

Table 7. REACTION OF THE 1998 NORTHERN REGIONAL PERFORMANCE NURSERY
TO LEAF RUST & SOILBORNE WHEAT MOSAIC VIRUS (SBWMV)

Bob Hunger, Jean Marie Verchot, Craig Siegerist, & Lisa Myers, Entomology & Plant
Pathology Dept., Oklahoma State Univ, Stillwater, OK

Entry/Seln. No.	Leaf rust reaction ^W (seedling-grnhse)			SBWMV reaction (field) ^X	
	Rep 1	Rep 2	Rep 3	Visual (1-4) ^Y	ELISA ^Z
01 CI1442.....	S	S	S	1.3	-
02 CI17439.....	S	S	S	1.0	±
03 PI511307.....	S	S	S	2.3	-
04 SD92107.....	R	MR	MR	1.3	+
05 SD93267.....	S	S	S	1.0	+
06 SD93380.....	Seg-S	S	S	1.3	+
07 SD93338.....	S	S	S	1.6	+
08 SD93528.....	MS	MS	MS	1.6	+
09 SD94149.....	S	S	S	2.0	+
10 SD94227.....	S	S	S	2.0	+
11 SD94241.....	MS	S	S	1.0	-
12 NE94479.....	S	MS	S	1.6	+
13 NE94482.....	MS	S	S	1.6	+
14 NE94653.....	MS	MS	MS	2.0	+
15 NE94655.....	S	S	S	1.6	+
16 NE94654.....	MS	MR	MR	2.0	+
17 NE94589.....	S	S	S	1.3	+
18 NE95473.....	Seg-S	MS	MS	2.0	±
19 NE95553.....	S	S	S	2.0	-
20 NE95656.....	S	S	S	1.6	+
21 N95L189.....	S	S	S	1.0	-
22 N95L1224.....	S	S	S	1.0	-
23 N95L1226.....	S	MS	S	1.3	-
24 N95L1229.....	S	S	S	1.3	-
25 XNH1824.....	R	R	R	1.6	±
26 XH1881.....	R	MR	MR	2.0	-
27 XH1872.....	R	MS	R	1.3	-
28 XNH1778.....	S	MS	S	2.0	+

^WReaction to leaf rust was determined following inoculation of seedlings with a mixture of *Puccinia recondita* f. sp. *tritici* races collected in Oklahoma in spring, 1997. The avirulence/virulence formula of this mixture of races on a set of single-gene differentials plus selected cultivars was: 9 17 19 26 SXL / 1 2a 2c 3 3ka 11 16 24 30 DNE CTY. Reactions were obtained using Stakeman's rating system (USDA Bull. #E617, 1962, 53 pp) and translated for reporting to the following scale:

S=susceptible (Stakeman's 3 3- 3+ 4 3+c)
MS=moderately susceptible (Stakeman's X3; 3= 3=c 3-c 3-n 3c 3n)
MR=moderately resistant (Stakeman's X;3= X;3- X;3=c X;3-n X;3-c 3=n)
R=resistant (Stakeman's 0 ; 1 X;3=n X;1).

^XSymptom expression of SBWMV was much less than desired for an accurate rating. Thus, rely on these results with caution.

^YThree reps of each entry were rated for SBWMV symptoms twice in the spring. Thus, values are the average of six ratings/entry where: 1=no mosaic, no stunting; 2=slight mosaic and/or slight stunting; 3=moderate mosaic and/or moderate stunting; 4=severe mosaic and/or severe stunting.

^ZELISA=enzyme linked immunosorbent assay. Values from ELISA are indicative of the presence or absence of the virus in tissue, but should not be used exclusively to determine reaction (i.e., resistance or susceptibility) to SBWMV.

For additional explanation of the use ELISA in evaluating reaction to SBWMV, see Hunger et al. 1991. Crop Science 31:900-905. Samples from three reps with 3 wells/per rep were evaluated by ELISA and translated as follows:

- = values from ELISA indicate no SBWMV detected;
± = values from ELISA indicate little, if any, SBWMV detected;
+ = values from ELISA indicate SBWMV detected.