

Table 7. Least square means for yield and fiber quality traits in the 2023 RBTN at Keiser, AR. Planted on 16 May 2023 and harvested on 25 October 2023. (Cooperator: Fred Bourland)

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	%	%			
OA-23105	698	41.5	5.1	1.24	86.1	36.8	5.2	5.10	1.211	0.950	1.181	0.712	0.802	78.42	15.56	65.25	74.00	70.25
Ark 1510-28	650	39.3	5.3	1.23	85.8	34.4	5.6	5.60	1.198	0.924	1.172	0.669	0.754	77.09	17.41	60.00	73.75	63.50
PD 2017030	559	38.7	5.2	1.23	85.1	35.4	5.4	5.60	1.187	0.922	1.151	0.684	0.768	77.64	16.72	69.75	79.25	75.50
OA-23104	532	41.7	5.0	1.26	85.5	37.2	5.2	4.70	1.216	0.961	1.181	0.734	0.828	79.03	14.79	54.00	69.25	60.75
17020-22-9-9	504	40.9	5.0	1.19	83.6	34.6	5.6	6.50	1.126	0.856	1.092	0.610	0.678	76.06	20.13	44.75	60.50	56.00
GA 2017132	500	40.1	5.2	1.25	85.4	35.3	5.3	4.80	1.212	0.961	1.176	0.736	0.832	79.26	13.62	51.25	66.50	59.50
DP 393 CK	499	40.2	5.3	1.20	84.2	34.7	5.9	6.00	1.146	0.885	1.113	0.646	0.730	77.28	17.67	58.25	71.50	64.75
UA 222 CK	479	40.1	5.2	1.24	85.0	33.8	7.0	5.70	1.191	0.910	1.161	0.652	0.723	76.48	17.46	60.75	68.00	65.75
OA-23106	468	39.2	5.1	1.25	85.6	34.9	5.2	5.00	1.212	0.951	1.180	0.709	0.796	78.52	14.70	53.50	64.75	61.00
GA 2018139	453	38.9	5.1	1.22	84.5	33.4	6.0	6.30	1.167	0.883	1.136	0.623	0.683	75.62	19.98	64.75	71.50	69.75
PD 20150030	430	33.8	5.1	1.25	84.4	34.2	5.1	5.20	1.191	0.921	1.154	0.675	0.763	77.29	17.59	66.50	75.00	70.50
Ark 1510-31	426	38.8	5.5	1.22	84.1	33.8	5.7	6.00	1.158	0.888	1.123	0.642	0.717	76.64	18.09	46.25	60.50	55.00
GA 2017126	426	38.4	5.1	1.21	85.1	34.8	5.5	5.40	1.172	0.929	1.141	0.700	0.802	79.24	14.13	38.25	55.00	49.50
DP 493 CK	417	41.5	5.3	1.19	83.5	33.3	5.3	6.50	1.125	0.857	1.092	0.607	0.671	76.11	19.02	67.00	71.75	73.25
Ark 1514-34	399	39.6	5.0	1.23	85.1	32.6	6.3	5.80	1.180	0.916	1.153	0.661	0.744	77.54	17.15	59.25	68.75	64.50
Ark 1519-16	384	39.9	5.1	1.23	84.3	32.9	6.9	5.50	1.174	0.901	1.141	0.648	0.722	76.72	18.14	56.75	63.50	64.25
FM 958 CK	301	39.1	5.3	1.21	84.6	35.5	5.4	5.80	1.162	0.904	1.132	0.664	0.751	77.80	16.75	62.25	67.00	69.25
GA 2017024	297	38.9	5.2	1.25	85.2	34.5	5.2	5.20	1.206	0.943	1.173	0.701	0.799	78.20	15.78	45.00	61.50	54.50
Ark 1512-32	286	40.9	5.2	1.20	85.1	32.3	5.8	6.40	1.156	0.880	1.126	0.630	0.695	76.15	18.84	48.50	66.00	54.75
PD 20150002	212	35.1	5.0	1.26	84.8	35.5	5.5	5.00	1.205	0.949	1.170	0.713	0.820	78.81	15.30	67.25	81.50	71.75
Mean	446	39.3	5.2	1.23	84.8	34.5	5.6	5.60	1.180	0.915	1.147	0.671	0.754	77.49	16.94	56.96	68.48	63.70
Entry (P>F)	<0.0001	<0.0001	0.0085	0.0120	0.0054	<0.0001	<0.0001	0.0002	0.0007	0.0002	0.0004	0.0005	0.0029	0.0034	0.0039	0.0019	0.0001	0.0072
R-square	0.73	0.78	0.47	0.41	0.44	0.60	0.86	0.42	0.51	0.56	0.52	0.55	0.50	0.50	0.49	0.45	0.54	0.38
Entry LSD (0.05)	128	1.4	0.2	0.04	1.3	1.8	0.4	0.87	0.045	0.050	0.046	0.063	0.090	2.03	3.34	15.75	10.00	13.75
CV (%)	26.6	5.0	2.3	1.9	0.8	3.8	9.7	10.1	2.4	3.6	2.5	5.9	6.8	1.5	11.0	15.8	9.6	11.3

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.