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Burley Variety Information for 1994

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Two new varieties, KY 907 and PF 561, met the chemical and physical standards in the 1992 Regional Variety Evaluation Program and seed will be commercially available to producers in 1994. The new varieties have been thoroughly evaluated, but under a narrow range of climatic and management conditions. Growers are advised to plant only a limited acreage of any new variety until more information becomes available. Brief descriptions of the new varieties are given below.

KY 907 (tested as KY 9070) was developed by the Kentucky Agricultural Experiment Station from a cross of KY 8538 by TN 86. The parentage of KY 8538, a breeding line, includes Tobacco Introduction 1406, KY 10, KY 16, KY 15, KY 17, Burley 49, and two other burley breeding lines. KY 907 is high yielding and late maturing with a semi-upright growth habit. It has a high level of resistance to black root rot, tobacco mosaic virus, and wildfire.

PF 561 (tested as EXP 1278) was developed by Pedigo Seed Farms from a cross of a private breeding line by TN 90. PF 561 is late maturing with moderate yields. It has a moderate level of resistance to both races of black shank and a high level of resistance to black root rot, tobacco mosaic virus, and wildfire.

Information is provided for widely grown or recently released varieties in Tables 1-3 of this publication. Average performance of 11 varieties included in the 1993 Virginia Official Variety Tests are shown in Table 1. Tests were conducted in Washington (B. Miller, Jr. farm and Southwest Virginia Agricultural Research and Extension Center), Lee (D. Cavin and H. Scott farms), and Scott (P. Johnson farm) counties under the joint supervision of Extension Agents in the respective counties and Virginia Polytechnic Institute and State University Research and Extension personnel. 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 1989 to 1993 data are also presented in Table 2.

Certain agronomic and disease information are 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 farm. Varietal resistance alone can not prevent losses to diseases. Crop rotation should be practiced in every field, no matter what variety is grown. Varietal resistance should be used in combination with crop rotation with nonhost plants, early root destruction, and the proper use of labelled pesticides to achieve consistent, cost-effective pest control.

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Table 1. Virginia Burley Tobacco Variety Test Results: Yield, Value, Price, Grade Index, 1993.[1]

Variety or Hybrid	State Average Yield lbs/A	State Average Price[2] $/cwt	Southwest VA Ag Res & Ext Yield lbs/A	Southwest VA Ag Res & Ext Price $/cwt	B. H. Miller farm Yield lbs/A	B. H. Miller farm Price $/cwt	D. Cavin farm Yield lbs/A	D. Cavin farm Price $/cwt	H. Scott farm Yield lbs/A	H. Scott farm Price $/cwt	P. Johnson farm Yield lbs/A	P. Johnson farm Price $/cwt
KY 14	2784	181	3138	178	3280	181	2710	181	2460	184	2330	183
KY 8959	2837	182	3253	181	3160	180	2750	183	2430	183	2590	184
KY 907	**2917**	**177**	**3055**	**176**	**3520**	**162**	**2780**	**182**	**2620**	**185**	**2610**	**182**
TN 86	2679	180	3124	176	3300	176	2710	182	2300	183	1960	183
TN 90	2619	181	2895	184	3040	175	2420	182	2220	181	2520	182
B 21 x KY 10	2909	182	3114	183	3500	179	2790	183	2470	184	2670	183
KY 14 x L8	2897	182	3166	184	3050	174	2860	184	2410	184	3000	184
NC BH 129	2981	181	3196	180	3290	178	3210	183	2190	180	3020	182
NC 2	2907	181	3075	182	3510	176	3020	184	2260	180	2670	183
R 711	2993	180	3184	176	3140	171	3310	184	2300	184	3030	183
PF 561	**2639**	**182**	**2916**	**182**	**3130**	**180**	**2670**	**183**	**2090**	**183**	**2390**	**182**
	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 14	5048	70	5590	61	5932	65	4917	69	4534	82	4267	75
KY 8959	5159	71	5864	70	5690	62	5045	74	4443	74	4752	75
KY 907	**5204**	**62**	**5373**	**51**	**5686**	**39**	**5067**	**72**	**4837**	**82**	**4759**	**67**
TN 86	4811	66	5507	62	5800	48	4945	73	4211	75	3591	73
TN 90	4735	71	5335	82	5315	63	4412	70	4014	72	4598	70
B 21 x KY 10	5302	74	5705	77	6263	62	5103	78	4553	82	4884	72
KY 14 x L8	5267	72	5833	81	5295	48	5268	78	4433	78	5505	75
NC BH 129	5381	65	5742	66	5845	51	5879	75	3945	68	5496	67
NC 2	5262	69	5617	78	6181	50	5546	75	4076	69	4891	73
R 711	5363	64	5601	57	5355	39	6098	80	4225	76	5535	69
PF 561	**4797**	**70**	**5296**	**73**	**5634**	**60**	**4887**	**78**	**3819**	**71**	**4349**	**67**

New varieties for 1994 are in bold.

[1]Tests were conducted in Washington (Southwest Virginia Ag. Res. and Ext. Ctr. and B. H. Miller, Jr. farm), Lee (Dale Cavin and Herbert Scott farms), and Scott (P. Johnson farm) counties in 1993.

[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 Experiment Station, Glade Spring, VA.[1]

Variety or Hybrid	Yield, lbs/A						Value, $/A					Grade Index				
	1989	1990	1991	1992	1993	Avg.	1989	1990	1991	1992	1993	1989	1990	1991	1992	1993
KY 14	2758	3122	2915	2885	3138	2964	4611	5443	5313	5299	5590	53	85	77	77	61
KY 8959	----	----	----	3344	3253	3298	----	----	----	6137	5864	--	--	--	75	70
KY 907	----	----	----	----	**3055**	**3055**	----	----	----	----	**5373**	--	--	--	--	**51**
TN 86	2918	3096	2843	3118	3124	3020	4881	5393	5178	5733	5507	53	88	78	76	62
TN 90	----	3342	2842	3057	2895	3034	----	5825	5204	5617	5335	--	87	86	78	82
VA 509	2754	2863	2959	2665	3097	2868	4599	4985	5393	4894	5609	66	85	78	75	73
B 21 x KY 10	2837	3383	2847	3178	3114	3072	4737	5892	5205	5812	5705	62	86	83	75	77
KY 14 x L8	2702	3026	2851	2877	3166	2924	4512	5270	5164	5257	5833	56	85	69	70	81
NC 2	----	----	----	3142	3075	3108	----	----	----	5783	5617	--	--	--	81	78
NC BH 129	2597	3083	2772	2926	3196	2915	4336	5379	5034	5335	5742	63	89	73	70	66
PF 561	----	----	----	----	**2916**	**2916**	----	----	----	----	**5296**	--	--	--	--	**73**
R7-11	2932	3315	3028	3200	3184	3132	4903	5784	5535	5839	5601	56	88	83	71	57
R 800	----	----	2944	3039	3219	3067	----	----	5361	5601	5855	--	--	81	82	76
Coop 313	----	3100	2970	2950	3110	3032	----	5400	5398	5379	5569	--	86	76	69	67
Coop 543	----	3334	2388	2352	2844	2730	----	5813	4340	4299	5117	--	88	73	72	68
Clay's 403	----	2851	3141	3180	3400	3143	----	4960	5699	5829	6025	--	86	71	75	60

New varieties for 1994 are in bold.

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

Table 3. Agronomic and Disease Information for Varieties Tested in VA, 1993[1].

Variety or Hybrid	Days to Flower	Plant Height (in)	Leaf No.	Leaf Length (in)	Leaf Width (in)	Disease Reaction[2] BS	BRR	TMV	WF	FW
KY 14	76	45.1	20.9	27.4	12.7	S	M	H	H	H
KY 8959	79	46.3	20.7	27.1	12.5	S	H	S	H	S
KY 907[3]	**75**	**47.8**	**21.4**	**27.5**	**13.5**	**-**	**H**	**H**	**H**	**M**
TN 86[3]	78	45.3	21.1	27.0	12.5	M	H	S	H	S
TN 90[3]	75	47.4	20.9	26.4	12.1	M	H	H	H	-
VA 509	76	44.1	21.5	27.9	12.8	M	L	S	H	L
B 21 x KY 10	68	41.8	19.4	27.6	12.8	S	L	H	H	L
KY 14 x L8	68	42.5	18.1	29.7	13.9	[4]	M	H	H	M
NC 2	80	49.6	20.5	27.1	13.0	L	H	H	H	S
NC BH 129	76	47.9	19.5	28.1	12.7	S	H	H	H	-
PF 561	**76**	**46.9**	**20.2**	**26.6**	**12.3**	**M**	**H**	**H**	**H**	**-**
R 711	77	47.1	18.6	27.3	12.5	S	M	H	H	-
R 800	76	46.0	21.3	28.2	13.2	L	H	H	-	H
Coop 313	77	48.2	20.3	27.0	12.8	L	MH	H	H	-
Coop 543	75	46.4	20.1	27.3	13.2	M	M	H	H	-
Clay's 403	79	46.1	20.6	27.9	13.2	S	M	H	H	-

New varieties for 1994 are in bold.

[1]Agronomic measures were made at the Southwest Virginia Ag. Res. & Ext. Center.

[2]BS=Black Shank; BRR=Black Root Rot; TMV=Tobacco Mosaic Virus; WF=Wildfire; FW=Fusarium Wilt. Resistance levels: H=high; M=moderate; L=low; S=susceptible; and -=not determined.

[3]High resistance to tobacco vein mottle virus and medium resistance to tobacco etch virus.

[4]High resistance to race 0 and no resistance to race 1.

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