

Table 8. Least square means for yield and fiber quality traits in the 2024 RBTN at Lubbock, Texas. Planted on 21 May 2024 and harvested on 25 November 2024. (Cooperator: Carol Kelly)

				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	604	26.7	4.4	1.16	81.8	31.5	6.4	8.05	1.061	0.776	1.028	0.507	0.521	73.1	25.04	58.75	66.00	65.75
Ark1620-030	701	27.1	4.3	1.20	82.2	32.8	5.7	7.68	1.094	0.798	1.057	0.523	0.530	72.9	25.03	71.50	70.75	77.75
Ark1620-055	538	26.9	4.4	1.14	81.5	31.2	6.2	9.43	1.022	0.725	0.987	0.450	0.411	71.0	31.00	50.00	61.00	59.75
Ark1620-098	652	26.3	4.1	1.23	83.2	35.1	6.5	6.88	1.135	0.834	1.100	0.554	0.567	73.4	22.93	78.50	78.75	81.75
Ark1622-058	616	26.6	4.0	1.19	82.4	33.8	6.8	8.10	1.087	0.782	1.049	0.501	0.479	71.9	26.58	65.25	70.75	71.75
Ark1622-086	781	25.7	4.6	1.12	82.0	31.0	6.5	9.05	1.022	0.734	0.992	0.467	0.452	71.8	28.54	48.50	63.50	57.25
AU17014-45-250	791	28.2	4.2	1.17	82.1	32.5	6.5	8.53	1.074	0.777	1.037	0.509	0.498	72.2	26.21	65.00	68.00	71.75
AU17016-19-285	730	29.3	4.4	1.12	81.4	30.3	6.5	9.50	1.007	0.718	0.973	0.450	0.421	71.2	30.59	44.75	59.50	55.50
DP393	501	26.6	4.4	1.17	82.0	31.8	6.4	8.70	1.061	0.759	1.023	0.483	0.453	71.5	28.35	60.25	66.00	67.75
DP493	577	27.8	4.2	1.17	82.5	31.6	6.1	8.73	1.066	0.765	1.034	0.489	0.471	71.6	27.44	64.75	70.00	70.50
FM958	771	26.7	4.0	1.21	82.7	33.2	6.0	8.20	1.101	0.795	1.068	0.508	0.494	72.2	25.68	76.00	73.25	80.25
GA2021049	931	28.3	4.2	1.19	82.6	32.9	6.6	7.80	1.093	0.801	1.057	0.534	0.544	73.2	24.01	72.00	73.75	77.75
GA2021058	549	28.7	4.2	1.19	82.6	33.2	6.3	7.50	1.102	0.811	1.063	0.543	0.556	73.6	23.19	72.00	74.25	77.50
GA2022052	580	29.0	4.6	1.15	82.7	31.6	6.2	8.05	1.059	0.776	1.029	0.510	0.507	73.2	25.22	57.50	69.50	63.75
KS2202	693	25.5	4.1	1.22	83.9	33.3	6.3	6.75	1.144	0.844	1.110	0.576	0.596	73.7	22.13	80.00	82.00	82.00
OA-24107	488	26.5	4.5	1.16	82.2	31.4	6.8	8.18	1.061	0.776	1.027	0.512	0.527	73.0	25.35	56.75	66.25	64.00
OA-24108	818	27.4	4.3	1.15	82.0	31.7	6.7	8.60	1.050	0.758	1.016	0.491	0.483	72.1	26.65	57.50	65.75	65.25
OA-24109	723	27.5	4.4	1.16	82.3	32.7	6.1	8.13	1.069	0.778	1.033	0.514	0.513	72.7	25.27	63.25	68.75	69.75
PD2018041	759	25.6	4.1	1.19	83.3	32.9	6.5	7.88	1.094	0.797	1.067	0.516	0.522	72.9	24.84	69.50	77.25	73.75
PD2018060	563	24.0	4.2	1.18	83.2	32.8	6.5	7.60	1.095	0.803	1.062	0.539	0.543	73.3	23.02	66.00	75.25	70.50
TAM18SHB-08	601	24.6	4.2	1.17	81.7	32.8	6.7	7.88	1.068	0.781	1.027	0.521	0.525	73.0	25.45	62.50	67.75	72.00
TAM18WSL-37	560	22.9	4.3	1.16	82.4	31.4	6.9	8.33	1.062	0.767	1.025	0.500	0.485	72.3	26.25	54.75	66.75	61.00
TAMYDC255	519	22.9	4.4	1.18	83.4	32.5	6.5	7.15	1.103	0.818	1.067	0.562	0.584	74.1	22.01	69.75	75.75	72.75
UA222	564	25.6	4.3	1.17	82.4	31.7	6.4	8.00	1.073	0.784	1.042	0.508	0.502	73.0	25.61	65.75	70.00	72.00
Mean	650	26.5	4.3	1.17	82.4	32.3	6.4	8.11	1.075	0.782	1.041	0.511	0.508	72.6	25.68	63.77	70.02	70.07
Entry (P>F)	0.0012	<0.0001	0.3990	0.0216	0.0883	0.1080	0.3255	0.0884	0.0210	0.0326	0.0313	0.0270	0.0475	0.1346	0.0363	0.0232	0.0938	0.0216
R-square	0.48	0.77	0.40	0.36	0.32	0.32	0.29	0.34	0.36	0.37	0.35	0.39	0.38	0.36	0.39	0.37	0.29	0.37
Entry LSD (0.05)	205	2.9	NS	0.06	NS	NS	NS	NS	0.067	0.066	0.069	0.066	0.102	NS	4.98	19.20	NS	15.50
CV (%)	18.0	6.5	3.7	2.3	0.7	3.3	4.3	8.6	3.0	3.9	3.1	6.1	9.2	1.1	9.1	14.4	7.9	10.6

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.