

Table 9. Least square means for yield and fiber quality traits in the 2023 RBTN at Las Cruces, NM. Planted on 8 May 2023 and harvested on 15 December 2023. (Cooperator: J. Zhang)

Genotype	LINT YEILD	LINT PERCENT	MIC	HVI data				Fibrogram Data								QS1 ¹	QS2 ¹	QS3 ¹
				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	%	%			
Ark 1519-16	2234	43.2	4.6	1.22	82.3	28.9	7.5	7.78	1.110	0.798	1.075	0.508	0.491	71.84	26.18	56.00	60.50	65.25
OA-23106	1970	43.6	4.8	1.28	84.8	30.7	5.5	5.28	1.203	0.897	1.180	0.611	0.656	74.58	19.84	62.25	68.50	68.25
OA-23104	1893	46.1	4.7	1.22	83.1	29.7	5.6	7.33	1.123	0.821	1.091	0.547	0.556	73.06	23.28	50.50	71.25	55.00
GA 2017126	1863	43.2	4.8	1.19	84.4	30.7	6.4	6.80	1.120	0.846	1.093	0.590	0.615	75.41	20.41	33.75	53.50	46.00
17020-22-9-9	1805	43.2	4.4	1.21	82.6	29.4	5.8	7.13	1.112	0.823	1.078	0.554	0.570	73.98	22.54	58.00	64.00	66.75
Ark 1512-32	1786	45.5	4.7	1.20	83.0	28.6	7.2	7.63	1.105	0.812	1.075	0.537	0.557	73.41	24.73	52.75	62.50	60.25
GA 2017132	1756	42.8	4.7	1.25	83.7	31.4	6.0	6.08	1.169	0.866	1.132	0.592	0.618	74.07	21.25	65.00	69.00	70.25
DP 393 CK	1737	43.4	4.9	1.18	83.8	30.6	6.7	6.98	1.106	0.828	1.077	0.572	0.611	74.81	22.10	80.25	83.25	79.00
OA-23105	1733	45.4	4.8	1.24	83.0	30.7	5.7	6.98	1.147	0.836	1.110	0.558	0.570	72.87	22.87	70.50	71.75	75.00
PD 20150002	1599	38.6	4.8	1.29	83.5	31.6	5.8	5.03	1.197	0.891	1.166	0.605	0.648	74.37	20.48	64.50	67.00	71.00
Ark 1510-28	1591	42.2	4.7	1.25	83.4	29.5	6.2	6.60	1.156	0.845	1.122	0.563	0.553	73.12	22.61	67.00	69.50	73.00
DP 493 CK	1577	45.0	5.0	1.17	81.9	30.0	5.6	8.83	1.056	0.759	1.025	0.479	0.462	71.87	27.53	78.50	71.75	82.00
Ark 1510-31	1576	43.0	5.0	1.22	83.4	29.4	6.5	7.88	1.123	0.807	1.098	0.514	0.483	71.89	26.17	53.00	65.00	59.75
PD 2017030	1570	41.4	4.8	1.27	85.5	32.8	5.8	4.73	1.221	0.944	1.195	0.680	0.760	77.30	16.66	58.75	66.25	66.00
FM 958 CK	1545	40.7	4.7	1.25	83.5	31.0	6.0	6.48	1.158	0.854	1.124	0.575	0.599	73.69	21.30	83.25	80.25	83.75
GA 2018139	1537	43.2	4.7	1.23	83.4	30.1	6.2	7.43	1.138	0.822	1.109	0.528	0.506	72.21	25.59	65.75	67.50	72.25
GA 2017024	1501	43.5	4.8	1.25	83.0	32.1	5.9	6.75	1.153	0.853	1.117	0.579	0.600	73.84	21.90	47.75	67.50	53.75
PD 20150030	1395	35.8	4.7	1.29	84.8	31.8	5.3	4.73	1.234	0.926	1.198	0.650	0.669	75.02	19.18	78.75	79.00	79.50
Ark 1514-34	1387	43.3	4.4	1.18	83.4	28.7	7.2	7.68	1.101	0.808	1.069	0.542	0.553	73.36	23.60	52.25	67.00	59.50
UA 222 CK	1098	43.0	4.5	1.20	82.7	29.6	7.7	7.93	1.102	0.804	1.070	0.527	0.524	72.82	25.17	52.50	62.75	61.75
Mean	1658	42.8	4.7	1.23	83.5	30.4	6.2	6.80	1.142	0.842	1.110	0.566	0.580	73.68	22.67	61.55	68.40	67.40
Entry (P>F)	<0.0001	<0.0001	0.0083	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0005	0.0008	0.0034	<0.0001	<0.0001	<0.0001
R-square	0.59	0.73	0.45	0.68	0.59	0.64	0.91	0.60	0.69	0.65	0.69	0.60	0.53	0.54	0.49	0.68	0.61	0.65
Entry LSD (0.05)	356	1.2	0.3	0.04	1.3	1.4	0.3	1.30	0.052	0.058	0.053	0.068	0.115	2.24	4.87	14.50	9.50	12.25
CV (%)	14.7	5.5	3.6	3.1	1.0	3.9	11.2	16.7	4.0	5.4	4.1	8.5	12.3	1.8	12.0	20.4	10.0	14.9

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.