

Table 6. Least square means for yield and fiber quality traits in the 2025 RBTN at Suffolk, VA. Planted on 6 May 2025 and harvested on 6 November 2025.(Cooperator: Hunter Frame)

Genotype	Entry	Agronomic Data				HVI Data						Fibrogram Data						Quality Score			
		Lint Yield	Lint Percent	Boll Size	Seed index	Mic	UHML	UI	Str	Elo	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Uif	SFCf	QS1 <sup>1</sup>	QS2 <sup>1</sup>	QS3 <sup>1</sup>
		units: lb/acre	%	g	g		in	%	g/tex	%	%	in	in	in	in	in	%	%			
Ark 1704-53	1	1662	42.2	2.8	11.1	4.3	1.31	84.9	30.0	7.7	4.5	1.238	0.951	1.209	0.684	0.771	76.7	16.8	77	67	82
Ark 1706-45	2	1535	43.3	2.4	9.6	4.4	1.27	84.4	30.3	8.0	5.5	1.200	0.909	1.168	0.644	0.705	75.7	18.5	65	58	73
Ark 1704-26	3	1457	44.3	2.2	8.7	4.2	1.21	83.9	30.1	7.8	6.4	1.143	0.870	1.115	0.616	0.680	76.1	18.3	47	48	58
Ark 1720-52	4	1773	42.5	2.4	9.5	4.6	1.24	85.1	30.5	7.0	5.8	1.193	0.914	1.162	0.658	0.721	76.7	17.1	56	59	63
Ark 1706-34	5	1511	43.7	2.5	10.1	4.3	1.22	85.5	31.1	7.1	6.0	1.188	0.912	1.158	0.663	0.724	76.7	16.8	53	62	59
TAM 18J-13	6	865	35.2	3.0	11.8	4.1	1.35	85.5	34.9	6.4	3.8	1.303	1.017	1.265	0.763	0.853	78.2	14.1	86	77	90
TAM 19J-04	7	943	36.4	3.0	12.0	3.6	1.39	85.5	34.1	6.1	3.8	1.320	1.019	1.287	0.741	0.807	77.3	14.1	76	72	80
TAM 19O-09	8	1166	38.9	2.7	10.8	4.2	1.24	85.9	34.0	6.9	4.9	1.208	0.967	1.177	0.748	0.839	80.1	12.6	60	68	65
OA-25110	9	1664	42.0	2.5	10.1	4.3	1.28	85.1	32.6	6.1	4.7	1.228	0.952	1.195	0.703	0.779	77.5	15.3	66	64	72
OA-25111	10	1520	41.9	2.5	9.9	4.2	1.27	85.7	32.3	6.0	4.9	1.233	0.959	1.202	0.708	0.784	77.7	15.3	67	69	72
OA-25112	11	1281	41.2	2.3	9.1	4.3	1.25	85.6	32.4	6.3	5.0	1.215	0.960	1.182	0.729	0.821	78.9	14.1	63	67	68
OA-25113	12	1398	42.0	2.4	9.4	4.1	1.30	85.7	32.8	6.7	4.4	1.258	0.994	1.222	0.760	0.852	79.1	12.8	80	76	83
OA-25114	13	1581	44.2	2.1	8.5	4.5	1.23	85.3	31.6	7.2	5.5	1.193	0.937	1.160	0.708	0.803	78.4	15.2	58	63	64
Chee-1	14	1656	44.2	2.4	9.7	4.5	1.26	84.7	31.6	6.5	5.6	1.195	0.921	1.160	0.676	0.750	77.0	16.0	66	62	73
DP 393	15	1595	41.2	2.6	10.4	4.7	1.22	84.9	31.3	7.3	6.1	1.165	0.897	1.138	0.643	0.730	76.9	17.5	53	58	61
DP 493	16	1444	42.5	2.3	9.1	4.8	1.18	83.3	30.3	6.2	7.0	1.120	0.834	1.082	0.576	0.601	74.5	21.7	36	41	49
FM 958	17	1277	39.6	2.7	10.6	4.3	1.27	85.1	32.9	6.6	4.8	1.215	0.958	1.186	0.717	0.833	78.8	14.4	69	66	75
UA 222	18	1381	40.2	2.5	10.0	4.5	1.25	85.3	31.4	7.6	5.4	1.203	0.929	1.177	0.679	0.771	77.2	16.5	63	64	68
<b>Mean</b>		<b>1428</b>	<b>41.4</b>	<b>2.5</b>	<b>10.0</b>	<b>4.3</b>	<b>1.26</b>	<b>85.1</b>	<b>31.9</b>	<b>6.8</b>	<b>5.2</b>	<b>1.212</b>	<b>0.939</b>	<b>1.180</b>	<b>0.690</b>	<b>0.768</b>	<b>77.4</b>	<b>15.9</b>	<b>63</b>	<b>63</b>	<b>70</b>
<b>Entry (P&gt;F)</b>		<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>0.0016</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>0.0001</b>	<b>0.0001</b>	<b>0.0013</b>	<b>0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>
<b>R-square</b>		<b>0.6421</b>	<b>0.9</b>	<b>0.8</b>	<b>0.9</b>	<b>0.6</b>	<b>0.8134</b>	<b>0.5142</b>	<b>0.7047</b>	<b>0.8848</b>	<b>0.7793</b>	<b>0.7866</b>	<b>0.6886</b>	<b>0.7817</b>	<b>0.5963</b>	<b>0.5953</b>	<b>0.5351</b>	<b>0.5959</b>	<b>0.6774</b>	<b>0.6201</b>	<b>0.6807</b>
<b>Entry LSD (0.05)</b>		<b>258</b>	<b>1.1</b>	<b>0.1</b>	<b>0.6</b>	<b>0.9</b>	<b>0.03</b>	<b>0.9</b>	<b>1.4</b>	<b>0.3</b>	<b>0.6</b>	<b>0.036</b>	<b>0.046</b>	<b>0.036</b>	<b>0.061</b>	<b>0.079</b>	<b>1.8</b>	<b>2.7</b>	<b>12</b>	<b>10</b>	<b>10</b>
<b>CV (%)</b>		<b>15.3</b>	<b>2.2</b>	<b>4.9</b>	<b>4.7</b>	<b>5.5</b>	<b>2.30</b>	<b>0.9</b>	<b>3.7</b>	<b>4.0</b>	<b>10.3</b>	<b>2.5</b>	<b>4.1</b>	<b>2.6</b>	<b>7.4</b>	<b>8.7</b>	<b>2.0</b>	<b>14.4</b>	<b>15.5</b>	<b>12.7</b>	<b>11.8</b>

<sup>1</sup>QS1, 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)

<sup>2</sup>NS-Not significant at the 0.05 level of probability.