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FLUE-CURED TOBACCO VARIETY INFORMATION FOR 1981

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Two new varieties -- Coker 51 and Clemson PD 4 -- released for 1981 and five varieties -- McNair 373, NC 82, NC 628, Speight G-58, and Speight G-70 -- released in 1980 are the newest varieties available to the flue-cured tobacco producer. These varieties have met the chemical and physical standards established by the Regional Flue-cured Variety Evaluation Committee. Brief descriptions of the two new varieties available for planting in 1981 are given on page 4 of this report. Producers should be cautious of growing any variety with which they have had no experience. It is advisable to try new varieties on a limited acreage so that a proper personal evaluation can be made. Since 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 report will be helpful in choosing a variety or varieties to meet specific production goals.

The Virginia Official Variety Tests include only released varieties which are commercially available to producers. Information is provided for those which are widely grown or recently released. Testing in various locations in the production area makes 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 the flue-cured tobacco varieties under field conditions in their particular region.

Tests were conducted in Amelia (Russell Lynch Farm), Halifax (Linwood Palmer Farm), Lunenburg (Mariam and Ned Barnes Farm), and Nottoway (Southern Piedmont Center) Counties under the joint supervision of Extension Agents in the respective counties and V.P.I. & S.U. Research and Extension personnel. Data are provided for yield, value, price, chemical composition, disease reaction, and other factors for released varieties.

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Table 1. Virginia Flue-Cured Tobacco Official Variety Test Results; Yield, Value, Price, 1980.

Variety	Halifax County			Southern Piedmont Center			State Average		
	Yield Lbs/A	Value \$/A	Price ^{1/} \$/Cwt	Yield Lbs/A	Value \$/A	Price \$/Cwt	Yield Lbs/A	Value \$/A	Price \$/Cwt
Va 115	2752	4090	149	2748	4303	157	2750	4197	153
Coker 48 ^{2/}	2743	3758	137	3237	5104	158	2990	4431	148
Coker 51 ^{2/}	2570	3338	130	2796	4178	150	2683	3758	140
Coker 187-Hicks	2655	3714	140	2616	3991	152	2636	3853	146
Coker 319	2779	4254	153	2783	4381	158	2781	4318	155
McNair 944	2995	4732	158	2955	4534	153	2975	4633	156
McNair 373	2651	4048	153	2670	4168	156	2661	4108	154
NC 79	2779	4066	146	2633	4167	158	2706	4117	152
NC 82	2686	4207	157	3036	4950	163	2861	4579	160
NC 89	2703	4217	156	3105	4825	156	2904	4521	156
NC 628	2758	3495	127	2705	4076	150	2732	3786	139
NC 2326	2780	3828	138	3009	4777	159	2895	4303	149
SC 72	2800	4144	148	2984	4548	152	2892	4346	150
Clemson PD4 ^{2/}	3109	4290	138	3392	5277	156	3251	4784	147
Speight G-28	2583	3340	129	2837	4229	149	2710	3785	139
Speight G-58	2765	3694	134	3244	5054	156	3005	4374	145
Speight G-70	2825	4365	155	3192	4898	154	3009	4632	154

^{1/} Computed on the basis of the season's average prices for the Old Belt through October 3, 1980.

^{2/} New variety available for planting in 1981.

Table 2. Virginia Flue-Cured Tobacco Official Variety Test Results; Yield, Value, and Price by Years^{1/}.

Variety	No. of Tests	Yield Lbs/A						Value \$/A						Price \$/Cwt				
		1976	1977	1978	1979	1980	Avg.	1976	1977	1978	1979	1980	Avg.	1976	1977	1978	1979	1980
Va 115	14	2335	2606	2929	2316	2750	2587	2452	2918	3870	3251	4147	3328	105	111	132	140	153
Coker 48 ^{2/}	11		2337	3122	2259	2990	2677		2407	4193	3175	4431	3552		103	134	141	148
Coker 51 ^{2/}	2					2683	2683					3758	3758					140
Coker 187-Hicks	14	2308	2328	2808	2259	2636	2468	2428	2735	3929	3238	3853	3237	105	117	140	143	146
Coker 319	14	2403	2203	3045	2128	2781	2512	2666	2797	4329	3059	4318	3434	111	127	142	144	155
McNair 944	14	2738	2649	3251	2695	2795	2826	2875	3159	4498	3880	4633	3809	105	118	138	144	156
McNair 373	5				2431	2661	2546				3554	4108	3831				146	154
NC 79	14	2535	2666	3063	2607	2706	2715	2495	3181	4272	3799	4117	3573	90	119	139	146	152
NC 82	5				2615	2861	2738				3874	4579	4226				148	160
NC 89	11		2605	3183	2597	2904	2822		3079	4267	3766	4521	3908		109	134	145	156
NC 628	5				2904	2732	2818				4091	3786	3938				141	139
NC 2326	14	2488	2519	2702	2580	2895	2637	2654	2957	3663	3694	4303	3454	107	116	136	143	149
SC 72	14	2367	2372	2879	2524	2892	2607	2434	2688	3854	3624	4346	3389	103	114	134	144	150
Clemson PD4 ^{2/}	2					3251	3251					4784	4784					147
Speight G-28	14	2405	2452	2767	2436	2710	2554	2523	2808	3794	3513	3785	3285	104	115	137	144	139
Speight G-58	5				2827	3005	2916				3980	4374	4177				141	145
Speight G-70	5				2725	3009	2867				3856	4632	4244				141	154

^{1/} Averages are not directly comparable unless the number of tests is equivalent.

^{2/} Available for planting in 1981.

Table 3. Chemical Composition, Agronomic Measures, and Disease Reaction for Varieties Tested in Va., 1980^{1/}.

Variety	Reducing Sugars (%)	Nicotine (%)	Days to Flower	Plant Ht. (cm.)	Leaf No.	Ground Suckers per Plant	Disease Reaction ^{2/}			
							BS	TMV	RK	GW
Va 115 ^{3/}	6.3	3.76	60	99	18	0.7	M	S	S	L
Coker 48	5.6	4.57	65	106	18	1.1	H	S	S	H
Coker 51	5.2	4.52	69	101	19	0	H	R	R	H
Coker 187-Hicks	6.0	3.65	66	113	18	1.9	H	S	S	M
Coker 319	4.8	4.03	66	103	18	0.8	L	S	S	L
McNair 944	8.1	4.01	66	96	18	0.3	H	S	S	L
McNair 373	7.3	3.52	64	89	19	0	M	S	R	H
NC 79	5.5	3.89	60	104	17	0.1	M	S	R	L
NC 82	6.0	3.32	61	92	17	1.0	H	S	S	H
NC 89	5.6	4.41	62	102	18	0.1	M	S	R	L
NC 628	5.9	3.93	69	101	17	0	M	R	R	M
NC 2326	4.9	4.66	62	112	18	0	M	S	S	S
SC 72	8.4	4.11	65	106	18	0.1	M	R	R	M
Clemson PD4	8.2	3.54	61	108	19	0	M	S	S	L
Speight G-28	5.2	3.81	66	98	19	0	H	S	R	H
Speight G-58	4.8	4.20	63	92	19	0	M	S	R	H
Speight G-70	6.8	3.84	61	93	18	0.4	H	S	R	M

^{1/} Chemical and agronomic measures were made at the Southern Piedmont Center and disease classification represents field and greenhouse tests conducted in several states.

^{2/} Disease Reaction -- H = highly resistant; M = moderate; L = low; S = susceptible; T = tolerant; Mt = moderately tolerant; SE = sensitive; R = resistant; BS = Black Shank; GW = Granville Wilt; RK = Root Knot; TMV = Tobacco Mosaic Virus

^{3/} Resistant to black root rot.

Table 4. Comparative Information--Recently Released Varieties Grown in Halifax and at the Southern Piedmont Center, 1980.

Variety	Yield Lbs/A	Value \$/A	Price \$/Cwt	Nicotine (%)	Days to Flower	Disease Reaction ^{1/}				
						BS	TMV	RK	GW	
<u>Available in 1981</u>										
Coker 51	2683	3758	140	4.52	69	H	R	R	H	
Clemson PD4	3251	4784	147	3.54	61	M	S	S	L	
<u>Released in 1980</u>										
McNair 373	2661	4108	154	3.52	64	M	S	R	H	
NC 82	2861	4579	160	3.32	61	H	S	S	H	
NC 628	2732	3786	139	3.93	69	M	R	R	M	
Speight G-58	3005	4374	145	4.20	63	M	S	R	H	
Speight G-70	3009	4632	154	3.84	61	H	S	R	M	
<u>Check Varieties</u>										
Coker 319	2781	4318	155	4.03	66	L	S	S	L	
McNair 944	2975	4633	156	4.01	66	H	S	S	L	

^{1/} Disease reaction -- H = highly resistant; M = moderate; L = low; S = susceptible; T = tolerant; MT = moderately tolerant; SE = sensitive; R = resistant; BS = Black Shank; GW = Granville Wilt; RK = Root Knot; TMV = Tobacco Mosaic Virus

Description of New Varieties

Coker 51 was developed by the Coker Pedigreed Seed Company from crosses involving Coker 319, Virginia 45, Coker 86 and a high quality disease resistant breeding line. It is a medium maturing variety with a moderately high yield potential. Coker 51 has a high level of resistance to root knot nematodes, tobacco mosaic virus, black shank and bacterial wilt. It is strongly suggested that this variety be grown only where tobacco mosaic virus has been a problem.

Clemson PD 4 was developed by the South Carolina Agricultural Experiment Station from crosses involving Hicks, Burley 21 and NC 95. This variety produces a relatively high number of leaves that are fairly widely spaced on a strong stalk with a good root system. It has a high yield potential and is moderately resistant to black shank.

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