

Table 3. Least square means for lint yield and fiber quality traits in the 2024 RBTN at Florence, SC. Planted on 23 May 2024 and harvested on 8 October 2024. (Cooperator: Todd Campbell).

				HVI data				Fibrogram Data										
Genotype	LINT YIELD	LINT PERCENT	MIC	UHM	UI	STR	ELO	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Uif	SFCf	QS1 ¹	QS2 ¹	QS3 ¹
units	lb/acre	%	units	in	%	g/tex	%	%	in	in	in	in	in	%	%			
ACX167-27-347	835	39.7	4.5	1.22	84.5	34.2	6.4	6.38	1.153	0.872	1.117	0.616	0.673	75.6	19.05	71.75	69.25	79.25
Ark1620-030	714	39.5	4.8	1.16	85.9	34.8	7.1	5.63	1.130	0.889	1.102	0.671	0.767	78.6	15.46	56.75	73.50	61.50
Ark1620-055	716	41.2	4.8	1.21	85.1	33.4	6.6	5.43	1.157	0.907	1.125	0.678	0.772	78.3	14.67	67.75	70.00	72.75
Ark1620-098	881	40.4	4.6	1.18	84.3	33.1	6.6	6.38	1.120	0.861	1.086	0.623	0.701	76.9	17.23	58.25	63.75	67.00
Ark1622-058	1084	41.3	4.8	1.15	84.6	33.1	6.9	6.38	1.097	0.841	1.065	0.608	0.658	76.6	19.06	46.00	62.25	54.50
Ark1622-086	681	37.9	4.6	1.21	86.2	33.7	6.6	5.28	1.171	0.926	1.140	0.706	0.788	79.0	13.99	74.25	78.00	76.50
AU17014-45-250	780	42.5	5.1	1.20	85.3	33.8	7.0	5.78	1.148	0.898	1.117	0.664	0.774	78.2	16.08	57.25	68.25	63.00
AU17016-19-285	803	39.4	4.4	1.21	84.9	35.7	6.3	5.75	1.152	0.887	1.120	0.643	0.728	77.1	16.47	64.50	70.50	71.75
DP393	895	38.3	4.9	1.16	85.7	33.7	6.9	5.83	1.118	0.875	1.088	0.652	0.734	78.2	16.58	53.25	70.25	59.00
DP493	682	40.3	4.6	1.17	84.5	36.5	6.2	6.50	1.110	0.848	1.079	0.604	0.659	76.3	19.36	57.75	69.50	68.00
FM958	723	37.8	4.8	1.19	85.3	34.8	7.0	5.80	1.144	0.892	1.111	0.666	0.731	77.9	15.99	62.25	71.25	68.50
GA2021049	910	39.8	4.9	1.19	84.8	33.2	7.5	6.00	1.132	0.878	1.099	0.646	0.720	77.6	16.68	57.50	65.25	64.25
GA2021058	796	41.6	4.8	1.17	85.4	34.2	6.9	6.28	1.120	0.861	1.091	0.622	0.695	76.8	18.81	56.75	70.25	63.25
GA2022052	769	37.6	5.0	1.14	84.3	32.9	7.0	6.78	1.083	0.825	1.051	0.589	0.641	76.1	19.30	41.25	59.00	51.00
KS2202	799	39.9	4.4	1.17	84.8	35.3	6.4	6.38	1.117	0.858	1.087	0.617	0.682	76.8	17.48	61.75	70.75	70.25
OA-24107	806	38.8	4.6	1.22	85.7	33.4	7.3	5.48	1.169	0.925	1.140	0.700	0.790	79.1	13.75	75.75	75.75	79.00
OA-24108	798	39.3	4.6	1.20	85.4	36.9	6.2	5.58	1.156	0.906	1.121	0.683	0.758	78.3	15.41	67.50	77.25	74.75
OA-24109	889	41.2	4.8	1.21	85.0	35.2	6.7	5.65	1.161	0.908	1.126	0.681	0.767	78.0	15.42	67.00	72.00	74.25
PD2018041	566	36.6	4.7	1.19	85.3	34.3	7.1	5.85	1.144	0.894	1.111	0.669	0.764	78.1	15.96	65.25	74.25	72.00
PD2018060	578	35.2	4.7	1.20	84.8	34.4	7.0	6.05	1.144	0.885	1.110	0.653	0.727	77.3	15.95	65.75	70.00	73.25
TAM18SHB-08	779	39.4	4.7	1.14	84.3	32.6	6.8	6.80	1.089	0.824	1.056	0.588	0.638	75.7	20.42	47.00	61.25	56.25
TAM18WSL-37	568	34.3	4.3	1.21	85.4	37.2	7.1	5.60	1.159	0.902	1.129	0.660	0.757	77.8	17.35	71.25	77.75	77.75
TAMYDC255	695	37.5	4.6	1.20	84.8	34.2	7.0	5.98	1.148	0.889	1.112	0.656	0.737	77.3	17.55	67.25	70.75	74.50
UA222	663	37.7	4.7	1.18	85.8	33.6	7.5	5.58	1.144	0.901	1.112	0.678	0.768	78.8	15.50	62.25	74.25	66.75
Mean	767	39.1	4.7	1.18	85.1	34.3	6.8	5.96	1.135	0.881	1.104	0.649	0.726	77.5	16.81	61.5	70.21	68.29
Entry (P>F)	0.0001	<0.0001	0.1717	0.4887	0.7620	0.1318	0.1650	0.4378	0.7474	0.6101	0.7584	0.5131	0.3956	0.3530	0.4066	0.4482	0.7302	0.3063
R-square	0.57	0.90	0.32	0.24	0.20	0.32	0.30	0.25	0.20	0.22	0.20	0.24	0.26	0.26	0.25	0.25	0.20	0.27
Entry LSD (0.05)	191	0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)	15.6	5.1	3.9	2.0	0.6	3.6	5.3	7.2	2.2	3.2	2.2	5.2	6.5	1.3	10.6	14.2	7.2	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.