

Table 2. Least square means for lint yield and fiber quality traits in the 2023 RBTN at Jackson Springs, NC. Planted 3 May 2023 and harvested on 2 October 2023. (Cooperator: Todd Campbell)

Genotype	LINT YIELD	LINT PERCENT	HVI Data					Fibrogram Data									QS1 ¹	QS2 ¹	QS3 ¹
			MIC	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	%	%				
OA-23105	242	43.0	4.8	1.08	81.9	33.7	5.7	8.18	1.009	0.744	0.980	0.492	0.502	73.70	25.70	49.25	58.50	57.50	
PD2017030	236	41.8	5.0	1.14	84.3	38.5	5.5	6.63	1.100	0.834	1.069	0.594	0.645	75.80	20.20	73.25	81.75	80.75	
Ark1510-28	235	39.0	4.9	1.12	83.0	32.6	5.8	7.60	1.059	0.781	1.025	0.530	0.527	73.70	24.30	63.00	68.75	67.75	
Ark1519-16	230	40.1	4.6	1.12	82.9	31.9	7.2	7.23	1.052	0.789	1.023	0.543	0.591	74.90	21.30	66.50	71.25	70.75	
PD20150021	222	37.2	4.9	1.18	83.7	35.5	5.8	6.75	1.112	0.840	1.084	0.584	0.629	75.50	20.20	81.25	80.00	80.00	
Ark1510-31	221	39.0	5.0	1.12	82.4	33.2	6.0	8.15	1.047	0.763	1.013	0.504	0.491	72.90	25.70	59.50	63.75	63.25	
DP393CK	214	41.1	4.9	1.10	83.7	34.8	6.7	7.33	1.053	0.789	1.026	0.541	0.550	74.90	23.00	60.75	72.00	71.00	
FM958CK	214	38.9	4.7	1.12	82.6	33.7	5.8	7.60	1.059	0.787	1.025	0.542	0.543	74.20	23.40	64.75	69.25	68.50	
Ark1514-34	211	40.1	4.5	1.09	82.6	30.7	6.9	7.65	1.025	0.763	0.995	0.515	0.531	74.40	24.50	56.00	65.25	64.25	
DP493CK	209	39.7	4.9	1.11	82.7	33.3	5.9	7.83	1.038	0.767	1.010	0.516	0.532	73.90	23.40	57.75	65.00	63.75	
Ark1512-32	207	41.3	4.8	1.11	81.6	32.0	6.6	8.28	1.026	0.750	0.988	0.499	0.493	73.10	26.40	55.00	59.25	58.50	
GA2017024	193	40.9	5.2	1.12	82.4	32.9	5.6	8.08	1.046	0.766	1.017	0.503	0.505	73.20	25.60	56.75	60.75	60.00	
OA-23106	186	41.2	5.2	1.11	81.4	32.1	5.9	8.98	1.020	0.737	0.985	0.474	0.465	72.20	28.40	50.75	56.50	55.50	
OA-23104	181	41.9	4.8	1.09	81.7	33.9	5.6	8.28	1.020	0.750	0.983	0.507	0.510	73.40	25.50	54.00	62.00	60.75	
PD20150002	180	36.4	4.8	1.16	82.9	35.6	5.9	7.35	1.091	0.815	1.056	0.561	0.597	74.70	22.10	76.50	76.50	75.50	
GA2017132	165	40.3	5.0	1.12	82.4	36.1	5.9	8.43	1.044	0.776	1.013	0.526	0.563	74.10	25.20	58.75	65.50	64.25	
GA2018139	157	40.0	5.0	1.10	82.3	32.5	6.3	8.33	1.027	0.749	0.997	0.489	0.497	72.90	26.40	52.50	61.25	59.75	
GA2017126	151	39.9	4.9	1.08	82.6	33.7	6.0	8.08	1.017	0.752	0.986	0.507	0.531	73.90	24.30	49.75	62.00	60.75	
17020-22-9-9	151	41.4	4.9	1.07	81.9	32.7	6.0	8.65	0.997	0.731	0.967	0.479	0.490	73.20	26.50	46.00	57.25	56.00	
UA222CK	132	40.1	4.7	1.12	82.6	32.1	7.2	7.85	1.055	0.776	1.024	0.519	0.526	73.50	24.20	66.25	69.75	69.00	
Mean	197	40.2	4.9	1.11	82.6	33.6	6.1	7.90	1.045	0.773	1.013	0.521	0.536	73.91	24.32	59.90	66.30	65.38	
Entry (P>F)	0.0018	0.0040	0.1194	0.0005	0.1066	<0.0001	<0.0001	0.5531	0.0020	0.0292	0.0018	0.1448	0.2878	0.5740	0.5470	0.0145	0.0049	0.0454	
R-square	0.47	0.5	0.3	0.52	0.3	0.5	0.8	0.22	0.480	0.400	0.480	0.320	0.340	0.25	0.27	0.44	0.40	0.40	
Entry LSD (0.05)	55.9	1.4	NS²	0.04	NS	2.2	0.4	NS	0.052	0.063	0.052	NS	NS	NS	NS	18.25	15.50	15.75	
CV (%)	19.96	3.9	6.1	2.70	1.4	4.5	4.4	15.90	3.500	5.600	3.600	10.300	2.600	16.40	18.30	15.60	11.00	11.40	

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.