

Table 6. Least square means for yield and fiber quality traits in the 2023 RBTN at Suffolk, VA. Planted on 15 May 2023 and harvested on 3 November 2023. (Cooperator: W.H. Frame)

Genotype	HVI data							Fibrogram Data								QS1 ¹	QS2 ¹	QS3 ¹
	LINT	LINT	MIC	UHM	UI	STR	ELO	Short Fiber Index	UHMLf	MLf	UQLf	LHMLf	LQLf	Uif	SFCf			
	YEILD	PERCENT																
units	lb/acre	%	units	in	%	g/tex	%	%	in	in	in	in	in	%	%			
Ark 1519-16	2161	45.4	4.4	1.27	86.0	32.1	8.4	4.78	1.229	0.972	1.199	0.731	0.834	79.05	13.72	66.25	68.75	72.75
Ark 1514-34	2027	44.9	4.7	1.23	86.0	31.2	7.8	5.38	1.196	0.949	1.163	0.728	0.822	79.26	14.09	52.75	65.50	60.50
17020-22-9-9	2020	46.7	4.4	1.23	86.2	34.3	6.9	5.33	1.199	0.940	1.169	0.703	0.798	78.38	15.55	56.50	69.25	64.50
GA 2017132	1923	45.4	4.6	1.23	86.3	34.9	6.9	5.00	1.201	0.961	1.170	0.743	0.849	80.03	12.84	73.50	70.25	81.00
Ark 1512-32	1899	46.9	4.7	1.23	85.9	31.5	7.7	5.25	1.199	0.945	1.168	0.713	0.803	78.77	14.26	52.50	64.75	60.25
OA-23105	1895	48.2	4.5	1.25	85.9	35.7	6.1	5.25	1.209	0.939	1.179	0.698	0.761	77.66	14.57	55.00	69.75	62.50
GA 2017126	1880	44.6	4.6	1.24	86.5	34.0	7.1	4.93	1.218	0.969	1.189	0.737	0.846	79.56	13.40	48.25	60.25	59.25
Ark 1510-28	1873	43.7	4.7	1.29	87.2	34.1	6.6	4.30	1.268	1.006	1.239	0.768	0.861	79.29	12.97	71.00	76.75	74.00
OA-23104	1845	47.9	4.5	1.29	86.2	36.7	6.3	4.35	1.254	0.994	1.222	0.758	0.862	79.18	13.55	60.50	71.00	66.25
UA 222 CK	1801	44.5	4.7	1.27	86.9	31.6	9.0	4.53	1.244	0.992	1.217	0.757	0.852	79.70	12.70	67.75	73.75	71.50
GA 2018139	1796	44.8	4.8	1.25	86.1	33.9	7.3	5.00	1.213	0.959	1.189	0.714	0.823	79.00	14.75	61.50	69.75	68.25
OA-23106	1780	45.6	4.5	1.28	87.1	33.8	6.2	4.23	1.261	1.015	1.232	0.788	0.894	80.41	11.83	58.75	68.25	66.00
Ark 1510-31	1745	45.5	5.2	1.26	86.4	33.2	7.3	4.83	1.231	0.962	1.203	0.716	0.808	78.17	15.26	51.25	64.75	57.00
GA 2017024	1733	45.1	4.6	1.26	86.2	34.4	6.4	4.98	1.225	0.966	1.193	0.737	0.814	78.84	13.50	48.25	63.00	57.25
PD 2017030	1676	42.2	4.5	1.27	87.1	35.4	6.5	4.50	1.252	1.012	1.220	0.796	0.905	80.81	12.60	75.00	77.75	82.75
DP 393 CK	1672	44.0	4.9	1.23	85.7	33.1	7.3	5.43	1.195	0.932	1.164	0.702	0.772	77.97	15.16	69.50	78.25	73.75
PD 20150002	1601	41.6	4.4	1.31	86.4	34.6	6.7	4.03	1.276	1.014	1.242	0.778	0.860	79.42	11.76	59.75	70.25	69.25
FM 958 CK	1569	42.7	4.5	1.31	85.8	34.6	6.9	4.53	1.262	0.993	1.226	0.752	0.838	78.61	13.35	75.50	74.00	80.75
DP 493 CK	1474	45.4	4.7	1.22	85.1	33.6	6.3	5.93	1.177	0.905	1.148	0.655	0.719	76.94	16.53	80.25	75.25	85.50
PD 20150030	1379	37.6	4.6	1.31	86.4	34.9	6.0	4.10	1.276	1.028	1.242	0.805	0.898	80.57	10.66	74.25	76.50	77.00
Mean	1787	44.6	4.6	1.26	86.3	33.9	7.0	4.83	1.229	0.973	1.199	0.739	0.831	79.08	13.65	62.90	70.39	69.50
Entry (P>F)	0.0016	<0.0001	<0.0001	<0.0001	0.0592	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	0.0081	0.0059	0.0583	0.0265	<0.0001	0.0005	<0.0001
R-square	0.50	0.87	0.75	0.67	0.35	0.73	0.90	0.58	0.61	0.37	0.60	0.40	0.28	0.20	0.18	0.66	0.51	0.69
Entry LSD (0.05)	326	1.5	0.2	0.04	NS²	1.5	0.5	0.75	0.042	0.051	0.041	0.071	0.086	NS	2.89	12.75	8.25	10.75
CV (%)	10.6	5.3	4.1	2.4	0.6	4.2	11.4	10.5	2.5	3.4	2.5	5.1	5.6	1.2	10.4	15.9	7.3	12.7

¹QS1, 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).

²NS- Not significant at the 0.05 level of probability.