

Table 2. Least square means for lint yield and fiber quality traits in the 2024 RBTN at College Station, Texas. Planted on 10 May 2024 and harvested on 11 October 2024. (Cooperator: Lori Hinze)

				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	1178	38.4	3.9	1.22	85.1	31.6	5.3	5.93	1.178	0.886	1.152	0.616	0.658	75.2	19.57	59.50	70.50	65.25
Ark1620-030	1065	37.0	3.6	1.25	84.7	32.0	5.4	6.03	1.191	0.885	1.157	0.608	0.619	74.1	21.39	58.25	66.75	64.25
Ark1620-055	1385	39.7	4.3	1.28	86.3	33.2	6.0	4.28	1.256	0.970	1.227	0.705	0.769	77.2	16.43	74.50	80.00	75.25
Ark1620-098	1386	40.2	4.3	1.26	85.2	32.7	6.1	4.90	1.222	0.927	1.190	0.658	0.711	75.9	17.76	72.25	74.00	76.00
Ark1622-058	1500	39.2	4.5	1.22	84.9	32.9	5.9	6.00	1.180	0.907	1.149	0.657	0.722	76.8	17.75	53.50	67.50	59.50
Ark1622-086	1343	37.5	3.9	1.26	85.8	32.1	6.0	4.85	1.222	0.943	1.193	0.685	0.770	77.2	16.28	70.50	76.25	72.75
AU17014-45-250	1310	39.0	4.1	1.22	84.5	30.2	5.6	6.23	1.164	0.876	1.131	0.618	0.677	75.3	19.23	56.75	67.00	64.00
AU17016-19-285	1222	38.6	4.0	1.25	84.5	32.3	5.1	5.38	1.201	0.902	1.173	0.627	0.671	75.1	18.69	64.75	68.25	71.50
DP393	1478	38.0	4.3	1.21	85.4	31.6	6.0	5.83	1.174	0.912	1.147	0.668	0.747	77.6	15.97	58.75	72.00	63.75
DP493	1340	37.9	4.0	1.18	83.1	30.1	4.9	7.70	1.097	0.802	1.062	0.535	0.540	73.1	23.51	38.50	55.00	50.75
FM958	1147	35.9	4.0	1.25	84.6	33.6	5.2	5.48	1.192	0.902	1.162	0.632	0.690	75.7	18.50	62.25	69.25	68.75
GA2021049	1254	38.2	3.9	1.21	84.2	30.1	5.5	6.80	1.147	0.860	1.117	0.594	0.629	74.9	20.19	52.00	64.25	60.75
GA2021058	1155	34.7	3.7	1.25	84.3	30.8	5.7	5.85	1.181	0.873	1.150	0.589	0.605	73.9	21.35	60.50	65.50	67.75
KS2202	801	36.1	3.9	1.23	84.8	32.9	6.1	5.88	1.193	0.904	1.161	0.643	0.669	75.7	18.47	56.00	67.25	62.00
OA-24107	1199	38.2	4.0	1.24	84.8	30.9	6.0	5.98	1.182	0.902	1.149	0.641	0.712	76.3	17.91	59.75	68.00	65.50
OA-24108	1129	39.1	3.7	1.26	85.0	32.9	5.0	5.33	1.203	0.910	1.174	0.642	0.694	75.6	18.24	65.50	70.75	70.75
OA-24109	1199	38.9	3.6	1.28	84.4	34.5	5.1	5.30	1.204	0.896	1.172	0.610	0.620	74.4	19.31	64.75	68.00	71.75
PD2018041	983	34.4	3.6	1.25	84.2	33.5	4.9	6.45	1.175	0.876	1.140	0.605	0.629	74.5	19.59	59.25	66.00	66.75
PD2018060	978	33.6	3.9	1.30	84.0	33.1	5.3	4.95	1.226	0.908	1.190	0.619	0.633	74.0	20.26	73.75	67.75	80.75
TAM18SHB-08	1270	38.9	3.7	1.16	83.5	32.6	5.6	7.13	1.106	0.831	1.074	0.581	0.615	75.1	20.54	36.50	56.50	48.25
TAM18WSL-37	835	32.5	3.2	1.33	86.0	37.3	5.6	3.95	1.292	0.981	1.260	0.702	0.754	75.9	16.32	76.25	83.00	79.75
TAMYDC255	915	34.9	3.4	1.29	85.9	39.0	5.5	4.53	1.249	0.967	1.219	0.707	0.782	77.4	16.21	72.00	84.00	77.25
UA222	1207	36.3	4.0	1.27	85.0	30.7	6.4	4.93	1.219	0.928	1.188	0.665	0.723	76.1	16.96	69.25	71.50	73.75
Mean	1186	37.3	3.9	1.25	84.8	32.6	5.6	5.64	1.194	0.902	1.162	0.635	0.680	75.5	18.71	61.52	69.52	67.68
Entry (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	0.0180	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0041	0.0049	0.0034	0.0600	0.0058	0.0068	0.0020
R-square	0.72	0.94	0.71	0.67	0.41	0.84	0.90	0.54	0.55	0.51	0.56	0.45	0.45	0.49	0.39	0.45	0.45	0.48
Entry LSD (0.05)	262	0.7	0.4	0.08	1.6	3.0	0.45	1.28	0.058	0.064	0.058	0.079	0.118	2.2	NS	19.50	13.25	14.75
CV (%)	15.9	5.6	7.7	3.0	0.90	6.5	7.7	15.6	3.6	4.6	3.8	6.7	9.2	1.6	10.4	16.7	9.9	12.2

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.