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# Virginia Dark-Fired Tobacco Variety Information for 1998

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Seed of Lizard Tail Orinoco, VA 309, VA 312, Shirey, and Brownleaf JH should be commercially available for 1998. Primed pelleted seed of VA 309, Shirey, and Brownleaf JH will also be available. Information is provided for widely grown varieties in Tables 1 and 2 of this publication. The Dark-Fired Official Variety Test was conducted at the Virginia Tech Southern Piedmont Agricultural Research and Extension Center in Nottoway County. Data from 1993 to 1997 are presented in Table 1.

Certain agronomic and disease information are given in Table 2. In addition to yield, quality potential, and ease of handling, the history of various disease problems on your farm should be considered when selecting the variety 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 labeled pesticides to achieve consistent, cost-effective disease 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 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 many years. 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.<sup>1</sup>

Variety	Yield, lbs/A							Value, \$/A							Price, \$/cwt							
	1993	1994	1995	1996	1997	Avg.	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997	
Brownleaf JH	2124	2070	2308	2421	2301	2245	3711	3518	3816	4779	4862	175	170	165	198	211						
Daniels Special	2173	2170	2096	2390	2275	2221	3773	3516	3341	4437	4816	174	162	159	186	211						
Liz Tail Orinoco <sup>2</sup>	2228	1990	2159	2480	2279	2227	3956	3244	3371	4972	4795	178	163	156	201	211						
Liz Tail Tur Ft <sup>2</sup>	2115	2325	2273	2384	2480	2315	3685	3847	3966	4719	5386	174	164	175	198	217						
Sears Special	2312	2179	2265	2417	2446	2324	4011	3435	3741	4712	5134	173	157	165	195	210						
Shirey	2022	2006	2140	2409	2454	2206	3516	3276	3649	5021	5616	171	163	170	209	229						
Silky Pride	2152	2100	1870	2419	2123	2133	3675	3448	3035	4691	4270	170	164	162	194	201						
VA 309	2189	1984	2170	2465	2454	2252	3739	3004	3618	4807	5221	171	152	167	195	213						
VA 310	2239	2214	2373	2324	2346	2299	3785	3409	3714	4621	4922	168	154	157	198	210						
VA 312	2390	2140	2296	2445	2613	2377	4266	3490	3940	4956	5651	179	162	172	203	217						
VA 331	2021	2109	2134	2085	2147	2099	3344	3356	3373	3665	4207	165	159	158	176	196						
Walkers Broadleaf	2221	2087	2067	2299	2438	2222	3873	3453	3389	4579	5129	174	165	164	201	211						

<sup>1</sup> Averages are not directly comparable unless the number of years is equivalent.

<sup>2</sup> Liz Tail Orinoco = Lizard Tail Orinoco; Liz Tail Tur Ft = Lizard Tail Turtle Foot.

Table 2. Agronomic and Disease Information for Dark-Fired Tobacco Varieties Tested at the Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA, 1997.

Variety	Days to Flower	Plant Height (in)	Leaf no.	Ground Suckers per Plot <sup>1</sup>	Length (L) and Width (W)			Disease Reaction <sup>2</sup>			Group (%) <sup>3</sup>			Color (%) <sup>4</sup>			
					Mid Leaf L	Mid Leaf W	Top Leaf L	Top Leaf W	BS	TMV	BRR	X	C	B	F	M	G
Brownleaf JH	64	23.1	12.8	1.7	31.8	17.2	32.5	17.2	S	S	L	16	59	25	62	0	38
Daniels Special	70	22.6	13.2	1.3	29.7	15.0	29.6	15.3	S	S	L	27	40	33	64	15	21
Liz Tail Orinoco <sup>5</sup>	67	23.6	14.1	1.3	30.2	15.8	29.1	15.5	S	S	S	31	34	35	49	11	40
Liz Tail Tur Ft <sup>5</sup>	65	21.7	13.6	0.3	32.5	15.8	32.5	16.4	S	S	S	0	85	15	47	53	0
Sears Special	62	24.0	13.0	9.0	31.6	16.1	29.7	15.6	S	S	M	29	58	13	60	11	29
Shirey	65	22.2	13.2	0	32.6	16.2	33.0	15.9	S	S	L	0	78	22	57	31	12
Silky Pride	65	22.4	12.6	3.0	30.1	13.8	30.1	14.6	S	S	S	14	28	37	46	23	10
VA 309	65	24.0	13.9	2.7	30.8	15.6	29.9	15.5	M	S	M	21	47	32	56	44	0
VA 310	65	23.6	14.0	2.0	30.7	15.2	30.7	15.1	M	S	L	31	42	27	49	32	19
VA 312	65	22.6	13.0	2.0	33.2	16.3	33.1	17.2	S	R	H	0	81	19	62	25	13
VA 331	65	23.1	12.7	0.3	32.3	16.4	31.2	16.2	M	S	L	40	37	23	0	49	51
Walkers Broadleaf	62	22.9	13.7	1.7	30.5	15.4	30.0	15.7	S	S	L	10	67	23	56	9	35

<sup>1</sup> Ground suckers/18 plant plot.

<sup>2</sup> Disease 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.

<sup>3</sup> X = lugs; C = thin leaf; B =heavy leaf.

<sup>4</sup> F =medium brown; M = mixed or variegated; G = green.

<sup>5</sup> Liz Tail Orinoco = Lizard Tail Orinoco; Liz Tail Tur Ft = Lizard Tail Turtle Foot.

**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 is 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 VA 312 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 tobacco mosaic virus.

**Walkers Broadleaf** originated as a farmer selection in Cumberland County, Virginia. 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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