

2011 Virginia Flue-Cured Tobacco Production Guide

Table 1. Reactions of Flue-Cured Tobacco Varieties to Black Shank in Research Station Small Plot Tests.

Varieties with the <i>Php</i> gene ¹	% Survival (Race 1) ²		2008-2010 Yield Index	
	2010	2008-2010	Black	No
			Shank (Race 1)	Black Shank
SP 225	92	89	78	87
NC 606	67	74	71	97
SP 227	71	71	69	97
NC 471	80	73	66	90
PVH 1596	78	72	.	.
NC 196	45	53	57	107
CC 67	70	57	57	100
PVH 1452	60	57	56	99
SP 220	49	58	55	96
PVH 1118	61	52	54	105
SP 168	62	58	54	92
NC 71	44	47	49	106
CC 37	41	47	49	105
NC 299	39	47	48	102
CC 700	51	44	46	105
NC 291	28	38	41	107
CC 27	40	35	38	107
NC 72	40	34	36	106
RG H51	35	35	35	101
NC 102	41	31	32	101
NC 297	30	29	31	105
<u>Varieties without the <i>Php</i> gene¹</u>				
SP 236	90	88	77	88
K 346	79	80	74	92
K 394	63	72	74	103
CC 35	31	51	58	113
CC 33	59	56	58	103
K 149	54	55	55	100
CC 13	45	51	53	104
PVH 2110	44	48	51	105
K 326	25	31	33	108
<u>New Varieties in 2011</u>				
GL 338	54	53	.	.
PVH 2277	45	53	.	.
GL 368	27	40	.	.

¹ Varieties with the *Php* gene possess high to very high resistance to race 0 of the black shank pathogen. Resistance to race 0 in varieties without the *Php* gene is similar to or higher than that to race 1.

² Average % Survival near 2nd harvest without a soil fungicide. Results are averages from 2008-2010 field experiments conducted by Clemson and North Carolina State Universities as part of the Regional Flue-Cured Tobacco Variety Evaluation Program.

³ Relative Yield Index = yield of each cultivar relative to the yield of all other cultivars in the experiment(s). Yield indexes for "No Black Shank" = average relative yield from the 2010 Virginia OVT test conducted at the Southern Piedmont AREC, Blackstone. Yield indexes for "Black Shank (race 1)" = yield index without black shank multiplied by the average estimated plant stand during harvest (% Survival/100).

⁴ Based upon the more limited data available.

Table 2. Results from 2010 On-Farm Black Shank resistance tests (race 1).

Varieties with the <i>Php</i> gene	Surry Co., NC Trial ¹		Mecklenburg Co., VA Trial	
	% Survival	Black Shank-Yield Index	% Survival	Black Shank-Yield Index
SP 225	.	.	91	83
PVH 1452	87	82	66	62
NC 196	85	89	37	39
PVH 1596	83	76	.	.
CC 700	78	81	.	.
NC 299	77	77	.	.
PVH 1118	76	81	.	.
CC 67	73	69	59	56
NC 102	69	70	.	.
CC 37	57	55	50	49
CC 27	.	.	24	23
<u>Varieties without the <i>Php</i> gene¹</u>				
CC 35	92	109	100	118
K 346	90	84	88	82
SP 236	95	83	.	.
CC 13	62	68	.	.
CC 33	62	63	75	76
PVH 2110	59	64	40	43
K 326	44	48	30	33
<u>New Varieties in 2011</u>				
GL 338	87	85	.	.
PVH 2277	81	81	.	.
GL 368	69	76	.	.

¹Disease data courtesy Dr. Mina Mila, Dept of Plant Pathology, NCSU.

2011 Virginia Flue-Cured Tobacco Production Guide

Table 3. Reactions of Flue-Cured Tobacco Varieties to Granville Wilt.

Varieties with the <i>Php</i> gene ¹	% Survival ²		2008-2010 Yield Index	
	2010	2008-2010	With Granville Wilt	No Granville Wilt
CC 27	95	87	94	107
CC 37	96	88	92	105
SP 227	97	93	90	97
SP 220	98	93	89	96
PVH 1452	98	86	85	99
NC 196	85	77	83	107
NC 471	97	89	80	90
NC 606	92	82	80	97
NC 72	88	73	77	106
CC 67	100	77	77	100
NC 299	93	74	76	102
SP 225	98	86	75	87
SP 168	93	81	74	92
CC 700	80	71	74	105
NC 297	79	70	73	105
NC 71	82	68	72	106
PVH 1118	80	69	72	105
NC 291	79	65	70	107
NC 102	87	69	70	101
PVH 1596	95	76 ³	.	.
RG H51	80	66	66	101
<u>Varieties without the <i>Php</i> gene¹</u>				
K 149	75	81	81	100
K 346	93	82	75	92
CC 33	85	72	74	103
CC 13	90	70	73	104
SP 236	89	81	71	88
PVH 2110	91	67	71	105
K 326	46	58	63	108
CC 35	43	38	43	113
K 394	50	31	32	103
<u>New Varieties in 2011</u>				
GL 338	95	68	.	.
PVH 2277	70	48	.	.
GL 368	93	74	.	.

¹ Varieties with the *Php* gene possess high to very high resistance to race 0 of the black shank pathogen. Resistance to race 0 in varieties without the *Php* gene is similar to or higher than that to race 1.

² Average % Survival near 2nd harvest without a soil fumigant. Results are averages from 2008-2010 field experiments conducted by Clemson University as part of the Regional Flue-Cured Tobacco Variety Evaluation Program.

³ Relative Yield Index = yield of each cultivar relative to the yield of all other cultivars in the experiment(s). Yield indexes for "No Granville Wilt" = average relative yield from the 2010 Virginia OVT test conducted at the Southern Piedmont AREC, Blackstone. Yield indexes "With Granville Wilt" = yield index without disease multiplied by the average estimated plant stand during harvest (% Survival/100).

⁴ Based upon the more limited data available.

2011 Virginia Flue-Cured Tobacco Production Guide

Table 4. Results from 2010 On-Farm Granville Wilt resistance tests.

Varieties with the <i>Php</i> gene ¹	Average: 5 NCSU Trials ¹		Brunswick Co., VA Trial	
	% Survival	Granville Wilt-Yield Index	% Survival	Granville Wilt-Yield Index
CC 67	81	77	99	99
PVH 1596	77	71	.	.
CC 37	73	71	100	105
SP 225	.	.	99	87
PVH 1452	70	66	94	93
SP 227	.	.	95	92
SP 236	61	53	.	.
NC 196	56	59	86	92
NC 299	54	54	83	84
NC 102	40	42	.	.
CC 700	38	40	.	.
PVH 1118	24	26	.	.
CC 65	19	22	.	.
CC 27	.	.	92	99
<u>Varieties without the <i>Php</i> gene¹</u>				
CC 33	50	50	83	85
PVH 2110	44	47	.	.
CC 13	37	40	.	.
CC 35	14	17	.	.
K 326	.	.	30	33
<u>New Varieties in 2011</u>				
PVH 2277	69	69	.	.
GL 338	56	55	.	.
GL 368	40	44	.	.

¹ Disease data courtesy Dr. Mina Mila, Dept of Plant Pathology, NCSU.