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# Flue-Cured Tobacco Variety Information for 1999

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Seed of one new variety will be available to tobacco producers in 1999. RG H12 met the chemical and physical standards established by the Regional Variety Evaluation Committee in 1997. Growers should consider planting a limited acreage of any new variety until more information and experience is available from a wider range of soil and climatic conditions.

**RG H12** (tested as RG4H2-12) was developed by RG Seed Company. RG H12 is a male sterile hybrid and only pelleted seed will be available from F. W. Rickard Seed Company. Information on parents used to develop a hybrid is not released. RG H12 is a moderate yielding hybrid with good quality. It has a moderate level of resistance to black shank and Granville wilt. RG H12 is resistant to the common races of the root knot nematode and is susceptible to tobacco mosaic virus.

Information is provided for widely grown and recently released varieties in Tables 1 to 5 of this publication. Results of thirteen varieties included in the 1998 Virginia Official Variety Tests (OVT) are shown in Table 1. These tests were conducted in Charlotte (Jamie Newcomb), Halifax (Wayne Palmer), Pittsylvania (Kevin Motley), 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. There was some differential leaf drop among varieties in 1996 due to Hurricane Fran, therefore yield data from 1996 needs to be interpreted cautiously. Where available, averages that include 1994 to 1998 data are also presented in Table 2.

Information on agronomic performance and disease resistance levels is given in Table 3. The use of disease 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 (particularly with fescue and 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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**Table 1. Virginia Flue-Cured Official Variety Test Results: Yield, Value, Price, and Grade Index, 1998.<sup>1</sup>**

Variety	State Average			So. Pied. AREC			Charlotte County			Halifax County			Pittsylvania County		
	Yield	Price	Grade Index	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	3059	180	72	3754	182	80	3264	182	76	2541	177	58	2676	179	72
K 346	2763	180	69	3250	179	70	3168	185	88	2592	178	57	2040	179	59
K 394	3016	180	73	3439	181	78	3214	183	84	2691	178	59	2718	179	69
NC 71	3325	180	72	3896	181	77	3510	183	83	2641	178	58	3251	179	72
NC 72	3080	181	73	3702	182	78	3126	182	88	2635	179	58	2855	180	69
NC 37 NF	3095	182	72	3284	183	76	3219	185	83	2995	181	56	2882	179	73
OX 207	2839	181	76	3300	182	81	2633	185	88	2610	177	69	2813	180	72
RG 81	3084	181	73	3486	182	78	3374	185	88	2635	176	58	2842	180	65
RG H4	2943	180	75	3357	180	78	3049	185	88	2629	175	58	2736	181	69
<b>RG H12</b>	<b>2884</b>	<b>181</b>	<b>75</b>	<b>3162</b>	<b>182</b>	<b>80</b>	<b>3041</b>	<b>184</b>	<b>87</b>	<b>2515</b>	<b>176</b>	<b>58</b>	<b>2816</b>	<b>180</b>	<b>72</b>
Sp. G-168	3079	181	77	3453	182	79	3108	183	84	2652	176	57	3102	181	77
Sp. G-172	2804	180	70	3303	181	77	2935	183	83	2606	176	47	2370	178	73
Sp. NF3	2985	181	76	2921	180	75	3110	185	87	3145	181	69	2762	178	74
K 326	5513	180	72	6826	182	80	5942	182	76	4493	177	58	4790	179	72
K 346	4989	180	69	5822	181	70	5855	183	88	4618	178	57	3660	179	59
K 394	5444	180	73	6237	181	78	5877	183	84	4788	178	59	4875	179	69
NC 71	6004	181	72	7067	182	76	6425	183	83	4693	179	56	5831	180	73
NC 72	5567	180	73	6714	181	77	5704	182	75	4721	178	69	5127	179	72
NC 37 NF	5635	180	76	6001	181	81	5945	182	88	5426	177	69	5167	180	65
OX 207	5136	180	73	5997	181	78	4866	182	88	4622	178	58	5057	179	69
RG 81	5580	181	75	6351	182	81	6231	183	88	4628	179	58	5110	180	74
RG H4	5303	180	71	6049	181	75	5625	182	88	4591	178	41	4948	179	78
<b>RG H12</b>	<b>5205</b>	<b>181</b>	<b>75</b>	<b>5737</b>	<b>182</b>	<b>80</b>	<b>5588</b>	<b>183</b>	<b>87</b>	<b>4432</b>	<b>176</b>	<b>60</b>	<b>5063</b>	<b>177</b>	<b>74</b>
Sp. G-168	5569	180	77	6291	181	79	5693	182	84	4673	177	67	5617	178	77
Sp. G-172	5041	180	70	5989	181	77	5358	182	83	4595	176	47	4221	177	73
Sp. NF3	5395	181	76	5248	180	75	5738	181	87	5686	181	69	4907	178	74

**New variety for 1999 is in bold.**

<sup>1</sup> Tests were conducted in Nottoway (So. Pied. Ag. Res. and Ext. Ctr.), Charlotte (Jamie Newcomb), Halifax (Wayne Palmer), and Pittsylvania (Kevin Motley) counties in 1998.

<sup>2</sup> Grade 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							
	1994	1995	1996	1997	1998	Avg. <sup>1</sup>	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998			
C 319	3441	2980	2365	2667	3006	2892	5879	5378	4537	4756	5463	171	180	192	178	182	171	180	192	178	182			
C 371 Gold	3776	3093	2631	3246	3765	3302	6444	5598	5044	5731	6835	171	181	192	177	182	171	181	192	177	182			
CU 263	—	3122	3062	2852	3612	3162	—	5679	5875	5092	6540	—	182	192	179	181	—	182	192	179	181			
K 149	3460	3319	2585	3331	3124	3164	5876	6006	4957	5962	5611	170	181	192	179	180	170	181	192	179	180			
K 326	4072	3536	3093	3069	3754	3505	7067	6425	5935	5526	6826	173	182	192	180	182	173	182	192	180	182			
K 346	3625	3277	2696	3100	3250	3190	6061	5910	5172	5487	5822	167	180	192	177	179	167	180	192	177	179			
K 358	3666	3272	3001	2878	3280	3219	6367	5962	5757	5155	5930	174	182	192	179	181	174	182	192	179	181			
K 394	3819	3579	3088	3668	3439	3519	6473	6532	5923	6584	6237	169	182	192	180	181	169	182	192	180	181			
K 730	3581	3197	2919	2890	3453	3208	6107	5792	5600	5198	6268	170	181	192	180	182	170	181	192	180	182			
GL 939	3401	3319	3026	2990	3141	3175	5822	6029	5802	5282	5697	171	182	192	177	181	171	182	192	177	181			
NC 27 NF	3810	3755	3378	3224	3694	3572	6453	6783	6469	5746	6718	169	181	191	178	182	169	181	191	178	182			
NC 37 NF	3654	3298	2900	3096	3284	3246	6170	5972	5560	5523	6001	169	181	192	178	183	169	181	192	178	183			
NC 55	—	—	3077	3355	3274	3235	—	—	5900	6008	5938	—	—	—	192	181	—	—	—	192	179	181		
NC 71	—	—	3202	3221	3896	3440	—	—	6143	5737	7067	—	—	—	192	181	—	—	—	192	178	181		
NC 72	—	—	—	3308	3702	3505	—	—	—	5978	6714	—	—	—	181	182	—	—	—	—	181	182		
NC 567	3569	3508	2749	3170	3293	3258	6040	6304	5274	5599	5941	169	180	192	177	180	169	180	192	177	180			
NC 729	3545	3538	2982	3220	3061	3269	5962	6397	5720	5757	5528	168	181	192	179	181	168	181	192	179	181			
OX 207	—	—	2894	3224	3300	3139	—	—	5554	5783	5997	—	—	—	192	182	—	—	—	192	179	182		
OX 940	3434	3283	2581	3285	3078	3132	5709	5915	4946	5823	5535	166	180	192	177	180	166	180	192	177	180			
RG 11	3378	3527	2899	3329	3290	3285	5735	6399	5564	5953	5965	170	182	192	179	181	170	182	192	179	181			
RG 17	3833	3669	3138	3251	3359	3450	6487	6623	6022	5826	6082	169	180	192	179	181	169	180	192	179	181			
RG 22	3154	—	—	3137	3002	3098	5405	—	—	5546	5441	171	—	—	177	181	171	—	—	177	181			
RG 81	—	3947	3090	3288	3486	3453	—	7135	5927	5917	6351	—	181	192	180	182	—	181	192	180	182			
RG H4	—	3667	2720	3123	3357	3217	—	6658	5215	5570	6050	—	182	192	178	181	—	182	192	178	181			
<b>RG H12</b>	—	—	—	—	<b>3162</b>	<b>3162</b>	—	—	—	—	<b>5737</b>	—	—	—	—	<b>182</b>	—	—	—	—	—	<b>182</b>		
RG H61	—	—	2882	3335	3460	3226	—	—	5531	6001	6289	—	—	192	180	182	—	—	192	180	182	182		
Sp. G-70	—	4021	2927	3129	3283	3340	—	7277	5615	5398	5867	—	181	192	172	179	—	181	192	172	179			
Sp. G-117	3396	3610	2859	3179	3251	3259	5686	6547	5488	5640	5868	168	181	192	177	180	168	181	192	177	180			
Sp. G-126	3643	3359	2741	3305	3362	3282	6205	6091	5262	5892	6122	170	181	192	178	182	170	181	192	178	182			
Sp. G-168	—	—	—	2909	3453	3181	—	—	—	5227	6291	—	—	—	180	182	—	—	—	—	180	182		
Sp. G-172	—	—	—	3164	3303	3234	—	—	—	5643	5989	—	—	—	178	181	—	—	—	—	178	181		
Sp. NF3	—	—	—	2890	2921	2906	—	—	—	5178	5248	—	—	—	179	180	—	—	—	—	179	180		
VA 116	3610	3389	2934	3341	3433	3341	6127	6138	5630	5987	6263	170	182	192	179	183	170	182	192	179	183			

**New variety for 1999 is in bold.**

<sup>1</sup> Averages 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, 1998.**

Variety	Grade Index <sup>1</sup>	Days to Flower	Plant Height (in.)	Leaf No.	Ground Suckers per plot <sup>2</sup>	Disease Reactions <sup>3</sup>			
						BS	TMV	RK	GW
C 319	79	66	33.9	18.0	6.7	L	S	S	L
C 371 Gold	75	60	32.3	18.1	3.7	VH	S	S	M
CU 263	74	59	29.8	18.0	2.0	L	S	R	L
K 149	79	65	32.4	20.2	0	M	S	R	H
K 326	80	68	32.4	19.1	1.0	L	S	R	L
K 346	70	66	32.5	19.0	0.3	H	S	R	H
K 358	77	63	31.6	18.7	0	M	S	R	M
K 394	78	65	29.8	18.4	0	H	S	S	L
K 730	78	65	33.4	19.4	0.3	L	S	R	M
GL 939	80	63	31.1	19.0	4.7	M	S	S	M
NC 27 NF	80	NF <sup>4</sup>	36.4	19.6	0.7	L	S	S	L
NC 37 NF	81	NF <sup>4</sup>	35.4	19.1	2.0	L	S	R	L
NC 55	80	70	31.6	19.8	0	L	S	R	L
NC 71	76	63	32.1	19.5	1.7	VH	S	R	M
NC 72	77	67	35.2	19.1	0.7	VH	S	R	L
NC 567	74	61	32.8	17.9	6.3	L	R	R	M
NC 729	78	63	28.1	18.6	1.7	L	S	R	H
OX 207	78	68	32.8	19.5	0	H	S	R	H
OX 940	77	60	29.4	18.5	2.3	H	S	S	M
RG 11	78	65	33.0	18.0	0.3	L	S	R	M
RG 17	79	65	31.5	19.5	0	L	S	R	M
RG 22	78	65	29.8	19.1	3.7	M	S	R	H
RG 81	81	66	33.6	20.3	0	L	S	R	L
RG H4	75	66	35.4	18.9	0	M	R	R	H
<b>RG H12</b>	<b>80</b>	<b>65</b>	<b>31.9</b>	<b>19.1</b>	<b>0.3</b>	<b>M</b>	<b>S</b>	<b>R</b>	<b>M</b>
RG H61	81	62	32.6	17.3	1.7	M	S	R	L
Sp. G-70	62	65	31.7	18.2	2.3	H	S	R	M
Sp. G-117	75	63	29.0	17.9	1.7	M	S	R	M
Sp. G-126	81	66	33.8	18.7	0.3	L	S	R	L
Sp. G-168	79	67	33.4	18.4	0.7	VH	S	R	H
Sp. G-172	77	66	32.3	19.4	1.3	VH	S	R	M
Sp. NF3	75	NF <sup>4</sup>	35.1	18.1	0	H	S	R	H
VA 116	80	63	33.9	17.7	5.0	M	S	S	L

**New variety for 1999 is in bold.**

<sup>1</sup> Grade index is a numerical quality rating based on government grade. High ratings are best.

<sup>2</sup> Ground suckers/22 plant plot.

<sup>3</sup> Disease reaction - H = highly resistant; M = moderate; L = low; S = susceptible; R = resistant; BS = black shank (VH ratings are for Race 0 of *Phytophthora*; resistance to Race 1 may be considerably lower); TMV = tobacco mosaic virus; RK = root knot; GW = Granville wilt.

<sup>4</sup> NF = nonflowering. Plants should be topped at 20 to 22 harvestable leaves.

**Table 4. Percentage of certain color grade factors of varieties tested at four locations in 1998.**

Variety	L,F	K	KR	V	KL,KF	KM	G,GK
K 326	35	41	4	10	10	0	0
K 346	42	24	9	0	20	5	0
K 394	37	43	5	0	10	5	0
NC 71	32	52	0	4	11	1	0
NC 72	30	49	0	15	0	6	0
NC 37 NF	61	26	0	0	9	4	0
OX 207	47	39	0	0	4	5	5
RG 81	48	42	0	0	5	0	5
RG H4	43	30	0	6	16	0	5
<b>RG H12</b>	<b>48</b>	<b>43</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>
Sp. G-168	41	53	0	2	0	0	4
Sp. G-172	39	40	0	1	15	5	0
Sp. NF3	64	23	5	1	3	4	0

**New variety for 1999 is in bold.**

<sup>1</sup> L = lemon; F = orange; K = variegated; KR = variegated red; V = greenish; KL = variegated lemon; KF = variegated orange; KM = variegated mixed; G = green; GK = green variegated.

**Table 5. Harvest rate (cumulative percentage by harvest) as a measure of maturation patterns.<sup>1</sup>**

Variety	So. Piedmont				Charlotte				Halifax				
	H1	H2	H3	H4	H1	H2	H3	H4	H1	H2	H3	H4	H5
K 326	10	28	52	100	20	48	90	100	13	31	52	100	—
K 346	11	33	47	100	19	53	92	100	14	34	57	100	—
K 394	11	27	44	100	23	58	94	100	15	36	60	100	—
NC 71	12	29	48	100	20	45	89	100	15	36	60	100	—
NC 72	12	29	45	100	18	44	90	100	15	34	53	100	—
NC 37 NF	10	25	45	100	19	46	89	100	11	25	40	52	100
OX 207	10	29	52	100	19	46	85	100	14	35	55	100	—
RG 81	11	29	46	100	20	45	88	100	18	37	57	100	—
RG H4	13	37	53	100	20	52	94	100	15	33	52	100	—
<b>RG H12</b>	<b>14</b>	<b>34</b>	<b>58</b>	<b>100</b>	<b>23</b>	<b>54</b>	<b>93</b>	<b>100</b>	<b>16</b>	<b>34</b>	<b>53</b>	<b>100</b>	<b>—</b>
Sp. G-168	10	28	43	100	20	56	93	100	16	33	53	100	—
Sp. G-172	11	26	49	100	24	55	93	100	19	38	56	100	—
Sp. NF3	13	36	50	100	20	51	86	100	13	28	41	54	100

**New variety for 1999 is in bold.**

<sup>1</sup> Harvest 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.



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