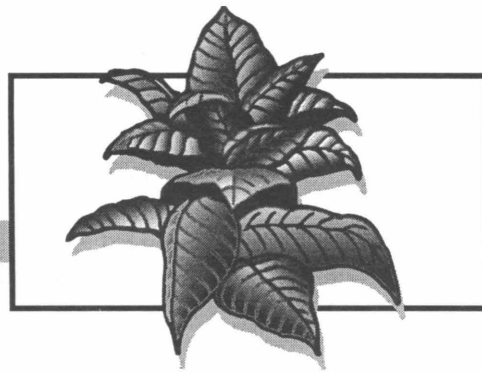


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Tobacco

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Virginia Dark-Fired Tobacco Variety Information for 1996

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Information is provided for widely grown varieties in Tables 1 and 2 of this publication. Seed of Lizard Tail Orinoco, VA 309, VA 312, Shirey, and Brownleaf JH should be commercially available for 1996. The Dark-Fired Official Variety Test was conducted in Nottoway County at the Southern Piedmont Agricultural Research and Extension Center, Virginia Polytechnic Institute and State University. Data from 1991 to 1995 are presented in Table 1.

Certain agronomic and disease information is given in Table 2. In addition to yield, quality potential, and ease of handling, the history of various disease problems on your farm should weigh into the decision of which variety is best suited to your farm. 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 fields where black shank and/or black root rot is a problem, VA 309 is suggested. VA 312 is also suggested for fields where black root rot alone is a problem. However, the use of resistant varieties alone cannot 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.

While the traditional flavor and aroma, characteristic of certain old-line varieties such as Lizard Tail Orinoco, Shirey, and Walkers Broadleaf, is still desirable, disease problems can often 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. Following are descriptions of some varieties.

Brownleaf, JH is a variety that originated in Kentucky. It has relatively large leaves of medium body which are medium spaced on the stalk. It has low resistance to black root rot and no resistance to black shank.

Lizard Tail Orinoco is an old variety that has been grown in Virginia for a long time. The leaves are closely spaced on the stalk and are of medium size and heavy body. This variety has no disease resistance.

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Table 1. Virginia Dark-Fired Tobacco Variety Test Results by Years, Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA.¹

Variety	Yield, lbs/A					Value, \$/A					Price, \$/cwt					
	1991	1992	1993	1994	1995	Avg.	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
Brownleaf, JH	2144	2004	2124	2070	2308	2130	3654	3490	3711	3518	3816	170	174	175	170	165
Daniels Special	2071	2010	2173	2170	2096	2104	3362	3567	3773	3516	3341	161	177	174	162	159
Liz Tail Orinoco	2171	2059	2228	1990	2159	2121	3364	3543	3956	3244	3371	155	172	178	163	156
Liz Tail Tur Ft	2569	1985	2115	2325	2273	2253	4630	3408	3685	3847	3966	179	171	174	164	175
Sears Special	2188	1984	2312	2179	2265	2186	3408	3366	4011	3435	3741	155	170	173	157	165
Shirey	2412	1893	2022	2006	2140	2095	4184	3288	3516	3276	3649	170	173	171	163	170
Silky Pride	2070	1841	2152	2100	1870	2007	3346	3131	3675	3448	3035	162	169	170	164	162
VA 309	2402	1874	2189	1984	2170	2124	3898	3284	3739	3004	3618	163	175	171	152	167
VA 310	2224	1916	2239	2214	2373	2193	3533	3187	3785	3409	3714	158	166	168	154	157
VA 312	2325	1961	2390	2140	2296	2222	4074	3345	4266	3490	3940	175	171	179	162	172
VA 331	1965	1781	2021	2109	2134	2002	3079	2979	3344	3356	3373	156	167	165	159	158
Walkers Broadleaf	2197	1853	2221	2087	2067	2085	3382	3218	3873	3453	3389	154	173	174	165	164

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

Table 2. Agronomic and Disease Information for Dark-Fired Tobacco Varieties Tested at the Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA, 1995.

Variety	Days to Flower	Plant Height (in)	Leaf no.	Ground Suckers /Plot ¹	Length (L) and Width (W)		Top Leaf		Disease Reaction ²			Group (%) ³			Color (%) ⁴			
					Flower	Height	Leaf no.	Ground Suckers	Mid Leaf L	Mid Leaf W	Top Leaf L	Top Leaf W	BS	RK	TMV	BRR	X	C
Brownleaf, JH	54	25.7	11.4	1.3	32.2	15.2	31.7	15.8	S	S	S	L	8	54	38	48	0	52
Daniels Special	48	22.6	10.9	0	31.8	14.9	31.9	15.2	S	S	S	L	23	24	53	73	0	27
Liz Tail Orinoco	51	24.5	11.9	0.3	30.4	15.7	29.7	15.4	S	S	S	S	27	46	27	22	11	67
Liz Tail Tur Ft	51	26.0	12.3	0.7	33.4	14.6	30.9	13.4	S	S	S	S	8	67	25	82	18	0
Sears Special	54	26.2	12.8	2.3	30.7	15.2	30.0	15.3	S	—	S	M	12	88	0	48	16	36
Shirey	53	25.4	11.3	0.3	31.3	14.9	30.4	13.8	S	S	S	L	22	49	29	69	24	7
Silky Pride	54	24.3	11.7	1.3	29.9	13.6	28.7	13.4	S	S	S	S	18	42	40	52	19	29
VA 309	53	24.8	12.1	0.7	28.9	15.3	28.0	15.2	M	S	S	M	15	45	40	51	34	15
VA 310	56	25.5	12.3	0	29.0	14.4	28.3	14.1	M	S	S	L	19	45	36	23	0	77
VA 312	51	23.9	11.8	0.3	33.0	16.4	31.7	16.5	S	S	R	H	13	58	29	71	22	7
VA 331	54	25.0	11.6	0.7	30.4	14.8	30.7	14.4	M	—	S	L	24	25	51	66	15	19
Walkers Broadleaf	56	24.3	11.5	0	31.2	13.8	29.7	14.2	S	S	S	L	16	42	42	73	11	16

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.

³X=lugs; C=thin leaf; B=heavy leaf.

⁴F=medium brown; M=mixed or variegated; G=green.

Sears Special was developed from a cross of Little Dick by VA 312. The leaves are medium in width and length and are medium spaced on the stalk. The upper leaves on mature plants are wrinkled and the margins have a tendency to roll downward. It has moderate resistance to black root rot and no resistance to black shank.

VA 309 was developed from a series of crosses involving Vesta 55, VA 312, and Lizard Tail Orinoco. It is intermediate in plant type between Lizard Tail Orinoco and VA 312. The soft texture and dull green color of the leaf are similar to that of Lizard Tail Orinoco. The leaf surface at maturity is wrinkled with a marked depression of the veins and midribs. The cured leaf tends to be thinner than that from Lizard Tail Orinoco and usually has a higher percentage of mixed color grades. It has moderate resistance to black shank and black root rot.

VA 310 was developed from a series of crosses involving Vesta 55, KY 2, VA 312, and Hastings.

Leaves are large like those of the VA 312 parent and spaced closely on the stalk. The percentage of green grades in this variety tends to be high which suggests that it is slow to mature and should have special attention in curing. It has moderate resistance to black shank and low resistance to black root rot.

VA 312 was developed from a cross of Walkers Broadleaf, Lizard Tail Orinoco, and a breeding line. It is somewhat intermediate in plant type between Lizard Tail Orinoco and Walkers Broadleaf. Its leaves have a tendency to become brittle at maturity, and breakage during storms may be greater than with other varieties. The cured leaf is rich red in color with thin body. It has excellent resistance to black root rot and mosaic.

Walkers Broadleaf originated as a farmer selection in Cumberland County, VA. The leaves are large with medium body and they are medium spaced on the stalk. It has low resistance to black root rot and no resistance to black shank.



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