

Table 4. Least square means for lint yield and fiber quality traits in the 2024 RBTN at Jackson Springs, NC. Planted on 2 May 2024 and harvested on 9 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	340	38.1	4.4	1.28	86.7	35.7	6.5	4.73	1.247	0.981	1.214	0.749	0.830	78.6	13.65	79.00	79.33	83.33
Ark1620-030	404	39.9	4.8	1.25	85.7	34.1	7.6	4.93	1.200	0.955	1.168	0.732	0.813	79.5	13.59	66.00	69.00	72.67
Ark1620-055	392	37.1	4.7	1.27	87.0	35.1	7.5	4.87	1.238	0.976	1.209	0.744	0.839	78.8	13.06	76.33	80.67	78.67
Ark1620-098	372	35.8	4.8	1.25	86.7	36.0	7.2	5.13	1.214	0.963	1.181	0.741	0.817	79.2	13.38	67.67	77.33	72.33
Ark1622-058	489	40.0	4.7	1.23	86.0	34.8	7.4	5.53	1.181	0.917	1.159	0.663	0.757	77.6	16.58	63.00	71.00	69.33
Ark1622-086	333	38.1	4.4	1.25	86.7	37.8	6.4	4.93	1.210	0.951	1.181	0.717	0.794	78.5	14.28	72.33	82.00	78.33
AU17014-45-250	348	37.3	4.6	1.20	84.4	33.1	7.1	6.33	1.132	0.863	1.099	0.623	0.690	76.3	18.68	50.00	58.67	61.33
AU17016-19-285	432	38.3	4.6	1.27	85.3	36.6	6.3	5.10	1.207	0.941	1.173	0.697	0.791	77.9	14.99	75.00	73.00	83.67
DP393	422	39.1	4.7	1.22	85.8	33.9	6.6	5.57	1.176	0.919	1.141	0.691	0.760	78.1	15.63	59.00	68.33	66.33
DP493	278	39.1	5.0	1.21	86.0	33.7	7.1	5.13	1.167	0.931	1.137	0.711	0.818	79.8	13.73	51.33	66.67	57.67
FM958	400	37.0	5.1	1.25	86.6	35.0	7.1	5.67	1.204	0.932	1.176	0.682	0.746	77.4	17.08	62.67	73.33	67.33
GA2021049	452	38.8	4.8	1.18	85.4	33.3	6.5	6.43	1.137	0.863	1.106	0.616	0.681	75.9	19.45	45.67	62.67	54.67
GA2021058	484	40.6	4.7	1.25	86.2	35.3	6.6	5.13	1.203	0.949	1.173	0.712	0.811	78.9	14.05	70.33	74.67	75.67
GA2022052	438	36.4	4.3	1.21	85.7	36.2	7.1	5.63	1.164	0.906	1.136	0.663	0.748	77.8	16.44	60.33	72.33	69.33
KS2202	495	39.7	4.7	1.20	85.2	33.7	7.1	6.20	1.151	0.886	1.120	0.645	0.713	76.9	16.13	54.33	64.67	63.67
OA-24107	434	39.0	4.8	1.20	84.8	34.5	7.0	5.57	1.148	0.903	1.112	0.681	0.770	78.6	14.99	51.33	62.33	62.00
OA-24108	493	37.5	5.0	1.21	85.8	33.7	6.9	6.13	1.171	0.900	1.137	0.665	0.719	76.9	16.66	51.67	66.00	58.67
OA-24109	441	37.1	4.9	1.25	85.9	33.4	6.8	5.03	1.210	0.957	1.176	0.728	0.817	79.0	13.66	65.67	69.67	70.67
PD2018041	359	38.2	4.7	1.22	85.6	34.2	7.0	5.83	1.172	0.906	1.142	0.660	0.721	77.3	16.08	58.00	67.00	65.33
PD2018060	500	40.0	4.9	1.24	87.1	34.6	7.1	4.97	1.220	0.983	1.185	0.782	0.866	80.6	11.58	66.33	78.33	69.00
TAM18SHB-08	541	39.7	4.9	1.23	85.7	34.3	7.3	5.30	1.178	0.923	1.148	0.692	0.790	78.3	15.12	57.67	67.00	64.67
TAM18WSL-37	420	38.7	4.8	1.25	85.6	33.8	7.2	5.03	1.193	0.933	1.163	0.691	0.772	78.2	14.60	65.33	68.00	71.67
TAMYDC255	424	40.1	4.8	1.21	85.5	33.4	7.6	5.87	1.163	0.905	1.132	0.665	0.763	77.8	16.50	54.33	65.00	62.00
UA222	366	39.5	4.5	1.17	85.7	35.0	7.7	5.33	1.138	0.902	1.106	0.695	0.790	79.2	14.86	51.67	68.33	60.33
Mean	419	38.5	4.7	1.23	85.8	34.6	7.0	5.43	1.184	0.927	1.153	0.693	0.775	78.2	15.19	61.4	70.2	68.20
Entry (P>F)	0.4420	0.0727	0.1964	0.2539	0.4318	0.4020	0.4746	0.3729	0.3479	0.4360	0.3419	0.4314	0.5050	0.4588	0.2728	0.3657	0.4864	0.2938
R-square	0.44	0.32	0.36	0.33	0.34	0.33	0.23	0.24	0.30	0.18	0.29	0.28	0.17	0.25	0.36	0.29	0.24	0.21
Entry LSD (0.05)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)	15.1	3.4	4.2	2.3	0.8	3.4	5.5	9.1	2.7	3.6	2.8	5.9	6.2	1.5	12.0	14.9	8.7	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.