

Table 11. Least square means for yield and fiber quality traits in the 2023 RBTN at Lubbock, Texas. Planted on 7 June 2023 and harvested on 17 November 2023. (Cooperator: Jane Dever)

Genotype	LINT YEILD	LINT PERCENT	HVI Data					Fibrogram Data								QS1 ¹	QS2 ¹	QS3 ¹
			MIC	UHM	UI	STR	ELO	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Uif	SFCf			
units	lb/acre	%	units	in	%	g/tex	%	%	in	in	in	in	in	%	%			
PD20150002	738	33.6	4.7	1.20	82.8	32.9	6.4	7.80	1.110	0.808	1.079	0.528	0.531	72.73	24.46	56.25	70.75	63.25
PD2017030	676	32.6	5.0	1.19	83.1	34.3	6.2	7.48	1.112	0.818	1.077	0.549	0.564	73.49	23.04	71.50	73.50	76.75
Ark1510-28	629	31.8	4.7	1.18	82.1	34.0	5.9	7.95	1.090	0.792	1.055	0.516	0.501	72.67	25.06	62.25	68.00	70.25
PD20150021	623	35.1	4.7	1.17	82.7	34.2	6.5	7.75	1.095	0.802	1.063	0.534	0.538	73.19	24.07	74.75	78.25	79.75
GA2017126	612	33.8	4.8	1.17	82.5	33.9	6.7	7.80	1.087	0.796	1.055	0.520	0.519	73.24	24.80	61.35	68.42	67.54
FM958CK	606	31.9	4.6	1.19	82.8	35.5	6.4	7.53	1.107	0.817	1.078	0.541	0.562	73.73	22.88	61.50	71.75	68.00
OA-23106	600	33.2	4.6	1.21	83.1	35.8	6.3	7.40	1.130	0.827	1.094	0.551	0.559	73.11	23.08	54.75	63.25	64.00
Ark1519-16	591	33.2	4.7	1.17	82.3	34.1	6.8	7.90	1.088	0.795	1.054	0.526	0.520	72.99	24.59	60.00	68.75	67.25
OA-23105	572	33.5	4.8	1.16	82.7	34.4	6.6	7.85	1.083	0.793	1.053	0.523	0.521	73.15	24.82	62.50	70.00	71.50
GA2017132	567	34.5	4.5	1.18	82.0	35.2	5.8	8.15	1.086	0.787	1.050	0.509	0.497	72.48	25.57	68.00	74.75	74.00
GA2018139	540	32.1	4.7	1.16	81.4	32.9	6.6	9.13	1.053	0.756	1.021	0.473	0.460	71.64	28.44	65.00	72.25	71.00
DP493CK	533	34.1	4.7	1.19	82.5	34.6	6.2	7.83	1.102	0.802	1.069	0.531	0.525	72.76	24.39	66.75	71.00	71.25
GA2017024	531	31.2	4.7	1.19	82.7	34.7	6.3	7.48	1.106	0.816	1.073	0.547	0.559	73.71	23.52	59.75	66.50	68.50
17020-22-9-9	524	33.2	4.7	1.20	83.0	34.6	6.3	7.50	1.118	0.823	1.087	0.550	0.570	73.56	22.93	68.50	75.25	74.00
UA222CK	522	33.4	4.7	1.17	82.1	34.4	5.8	8.30	1.075	0.774	1.041	0.501	0.482	72.01	26.49	57.75	67.00	66.00
Ark1514-34	514	34.3	4.7	1.18	82.3	34.2	6.1	8.10	1.096	0.792	1.062	0.510	0.506	72.29	25.19	63.50	69.50	71.25
OA-23104	498	33.4	4.7	1.21	82.7	34.7	5.7	6.95	1.132	0.834	1.096	0.560	0.570	73.68	22.60	57.75	68.50	64.75
Ark1510-31	495	32.8	4.8	1.18	82.4	33.6	6.7	7.68	1.095	0.797	1.060	0.525	0.527	72.79	24.55	59.50	68.50	66.50
DP393CK	478	33.5	4.6	1.18	81.9	34.4	6.0	8.35	1.082	0.780	1.045	0.503	0.484	72.04	26.72	60.00	72.00	64.75
Ark1512-32	413	32.4	4.7	1.19	83.0	35.4	6.0	7.50	1.117	0.819	1.085	0.543	0.561	73.28	23.27	67.75	75.50	73.00
Mean	563	33.2	4.7	1.20	82.5	34.4	6.2	7.82	1.098	0.801	1.065	0.527	0.528	72.93	24.52	62.95	70.68	69.67
Entry (P>F)	0.3156	0.5502	0.2509	0.7499	0.5944	0.5988	0.4471	0.4382	0.6153	0.5308	0.6847	0.3923	0.3468	0.3458	0.4805	0.8151	0.7861	0.8009
R-square	0.38	0.19	0.17	0.29	0.28	0.20	0.26	0.33	0.31	0.32	0.29	0.35	0.35	0.34	0.31	0.26	0.25	0.26
Entry LSD (0.05)	NS²	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)	13.2	3.0	1.9	1.3	0.5	2.2	5.2	5.8	1.7	2.4	1.8	4.0	6.2	0.8	6.1	8.3	5.1	6.3

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.