

Table 11. Least square means for yield and fiber quality traits in the 2025 RBTN at Keiser, AR. Planted on 3 June 2025 and harvested on 8 November 2025.(Cooperator: Fred Bourland)

Genotype	Agronomic Data					HVI Data						Fibrogram Data						Quality Score			
	entry	Lint Yield	Lint Percent	Boll Size	Seed index	Mic	UHML	UI	Str	Elo	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Ulf	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	963	39.8	5.2	12.8	4.7	1.33	85.5	33.2	6.2	<b>3.8</b>	1.288	0.968	1.260	0.673	0.701	75.1	18.2	68	61	74
Ark 1706-45	2	<b>1330</b>	<b>40.7</b>	5.1	11.9	4.8	1.31	<b>86.7</b>	32.0	<b>7.1</b>	<b>4.0</b>	1.288	1.008	1.263	0.752	<b>0.851</b>	<b>78.3</b>	<b>14.2</b>	62	67	67
Ark 1704-26	3	1113	<b>41.9</b>	5.3	11.4	<b>5.0</b>	1.25	85.6	33.3	6.5	5.3	1.220	0.928	1.188	0.666	0.719	76.2	18.4	39	51	48
Ark 1720-52	4	1037	<b>41.5</b>	5.5	11.6	<b>5.0</b>	1.29	<b>86.5</b>	33.5	6.3	<b>4.1</b>	1.265	0.996	1.240	0.744	<b>0.846</b>	<b>78.5</b>	<b>14.6</b>	52	61	57
Ark 1706-34	5	1045	<b>40.9</b>	5.7	12.2	4.8	1.30	<b>86.4</b>	33.2	6.3	<b>4.0</b>	1.285	1.007	1.250	0.763	<b>0.847</b>	<b>78.5</b>	<b>13.3</b>	61	65	66
TAM 18J-13	6	609	34.7	4.9	<b>14.1</b>	4.4	<b>1.42</b>	<b>87.2</b>	<b>39.2</b>	5.8	<b>3.7</b>	<b>1.408</b>	<b>1.105</b>	<b>1.378</b>	<b>0.832</b>	<b>0.901</b>	<b>78.3</b>	<b>12.7</b>	<b>96</b>	<b>90</b>	<b>100</b>
TAM 19J-04	7	510	33.8	5.0	<b>14.0</b>	4.1	<b>1.43</b>	86.1	35.3	5.2	<b>3.8</b>	<b>1.395</b>	<b>1.075</b>	<b>1.360</b>	<b>0.782</b>	<b>0.856</b>	76.9	<b>13.8</b>	<b>90</b>	76	<b>95</b>
TAM 19O-09	8	578	37.9	5.0	11.7	4.7	1.31	86.1	35.9	6.2	<b>4.0</b>	1.288	1.033	1.253	<b>0.796</b>	<b>0.902</b>	<b>80.1</b>	<b>11.7</b>	64	66	71
OA-25110	9	909	39.9	5.3	11.3	4.8	1.30	86.3	34.6	5.2	<b>4.1</b>	1.278	1.002	1.245	0.760	<b>0.849</b>	<b>78.5</b>	<b>13.5</b>	59	64	65
OA-25111	10	1002	<b>42.1</b>	4.6	10.1	4.7	1.29	<b>85.5</b>	35.0	5.2	<b>4.3</b>	1.253	0.969	1.225	0.702	0.777	77.3	15.2	57	58	66
OA-25112	11	995	40.1	5.2	10.1	4.6	1.30	85.1	35.8	5.3	<b>4.0</b>	1.253	0.979	1.225	0.727	<b>0.824</b>	<b>78.1</b>	<b>14.7</b>	59	57	70
OA-25113	12	813	<b>41.1</b>	4.2	10.8	4.7	1.33	85.9	34.5	5.4	3.9	1.303	1.010	1.265	0.752	<b>0.837</b>	<b>77.8</b>	<b>14.1</b>	69	65	75
OA-25114	13	989	<b>42.5</b>	5.1	10.2	<b>5.0</b>	1.30	86.1	34.2	6.3	<b>4.1</b>	1.275	1.008	1.243	<b>0.772</b>	<b>0.856</b>	<b>79.2</b>	<b>13.3</b>	54	61	61
GA2023279	14	887	<b>42.3</b>	4.8	10.6	4.9	1.32	85.9	34.6	5.5	<b>3.9</b>	1.285	0.996	1.253	0.735	0.811	<b>77.5</b>	15.3	60	62	67
DP 393	15	932	39.2	5.1	11.7	<b>5.1</b>	1.27	85.8	35.5	6.2	4.5	1.238	0.977	1.210	0.736	<b>0.838</b>	<b>78.9</b>	<b>14.2</b>	44	55	53
DP 493	16	839	<b>41.1</b>	5.1	10.3	<b>5.0</b>	1.26	85.4	34.5	5.5	5.0	1.225	0.951	1.188	0.707	0.785	<b>77.7</b>	16.0	41	51	51
FM 958	17	835	37.4	5.1	12.5	<b>4.9</b>	1.31	<b>86.4</b>	36.2	5.5	<b>3.8</b>	1.293	1.024	1.258	<b>0.785</b>	<b>0.884</b>	<b>79.2</b>	<b>12.9</b>	63	67	69
UA 222	18	718	38.3	5.3	13.1	<b>5.1</b>	1.29	86.1	33.8	<b>7.0</b>	<b>4.2</b>	1.268	1.001	1.230	0.758	<b>0.852</b>	<b>79.1</b>	<b>13.5</b>	48	58	55
<b>Mean</b>		<b>895</b>	<b>39.7</b>	<b>5.1</b>	<b>11.7</b>	<b>4.8</b>	<b>1.31</b>	<b>86.0</b>	<b>34.7</b>	<b>5.9</b>	<b>4.1</b>	<b>1.283</b>	<b>1.002</b>	<b>1.250</b>	<b>0.747</b>	<b>0.830</b>	<b>78.1</b>	<b>14.4</b>	<b>60</b>	<b>63</b>	<b>67</b>
<b>Entry (P&gt;F)</b>		<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>0.6073</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>0.0165</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>0.0052</b>	<b>0.0220</b>	<b>0.0206</b>	<b>0.0383</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>	<b>&lt;0.0001</b>
<b>R-square</b>		<b>0.7536</b>	<b>0.9300</b>	<b>0.2335</b>	<b>0.8681</b>	<b>0.8445</b>	<b>0.7956</b>	<b>0.4586</b>	<b>0.8465</b>	<b>0.9229</b>	<b>0.5898</b>	<b>0.8234</b>	<b>0.6410</b>	<b>0.8198</b>	<b>0.5076</b>	<b>0.4686</b>	<b>0.4526</b>	<b>0.4301</b>	<b>0.8397</b>	<b>0.7022</b>	<b>0.8688</b>
<b>Entry LSD (0.05)</b>		<b>160</b>	<b>0.9</b>	<b>NS<sup>2</sup></b>	<b>0.7</b>	<b>0.2</b>	<b>0.03</b>	<b>0.8</b>	<b>0.9</b>	<b>0.2</b>	<b>0.5</b>	<b>0.032</b>	<b>0.045</b>	<b>0.032</b>	<b>0.062</b>	<b>0.090</b>	<b>2.0</b>	<b>3.0</b>	<b>9</b>	<b>8</b>	<b>7</b>
<b>CV (%)</b>		<b>15.1</b>	<b>2.0</b>	<b>13.8</b>	<b>4.8</b>	<b>2.7</b>	<b>2.0</b>	<b>0.8</b>	<b>2.3</b>	<b>3.4</b>	<b>10.7</b>	<b>2.1</b>	<b>3.8</b>	<b>2.2</b>	<b>7.1</b>	<b>9.1</b>	<b>2.1</b>	<b>17.6</b>	<b>12.7</b>	<b>11.3</b>	<b>9.3</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.