

Table 7. Least square means for yield and fiber quality traits in the 2025 RBTN at Tifton, GA. Planted on 6 May 2025 and harvested on 17 October 2025.(Cooperator: Peng Chee)

Genotype	Entry	Agronomic Data			HVI Data						Fibrogram Data						Quality Score			
		Lint Yield	Lint Percent	Boll Size	Mic	UHML	UI	Str	Elo	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Ulf	SFCf	QS1 ¹	QS2 ¹	QS3 ¹
	units:	lb/acre	%	g		in	%	g/tex	%	%	in	in	in	in	in	%	%			
Ark 1704-53	1	1233	43.1	6.0	4.6	1.25	84.5	29.7	7.4	4.9	1.206	0.924	1.171	0.667	0.730	76.6	16.7	62	60	70
Ark 1706-45	2	1233	43.2	5.7	4.6	1.25	85.0	30.7	7.4	5.1	1.208	0.935	1.175	0.684	0.760	77.4	18.3	64	64	70
Ark 1704-26	3	1202	43.5	5.5	4.8	1.19	83.8	31.0	7.3	6.3	1.136	0.871	1.105	0.625	0.673	76.6	19.1	41	47	52
Ark 1720-52	4	1214	43.5	5.6	4.7	1.24	85.1	30.8	7.2	5.3	1.203	0.923	1.173	0.668	0.736	76.7	18.7	61	64	66
Ark 1706-34	5	1133	43.6	6.0	4.6	1.24	85.1	31.2	7.1	5.3	1.202	0.938	1.173	0.694	0.768	78.0	15.9	64	65	69
TAM 18J-13	6	928	36.3	5.9	4.2	1.34	86.0	36.6	6.0	3.9	1.315	1.046	1.286	0.796	0.894	79.5	11.6	95	88	99
TAM 19J-04	7	897	37.6	5.9	4.0	1.36	85.1	34.1	5.5	3.8	1.308	0.988	1.277	0.696	0.736	75.4	17.1	89	75	94
TAM 19O-09	8	994	40.6	5.9	4.6	1.24	85.8	34.7	6.4	5.0	1.219	0.965	1.190	0.731	0.828	79.2	13.3	66	70	72
OA-25110	9	1250	43.9	5.6	4.5	1.23	85.0	32.1	5.5	5.6	1.193	0.922	1.163	0.675	0.750	77.3	15.9	60	62	67
OA-25111	10	1223	42.8	5.2	4.4	1.26	85.3	33.2	5.7	4.9	1.221	0.944	1.195	0.685	0.768	77.4	15.4	73	70	77
OA-25112	11	1030	41.8	5.0	4.3	1.26	85.1	33.4	5.9	4.8	1.225	0.965	1.187	0.737	0.822	78.7	13.0	68	65	74
OA-25113	12	1299	43.3	5.2	4.5	1.24	84.9	32.7	6.2	5.5	1.207	0.934	1.175	0.684	0.766	77.4	15.7	67	65	73
OA-25114	13	1044	44.5	5.7	4.8	1.22	85.4	31.6	6.9	5.3	1.187	0.941	1.160	0.710	0.814	79.2	14.4	54	62	60
GA 2023279	14	1161	45.3	5.9	4.6	1.25	84.8	33.0	6.3	5.5	1.208	0.931	1.176	0.673	0.753	77.1	16.8	65	62	72
DP 393	15	952	40.5	5.3	4.6	1.24	84.6	33.5	7.0	5.2	1.199	0.936	1.162	0.699	0.781	78.1	15.0	62	61	70
DP 493	16	1113	42.7	5.6	5.1	1.15	83.3	30.3	6.1	7.2	1.090	0.814	1.060	0.561	0.597	74.6	21.4	28	39	41
FM 958	17	950	40.1	5.8	4.8	1.24	85.1	34.0	5.7	5.1	1.209	0.950	1.174	0.717	0.817	78.6	15.1	57	62	64
UA 222	18	1089	41.8	5.9	4.8	1.22	85.6	31.1	7.2	5.2	1.205	0.955	1.174	0.729	0.814	79.2	13.5	56	64	61
Mean		1108	42.1	5.3	4.6	1.24	85.0	32.4	6.5	5.2	1.208	0.938	1.176	0.691	0.767	77.6	15.9	63	64	69
Entry (P>F)		0.0016	<0.0001	0.0173	<0.0001	<0.0001	0.0050	<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
R-square		0.5573	0.9320	0.4424	0.7386	0.8042	0.4664	0.7534	0.8671	0.3810	0.7620	0.6972	0.7560	0.6134	0.5832	0.5716	0.5732	0.8000	0.6908	0.8235
Entry LSD (0.05)		176	0.9	0.5	0.2	0.03	1.0	1.4	0.4	0.6	0.038	0.042	0.039	0.053	0.076	1.6	2.9	10	9	8
CV (%)		13.4	1.8	7.4	3.9	2.2	1.0	3.7	4.9	10.0	2.7	3.8	2.8	6.5	8.3	1.8	15.3	13.8	12.4	10.1

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 the 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.