

**Soybean** (*Glycine max*)

Septoria brown spot, (*Septoria glycines*)

Frogeye leaf spot (*Cercospora sojina*)

Soybean Vein Necrosis Virus (SVNV)

### **Soybean Disease Evaluations-2014**

Disease severity was evaluated at the soybean variety trial located in Middletown, Delaware. The variety trial tests the adaptability of soybean varieties to Delaware growing conditions and susceptibility to common diseases in the region. Few diseases were present during the 2014 growing season. Pathogens detected in the Middletown variety trial included Septoria brown spot (BS), Soybean Vein Necrosis Virus (SVNV), and Frogeye leaf spot (FLS). BS and SVNV were dispersed uniformly and at levels high enough to rate. FLS was rated as presence or absence on a variety, as levels in the canopy were low during the rating period.

The disease ratings were made on September 3<sup>rd</sup>, 2013. The stage of development was R6. Plots were identified with numbers and not variety identifications. There were 3-4 plots per variety. Disease ratings were made on whole plots by rating the mid-canopy for BS and upper canopy for SVNV using a 5-point scale where **0 = no disease, 1 = less than 10% disease; 2 = 10-25% disease; 3 = 25-50% disease; and 4 = more than 50% disease.** Two raters independently rated each plot and scores were averaged to minimize rater bias. Frogeye leaf spot was rated as present or absent (yes/no). Means are presented in Tables 1 and 2.

In the trial group 3 beans had an average rating of 1.5 for BS and 0.82 for SVNV. The average ratings for group 4 beans was 1.0 for BS and 0.3 for SVNV. Overall levels of diseases were low. Across Delaware, BS, SVNV, and soybean cyst nematode were most prevalent diseases encountered. FLS was detected in some fields at high levels (>25% severity at R6), but overall levels across the state were negligible. Other diseases detected were Downy mildew, Sclerotinia stem blight, Cercospora leaf blight/purple seed stain, Anthracnose, Phomopsis, and Sudden Death Syndrome (full-season beans).

Variety	BS*	SVNV**	FLS***
SS 3813N	1.19	0.37	N
USG 39RY43	1.19	0.46	Y
HS39T44	1.25	0.89	N
USG 37RY47	1.31	0.63	Y
USG 73P93R	1.33	0.98	N
HS39A22	1.38	0.79	Y
S39RY65	1.40	0.64	N
DB3815RR	1.41	0.88	Y
SS 3811N	1.44	0.47	Y
SS 3914NS	1.50	0.75	Y
S39-T3	1.56	1.20	Y
TS3959R2S	1.56	0.90	Y
USG 536RY24	2.25	0.90	N
DB3315RR	2.25	1.70	N

**Table 1.** Ratings of 14 group 3 beans in the University of Delaware wheat variety trials in 2014. The site located in Middletown, Delaware was used in this test. Disease ratings were made at R6 on whole plots by rating the mid-canopy for BS and upper canopy for SVNV using a 5-point scale where **0 = no disease, 1 = less than 10% disease; 2 = 10-25% disease 3 = 25-50% disease and 4 = more than 50% disease**. Two raters independently rated each plot and scores were averaged to minimize rater bias. FLS was rated as present or absent (yes/no). \* Septoria Brown Spot; \*\* Soybean Vein Necrosis Virus; \*\*\* Frogeye leaf spot

Variety	BS*	SVNV**	FLS***
Mycogen 5N479R2	.50	0.16	N
S48RS53	.53	0.07	N
HS47T12	.63	0.06	N
HS49T14	.67	0.28	Y
HBK5221R4	.78	0.27	Y
HBK4721RY	.80	0.01	N
S46RY85	.80	0.28	Y
SS4725N7	.80	0.12	N
HS42T14	.83	0.32	N
SS4913NR2	.84	0.06	Y
SS4700R2	.88	0.29	N
HS42A44	.93	0.27	Y
SS4514N	.95	0.19	Y
BX4959RY	1.00	0.53	N
HS45A14	1.00	0.07	N
Mycogen 5N423R2	1.00	0.40	Y
SS4714NS	1.00	0.16	Y
SS4917N	1.00	0.32	Y
USG74B42R	1.00	0.16	Y
HBK4620RY	1.08	0.40	Y
SS4312N	1.08	0.32	N
S41-J6	1.08	0.43	Y
USG74D32R	1.08	0.19	N
USG74B94RS	1.11	0.33	Y
DB4715RR	1.17	0.43	N
Mycogen 5N413R2	1.19	0.51	N
USG74F24RS	1.19	0.16	N
DB4415RR	1.25	0.37	N
S43RY95	1.25	0.15	N
USG74F12R	1.34	0.63	Y
SS4114N	1.38	0.50	N
HS44T14	1.42	0.26	N
USG74A69R	1.42	0.34	Y
S46-L2	1.50	0.33	Y
S43-K1	1.50	0.17	Y
S40RY25	1.56	0.24	N

**Table 2.** Ratings of 35 group 4 beans in the University of Delaware wheat variety trials in 2014. The site located in Middletown, Delaware was used in this test. Disease ratings were made at R6 on whole plots by rating the mid-canopy for BS and upper canopy for SVNV using a 5-point scale where **0 = no disease, 1 = less than 10% disease; 2 = 10-25% disease 3 = 25-50% disease and 4 = more than 50% disease**. Two raters independently rated each plot and scores were averaged to minimize rater bias. FLS was rated as present or absent (yes/no). \* Septoria Brown Spot; \*\* Soybean Vein Necrosis Virus; \*\*\* Frogeye leaf spot

