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Virginia Dark-Fired Tobacco Variety Information for 1994

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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 1994. Average performance of 5 varieties included in the 1993 Virginia Dark-fired Variety Tests are shown in Table 1. These tests were conducted in Charlotte (K. Mason farm), Brunswick (T. Hawthorne farm), and Nottoway (Southern Piedmont Agricultural Research and Extension Center) 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. 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 1989 to 1993 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. However, the use of resistant varieties alone can not prevent losses due to disease infestations. 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. Varietal resistance should be used with crop rotation with nonhost plants, early root destruction, and the proper use of labelled pesticides to achieve consistent, cost-effective disease and nematode control.

There is a continuing demand for Virginia dark-fired tobacco with traditional flavor and aroma, characteristic of certain old-line varieties such as Lizard Tail Orinoco, Shirey, and Walkers Broadleaf, but disease problems often can limit the production of these varieties. 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. Careful study of the information presented in this publication may be helpful in choosing a variety which will fit into specific production management systems and alleviate or reduce the severity of particular production problems.

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Table 1. Virginia Dark-fired Tobacco Variety Test Results: Yield, Value, Price, Grade Index, 1993.¹

Variety	State Average			So Pied Ag Res & Ext Ctr			T. Hawthorne Farm			K. Mason Farm						
	Yield	Value	Price	Yield	Value	Price	Yield	Value	Price	Yield	Value	Price				
	lbs/A	\$/A	\$/cwt	lbs/A	\$/A	\$/cwt	lbs/A	\$/A	\$/cwt	lbs/A	\$/A	\$/cwt				
Brownleaf, JH	2032	3557	175	60	2124	3711	175	57	2082	3736	179	67	1890	3225	171	56
Liz Tail Tur Ft	2173	3815	175	61	2115	3685	174	58	2304	4160	180	66	2100	3599	171	59
Shirey	2052	3610	175	60	2022	3516	171	50	2304	4140	180	68	1830	3175	174	61
VA 309	2134	3692	173	56	2189	3739	171	52	2292	4104	179	65	1920	3233	168	51
VA 312	2187	3907	179	65	2390	4266	179	65	2370	4257	180	62	1800	3198	178	67

¹Tests were conducted in Nottoway (So. Pied. Ag. Res. & Ext. Ctr.), Brunswick (T. Hawthorne Farm), and Charlotte (K. Mason Farm) counties in 1993.

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. Res. and Ext. Ctr., Blackstone, VA.¹

Variety	Yield, lbs/A									Value, \$/A									Price, \$/cwt								
	1989	1990	1991	1992	1993	1993	Avg.	1989	1990	1991	1992	1993	1993	Avg.	1989	1990	1991	1992	1993								
	Brownleaf, JH	2383	1983	2144	2004	2124	2128	2128	3649	3312	3654	3490	3711	3563	153	167	170	174	175								
Daniels Special	2296	2025	2071	2010	2173	2115	2115	3447	3378	3362	3567	3773	3505	150	167	161	177	174									
Liz Tail Orinoco	2203	2226	2171	2059	2228	2177	2177	3256	3717	3364	3543	3956	3567	148	167	155	172	178									
Liz Tail Tur Ft	2709	2299	2569	1985	2115	2335	2335	4303	3869	4630	3408	3685	3979	159	168	179	171	174									
Sears Special	2214	2067	2188	1984	2312	2153	2153	3283	3504	3408	3366	4011	3514	148	170	155	170	173									
Shirey	2228	2167	2412	1893	2022	2144	2144	3736	3916	4184	3288	3516	3728	168	180	170	173	171									
Silky Pride	2315	2038	2070	1841	2152	2083	2083	3430	3316	3346	3131	3675	3380	149	163	162	169	170									
VA 309	2326	2388	2402	1874	2189	2236	2236	3520	4357	3898	3284	3739	3760	152	182	163	175	171									
VA 310	2484	2352	2224	1916	2239	2243	2243	3724	4143	3533	3187	3785	3674	150	177	158	166	168									
VA 312	-----	2375	2325	1961	2390	2263	2263	-----	4183	4074	3345	4266	3967	---	176	175	171	179									
VA 331	2319	2052	1965	1781	2021	2028	2028	3670	3364	3079	2979	3344	3287	158	164	156	167	165									
Walkers Broadleaf	2284	2129	2197	1853	2221	2137	2137	3150	3613	3382	3218	3873	3447	136	170	154	173	174									

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

Table 3. Agronomic and Disease Information for Dark-fired Tobacco Varieties Tested at the Southern Piedmont Agricultural Experiment Station, Blackstone, VA, 1993.

Variety	Days to flower	Plant height (in.)	Leaf no.	Ground suckers /plot ¹	Length (L) and Width (W)		Disease Reaction ²					
					Mid Leaf L	Mid Leaf W	Top Leaf L	Top Leaf W	BS	RK	TMV	BRR
Brownleaf, JH	56	23.0	12.1	0.3	28.6	14.2	28.5	13.8	S	S	S	L
Daniels Special	55	22.2	12.9	0	27.6	13.4	26.1	12.8	S	S	S	L
Liz Tail Orinoco	56	21.3	12.7	0	28.1	13.8	27.5	13.7	S	S	S	S
Liz Tail Turt Ft	55	23.1	13.1	0.3	30.7	14.6	30.3	13.6	S	S	S	S
Sears Special	53	23.0	13.3	1.0	28.9	14.7	28.9	14.2	S	-	S	M
Shirey	56	22.5	12.5	0.3	28.8	13.7	28.2	13.4	S	-	S	L
Silky Pride	56	22.0	13.3	0	28.8	12.7	27.5	12.5	S	S	S	S
VA 309	58	22.9	13.5	0.3	26.8	13.9	27.4	13.5	M	S	S	M
VA 310	55	21.4	13.3	0.3	28.0	14.5	26.3	13.7	M	-	S	L
VA 312	53	22.3	12.5	0	30.0	14.3	29.3	14.5	S	S	R	H
VA 331	53	21.0	12.3	0	29.6	14.6	29.8	13.6	M	-	S	L
Walkers Broadleaf	55	23.1	12.9	0	29.5	13.8	28.6	13.1	S	-	S	L

¹Ground suckers/18 plant plot.

²Disease 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, 1993.¹

Variety	Group (%) ²				Color (%) ³			
	X	C	B	N	L	F	M	G
Brownleaf, JH	28	68	4	0	11	54	35	0
Liz Tail Turt Ft	16	77	6	1	25	44	30	0
Shirey	16	82	0	2	0	58	31	9
VA 309	30	64	6	0	18	33	43	6
VA 312	11	87	0	2	16	51	32	0

¹Values are averages of tests conducted at 3 locations.

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

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

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