

Table 1. Least square means for lint yield and fiber quality traits over 9 locations in the 2024 RBTN.																		
				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	%	%			
Ark1622-058	1162	39.6	4.8	1.20	84.7	33.6	6.7	6.27	1.141	0.872	1.110	0.623	0.685	76.3	19.15	49.83	64.33	57.87
Ark1620-098	1151	39.0	4.7	1.22	85.3	33.7	6.9	5.86	1.174	0.901	1.142	0.653	0.715	76.7	17.77	60.63	70.37	66.18
DP393	1101	39.0	4.8	1.19	84.9	32.8	6.8	6.29	1.136	0.873	1.106	0.632	0.695	76.8	18.41	50.92	66.29	58.34
GA2021049	1114	40.0	4.7	1.21	84.7	32.1	6.5	6.27	1.152	0.881	1.119	0.636	0.695	76.5	18.13	56.07	66.07	63.38
Ark1620-055	1082	39.4	4.8	1.24	85.4	33.6	6.8	5.70	1.186	0.911	1.156	0.658	0.717	76.6	18.14	65.76	72.24	70.30
AU17014-45-250	1074	40.3	4.7	1.20	84.6	32.3	6.5	6.27	1.143	0.876	1.111	0.631	0.703	76.6	18.48	53.56	64.80	61.48
Ark1620-030	1067	38.8	4.8	1.23	85.3	34.0	6.3	5.75	1.176	0.911	1.145	0.669	0.736	77.4	17.07	61.47	71.03	66.91
AU17016-19-285	1061	40.1	4.6	1.22	84.8	33.6	5.9	6.04	1.163	0.890	1.132	0.638	0.702	76.4	18.41	60.44	68.03	67.49
Ark1622-086	1052	38.5	4.6	1.21	85.1	33.0	6.8	5.88	1.157	0.895	1.126	0.656	0.732	77.3	17.31	58.68	69.53	65.04
ACX167-27-347	1047	39.5	4.7	1.21	84.8	33.0	6.2	6.23	1.156	0.882	1.125	0.631	0.694	76.2	18.79	57.50	67.06	64.68
GA2021058	1043	40.6	4.6	1.22	85.0	32.7	6.6	5.96	1.166	0.894	1.135	0.643	0.711	76.6	17.99	62.87	69.96	69.02
OA-24108	1043	39.8	4.6	1.22	84.9	34.0	6.0	6.14	1.164	0.888	1.134	0.636	0.697	76.2	18.41	62.13	69.94	68.96
OA-24109	1023	40.0	4.5	1.24	84.7	34.4	6.0	5.76	1.177	0.902	1.143	0.651	0.716	76.6	17.59	66.66	70.07	73.96
TAM18SHB-08	1009	39.3	4.5	1.18	84.2	33.2	6.5	6.60	1.116	0.848	1.084	0.604	0.654	75.9	19.91	48.24	62.25	58.30
DP493	991	39.9	4.7	1.18	84.1	32.5	5.9	6.96	1.110	0.835	1.079	0.582	0.619	75.1	20.89	45.12	60.74	55.19
UA222	987	38.3	4.6	1.21	84.9	32.4	7.3	5.95	1.156	0.890	1.124	0.644	0.711	76.9	17.74	58.91	67.87	65.79
OA-24107	976	38.8	4.6	1.21	84.7	32.1	6.8	6.17	1.154	0.887	1.122	0.642	0.711	76.8	17.56	59.40	67.12	66.78
GA2022052	953	39.8	4.8	1.22	84.9	33.3	6.7	6.14	1.159	0.886	1.127	0.636	0.690	76.3	18.76	57.56	67.54	64.59
KS2202	944	38.9	4.6	1.21	85.2	33.2	7.0	5.86	1.164	0.900	1.133	0.659	0.730	77.2	16.93	59.34	70.05	65.38
FM958	938	37.3	4.7	1.24	85.0	33.9	6.2	5.82	1.180	0.905	1.148	0.654	0.714	76.6	17.60	65.35	69.98	71.29
PD2018060	837	36.1	4.6	1.26	85.0	33.7	6.1	5.37	1.199	0.922	1.164	0.674	0.734	76.9	16.86	71.09	72.04	76.53
PD2018041	789	36.6	4.5	1.24	85.2	34.4	6.1	5.68	1.188	0.915	1.156	0.665	0.729	76.9	16.95	68.67	73.61	74.23
TAMYDC255	765	36.1	4.4	1.27	86.2	36.6	6.3	4.83	1.233	0.972	1.199	0.738	0.822	78.7	14.72	80.48	84.61	84.36
TAM18WSL-37	753	34.7	4.1	1.29	86.1	36.7	6.5	4.70	1.246	0.975	1.214	0.728	0.804	78.1	15.04	80.87	84.36	84.60
Mean	1014	38.7	4.6	1.22	84.9	33.5	6.5	5.95	1.165	0.895	1.134	0.648	0.711	76.7	17.90	60.76	60.56	67.50
Entry (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Location (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0187	0.7011	0.0018
Entry x Loc. (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
R-square	0.90	0.98	0.80	0.67	0.69	0.72	0.82	0.71	0.70	0.71	0.70	0.70	0.71	0.69	0.69	0.57	0.54	0.59
Entry LSD (0.05)	67	0.7	0.2	0.03	0.80	0.67	0.35	0.72	0.037	0.040	0.036	0.048	0.068	1.4	2.55	11.10	7.44	9.03
CV (%)	18.7	3.9	3.4	2.2	0.6	3.5	5.8	8.1	2.6	3.4	2.7	5.0	5.7	0.9	7.4	14.4	9.1	11.0

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).