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Virginia Dark-Fired Tobacco Variety Information for 1993

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Information is provided for widely grown varieties in Tables 1-4 of this publication. Seed of Lizard Tail Orinoco, VA 309, VA 312, Shirey, and Brownleaf, JH should be commercially available for 1993. Careful consideration should be given to the choice of a variety to meet specific production objectives. Varieties differ in disease reaction, chemical composition, response to nutrient levels in the soil, and many other factors. Average performance of 5 varieties included in the 1992 Virginia Dark-fired Variety Tests are shown in Table 1. These tests were conducted in Charlotte (K. Mason and R. Walker farms) and Nottoway (Southern Piedmont Agricultural Experiment Station) counties under the joint supervision of Extension Agents in the respective counties and Virginia Polytechnic Institute and State University Research and Extension personnel. Testing in various locations in the production area make it possible to evaluate varietal performance under the widely ranging soil and climatic conditions existing in Virginia. Such a testing program provides an opportunity for producers to observe dark-fired tobacco varieties under field conditions in their particular region. Remember that the data in Table 1 are for only one year and the results may not be indicative of what might be obtained in other years. Where available, averages that include 1988 to 1992 data are also presented in Table 2.

Certain agronomic and disease information are given in Table 3. Since disease infestations on a farm can seriously limit variety selection, producers should attempt to keep their fields free of these problems. Black shank, a disease caused by the soilborne fungus *Phytophthora parasitica* and black root rot, a disease caused by the soilborne fungus *Thielaviopsis basicola*, have continued to cause yield reductions in many seasons. For land where black shank and/or black root rot is a problem, VA 309 is suggested. VA 312 is also suggested for land where black root rot is a problem. Varietal resistance alone can not prevent losses to diseases. Any variety can suffer damage when disease-causing organisms are present and when weather conditions favor diseases. Crop rotation should be practiced in every field, no matter what variety is grown. Combining varietal resistance with crop rotation, early root and stalk destruction, and proper use of chemicals is the only way to achieve consistent, cost-effective disease and nematode control.

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Table 1. Virginia Dark-fired Tobacco Variety Test Results: Yield, Value, Price, Grade Index, 1992.¹

Variety	State Average			Ag. Exp. Station			K. Mason Farm			R. Walker Farm			
	Yield lbs/A	Value \$/A	Price \$/cwt	Yield lbs/A	Value \$/A	Price \$/cwt	Yield lbs/A	Value \$/A	Price \$/cwt	Yield lbs/A	Value \$/A	Price \$/cwt	
Brownleaf, JH	1742	3326	190	2004	3490	174	1326	2413	182	71	1896	4074	215
Liz Tail Tur Ft	1908	3593	188	1985	3408	171	1752	3105	177	57	1986	4267	215
Shirey	1651	2977	180	1893	3288	173	1260	2297	182	73	1800	3345	186
VA 309	1601	2796	175	1874	3284	175	1374	2473	180	59	1554	2631	169
VA 312	1664	2914	175	1961	3345	171	1314	2317	176	64	1716	3079	179

¹Tests were conducted in Nottoway (So. Pied. Ag. Exp. Sta.) and Charlotte (K. Mason and R. Walker Farms) counties in 1992.

²GI=Grade Index; Grade index is a numerical quality rating based on government grade. High ratings are best.

Table 2. Virginia Dark-fired Tobacco Variety Test Results by Years, Southern Piedmont Ag. Exp. Sta., Blackstone, VA.¹

Variety	Yield, lbs/A			Value, \$/A			Price, \$/cwt										
	1988	1989	1990	1991	1992	Avg.	1988	1989	1990	1991	1992						
Brownleaf, JH	2289	2383	1983	2144	2004	2161	3895	3649	3312	3654	3490	3600	170	153	167	170	174
Daniels Special	2056	2296	2025	2071	2010	2092	3240	3447	3378	3362	3567	3399	158	150	167	161	177
Liz Tail Orinoco	2065	2203	2226	2171	2059	2145	3087	3256	3717	3364	3543	3393	149	148	167	155	172
Liz Tail Tur Ft	2626	2709	2299	2569	1985	2438	4464	4303	3869	4630	3408	4135	170	159	168	179	171
Sears Special	2167	2214	2067	2188	1984	2124	3501	3283	3504	3408	3366	3412	162	148	170	155	170
Shirey	2275	2228	2167	2412	1893	2195	3835	3736	3916	4184	3288	3792	169	168	180	170	173
Silky Pride	2064	2315	2038	2070	1841	2066	3219	3430	3316	3346	3131	3288	155	149	163	162	169
VA 309	2293	2326	2388	2402	1874	2257	3900	3520	4357	3898	3284	3792	170	152	182	163	175
VA 310	2135	2484	2352	2224	1916	2222	3378	3724	4143	3533	3187	3593	158	150	177	158	166
VA 312	2167	---	2375	2325	1961	2207	3220	---	4183	4074	3345	3706	149	---	176	175	171
VA 331	2226	2319	2052	1965	1781	2069	3537	3670	3364	3079	2979	3326	159	158	164	156	167
Walkers Broadleaf	2053	2284	2129	2197	1853	2103	2979	3150	3613	3382	3218	3268	145	136	170	154	173

¹Averages are not directly comparable unless the number of years is equivalent.

Table 3. Agronomic and Disease Information for Dark-fired Tobacco Varieties Tested in Virginia, 1992.¹

Variety	Days to Flower	Plant Height (in)	Leaf no.	Ground Suckers /Plot ²	Length (L) and Width (W)		Top Leaf		Disease Reaction ³			
					Mid Leaf L	Mid Leaf W	L	W	BS	RK	TMV	BRR
Brownleaf, JH	60	25.6	12.6	2.3	31.4	13.8	30.8	11.8	S	S	S	L
Daniels Special	50	24.0	12.6	1.3	29.3	13.3	29.5	12.5	S	S	S	L
Liz Tail Orinoco	60	24.3	12.9	0.3	28.7	13.3	27.1	11.8	S	S	S	S
Liz Tail Turt Ft	53	24.7	12.9	0.3	30.4	13.0	30.0	11.6	S	S	S	S
Sears Special	60	24.4	13.1	4.0	29.3	13.4	27.2	13.0	S	-	S	M
Shirey	60	25.6	12.7	1.7	29.1	12.6	28.4	11.3	S	-	S	L
Silky Pride	53	24.9	13.8	0.7	26.1	10.8	27.6	11.2	S	S	S	S
VA 309	60	24.8	13.3	2.7	27.4	12.8	26.4	11.9	M	S	S	M
VA 310	60	21.8	12.8	0.7	27.7	12.9	26.6	12.2	M	-	S	L
VA 312	60	23.9	12.7	0	31.3	13.7	30.9	12.5	S	S	R	H
VA 331	50	24.1	12.5	1.0	28.9	13.2	28.5	11.5	M	-	S	L
Walkers Broadleaf	53	24.4	12.9	0	29.7	12.7	29.3	11.7	S	-	S	L

¹Agronomic measures were made at the Southern Piedmont Agricultural Experiment Station.

²Ground suckers/18 plant plot.

³Disease reaction: BS = Black Shank; RK = Root Knot; TMV = Tobacco Mosaic Virus; BRR = Black Root Rot; H = high resistance; M = moderate; L = low; R = resistant; S = susceptible.

Table 4. Percentage distribution of grade factors of the Virginia Dark-Fired Tobacco Variety Test, 1992.¹

Variety	Group (%)			Color (%) ³			
	X	C	B	L	F	M	G
Brownleaf, JH	6	58	36	9	84	3	4
Liz Tail Tur Ft	5	59	36	33	56	7	4
Shirey	9	48	43	4	87	9	0
VA 309	22	48	30	18	60	20	2
VA 312	7	84	9	23	54	23	0

¹Values are averages of tests conducted at 3 locations.

²X = lugs; C = thin leaf; B = heavy leaf.

³L = light brown; F = medium brown; M = mixed or variegated; G = green.

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