Table 2. Least square means for yield and fiber quality traits over 9 locations in the 2025 RBTN.

	Agronomic Data			HVI Data						Fibrogram Data[2]							Quality Score		
Genotype	Entry	Lint Yield	Lint Percent	Mic	UHML	UI	Str	Elo	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Ulf	SFCf	QS1[1]	QS2[1]	QS3[1]
	units:	lb/acre	%		in	%	g/tex	%	%	in	in	in	in	in	%	%			
Ark 1704-53	1	1451	40.4	4.5	1.27	84.6	31.2	6.7	5.2	1.213	0.913	1.183	0.636	0.676	75.2	18.9	69	65	75
Ark 1706-45	2	**1513**	41.6	4.7	1.24	84.2	31.3	**7.1**	6.0	1.181	0.895	1.149	0.632	0.683	75.7	19.6	58	58	66
Ark 1704-26	3	**1565**	42.1	4.9	1.20	84.0	31.2	**6.9**	6.6	1.140	0.859	1.108	0.603	0.641	75.3	20.5	46	54	54
Ark 1720-52	4	**1544**	41.9	4.9	1.22	84.8	31.5	6.5	6.1	1.171	0.891	1.142	0.635	0.683	76.0	19.3	52	60	58
Ark 1706-34	5	1320	42.1	4.7	1.22	84.8	31.6	6.6	6.1	1.178	0.899	1.148	0.643	0.697	76.2	18.5	61	65	67
TAM 18J-13	6	1166	35.6	4.4	**1.34**	**86.1**	**37.4**	5.9	**3.9**	**1.312**	**1.022**	**1.279**	**0.761**	**0.830**	**77.8**	**14.4**	**94**	**89**	**96**
TAM 19J-04	7	1031	35.1	4.1	**1.36**	84.9	34.5	5.3	**3.9**	**1.298**	0.977	**1.265**	0.684	0.722	75.2	17.6	**88**	78	**92**
TAM 19O-09	8	1181	38.5	4.6	1.24	84.7	34.8	6.2	5.4	1.192	0.930	1.159	0.689	0.766	**77.9**	**16.0**	62	65	68
OA-25110	9	1434	41.4	4.8	1.23	84.3	32.6	5.5	6.0	1.172	0.892	1.140	0.635	0.683	76.0	18.7	55	58	63
OA-25111	10	**1555**	41.5	4.6	1.23	84.2	32.9	5.5	6.0	1.174	0.894	1.142	0.635	0.690	76.0	18.6	62	62	69
OA-25112	11	1362	40.9	4.6	1.23	84.3	33.6	5.7	5.9	1.176	0.900	1.145	0.647	0.709	76.4	18.1	61	62	68
OA-25113	12	1411	41.7	4.6	1.27	84.6	33.4	5.8	5.0	1.222	0.940	1.186	0.687	0.756	**77.0**	**16.4**	70	67	75
OA-25114	13	**1489**	**43.3**	**5.0**	1.22	84.5	32.2	6.7	5.8	1.168	0.905	1.135	0.665	0.743	**77.4**	16.9	54	60	60
DP 393	15	1441	39.1	4.9	1.22	84.4	33.0	6.6	6.0	1.163	0.895	1.132	0.649	0.718	**76.9**	17.7	51	57	58
DP 493	16	1360	41.0	**5.1**	1.16	83.3	31.9	5.7	7.0	1.101	0.826	1.068	0.574	0.610	74.9	21.8	35	45	47
FM 958	17	1258	38.5	4.9	1.23	84.3	33.4	5.7	5.7	1.178	0.902	1.146	0.648	0.715	76.4	18.1	60	61	67
UA 222	18	1404	39.6	4.8	1.23	84.6	32.2	6.8	6.0	1.172	0.898	1.140	0.645	0.709	76.5	18.3	58	62	64
Mean		**1368**	**40.2**	**4.7**	**1.26**	**84.5**	**32.8**	**6.2**	**5.7**	**1.202**	**0.921**	**1.170**	**0.663**	**0.718**	**76.2**	**18.3**	**61**	**63**	**68**
Entry (P>F)		**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**
Location (P>F)		**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**<0.0001**	**0.0533**	**0.8203**	**0.0136**
EntryxLoc. (P>F)		**<0.0001**	**<0.0001**	**0.0566**	**0.0011**	**0.0005**	**0.0054**	**<0.0001**	**<0.0001**	**0.0025**	**0.0090**	**0.0027**	**0.0128**	**0.0341**	**0.0443**	**0.0664**	**<0.0001**	**<0.0001**	**<0.0001**
R-square		**0.9470**	**0.9227**	**0.7848**	**0.8317**	**0.7064**	**0.7310**	**0.0001**	**0.7931**	**0.8412**	**0.7892**	**0.8414**	**0.7263**	**0.6878**	**0.6489**	**0.6466**	**0.6930**	**0.5070**	**0.7277**
Entry LSD (0.05)		**76**	**0.7**	**0.1**	**0.02**	**0.5**	**0.7**	**0.2**	**0.7**	**0.029**	**0.033**	**0.029**	**0.041**	**0.059**	**1.2**	**2.1**	**6**	**6**	**5**
CV (%)		**12.6**	**2.7**	**0.4**	**2.3**	**1.0**	**3.4**	**4.2**	**12.1**	**2.8**	**4.3**	**2.9**	**7.5**	**10.4**	**2.0**	**15.0**	**16.5**	**14.4**	**12.2**

[1]QS1, QS2,and QS3 (Quality Score)-a measurement very similar to a selection index, adds the weighted values of selected fiber traits (lenth, 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)

[2]Fibrogram data averages do not include the Missouri Location.