

## Flue-Cured Tobacco Variety Disease Ratings





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## Table 1. Susceptibility scales for flue-cured tobacco varieties to black shank and bacterial wilt, 2022 - 2024

			Black s	shank <sup>a</sup>	Bacterial wilta			
Variety	Ph <sup>b</sup> gene	Wz <sup>c</sup> gene	Susceptibility <sup>d</sup> scale values	Designation <sup>e</sup>	Survival (%) <sup>f</sup>	Susceptibility <sup>d</sup> scale values	Designation <sup>e</sup>	Survival (%) <sup>f</sup>
CC1063	_	-	1.7	Resistant	84	2.7	Moderately resistant	73
CC143	-	-	2.4	Resistant	76	2.3	Resistant	69
CC145	-	1	1	Highly resistant	89	1.8	Resistant	77
CC603	+	1	1.3	Highly resistant	79	2.1	Resistant	78
CC607	+	1	4.7	Moderately susceptible	18	2.9	Moderately resistant	78
CC700	+	-	2.8	Moderately resistant	72	3.0	Moderately resistant	68
GF318	+	-	5.1	Moderately susceptible	52	3.1	Moderately resistant	69
GL26H	-	-	6.9	Susceptible	41	5.3	Moderately susceptible	46
GL365	-	-	1.6	Resistant	86	3.0	Moderately resistant	65
GL386	-	-	6.2	Moderately susceptible	15	4.8	Moderately susceptible	49
GL395	-	-	2.3	Resistant	75	3.7	Moderately resistant	67
K326	-	ı	7.4	Susceptible	43	5.7	Moderately susceptible	41
K346	-	-	1.8	Resistant	80	2.1	Resistant	77
NC1006			3.2	Moderately resistant	66	4.1	Moderately resistant	55
NC1007			5	Moderately susceptible	27	3.6	Moderately resistant	67
NC 1226	+	+	2.7	Moderately resistant	67	1.5	Highly Resistant	82
NC 196	+	-	1.7	Resistant	82	3.4	Moderately Resistant	66
NC 299	+	-	6.8	Susceptible	42	1.9	Resistant	75
NC 606	-	-	3.3	Moderately resistant	66	3.1	Moderately Resistant	62
NC960	+	+	1.2	Highly resistant	75	3.6	Moderately resistant	65
NC991			1.4	Highly resistant	84	2.9	Moderately resistant	75

NC993			4.1	Moderately resistant	34	2.3	Resistant	73
NC 996			1.5	Highly resistant	87	1.2	Highly resistant	79
PVH1920			4.7	Moderately susceptible	17	3.1	Moderately resistant	64
PVH1940	+	1	2.9	Moderately resistant	55	3.0	Moderately resistant	73
PVH1980			5.3	Moderately susceptible	20	2.5	Moderately resistant	76
PVH2233			8.7	Highly susceptible	3	2.9	Moderately resistant	70
PVH2254	ı	ı	9	Highly susceptible	3	3.1	Moderately resistant	78
PVH2310	+	1	8.9	Highly susceptible	1	3.7	Moderately resistant	50
PVH2343	1	1	7.4	Susceptible	6	2.2	Resistant	76
PXH53			3.6	Moderately resistant	66	2.0	Resistant	82

<sup>&</sup>lt;sup>a</sup>Black shank data is from 2023-2024, and bacterial wilt data is from 2022-2024.

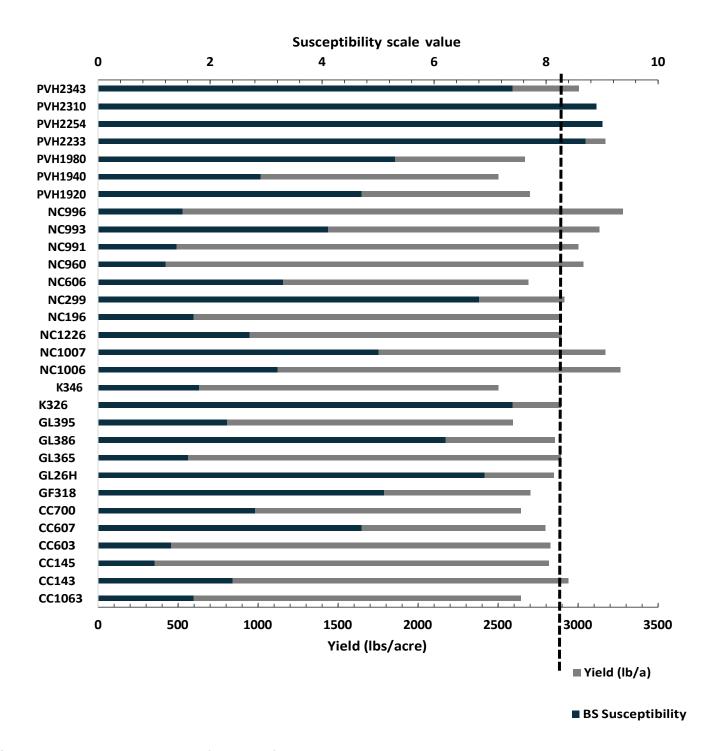
<sup>&</sup>lt;sup>b</sup>The *Ph gene* from Tex-Mex tobacco (*Nicotiana plumbaginifolia*) has been incorporated into several flue-cured tobacco cultivars to provide resistance against races 0 and 3 of *P. nicotianae*. Varieties with the *Ph gene* may vary in their resistance to race 1 depending on the polygenic resistance that is in their heritage.

<sup>&</sup>lt;sup>c</sup>The Wz gene confers resistance to race 0 and race 1.

<sup>&</sup>lt;sup>d</sup>Susceptibility scale values (SSV) are a 0-9 scale that reflects disease severity based on the number of observed healthy plants over multiple time periods in the season in fields heavily infested with disease. The higher the susceptibility scale value, the more susceptible the variety is to disease.

<sup>&</sup>lt;sup>e</sup>The designation is based on the 0-9 susceptibility scale. Designation goes as follows: SSV < 1.5 is "Highly resistant", SSV < 2.5 is "Resistant", SSV < 4.5 is "Moderately resistant", SSV < 6.5 is "Moderately susceptible", SSV < 7.5 is "Susceptible", and SSV < 8.5 is "Highly susceptible."

<sup>&</sup>lt;sup>f</sup>Survival (%) ratings are the percentage survival based on the number of observed healthy plants in fields heavily infested with disease. High survival ratings indicate higher levels of resistance.



**Figure 1**. Disease screening of several flue-cured tobacco varieties to black shank in Rocky Mount, NC, 2023-2024. Susceptibility scale values reflect disease severity based on the number of observed healthy plants over multiple time periods in the season in fields heavily infested with *Phytophthora nicotinae*. The higher the susceptibility value, the more susceptible the variety is to black shank.