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Tobacco

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Flue-Cured Tobacco Variety Information for 1995

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Seed of one new variety, RG 17, will be commercially available to tobacco producers in 1995. RG 17 (tested as RG OB17) was developed by the RG Seed Company from a cross of K 326 by K 399. This variety met the chemical and physical standards established by the Regional Variety Evaluation Program in 1993. In variety evaluation tests at four locations in Virginia in 1994, RG 17 produced average yield and cured leaf quality. Data from 1994 indicates that RG 17 is a moderate maturing variety, as compared to early varieties such as Reams 158 and Coker 371-Gold and later varieties such as K 326 and K 346. RG 17 has a low level of resistance to black shank, a moderate level of resistance to Granville wilt, is resistant to root knot nematode, and is susceptible to tobacco mosaic virus. Growers are advised to plant only a limited acreage of any new variety until more information and experience is available from a wider range of soil and climatic conditions.

Information is provided for widely grown and recently released varieties in Tables 1-5 of this publication. Results of 12 varieties included in the 1994 Virginia Official Variety Tests (OVT) are shown in Table 1. These tests were conducted in Charlotte (Clark Poindexter), Halifax (Wayne

Palmer), Pittsylvania (Kenneth Hutcherson), 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 throughout the production area makes it possible to evaluate varietal performance under the widely ranging soil and weather conditions existing in Virginia. Such a testing program also provides an opportunity for producers to observe flue-cured tobacco varieties under field conditions in their particular region. Contact the Extension agent in your county to arrange a visit to the on-farm variety test nearest you and to learn of tours of tobacco on-farm tests.

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 1990 to 1994 data are also present in Table 2. Table 5 presents data on harvest rates/maturation patterns for the 12 varieties in the OVT.

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Table 1. Virginia Flue-Cured Official Variety Test Results: Yield, Value, Price, Grade Index, 1994.¹

Variety	State Average			So Pied Ag Res & Ext Ctr			Charlotte County			Halifax County			Pittsylvania County		
	Yield	Price	Grade Index ²	Yield	Price	Grade Index	Yield	Price	Grade Index	Yield	Price	Grade Index	Yield	Price	Grade Index
	lbs/A	\$/cwt		lbs/A	\$/cwt		lbs/A	\$/cwt		lbs/A	\$/cwt		lbs/A	\$/cwt	
K 326	3669	173	70	4072	173	72	3512	172	72	3241	173	72	3852	175	64
K 346	3464	173	73	3625	167	61	3756	176	79	3057	169	68	3416	180	84
K 394	3500	173	71	3819	169	62	2992	172	77	3495	174	74	3696	176	72
K 730	3544	174	72	3581	170	62	3619	174	79	3227	172	73	3748	179	76
NC 27 NF	3631	174	74	3810	169	65	3246	174	77	3525	173	75	3942	178	79
NC 37 NF	3420	174	76	3654	169	63	3467	174	76	2947	173	75	3611	182	92
Ox 940	3052	171	72	3434	166	62	2905	170	71	2478	170	69	3390	178	84
Reams M1	3002	172	74	3296	169	70	3259	174	74	2641	171	71	2812	172	63
RG 8	3392	173	74	3756	171	75	3548	173	75	3163	172	74	3102	176	72
RG 17	3426	172	71	3833	169	64	3541	173	79	3065	173	75	3265	174	66
Sp G-126	3332	172	70	3643	170	67	3587	174	80	2912	171	71	3184	172	63
VA 116	3284	172	69	3610	170	63	3471	174	78	3007	173	75	3049	172	60
K 326	6356	70	70	7067	72	72	6041	72	72	5593	72	72	6724	64	64
K 346	5995	73	73	6061	61	61	6619	79	79	5156	68	68	6144	84	84
K 394	6046	71	71	6473	62	62	5146	77	77	6081	74	74	6484	72	72
K 730	6171	72	72	6107	62	62	6312	79	79	5553	73	73	6711	76	76
NC 27 NF	6299	74	74	6453	65	65	5644	77	77	6108	75	75	6991	79	79
NC 37 NF	5968	76	76	6170	63	63	6018	75	75	5091	75	75	6593	92	92
Ox 940	5224	72	72	5709	62	62	4941	71	71	4213	69	69	6032	84	84
Reams M1	5154	71	71	5573	70	70	5679	79	79	4512	71	71	4854	63	63
RG 8	5862	74	74	6432	75	75	6127	75	75	5434	74	74	5455	72	72
RG 17	5904	71	71	6487	64	64	6141	79	79	5292	75	75	5694	66	66
Sp G-126	5733	70	70	6205	67	67	6241	80	80	4981	71	71	5504	63	63
VA 116	5652	69	69	6127	63	63	6045	78	78	5192	75	75	5246	60	60

New varieties for 1995 are in bold.

¹Tests were conducted in Nottoway (So. Pied. Ag. Res. and Ext. Ctr.), Charlotte (Clark Poindexter), Halifax (Wayne Palmer), and Pittsylvania (Kenneth Hutcherson) counties in 1994.

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

Table 2. Virginia Flue-Cured Tobacco Official Variety Test Results by Years, Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA.

Variety	Yield, lbs/A					Value, \$/A					Price, \$/cwt					
	1990	1991	1992	1993	1994	Avg ¹	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
C 319	2915	3205	2502	2683	3441	2949	5111	5555	4446	4385	5879	175	173	178	163	171
C 371 Gold	3073	3367	2854	3507	3776	3315	5382	5934	5041	5992	6444	175	176	177	171	171
K 149	2992	3283	2485	2733	3460	2991	5196	5789	4388	4401	5876	174	176	177	161	170
K 326	3421	3518	2874	3436	4072	3464	6084	6181	5056	5927	7067	178	176	176	173	173
K 346	3004	3263	2543	3061	3625	3099	5267	5763	4511	5023	6061	175	177	177	164	167
K 358	3047	3340	2691	3508	3666	3250	5391	5826	4760	5699	6367	177	174	176	163	174
K 394	3569	3489	2699	3164	3819	3348	6214	6073	4729	5175	6473	174	174	175	163	169
K 730	—	3107	2500	3233	3581	3105	—	5396	4361	5190	6107	—	174	174	162	170
McN 944	2961	3313	2430	3044	3766	3049	5143	5778	4261	4909	6209	174	174	175	161	165
NC 27 NF	2764	3539	2658	3028	3810	3160	4841	6131	4618	4876	6453	175	173	174	161	169
NC 37 NF	3145	3024	2635	2911	3654	3074	5466	5269	4587	4742	6170	174	174	174	163	169
NC 82	2612	3331	2352	3001	3463	2952	4562	5807	4048	5032	5938	174	174	172	168	171
NC 567	3048	3014	2623	3240	3569	3099	5334	5255	4615	5200	6040	175	174	176	161	169
NC 729	—	3583	2478	2993	3545	3150	—	6218	4354	4895	5962	—	174	175	164	168
Ox 940	—	—	—	3244	3434	3339	—	—	—	5158	5709	—	—	—	160	166
Reams 158	2994	3462	2424	2948	3334	3032	5159	6112	4163	4905	5688	172	176	171	166	170
Reams M1	—	—	—	3219	3296	3258	—	—	—	5224	5573	—	—	—	165	169
RG 8	—	3634	2599	3410	3756	3350	—	6346	4535	5614	6432	—	175	174	165	171
RG 11	—	—	2383	3183	3378	2981	—	—	4161	5328	5735	—	—	175	168	170
RG 13	—	—	2497	3384	3499	3127	—	—	4327	5661	5937	—	—	173	167	170
RG 17	—	—	—	—	3833	—	—	—	—	—	6487	—	—	—	—	169
RG 22	—	3125	2524	3016	3154	2955	—	5481	4474	5018	5405	—	175	177	166	171
Sp G-28	2950	2995	2623	3164	3577	3062	5185	5199	4641	5188	6110	176	173	177	164	171
Sp. G-108	3238	3518	2755	—	3829	3335	—	—	—	—	6218	—	—	—	—	162
Sp G-111	—	—	2439	3146	3535	3040	—	—	4314	5185	5988	—	—	177	165	169
Sp G-117	—	3037	2542	3320	3396	3074	—	5232	4459	5567	5686	—	172	176	167	168
Sp G-126	—	—	—	3154	3643	3398	—	—	—	5109	6205	—	—	—	162	170
VA 116	3163	3241	2610	3433	3610	3211	5551	5581	4569	5814	6127	176	172	175	169	170

New varieties for 1995 are in bold.

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

Table 3. Agronomic and Disease Information for Varieties Tested at the Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA, 1994.

Variety	Days to Flower	Plant Height (in.)	Leaf No.	Ground Suckers per plot ¹	Disease Reaction ²				
					BS	TMV	RK	GW	B.Sp.
Coker 319	72	34.3	17.9	0	L	S	S	L	M
Coker 371 Gold	69	32.1	18.6	0.3	H	S	S	M	M
K 149	74	32.4	18.5	0	M	S	R	H	H
K 326	69	30.1	18.3	0	L	S	R	L	H
K 346	70	31.8	18.5	0.3	H	S	R	H	H
K 358	69	31.6	16.9	0	M	S	R	M	H
K 394	71	32.6	18.7	0	H	S	S	L	L
K 730	69	30.1	18.3	0	L	S	R	H	-
McN 944	69	32.4	17.5	1.7	M	S	S	L	S
NC 27 NF	NF ³	30.5	18.8	0	L	S	S	L	L
NC 37 NF	NF ³	33.4	17.3	0	L	S	R	L	L
NC 82	71	32.5	18.3	1.3	H	S	S	M	M
NC 567	67	33.2	17.1	0.3	L	R	R	M	M
NC 729	69	28.2	18.7	0.7	L	S	R	H	-
OX 940	67	28.9	17.5	0	H	S	S	M	-
Reams 158	72	32.5	17.6	0	M	S	S	L	L
Reams M1	73	29.5	17.9	0	M	S	-	M	-
RG 8	70	29.3	19.3	0.7	M	S	R	M	-
RG 11	76	34.0	18.2	0.3	M	S	R	H	-
RG 13	71	31.8	19.1	0.3	M	S	R	M	-
RG 17	71	28.6	18.3	0.3	L	S	R	M	-
RG 22	72	26.9	18.7	0.3	M	S	R	H	-
Sp. G-28	70	29.9	18.3	0	M	S	R	M	M
Sp. G-108	69	30.8	18.0	0	M	S	R	M	M
Sp. G-111	70	28.2	19.0	1.7	M	S	R	M	-
Sp. G-117	76	29.2	18.4	0	M	S	R	H	-
Sp. G-126	75	33.0	19.5	0	M	S	R	M	-
VA 116	70	31.6	18.2	2.0	M	S	S	L	M

New varieties for 1995 are in bold.

¹Ground suckers/22 plant plot.

²Disease reaction - H=highly resistant; M=moderate; L=low; S=susceptible; R=resistant; BS=Black Shank; GW=Granville Wilt; RK=Root Knot; TMV=Tobacco Mosaic Virus; B.Sp.=Brown Spot.

³NF=nonflowering. Plants should be topped at 20-22 harvestable leaves.

Table 4. Percentage of certain color grade factors of varieties tested at four locations in 1994.

Variety	L ¹	F	FR	K	KR	V	KL	KF	KM	G
K 326	8	42	3	18	0	0	0	17	12	0
K 346	2	52	0	31	0	0	0	11	4	0
K 394	6	45	0	28	0	0	0	15	6	0
K 730	3	53	0	21	0	8	0	6	9	0
NC27 NF	5	56	0	18	0	4	0	12	4	1
NC37 NF	3	54	0	33	0	0	0	10	0	0
OX 940	2	40	0	28	8	0	0	4	11	7
Reams M1	2	55	0	25	0	0	0	18	0	0
RG 8	5	53	0	22	0	0	0	10	10	0
RG 17	4	52	0	18	0	0	2	10	12	2
Sp. G-126	8	50	0	21	0	0	0	18	3	0
VA 116	6	41	0	23	0	2	4	18	6	0

New varieties for 1995 are in bold.

¹L=lemon; F=orange; FR=orange red; K=variegated red; KR=variegated red; V=greenish; KL=variegated lemon; KF=variegated orange; KM=variegated mixed; G=green.

Table 5. Harvest rate (cumulative percentage by harvest) as a measure of varietal maturation patterns.¹

Variety	So. Piedmont				Charlotte				Halifax				Pittsylvania			
	H1	H2	H3	H4	H1	H2	H3	H4	H1	H2	H3	H4	H1	H2	H3	H4
K 326	14	38	56	100	12	23	44	100	14	29	44	64	14	31	47	100
K 346	13	32	56	100	12	20	38	100	16	32	45	63	16	36	57	100
K 394	14	39	61	100	13	25	57	100	17	33	44	65	15	32	54	100
K 730	13	30	50	100	9	19	40	100	16	35	43	65	13	29	46	100
NC27 NF	12	29	48	100	13	26	53	100	18	35	55	100	12	26	42	100
NC37 NF	11	32	55	100	13	22	46	100	17	39	62	82	14	32	49	100
OX 940	14	39	62	100	14	27	60	100	19	42	67	100	21	45	71	100
Reams M1	16	41	65	100	12	24	49	100	19	44	69	100	20	42	58	100
RG 8	15	37	58	100	11	23	51	100	20	41	64	100	19	38	57	100
RG 17	14	34	53	100	12	23	46	100	18	37	60	81	20	48	60	100
Sp. G-126	13	33	51	100	11	22	44	100	17	36	50	64	20	42	66	100
VA 116	14	33	57	100	10	21	48	100	15	42	76	100	18	43	67	100

New varieties for 1995 are in bold.

¹Harvest date for each priming was determined by the appearance of the tobacco at each location. The tobacco produced and the rate of removal were influenced by individual management and local soil and weather conditions.

Information on agronomic performance and disease resistance levels is given in Table 3. The use of resistant varieties is a very effective means of reducing losses due to certain diseases and nematodes. However, varietal resistance cannot be used alone. Any variety may suffer damage when nematodes and disease causing organisms are present and when weather conditions favor their development. An effective pest management program will also include crop rotation (particu-

larly with fescue or small grains) and other cultural control practices. Combining varietal resistance with crop rotation, early stalk and root destruction, and proper use of pesticides is the only way to achieve consistent, cost-effective disease and nematode control.

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