

LD
5655
A761
B87
2000
C.2

Virginia
Cooperative
Extension

REVISED 2000



Tobacco

PUBLICATION 436-417

Burley Tobacco Variety Information for 2000

C. A. Wilkinson, D. R. Peek, T. D. Reed, and C. S. Johnson*

Four new varieties will be commercially available to tobacco producers in 2000. NC 2000 and R 712 met the chemical and physical standards in the 1998 Regional Variety Evaluation Program. R 630 and NBH 98 met the chemical and physical standards in the 1997 and 1995 Regional Variety Evaluation Program, respectively. 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.

NC 2000 (tested as DH 408) was developed by North Carolina State University. This is the first variety to be released with some resistance to blue mold. The blue mold resistance is derived from Ovens 62, an Australian variety. NC 2000 is lower yielding but similar in quality to KY 14. It is resistant to tobacco mosaic virus and wildfire.

R 630 (tested as R 99x) and **R 712** (tested as R 710) were developed by Rickard Seeds. R 630 is similar to TN 90 for yield and disease resistance. It matures about a week earlier than TN 90. R 630 has a small stalk and is easy to handle. R 712 is a stand up variety with good quality. It is moderate to late in maturity. R 712 is resistant to tobacco mosaic virus and black root rot. It has no resistance to black shank.

NBH 98 (tested as N 5789) was developed by Newton Seed. It was similar in yield and quality to KY 14 and VA 509 when averaged across eight test locations. It is medium early in maturity and has a low level of resistance to black shank.

Information is provided for widely grown and recently released varieties in Tables 1 to 3 of this publication. Average performance of twelve varieties in the 1999 Virginia Official Variety Tests (OVT) are shown in Table 1. These tests were conducted in Washington (B. Miller, Jr. farm, G. Thomas farm, and Southwest Virginia Agricultural Research and

Extension Center), Lee (H. Scott farm), and Scott (L. Culbertson farm) 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 burley 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 1995 to 1999 data are also presented in Table 2. Do not compare the average yield of varieties unless each variety was grown the same number of years. Yields in 1995 were low due to a combination of a dry growing season and the presence of blue mold.

Information on agronomic performance and disease resistance levels is given in Table 3. 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 production system. Varietal resistance alone cannot prevent losses to diseases. Any variety may suffer damage when disease causing organisms are present and when weather conditions favor their development. An effective pest management program will also include crop rotation and other cultural control practices. Combining varietal resistance with crop rotation, early root destruction, and proper use of labeled pesticides is the only way to achieve consistent, cost-effective pest control.

* Associate Professor of Agronomy; Extension Specialist, Burley Tobacco; Extension Agronomist, Tobacco; and Extension Plant Pathologist, Tobacco, respectively; Virginia Tech, Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA.



VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, religion, sex, age, veteran status, national origin, disability, or political affiliation. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. J. David Barrett, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; Lorenza W. Lyons, Administrator, 1890 Extension Program, Virginia State, Petersburg.

VT/028/0300/1M//436417



VIRGINIA STATE UNIVERSITY

Table 1. Results from Virginia Burley Tobacco Variety Tests, Yield, Value, Price and Grade Index, 1999.¹

Variety	State Average		Southwest VA		B. H. Miller		G. Thomas		H. Scott		L. Culbertson	
	Yield	Price ²	AREC		farm		farm		farm		farm	
	lbs/A	\$/cwt	Yield	Price	Yield	Price	Yield	Price	Yield	Price	Yield	Price
			lbs/A	\$/cwt	lbs/A	\$/cwt	lbs/A	\$/cwt	lbs/A	\$/cwt	lbs/A	\$/cwt
KY 14	2478	170	2140	172	3230	173	2620	168	2990	173	1550	161
KY 910	2571	186	2193	185	3000	184	2140	189	3170	188	1920	187
TN 86	2750	188	2738	184	3250	193	2650	189	3370	184	1640	190
TN 90	2779	182	2674	174	3270	179	2140	191	3070	184	2100	190
TN 97	2888	186	2422	186	3020	190	2600	190	3320	176	2790	190
Bu 21 x KY 10	2790	178	2570	164	3310	176	2810	187	3240	184	2040	189
KY 14 x L8	2861	187	2864	180	3220	191	2620	191	3440	188	1920	190
NC BH129	3017	185	2567	184	3230	191	2130	170	3230	176	3040	190
Clay's 403	2875	182	2201	165	3360	189	2590	169	3240	188	2700	187
HY 502	2739	185	2567	177	2900	189	2450	189	3310	188	2180	187
PF 561	2636	183	2452	185	3030	189	2280	185	3320	184	1740	173
R 711	2701	177	2293	172	3060	189	2500	189	3320	166	2130	180
Location Average	2757	182	2473	177	3157	186	2461	184	3252	182	2146	185
KY 14	Value \$/A	Grade ³ Index	Value \$/A	Grade Index	Value \$/A	Grade Index	Value \$/A	Grade Index	Value \$/A	Grade Index	Value \$/A	Grade Index
KY 910	4250	57	3693	57	5585	58	4410	45	5225	68	2495	43
TN 86	4787	66	4070	63	5519	58	4053	64	5967	82	3591	61
TN 90	5150	67	5030	61	6262	67	5019	65	6196	76	3113	62
TN 97	5034	60	4664	51	5857	48	4092	70	5632	78	3982	62
Bu 21 x KY 10	5355	65	4505	60	5751	69	4950	74	5860	66	5304	65
KY 14 x L8	4969	57	4221	42	5832	45	5250	59	5977	76	3847	65
NC BH129	5359	68	5155	55	6139	73	4994	74	6490	80	3651	64
Clay's 403	5587	65	4728	61	6165	75	3628	37	5675	62	5781	62
HY 502	5279	63	3620	38	6335	75	4369	38	6100	76	5059	63
PF 561	5090	67	4557	55	5482	73	4626	70	6235	77	4085	62
R 711	4838	64	4527	66	5727	75	4220	58	6097	74	3002	42
	4762	54	3953	43	5784	68	4721	69	5486	50	3823	53

¹ Tests were conducted in Washington (Southwest Virginia Ag. Res. and Ext. Ctr., B. H. Miller Jr., and G. Thomas farms), Lee (H. Scott farm), and Scott (L. Culbertson farm) counties in 1999.

² Based on season average prices for Virginia.

³ Grade index is a numerical quality rating based on government grade. High ratings are best.

Table 2. Virginia Burley Tobacco Official Variety Test Results by Years, Southwest Virginia Agricultural Research and Extension Center, Glade Spring, VA.

Variety or Hybrid	Yield, lbs/A					Avg.	Value ² , \$/A					Grade Index ³				
	1995	1996	1997	1998	1999		1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
KY 14	1481	1741	2251	2576	2140	2038	2723	3273	4234	4904	3693	71	70	55	74	57
KY 908	—	1830	2164	2160	2488	2161	—	3440	4099	4095	4566	—	76	55	76	62
KY 910	—	—	—	—	2193	2193	—	—	—	—	4070	—	—	—	—	63
TN 86	1441	2347	2734	2483	2738	2349	2654	4412	5179	4730	5030	77	78	68	72	61
TN 90	1473	2162	2523	2330	2674	2232	2709	4063	4745	4433	4664	75	75	63	73	51
TN 97	—	—	2459	2491	2422	2457	—	—	4685	4749	4505	—	—	69	75	60
Bu 21 x KY 10	1548	2476	2614	2613	2570	2364	2847	4641	4895	4950	4221	73	77	54	75	42
KY 14 x L 8	1671	2189	2352	2576	2864	2330	3078	4114	4327	4859	5155	86	76	47	74	55
NC BH 129	1521	2127	2461	2399	2567	2215	2798	3998	4637	4557	4728	73	76	72	72	61
Coop 313	1556	2110	2344	2400	2552	2192	2859	3959	4363	4544	4423	77	76	43	74	54
Clay's 403	1566	2018	2604	2736	2201	2225	2876	3794	4883	5180	3620	76	73	50	76	38
HY 502	—	2238	2340	2677	2567	2456	—	4208	4404	5074	4557	—	82	59	76	55
PF 561	1420	2305	2433	2623	2452	2247	2613	4333	4575	4968	4527	74	77	56	74	66
R 711	1382	2169	2657	3007	2293	2302	2540	4077	4999	5699	3953	69	76	62	76	43
Year Average	1506	2143	2457	2544	2480		2770	4026	4617	4826	4408	75	76	58	74	55

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

² Based on season average prices for Virginia.

³ Grade index is a numerical quality rating based on government grade. High ratings are best.

Table 3. Agronomic and Disease Information for Varieties Tested at the Southwest Virginia Agricultural Research and Extension Center, Glade Spring, VA.

Variety	Days to Flower	Plant height (in.)	Leaf No.	Leaf Length (in.)	Leaf Width (in.)	Disease Reaction ¹			
						BS	BRR	TMV	WF
KY 14	64	47.8	17.2	26.9	11.4	S	M	H	H
KY 908 ²	57	44.5	17.5	29.4	13.7	M	H	H	H
KY 910 ²	56	48.4	17.1	29.9	13.3	L	H	H	H
TN 86 ²	67	52.2	22.1	28.8	13.4	M	H	S	H
TN 90 ²	64	55.9	20.5	28.8	12.8	M	H	H	H
TN 97 ²	66	51.8	21.5	28.4	12.9	M	H	H	H
Bu 21 x KY 10	61	50.3	18.5	28.9	13.0	S	L	H	H
KY 14 x L8	56	42.7	17.4	33.5	14.2	³	M	H	H
NC BH129	56	48.3	17.5	30.3	13.3	S	H	H	H
Coop 313	62	48.3	18.9	28.2	12.6	S	MH	H	H
Clay's 403	66	56.0	19.9	27.2	11.5	S	M	H	H
HY 502	60	48.8	16.0	28.7	12.4	M	H	S	H
PF 561	61	52.0	19.0	29.2	13.3	M	H	H	H
R 711	66	45.3	17.7	29.0	11.9	S	M	H	H

¹ BS = black shank; BRR = black root rot; TMV = tobacco mosaic virus; and WF = wildfire.

Resistance levels: H = high; M = moderate; L = low; S = susceptible, and — = not determined.

² High resistance to tobacco vein mottling virus and medium resistance to tobacco etch virus.

³ High resistance to race 0 and no resistance to race 1.

Disclaimer

Commercial products are named in this publication for information purposes only. Virginia Cooperative Extension and Virginia Polytechnic Institute and State University do not endorse these products and do not intend discrimination against other products which also may be suitable.



BULK RATE
POSTAGE & FEES PAID
USDA
PERMIT NO. G268

Virginia Cooperative Extension
U.S. Department of Agriculture
Virginia Polytechnic Institute
and State University
Blacksburg, Virginia 24061