SWEET CORN HYBRID DISEASE NURSERY – 2009

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Sweet corn hybrids have been evaluated for their reactions to prevalent diseases in nurseries at the University of Illinois for 26 consecutive years. This report summarizes the reactions of 387 sweet corn hybrids to common rust, NCLB, Stewart's wilt, MDM, and SCLB based on their performance in the 2009 nursery. These hybrids also were evaluated for their responses to three HPPD-inhibiting, post-emergence herbicides: Callisto (mesotrione), Laudis (tembotrione), and Impact (topramezone).

Resistance and susceptibility are the two extremes of a continuum of host reactions to diseases. Resistance is a measure of the ability of the host to reduce the growth, reproduction, and/or disease-producing abilities of the pathogen, thus resulting in less severe symptoms of disease. Major genes for resistance, such as *Rp1-D*, *Ht1*, or *Mdm1*, can prevent or substantially limit disease development if specific virulence (i.e., races) is not prevalent in pathogen populations. Hybrids with major gene resistance usually have clearly distinguishable phenotypes. Major gene resistance may be ineffective if specific virulence occurs, such as the Rp1-D-virulent race of the common rust fungus.

In the absence of effective major gene resistance, disease reactions often range from partially resistant to susceptible. Hybrids can be grouped into broad classes such as: resistant (R), moderately resistant (MR), moderate (M), moderately susceptible (MS), and susceptible (S) based on severity of disease symptoms. This procedure produces statistically "overlapping" groups without clear-cut differences (e.g., the hybrid with least severe symptoms in the MR class does not differ significantly from the hybrid with the most severe symptoms in the R class). Thus, boundries between categories of disease reactions are somewhat arbitrary. Nevertheless, a consistent response of a hybrid over several trials produces a reasonable estimate of the disease reaction of that hybrid relative to the response of other hybrids. These reactions can be used to assess the potential for diseases to become severe and affect yield of that hybrid.

Certain post-emergence herbicides also can injure some sweet corn hybrids. Responses of sweet corn hybrids to several cytochrome P450-metabolized herbicides have been associated with a mutation in a specific cytochrome P450 gene on chromosome 5S. Classification of hybrids for responses to herbicides will help identify those with the greatest risk of injury.

MATERIALS AND METHODS

Hybrids. The 2009 nursery included 387 entries: 259 *sh2* hybrids, 48 *se* hybrids and 80 *su* hybrids. Hybrids with multiple endosperm mutations were placed in the most appropriate of the three categories. Seven hybrids (Challenger, GH 3369, Obsession, SEM 19, Signet, Suregold, Synergy) were entered in the trial twice. Separate entries of those seven hybrids are reported and serve as a measure of variability in the trial. Standard hybrids with relatively consistent reactions to common rust, Stewart's wilt, NLB, MDM, and SLB (Table 1) also were included to compare the results of the 2009 nursery to those from previous nurseries. Hybrids known to carry the *Rp1-D*, *Rp1-E*, *Rp1-I* or *Rp-G* rust resistance genes also were included and aid in the interpretation of responses to different populations of *Puccinia sorghi*.

Table 1. Reactions of sweet corn hybrids included as standards in the 2009 disease nursery

	Stewart's wilt			Common rust (races)				NLB (races 0&1)			MDM A&B			SLB		
Hybrid	Prior	09	Rating	Prior	avir	D	G	Prior	09	Rating	Prior	09	Rating	Prior	09	Rating
277A	4	3	2.5	6	7	5	9	5	5	32%	9	8	97%	3	4	3.3
Ambrosia	2	3	2.5	5	7	6	7	5	5	32%	9	9	100%	6	6	4.5
Bonus	1	1	1.3	Rp	Rp	6	Rp	5	5	29%	2	2	6%	7	6	4.5
El Toro	3	3	2.5	Rp	Rp	7	Rp	7	7	39%	2	4	21%	4	2	2
Eliminator	2	1	1.7	Rp	Rp	7	Rp	6	7	41%	1	2	10%	6	6	4.5
Garrison	2	2	2.2	Rp	Rp	Rp	Rp	2	1	10%	2	3	16%	3	3	2.5
GH 1829	5	3	2.5	Rp	Rp	Rp	5	6	7	42%	9	9	100%	6	6	4.5
Jubilee	9	9	5	5	6	6	6	8	9	50%	9	9	100%	4	4	3.3
Miracle	1	2	2	3	3	4	3	3	5	30%	9	9	100%	3	3	2.8
Sensor	5	6	4.2	4	4	5	4	4	6	36%	9	9	100%	3	1	1.8
Snow White	7	6	3.8	9	9	9	9	7	6	36%	3	6	67%	3	3	2.8
Tuxedo	3	2	2.3	3	3	2	3	2	4	23%	9	9	100%	1	1	1.3

Prior - reaction in previous years (1984-2004).
09 - reaction in 2009: 1 - resistant, 3 - moderately resistant, 5 - moderate, 7 - moderately susceptible, 9 - susceptible.
Rating -2009 mean rating: 1 to 9 for Stewart's wilt and SLB; 0 to 100% severity of NLB, 0 to 100% incidence of MDM.

Table 2. Criteria for classifying hybrid reactions to diseases in the 2009 nursery

		Classification of reaction							
		Resistant	Moderately resistant		Moderate	Moderately susceptible			Susceptible
Disease (rating)	Rp	1	2	3	4	5	6	7	8	9
Rust (%)										
avirulent	0	< 10	< 15	< 20	< 25	< 30	< 35	<40	< 45	≥45
D-virulent	0	≤ 10	≤ 15	≤ 20	≤ 25	≤ 30	≤ 34	≤38	≤42	>42
G-virulent	0	≤ 10	≤ 15	≤ 20	≤ 25	≤ 30	≤ 35	≤40	≤ 45	>45
NLB race 0&1 (%)		≤ 10	≤16	≤21	≤26	≤32	≤37	≤ 42	≤47	>47
Stewart's wilt (1-9)		< 1.75	< 2.5	<3	< 3.25	< 3.75	< 4.25	< 4.6	< 5	≥ 5
MDM-A&B (%)		0	≤ 10	≤ 20	≤ 35	≤ 50	<80	< 90	< 100	100
SLB (1-9)		< 2	<2.5	≤ 3	≤3.5	≤ 4	≤4.75	≤ 5.25	< 6.5	≥ 6.5
Callisto and Laudis (%)		<1	≤5	≤10	<15	<20	<25	<35	<50	≥50

See text for description of disease and herbicide assessments.

Experimental design and procedures. Each trial of a disease or herbicide was a separate experiment with replicates of hybrids arranged in randomized complete blocks. Each rep was split into two main blocks: *sh2* hybrids or *su* and *se* hybrids. Each experimental unit was a 12-ft. row with about 18 plants per row. Trials were planted in four different fields (Table 5) from May 21 to June 9 on the University of Illinois South Farms and included: Stewart's wilt (2 reps), NLB (3 reps), MDM (2 reps), SLB (2 reps), D-rust (3 reps), G-rust (2 reps), and avirulent rust (2 rep). Responses to Callisto (mesotrione), Laudis (tembotrione), and Impact (topramezone) were evaluated from 13, 2 and 2 reps, respectively.

Inoculation and disease assessment. Plants at the 4- to 6-leaf stage were inoculated with *Erwinia stewartii* (Stewart's wilt) by wounding leaves in the whorl and introducing bacteria in a 0.1 M saline solution into wounds. For the three foliar fungal diseases, (NLB, SLB, and common rust) spores were sprayed directly into plant whorls from the 3- to 8-leaf stages. Inocula consisted of conidia of either race 0 or race 1 of *Exserohilum turcicum*; conidia of *Bipolaris maydis* race O; and urediniospores of one of three isolates of *Puccinia sorghi*: avirulent on Rp genes (avirulent), Rp1-D-virulent (D-virulent), or Rp-G/Rp1-I/Rp1-E-virulent (G-virulent). Plants were inoculated with *Maize dwarf mosaic virus* strain A (MDMV-A) and *Sugarcane mosaic virus* (MDMV-B) at the 2- to 6-leaf stages. A phosphate buffer solution with a mixture of the viruses was sprayed directly onto leaves using a motorized backpack sprayer. One replicate each was inoculated at the 2- to 3-leaf or the 4-to 6-leaf stages.

The total number of plants and the number of plants with symptoms of MDM were counted about 2 wk after inoculation. Incidence (%) of MDM-infected plants was calculated for each hybrid from totals of all replicates. Symptom severity was rated for each of the other diseases. Stewart's wilt was rated before anthesis using a scale from 1 (symptoms within 2 cm of inoculation wounds) to 9 (severe systemic infection or dead plants). Chlorotic, Rp-resistant reactions were scored in the rust trials about 2 to 3 wk after the first inoculation. Percent leaf area infected with common rust and NLB were rated at harvest maturity in all rust and NLB trials. Hybrids with chlorotic NLB-lesions typical of Ht-resistance also were noted. Symptoms of SLB were rated on a 1 to 9 scale (mild to severe).

Herbicide application and assessment. Post-emergence herbicides were applied at twice the registered rates when the majority of plants ranged from the 4- to 5-leaf stages and were about 8 to 12 inches tall. Herbicide treatments included Callisto at 6.0 oz/A, Impact at 1.5 oz/A, and Laudis at 6.0 oz/A. Adjuvants included 1% crop oil concentrate (COC) and 28% urea ammonium nitrate (UAN) All fields were treated pre-emergence with metachlor + atrazine.

Corn injury was rated visually 1 and 3 weeks after application independently using two methods. One method scored each row for percentage of leaf area with bleaching symptoms. The other method classified rows from 1 to 9, where 1 = no injury apparent, 5 = moderate injury, 9=severe injury or dead plants.

Data analysis. Disease and herbicide injury ratings were analyzed by ANOVA. Hybrid reactions to diseases and herbicides were classified from 1 (highly resistant) to 9 (highly susceptible) according to standard deviations from the mean (z-scores), Bayesian least significant difference (BLSD) separations (k=100), and ranks of standard hybrids.

RESULTS AND DISCUSSION

Symptoms ranged from slight disease to severely infected plants (Tables 6,7). Reactions of standard hybrids to Stewart's wilt, common rust, NLB, MDM, and SLB were within expected ranges

(Table 1). The criteria for classifying hybrid reactions are listed in Table 2. Table 7 includes reactions and disease ratings of 387 hybrid entries **based solely on the 2009 trial**. This is the only data we have for some of these hybrids. For hybrids that have been evaluated previously, an assessment of disease reactions based on multiple trials is most representative of hybrid performance.

Stewart's wilt. Stewart's wilt ratings (1 to 9) ranged from 1.2 to 6 with a mean of 3.3. Sixty-six hybrids that were rated 4.25 or higher (i.e., frequent systemic infection) were classified as moderately susceptible to susceptible (7 to 9). Symptoms of Stewart's wilt were mild (rated less than 1.75) on 22 hybrids classified as resistant. An additional 87 hybrids were classified from resistant to moderately resistant. Ten hybrids rated 1.5 or below had highly resistant reactions. These included: A0873 5807, Bold, Bonus, BSS 5390, Code 944, CSAYP6-225, GH 0937A, GH 9597, GG Code 212, and Summer Sweet 7650 Y. If Stewart's wilt infection is non-systemic (i.e., ratings <3), yield is affected minimally.

Northern leaf blight. Severity of NLB (% leaf area symptomatic) ranged from 2% to 65% and averaged 28% in the 2009 trial In the two replicates inoculated with race 0, many hybrids had chlorotic lesions indicative of *Ht*-gene resistance. In those replicates, NLB was about ⅓ to ¼ less severe on hybrids with Ht1-resistance than if inocula were entirely race 1 as in the third replicate.

Severity was 10% or less 27 hybrids classified as resistant. An additional 87 hybrids were classified from R to MR with less than 21% leaf area infected. The effects of NLB on yield are minimal when severity is below 20%. Of the 114 hybrids with the most resistant reactions to NLB, 104 were sh2, 9 were su, and 1 was an se endosperm type. Of the 25 hybrids with the most severe reactions to NLB (>50% severity), 8 were sh2, 14 were su, and 3 were se.

Ninety-nine of the 114 hybrids classified from R to MR for NLB had chlorotic lesions indicative of an *Ht* gene that conveyed resistance to *E. turcicum* race 0. Only 5 of 84 hybrids classified from MS to S had Ht-gene resistant reactions. NLB severity averaged 20.5% and ranged from 2% to 46% on 179 hybrids with Ht-gene reactions. Severity averaged 35% and ranged from 6% to 65% for 208 hybrids without Ht-gene reactions.

The dozen hybrids with the least severe NLB symptoms (≤7% severity) included: Accede MRY, ACcensuate MRY, ACX 1204 MRW, Code 902, Code 947, HMX 9347 S, HMX 9349 S, Prime Plus, Summer Sweet 7641 MRW, Summer Sweet 8101 MRW, Tribute, and Winstar.

Maize dwarf mosaic. Incidence of MDM-infected plants ranged from 0 to 100% and averaged 67%. Most hybrids (158) were completely susceptible to MDM with 100% symptomatic plants. An additional 62 hybrids were classified from MS to S with more than 80% symptomatic plants. Hybrids classified from MS to S probably were susceptible but a few plants escaped infection.

Most of the 167 hybrids classified from R to M/MS (less than 80% incidence) probably carry the *Mdm1* gene although many may be heterozygous for this gene and/or may not carry additional "modifier" genes necessary for complete resistance to MDM. Consequently, 'MDM-resistant' hybrids displayed a range of responses. MDM-infected plants were not observed for 11 hybrids classified as resistant, including: Dallas, GH 0991, Samurai, SEM 9, SEM 39, SHY 6RH 1034, SUY 6RH 1182, SUY 6RH 1183, UY 1953 OK, and WH 1428. The incidence of symptomatic plants was 10% or less for 26 hybrids classified as R/MR. Incidence was 20% or less for 32 hybrids classified as MR. An additional 98 hybrids with 20% to 80% MDM-infected plants were classified from MR to MS. Incidence of infected plants averaged 18%; and 86 of the MR-to-MS hybrids had less than 40% MDM-infected plants in the replicate inoculated at the 4- to 6-leaf stages. Conversely, incidence of MDM averaged 75%; and 85 of the MR-to-MS-hybrids had 40% or more MDM-infected plants in the replicate inoculated at the 2- to 3-leaf stages.

Hybrids with R to M reactions to MDM (≤ 50% incidence) were prevalent among su endosperm types (57 of 80), common among sh2 endosperm types (87 of 259) and relatively uncommon among se endosperm types (5 of 48).

Southern leaf blight. SLB ratings (1 to 9 scale) ranged from 1 to 7.5 and averaged 3.25. Ratings were 5 or above for 46 hybrids classified as MS to

S. One hundred and eighty-nine hybrids rated 3 or below were classified from R to MR. Seventy-eight hybrids rated below 2 were classified as resistant.

Common rust. Low levels of D-virulent and G-virulent *P. sorghi* occurred in all rust trials but this contamination was not so prevalent that Rp-resistant reactions could not be identified soon after inoculation. However, as a consequence of this spread of inocula, rust severity at fresh market harvest was not necessarily 0% on all Rp-resistant hybrids. For example, the hybrid Bonus, which carries the *Rp1-D* gene, had 3% and 1% leaf area infected in the avirulent and G-virulent trials as a result of D-virulent inocula spreading to those trials (Table 3). In comparison, rust severity was 31% on Bonus in the D-virulent trial in which the *Rp1-D* gene was ineffective against the virulent race. Bold, another *Rp1-D*-resistant hybrid with a more susceptible genetic background than Bonus, had 24% and 18% rust severity in the avirulent and G-virulent trials as a result of contaminant, D-virulent inocula; but rust severity was 55% in the D-virulent trial when the *Rp1-D* gene was ineffective. Rust severity ranged from 0% to 5% on GH 1829 (*Rp-G*), GH 2269 (*Rp1-I*) and GH 5704 (*Rp1-E*) in the avirulent trial due to contaminant, G-virulent inocula; but ranged from 25% to 44% in the G-virulent trial when the *Rp-G*, *Rp1-I* and *Rp1-E* genes were ineffective (Table 3). Garrison, which carries the *Rp1-D* and *Rp1-I* genes was not nfected in any trial, indicating that isolates with a combination of virulence against both of these genes were not present.

Sixty-nine hybrids were Rp-resistant in all three trials: avirulent, G-virulent, and D-virulent. Similar to Garrison which is *Rp1-D/Rp1-I*, these hybrids probably carry the *Rp1-D* gene that conveys resistance to G-virulent isolates and an Rp gene that conveys resistance to D-virulent isolates (e.g., *Rp-G*, *Rp1-E*, or *Rp1-I*). Each inbred parent may contribute a different Rp gene to some of these hybrids. In other hybrids, one inbred may contribute multiple Rp genes via "compound rust resistance" in which combinations of various Rp genes are closely linked in coupling phase, e.g., *Rp1-DGJ, Rp1-JFC,* or *Rp-GFJ*.

An additional 63 hybrids were Rp-resistant to avirulent and D-virulent isolates, but susceptible in the G-virulent trial where severity ranged from 9% to 46% on these hybrids. These hybrids probably carry the *Rp-G, Rp1-I,* or *Rp1-E* gene similar to GH 1829, GH 2269 or GH 5704. The remaining 131 hybrids were Rp-resistant in the avirulent and G-virulent trials, but rust severity on these hybrids ranged from 17% to 55% in the D-virulent trial. These hybrids probably carry the *Rp1-D* gene.

Among the 124 hybrids that were not Rp-resistant, rust severity ranged from 6% to 63%, 14% to 54%, and 11% to 80% in the avirulent, D-virulent, and G-virulent trials, respectively. Only four hybrids (Code 917, GG Code 74, Merlin, and Tuxedo) were rated MR or better in all three trials with an average rust severity of 19%, 10%, 17%, and 15%, respectively. Mean rust severity over all three trials was less than 20% on two additional hybrids, Lancelot and Miracle. Thirty-eight hybrids with an average rust severity of 33% or higher were classified as MS to S in at least two of the three trials. Rust has the potential to be very severe on these 38 hybrids.

Table 3. Reactions of hybrids with known Rp genes in trials inoculated with different isolated of *Puccinia sorghi*

	Rust severity (%)		
Hybrid (Rp genes)	avirulent	D-virulent	G-virulent
Bonus (*Rp1-D*)	3	31	1
Bold (*Rp1-D*)	24	55	18
GH 1829 (*Rp-G*)	3	0	29
GH 2269 (*Rp1-I*)	0	0	25
GH 5704 (*Rp1-E*)	5	0	44
Garrison (*Rp1-D/Rp1-I*)	0	0	0
shaded areas - rust due to contaminant inocula			

Reactions to herbicides. Injury due to the three HPPD-inhibiting herbicides was assessed based on the amount of leaf area "bleached" (loss of chlorophyll) 1 and 3 wk after application. None of the sweet corn hybrids were injured by Impact (topramezone). Eleven hybrids were severely injured by Laudis (tembotrione) and Callisto (mesotrione): 177A, 3175, BC 375, Code 921, Code 941, CSAYP6-225, HMX 6386S, Merit, SEM 4, SEM 8, and SVR 0870 5770). Six of these eleven hybrids are known to be homozygous for a mutant cytochrome P450 (CYP) allele that conditions sensitivity to several P450-metabolized, post-emergence herbicides. Laudis mildly injured one additional hybrid and Callisto ildly injured an additional 58 hybrids (classified from 4 to 7).

Based on previous research, 80 hybrids were known to be homozygous or heterozygous for

CYP alleles that condition herbicide reactions. All six hybrids that were homozygous for the mutant CYP allele that conditions sensitivity were severely injured by Callisto and Laudis (Table 4). None of the 32 hybrids that were homozygous for the CYP allele that conditions tolerance were injured. Of 42 hybrids that were heterozygous for these CYP alleles, none were injured by Laudis while 21 were mildly injured (classified 4 to 6) and 2 were substantially injured (≥7) by Callisto.

Table 4. Reactions of hybrids with known CYP alleles to Callisto (mesotrione) and Laudis (tembotrione)

		Number of hybrids per category					
		Callisto			Laudis		
		1-3	4-6	7-9	1-3	4-6	7-9
Homozygous sensitive	*cyp cyp*	0	0	6	0	0	6
Heterozygous	*CYP cyp*	19	21	2	42	0	0
Homozygous tolerant	*CYP CYP*	32	0	0	32	0	0

Category: 1-3 - little or no injury; 4-6 - mild injury; 7-9 considerably injury

Table 5. Protocol for the 2009 University of Illinois sweet corn hybrid disease nursery

Field and Trial	Herbicide	Inoculated	Rated
551 (May 21)			
avirulent rust (2 reps)		June 9, 15, 17, 19, 22, 25	June 28 (Rp), Aug 3
MDM		June 28, 12, 19	June 30
M13S (May 21)			
NLB race 0	Callisto	June 17, 19, 22, 25, 29	August 5
G-rust (2 reps)	Callisto	June 15, 17, 19, 22, 25, 30	July 2 (Rp), Aug 3
Cruse 1300 (May 29)			
MDM	Callisto	June 15, 19; July 2	July 14
NLB race 0	Callisto	June 24, 29: July 2, 7, 9, 15	August 17
D-rust	Callisto	June 24, 26, 29; July 1, 7, 10	August 19
Stewart's wilt	Callisto	June 23, 25, 29	July 14
SLB	Callisto	June 26, 30; July 2, 8, 15	August 12
NLB race 1	Callisto	June 24, 29; July 2, 7, 9	August 21
Laudis (2 reps)		July 1	July 7, 22
Impact (2 reps)		July 1	July 7, 22
Callisto (2 reps)		July 1	July 7, 22
Cruse 1100 (June 9)			
D-rust (2 reps)	Callisto	July 7, 10, 13, 20	August 21-22
SLB	Callisto	July 8, 15, 23	Augsut 20
Stewart's	Callisto	July 1, 7	July 30

Table 6. Number of hybrids in each category from the 2009 University of Illinois sweet corn disease nursery

		Resistant		MR	Moderate			MS	Susceptible	
Trial	Rp	1	2	3	4	5	6	7	8	9
Common rust										
avirulent	257	1	1	7	10	26	34	21	11	12
D-virulent	132	0	3	9	24	68	70	51	18	12
G-virulent	200	4	4	17	28	44	42	16	15	15
NLB (races 0&1)										
Ht-resistsnt rxn		25	42	32	30	31	14	4	1	0
no Ht-resistant rxn		2	5	8	16	56	42	36	18	25
MDM(A&B)		11	26	32	54	26	18	15	47	158
Stewart's wilt		22	43	44	72	75	63	33	16	17
SLB		78	53	58	39	59	53	22	16	8
Callisto		52	150	116	30	11	9	8	9	2
Laudis		355	13	7	0	1	0	5	5	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
Sugary and sugar enhancer hybrids																					
su	Y	5	Sem	0875 5821	**Rp**	0	**Rp**	0	**Rp**	0	**3**	20	Ht	**2**	2.3	**3**	18	**6**	4.8	3	1
su	Y	5	Sem	A0873 5807	**Rp**	1	**3**	17	**Rp**	1	**4**	26	Ht	**1**	1.5	**2**	6	**7**	5.3	2	1
su	Y	5	Sem	A0875 7057	**Rp**	0	**Rp**	0	**Rp**	0	**5**	31	Ht	**6**	4	**3**	20	**5**	3.8	1	1
se	B	4	Sem	Absolute	**4**	24	**5**	28	**5**	26	**5**	32		**4**	2.8	**9**	100	**3**	2.8	2	1
se	B	3	Cr	Ambrosia	**7**	37	**6**	31	**7**	39	**5**	32		**3**	2.5	**9**	100	**6**	4.5	3	1
se	W	4	Cr	Argent	**5**	28	**6**	32	**5**	27	**5**	29		**1**	1.7	**8**	97	**1**	1.8	7	2
se	W	4	MM	Augusta	**5**	26	**5**	29	**5**	30	**5**	31		**3**	2.7	**8**	93	**6**	4.8	2	1
se	Y	3	Cr	Bodacious R/M	**Rp**	0	**Rp**	0	**Rp**	1	**7**	38		**5**	3.7	**5**	41	**6**	4.3	2	1
sesyn	B	3	Cr	Bojangles	**6**	33	**5**	27	**9**	48	**5**	31		**7**	4.3	**9**	100	**5**	4	1	1
su	Y	4	Rog	Bold	**Rp**	24	**9**	55	**Rp**	18	**5**	27		**1**	1.5	**4**	31	**2**	2.3	2	1
su	Y	5	Rog	Bonus	**Rp**	3	**6**	31	**Rp**	1	**5**	29	Ht	**1**	1.3	**2**	6	**6**	4.5	3	1
se	B	4	MM	Brocade TSW	**5**	27	**7**	36	**5**	28	**5**	27		**5**	3.5	**9**	100	**2**	2.3	2	1
su	Y	4	SnRv	Captain	**5**	28	**6**	32			**8**	43		**7**	4.5	**9**	100	**6**	4.5	3	1
sesyn	W	4	Cr	Celestial	**6**	31	**7**	36	**6**	31	**5**	27		**1**	1.7	**7**	90	**2**	2	7	2
sesyn	B	3	Sdw	Charisma	**4**	24	**4**	23	**4**	23	**5**	28		**5**	3.3	**9**	100	**8**	5.5	3	1
su	Y	3	Rog	Code 901	**Rp**	11	**7**	36	**Rp**	3	**7**	42		**1**	1.7	**3**	20	**5**	3.8	3	1
su	Y	3	Rog	Code 903	**Rp**	0	**Rp**	0	**Rp**	11	**5**	30	Ht	**5**	3.7	**3**	17	**2**	2	3	1
su	Y	4	Rog	Code 904	**Rp**	3	**5**	28	**Rp**	2	**9**	51		**9**	5.3	**4**	30	**5**	4	4	1
su	Y	5	Rog	Code 915	**Rp**	0	**Rp**	0	**Rp**	0	**6**	37	Ht	**5**	3.7	**2**	3	**7**	5.3	3	1
su	Y	3	Rog	Code 921	**6**	34	**7**	38	**6**	31	**6**	35		**9**	5.7	**2**	7	**7**	5	8	5
su	Y	4	Rog	Code 927	**Rp**	1	**Rp**	0	**4**	21	**4**	24	Ht	**3**	2.7	**5**	44	**7**	5	3	1
su	Y	5	Rog	Code 928	**Rp**	0	**Rp**	0	**Rp**	0	**1**	8	Ht	**6**	3.8	**6**	55	**3**	3	1	1
su	Y	4	Rog	Code 952	**Rp**	0	**Rp**	0	**Rp**	1	**8**	46	Ht	**9**	5	**2**	3	**1**	1.5	3	1
se	B	4	Rog	Code 955	**6**	32	**5**	30	**6**	32	**9**	48		**5**	3.3	**9**	100	**2**	2.3	2	1
se	W	4	Rog	Code 956	**Rp**	3	**5**	27	**Rp**	2	**6**	37		**6**	3.8	**8**	97	**1**	1.5	1	1
se	Y	4	Rog	Code 957	**Rp**	1	**5**	27	**Rp**	1	**8**	43		**7**	4.3	**9**	100	**2**	2.3	2	1
se	Y	2	Rog	Code 958	**8**	43	**6**	33	**9**	58	**9**	53		**5**	3.5	**9**	100	**9**	7	2	1
su	Y	4	HM	Coho	**Rp**	4	**5**	30	**Rp**	2	**9**	52		**7**	4.5	**5**	45	**5**	4	4	1
su	Y	4	Cr	CSUYP2-35	**Rp**	4	**6**	31	**Rp**	1	**8**	45		**3**	2.5	**4**	22	**4**	3.3	2	1
su	Y	4	Cr	CSUYP6-205	**Rp**	0	**Rp**	0	**Rp**	0	**9**	50		**5**	3.5	**9**	100	**8**	5.8	1	1
sesyn	B	2	Cr	CSYBF7-256	**Rp**	6	**Rp**	0	**8**	43	**6**	35		**6**	4	**8**	97	**1**	1	2	1
sesyn	B	2	Cr	CSYBF7-257	**Rp**	0	**Rp**	0	**Rp**	0	**5**	31		**7**	4.5	**8**	96	**1**	1.3	2	1
sesyn	B	3	Cr	CSYBF7-258	**7**	39	**6**	31	**9**	49	**6**	36		**5**	3.7	**9**	100	**7**	5	1	1
sesyn	B	2	Cr	CSYBF7-263	**6**	31	**5**	27	**7**	38	**6**	37		**6**	4	**8**	94	**3**	2.8	1	1
sesyn	W	4	Cr	CSYWF7-260	**6**	33	**5**	29	**9**	48	**5**	29		**4**	2.8	**9**	100	**7**	5	2	1
su	Y	4	Rog	Dallas	**7**	37	**7**	35	**7**	39	**9**	58		**9**	5.2	**1**	0	**3**	3	4	1
se	B	4	Cr	Delectable	**4**	22	**4**	23	**3**	17	**6**	34		**4**	3.2	**8**	94	**1**	1.8	3	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
se	W	5	MM	Denali	**5**	29	**6**	32	**5**	29	**5**	31		**2**	2.2	**9**	100	**3**	2.8	4	1
se	B	3	MM	Double Gem	**5**	26	**6**	31	**5**	28	**4**	23		**6**	4.2	**9**	100	**1**	1.8	2	1
su	Y	3	HM	Dynamo	**Rp**	4	**5**	26	**Rp**	1	**9**	50		**6**	3.8	**4**	25	**6**	4.3	6	1
su	Y	4	Sem	El Toro	**Rp**	7	**7**	37	**Rp**	3	**7**	39		**3**	2.5	**4**	21	**2**	2	3	1
su	Y	4	Cr	Eliminator	**Rp**	7	**7**	37	**Rp**	1	**7**	41		**1**	1.7	**2**	10	**6**	4.5	2	1
su	Y	5	Rog	Elite	**Rp**	5	**6**	33	**Rp**	2	**9**	51		**5**	3.5	**2**	6	**6**	4.3	3	1
su	Y	5	SnRv	Enterprise	**Rp**	1	**4**	25	**Rp**	2	**4**	23		**3**	2.7	**3**	13	**2**	2	2	1
su	Y	4	Cr	Evita	**Rp**	6	**5**	26	**Rp**	1	**8**	47		**5**	3.3	**2**	6	**5**	4	2	1
se	Y	2	Sem	EX 0873 5414	**Rp**	15	**5**	29	**Rp**	2	**6**	35		**6**	3.8	**3**	17	**6**	4.8	3	1
su	Y	5	Rog	GH 0937 A	**Rp**	2	**6**	31	**Rp**	2	**5**	32	Ht	**1**	1.3	**3**	14	**6**	4.5	3	1
su	Y	4	Rog	GH 0991	**Rp**	0	**Rp**	0	**Rp**	0	**5**	31		**2**	2.2	**1**	0	**1**	1.3	3	1
se	Y	4	Rog	GH 1829 (Rp-G)	**Rp**	3	**Rp**	0	**5**	29	**7**	42		**3**	2.5	**9**	100	**6**	4.5	2	1
su	Y	3	Rog	GH 2041	**Rp**	0	**Rp**	0	**6**	31	**9**	65		**8**	4.8	**8**	94	**2**	2.3	3	1
su	Y	4	Rog	GH 2298	**Rp**	0	**Rp**	0	**Rp**	0	**9**	53		**8**	4.8	**3**	15	**2**	2	4	1
su	Y	4	Rog	GH 2547	**Rp**	5	**5**	29	**Rp**	2	**7**	40		**5**	3.7	**4**	29	**5**	4	1	1
su	Y	2	Rog	GH 2669 (Rp1-I)	**Rp**	0	**Rp**	0	**4**	25	**4**	26	Ht	**4**	2.8	**5**	37	**6**	4.3	4	1
su	Y	4	Rog	GH 3369	**Rp**	0	**Rp**	0	**Rp**	0	**7**	41		**6**	3.8	**2**	10	**3**	2.5	3	1
su	Y	4	Rog	GH 3369	**Rp**	0	**Rp**	0	**Rp**	0	**7**	38		**7**	4.3	**4**	33	**5**	3.8	3	1
su	Y	2	Rog	GH 4902	**Rp**	0	**3**	19	**Rp**	2	**9**	52		**7**	4.3	**6**	69	**4**	3.3	3	1
su	Y	5	Rog	GH 5704	**Rp**	4	**Rp**	0	**8**	41	**4**	26	Ht	**3**	2.5	**5**	48	**2**	2.3	1	2
su	Y	5	Rog	GH 5704 (Rp1-E)	**Rp**	5	**Rp**	0	**8**	44	**4**	26	Ht	**3**	2.5	**5**	42	**2**	2.3	1	3
sesu	Y	4	Rog	GH 6014	**Rp**	9	**Rp**	0	**5**	28	**6**	36	Ht	**8**	4.7	**2**	6	**1**	1.8	4	1
su	Y	4	Rog	GH 6223	**Rp**	0	**Rp**	0	**Rp**	0	**4**	26		**4**	2.8	**5**	41	**1**	1.8	2	1
su	Y	4	Rog	GH 6377P	**Rp**	0	**Rp**	0	**Rp**	0	**6**	35	Ht	**4**	3.2	**2**	4	**6**	4.3	4	1
su	Y	5	Rog	GH 6462	**Rp**	0	**Rp**	0	**Rp**	0	**7**	38	Ht	**5**	3.5	**4**	23	**5**	4	2	1
su	Y	4	Rog	GH 8267	**Rp**	0	**Rp**	0	**5**	28	**5**	28	Ht	**6**	4	**2**	3	**6**	4.5	6	1
su	Y	5	Rog	GH 9597	**Rp**	0	**Rp**	0	**Rp**	0	**5**	31	Ht	**1**	1.5	**4**	28	**7**	5.3	4	1
su	Y	4	GG	Green Giant Code 74	**1**	6	**2**	14	**2**	11	**5**	30		**2**	2.2	**7**	86	**5**	3.8	1	1
su	Y	4	GG	Green Giant Code 146	**Rp**	0	**Rp**	0	**4**	21	**5**	29		**7**	4.3	**6**	52	**1**	1.3	2	1
su	Y	3	GG	Green Giant Code 166	**Rp**	1	**Rp**	0	**4**	21	**7**	39		**5**	3.7	**4**	33	**1**	1	2	1
su	Y	2	GG	Green Giant Code 174	**Rp**	2	**3**	20	**Rp**	1	**6**	33		**5**	3.7	**4**	27	**2**	2	3	1
su	Y	4	GG	Green Giant Code 175	**Rp**	1	**4**	22	**Rp**	1	**2**	14	Ht	**2**	1.8	**7**	86	**1**	1.5	1	1
su	Y	4	GG	Green Giant Code 188	**Rp**	1	**Rp**	0	**1**	9	**3**	20	Ht	**1**	1.7	**3**	19	**5**	4	1	1
su	Y	4	GG	Green Giant Code 201	**Rp**	1	**Rp**	0	**4**	25	**6**	36		**6**	4.2	**5**	39	**1**	1	2	1
su	Y	1	GG	Green Giant Code 203	**6**	33	**6**	33	**5**	26	**8**	47		**7**	4.3	**9**	100	**5**	4	3	1
su	Y	2	GG	Green Giant Code 204	**Rp**	2	**3**	19	**Rp**	1	**9**	53		**4**	3.2	**8**	93	**8**	6	2	1
su	Y	2	GG	Green Giant Code 206	**Rp**	1	**3**	17	**Rp**	1	**8**	44		**5**	3.7	**9**	100	**8**	6	2	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
su	Y	4	GG	Green Giant Code 210	**Rp**	1	**3**	20	**Rp**	4	**5**	27		**6**	4	**6**	54	**1**	1.5	2	1
su	Y	4	GG	Green Giant Code 212	**Rp**	0	**Rp**	0	**1**	10	**3**	21	Ht	**1**	1.3	**4**	35	**5**	4	2	1
su	Y	1	GG	Green Giant Code 218	**Rp**	6	**Rp**	9	**6**	34	**8**	46		**6**	4	**7**	85	**3**	2.5	3	1
su	Y	1	GG	Green Giant Code 219	**8**	49	**7**	38	**5**	30	**8**	47		**5**	3.7	**8**	93	**4**	3.3	3	1
su	Y	4	GG	Green Giant Code 220	**Rp**	0	**Rp**	0	**Rp**	0	**6**	33		**3**	2.5	**3**	12	**5**	3.8	3	1
su	Y	4	Sem	Harvest Gold	**Rp**	5	**4**	23	**Rp**	1	**3**	18	Ht	**1**	1.7	**6**	76	**5**	4	1	1
su	Y	3	HM	HM 2390	**Rp**	0	**4**	22	**Rp**	6	**9**	51		**7**	4.3	**7**	86	**4**	3.5	2	1
se	B	1	HM	HMX 6358 BES	**9**	60	**9**	48	**9**	80	**9**	50		**8**	4.8	**9**	100	**7**	5	2	1
su	Y	4	HM	HMX 6384	**Rp**	0	**Rp**	0	**Rp**	0	**9**	48		**6**	3.8	**4**	29	**1**	1	1	1
su	Y	5	HM	HMX 8376	**Rp**	2	**Rp**	0	**6**	31	**6**	35	Ht	**4**	3.2	**4**	25	**5**	4	1	1
su	Y	5	HM	HMX 8378	**Rp**	0	**Rp**	0	**Rp**	0	**7**	40		**4**	3	**4**	23	**5**	4	1	1
su	Y	5	HM	HMX 9385	**Rp**	0	**Rp**	0	**Rp**	1	**6**	36		**4**	2.8	**5**	41	**2**	2.3	4	2
su	Y	5	HM	HMX 9395	**Rp**	0	**Rp**	0	**Rp**	1	**4**	22		**2**	2.2	**2**	3	**3**	2.5	2	1
su	Y	5	HM	HMX 9396	**Rp**	0	**Rp**	0	**Rp**	3	**1**	9	Ht	**6**	3.8	**4**	24	**5**	4	2	1
se+	Y	4	Rog	Honey Select	**5**	27	**5**	29	**6**	31	**7**	42		**7**	4.3	**9**	100	**1**	1.8	1	1
su	Y	1	SnRv	Jet	**Rp**	2	**5**	27	**Rp**	3	**9**	49		**4**	3.2	**9**	100	**9**	7.3	2	1
su	Y	4	Rog	Jubilee	**6**	33	**6**	34	**6**	33	**9**	50		**9**	5	**9**	100	**4**	3.3	3	1
se	B	5	MM	Lancelot	**3**	17	**2**	15	**4**	21	**5**	31		**3**	2.7	**9**	100	**2**	2	2	1
se	B	3	MM	Luscious TSW	**6**	31	**5**	30	**6**	32	**5**	31		**6**	4.2	**9**	100	**3**	2.8	2	1
su	Y	4	Sem	Merit	**9**	50	**9**	43	**6**	34	**5**	31		**6**	4.2	**9**	100	**5**	4	9	9
su	Y	4	Sem	Merkur	**Rp**	3	**6**	32	**Rp**	4	**2**	14	Ht	**2**	2	**5**	40	**6**	4.8	2	1
se	Y	5	MM	Merlin	**3**	15	**3**	17	**3**	18	**5**	32		**3**	2.5	**9**	100	**1**	1.3	3	1
se	Y	4	Cr	Miracle	**3**	19	**4**	21	**3**	17	**5**	30		**2**	2	**9**	100	**3**	2.8	3	1
se	B	3	Cr	Mystique	**6**	31	**6**	33	**4**	24	**3**	21		**2**	2.3	**8**	93	**3**	2.8	5	1
se	B	1	MM	Native Gem	**8**	42	**6**	32	**8**	43	**5**	31		**6**	3.8	**9**	100	**5**	3.8	1	1
se	B	4	MM	Precious Gem	**4**	22	**4**	23	**4**	22	**6**	33		**2**	2	**9**	100	**1**	1.5	3	1
su	Y	2	SnRv	Prelude	**6**	34	**5**	30	**5**	29	**8**	45		**7**	4.3	**9**	100	**5**	4	2	1
se	B	2	HM	Reflection	**9**	53	**8**	40	**9**	73	**6**	33		**6**	4	**6**	73	**7**	5.3	2	1
su	Y	5	Rog	Rocker	**Rp**	0	**Rp**	0	**Rp**	0	**7**	41		**5**	3.5	**4**	34	**4**	3.3	1	1
se	B	3	Sem	SEM 15	**7**	36	**5**	26	**7**	38	**6**	35		**8**	4.8	**8**	92	**4**	3.5	2	1
se	B	3	Sem	SEM 19	**8**	44	**6**	31	**6**	34	**6**	33		**6**	4	**9**	100	**5**	3.8	1	1
se	B	3	Sem	SEM 19	**5**	28	**6**	33	**6**	32	**5**	30		**6**	3.8	**9**	100	**5**	4	2	1
se	B	3	Sem	SEM 23	**Rp**	4	**5**	28	**Rp**	1	**6**	33		**5**	3.5	**9**	100	**2**	2	2	1
se	B	3	Sem	SEM 31	**8**	48	**6**	33	**7**	39	**5**	31		**7**	4.3	**9**	100	**6**	4.5	3	1
se	Y	2	Sem	SEM 38	**Rp**	0	**Rp**	0	**Rp**	0	**5**	32		**4**	3	**2**	9	**6**	4.5	2	1
se	y	2	Sem	SEM 39	**Rp**	0	**Rp**	0	**Rp**	0	**6**	36		**3**	2.7	**1**	0	**6**	4.3	3	1
se	B	4	Sem	Sensor	**4**	20	**5**	27	**4**	24	**6**	36		**6**	4.2	**9**	100	**1**	1.8	2	1
se	Y	2	Cr	Sugar Buns	**5**	25	**5**	26	**4**	21	**6**	33		**5**	3.7	**9**	100	**5**	3.8	2	1

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					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
su	Y	4	Sem	SUY 6RH 1176	**Rp**	0	**4**	24	**Rp**	1	**7**	39		**5**	3.3	**9**	100	**7**	5	3	1
su	Y	5	Sem	SUY 6RH 1182	**Rp**	3	**5**	30	**Rp**	2	**6**	34	Ht	**7**	4.5	**1**	0	**7**	5.3	2	1
su	Y	5	Sem	SUY 6RH 1183	**Rp**	0	**Rp**	0	**Rp**	0	**5**	30	Ht	**4**	3.2	**1**	0	**8**	5.8	2	1
sb	B	2	HM	Sweet Chorus	**7**	39	**5**	30	**5**	29	**7**	38		**7**	4.5	**8**	91	**9**	7.3	2	1
sesy	B	3	Sem	Synergy	**3**	17	**4**	21	**5**	30	**4**	25	Ht	**6**	4	**8**	97	**6**	4.3	2	1
sesyn	B	3	Sem	Synergy	**4**	20	**5**	26	**5**	28	**5**	28	Ht	**5**	3.7	**8**	96	**5**	3.8	2	1
su	Y	4	Cr	Tamarack	**Rp**	0	**Rp**	0	**Rp**	0	**7**	41		**2**	1.8	**3**	20	**6**	4.3	2	1
se	B	1	Sem	Temptation	**8**	49	**6**	31	**8**	41	**6**	33		**7**	4.5	**9**	100	**9**	6.8	1	1
su	Y	3	HM	Turbo	**2**	10	**4**	21	**3**	17	**5**	30	Ht	**4**	3	**5**	36	**1**	1.8	5	1
se	Y	4	MM	Tuxedo	**3**	16	**2**	14	**3**	16	**4**	23		**2**	2.3	**9**	100	**1**	1.3	2	1
su	Y	5	SnRv	UY 0712 OJ	**Rp**	3	**5**	27	**Rp**	3	**6**	37		**5**	3.7	**2**	6	**4**	3.5	1	1
su	Y	5	SnRv	UY 1953 OK	**6**	30	**5**	29	**5**	28	**3**	18	Ht	**2**	2.2	**1**	0	**3**	2.5	2	1
su	Y	1	SnRv	UY 3435 OM	**Rp**	3	**5**	30	**Rp**	3	**7**	38		**7**	4.5	**8**	94	**9**	6.8	2	1
su	W	5	Rog	WH 1428	**Rp**	0	**Rp**	0	**Rp**	0	**5**	28		**4**	2.8	**1**	0	**3**	2.5	2	3
su	W	5	Rog	WH 2801 (Rp1-D)	**Rp**	14	**8**	40	**Rp**	12	**5**	31		**2**	2	**9**	100	**5**	4	2	2
Shrunken-2 and HQ sh2 hybrids																					
sh2	Y	3	IFS	177A	**6**	30	**6**	34	**7**	36	**7**	41		**2**	1.8	**9**	100	**4**	3.3	8	7
sh2	Y	3	IFS	179A	**5**	27	**6**	34	**5**	29	**5**	32		**2**	1.8	**8**	97	**7**	5	3	1
sh2	Y	4	IFS	182A	**Rp**	2	**6**	31	**Rp**	4	**1**	10	Ht	**1**	1.7	**9**	100	**1**	1.8	3	1
sh2	B	2	IFS	273A	**5**	27	**4**	25	**5**	27	**7**	40		**4**	3	**7**	87	**9**	6.8	4	1
sh2	B	3	IFS	277A	**7**	36	**5**	30	**9**	48	**5**	32		**3**	2.5	**8**	97	**4**	3.3	3	1
sh2	B	3	IFS	278A	**6**	34	**6**	33	**7**	40	**3**	21	Ht	**2**	2.2	**9**	100	**3**	3	3	1
sh2	B	4	IFS	282A	**Rp**	3	**7**	37	**Rp**	2	**2**	11	Ht	**2**	2.2	**9**	100	**3**	2.5	1	1
sh2	W	4	IFS	382A	**Rp**	5	**7**	37	**Rp**	2	**2**	12	Ht	**2**	2.3	**9**	100	**4**	3.3	3	1
sh2	Y	3	IFS	1179	**6**	33	**6**	31	**6**	34	**8**	46		**4**	3.2	**8**	97	**1**	1.8	4	1
sh2	Y	4	IFS	1183 M S34	**Rp**	2	**5**	30	**Rp**	2	**2**	13	Ht	**3**	2.7	**4**	21	**2**	2.3	3	1
sh2	Y	2	IFS	1277	**8**	44	**8**	42	**9**	55	**9**	48		**4**	3.2	**9**	100	**3**	2.8	2	1
sh2	Y	4	IFS	1280	**Rp**	1	**5**	30	**Rp**	1	**2**	14	Ht	**2**	1.8	**9**	100	**1**	1.8	2	1
sh2	Y	4	IFS	1283	**Rp**	2	**5**	26	**Rp**	2	**2**	11	Ht	**1**	1.7	**9**	100	**1**	1.5	3	1
sh2	B	2	IFS	2170	**7**	37	**6**	33	**8**	45	**7**	38		**4**	3.2	**9**	100	**8**	6	1	1
sh2	B	3	IFS	2178	**Rp**	3	**5**	26	**Rp**	2	**2**	13	Ht	**2**	1.8	**9**	100	**2**	2	3	1
sh2	B	4	IFS	2281	**Rp**	6	**6**	33	**Rp**	2	**2**	16	Ht	**1**	1.7	**9**	100	**2**	2.3	2	1
sh2	W	2	IFS	3173	**8**	40	**7**	36	**8**	41	**7**	40		**4**	3	**9**	100	**4**	3.3	4	1
sh2	W	3	IFS	3175	**7**	36	**9**	45	**9**	63	**8**	45		**4**	3.2	**9**	100	**5**	4	8	8
sh2	W	2	IFS	3474	**6**	34	**6**	31	**7**	37	**7**	38		**5**	3.7	**4**	31	**4**	3.3	4	1
sh2	B	4	Cent	74213B	**6**	32	**5**	30	**6**	34	**5**	27	Ht	**2**	2.3	**8**	97	**4**	3.3	3	1
sh2	Y	4	AC	Abco Var 232 Y	**Rp**	3	**6**	31	**Rp**	2	**5**	29	Ht	**3**	2.5	**4**	31	**3**	2.5	2	1
sh2	Y	4	AC	ACcede MR Y	**Rp**	3	**Rp**	0	**6**	33	**1**	4	Ht	**6**	4.2	**9**	100	**1**	1.3	2	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
sh2	Y	4	AC	Accensuate MRY	**Rp**	2	**Rp**	0	**5**	28	**1**	3	Ht	**4**	3.2	**9**	100	**1**	1	2	1
sh2	W	3	AC	ACcrue	**8**	44	**6**	34	**8**	42	**9**	48		**5**	3.7	**4**	27	**7**	5.3	3	2
sh2	B	3	AC	ACR 7156 BC	**Rp**	0	**Rp**	0	**4**	25	**2**	11	Ht	**3**	2.7	**9**	100	**5**	3.8	2	1
sh2	W	4	AC	ACX 1204 MRW	**Rp**	2	**Rp**	0	**5**	26	**1**	7	Ht	**4**	3.2	**9**	100	**1**	1.5	1	1
sh2	B	3	Sdw	Awesome	**6**	31	**5**	28	**6**	31	**7**	42		**2**	2.3	**8**	96	**5**	3.8	4	1
sh2	Y	4	HM	Bandit	**Rp**	8	**7**	37	**Rp**	5	**7**	40	Ht	**7**	4.5	**4**	23	**2**	2.3	2	1
sh2	Y	4	Sem	Basin R	**Rp**	6	**7**	37	**Rp**	2	**6**	37		**6**	4	**3**	16	**3**	3	7	1
sh2	B	6	Bas	BC 375	**6**	32	**6**	31	**4**	25	**2**	13	Ht	**4**	2.8	**8**	94	**3**	3	7	7
sh2	B	5	Bas	BC 503	**Rp**	10	**6**	32	**Rp**	1	**2**	12	Ht	**1**	1.7	**4**	29	**1**	1.8	3	1
sh2	B	5	Bas	BC 1735	**Rp**	4	**4**	22	**Rp**	1	**4**	25		**4**	3	**3**	16	**1**	1.5	2	1
sh2	W	3	Rog	Boreal	**Rp**	2	**7**	37	**Rp**	1	**1**	9	Ht	**2**	2.2	**9**	100	**8**	6.3	3	1
sh2	B	3	Rog	BSS 0977 VP A	**Rp**	0	**Rp**	0	**Rp**	0	**2**	12	Ht	**4**	3	**8**	96	**8**	6.3	3	1
sh2	B	3	Rog	BSS 0982	**Rp**	4	**6**	32	**Rp**	2	**8**	44		**8**	4.7	**4**	23	**3**	2.8	2	1
sh2	B	3	Rog	BSS 5390	**5**	26	**6**	31	**6**	34	**7**	41		**1**	1.5	**8**	91	**1**	1.3	3	1
sh2+	B	4	Cr	Bueno	**Rp**	2	**Rp**	0	**6**	31	**4**	25		**2**	2.2	**9**	100	**2**	2	3	1
sh2	Y	4	DM	C411	**Rp**	0	**Rp**	0	**Rp**	0	**5**	31		**2**	2.2	**3**	17	**1**	1.8	2	1
sh2	B	3	HM	Candy Corner	**Rp**	7	**7**	37	**Rp**	4	**6**	36		**6**	4	**4**	26	**6**	4.3	2	1
sh2	B	4	HM	Cavalry	**Rp**	4	**5**	30	**Rp**	1	**1**	9	Ht	**5**	3.7	**4**	27	**1**	1.5	1	1
sh2	Y	3	Sem	Challenger	**7**	37	**7**	35	**6**	34	**2**	16	Ht	**3**	2.7	**9**	100	**1**	1.5	2	1
sh2	Y	3	Sem	Challenger	**6**	33	**7**	38	**5**	28	**2**	14	Ht	**4**	2.8	**9**	100	**1**	1.8	2	1
sh2	Y	5	Rog	Code 902	**Rp**	0	**Rp**	0	**Rp**	0	**1**	5	Ht	**9**	5.2	**3**	12	**1**	1.5	2	1
sh2	Y	2	Rog	Code 905	**7**	39	**8**	39	**6**	35	**7**	41		**6**	4	**7**	89	**4**	3.5	1	1
sh2	Y	3	Rog	Code 907	**Rp**	0	**Rp**	0	**4**	24	**3**	20	Ht	**4**	3	**9**	100	**4**	3.5	3	1
sh2	Y	4	Rog	Code 909	**Rp**	1	**Rp**	0	**5**	28	**2**	14	Ht	**4**	2.8	**4**	33	**3**	3	3	1
sh2	Y	4	Rog	Code 910	**Rp**	2	**Rp**	0	**6**	33	**3**	21	Ht	**4**	2.8	**2**	3	**3**	2.5	2	1
sh2	Y	5	Rog	Code 911	**Rp**	0	**Rp**	0	**Rp**	0	**2**	11	Ht	**2**	1.8	**2**	9	**1**	1.8	3	1
sh2	Y	4	Rog	Code 912	**Rp**	1	**Rp**	0	**3**	20	**4**	26	Ht	**7**	4.3	**3**	16	**6**	4.5	2	1
sh2	Y	4	Rog	Code 913	**Rp**	0	**Rp**	0	**Rp**	0	**5**	28	Ht	**3**	2.7	**8**	95	**5**	4	2	1
sh2	Y	3	Rog	Code 916	**6**	30	**7**	36	**6**	32	**3**	19	Ht	**3**	2.7	**9**	100	**1**	1.8	2	1
sh2	Y	4	Rog	Code 917	**3**	18	**3**	19	**3**	19	**3**	21	Ht	**6**	4.2	**5**	46	**6**	4.5	2	1
sh2	Y	4	Rog	Code 918	**Rp**	1	**Rp**	0	**3**	17	**5**	32	Ht	**5**	3.5	**6**	53	**3**	3	3	1
sh2	Y	3	Rog	Code 919	**Rp**	0	**Rp**	0	**4**	23	**4**	22	Ht	**6**	4	**9**	100	**6**	4.3	3	1
sh2	Y	2	Rog	Code 929	**6**	33	**6**	32	**6**	33	**6**	35	Ht	**9**	5	**9**	100	**3**	3	2	1
sh2	Y	2	Rog	Code 930			**Rp**	0			**3**	19	Ht	**4**	2.8	**9**	100	**6**	4.8	3	1
sh2	Y	3	Rog	Code 931	**Rp**	3	**Rp**	0	**6**	33	**9**	53		**7**	4.5	**5**	42	**1**	1.8	1	1
sh2	Y	4	Rog	Code 932	**Rp**	5	**6**	34	**Rp**	5	**1**	8	Ht	**4**	2.8	**7**	89	**1**	1.5	2	1
sh2	B	4	Rog	Code 933	**Rp**	0	**Rp**	0	**Rp**	1	**7**	38		**9**	5	**8**	95	**2**	2.3	6	1
sh2	Y	4	Rog	Code 934	**Rp**	1	**Rp**	0	**3**	18	**5**	28	Ht	**4**	3.2	**4**	27	**5**	4	3	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
sh2	Y	4	Rog	Code 935	**Rp**	2	**7**	35	**Rp**	2	**3**	19	Ht	**6**	3.8	**9**	100	**5**	4	3	1
sh2	Y	4	Rog	Code 938	**7**	35	**7**	35	**6**	34	**6**	35		**6**	4.2	**5**	50	**2**	2	2	1
sh2	Y	4	Rog	Code 939	**7**	36	**8**	39	**7**	36	**5**	32	Ht	**6**	4.2	**4**	28	**7**	5	3	2
sh2	Y	4	Rog	Code 940	**Rp**	1	**Rp**	0	**5**	28	**5**	31	Ht	**8**	4.8	**5**	50	**3**	2.5	6	1
sh2	Y	4	Rog	Code 941	**7**	35	**7**	36	**6**	34	**7**	38		**4**	3.2	**2**	10	**8**	5.8	8	7
sh2	Y	4	Rog	Code 942			**Rp**	0			**1**	9		**4**	2.8	**6**	54	**5**	3.8	2	1
sh2	Y	5	Rog	Code 943	**Rp**	0	**Rp**	0	**Rp**	0	**3**	17	Ht	**5**	3.7	**4**	35	**2**	2	3	1
sh2	Y	5	Rog	Code 944	**Rp**	2	**Rp**	0	**4**	25	**2**	16		**1**	1.2	**5**	39	**6**	4.3	2	1
sh2	Y	5	Rog	Code 947	**Rp**	0	**Rp**	0	**Rp**	8	**1**	2	Ht	**5**	3.5	**3**	16	**6**	4.3	3	1
sh2	Y	3	Rog	Code 948	**Rp**	3	**4**	22	**Rp**	1	**9**	53		**6**	3.8	**9**	100	**2**	2	2	1
sh2	Y	4	Rog	Code 949	**Rp**	0	**Rp**	0	**Rp**	0	**3**	20	Ht	**2**	2.3	**4**	23	**3**	3	3	1
sh2	Y	5	Rog	Code 950			**7**	36			**4**	23	Ht	**8**	4.7	**9**	100	**6**	4.8	3	1
sh2	B	4	Rog	Code 951	**Rp**	0	**Rp**	0	**Rp**	0	**6**	36		**9**	5	**7**	89	**5**	3.8	7	1
sh2	Y	4	Rog	Code 953	**Rp**	4	**7**	36	**Rp**	4	**5**	30		**2**	2	**9**	100	**1**	1.3	2	1
sh2	W	3	Rog	Code 954	**Rp**	1	**5**	26	**Rp**	2	**3**	20	Ht	**4**	3.2	**3**	15	**6**	4.5	2	1
sh2	Y	4	Rog	Code 959	**Rp**	5	**7**	37	**Rp**	6	**3**	18	Ht	**4**	3	**3**	14	**5**	3.8	2	1
sh2	B	3	Rog	Code 960	**Rp**	3	**3**	17	**Rp**	2	**3**	21		**2**	2	**7**	80	**1**	1.5	1	1
sh2	W	3	AC	Constellation	**9**	50	**9**	43	**9**	60	**7**	40		**4**	3.2	**9**	100	**6**	4.5	2	1
sh2+	B	2	Cr	CSABF4-157	**8**	45	**9**	43	**9**	56	**5**	31		**5**	3.5	**9**	100	**7**	5	1	1
sh2+	Y	4	Cr	CSAYP6-225	**6**	33	**8**	40	**8**	41	**5**	31	Ht	**1**	1.5	**9**	100	**6**	4.5	8	8
sh2	Y	5	Cr	CSHYP6-229	**Rp**	0	**Rp**	0	**Rp**	0	**4**	22		**4**	2.8	**9**	100	**1**	1	3	1
sh2	W	5	Sem	Devotion	**6**	30	**6**	33	**6**	31	**4**	26	Ht	**4**	2.8	**9**	100	**5**	4	4	1
sh2	Y	4	DM	DMC 21-84	**Rp**	2	**5**	27	**Rp**	1	**5**	30	Ht	**3**	2.7	**3**	17	**7**	5.3	2	1
sh2	Y	4	DM	DMX 21-87	**Rp**	1	**4**	25	**Rp**	1	**5**	27		**2**	2	**5**	40	**6**	4.8	3	1
sh2	B	3	Sem	EX 0870 5788	**Rp**	10	**7**	36	**Rp**	3	**6**	36		**5**	3.5	**4**	24	**5**	4	5	1
sh2	Y	4	Cr	Fortitude	**Rp**	4	**7**	38	**Rp**	4	**3**	20	Ht	**6**	4.2	**9**	100	**5**	3.8	3	1
sh2	Y	4	SnRv	Galaxy	**Rp**	20	**8**	40	**Rp**	6	**4**	25	Ht	**7**	4.5	**9**	100	**4**	3.5	2	1
sh2	Y	3	Rog	Garrison	**Rp**	0	**Rp**	0	**Rp**	0	**1**	10	Ht	**2**	2.2	**3**	16	**3**	2.5	2	1
sh2	Y	4	GG	Green Giant Code 202	**Rp**	1	**Rp**	0	**4**	22	**5**	32		**4**	3	**4**	24	**1**	1.3	3	1
sh2	B	4	GG	Green Giant Code 214	**Rp**	3	**5**	29	**Rp**	1	**6**	34		**3**	2.5	**7**	85	**5**	3.8	2	1
sh2	Y	4	GG	Green Giant Code 215	**Rp**	1	**Rp**	0	**3**	18	**6**	34		**9**	5.2	**4**	32	**1**	1	3	1
sh2	Y	4	GG	Green Giant Code 216	**Rp**	2	**Rp**	0	**6**	33	**5**	32		**4**	3	**7**	90	**5**	3.8	3	1
sh2	Y	2	GG	Green Giant Code 221	**Rp**	0	**Rp**	0	**Rp**	0	**6**	35		**8**	4.8	**9**	100	**7**	5	2	1
sh2	Y	2	GG	Green Giant Code 222	**Rp**	1	**Rp**	0	**3**	20	**5**	29	Ht	**5**	3.7	**9**	100	**6**	4.8	2	1
sh2	Y	3	GG	Green Giant Code 223	**Rp**	1	**Rp**	0	**Rp**	1	**4**	25		**5**	3.5	**9**	100	**2**	2.3	3	1
sh2	Y	4	GG	Green Giant Code 226	**4**	20	**6**	34	**5**	29	**5**	30		**5**	3.7	**8**	97	**4**	3.3	3	1
sh2	W	4	GG	Green Giant Code 227	**Rp**	0	**Rp**	0	**2**	14	**5**	31		**5**	3.3	**6**	79	**4**	3.3	2	1
sh2	W	4	GG	Green Giant Code 228	**Rp**	2	**5**	27	**Rp**	1	**8**	43		**6**	3.8	**9**	100	**3**	2.5	2	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
sh2	Y	3	Rog	GSS 0951	**Rp**	1	**Rp**	0	**4**	25	**4**	25	Ht	**5**	3.7	**9**	100	**2**	2	3	1
sh2	Y	5	Rog	GSS 0952	**Rp**	0	**Rp**	0	**4**	22	**2**	11	Ht	**5**	3.7	**9**	100	**8**	5.8	3	1
sh2	Y	3	Rog	GSS 0966 A	**Rp**	1	**Rp**	0	**5**	26	**2**	11	Ht	**4**	2.8	**9**	100	**9**	6.8	3	1
sh2	Y	4	Rog	GSS-0974-c	**Rp**	2	**Rp**	0	**5**	29	**2**	15	Ht	**4**	2.8	**6**	74	**1**	1.5	4	1
sh2	Y	3	Rog	GSS 1477	**Rp**	2	**5**	27	**Rp**	2	**4**	22	Ht	**4**	3	**3**	12	**3**	2.8	2	1
sh2	Y	5	Rog	GSS 2259P	**Rp**	9	**Rp**	0	**5**	30	**4**	24	Ht	**4**	2.8	**3**	12	**3**	2.8	5	1
sh2	Y	4	Rog	GSS 3404	**Rp**	4	**7**	35	**Rp**	7	**4**	24	Ht	**6**	4.2	**4**	27	**1**	1.8	2	1
sh2	Y	5	Rog	GSS 4644-C	**3**	16	**6**	34	**5**	29	**3**	21	Ht	**8**	4.7	**9**	100	**2**	2	7	1
sh2	Y	2	Rog	GSS 5610	**6**	31	**6**	34	**8**	41	**6**	34	Ht	**7**	4.3	**8**	96	**2**	2.3	2	1
sh2	Y	3	Rog	GSS 5649	**Rp**	6	**6**	34	**Rp**	4	**4**	25	Ht	**6**	3.8	**3**	19	**4**	3.3	3	1
sh2	Y	4	Rog	GSS 5698	**Rp**	6	**5**	29	**Rp**	5	**4**	25	Ht	**5**	3.3	**8**	94	**2**	2	2	1
sh2	Y	4	Rog	GSS 5729	**Rp**	0	**Rp**	0	**Rp**	0	**5**	27		**5**	3.7	**4**	29	**4**	3.3	2	1
sh2	Y	5	Rog	GSS 6352	**Rp**	5	**7**	38	**Rp**	5	**2**	14	Ht	**5**	3.3	**3**	16	**5**	3.8	2	1
sh2	Y	2	Rog	GSS 7158	**Rp**	0	**Rp**	0	**Rp**	0	**5**	29	Ht	**3**	2.5	**4**	33	**3**	2.8	1	3
sh2	Y	2	Rog	GSS 7314	**8**	43	**6**	32	**7**	37	**9**	52		**5**	3.7	**8**	92	**6**	4.8	3	1
sh2	Y	4	Rog	GSS 7568	**Rp**	3	**6**	31	**Rp**	2	**7**	39		**7**	4.5	**4**	26	**4**	3.5	2	1
sh2	Y	5	Rog	GSS 8369	**Rp**	2	**Rp**	0	**5**	27	**4**	22	Ht	**6**	4.2	**8**	95	**2**	2	8	1
sh2	Y	4	Rog	GSS 8529	**6**	32	**6**	34	**7**	37	**5**	30		**2**	2	**4**	32	**7**	5	3	1
sh2	Y	3	Rog	GSS 8812	**Rp**	0	**Rp**	0	**Rp**	0	**4**	24		**5**	3.5	**1**	0	**1**	1.5	2	2
sh2	Y	5	Rog	GSS 9641	**Rp**	1	**Rp**	0	**6**	32	**3**	17	Ht	**2**	2	**6**	58	**7**	5	4	1
sh2	B	4	SnRv	HB 1635 OP	**Rp**	12	**9**	43	**Rp**	11	**5**	32		**6**	4.2	**8**	96	**3**	3	2	1
sh2	B	4	SnRv	HB 2630 OM	**Rp**	11	**7**	38	**Rp**	10	**5**	32		**7**	4.5	**9**	100	**2**	2.3	1	1
sh2	B	5	SnRv	HB 4828 LN	**Rp**	4	**5**	28	**Rp**	1	**5**	28		**8**	4.7	**9**	100	**2**	2	2	1
sh2	W	4	Rog	Heavenly	**Rp**	1	**7**	36	**Rp**	4	**7**	42		**6**	3.8	**4**	26	**4**	3.3	2	1
sh2	W	4	HM	HMX 1368 WS	**Rp**	1	**6**	32	**Rp**	3	**7**	39		**5**	3.3	**4**	23	**1**	1.5	2	1
sh2	W	3	HM	HMX 6360 WS	**7**	36	**6**	32	**6**	35	**8**	46		**3**	2.7	**3**	12	**2**	2.3	2	1
sh2	Y	3	HM	HMX 6386 S	**Rp**	3	**Rp**	0	**6**	33	**5**	31	Ht	**3**	2.7	**3**	14	**5**	4	8	8
sh2	Y	3	HM	HMX 7368 S	**6**	33	**5**	27	**5**	27	**5**	27		**7**	4.3	**9**	100	**3**	2.8	1	1
sh2	Y	4	HM	HMX 7389 S	**Rp**	0	**Rp**	0	**Rp**	0	**4**	22		**7**	4.3	**9**	100	**3**	3	6	1
sh2	B	3	HM	HMX 8343 BS	**4**	24	**4**	23	**4**	25	**7**	38	Ht	**5**	3.5	**9**	100	**6**	4.3	3	1
sh2	Y	3	HM	HMX 8346 S	**5**	29	**5**	29	**6**	31	**2**	12		**5**	3.5	**9**	100	**1**	1.8	1	1
sh2	Y	4	HM	HMX 8372 S	**8**	43	**7**	38	**7**	39	**3**	19		**5**	3.7	**9**	100	**6**	4.3	4	1
sh2	Y	4	HM	HMX 8373 S	**8**	45	**8**	39	**8**	44	**3**	20		**6**	4	**9**	100	**4**	3.3	3	1
sh2	W	3	HM	HMX 9347 S	**5**	29	**6**	32	**6**	32	**1**	6		**4**	3	**9**	100	**1**	1.3	2	1
sh2	W	4	HM	HMX 9349 S	**7**	38	**8**	41	**8**	41	**1**	4	Ht	**5**	3.5	**9**	100	**1**	1.8	2	1
sh2	B	3	HM	HMX 9350 S	**Rp**	4	**Rp**	0	**9**	46	**7**	39		**6**	3.8	**3**	14	**3**	2.5	3	1
sh2	B	2	HM	HMX 9351 S	**5**	29	**5**	27	**5**	30	**3**	20		**3**	2.5	**9**	100	**1**	1.5	1	1
sh2	B	3	HM	HMX 9353 S	**9**	50	**6**	31	**9**	49	**2**	13		**5**	3.7	**9**	100	**3**	2.5	2	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
sh2	Y	2	HM	HMX 9354 S	**Rp**	1	**Rp**	0	**6**	35	**6**	34	Ht	**5**	3.7	**8**	96	**5**	4	2	1
sh2	Y	3	HM	HMX 9356 S	**Rp**	0	**Rp**	0	**4**	25	**4**	22	Ht	**5**	3.7	**5**	50	**2**	2	2	1
sh2	Y	3	HM	HMX 9386 S	**Rp**	1	**5**	28	**Rp**	1	**5**	31		**8**	4.7	**2**	6	**1**	1.5	6	1
sh2	Y	3	HM	HMX 9387 S	**Rp**	4	**6**	31	**Rp**	2	**2**	13	Ht	**2**	2.2	**6**	55	**1**	1.5	3	1
sh2	Y	3	HM	HMX 9388 S	**Rp**	0	**Rp**	0	**Rp**	0	**3**	19	Ht	**1**	1.7	**9**	100	**1**	1.3	4	1
sh2	Y	3	HM	HMX 9389S	**Rp**	0	**Rp**	0	**Rp**	1	**2**	12	Ht	**6**	4	**3**	14	**2**	2	6	1
sh2	Y	4	HM	HMX 9390 S	**Rp**	5	**7**	35	**Rp**	3	**2**	11	Ht	**7**	4.3	**4**	21	**1**	1.5	3	1
sh2	Y	4	HM	HMX 9391 S	**Rp**	0	**Rp**	0	**Rp**	0	**2**	13		**7**	4.3	**5**	41	**4**	3.5	5	2
sh2	Y	4	HM	HMX 9392 S	**Rp**	0	**Rp**	0	**Rp**	1	**2**	14		**4**	3.2	**4**	30	**3**	2.8	1	1
sh2	Y	4	HM	HMX 9393 S	**Rp**	4	**5**	28	**Rp**	3	**3**	20		**6**	4	**4**	21	**4**	3.3	4	1
sh2	Y	3	HM	HMX 9394 S	**Rp**	4	**6**	33	**Rp**	3	**2**	12	Ht	**5**	3.7	**3**	17	**2**	2.3	3	1
sh2	B	5	Cr	Holiday	**Rp**	8	**5**	30	**Rp**	3	**1**	8	Ht	**2**	2.3	**9**	100	**1**	1.5	2	1
sh2	W	5	Cr	How Sweet It Is	**7**	37	**7**	37	**7**	37	**5**	28		**5**	3.5	**9**	100	**5**	3.8	6	1
sh2	W	4	SnRv	HW 2545 OM	**Rp**	10	**7**	35	**Rp**	4	**4**	26	Ht	**6**	4	**6**	66	**3**	3	7	2
sh2	Y	5	SnRv	HY 0850 ON	**5**	29	**5**	30			**2**	13	Ht	**7**	4.5	**9**	100	**1**	1.5	4	1
sh2	Y	4	SnRv	HY 0882 OP	**Rp**	14	**9**	43	**Rp**	7	**5**	29	Ht	**9**	5.7	**8**	93	**3**	2.8	2	1
sh2	Y	2	SnRv	HY 1027 OP	**5**	28	**5**	29	**5**	26	**2**	16	Ht	**5**	3.5	**9**	100	**3**	2.5	2	1
sh2	Y	1	SnRv	HY 1089 OM	**Rp**	3	**6**	34	**Rp**	6	**3**	20	Ht	**9**	5	**9**	100	**5**	4	3	3
sh2	Y	2	SnRv	HY 1122 OP	**Rp**	12	**7**	36	**Rp**	6	**8**	43		**8**	4.8	**9**	100	**6**	4.5	2	1
sh2	Y	4	SnRv	HY 1481 OM	**Rp**	12	**7**	38	**Rp**	6	**3**	18	Ht	**9**	5.5	**8**	93	**3**	2.5	2	1
sh2	Y	4	SnRv	HY 1516 OM	**Rp**	9	**8**	41	**Rp**	7	**3**	21	Ht	**7**	4.3	**9**	100	**3**	3	2	1
sh2	Y	3	SnRv	HY 1656 ON	**Rp**	8	**7**	37	**Rp**	4	**7**	39		**9**	6	**9**	100	**8**	5.5	1	1
sh2	W	3	HM	Ice Queen	**Rp**	9	**8**	42	**Rp**	3	**6**	36		**5**	3.5	**2**	10	**6**	4.3	1	1
sh2	W	3	HM	Iceberg	**7**	39	**8**	40	**7**	36	**6**	34		**4**	2.8	**4**	21	**2**	2.3	3	1
sh2	W	3	Sak	K2-501B	**7**	38	**6**	34	**7**	38	**8**	46		**5**	3.5	**8**	97	**5**	4	2	1
sh2	W	3	Sak	K7-318	**Rp**	3	**6**	34	**Rp**	3	**5**	28		**4**	2.8	**9**	100	**4**	3.3	2	1
sh2	B	3	Rog	Legion	**Rp**	0	**Rp**	0	**Rp**	0	**1**	9	Ht	**4**	2.8	**2**	6	**3**	2.8	3	1
sh2	Y	4	Rog	Magnum II	**6**	31	**6**	32	**4**	23	**3**	18	Ht	**3**	2.7	**8**	97	**3**	3	2	1
sh2	Y	4	Cr	Marvel	**Rp**	4	**7**	35	**Rp**	7	**5**	32		**5**	3.5	**9**	100	**5**	3.8	2	1
sh2	Y	4	Cr	Marvel Edge	**Rp**	0	**Rp**	0	**Rp**	2	**5**	30		**4**	2.8	**8**	92	**5**	4	2	1
sh2	Y	4	HM	Max	**Rp**	7	**8**	41	**Rp**	12	**5**	31		**4**	3.2	**4**	22	**1**	1.8	3	1
sh2	Y	5	HM	Megaton	**Rp**	7	**7**	36	**Rp**	1	**5**	29		**7**	4.5	**4**	22	**3**	3	2	1
sh2	Y	2	Cent	Mirai 003	**5**	29	**4**	25	**6**	32	**8**	44		**4**	3.2	**4**	29	**7**	5	3	1
sh2	Y	1	Cent	Mirai 131 Y	**4**	21	**4**	24	**5**	26	**3**	21		**4**	3	**8**	97	**8**	6	3	1
sh2	Y	1	Cent	Mirai 148 Y	**5**	26	**4**	23	**5**	27	**4**	22		**3**	2.7	**9**	100	**8**	6	2	1
sh2	B	2	Cent	Mirai 308 BC	**5**	25	**4**	21	**4**	24	**6**	35		**2**	2.3	**8**	97	**9**	7.5	3	3
sh2	B	2	Cent	Mirai 336 BC	**7**	35	**6**	31	**5**	27	**5**	31		**1**	1.7	**9**	100	**1**	1.8	3	1
sh2	B	4	Cent	Mirai 350 BC	**5**	29	**6**	31	**5**	28	**3**	19	Ht	**2**	1.8	**9**	100	**5**	3.8	1	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
sh2	B	3	Sem	Obsession	**Rp**	3	**4**	23	**Rp**	1	**3**	18	Ht	**3**	2.5	**9**	100	**2**	2	1	1
sh2	B	3	Sem	Obsession	**Rp**	5	**4**	25	**Rp**	2	**2**	16	Ht	**4**	3.2	**9**	100	**2**	2	1	1
sh2	B	4	Sem	Obsession -R	**Rp**	3	**5**	27	**Rp**	2	**3**	17	Ht	**1**	1.7	**8**	96	**4**	3.5	2	1
sh2	B	3	Cr	Optimum	**6**	32	**6**	31	**8**	41	**5**	28		**6**	4	**9**	100	**6**	4.3	2	1
sh2	Y	5	Rog	Overland	**Rp**	1	**Rp**	0	**5**	26	**2**	11	Ht	**3**	2.5	**7**	88	**5**	4	5	1
sh2	Y	2	Sem	Passion	**Rp**	2	**5**	30	**Rp**	1	**3**	20	Ht	**4**	2.8	**9**	100	**2**	2.3	3	1
sh2	B	4	HM	Polaris	**Rp**	7	**7**	37	**Rp**	4	**6**	35		**4**	3.2	**4**	34	**3**	2.5	4	1
sh2	Y	3	Rog	Prime Plus	**Rp**	6	**6**	34	**Rp**	5	**1**	7	Ht	**2**	2.2	**9**	100	**9**	7.3	3	1
sh2	Y	3	Rog	Protégé	**Rp**	0	**Rp**	0	**4**	22	**5**	27	Ht	**4**	3.2	**9**	100	**5**	3.8	3	1
sh2	B	4	Sem	QHB 6RH 1074	**Rp**	1	**Rp**	0	**Rp**	0	**2**	15	Ht	**3**	2.5	**9**	100	**2**	2.3	2	1
sh2	W	4	Sem	QHW 6RH 1051	**Rp**	1	**Rp**	0	**Rp**	0	**6**	34	Ht	**6**	3.8	**2**	6	**5**	3.8	2	1
sh2	W	4	Sem	QHW 6RH 1058	**Rp**	1	**Rp**	0	**Rp**	0	**6**	33	Ht	**6**	3.8	**2**	7	**6**	4.3	4	4
sh2	Y	5	Sem	QHY 6SH 1065	**Rp**	2	**5**	30	**Rp**	2	**4**	26	Ht	**6**	3.8	**5**	42	**5**	4	2	1
sh2	Y	4	Cr	Rana	**Rp**	2	**6**	31	**Rp**	3	**2**	12	Ht	**3**	2.7	**9**	100	**1**	1.8	2	1
sh2	Y	4	HM	Ranger	**8**	48	**9**	44	**8**	41	**1**	8	Ht	**9**	5	**5**	36	**3**	2.5	5	3
sh2	Y	2	Rog	Ravelin	**Rp**	1	**5**	27	**Rp**	1	**7**	40	Ht	**6**	3.8	**7**	89	**6**	4.3	2	1
sh2	Y	5	PV	Rebecca	**Rp**	6	**8**	40	**Rp**	5	**2**	14	Ht	**3**	2.5	**6**	63	**1**	1.8	3	1
sh2	Y	4	HM	Rustler	**Rp**	11	**7**	36	**Rp**	4	**5**	32	Ht	**4**	3	**4**	32	**1**	1.3	1	1
sh2	Y	4	Cr	Samurai	**Rp**	4	**5**	29	**Rp**	2	**4**	24	Ht	**5**	3.3	**1**	0	**6**	4.3	4	1
sh2	B	4	Sem	SEM 1	**Rp**	0	**Rp**	0	**Rp**	0	**2**	15	Ht	**2**	1.8	**9**	100	**4**	3.3	1	1
sh2	B	4	Sem	SEM 2	**Rp**	1	**Rp**	0	**Rp**	1	**2**	15	Ht	**2**	2	**9**	100	**3**	2.5	1	1
sh2	Y	4	Sem	SEM 3	**Rp**	2	**4**	23	**Rp**	1	**6**	35		**4**	3.2	**2**	4	**2**	2	3	1
sh2	Y	4	Sem	SEM 4	**Rp**	0	**Rp**	0	**Rp**	1	**6**	33	Ht	**6**	3.8	**6**	79	**2**	2.3	9	8
sh2	B	3	Sem	SEM 7	**Rp**	2	**5**	27	**Rp**	1	**5**	31	Ht	**5**	3.7	**8**	95	**1**	1.8	3	1
sh2	W	4	Sem	SEM 8	**6**	30	**7**	37	**5**	29	**4**	23	Ht	**4**	3.2	**9**	100	**3**	2.8	8	7
sh2	Y	5	Sem	SEM 9	**Rp**	3	**5**	26	**Rp**	1	**7**	38		**3**	2.7	**1**	0	**6**	4.8	3	1
sh2	Y	5	Sem	SEM 10	**Rp**	0	**Rp**	0	**Rp**	0	**1**	9	Ht	**6**	3.8	**9**	100	**2**	2	1	1
sh2	Y	5	Sem	SEM 11	**Rp**	1	**Rp**	0	**Rp**	0	**2**	13	Ht	**3**	2.5	**9**	100	**1**	1.5	3	1
sh2	W	3	Sem	SEM 13	**4**	22	**5**	28	**4**	22	**5**	28	Ht	**6**	4.2	**9**	100	**4**	3.3	4	2
sh2	Y	5	Sem	SEM 14	**Rp**	6	**7**	37	**Rp**	3	**4**	23	Ht	**6**	4.2	**2**	7	**4**	3.3	2	1
sh2	B	3	Sem	SEM 16	**Rp**	2	**Rp**	0	**3**	20	**5**	28	Ht	**4**	3.2	**9**	100	**6**	4.5	4	1
sh2	B	3	Sem	SEM 17	**Rp**	2	**Rp**	0	**2**	15	**4**	26	Ht	**4**	2.8	**9**	100	**5**	4	4	1
sh2	Y	4	Sem	SEM 18	**Rp**	2	**Rp**	0	**Rp**	0	**3**	19	Ht	**6**	4.2	**9**	100	**3**	2.5	2	1
sh2	Y	3	Sem	SEM 20	**5**	26	**5**	30	**5**	26	**4**	26		**6**	3.8	**8**	97	**3**	2.8	2	1
sh2	Y	4	Sem	SEM 21	**Rp**	5	**Rp**	0	**Rp**	0	**4**	22		**5**	3.5	**9**	100	**4**	3.3	3	1
sh2	Y	3	Sem	SEM 22	**Rp**	9	**7**	38	**Rp**	8	**6**	33		**6**	3.8	**6**	57	**5**	4	2	1
sh2	B	3	Sem	SEM 24	**Rp**	1	**Rp**	0	**5**	27	**6**	35		**5**	3.5	**9**	100	**5**	4	3	1
sh2	Y	4	Sem	SEM 25	**Rp**	2	**Rp**	0	**Rp**	0	**2**	16	Ht	**4**	2.8	**9**	100	**3**	3	2	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
sh2	B	4	Sem	SEM 26	**Rp**	0	**Rp**	0	**Rp**	0	**4**	22	Ht	**3**	2.7	**9**	100	**1**	1.8	1	1
sh2	Y	4	Sem	SEM 27	**Rp**	0	**Rp**	0	**Rp**	0	**2**	14	Ht	**3**	2.7	**9**	100	**4**	3.5	2	1
sh2	B	3	Sem	SEM 28	**Rp**	1	**Rp**	0	**6**	33	**5**	27	Ht	**3**	2.5	**9**	100	**6**	4.5	2	1
sh2	W	3	Sem	SEM 29	**Rp**	1	**Rp**	0	**3**	19	**6**	34	Ht	**5**	3.7	**9**	100	**5**	3.8	3	1
sh2	Y	4	Sem	SEM 30	**Rp**	1	**Rp**	0	**Rp**	0	**2**	16	Ht	**6**	3.8	**8**	97	**2**	2	2	2
sh2	Y	5	Sem	SEM 32	**Rp**	2	**Rp**	0	**3**	17	**5**	27	Ht	**6**	4.2	**9**	100	**1**	1.8	1	1
sh2	Y	3	Sem	SEM 33	**Rp**	5	**7**	35	**Rp**	10	**3**	20	Ht	**6**	4	**5**	48	**6**	4.5	3	1
sh2	B	5	Sem	SEM 34	**Rp**	1	**Rp**	0	**5**	29	**5**	30	Ht	**7**	4.3	**9**	100	**4**	3.5	2	1
sh2	Y	4	Sem	SEM 35	**6**	31	**6**	33	**6**	34	**4**	25	Ht	**8**	4.8	**9**	100	**2**	2.3	2	1
sh2	B	5	Sem	SEM 36	**5**	28	**5**	28	**4**	21	**4**	22	Ht	**5**	3.7	**7**	85	**1**	1.8	2	1
sh2	Y	4	Sem	SEM 37	**Rp**	0	**Rp**	0	**Rp**	0	**7**	40		**5**	3.7	**2**	10	**2**	2.3	5	1
sh2	Y	3	Sem	SEM 40	**Rp**	0	**Rp**	0	**Rp**	1	**8**	43		**8**	4.7	**5**	50	**2**	2	3	1
sh2	W	4	Sem	SEM 41	**Rp**	3	**5**	26	**Rp**	1	**3**	17	Ht	**2**	1.8	**9**	100	**4**	3.3	2	1
sh2	B	5	Sem	SEM 42	**5**	26	**5**	28	**3**	19	**4**	23	Ht	**5**	3.5	**8**	97	**2**	2.3	1	1
sh2	Y	5	HM	Sentinel	**Rp**	3	**7**	37	**Rp**	3	**1**	9	Ht	**4**	3	**5**	39	**3**	2.8	3	1
sh2	Y	5	Sem	Shimmer	**Rp**	3	**6**	32	**Rp**	2	**2**	15	Ht	**4**	3.2	**9**	100	**2**	2	3	1
sh2	Y	5	Sem	SHY 6RH 1034	**Rp**	3	**5**	28	**Rp**	2	**6**	34		**3**	2.7	**1**	0	**6**	4.3	2	1
sh2	Y	1	Sem	Signet	**8**	41	**5**	27	**5**	27	**5**	32		**4**	2.8	**9**	100	**6**	4.5	2	1
sh2	Y	1	Sem	Signet	**7**	38	**5**	27	**4**	21	**5**	31		**4**	3	**9**	100	**4**	3.5	1	1
sh2	W	4	HM	Snow White	**9**	63	**9**	56	**9**	73	**6**	36		**6**	3.8	**6**	67	**3**	2.8	3	1
sh2	Y	4	SnRv	Spaceship	**5**	25	**6**	31	**3**	20	**3**	19	Ht	**6**	4.2	**9**	100	**1**	1	3	1
sh2	B	2	AC	Summer Sweet 7102 R	**Rp**	9	**6**	32	**Rp**	7	**6**	34	Ht	**5**	3.5	**9**	100	**8**	5.8	3	1
sh2	W	2	AC	Summer Sweet 7111 W	**8**	43	**7**	35	**8**	43	**6**	36	Ht	**5**	3.3	**9**	100	**7**	5.3	4	1
sh2	W	4	AC	Summer Sweet 7641 MR W	**Rp**	2	**Rp**	0	**6**	33	**1**	7	Ht	**3**	2.5	**9**	100	**1**	1	3	1
sh2	W	4	AC	Summer Sweet 7641 W	**Rp**	6	**8**	39	**Rp**	2	**1**	10	Ht	**3**	2.5	**9**	100	**1**	1.8	3	2
sh2	Y	4	AC	Summer Sweet 7650 Y	**Rp**	7	**8**	41	**Rp**	5	**1**	9	Ht	**1**	1.3	**9**	100	**3**	2.5	2	3
sh2	W	4	AC	Summer Sweet 8101 MR W	**Rp**	2	**Rp**	0	**5**	26	**1**	7	Ht	**4**	3.2	**9**	100	**1**	1.3	2	1
sh2	W	4	AC	Summer Sweet 8101 R	**Rp**	4	**8**	40	**Rp**	3	**2**	12	Ht	**3**	2.7	**9**	100	**1**	1.5	3	1
sh2	B	4	AC	Summer Sweet 8102 R	**Rp**	1	**8**	39	**Rp**	2	**2**	15	Ht	**3**	2.7	**9**	100	**1**	1	1	1
sh2+	B	3	AC	Summer Sweet MS 502 BC	**7**	36	**9**	43	**7**	36	**6**	37		**8**	4.7	**9**	100	**6**	4.3	3	1
sh2+	Y	3	AC	Summer Sweet MS 820 Y	**6**	32	**6**	32	**6**	31	**7**	42		**5**	3.3	**9**	100	**3**	2.8	3	1
sh2	Y	4	Rog	Supersweet Jubilee	**6**	31	**6**	34	**6**	33	**9**	48		**9**	5.8	**9**	100	**5**	4	6	1
sh2	Y	4	Rog	Supersweet Jubilee Plus	**Rp**	5	**6**	33	**Rp**	3	**9**	49		**9**	5.8	**8**	96	**6**	4.3	7	1
sh2	Y	4	HM	Suregold	**Rp**	6	**7**	35	**Rp**	4	**6**	35		**5**	3.7	**5**	47	**4**	3.3	5	1
sh2	Y	4	HM	Suregold	**Rp**	7	**7**	37	**Rp**	7	**6**	37		**6**	3.8	**6**	63	**4**	3.3	5	1
sh2	W	4	Sem	SVR 0870 5770	**Rp**	4	**7**	38	**Rp**	2	**5**	27		**5**	3.5	**3**	17	**6**	4.5	8	8
sh2	Y	2	Sem	SVR 0870 5808	**Rp**	7	**6**	33	**Rp**	3	**7**	38		**4**	2.8	**4**	30	**4**	3.5	2	1
sh2	W	4	Cr	Symmetry	**Rp**	1	**4**	25	**Rp**	1	**4**	26		**4**	3.2	**4**	28	**3**	2.5	5	1

Table 7. Reactions of hybrids in the University of Illinois sweet corn disease nursery - 2009 (continued)

					Common rust						Northern			Stewart's		MDM		Southern		Herbicide	
					avirulent		D-virlnt		G-virlnt		leaf blight			wilt		A & B		leaf blight		Callisto	Laudis
ET	KC	RM	SdCo	Hybrid	Rxn	%	Rxn	%	Rxn	%	Rxn	%	HT	Rxn	rate	Rxn	%	Rxn	rate	Rxn	Rxn
sh2+	W	5	Cr	Tempest	**6**	33	**6**	33	**6**	33	**5**	28		**5**	3.3	**9**	100	**2**	2	3	1
sh2	Y	5	Cr	Tribute	**Rp**	6	**7**	37	**Rp**	3	**1**	6	Ht	**3**	2.5	**9**	100	**1**	1.5	1	1
sh2	Y	2	IFS	Vision	**8**	44	**9**	43	**9**	58	**9**	49		**5**	3.7	**9**	100	**3**	2.8	2	1
sh2	W	3	Sdw	White Saturn	**5**	25	**5**	30	**3**	20	**5**	31	Ht	**2**	2.2	**8**	96	**6**	4.5	2	1
sh2	Y	4	Rog	Winstar	**Rp**	1	**6**	33	**Rp**	1	**1**	7	Ht	**5**	3.7	**9**	100	**8**	5.5	3	1
sh2	W	3	Rog	WSS 1830	**Rp**	2	**Rp**	0	**5**	29	**2**	12	Ht	**2**	2.3	**4**	35	**8**	5.5	3	1
sh2	W	3	Rog	WSS 3801	**Rp**	1	**5**	27	**Rp**	1	**4**	22	Ht	**5**	3.3	**4**	22	**7**	5	3	1
sh2	W	4	Rog	WSS 3826	**Rp**	2	**Rp**	0	**6**	34	**4**	22		**5**	3.5	**5**	50	**5**	3.8	2	1
sh2	W	4	SnRv	ZHW 1622 OP	**Rp**	5	**6**	31	**Rp**	2	**3**	20		**5**	3.5	**9**	100	**2**	2	4	1
				mean		32.5	*	31.4	*	30.9	*	28			3.3		67.2		3.25		
				sd		9.4	*	6.7	*	11.3	*	12			0.95		37.7		1.39		
				BLSD		9.1	*	6.7	*	7.5	*	10			1.52		31.6		1.17		
				1Q		27	*	0	*	25	*	20			2.7		27.5		2		
				2Q		32	*	29	*	30	*	29			3.3		94		3.3		
				3Q		37	*	35	*	35	*	36			4		100		4.3		
						* excluding Rp hybrids															

Rxn - classification of hybrid disease reactions: 1 - resistant, 3 - moderately resistant, 5 - moderate, 7 - moderately susceptible, 9 - susceptible

Rate - disease rating: 0 to 100% leaf area infected (avirulent, D-virulent rust, G-virulent rust, NLB); 1 to 9 scale (Stewart's wilt, SLB);
0 to 100% incidence of infected plants (MDM)

Seed source: AC - Abbott & Cobb, Bas - Basso, Cent - Centest, Cr - Crookham, DM - Del Monte, GG - Green Giant, HM - Harris Moran, IFS - Illinois Foundation Seeds, MM - Mesa Maize, PV - Pop Vriend, Rog - Rogers (Syngenta), Sak - Sakata, Sdw - Seedway, Sem - Seminis, SnR - Snowy River