SWEET CORN HYBRID DISEASE NURSERY – 2005

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Common rust, northern leaf blight (NLB), Stewart's wilt, maize dwarf mosaic (MDM) and southern leaf blight (SLB) can reduce yields of susceptible and moderately susceptible sweet corn hybrids. These diseases can be managed more efficiently if reactions of hybrids are known.

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 and race 1 of the northern leaf blight 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 between classes (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). Nevertheless, a consistent response over several trials produces a reasonable estimate of the disease reaction of a 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.

Sweet corn hybrids also can be damaged by certain postemergence herbicides. Reactions of hybrids to herbicides can be classified in a manner similar to disease reactions. This information can be used to identify sweet corn hybrids with the greatest risk of being damaged and to develop lists of hybrids on which specific herbicides should not be used.

This report summarizes the reactions of 327 sweet corn hybrids to Stewart's wilt, common rust, NLB, MDM, and SLB based on their performance in the University of Illinois sweet corn disease nursery in 2005. The reactions of these hybrids to post-emergence applications of Callisto and Accent herbicides also are reported.

MATERIALS AND METHODS

Hybrids: Three hundred and twenty-seven hybrids and eight other lines were evaluated in 2005. This included 176 *sh2* hybrids, 77 *se* hybrids and 74 *su* hybrids. Hybrids with multiple endosperm mutations were placed in the most appropriate of these three categories. Standard hybrids with relatively consistent reactions to common rust, Stewart's wilt, NLB, MDM, and SLB (Table 1) were included to compare the results from the 2005 nursery to those from previous nurseries.

Table 1. Reactions of sweet corn hybrids included as standards in the 2005 disease nursery

	Stewart's wilt			**Rust** G-virulent			**NLB** (races 0 & 1)			**MDM**				**SLB**		
Hybrid	Prior	05	Rating	Prior	05	Rating	Prior	05	Rating	Prior	05	Early	Late	Prior	05	Rating
277A	4	3	2.7	6	5	3.3	5	4	34 %	9	9	100%	5	3	2	12%
Ambrosia	2	3	2.5	5	4	2.3	5	4	35 %	9	9	100%	5	6	8	48%
Bonus	1	1	1.3	0	0	0.3	5	5	39 %	1	1	0%	1	7	6	32%
El Toro	4	3	2.7	0	0	0.3	7	5	43 %	2	2	7%	1	4	3	13%
Eliminator	2	2	2.2	0	0	0	6	6	51 %	1	1	0%	1	6	4	23%
Green Giant 27	2	2	2	2	3	1.5	3	3	27 %	8	9	82%	4.5	4	3	15%
Jubilee	9	7	4.4	5	5	3.3	8	8	64 %	9	9	100%	5	4	2	9%
Miracle	1	3	2.9	2	3	1.8	3	4	30 %	9	9	100%	5	4	3	14%
Sensor	5	6	3.9	4	5	3.0	4	5	40 %	9	9	100%	5	3	2	10%
Snow White	7	5	3.7	9	9	7.9	7	5	41 %	3	6	10%	4.5	3	3	13%
Sum. Swt. 781 Ultra	3	3	2.5	7	7	5.3	3	4	31 %	9	9	100%	5	3	3	16%
Tuxedo	3	3	2.5	3	3	1.5	2	2	19 %	9	9	100%	5	2	2	11%

Prior - reaction in previous years (1984-2004).

05 - reaction in 2005: 1 - resistant, 3 - moderately resistant, 5 - moderate, 7 - moderately susceptible, 9 - susceptible.

Rating -2005 mean rating: 1 to 9 for Stewart's wilt and G-virulent rust ; 0 to 100% severity of NLB and SLB, 0 to 100% incidence of MDM.

Experimental design and procedures: Each disease was a separate trial with two replicates of hybrids arranged in randomized complete blocks. Each trial was split into two main blocks: *sh2* hybrids and *su* or *se* hybrids. Each experimental unit was a 12-ft. row with about 10 to 18 plants per row. All trials were planted on the University of Illinois South Farms. The G-virulent rust trial was planted May 16. Six trials were planted May 24, including: Stewart's wilt, MDM, SLB, NLB, and two herbicide evaluations (Callisto and Accent). Trials inoculated with the old race of rust (avirulent on Rp genes) or the Rp1D-virulent race also were planted May 24. Reactions of hybrids could not be definitively differentiated in these two rust trials due to insufficient development of secondary disease symptoms under hot, dry, drought-like conditions.

Inoculation and disease assessment: The trials planted May 24 were inoculated with: *Erwinia stewartii* (Stewart's wilt), *Exserohilum turcicum* (NLB) races 0 and 1, *Bipolaris maydis* (SLB)and maize dwarf mosaic virus strains A and B (SCMV). Plants were inoculated with *E. stewartii* on June 20, 24, and 29 by wounding leaves in the whorl and introducing bacteria into wounds. A mixture of conidia of races 0 and 1 of *E. turcicum* were sprayed into plant whorls June 21, 23, 28 and 30. Plants were inoculated with MDMV-A and B on June 22, 24 and 27 using a tractor-mounted, solid-stream inoculator. In the trial inoculated with one of the "new races" of rust, urediniospores of Rp1G-virulent *P. sorghi* were sprayed into plant whorls June 16, 17, 21, and 27.

The total number of plants and the number of plants infected with MDM were counted July 5-7 in each row in the MDM trial. Incidence (%) of MDM-infected plants was calculated from totals of all replicates of a hybrid. Incidence of MDM-infected plants also was estimated August 11 in the same plots using a 1 to 5 scale where 1 = 0 to 5% incidence, 2 = 5% to 20% incidence, 3 = 20% to 50% incidence, 4 = 50% to 90% incidence, and 5 = 90% to 100% incidence. For other diseases, symptom severity was rated on a plot (row) basis with two people giving a separate rating for each row. Stewart's wilt was rated August 2-3 using a scale from 1 (symptoms within 2 cm of inoculation wounds) to 9 (severe systemic infection or dead plants). Common rust was rated July 26-28 in the G-virulent rust trial based on the density of uredinia in bands of infected leaf tissue. Rust ratings ranged from 0 to 9 scale, where 0 = no uredinia (Rp reactions), 1 = a few (5 to 10) scattered uredinia across a 3 cm band of infected leaf tissue, and 9 = a solid, dense band of uredinia across the leaf. Leaf area infected by NLB and SLB was rated from 0 to 100%. The SLB trial was rated August 5-8. The NLB trial was rated August 9-10. Hybrids with chlorotic lesions typical of Ht-resistance were noted in this trial

Herbicide application and assessment: Post-emergence herbicides were applied June 21 when plants ranged from the 4- to 5-leaf stages and from about 8 to 12 inches. Accent was applied at 1.34 oz./A with a 1%v/v crop oil concentrate (COC) and 2 pt/A 28% UAN. Callisto was applied at 6.0 oz./A with 1% v/v (COC) and 2.5% v/v 28% UAN. The entire field had been treated pre-emergence with metachlor + atrazine.

Corn injury was rated visually 7 and 15 days (June 28 and July 6) after application of Callisto and Accent, respectively.

Data analysis: Disease 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), ranks of standard hybrids, and/or the FASTCLUS procedure of SAS using various groupings of 6 to 12 clusters.

RESULTS AND DISCUSSION

Symptoms ranged from very little disease to severely infected plants (Table 3). Reactions of standard hybrids to Stewart's wilt, rust, NLB, MDM, ands SLB were generally within expected ranges (Table 1). The criteria for classifying hybrid reactions are listed in Table 2. Table 3 includes reactions and actual ratings of the 327 hybrids **based solely on the 2005 trial**. This is the only data we have for some of these hybrids. For hybrids that have been evaluated in previous years, an assessment of disease reactions based on multiple trials is presented in another report, "*Reactions of sweet corn hybrids to prevalent diseases - 2005*".

Stewart's wilt. Stewart's wilt was less severe in 2005 than in many previous nurseries. Ratings ranged from 1.2 to 6.9. Twenty-eight hybrids

rated 4.3 or higher (i.e., frequent systemic infection) were classified as moderately susceptible to susceptible (7 to 9); and 167 hybrids rated from 3 to 4.3 (i.e., occasional systemic infection) were classified as moderate (4 to 6). Thirteen hybrids with ratings below 1.8 were not significantly different from HMX-1383, the hybrid with the least severe symptoms. These included: Bonus, CSUWP1-7, CSUYP2-30, EX 0870 5353, EX 0873 5816, Millenium, Mirai 334BC, Mirai 336BC, Nauset SYN, SVR 0873 5807, SVR 0873 5566, SVR 0875 5780, and Topcorn 009. The impact of Stewart's wilt was minor on the 79 hybrids classified as resistant or R/MR (1 or 2) or on 61 hybrids with ratings from 2.5 to 3 that were classified as moderately resistant (i.e., 3). Yield is affected minimally if Stewart's wilt is non-systemic, i.e., ratings < 3. Of the 140 hybrids with R to MR reactions to Stewart's wilt, 17% were *se*, 58% were *sh2*, and 25% were *su*.

Northern leaf blight. NLB severity (% symptomatic leaf area) ranged from 8% to 86% and averaged 38% on all 327 hybrids in the trial. Severity was >53% on 59 hybrids with moderately susceptible to susceptible reactions (7 to 9). One-hundred-and-eighty-three hybrids with 20% to 53% leaf area infected were classified between MR and MS (4 to 6).

Severity was less than 10% on three hybrids (Holiday, SCH 71141 and 182A), and less than 15% on 20 additional hybrids classified as resistant (180A, 382A, Columbus, GG Code 62, GG Code 175, HMX 1383, HY 265 OK, Maize Dulce A-111, Mont Blanc, Overland, Sentinel, SVR 0873 5566, XTH 1183, XTH 1184, XTH 1280, XTH 1281, XTH 1283, XTH 2278, XTH 2381, and XTH 3180). All 23 of the most resistant hybrids had some chlorotic lesions indicative of an *Ht* gene that conveyed resistance to *E. turcicum* race 0. Seventy hybrids were classified as R/MR (2) or moderately resistant (3). These hybrids had less than 20% leaf area infected. Effects of NLB on yield are minimal when NLB severity is below 20%. Of the 93 hybrids with R to MR reactions to NLB, 10% were *se*, 77% were *sh2*, and 13% were *su*. Seventy-five of these hybrids had a chlorotic-lesion, Ht-resistant reaction, and 18 appeared to not carry an Ht-gene.

Maize dwarf mosaic. Incidence of MDM-infected plants 1 to 2 weeks after inoculation (about 7- to 8-leaf stage) ranged from 0 to 100% on 327 hybrids and averaged 72% for the trial. When MDM on the same plants was rated 5 weeks later (about 1 wk past fresh corn harvest), incidence had increased on a few hybrids that were predominantly asymptomatic at the 7- to 8-leaf seedling stage. Thus, it appears that MDM resistance in some sweet corn hybrids delays symptom development but does not completely inhibit infection.

None of the 31 hybrids classified as resistant (1) were symptomatic at either rating. Seventeen hybrids were classified as R/MR (2). Eleven of these hybrids were completely asymptomatic at the early rating and had 5% to 20% infected plants at the late rating. Six hybrids had less than 10% incidence at both ratings. Thirteen hybrids were classified moderately resistant (3). These included six hybrids without symptoms at the early rating but with 20 to 50% incidence at the later rating; and seven hybrids with less than 10% incidence at the early rating and less than 20% incidence at the later ratings. Twenty-three hybrids classified as MR/M or M (4 or 5) included those with low incidence at early ratings (0 to 37%) and moderate incidence (20% to 90%) at late ratings. Four of these hybrids were asymptomatic at the early rating. Of the 59 hybrids with R to MR reactions to MDM, 8% were *se*, 47% were *sh2*, and 44% were *su*.

Eleven hybrids were classified as MS or MS/S (7 or 8) because not all plants were symptomatic at both ratings, however, these hybrids probably are susceptible and asymptomatic plants had merely escaped infection. Two-hundred-and-thirty-two hybrids were classified as susceptible (9) because all plants were infected at both ratings.

Southern leaf blight. SLB severity (% symptomatic leaf area) ranged from 2% to 74% and averaged 20% on all 327 hybrids in the trial. Severity was > 37% on 34 hybrids with moderately susceptible to susceptible reactions (7 to 9). One-hundred-and-sixteen hybrids with 20% to 37% leaf area infected were classified between MR and MS (4 to 6). The majority of hybrids (185) were classified as R to MR for their reaction to SLB based on less than 20% leaf area infected. The 33 hybrids with the most resistant reactions

Table 2. Criteria for classifying hybrid reactions to diseases in the 2005 nursery

	Classification of reaction								
	Rp	Resistant	Moderately resistant			Moderate	Moderately susceptible			Susceptible
	0	1	2	3	4	5	6	7	8	9
Stewart's wilt (1-9)		< 1.8	< 2.5	< 3	< 3.3	< 3.8	< 4.3	< 5	< 6	≥ 6
Rust G-virulent (1-9)	<1		< 1.5	≤2	< 3	≤ 3.5	≤ 4.5	≤ 5.5	≤ 6.5	> 6.5
NLB races 0&1 (%)		≤ 14	≤ 20	≤ 27	≤ 35	≤ 45	≤ 53	≤ 61	≤ 69	≥ 69
SLB (%)		≤ 6	≤ 12	< 20	< 24	< 28	≤ 37	≤ 46	< 55	≥ 55
MDM-early (%)		0	≤ 10	≤ 20	≤ 50	≤ 60	≤ 70	≤ 80	<100	100
MDM-late (1 to 5)		1		< 3		< 4		< 5		5
Callisto		0	<3	< 6	< 10	< 15	< 20	< 25	< 40	≥ 40

Hybrid reactions to Callisto, and Accent were based on symptoms rated 7 and 15 days after application (see text).

had less than 6% leaf area infected and included 2 *se* hybrids, 25 *sh2* hybrids, and 6 *su* hybrids.

Common rust. In trials inoculated with the D-virulent race of *P. sorghi* and with the "old" race that lacks virulence against most Rp genes, dry weather prevented common rust from developing sufficiently to definitively differentiate reactions of hybrids. In the trial inoculated with the G-virulent race, bands of infection occurred on leaf tissue that was in the whorl during one or two rainy days in early June. Hybrid reactions could be differentiated based on density of uredinia (pustules) within these bands.

Uredinia were not observed or were extremely sparse (fewer than 10 pustules) on 153 hybrids that were classified as having Rp-resistance against the G-virulent race. Of these 153 hybrids, 10 were *se* hybrids, 92 were *sh2* hybrids, and 51 were *su* hybrids. Rust ratings (0 to 9) ranged from 1 to 7.8 and averaged 3.4 for the 182 hybrids and lines that did not have Rp-resistant reactions. Twenty-four hybrids rated above 4.5 were classified as MS to S (7 to 9). One-hundred-and-twenty-eight hybrids rated from 3 to 4.5 were classified from MR to MS (4 to 6). Twenty-five hybrids rated 2 or below were classified as MR or R/MR (3 or 2). Some hybrids classified as MR or R/MR may have Rp-resistance; however, more uredinia than expected were seen on those hybrids because plants were infected by a race of rust that was virulent against the Rp gene in those hybrids. Likewise, some of the hybrids with a few pustules that were classified as having Rp-resistance may actually have partial resistance that is not conveyed by single Rp genes.

Reactions to herbicides. Most hybrids were not affected by post-emergence applications of Callisto or Accent (Table 4). Sixty-four hybrids displayed some symptoms of injury from Callisto. Callisto injury was characterized by temporary bleaching of newly emerged leaves. Symptoms of Callisto injury 7 days after application were rated above 10% for 10 hybrids and were most severe (40%) on HY 478 OK. Other hybrids with > 10% injury included: ACR 4049Y, ACR 4050Y, ACX 1079Y, Bold, Enterprise, EX 0870 5770, EX 0871 6607, Millenium, and Topcorn 008. Injury was between 1% and 10% on 54 hybrids. Two hybrids, MXH 14201 and Topcorn 008, were severely injured 15 days after the application of Accent. Both of these hybrids also had symptoms of injury from Callisto.

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
Sugary hybrids																			
su	Y	SnR	Bliss	**9**	9	100	9	5	**2**	2.2	**5**	45		**6**	29	**0**	0	0	0
su	Y	Rog	Bold	**2**	1	0	3	1.5	**3**	2.9	**4**	31		**6**	35	**0**	0	5	0
su	Y	Cr	Bolero	**9**	9	100	9	5	**5**	3.7	**8**	63		**4**	22	**0**	0	0	0
su	Y	Rog	Bonus	**1**	1	0	1	1	**1**	1.3	**5**	39	Ht	**6**	32	**0**	0.3	0	0
su	Y	HM	Coho	**4**	2	5	5	3.25	**6**	4.1	**8**	65		**6**	28	**0**	0	0	0
su	Y	Cr	CSUYP1-1	**1**	1	0	1	1	**2**	2.2	**6**	46		**5**	24	**0**	0	0	0
su	Y	Cr	CSUYP2-28	**1**	1	0	1	1	**6**	4	**7**	57		**5**	27	**0**	0	0	0
su	Y	Cr	CSUYP2-30	**9**	9	100	9	5	**1**	1.3	**5**	38	Ht	**6**	32	**0**	0	0	0
su	Y	Cr	CSUYP2-38	**1**	1	0	1	1	**5**	3.5	**5**	42		**6**	30	**0**	0	0	0
su	Y	Cr	CSUYP3-85	**9**	9	100	9	5	**2**	2.2	**4**	32	Ht	**3**	13	**0**	0	0	0
su	Y	Cr	CSUYP3-88	**9**	9	100	9	5	**2**	2.2	**6**	46		**6**	32	**0**	0	0	0
su	Y	Cr	CSUYP3-89	**9**	9	100	9	5	**6**	3.9	**7**	55		**5**	24	**0**	0	0	0
su	Y	Cr	Eliminator	**1**	1	0	1	1	**2**	2.2	**6**	51		**4**	23	**0**	0	0	0
su	Y	SnR	Empire	**9**	9	100	9	5	**6**	3.9	**8**	66		**7**	38	**3**	2	0	0
su	Y	SnR	Enterprise	**1**	1	0	1	1	**2**	2.4	**4**	34		**3**	16	**0**	0	6	0
su	Y	Sem	EX 0870 5353	**9**	9	100	9	5	**1**	1.5	**4**	35	Ht	**6**	34	**0**	0	0	0
su	Y	Sem	EX 0870 5640	**4**	3	16	5	3	**2**	2.3	**4**	29	Ht	**7**	40	**0**	0	0	0
su	Y	Sem	EX 0871 6607	**9**	9	100	9	5	**5**	3.5	**4**	33		**2**	9	**0**	0	7	0
su	Y	Sem	EX 0873 5816	**1**	1	0	1	1	**1**	1.3	**3**	24	Ht	**6**	28	**0**	0	0	0
su	Y	Sem	EX 84 9023 9	**9**	9	100	9	5	**7**	4.5	**9**	74		**2**	10	**0**	0	0	0
su	Y	Rog	GH 2669	**1**	1	0	1	1	**3**	2.5	**4**	28	Ht	**4**	21	**5**	3.3	0	0
su	Y	Rog	GH 6333	**9**	9	100	9	5	**6**	4	**8**	63		**8**	49	**5**	3.3	0	0
su	Y	Rog	GH 6462	**1**	1	0	1	1	**5**	3.7	**6**	51		**3**	17	**0**	0	0	0
su	Y	Rog	GH 6631	**2**	2	6	1	1	**6**	4.2	**7**	58		**3**	17	**0**	0	0	0
su	Y	Rog	GH1829	**9**	9	100	9	5	**4**	3	**5**	43		**6**	34	**4**	2.8	0	0
su	Y	GG	Green Giant Code 123	**9**	9	100	9	5	**4**	3.2	**7**	58		**9**	62	**5**	3	0	0
su	Y	GG	Green Giant Code 139	**9**	9	100	9	5	**8**	5	**9**	78		**7**	45	**5**	3.5	0	0
su	Y	GG	Green Giant Code 150	**9**	9	100	9	5	**7**	4.9	**9**	77		**7**	43	**0**	0.3	0	0
su	Y	GG	Green Giant Code 151	**9**	9	100	9	5	**6**	4.2	**8**	67		**9**	59	**0**	0	0	0
su	Y	GG	Green Giant Code 162	**9**	9	100	9	4.5	**9**	6	**9**	69		**3**	16	**0**	0	0	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
su	Y	GG	Green Giant Code 164	**9**	9	100	9	5	**6**	4	**8**	66		**9**	58	**4**	2.8	0	0
su	Y	GG	Green Giant Code 165	**9**	9	100	9	5	**8**	5.8	**7**	57		**3**	16	**6**	4.5	0	0
su	Y	GG	Green Giant Code 166	**5**	4	37	5	3	**4**	3.2	**4**	35		**1**	3	**3**	2	0	0
su	Y	GG	Green Giant Code 167	**6**	3	19	9	4.5	**3**	2.9	**4**	33		**1**	4	**4**	2.8	0	0
su	Y	GG	Green Giant Code 168	**7**	5	54	9	4.5	**3**	2.5	**4**	34		**1**	3	**0**	0.3	0	0
su	Y	GG	Green Giant Code 173	**1**	1	0	1	1	**2**	2	**2**	20	Ht	**4**	21	**0**	0.3	0	0
su	Y	GG	Green Giant Code 174	**3**	1	0	5	3	**6**	4.2	**5**	36		**6**	29	**0**	0	0	0
su	Y	GG	Green Giant Code 175	**8**	7	78	9	5	**2**	2.2	**1**	14	Ht	**1**	4	**0**	0	0	0
su	Y	GG	Green Giant Code 176	**3**	1	0	5	3	**6**	4	**5**	44		**1**	5	**6**	4	0	0
su	Y	GG	Green Giant Code 27	**9**	8	82	9	4.5	**2**	2	**3**	27		**3**	15	**3**	1.5	0	0
su	Y	GG	Green Giant Code 58	**9**	9	100	9	5	**6**	4.2	**9**	74		**7**	46	**0**	0.5	0	0
su	Y	GG	Green Giant Code 62	**9**	9	100	9	5	**2**	2	**1**	13	Ht	**5**	26	**0**	0	0	0
su	Y	GG	Green Giant Code 74	**8**	6	62	9	5	**2**	2	**4**	30		**4**	23	**2**	1.3	0	0
su	Y	GG	Green Giant Code 92	**6**	4	27	7	3.5	**3**	2.9	**5**	36		**1**	5	**4**	2.8	0	0
su	Y	GG	Green Giant Code 94	**6**	4	35	7	3.5	**4**	3	**4**	32		**3**	17	**0**	0	0	0
su	Y	GG	Green Giant Code163	**9**	9	100	9	5	**5**	3.5	**7**	58		**7**	40	**0**	0	0	0
su	Y	Sem	Harvest Gold	**9**	8	95	9	5	**2**	2.2	**3**	25	Ht	**6**	30	**0**	0	0	0
su	Y	HM	HMX 1383	**1**	1	0	1	1	**1**	1.2	**1**	10	Ht	**4**	21	**0**	0	0	0
su	Y	HM	HMX 2390	**9**	9	100	9	5	**6**	4.2	**7**	58		**2**	11	**0**	0	0	0
su	Y	HM	HMX 4394	**9**	9	100	9	5	**6**	3.9	**8**	62		**7**	38	**5**	3.5	0	0
su	Y	HM	HMX 5376	**3**	2	3	3	1.5	**5**	3.5	**4**	32		**2**	9	**0**	0	0	0
su	Y	Rog	Jubilee	**9**	9	100	9	5	**7**	4.4	**8**	64		**2**	9	**5**	3.3	0	0
su	Y	HM	Kokanee	**9**	9	100	9	5	**5**	3.7	**7**	61		**3**	19	**0**	0	0	0
su	Y	HM	Lumina	**9**	9	100	9	5	**6**	4.2	**6**	47	Ht	**6**	29	**0**	0	0	0
su	Y	Cr	Maestro	**1**	1	0	1	1	**2**	2.2	**6**	51		**5**	25	**0**	0	0	0
su	Y	Sem	Merkur	**1**	1	0	1	1	**2**	2.2	**3**	24	Ht	**7**	46	**0**	0	0	0
su	Y	SnR	Prelude	**9**	9	100	9	5	**6**	3.9	**8**	63		**6**	32	**4**	2.5	0	0
su	Y	SnR	Punch	**9**	9	100	9	5	**5**	3.7	**7**	57		**5**	26	**6**	3.8	0	0
su	Y	Sem	SVR 0872 6795	**9**	8	92	9	5	**4**	3	**8**	65		**7**	38	**5**	3.3	0	0
su	Y	Sem	SVR 0873 5807	**1**	1	0	1	1	**1**	1.3	**5**	36	Ht	**7**	41	**0**	0	0	0
su	Y	Sem	SVR 0873 8727	**9**	9	100	9	5	**9**	6.5	**9**	86		**3**	15	**0**	0	0	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
su	Y	Sem	SVR 0875 5780	**1**	1	0	1	1	**1**	1.4	**3**	27	Ht	**7**	41	**0**	0	0	0
su	Y	Sem	SVR 0875 5781	**1**	1	0	1	1	**2**	2.2	**7**	57		**5**	27	**0**	0	0	0
su	Y	TC	Topcorn 008	**2**	1	0	3	1.5	**2**	2.2	**6**	53		**5**	27	**0**	0.5	7	9
su	Y	TC	Topcorn 009	**2**	2	3	1	1	**1**	1.7	**6**	49		**3**	18	**0**	0.3	0	0
su	Y	HM	Turbo	**3**	2	3	3	1.5	**4**	3	**3**	24	Ht	**2**	9	**0**	0	0	0
su	Y	SnR	UY 0607 OJ	**9**	9	100	9	5	**4**	3.2	**7**	59		**9**	64	**0**	0	0	0
su	Y	SnR	UY 0712 OJ	**1**	1	0	1	1	**3**	2.9	**6**	51		**4**	23	**0**	0	0	0
su	Y	SnR	UY 1953 OK	**1**	1	0	1	1	**3**	2.9	**2**	20	Ht	**3**	13	**5**	3.3	0	0
su	Y	Rog	WH 2801	**9**	9	100	9	5	**3**	2.9	**5**	43		**6**	33	**0**	0	2	0
su	W	Cr	CSUPW1-7	**9**	9	100	9	5	**1**	1.3	**4**	34		**6**	34	**0**	0	0	0
su	W	GG	Green Giant Code 169	**9**	9	100	9	5	**6**	3.9	**5**	42		**3**	13	**3**	1.5	2	0
su	W	GG	Green Giant Code 170	**9**	9	100	9	5	**6**	3.9	**5**	43		**6**	32	**4**	2.3	0	0
su	W	GG	Green Giant Code 61	**9**	8	93	9	5	**6**	4	**5**	39		**4**	23	**4**	2.8	0	0
Sugary enhancer hybrids																			
se	Y	Cr	Bodacious	**9**	9	100	9	5	**5**	3.7	**6**	52		**4**	22	**5**	3	0	0
se	Y	Cr	CSEYP1-25	**9**	9	100	9	5	**5**	3.5	**7**	57		**8**	48	**0**	0	0	0
se	Y	Cr	CSEYP1-3	**9**	9	100	9	5	**4**	3.2	**8**	66		**8**	48	**0**	0	0	0
se	Y	Cr	CSEYP1-5	**9**	8	91	9	5	**6**	4	**8**	64		**7**	45	**5**	3	0	0
sesu	Y	Sem	El Toro	**2**	2	7	1	1	**3**	2.7	**5**	43		**3**	13	**0**	0.3	0	0
sesy	Y	Sem	EX 93 3010 9	**9**	9	100	9	5	**7**	4.3	**7**	54		**5**	25	**5**	3.5	4	0
sesu	Y	Rog	GH 6014	**1**	1	0	1	1	**6**	4	**6**	47	Ht	**2**	9	**5**	3.5	0	0
se+	Y	Rog	Honey Select	**9**	9	100	9	5	**6**	4.2	**6**	53		**1**	5	**4**	2.8	0	0
se	Y	Cr	Incredible	**9**	9	100	9	5	**5**	3.3	**6**	46		**3**	17	**3**	1.8	0	0
sesy	Y	Cr	Intrigue	**9**	9	100	9	5	**4**	3	**7**	61		**7**	39	**0**	0	0	0
se	Y	Cr	Miracle	**9**	9	100	9	5	**3**	2.9	**4**	30		**3**	14	**3**	1.8	0	0
se	Y	MM	MXH 30748	**9**	9	100	9	5	**2**	2.3	**4**	33		**2**	8	**3**	1.5	0	0
se	Y	MM	MXH 30784	**9**	8	96	9	5	**4**	3	**6**	46		**3**	17	**6**	4.3	0	0
sesu	Y	Sem	Powerhouse	**2**	2	4	1	1	**7**	4.5	**5**	37		**5**	24	**0**	0.3	0	0
se	Y	Sem	SVR 0872 5247	**9**	9	100	9	5	**7**	4.9	**6**	52		**3**	13	**6**	3.8	0	0
se	Y	Sem	SVR 0873 5414	**5**	4	26	5	3	**5**	3.7	**5**	38		**6**	37	**0**	0	0	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
se	Y	Sem	SVR 0873 7275	**2**	1	0	3	1.5	**6**	3.9	**5**	44		**6**	31	**5**	3.3	0	0
sesu	Y	Sem	SVR 0873 8119	**9**	9	100	9	5	**5**	3.4	**5**	36		**3**	15	**6**	3.8	0	0
se	Y	MM	Tuxedo	**9**	9	100	9	5	**3**	2.5	**2**	19		**2**	11	**3**	1.5	0	0
se+	Y	Rog	WH 0807	**1**	1	0	1	1	**6**	3.9	**5**	41		**3**	19	**0**	0	0	0
se	B	MM	Accord	**9**	9	100	9	5	**2**	2.3	**3**	22		**2**	12	**5**	3	0	0
se	B	Cr	Ambrosia	**9**	9	100	9	5	**3**	2.5	**4**	35		**8**	48	**4**	2.3	0	0
sesy	B	Cr	Applause	**9**	9	100	9	5	**6**	4	**5**	45		**3**	15	**4**	2.8	0	0
se+	B	Rog	BC 0805	**9**	9	100	9	5	**6**	4.2	**7**	56		**3**	13	**0**	0	0	0
sesy	B	Cr	Bojangles	**9**	9	100	9	5	**6**	4.2	**5**	42		**3**	15	**5**	3.3	0	0
se	B	MM	Bon Jour (10854)	**9**	9	100	9	5	**8**	5.9	**9**	75		**6**	37	**4**	2.5	0	0
se	B	MM	Brocade	**9**	9	100	9	5	**5**	3.4	**3**	22		**4**	21	**5**	3	0	0
se	B	MM	Buccaneer	**9**	8	91	9	5	**5**	3.5	**4**	35		**2**	10	**8**	6	0	0
sesy	B	Cr	Cameo	**9**	9	100	9	5	**3**	2.5	**5**	41		**3**	18	**5**	3.5	0	0
sesy	B	Sdwy	Charisma	**9**	9	100	9	5	**2**	2	**3**	22		**6**	32	**3**	2	0	0
sesy	B	Cr	Charmed	**9**	8	97	9	5	**5**	3.5	**5**	43		**3**	14	**5**	3.3	0	0
se	B	Cr	Delectable	**9**	9	100	9	5	**3**	2.8	**5**	44		**4**	23	**4**	2.8	0	0
se	B	Sem	EX 0872 5441	**9**	9	100	9	5	**9**	6.2	**9**	75		**7**	39	**6**	4.3	0	0
sesy	B	Sem	EX 0872 5994	**9**	9	100	9	5	**9**	6	**5**	43		**7**	44	**6**	4.5	0	0
sesy	B	Sem	EX 0873 6037	**9**	9	100	9	5	**5**	3.5	**3**	25	Ht	**6**	29	**4**	2.8	0	0
sesy	B	Sem	EX 0873 6043	**9**	9	100	9	5	**6**	3.9	**5**	44	Ht	**1**	3	**4**	2.8	2	0
sesy	B	Cr	Frisky	**9**	9	100	9	5	**9**	6.9	**8**	62		**4**	23	**7**	5.3	0	0
se+	B	Rog	Gateway (BC 1136)	**9**	9	100	9	5	**5**	3.3	**5**	36		**4**	20	**5**	3.3	0	0
sesy	B	Cr	Kristine	**9**	8	96	9	5	**5**	3.3	**5**	41		**2**	12	**5**	3.3	0	0
se	B	MM	Lancelot	**9**	9	100	9	5	**3**	2.7	**3**	24		**6**	30	**3**	1.5	0	0
se	B	MM	Montauk SYN	**9**	9	100	9	5	**5**	3.7	**5**	43		**7**	44	**6**	4.3	0	0
se	B	MM	MXH 11467	**9**	8	91	9	5	**2**	2	**5**	37		**2**	11	**4**	2.5	0	0
se	B	MM	MXH 12564	**9**	8	97	9	5	**2**	2.2	**5**	39		**4**	20	**4**	2.3	0	0
se	B	MM	MXH 12572	**9**	8	87	9	5	**2**	1.9	**4**	35		**3**	18	**3**	2	0	0
se	B	MM	MXH 14200	**9**	9	100	9	5	**7**	4.3	**4**	32		**3**	18	**4**	2.8	2	0
se	B	MM	MXH 14201	**9**	9	100	9	5	**5**	3.5	**3**	26		**3**	19	**3**	2	3	9

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				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
se	B	MM	Nantasket SYN	**9**	9	100	9	5	**6**	3.9	**5**	45		**4**	23	**6**	4.5	0	0
se	B	MM	Nauset SYN	**9**	9	100	9	5	**1**	1.7	**6**	47		**5**	26	**3**	1.5	0	0
sesy	B	Cr	Polka	**9**	9	100	9	5	**9**	6.2	**7**	59		**3**	16	**8**	6.3	0	0
se	B	MM	Precious Gem	**9**	9	100	9	5	**3**	2.9	**3**	25		**3**	18	**4**	2.3	0	0
sb	B	HM	Renaissance (HMX 0351)	**9**	9	100	9	5	**7**	4.7	**8**	68		**4**	23	**8**	5.8	0	0
sb	B	HM	Revelation	**9**	9	100	9	5	**8**	5.4	**9**	70		**9**	57		.	0	0
se	B	Sem	Sensor	**9**	9	100	9	5	**6**	3.9	**5**	40		**2**	10	**5**	3	0	0
se	B	Sem	SVR 0872 5451	**9**	9	100	9	5	**7**	4.9	**4**	33		**3**	19	**5**	3.5	0	0
se	B	Sem	SVR 0874 6052	**8**	7	77	9	5	**6**	4	**6**	46		**9**	62	**6**	4	0	0
se	B	Sem	Temptation	**9**	9	100	9	5	**6**	4.2	**6**	47		**9**	74	**6**	4.3	0	0
sesy	B	Cr	Trinity	**9**	9	100	9	5	**9**	6.7	**8**	66		**3**	18	**7**	5.5	0	0
sesy	B	Cr	Valor	**9**	9	100	9	5	**6**	3.9	**6**	52		**3**	17	**6**	4.5	0	0
sesy	W	Cr	Alexis	**9**	9	100	9	5	**4**	3.2	**5**	37		**2**	11	**4**	2.8	0	0
se	W	Cr	Argent	**9**	9	100	9	5	**3**	2.5	**4**	32		**4**	22	**5**	3	0	0
sesy	W	Cr	Celestial	**9**	9	100	9	5	**2**	2	**4**	32		**4**	23	**4**	2.8	0	0
se	W	MM	Chantilly	**9**	9	100	9	5	**8**	5.4	**5**	45		**3**	13	**6**	4	0	0
sesy	W	Cr	Cinderella	**9**	9	100	9	5	**5**	3.4	**5**	38		**2**	9	**5**	3.3	0	0
se	W	MM	Cloud Nine TSW	**9**	9	100	9	5	**3**	2.9	**4**	35		**4**	21	**3**	2	0	0
se	W	Cr	CSEPW2-40	**9**	9	100	9	5	**3**	2.9	**4**	31		**5**	27	**0**	0	0	0
se	W	Sem	EX 0871 6630	**9**	9	100	9	5	**5**	3.4	**3**	25		**5**	25	**0**	0	0	0
se	W	Cr	Frosty	**9**	9	100	9	5	**6**	4	**7**	59		**4**	23	**6**	4	0	0
se	W	MM	Immaculata	**9**	9	100	9	5	**2**	2.4	**2**	19		**3**	17	**4**	2.8	0	0
se	W	MM	Misquamicut SYN	**9**	8	95	9	4.5	**4**	3.2	**6**	46		**6**	31	**4**	2.8	0	0
se	W	MM	MXH 21189	**9**	9	100	9	5	**3**	2.9	**4**	33		**7**	45	**4**	2.3	0	0
se	W	MM	MXH 21247	**9**	9	100	9	5	**5**	3.3	**4**	33		**5**	26	**3**	2	0	0
se	W	MM	MXH 22085	**9**	8	88	9	5	**2**	2	**4**	34		**3**	15	**4**	2.8	0	0
se	W	MM	Sugar Pearl	**9**	9	100	9	5	**7**	4.7	**5**	45		**3**	15	**6**	4	0	0
se	W	MM	Sugar Queen	**9**	9	100	9	5	**2**	2.4	**4**	28		**5**	26	**4**	2.5	0	0
se	W	Cr	Venus	**9**	9	100	9	5	**6**	4.2	**5**	39		**2**	7	**6**	3.8	0	0
se	R	Sem	Sweet Prisma	**9**	9	100	9	5	**6**	4	**4**	32		**3**	19	**4**	2.3	0	0
sesu	R	Sem	Sweet Scarlet	**9**	9	100	9	5	**6**	4	**6**	48		**2**	8	**4**	2.8	4	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
Shrunken-2 hybrids																			
sh2	Y	Sak	02TC136	**9**	9	100	9	5	**1**	1.8	**5**	38		**2**	11	**4**	2.5	2	0
sh2	Y	IFS	178 A	**9**	9	100	9	5	**3**	2.9	**5**	40	Ht	**6**	30	**7**	4.8	2	0
sh2	Y	IFS	180 A	**9**	9	100	9	5	**3**	2.5	**1**	12	Ht	**2**	12	**0**	0	0	0
sh2	Y	IFS	182 A	**9**	9	100	9	5	**2**	1.9	**1**	9	Ht	**1**	4	**0**	0	0	0
sh2	Y	AC	Accede	**9**	8	97	9	5	**4**	3.2	**3**	24	Ht	**1**	6	**0**	0.3	0	0
sh2	Y	AC	ACR 4049 Y	**9**	9	100	9	5	**5**	3.5	**7**	59		**3**	16	**7**	5.3	5	0
sh2	Y	AC	ACR 4050 Y	**9**	9	100	9	5	**5**	3.4	**7**	58		**3**	19	**6**	4	6	0
sh2	Y	AC	ACX 1079 Y	**9**	9	100	9	5	**5**	3.5	**5**	36		**3**	16	**5**	3.3	5	0
sh2	Y	AC	ACX 1082 Y	**8**	7	76	9	4.5	**5**	3.7	**3**	27	Ht	**1**	5	**0**	0.3	0	0
sh2	Y	Sem	Basin	**4**	2	3	5	3	**5**	3.5	**6**	51		**3**	13	**0**	0	2	0
sh2	Y	Sem	Basin R	**4**	1	0	7	3.5	**5**	3.7	**5**	45		**2**	9	**0**	0	0	0
sh2	Y	IFS	Beyond (70064 RR)	**6**	4	50	7	4	**3**	2.5	**4**	28	Ht	**2**	7	**0**	0	0	0
sh2	Y	Sem	Challenger	**9**	9	100	9	5	**3**	2.5	**3**	26		**2**	7	**6**	4	0	0
sh2	Y	SnR	Columbus	**9**	9	100	9	5	**2**	2.2	**1**	12	Ht	**1**	5	**5**	3.3	0	0
sh2	Y	Cr	Crisp n Sweet 710 A	**9**	9	100	9	5	**2**	2	**2**	16	Ht	**1**	6	**4**	2.8	0	0
sh2	Y	Cr	Crisp n Sweet 710 RR	**9**	8	96	9	5	**2**	2	**3**	25	Ht	**1**	6	**0**	0	0	0
sh2	Y	Cr	CSHYP2-52	**5**	2	7	7	3.5	**2**	2.4	**2**	19	Ht	**2**	10	**0**	0.3	0	0
sh2	Y	Cr	CSHYP2-57	**9**	8	90	9	5	**3**	2.9	**4**	30	Ht	**2**	8	**0**	0	0	0
sh2	Y	Cr	CSHYP2-78	**9**	9	100	9	5	**3**	2.7	**5**	43		**2**	10	**0**	0	3	0
sh2	Y	Cr	CSHYP3-113	**9**	8	97	9	5	**4**	3	**4**	32		**2**	10	**5**	3	0	0
sh2	Y	Cr	CSHYP3-99	**9**	9	100	9	5	**5**	3.3	**3**	21	Ht	**2**	12	**0**	0.3	2	0
sh2	Y	Cr	CSHYP4-145	**9**	9	100	9	5	**3**	2.9	**3**	25	Ht	**2**	12	**0**	0	0	0
sh2	Y	HM	Day Star	**9**	9	100	9	5	**3**	2.5	**2**	17	Ht	**1**	4	**6**	4.5	0	0
sh2	Y	DM	DMC 21-84	**4**	2	10	5	3	**2**	2.3	**4**	29	Ht	**6**	28	**0**	0	2	0
sh2	Y	Sem	EX 0841 3049	**9**	9	100	9	5	**4**	3.2	**4**	35		**5**	25	**4**	2.5	0	0
sh2	Y	Sem	EX 0870 5808	**2**	1	0	3	1.5	**6**	4	**7**	55		**3**	19	**0**	0	0	0
sh2	Y	Sem	EX 0871 6636	**5**	3	19	7	4	**6**	3.9	**4**	31		**2**	9	**0**	0	0	0
sh2	Y	Sem	EX 0871 7187	**1**	1	0	1	1	**4**	3.2	**3**	26		**3**	14	**0**	0.3	2	0
sh2	Y	Sem	EX 0871 7188	**9**	9	100	9	5	**4**	3	**4**	34		**5**	24	**6**	4.3	0	0

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				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
sh2	Y	Sem	EX 0871 7197	**2**	1	0	3	1.5	**6**	4	**5**	44		**3**	13	**0**	0	0	0
sh2	Y	Sem	EX 0872 5226	**7**	5	57	9	4.5	**5**	3.5	**4**	30	Ht	**6**	35	**6**	3.8	0	0
sh2	Y	Sem	EX 93 8117 8	**9**	9	100	9	5	**5**	3.7	**3**	25	Ht	**3**	15	**6**	4	0	0
sh2	Y	GG	Green Giant Code 159	**9**	9	100	9	5	**4**	3	**5**	41		**3**	13	**6**	4.3	0	0
sh2	Y	GG	Green Giant Code 171	**9**	9	100	9	5	**5**	3.7	**6**	51		**4**	23	**5**	3	0	0
sh2	Y	GG	Green Giant Code 172	**9**	9	100	9	5	**5**	3.7	**7**	59		**6**	31	**0**	0.5	2	0
sh2	Y	Rog	GSS 1303	**9**	9	100	9	5	**4**	3.2	**3**	25	Ht	**5**	25	**0**	0	2	0
sh2	Y	Rog	GSS 1477	**2**	1	0	3	2	**4**	3.2	**3**	23	Ht	**3**	15	**0**	0	0	0
sh2	Y	Rog	GSS 2718	**9**	9	100	9	5	**2**	2.2	**4**	30	Ht	**4**	22	**4**	2.8	0	0
sh2	Y	Rog	GSS 5035	**9**	9	100	9	4.5	**3**	2.7	**3**	27	Ht	**2**	7	**5**	3.3	2	0
sh2	Y	HM	HMX 0354 S	**9**	8	89	9	5	**5**	3.7	**8**	66		**5**	27	**7**	5.5	0	0
sh2	Y	HM	HMX 4383 S	**3**	2	7	3	2	**3**	2.9	**2**	15	Ht	**3**	15	**9**	7.3	0	0
sh2	Y	HM	HMX 4388 S	**9**	9	100	9	5	**6**	4.2	**5**	40		**6**	29	**5**	3	2	0
sh2	Y	HM	HMX 4395 S	**9**	9	100	9	5	**5**	3.5	**5**	41	Ht	**6**	28	**4**	2.5	0	0
sh2	Y	HM	HMX 4396 S	**9**	8	80	9	4.5	**6**	4	**5**	36	Ht	**4**	20	**0**	0	0	0
sh2	Y	HM	HMX 5379 S	**1**	1	0	1	1	**3**	2.8	**5**	38		**2**	12	**0**	0.5	2	0
sh2	Y	HM	HMX 5380 S	**2**	2	3	1	1	**4**	3	**6**	52		**5**	27	**0**	0	0	0
sh2	Y	SnR	HY 465 OK	**2**	2	6	1	1	**2**	2	**1**	14	Ht	**4**	20	**0**	0	2	0
sh2	Y	SnR	HY 466 OK	**3**	2	3	3	1.5	**3**	2.5	**2**	19	Ht	**3**	14	**0**	0	2	0
sh2	Y	SnR	HY 473 OK	**3**	2	5	3	2	**2**	2.3	**2**	18	Ht	**3**	15	**0**	0	0	0
sh2	Y	SnR	HY 478 OK	**1**	1	0	1	1	**2**	2.4	**3**	23	Ht	**1**	5	**0**	0	9	0
sh2	Y	SnR	HY 555 OK	**9**	9	100	9	5	**3**	2.9	**5**	42		**3**	19	**5**	3.3	2	0
sh2	Y	SnR	HY 579 OK	**9**	9	100	9	5	**4**	3	**2**	20	Ht	**3**	13	**4**	2.5	0	0
sh2	Y	SnR	HY 896 OK	**9**	9	100	9	5	**6**	4	**9**	71		**2**	12	**0**	0	2	0
sh2	Y	SnR	HY 912 OK	**9**	9	100	9	5	**5**	3.7	**3**	25	Ht	**1**	4	**2**	1	0	0
sh2	Y	SnR	Lancaster	**9**	9	100	9	5	**5**	3.7	**4**	34	Ht	**1**	4	**0**	0	0	0
sh2	Y	Bas	Maize Dulce 79-1	**9**	9	100	9	5	**2**	2.4	**5**	37		**3**	19	**0**	0	0	0
sh2	Y	Bas	Maize Dulce A-111	**9**	9	100	9	4.5	**2**	2	**1**	12	Ht	**1**	3	**0**	0	0	0
sh2	Y	Bas	Maize Dulce B-235	**5**	1	0	9	4.5	**2**	2	**2**	20	Ht	**3**	13	**0**	0.5	0	0
sh2	Y	Cr	Marvel	**9**	9	100	9	5	**5**	3.5	**5**	39		**2**	12	**0**	0	0	0
sh2	Y	Cen	Mirai 003	**4**	3	11	5	3	**5**	3.3	**7**	58		**6**	32	**4**	2.8	2	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
sh2	Y	Cen	Mirai 117 Y	**9**	9	100	9	5	**4**	3.2	**4**	31		**6**	35	**3**	2	0	0
sh2	Y	Cen	Mirai 130 Y	**9**	9	100	9	5	**4**	3.2	**4**	28		**7**	41	**4**	2.8	0	0
sh2	Y	Cen	Mirai 131 Y	**9**	9	100	9	5	**5**	3.5	**3**	27		**7**	43	**3**	2	0	0
sh2	Y	Rog	Overland (GSS 3287)	**7**	6	64	7	3.5	**2**	1.9	**1**	12	Ht	**3**	18	**2**	1.3	2	0
sh2	Y	Sem	Passion	**9**	9	100	9	5	**3**	2.7	**3**	24	Ht	**3**	14	**0**	0	0	0
sh2	Y	SnR	Rising Sun	**9**	9	100	9	5	**6**	4.2	**6**	52		**2**	12	**0**	0	0	0
sh2	Y	IFS	Saturn	**9**	9	100	9	5	**2**	2.3	**5**	37		**2**	10	**4**	2.3	0	0
sh2	Y	IFS	SCH 71141	**9**	8	88	9	5	**1**	1.8	**1**	9	Ht	**1**	6	**0**	0.3	0	0
sh2	Y	HM	Sentinel	**2**	1	0	3	2	**4**	3	**1**	12	Ht	**4**	21	**0**	0.3	0	0
sh2	Y	Sem	Shimmer	**9**	9	100	9	5	**2**	2.4	**3**	21	Ht	**3**	13	**0**	0	3	0
sh2	Y	AC	Summer Sweet 610 Y	**9**	8	92	9	5	**6**	4.2	**6**	47		**6**	30	**0**	0.3	0	0
sh2	Y	AC	Summer Sweet 725 Y	**9**	9	100	9	5	**5**	3.4	**6**	46		**6**	37	**5**	3	2	0
sh2	Y	AC	Summer Sweet 820 Y	**9**	9	100	9	5	**4**	3.2	**6**	51		**5**	26	**2**	1.3	0	0
sh2	Y	AC	Summer Sweet 900 Y	**9**	9	100	9	5	**5**	3.5	**5**	40		**3**	13	**5**	3.5	2	0
sh2	Y	Rog	Supersweet Jubilee Plus	**9**	9	100	9	5	**6**	4	**6**	52	Ht	**3**	15	**0**	0	0	0
sh2	Y	Sem	SVR 0872 5143	**5**	3	15	7	3.5	**5**	3.5	**2**	19	Ht	**2**	7	**6**	4.5	0	0
sh2	Y	Sem	SVR 0873 5566	**5**	3	11	7	3.5	**1**	1.7	**1**	11	Ht	**3**	15	**0**	0	0	0
sh2	Y	Sem	SVR 0873 5574	**5**	3	14	7	4	**2**	2	**2**	17		**3**	13	**0**	0	0	0
sh2	Y	Sem	SVR 0873 5590	**1**	1	0	1	1	**1**	1.8	**5**	35		**5**	24	**0**	0	0	0
sh2	Y	Sem	SVR 0873 6047	**9**	9	100	9	5	**4**	3.2	**4**	33	Ht	**1**	5	**0**	0	0	0
sh2	Y	Sem	SVR 0873 6091	**9**	9	100	9	5	**5**	3.5	**3**	25	Ht	**2**	8	**6**	3.8	0	0
sh2	Y	Sem	SVR 0873 6780	**9**	8	91	9	5	**6**	4	**5**	39	Ht	**3**	15	**5**	3.5	0	0
sh2	Y	Sem	SVR 0874 6105	**2**	1	0	3	2	**3**	2.9	**3**	24	Ht	**1**	2	**0**	0	0	0
sh2	Y	Sem	SVR 0874 6106	**5**	2	7	7	4	**6**	3.9	**6**	47		**1**	4	**0**	0	0	0
sh2	Y	Sem	SVR 0874 6107	**4**	2	5	5	3	**5**	3.5	**5**	37		**3**	13	**0**	0	0	0
sh2	Y	Sem	Sweet Talk	**9**	9	100	9	5	**3**	2.5	**3**	22	Ht	**1**	6	**6**	3.8	2	0
sh2	Y	IFS	Vision	**9**	9	100	9	5	**4**	3	**6**	47		**2**	9	**7**	4.8	0	0
sh2	B	IFS	277 A	**9**	9	100	9	5	**3**	2.7	**4**	34		**2**	12	**5**	3.3	0	0
sh2	B	AC	ACR 4022 BC	**7**	9	100	5	3	**5**	3.3	**4**	28		**3**	15	**3**	1.5	0	0
sh2	B	AC	ACX 1413 BC	**7**	8	91	5	3	**3**	2.9	**4**	31		**7**	43	**9**	6.8	0	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	**KC**	**SC**	**Hybrid**	**Rxn**	**Rxn**	%	**Rxn**	Rate	**Rxn**	Rate	**Rxn**	%	**Ht**	**Rxn**	%	**Rxn**	Rate	**Rxn**	**Rxn**
sh2	B	Rog	BSS 0977 VP A	**9**	8	81	9	5	**3**	2.5	**2**	17	Ht	**5**	26	**0**	0	0	0
sh2	B	Rog	BSS 3495	**1**	1	0	1	1	**5**	3.7	**6**	47		**2**	9	**0**	0	0	0
sh2	B	Rog	BSS 6562	**9**	9	100	9	5	**6**	4	**4**	30	Ht	**3**	17	**5**	3.5	0	0
sh2	B	HM	Cavalry	**2**	1	0	3	1.75	**3**	2.5	**2**	15	Ht	**2**	12	**0**	0	0	0
sh2	B	Cr	CSHBF3-118	**9**	8	84	9	5	**3**	2.5	**3**	25		**2**	8	**3**	1.5	0	0
sh2	B	Cr	CSHBF3-122	**8**	8	84	7	4	**5**	3.7	**4**	30		**5**	24	**0**	0	0	0
sh2	B	Sem	EX 0870 5788	**6**	2	10	9	4.5	**6**	4	**5**	41		**6**	31	**0**	0.5	0	0
sh2	B	Sem	EX 0871 6390	**9**	9	100	9	5	**2**	2.3	**3**	22	Ht	**5**	26	**7**	5.5	0	0
sh2	B	Sem	EX 0871 6622	**9**	9	100	9	5	**1**	1.8	**3**	25	Ht	**2**	10	**5**	3.3	2	0
sh2	B	Sem	EX 0872 5230	**1**	1	0	1	1	**3**	2.7	**4**	30		**7**	39	**5**	3.3	2	0
sh2	B	Sem	EX 0873 7009	**4**	1	0	7	4	**6**	4	**4**	32	Ht	**2**	10	**0**	0	0	0
sh2	B	GG	Green Giant Code 161	**9**	8	97	9	5	**3**	2.7	**5**	36		**5**	27	**0**	0	0	0
sh2	B	SnR	HB 1321 OK	**9**	9	100	9	5	**7**	4.3	**7**	60		**6**	28	**9**	6.8	0	0
sh2	B	HM	HMX 2372 BS	**9**	9	100	9	5	**5**	3.7	**4**	32	Ht	**5**	24	**0**	0	3	0
sh2	B	HM	HMX 4380 BES	**9**	8	95	9	5	**4**	3	**3**	24		**6**	33	**5**	3.3	0	0
sh2	B	HM	HMX 5340 B	**9**	9	100	9	5	**3**	2.7	**2**	16	Ht	**3**	18	**6**	4.5	2	0
sh2	B	Cr	Holiday	**9**	8	89	9	5	**3**	2.5	**1**	8	Ht	**1**	6	**0**	0	0	0
sh2	B	Sem	Hollywood	**9**	9	100	9	5	**5**	3.7	**5**	45		**6**	29	**0**	0.3	4	0
sh2	B	Sak	K3-312	**9**	9	100	9	5	**6**	4.2	**5**	36		**2**	11	**0**	0	4	0
sh2	B	Cen	Mirai 301 BC	**9**	9	100	9	5	**2**	2.2	**6**	53		**3**	18	**6**	4	0	0
sh2	B	Cen	Mirai 308 BC	**9**	9	100	9	5	**5**	3.5	**5**	45		**9**	55	**4**	2.3	0	0
sh2	B	Cen	Mirai 327 BC	**9**	9	100	9	5	**6**	4.2	**6**	46		**6**	35	**4**	2.8	0	0
sh2	B	Cen	Mirai 334 BC	**9**	8	95	9	5	**1**	1.4	**5**	42		**2**	10	**5**	3.5	0	0
sh2	B	Cen	Mirai 336 BC	**9**	9	100	9	5	**1**	1.3	**5**	39		**2**	12	**5**	3.3	0	0
sh2	B	Sem	Obsession	**9**	9	100	9	5	**4**	3	**3**	22	Ht	**3**	14	**0**	0.3	0	0
sh2	B	Cr	Optimum	**9**	9	100	9	5	**6**	3.9	**5**	45		**4**	22	**6**	4	0	0
sh2	B	Cr	Phenomenal	**9**	9	100	9	5	**6**	3.9	**6**	46		**5**	24	**6**	4.3	0	0
sh2	B	HM	Polaris	**4**	3	18	3	1.5	**4**	3.2	**7**	58		**4**	20	**0**	0	0	0
sh2	B	IFS	SCH 96064	**9**	9	100	9	5	**4**	3	**4**	30	Ht	**1**	6	**6**	4	0	0
sh2	B	Cr	Surpass	**9**	9	100	9	5	**6**	4.2	**5**	41		**3**	19	**7**	5.3	0	0
sh2	B	Sem	SVR 0843 4712	**9**	9	100	9	5	**7**	4.3	**4**	31	Ht	**1**	5	**0**	0	0	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's wilt		Northern leaf blight			Southern leaf blight		G-virulent rust		Herbicides	
				Overall	Early		Late											Clsto	Accnt
ET	KC	SC	Hybrid	Rxn	Rxn	%	Rxn	Rate	Rxn	Rate	Rxn	%	Ht	Rxn	%	Rxn	Rate	Rxn	Rxn
sh2	B	Sem	SVR 0870 5188	**9**	9	100	9	5	**7**	4.8	**6**	47		**4**	20	**7**	5.3	0	0
sh2	B	Sem	SVR 0874 6119	**9**	9	100	9	5	**4**	3	**2**	19	Ht	**1**	2	**0**	0	2	0
sh2	B	Cr	Tango	**9**	9	100	9	5	**4**	3	**5**	36		**2**	8	**4**	2.3	3	0
sh2	B	IFS	XTH 1181	**9**	9	100	9	5	**3**	2.5	**2**	18	Ht	**2**	11	**0**	0.3	2	0
sh2	B	IFS	XTH 1182	**9**	9	100	9	5	**3**	2.9	**2**	19	Ht	**2**	9	**0**	0	3	0
sh2	B	IFS	XTH 1183	**9**	9	100	9	5	**2**	2.2	**1**	14	Ht	**2**	10	**0**	0	0	0
sh2	B	IFS	XTH 1184	**9**	9	100	9	5	**2**	2.4	**1**	14	Ht	**3**	16	**0**	0	0	0
sh2	B	IFS	XTH 1274	**9**	9	100	9	5	**2**	2.4	**2**	17		**2**	9	**3**	2	4	0
sh2	B	IFS	XTH 1280	**9**	9	100	9	5	**2**	1.9	**1**	12	Ht	**1**	4	**0**	0	2	0
sh2	B	IFS	XTH 1281	**9**	8	90	9	5	**3**	2.7	**1**	13	Ht	**2**	10	**0**	0	0	0
sh2	B	IFS	XTH 1283	**9**	9	100	9	5	**2**	2	**1**	11	Ht	**1**	5	**0**	0	0	0
sh2	B	IFS	XTH 1284	**9**	9	100	9	5	**2**	2.3	**2**	19	Ht	**3**	13	**0**	0	0	0
sh2	B	IFS	XTH 1373	**9**	9	100	9	5	**3**	2.9	**5**	40		**5**	24	**6**	4	3	0
sh2	B	IFS	XTH 2178	**9**	9	100	9	5	**3**	2.7	**3**	22	Ht	**2**	12	**0**	0	3	0
sh2	B	IFS	XTH 2184	**9**	9	100	9	5	**3**	2.7	**3**	21	Ht	**3**	13	**0**	0	2	0
sh2	B	IFS	XTH 2278	**9**	9	100	9	5	**2**	2.2	**1**	14	Ht	**1**	4	**0**	0	3	0
sh2	B	IFS	XTH 2279	**9**	9	100	9	5	**2**	2.4	**2**	16	Ht	**2**	9	**0**	0.3	0	0
sh2	B	IFS	XTH 2280	**9**	9	100	9	5	**4**	3	**2**	20	Ht	**1**	4	**0**	0	0	0
sh2	B	IFS	XTH 2281	**9**	9	100	9	5	**2**	2.2	**2**	17	Ht	**2**	9	**0**	0	0	0
sh2	B	IFS	XTH 2381	**9**	9	100	9	5	**2**	2.4	**1**	12	Ht	**2**	11	**0**	0	0	0
sh2	W	IFS	378 A	**9**	9	100	9	5	**3**	2.7	**4**	29	Ht	**2**	7	**5**	3	0	0
sh2	W	IFS	382 A	**9**	9	100	9	5	**3**	2.7	**1**	14	Ht	**2**	9	**0**	0	2	0
sh2	W	AC	ACX 1410 W	**3**	1	0	5	2.5	**4**	3	**9**	71		**7**	39	**8**	5.8	2	0
sh2	W	AC	ACX 1411 W	**3**	1	0	5	3	**4**	3	**8**	67		**6**	30	**8**	6	0	0
sh2	W	AC	ACX 1412 W	**3**	2	9	3	1.5	**3**	2.7	**5**	45		**5**	26	**7**	4.8	0	0
sh2	W	Cr	CSHWF3-126	**1**	1	0	1	1	**2**	2	**2**	19		**3**	15	**0**	0	0	0
sh2	W	Sem	Devotion (EX 0841 3133)	**9**	9	100	9	5	**5**	3.3	**4**	34	Ht	**4**	21	**6**	4.3	0	0
sh2	W	SnR	Everest	**9**	9	100	9	5	**7**	4.7	**7**	59		**4**	22	**6**	4	0	0
sh2	W	Sem	EX 0870 5770	**3**	2	3	3	1.5	**5**	3.7	**5**	43		**6**	32	**0**	0.3	5	0
sh2	W	Sem	EX 0873 7042	**9**	9	100	9	5	**5**	3.7	**5**	36	Ht	**6**	28	**3**	2	0	0
sh2	W	HM	HMX 2376 WS	**2**	1	0	3	2	**4**	3	**5**	44		**3**	16	**7**	5.3	0	0

Table 3. Reactions of sweet corn hybrids in the University of Illinois disease nursery - 2005

				Maize dwarf mosaic					Stewart's		Northern			Southern		G-virulent		Herbicides	
				Overall	Early		Late		wilt		leaf blight			leaf blight		rust		Clsto	Accnt
ET	KC	SC	Hybrid	Rxn	Rxn	%	Rxn	Rate	Rxn	Rate	Rxn	%	Ht	Rxn	%	Rxn	Rate	Rxn	Rxn
sh2	W	HM	HMX 4387 WS	**5**	2	4	7	3.5	**3**	2.7	**6**	52		**3**	13	**7**	5	0	0
sh2	W	HM	HMX 5341 WS	**9**	9	100	9	5	**6**	3.9	**8**	62		**3**	18	**4**	2.5	0	0
sh2	W	HM	HMX 5342 WS	**1**	1	0	1	1	**5**	3.5	**7**	58		**4**	20	**0**	0	0	0
sh2	W	HM	HMX 5354 WS	**3**	2	4	3	2	**4**	3	**6**	52		**3**	14	**6**	4	0	0
sh2	W	HM	HMX 5355 WS	**4**	2	3	5	2.5	**3**	2.9	**6**	51		**2**	11	**6**	4	0	0
sh2	W	Cr	How Sweet It Is	**9**	9	100	9	5	**5**	3.5	**6**	48		**5**	25	**5**	3.5	2	0
sh2	W	SnR	HW 1336 OK	**9**	9	100	9	5	**3**	2.5	**3**	27	Ht	**3**	17	**5**	3.5	0	0
sh2	W	HM	Ice Queen	**2**	1	0	3	2	**5**	3.5	**6**	46		**3**	14	**0**	0.3	0	0
sh2	W	Sak	K2-501	**9**	9	100	9	5	**6**	3.9	**8**	64		**4**	23	**6**	3.8	0	0
sh2	W	Sak	Millennium	**1**	1	0	1	1	**1**	1.7	**4**	28		**2**	12	**0**	0.3	5	0
sh2	W	Cen	Mirai 421 W	**9**	8	91	9	5	**2**	2.2	**6**	46		**4**	20	**5**	3.5	0	0
sh2	W	HM	Mont Blanc	**5**	2	7	7	3.5	**2**	2.2	**1**	10	Ht	**2**	9	**0**	0.3	0	0
sh2	W	Cen	MX 420W	**9**	9	100	9	5	**3**	2.7	**7**	59		**4**	20	**5**	3.5	2	0
sh2	W	IFS	SCH 20705wht	**9**	9	100	9	5	**3**	2.7	**5**	36		**5**	24	**4**	2.8	2	0
sh2	W	Sem	Seneca Sugarburst	**9**	9	100	9	5	**7**	4.3	**8**	64		**2**	11	**5**	3.3	0	0
sh2	W	HM	Snow White	**6**	2	10	9	4.5	**5**	3.7	**5**	41		**3**	13	**9**	7.8	0	0
sh2	W	Sak	SSC0301	**9**	9	100	9	5	**5**	3.5	**4**	32		**3**	16	**6**	3.8	4	0
sh2	W	AC	Summer Sweet 781 Ultra	**9**	9	100	9	5	**3**	2.5	**4**	31		**3**	16	**7**	5.3	0	0
sh2	W	Sem	SVR 0783 7069	**6**	5	56	7	3.5	**6**	3.9	**4**	29	Ht	**2**	11	**0**	0	2	0
sh2	W	Sem	SVR 0841 3139	**9**	9	100	9	5	**7**	4.3	**7**	59		**2**	12	**7**	4.8	0	0
sh2	W	Sem	SVR 0843 4857	**9**	9	100	9	5	**6**	4	**5**	41	Ht	**2**	12	**7**	4.8	2	0
sh2	W	Sem	SVR 0873 7068	**1**	1	0	1	1	**6**	4	**3**	25	Ht	**6**	28	**0**	0	2	0
sh2	W	IFS	XTH 3180	**9**	9	100	9	5	**4**	3	**1**	14	Ht	**2**	12	**0**	0	0	0
sh2	W	IFS	XTH 3181	**9**	9	100	9	5	**4**	3	**2**	18	Ht	**3**	15	**0**	0	0	0
			Mean			72.5		4.2		3.2		37.9			20.2		3.4*	(w/o Rp lines)	
			Standard deviation			41.8		1.43		0.97		15.9			12.5		1.21*		
			LSD (0.05)			14.8		0.92		0.65		9.88			8.45		1.48*		

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

Rate - disease rating: 1 to 9 scale (Stewart's wilt, G-virulent rust); 0 to 100% leaf area infected (NLB, SLB);
0 to 100% incidence of infected plants (MDM-early); 1 to 5 (based on estimates of % infected - MDM-late)

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