

Table 8. Least square means for yield components<sup>1</sup>, oil and protein content, and fiber quality traits in the 2022 RBTN at Lubbock, Texas (Cooperator: Jane Dever).

Entry	Lint Yield	Gin Turnout	Lint Index	Boll Size	Seed per Boll	Seed Index	Seed Oil <sup>2</sup>	Seed Protein <sup>2</sup>	MIC	UHM	UI	STRN	ELO	SFC	QS1 <sup>3</sup>	QS2 <sup>3</sup>	QS3 <sup>3</sup>
	lb/A	%	grams	grams	#	grams	%	%	mic	inch	%	g/tex	%	%			
UA 222 CK	<b>1516</b>	32.44	9.04	6.79	24.38	10.95	—	—	<b>5.43</b>	1.166	83.75	31.88	<b>6.98</b>	7.20	48.50	61.50	53.50
MS 2010-96-8	<b>1398</b>	30.51	7.77	<b>7.39</b>	<b>29.02</b>	10.55	—	—	<b>5.15</b>	<b>1.195</b>	83.20	33.40	<b>6.43</b>	6.83	<b>57.00</b>	61.25	<b>63.25</b>
Ark 1406-21	<b>1395</b>	<b>34.56</b>	8.89	6.18	23.99	9.05	—	—	4.93	<b>1.198</b>	82.98	<b>34.38</b>	<b>6.63</b>	7.40	<b>63.25</b>	<b>62.75</b>	<b>70.50</b>
AU72028	<b>1347</b>	30.98	8.04	6.55	25.26	10.10	—	—	<b>5.24</b>	1.171	83.08	33.00	<b>6.53</b>	7.20	50.75	57.50	57.25
OA-22-3	<b>1307</b>	<b>34.50</b>	<b>10.82</b>	5.89	18.79	8.88	—	—	<b>5.32</b>	1.192	83.15	<b>33.98</b>	<b>6.53</b>	7.40	<b>55.75</b>	60.75	<b>62.50</b>
MS 2010-87-42	<b>1306</b>	32.78	8.61	6.90	26.28	10.08	—	—	<b>5.37</b>	1.158	83.33	32.73	<b>6.68</b>	6.83	46.00	57.25	52.25
CSX5432	1287	33.11	<b>11.05</b>	5.90	17.67	9.58	—	—	<b>5.21</b>	1.194	82.90	33.48	6.25	7.65	<b>57.25</b>	59.50	<b>64.25</b>
TAM 17 WSH-12	1285	32.38	10.22	6.89	21.81	9.98	—	—	<b>5.17</b>	1.160	82.58	30.78	<b>6.85</b>	7.73	48.50	52.75	56.75
Ark 1410-56	1272	30.07	7.82	6.92	26.63	10.98	—	—	5.02	<b>1.211</b>	83.63	<b>34.60</b>	6.33	6.95	<b>67.50</b>	<b>69.50</b>	<b>72.50</b>
DP 393 CK	1271	32.71	8.90	<b>7.18</b>	26.37	10.45	—	—	<b>5.41</b>	1.158	83.23	<b>34.00</b>	<b>6.88</b>	7.13	45.25	58.00	52.75
OA-22-2	1252	<b>34.64</b>	9.84	5.59	19.74	8.35	—	—	<b>5.19</b>	1.184	83.00	<b>35.20</b>	6.08	7.15	<b>55.50</b>	60.75	<b>63.50</b>
TAM 17 WSG-51	1236	28.78	7.91	7.04	25.59	<b>11.83</b>	—	—	4.94	<b>1.267</b>	83.63	<b>33.90</b>	<b>6.73</b>	5.88	<b>77.50</b>	<b>72.50</b>	<b>81.00</b>
MS 2010-28-27	1234	31.44	8.36	6.26	23.51	9.88	—	—	<b>5.41</b>	1.155	82.43	<b>34.48</b>	<b>6.70</b>	7.68	42.00	50.50	51.50
Ark 1414-28	1232	31.65	8.37	6.61	25.22	10.50	—	—	5.13	1.184	83.60	<b>34.03</b>	<b>6.48</b>	6.90	<b>58.00</b>	<b>64.50</b>	<b>62.75</b>
DP 493 CK	1212	<b>33.94</b>	9.38	6.18	22.39	9.35	—	—	<b>5.52</b>	1.138	82.28	31.53	6.03	8.08	34.50	46.00	44.25
MS2010-87-44	1211	30.82	8.18	6.59	24.79	9.80	—	—	<b>5.14</b>	<b>1.208</b>	83.80	33.68	<b>6.60</b>	6.33	<b>60.50</b>	<b>67.25</b>	<b>65.25</b>
AU90098	1203	31.43	8.91	6.68	23.71	9.90	—	—	<b>5.15</b>	1.164	83.15	33.05	6.15	7.18	50.25	58.00	57.25
MS 2010-87-37	1193	31.51	8.82	6.68	23.87	9.60	—	—	<b>5.33</b>	1.150	82.63	33.05	5.93	7.80	41.75	51.00	50.75
TAM 18 SHA-27	1175	29.95	8.41	6.94	24.70	11.50	—	—	4.88	<b>1.212</b>	83.13	33.35	<b>6.83</b>	6.78	<b>68.00</b>	<b>65.00</b>	<b>73.50</b>
TAM 17 SHK-43	1158	31.90	8.80	<b>7.13</b>	25.85	10.65	—	—	4.95	<b>1.241</b>	83.13	<b>34.13</b>	<b>6.65</b>	6.53	<b>71.50</b>	<b>67.00</b>	<b>77.25</b>
Ark 1410-32	1143	29.98	7.79	6.66	25.67	10.68	—	—	5.02	1.152	82.88	31.85	6.28	7.35	48.50	55.00	56.00
FM 958 CK	1140	29.37	8.13	6.43	23.39	10.55	—	—	<b>5.18</b>	1.167	82.60	33.60	6.10	7.13	49.25	54.00	57.50
Ark 1414-43	1139	31.45	7.35	5.67	24.33	9.75	—	—	<b>5.27</b>	<b>1.198</b>	83.80	<b>34.50</b>	6.35	6.73	<b>60.50</b>	<b>67.00</b>	<b>64.75</b>
OA-22-1	1070	32.43	8.35	6.24	24.25	9.30	—	—	5.00	1.164	82.93	32.78	5.98	7.50	52.00	57.25	59.50
Ark 1414-47	1045	29.69	6.99	6.28	26.67	10.05	—	—	5.02	<b>1.241</b>	84.23	<b>35.58</b>	6.38	6.15	<b>71.75</b>	<b>76.00</b>	<b>75.25</b>
MS 2010-66-16	1038	33.36	9.40	6.94	24.66	9.75	—	—	<b>5.29</b>	1.132	83.05	32.83	6.08	7.68	39.50	53.25	47.50
TAM 17 WSE-68	964	26.80	7.39	6.95	25.24	<b>11.68</b>	—	—	5.00	<b>1.217</b>	82.98	<b>33.85</b>	<b>6.50</b>	6.58	<b>64.75</b>	<b>62.75</b>	<b>70.75</b>
TAM 17 WSE-66	942	27.15	6.81	<b>7.27</b>	<b>28.99</b>	11.10	—	—	4.92	<b>1.243</b>	83.30	<b>35.65</b>	6.23	6.15	<b>73.25</b>	<b>70.25</b>	<b>79.25</b>
<b>Mean</b>	1213	31.44	8.58	6.60	24.38	10.17	—	—	5.16	1.186	83.15	33.54	6.43	7.07	55.67	60.67	62.25
<b>LSD (.05)</b>	228	0.83	0.52	0.30	1.84	0.27	—	—	0.39	0.073	ns	1.95	0.59	ns	23.17	14.18	20.67
<b>Entry (P&gt;F)</b>	0.0007	<.0001	<.0001	<.0001	<.0001	<.0001	—	—	0.0383	0.0288	0.0692	0.0002	0.0097	0.2549	0.0206	0.0095	0.0220
<b>CV(%)</b>	13.34	1.87	4.29	3.21	5.36	1.90	—	—	5.30	4.39	0.88	4.13	6.54	14.17	29.58	16.62	23.60
<b>R-Square</b>	0.59	0.94	0.91	0.90	0.86	0.96	—	—	0.36	0.37	0.37	0.48	0.40	0.31	0.38	0.42	0.38
<b>Reps</b>	4	4	4	4	4	4	—	—	4	4	4	4	4	4	4	4	4

Values in bold not significantly different from highest value according to LSD(0.05).

<sup>1</sup> Yield components (lint yield, gin turnout, boll size) based upon burr cotton samples.

<sup>2</sup> PENDING - Percent oil and protein (by weight) determined by low-field <sup>1</sup>H time-domain nuclear magnetic resonance (TD-NMR) methodology (Horn, et al, 2011, J Am Oil Chem Soc, 88: 1521-1529).

<sup>3</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 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).