

Table 10. Least square means for yield and fiber quality traits in the 2025 RBTN at Lubbock, Texas. Planted on 22 May 2025 and harvested on 17 November 2025.(Cooperator: Carol Kelly)

Genotype	Entry	Agronomic Data				HVI Data						Fibrogram Data						Quality Score			
		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	710	34.7	5.7	11.1	4.4	1.22	82.1	30.7	6.9	7.3	1.130	0.830	1.098	0.550	0.550	73.4	23.1	72	66	78
Ark 1706-45	2	<b>974</b>	<b>37.8</b>	<b>5.7</b>	10.4	4.7	1.21	82.0	30.7	<b>7.4</b>	7.8	1.120	0.818	1.085	0.535	0.536	72.8	24.4	68	63	75
Ark 1704-26	3	814	<b>38.0</b>	<b>5.4</b>	10.6	<b>5.0</b>	1.18	82.7	30.3	<b>7.1</b>	7.6	1.113	0.814	1.080	0.543	0.547	73.4	23.3	56	63	61
Ark 1720-52	4	<b>1028</b>	<b>39.4</b>	<b>5.9</b>	10.5	<b>5.0</b>	1.17	82.9	30.7	<b>6.7</b>	7.8	1.105	0.808	1.078	0.532	0.536	73.1	23.9	54	64	59
Ark 1706-34	5	768	<b>39.4</b>	5.3	10.9	4.6	1.20	82.3	30.2	<b>6.7</b>	8.0	1.110	0.798	1.078	0.511	0.490	71.9	26.1	66	64	72
TAM 18J-13	6	<b>889</b>	34.0	<b>5.8</b>	<b>12.6</b>	4.6	<b>1.32</b>	<b>84.2</b>	<b>37.7</b>	6.0	<b>4.1</b>	<b>1.245</b>	<b>0.931</b>	<b>1.213</b>	<b>0.635</b>	<b>0.672</b>	<b>74.7</b>	19.3	<b>97</b>	<b>95</b>	<b>99</b>
TAM 19J-04	7	689	32.6	<b>5.8</b>	<b>12.3</b>	4.2	<b>1.30</b>	82.7	34.0	5.4	<b>4.6</b>	1.210	0.884	1.178	0.584	0.595	73.0	21.5	<b>92</b>	78	<b>95</b>
TAM 19O-09	8	715	36.9	<b>5.4</b>	10.8	4.8	1.17	82.0	33.7	6.4	7.3	1.090	0.809	1.056	0.550	0.567	<b>74.2</b>	23.3	54	58	62
OA-25110	9	532	37.8	5.3	9.9	<b>4.9</b>	1.18	82.7	32.3	5.5	6.9	1.113	0.833	1.078	0.572	<b>0.601</b>	<b>74.9</b>	21.3	56	63	61
OA-25111	10	<b>1003</b>	37.2	4.8	9.4	4.7	1.16	82.0	32.4	6.0	7.8	1.080	0.792	1.045	0.534	0.536	73.3	24.3	53	57	62
OA-25112	11	<b>1000</b>	37.3	4.8	9.3	4.7	1.18	82.5	32.6	6.0	7.1	1.113	0.830	1.075	0.573	<b>0.610</b>	<b>74.6</b>	21.0	60	64	66
OA-25113	12	805	<b>38.9</b>	4.9	9.9	4.7	1.25	82.4	33.8	5.9	5.9	1.165	0.859	<b>1.128</b>	0.582	0.593	73.6	22.0	81	72	86
OA-25114	13	<b>917</b>	<b>39.5</b>	5.3	9.2	<b>5.0</b>	1.16	81.7	31.7	<b>7.2</b>	7.1	1.083	0.814	1.044	0.564	<b>0.611</b>	<b>75.2</b>	20.9	45	52	54
Chee-1	14	762	35.3	<b>5.4</b>	10.3	<b>4.9</b>	1.19	82.1	31.9	<b>6.9</b>	7.7	1.105	0.810	1.073	0.539	0.534	73.2	23.9	58	60	65
DP 393	15	<b>1039</b>	36.0	<b>5.4</b>	10.2	<b>5.0</b>	1.13	82.0	31.6	<b>6.8</b>	7.2	1.063	0.794	1.028	0.546	0.575	<b>74.8</b>	22.2	39	52	47
DP 493	16	801	37.6	4.6	9.1	<b>5.0</b>	1.11	80.9	31.6	6.0	8.2	1.023	0.751	0.991	0.493	0.516	73.4	25.0	31	41	43
FM 958	17	448	34.1	4.9	10.8	4.8	1.19	82.0	32.6	5.8	7.3	1.110	0.826	1.078	0.558	<b>0.603</b>	<b>74.3</b>	21.5	62	61	68
UA 222	18	701	36.4	5.2	9.8	<b>4.9</b>	1.15	81.8	31.3	<b>6.7</b>	8.0	1.070	0.780	1.038	0.514	0.512	72.9	25.3	47	53	56
<b>Mean</b>		<b>816</b>	<b>36.8</b>	<b>5.3</b>	<b>10.4</b>	<b>4.7</b>	<b>1.19</b>	<b>82.3</b>	<b>32.2</b>	<b>6.4</b>	<b>7.1</b>	<b>1.114</b>	<b>0.821</b>	<b>1.080</b>	<b>0.551</b>	<b>0.560</b>	<b>73.7</b>	<b>22.9</b>	<b>60</b>	<b>62</b>	<b>67</b>
Entry (P>F)		0.0012	<0.0001	0.0004	<0.0001	<0.0001	<0.0001	0.0035	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.0431	0.0043	0.1	<0.0001	<0.0001	<0.0001
R-square		0.6393	0.7163	0.5396	0.8189	0.8	0.8666	0.4792	0.8665	0.9490	0.8434	0.810	0.6829	0.8067	0.5001	0.3866	0.4655	0.4	0.8412	0.7346	0.8599
Entry LSD (0.05)		191	1.7	0.5	0.6	0.1	0.03	1.0	1.0	0.2	0.8	0.034	0.038	0.085	0.045	0.078	1.3	NS <sup>2</sup>	10	10	8
CV (%)		19.6	4.0	8.2	5.1	2.4	2.1	1.0	2.5	2.6	9.2	2.6	3.9	2.7	6.9	11.7	1.5	11.6	14.4	13.0	10.5

<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.