

Table 10. Least square means for yield and fiber quality traits in the 2024 RBTN at Tallassee, AL. Planted on 7 May 2024 and harvested on 30 October 2024. (Cooperator: J. Koebernick)

				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	1323	41.2	4.9	1.22	84.8	33.5	5.8	5.80	1.172	0.906	1.141	0.664	0.747	77.3	17.20	54.00	65.25	61.00
Ark1620-030	1383	39.4	5.2	1.25	85.6	34.0	5.9	5.20	1.211	0.958	1.179	0.733	0.826	79.1	13.11	59.25	71.00	63.25
Ark1620-055	1323	40.6	4.8	1.26	86.0	34.3	6.6	4.90	1.222	0.958	1.192	0.715	0.818	78.3	15.69	70.75	76.75	73.25
Ark1620-098	1263	40.4	5.1	1.22	85.6	33.3	6.5	5.50	1.185	0.932	1.154	0.703	0.797	78.6	15.23	50.75	68.50	55.50
Ark1622-058	1244	40.4	5.0	1.23	84.8	34.6	6.2	5.48	1.184	0.917	1.151	0.674	0.765	77.4	16.59	54.75	66.75	62.25
Ark1622-086	1176	38.7	4.8	1.22	84.8	33.2	6.5	5.80	1.172	0.909	1.141	0.666	0.753	77.5	16.52	56.25	66.25	63.50
AU17014-45-250	1295	40.8	4.9	1.23	84.7	32.6	6.0	5.73	1.174	0.908	1.141	0.665	0.755	77.3	16.53	55.00	65.25	62.50
AU17016-19-285	1139	40.6	4.9	1.24	85.3	34.0	5.3	5.13	1.201	0.933	1.171	0.686	0.783	77.8	16.15	62.75	70.50	67.75
DP393	1292	38.7	5.0	1.19	85.0	33.9	6.7	5.78	1.148	0.896	1.118	0.664	0.755	78.0	16.14	45.00	65.50	52.75
DP493	1017	39.6	4.9	1.18	84.0	32.7	5.5	6.60	1.122	0.851	1.090	0.600	0.648	75.9	18.96	41.00	58.25	51.75
FM958	1056	37.0	5.0	1.25	84.4	34.4	5.7	5.60	1.188	0.918	1.155	0.666	0.750	77.3	16.51	58.75	64.25	66.75
GA2021049	1081	41.8	5.1	1.22	85.1	33.0	6.1	5.45	1.178	0.931	1.149	0.702	0.813	79.1	14.37	50.75	65.25	57.00
GA2021058	1207	41.7	4.7	1.22	84.8	32.5	6.2	5.90	1.172	0.911	1.141	0.668	0.753	77.6	16.29	59.00	67.50	65.75
GA2022052	954	38.3	4.8	1.24	83.9	33.3	6.2	6.10	1.170	0.886	1.137	0.620	0.694	75.7	19.63	58.50	62.25	67.50
KS2202	923	38.6	4.9	1.24	85.9	33.7	7.1	5.18	1.202	0.953	1.172	0.725	0.821	79.2	14.37	62.25	74.00	66.00
OA-24107	1068	38.5	4.9	1.21	84.8	31.7	6.6	6.10	1.161	0.899	1.131	0.657	0.751	77.4	16.52	52.75	65.50	60.00
OA-24108	1115	41.5	4.5	1.23	84.4	34.0	5.4	6.33	1.169	0.890	1.139	0.630	0.684	76.1	18.71	62.00	66.75	70.00
OA-24109	946	42.4	4.7	1.23	84.1	35.5	5.4	6.00	1.170	0.900	1.136	0.648	0.719	76.9	17.62	61.00	67.00	71.25
PD2018041	782	35.7	4.7	1.26	84.9	35.1	5.7	5.13	1.211	0.938	1.173	0.695	0.766	77.4	15.33	67.50	71.50	74.25
PD2018060	1025	35.1	4.8	1.28	85.0	34.3	5.5	4.75	1.232	0.955	1.200	0.703	0.790	77.5	16.00	75.75	72.75	80.75
TAM18SHB-08	1106	40.0	4.6	1.19	84.0	34.2	6.1	6.45	1.129	0.861	1.098	0.612	0.654	76.3	18.87	48.75	62.50	59.75
TAM18WSL-37	843	33.7	4.3	1.34	86.2	38.9	6.0	3.80	1.298	1.019	1.266	0.764	0.857	78.5	14.25	96.25	92.25	100.00
TAMYDC255	711	36.2	4.6	1.31	86.6	38.3	5.7	3.95	1.285	1.029	1.253	0.798	0.898	80.1	12.26	91.75	92.25	94.75
UA222	1035	38.2	4.7	1.21	85.0	32.4	7.1	5.90	1.169	0.905	1.137	0.660	0.745	77.3	16.98	56.50	67.50	63.00
Mean	1096	39.1	4.8	1.24	84.9	34.1	6.1	5.52	1.189	0.923	1.157	0.680	0.764	77.6	16.24	60.46	69.38	67.09
Entry (P>F)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	0.0011	<0.0001	<0.0001	<0.0001
R-square	0.61	0.63	0.55	0.54	0.60	0.76	0.84	0.59	0.67	0.64	0.67	0.61	0.58	0.49	0.46	0.56	0.64	0.63
Entry LSD (0.05)	246	0.4	0.6	0.07	0.9	1.3	0.7	1.70	0.083	0.094	0.082	0.113	0.085	1.8	3.17	15.50	8.25	13.50
CV (%)	16.3	5.8	4.3	2.9	0.8	4.9	8.5	12.6	3.5	4.5	3.5	6.8	7.8	1.4	11.1	21.2	11.7	17.2

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.