

Table 6. Least square means for yield and fiber quality traits in the 2024 RBTN at Keiser, AR. Planted on 28 May 2024 and harvested on 22 October 2024. (Cooperator: Fred Bourland)

Genotype	LINT YIELD	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	%	%			
ACX167-27-347	701	42.5	5.1	1.22	85.9	34.8	5.9	6.00	1.169	0.905	1.142	0.660	0.747	77.4	16.81	51.75	65.75	59.25
Ark1620-030	898	42.0	5.2	1.23	86.7	37.5	6.0	5.28	1.198	0.952	1.168	0.727	0.827	79.4	14.25	56.50	75.00	63.25
Ark1620-055	912	41.8	5.0	1.26	86.7	35.7	6.8	5.20	1.219	0.952	1.189	0.705	0.785	78.0	15.73	67.25	75.25	72.00
Ark1620-098	1040	42.3	4.9	1.22	85.8	34.5	6.9	6.13	1.169	0.895	1.141	0.639	0.701	76.5	18.96	52.75	65.25	61.00
Ark1622-058	933	41.5	4.9	1.20	85.2	35.1	6.5	5.58	1.153	0.904	1.120	0.677	0.783	78.4	16.93	48.25	63.00	58.75
Ark1622-086	658	41.7	4.9	1.21	86.1	34.7	6.8	5.55	1.168	0.917	1.138	0.690	0.794	78.5	15.72	51.75	67.50	59.25
AU17014-45-250	822	44.3	5.0	1.20	85.0	33.3	6.0	6.20	1.142	0.878	1.111	0.634	0.711	76.9	18.28	42.75	58.75	53.75
AU17016-19-285	800	44.2	5.1	1.25	86.3	35.0	5.4	5.18	1.204	0.947	1.171	0.717	0.795	78.6	13.68	60.00	69.50	65.75
DP393	753	42.9	4.9	1.19	86.0	35.4	6.6	5.93	1.153	0.895	1.125	0.656	0.743	77.6	17.41	47.75	67.25	56.50
DP493	798	42.8	5.1	1.18	85.6	34.5	5.6	6.70	1.133	0.855	1.105	0.604	0.657	75.4	19.78	37.25	60.50	46.75
FM958	691	40.1	5.0	1.25	86.3	35.5	5.6	5.05	1.217	0.956	1.184	0.725	0.812	78.5	14.39	64.00	71.75	69.75
GA2021049	818	42.9	5.0	1.22	85.5	33.7	6.2	6.18	1.164	0.891	1.133	0.642	0.697	76.5	18.45	50.75	63.25	59.75
GA2021058	827	45.6	4.8	1.23	86.1	34.5	5.9	5.98	1.184	0.904	1.154	0.651	0.715	76.3	18.66	59.75	69.25	66.50
GA2022052	692	44.3	5.0	1.28	86.9	36.2	6.1	4.58	1.248	0.990	1.211	0.764	0.849	79.3	13.19	72.00	77.50	75.75
KS2202	663	44.0	5.0	1.20	85.5	34.3	6.6	6.13	1.148	0.880	1.120	0.634	0.712	76.6	18.08	44.25	61.75	53.50
OA-24107	767	43.9	4.9	1.26	85.6	36.4	5.4	5.15	1.203	0.947	1.169	0.714	0.802	78.7	14.14	65.75	70.75	74.25
OA-24108	793	44.2	4.9	1.24	86.3	35.0	5.8	5.68	1.197	0.919	1.170	0.665	0.744	76.8	17.09	61.75	71.25	67.75
OA-24109	836	41.9	4.6	1.22	86.2	33.7	6.6	5.68	1.181	0.914	1.154	0.666	0.750	77.3	16.98	61.00	69.75	67.50
PD2018041	572	39.4	4.8	1.29	86.6	36.3	5.8	4.78	1.245	0.981	1.216	0.742	0.829	78.7	13.98	75.50	77.25	80.25
PD2018060	671	38.9	5.0	1.30	85.8	36.1	5.6	4.53	1.240	0.971	1.204	0.727	0.809	78.3	14.47	71.75	71.75	79.00
TAM18SHB-08	627	42.5	4.6	1.18	85.5	34.7	6.0	6.35	1.133	0.869	1.107	0.624	0.675	76.6	19.15	47.00	64.00	57.00
TAM18WSL-37	642	38.2	4.3	1.33	87.6	40.1	6.1	3.98	1.296	1.036	1.265	0.798	0.883	79.9	11.52	92.75	91.50	95.75
TAMYDC255	558	39.5	4.6	1.30	87.3	38.6	5.8	4.35	1.266	1.010	1.232	0.786	0.876	79.7	12.70	84.00	88.00	88.25
UA222	655	41.3	4.8	1.25	86.2	34.6	7.4	5.33	1.205	0.947	1.171	0.711	0.802	78.6	15.60	64.00	70.50	70.00
Mean	755	42.2	4.9	1.24	86.1	35.4	6.1	5.48	1.193	0.930	1.162	0.690	0.771	77.9	16.08	59.59	70.25	66.70
Entry (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	0.0756	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0014	0.0181	0.0021	<0.0001	<0.0001	<0.0001
R-square	0.64	0.68	0.59	0.57	0.36	0.54	0.80	0.57	0.60	0.56	0.59	0.52	0.48	0.42	0.47	0.58	0.55	0.56
Entry LSD (0.05)	169	0.6	0.3	0.05	NS	2.2	0.7	1.00	0.054	0.066	0.054	0.083	0.109	2.5	4.14	15.50	11.50	12.50
CV (%)	15.9	4.5	3.9	3.2	0.7	4.4	8.5	12.7	3.7	4.9	3.6	7.6	8.0	1.6	14.3	22.3	11.2	17.5

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.