

Table 3. Least square means for yield and fiber quality traits in the 2025 RBTN at Maricopa, AZ. Planted on 24 April 2025 and harvested on 1 December 2025.(Cooperator: Randy Norton)

Agronomic Data					HVI Data						Fibrogram Data						Quality Score			
Genotype	Entry	Lint Yield	Lint Percent	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		in	%	g/tex	%	%	in	in	in	in	in	%	%			
Ark 1704-53	1	2954	39.2	11.9	4.3	1.27	83.7	31.1	<b>6.1</b>	6.5	1.167	0.841	1.143	0.534	0.500	72.0	25.0	76	71	80
Ark 1706-45	2	<b>3160</b>	41.6	10.8	4.7	1.23	82.7	31.5	<b>6.5</b>	7.4	1.128	0.819	1.094	0.532	0.526	72.6	25.0	61	58	69
Ark 1704-26	3	<b>3270</b>	41.4	10.4	4.8	1.18	82.8	31.0	<b>6.3</b>	8.2	1.089	0.789	1.056	0.516	0.512	72.4	26.2	43	52	52
Ark 1720-52	4	3024	40.7	10.2	4.9	1.21	84.2	31.7	<b>6.3</b>	7.4	1.136	0.832	1.106	0.559	0.545	73.3	24.4	54	65	58
Ark 1706-34	5	2662	42.1	11.3	4.7	1.22	83.7	31.7	<b>6.2</b>	7.1	1.142	0.845	1.111	0.570	0.591	73.9	22.1	60	65	65
TAM 18J-13	6	2646	37.9	12.6	4.5	<b>1.33</b>	<b>85.4</b>	<b>37.8</b>	5.6	<b>4.6</b>	<b>1.257</b>	<b>0.927</b>	<b>1.226</b>	<b>0.631</b>	0.612	73.7	<b>20.8</b>	<b>93</b>	<b>93</b>	<b>93</b>
TAM 19J-04	7	1971	34.1	<b>13.2</b>	3.9	<b>1.36</b>	83.4	35.7	4.9	<b>3.9</b>	<b>1.245</b>	<b>0.891</b>	<b>1.211</b>	<b>0.574</b>	0.531	71.6	24.1	<b>90</b>	77	<b>96</b>
TAM 19O-09	8	2642	39.2	11.0	4.6	1.22	83.5	34.9	5.7	6.5	1.146	0.856	1.110	<b>0.594</b>	0.620	74.6	<b>21.8</b>	64	67	72
OA-25110	9	2929	41.4	10.6	5.0	1.20	83.3	31.8	5.3	7.9	1.112	0.806	1.080	0.526	0.520	72.4	25.1	48	57	55
OA-25111	10	<b>3191</b>	41.8	9.8	4.7	1.21	81.7	32.1	5.2	7.9	1.100	0.801	1.065	0.524	0.520	72.8	24.9	53	49	64
OA-25112	11	3065	42.9	10.0	4.6	1.19	82.7	31.8	5.7	8.7	1.086	0.778	1.059	0.491	0.478	71.5	28.1	49	53	58
OA-25113	12	2856	41.1	10.8	4.6	1.27	83.3	33.5	5.6	5.7	1.184	<b>0.878</b>	1.144	0.607	0.629	74.2	<b>20.5</b>	74	68	80
OA-25114	13	<b>3237</b>	43.4	9.4	4.9	1.22	83.1	32.5	<b>6.3</b>	6.7	1.132	0.847	1.096	<b>0.590</b>	0.626	74.8	<b>21.0</b>	54	58	61
Chee-1	14	2801	38.9	10.9	4.7	1.23	84.0	33.9	<b>6.0</b>	7.2	1.151	0.844	1.124	0.557	0.543	73.3	<b>23.2</b>	65	69	69
DP 393	15	2875	38.1	11.2	4.8	1.21	83.2	33.4	<b>6.1</b>	7.1	1.129	0.836	1.098	0.565	0.577	74.0	<b>22.2</b>	57	61	64
DP 493	16	2972	40.9	9.4	4.9	1.17	82.7	32.2	5.3	8.4	1.075	0.775	1.046	0.496	0.476	72.0	27.6	38	49	48
FM 958	17	2694	37.4	11.2	4.7	1.25	83.4	33.2	5.3	6.5	1.167	0.859	1.130	0.583	0.593	73.6	<b>21.2</b>	68	66	74
UA 222	18	3075	40.4	10.7	4.8	1.21	82.8	32.3	<b>6.1</b>	7.7	1.110	0.809	1.079	0.531	0.521	72.8	24.8	53	55	61
<b>Mean</b>		<b>2890</b>	<b>40.1</b>	<b>10.8</b>	<b>4.7</b>	<b>1.23</b>	<b>83.3</b>	<b>32.9</b>	<b>5.8</b>	<b>7.0</b>	<b>1.142</b>	<b>0.835</b>	<b>1.110</b>	<b>0.554</b>	<b>0.551</b>	<b>73.1</b>	<b>23.8</b>	<b>62</b>	<b>63</b>	<b>69</b>
Entry (P>F)		<0.0001	NA	<0.0001	<0.0001	<0.0001	0.0023	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	0.0112	0.1412	0.1643	0.0399	<0.0001	<0.0001	<0.0001
R-square		0.9178	NA	0.8513	0.7957	0.7382	0.4849	0.7007	0.7704	0.6692	0.7044	0.5442	0.7002	0.4480	0.3503	0.3650	0.3991	0.7748	0.6753	0.7856
Entry LSD (0.05)		126	NA	0.6	0.2	0.04	1.1	1.6	0.4	1.2	0.044	0.051	0.044	0.060	NS <sup>2</sup>	NS <sup>2</sup>	4.0	16	15	13
CV (%)		3.7	NA	4.5	3.2	2.9	1.1	4.2	5.3	14.8	13.3	5.1	3.4	9.2	15.1	2.3	14.1	15.2	13.9	11.7

<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(0.5), 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.