9	1.18	83.8	36.5	5.6	6.63	1.109	0.840	1.079	0.588	0.636	75.70	19.30	60.50	76.00	65.25
GA 2018139	1420	46.4	4.9	1.18	84.0	33.4	6.5	6.80	1.120	0.840	1.085	0.588	0.616	75.00	20.70	57.00	63.75	64.75
UA 222 CK	1398	44.3	5.1	1.16	84.4	32.2	7.5	6.50	1.110	0.846	1.079	0.600	0.666	76.20	19.70	48.50	63.75	55.75
DP 393 CK	1391	44.3	5.1	1.16	84.4	34.7	6.8	6.43	1.111	0.854	1.079	0.622	0.688	76.80	18.50	78.75	85.25	81.25
GA 2017132	1385	45.4	5.0	1.18	85.6	35.4	6.1	6.00	1.144	0.887	1.117	0.652	0.729	77.50	17.20	63.00	67.50	70.50
Ark 1514-34	1341	44.4	5.0	1.15	84.1	31.7	7.1	6.48	1.097	0.839	1.067	0.602	0.667	76.40	18.50	45.75	61.75	54.75
FM 958 CK	1323	43.4	4.9	1.20	84.1	34.7	5.8	6.63	1.141	0.861	1.107	0.610	0.668	75.50	19.40	70.75	72.75	75.00
Ark 1519-16	1308	44.6	4.9	1.19	85.2	32.7	7.9	5.73	1.149	0.899	1.120	0.661	0.763	78.30	16.00	64.75	72.00	68.50
GA 2017126	1290	45.6	5.1	1.18	84.7	35.0	6.1	6.15	1.130	0.872	1.098	0.637	0.715	77.10	18.10	47.75	64.25	55.00
17020-22-9-9	1282	45.6	4.7	1.17	84.7	34.9	5.9	6.35	1.123	0.857	1.097	0.608	0.674	76.30	18.80	60.25	71.50	67.00
GA 2017024	1268	45.9	5.2	1.20	84.1	33.7	6.0	6.78	1.131	0.855	1.102	0.597	0.634	75.50	19.90	50.50	66.00	58.25
DP 493 CK	1249	45.6	5.1	1.16	84.5	33.0	5.8	6.73	1.110	0.842	1.082	0.592	0.648	75.80	19.70	70.50	75.25	75.25
PD 2017030	1245	42.6	4.9	1.23	86.1	36.5	6.1	5.48	1.192	0.935	1.162	0.702	0.791	78.40	15.30	50.50	63.50	62.75
PD 20150002	1091	41.1	5.0	1.22	85.1	35.4	6.1	5.88	1.171	0.900	1.141	0.649	0.722	76.80	16.90	57.00	69.25	67.75
PD 20150030	1011	38.1	5.0	1.22	84.9	34.4	5.7	5.70	1.172	0.906	1.143	0.659	0.732	77.30	16.80	67.00	68.00	73.25
Mean	1346	44.9	5.0	1.19	84.6	34.0	6.3	6.31	1.134	0.868	1.104	0.623	0.688	76.47	18.41	58.71	68.83	65.38
Entry (P>F)	0.0764	<0.0001	0.0001	0.0005	0.0007	<0.0001	<0.0001	0.0436	<0.0001	0.0014	<0.0001	0.0078	0.0176	0.0634	0.2456	<0.0001	<0.0001	0.0003
R-square	0.13	0.90	0.53	0.54	0.53	0.68	0.89	0.39	0.58	0.50	0.59	0.45	0.40	0.33	0.31	0.58	0.60	0.54
Entry LSD (0.05)	NS ²	1.4	0.2	0.04	1.2	1.6	0.4	0.90	0.040	0.050	0.040	0.063	0.097	NS	NS	13.75	8.75	12.00
CV (%)	10.2	5.3	3.0	2.1	0.8	4.4	10.5	6.6	2.4	3.4	2.5	5.4	7.1	1.3	8.0	15.6	8.8	11.5

¹QS1, 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).

²NS- Not significant at the 0.05 level of probability.