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2000 RGON Excel File

Table 1. 2000 Regional Germplasm Observation Nursery

Entry	Line	Cultivar or pedigree	Source
1	TAM-107	PI 495594	check
2	Karl 92	PI 564245	check
3	Arapahoe	PI 518591	check
4	local check 1	see comments	check
5	local check 2	see comments	check
6	local check 3	see comments	check
7	TX93V5722	TAM 200/TX82D8556	Texas A&M
8	TX97U2001	TX87V1613/KS91WGRC11	Texas A&M
9	TX97U2009	TX89D9537/TX89V4213	Texas A&M
10	TX97U2011	TX89D9537/TX89V4213	Texas A&M
11	TX97U2012	TX89D9537/TX89V4213	Texas A&M
12	TX97U2032	TX88D3442//Siouxland/Collin	Texas A&M
13	TX98U8018	TX92U2167/TX90D9692	Texas A&M
14	TX98U8035	TX90U6229/TX88U8074	Texas A&M
15	TX98U8042	TX91U1020/TX88U8074	Texas A&M
16	TX98U8054	TX92U2099/Sturdy	Texas A&M
17	TX98U8061	TX92U2156/TX88U8074	Texas A&M
18	TX98U8065	TX92U2156/TX90D9692	Texas A&M
19	TX98U8082	TX87U7003/TX90D9377	Texas A&M
20	TX98U8083	TX87U7003/TX90D9377	Texas A&M
21	TX98U8085	TX87U7003/TX90D9377	Texas A&M
22	TX98U8120	TX91U1027/TX90D9377	Texas A&M
23	TX98U8126	TX92U2156/TX88U8074	Texas A&M
24	TX98U8128	TX92U2156/TX88U8074	Texas A&M
25	TX98U8134	TX92U2156/TX88U8074	Texas A&M
26	TX98U8166	TX89D9537/TX89V4213	Texas A&M
27	TX98U8184	U1254-1-8-1-1/TX87V4213	Texas A&M
28	TX98U8185	U1254-1-8-1-1/TX87V1233	Texas A&M
29	TX98U8186	U1254-1-8-1-1/TX87V1233	Texas A&M
30	TX95D8697	TAM 200//Siouxland/Tanager	Texas A&M
31	TX96D1073	TX86D1310/Kavkaz//TX86D1308	Texas A&M
32	TX96D1682	Adder//TX84U4408/Pavon 76	Texas A&M
33	TX96D2264	TXGH10563B/TX89D6435	Texas A&M
34	TX97D4032	Adder/WX86D109-6	Texas A&M
35	TX97D4242	TX88D3495/TXGH1026	Texas A&M
36	TX97D4341	TX88D3495/TXGH1026	Texas A&M

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Entry	Line	Cultivar or pedigree	Source
37	TX97D4421	Adder/WX86D109-6	Texas A&M
38	TX97D4666	WX86D109-6/Sconger	Texas A&M
39	TX97D5088	TX85V1326/TX86D1312	Texas A&M
40	TX97D5736	TAM 300//RL6050/Kavkaz	Texas A&M
41	TX97D6122	Era//Len/TX82D4751	Texas A&M
42	TX97D6132	Siouxland/CI13227//TAM 200/3/Sturdy	Texas A&M
43	TX97D6627	TAM 300//RL6050/Kavkaz	Texas A&M
44	TX97D6784	Syrian #79/SDY//TXGH12588/TX87V1138	Texas A&M
45	TX98D1014	KS8010-1-4-2/TX84V1307	Texas A&M
46	TX98D1264	Len/Oslo//Mit/3/Suwon 85/4/TAM 300	Texas A&M
47	TX98D1407	C87-13WH//RL6048/Siete Cerros/Niki	Texas A&M
48	TX98D1873	Coker 9835/TX88D3146	Texas A&M
49	TX98D1899	TX87V1209/TX88V4136	Texas A&M
50	TX98D2423	2163*W3453/W2441	Texas A&M
51	TX98D2738	WTN/SDY/4/TXGH10563B/3/Len/Oslo//Mit	Texas A&M
52	TX98D2755	Len/Oslo//Mit/3/Suwon 85/4/TAM 300	Texas A&M
53	TX98D2964	ABI85*5186-1/TX91D7014	Texas A&M
54	TX98D3114	McN1003/Probrand 812//TAM 300/Coker 9134	Texas A&M
55	TX98D3231	RL6042/Kavkaz//TX86D7042	Texas A&M
56	TX98D3261	TX92D7619/TX92D7761	Texas A&M
57	TX98D3305	CI13227/Suwon 85//TX82D4751	Texas A&M
58	TX98D3447	CI 13227/Auburn//Mit	Texas A&M
59	TX98D3487	Bulk selection	Texas A&M
60	TAM-107	PI 495594	check
61	Karl 92	PI 564245	check
62	Arapahoe	PI 518591	check
63	local check 1	see comments	check
64	local check 2	see comments	check
65	local check 3	see comments	check
66	TX99A5016	TX86V1540/LCO//TAM-201	Texas A&M
67	TX99A5033	TAM-107//TAM-107/OASIS/3/KARL	Texas A&M
68	TX99A5211	MADSEN/TX87V1233//KARL	Texas A&M
69	TX99A5231	ARAPAHOE//TX78V2430-2/TX86V1540	Texas A&M
70	TX99A5232	ARAPAHOE//TX78V2430-2/TX86V1540	Texas A&M
71	TX99A5238	ARAPAHOE//TX78V2430-2/TX86V1540	Texas A&M
72	TX99A5422	TX78V2430-2/TX86V1540//LARNED	Texas A&M

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Entry	Line	Cultivar or pedigree	Source
73	TX99A5431	TX78V2430-2/TX86V1540//KS89H48-1	Texas A&M
74	TX99A5432	TX78V2430-2/TX86V1540//KS89H48-1	Texas A&M
75	TX99A5433	MADSEN/KS8010*-72//TX81V6599-1/3/KARL	Texas A&M
76	TX99A5437	MADSEN/KS8010*-72//TX81V6599-1/3/KARL	Texas A&M
77	TX99A5438	MADSEN/KS8010*-72//TX81V6599-1/3/KARL	Texas A&M
78	TX99A5440	MADSEN/KS8010*-72//TX81V6599-1/3/KARL	Texas A&M
79	TX99A5608	ARAPAHOE//TX86V1540/TAM-200	Texas A&M
80	TX99A5610	ARAPAHOE//TX86V1540/TAM-200	Texas A&M
81	TX99A5617	ARAPAHOE//TX86V1540/TAM-200	Texas A&M
82	TX99A5623	ARAPAHOE//TX86V1540/TAM-200	Texas A&M
83	TX99A5811	TX86V1540/TX90A9524	Texas A&M
84	TX99A5819	TX86V1540/TX90A9524	Texas A&M
85	TX99A5832	TX90V7911//N87V106	Texas A&M
86	TX99A5840	TX90V7912/ARAPAHOE	Texas A&M
87	TX99A6018	TX90V7912/TX90A9516	Texas A&M
88	TX99A6027	KARL/TX84V1905/3/TX81V6603//SXL/TAM107	Texas A&M
89	TX99A6029	KARL/TX84V1905/3/TX81V6603//SXL/TAM107	Texas A&M
90	TX99A6030	KARL/TX84V1905/3/TX81V6603//SXL/TAM107	Texas A&M
91	TX99A6411	TAM 107/COLLIN//TXGH10563B/3/KARL	Texas A&M
92	TX99A6426	ARAPAHOE//TX86V1540/TAM 200	Texas A&M
93	TX99A6436	TX86V1540/TX90A9524	Texas A&M
94	TX99A6616	TX90V7912/ARAPAHOE	Texas A&M
95	TX99A6632	KARL/TX84V1905/3/TX81V6603//SXL/AURORA	Texas A&M
96	OK98637	Odessa 18/Mesa	Oklahoma St.
97	OK98699	TAM 200/HBB313E//2158	Oklahoma St.
98	OK98697	TAM 200/HBB313E//2158	Oklahoma St.
99	OK98698	TAM 200/HBB313E//2158	Oklahoma St.
100	OK97462	Century*3/TA2460//Cimarron	Oklahoma St.
101	OK98680	Odessa 06/Mesa	Oklahoma St.
102	OK98662	HBE0780B/Karl//2180	Oklahoma St.
103	OK97508	2174/Cimarron	Oklahoma St.
104	OK98690	OK91724/Karl	Oklahoma St.
105	OK98640	Odessa 21/Mesa	Oklahoma St.
106	OK98650	2180/N86L177//Brigantina	Oklahoma St.
107	OK96705	2180/OK88803//Abilene	Oklahoma St.
108	OK98610	Century*3/TA2460//2163/3/Cimarron	Oklahoma St.

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Entry	Line	Cultivar or pedigree	Source
109	OK98631	Odessa 06/Karl	Oklahoma St.
110	OK96717	Abilene/2180//Chisholm	Oklahoma St.
111	OK94P549-2C	HBY756A/Siouxland//2180	Oklahoma St.
112	OK98G508W	Rio Blanco/KSWGRC10	Oklahoma St.
113	OK98G507W	KS90HW53/90IWWSN-88	Oklahoma St.
114	OK98G502W	KS91HW29/KSSB369-7	Oklahoma St.
115	OK95G703-98-61416	KS831374-154B/OR300764	Oklahoma St.
116	OK95G703-98-61421	KS831374-154B/OR300764	Oklahoma St.
117	STARS-99GOb01	Chisholm//Chisholm/PI225217	ARS-Stillwater
118	STARS-99GOb05	Chisholm//Chisholm/PI225217	ARS-Stillwater
119	STARS-99GOb10	Chisholm//Chisholm/PI225217	ARS-Stillwater
120	TAM-107	PI 495594	check
121	Karl 92	PI 564245	check
122	Arapahoe	PI 518591	check
123	local check 1	see comments	check
124	local check 2	see comments	check
125	local check 3	see comments	check
126	STARS-99GOb15	Chisholm//Chisholm/PI225217	ARS-Stillwater
127	STARS-99GOb34	Karl92/4/Karl/3/TAM101//Chisholm/PI366616	ARS-Stillwater
128	STARS-99GOb46	Custer/4/Karl//Bobwhite/PI149898/3/Karl92	ARS-Stillwater
129	STARS-99GOb60	Custer/4/TAM101//Chisholm/PI245462/3/Karl92	ARS-Stillwater
130	STARS-99GOb65	Custer/4/Karl92/3/Chisholm//Chisholm/PI225217	ARS-Stillwater
131	STARS-99GI02	TAM101//Chisholm/PI245462	ARS-Stillwater
132	STARS-99GI04	TAM101//Chisholm/PI245462	ARS-Stillwater
133	STARS-99GI05	TAM101//Chisholm/PI245462	ARS-Stillwater
134	STARS-99GI06	TAM101//Chisholm/PI245462	ARS-Stillwater
135	STARS-99GI07	TAM101//Chisholm/PI245462	ARS-Stillwater
136	STARS-99St102	Karl92/3/TAM101//Chisholm/PI245462	ARS-Stillwater
137	STARS-99St104	Karl92/3/TAM101//Chisholm/PI245462	ARS-Stillwater
138	G97019	Karl92/Tomahawk	Goertzen Seed
139	G97050	G1420/G1759	Goertzen Seed
140	G97099	862028/R654//Karl92	Goertzen Seed
141	G97159	G2500/G1980	Goertzen Seed
142	G97187	G2542/G1780	Goertzen Seed
143	G97209	Karl92//G525/Arlin	Goertzen Seed
144	G97237	9117850/B725//Karl92	Goertzen Seed

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Entry	Line	Cultivar or pedigree	Source
145	G97246	9113231/B725//Karl92	Goertzen Seed
146	G97252	Raeder/R654//Karl92	Goertzen Seed
147	G97288	Karl92//G525/Arlin	Goertzen Seed
148	G97343	919021/B725//K92	Goertzen Seed
149	G97380a	G1420//G33/G1980	Goertzen Seed
150	G97380b	G1420//G33/G1980	Goertzen Seed
151	G97393	861954/B725//Karl92	Goertzen Seed
152	G97447	Karl92/Wi89-055	Goertzen Seed
153	G97454	G399/Arlin//Haven	Goertzen Seed
154	G97466	9119021/B725//Karl92	Goertzen Seed
155	G980103	Halt/Snow White	Goertzen Seed
156	G980143	Tonkawa/Jagger	Goertzen Seed
157	G980406	28773/Karl92//R13003	Goertzen Seed
158	G980643	G13024/Jagger	Goertzen Seed
159	G980871	G14108/Snow White	Goertzen Seed
160	G981028	Halt/Snow White	Goertzen Seed
161	G981043	G14404/Jagger	Goertzen Seed
162	G982131	AC465/B288D//B384B/3/Jagger	Goertzen Seed
163	G982159	G2500/Karl92	Goertzen Seed
164	G982241	N87V107/Betty	Goertzen Seed
165	G982244	N87V107/Betty	Goertzen Seed
166	G982383	G14147/Haven	Goertzen Seed
167	KS98HW151-5	ARLIN//TA2460/*3 TAM107	Kansas St.
168	KS98HW151-6	ARLIN//TA2460/*3 TAM107	Kansas St.
169	KS98HW180-1	85W663-11-6-1/KS87H6	Kansas St.
170	KS98HW180-2	85W663-11-6-1/KS87H6	Kansas St.
171	KS98HW180-4	85W663-11-6-1/KS87H6	Kansas St.
172	KS98HW183-4	85W663-11-6-1/KS87H6	Kansas St.
173	KS98HW185-5	85W663-11-6-1/KS87H6	Kansas St.
174	KS98HW189-2	85W663-11-6-1/3/KS91HW29//KS90HW53/KS91H184	Kansas St.
175	KS98HW189-3	85W663-11-6-1/3/KS91HW29//KS90HW53/KS91H184	Kansas St.
176	KS98HW189-4	85W663-11-6-1/3/KS91HW29//KS90HW53/KS91H184	Kansas St.
177	KS98HW220-3	ARLIN/YUMA	Kansas St.
178	KS98HW220-5	ARLIN/YUMA	Kansas St.
179	KS98H239	IKE//TA2460/*3 TAM200	Kansas St.
180	TAM-107	PI 495594	check

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Entry	Line	Cultivar or pedigree	Source
181	Karl 92	PI 564245	check
182	Arapahoe	PI 518591	check
183	local check 1	see comments	check
184	local check 2	see comments	check
185	local check 3	see comments	check
186	KS99HW1	93H66/94HW297orHW301	Kansas St.
187	KS99HW2	93H66/94HW297orHW301	Kansas St.
188	KS99HW3	93H66/94HW297orHW301	Kansas St.
189	KS99HW6	91HW29//ARLSIB/91H184/3/91HW19/HYN SIB	Kansas St.
190	KS99HW24	CUSTER/93HW255(87H63//84HW200/82H238)	Kansas St.
191	KS99HW35	JGR/93HW242(HW196/Nrk//87H337)	Kansas St.
192	KS99HW36	JGR/93HW242(HW196/Nrk//87H337)	Kansas St.
193	KS99HW37	JGR/93HW242(HW196/Nrk//87H337)	Kansas St.
194	KS99HW41	91H153/93HW255(87H63//HW200/82H238)	Kansas St.
195	KS99HW55	93HW91/93HW255(87H63//84HW200/82H238-1)	Kansas St.
196	KS99HW56	93HW91/93HW255(87H63//84HW200/82H238-1)	Kansas St.
197	KS99HW78	93HW207(HW200/B203//87H22)/93HW242(196/Nrk//87H337)	Kansas St.
198	KS99HW79	93HW207(HW200/B203//87H22)/93HW242(196/Nrk//87H337)	Kansas St.
199	KS99HW80	93HW207(HW200/B203//87H22)/93HW242(196/Nrk//87H337)	Kansas St.
200	KS99HW85	93HW207(HW200/B203//87H22)/93HW242(196/Nrk//87H337)	Kansas St.
201	KS99HW88	93HW207(HW200/B203//87H22)/93HW242(196/Nrk//87H337)	Kansas St.
202	KS99HW90	IKE//91HW19/HYN SIB	Kansas St.
203	H9623153	Quantum Hybrid Wheat	Hybritech
204	H9623156	Quantum Hybrid Wheat	Hybritech
205	H9626547	Quantum Hybrid Wheat	Hybritech
206	WX97-2402	Quantum Hybrid Wheat	Hybritech
207	WX97-2412	Quantum Hybrid Wheat	Hybritech
208	WX97-2421	Quantum Hybrid Wheat	Hybritech
209	WX97-2515	Quantum Hybrid Wheat	Hybritech
210	WX97-3007	Quantum Hybrid Wheat	Hybritech
211	WX97-3313	Quantum Hybrid Wheat	Hybritech
212	WX97-4105	Quantum Hybrid Wheat	Hybritech
213	WX97-4201	Quantum Hybrid Wheat	Hybritech
214	WX97-4310	Quantum Hybrid Wheat	Hybritech
215	CO940610	KS87H22/MWO9	Colorado St.
216	CO940611	KS87G325-2-1/RioBlanco	Colorado St.

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Entry	Line	Cultivar or pedigree	Source
217	CO950043	Hill/PI294994-GBR//Lamar	Colorado St.
218	CO960026	RWAE5R/CO880210	Colorado St.
219	CO960223	CI6501/TAM 107//Yuma	Colorado St.
220	CO960603	Akron/Yuma	Colorado St.
221	CO970235	KS90HW53/90IWWSN-88	Colorado St.
222	CO970474	Ogallala/Halt	Colorado St.
223	CO970498	Ogallala/Halt	Colorado St.
224	CO970531	Ike/Halt	Colorado St.
225	CO970547	Ike/Halt	Colorado St.
226	CO970552	Ike/Halt	Colorado St.
227	CO970655	OK1/Carson//Yuma	Colorado St.
228	CO970769	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS12	Colorado St.
229	CO970773	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS12	Colorado St.
230	CO970787	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS12	Colorado St.
231	CO970812	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS08	Colorado St.
232	CO970866	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS08	Colorado St.
233	CO970875	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS08	Colorado St.
234	CO970883	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS08	Colorado St.
235	CO970887	Yuma/T-57//TAM 200/3/4*Yuma/4/NEWS08	Colorado St.
236	CO970901	Yuma/T-57//Lamar/3/4*Yuma/4/NEWS16	Colorado St.
237	CO970908	Yuma/T-57//Lamar/3/4*Yuma/4/NEWS16	Colorado St.
238	CO970919	Yuma/T-57//Lamar/3/4*Yuma/4/NEWS16	Colorado St.
239	CO970940	Yuma/T-57//Lamar/3/4*Yuma/4/NEWS16	Colorado St.
240	TAM-107	PI 495594	check
241	Karl 92	PI 564245	check
242	Arapahoe	PI 518591	check
243	local check 1	see comments	check
244	local check 2	see comments	check
245	local check 3	see comments	check
246	CO970943	Yuma/T-57//CO850034/3/4*Yuma/4/NEWS18	Colorado St.
247	MT9904	MT85200/Tiber	Montana St.
248	MT9905	MT85200/Tiber	Montana St.
249	MT9906	MT85200/NuWest	Montana St.
250	MT9907	MT85200/NuWest	Montana St.
251	MT9908	MT85200/Redwin	Montana St.
252	MT9918	MT85202/Judith	Montana St.

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Entry	Line	Cultivar or pedigree	Source
253	MT9921	MT8709/Judith	Montana St.
254	MT9922	MT8709/Judith	Montana St.
255	MT9923	MT8709/Judith	Montana St.
256	MT9924	MT8709/Judith	Montana St.
257	MT9927	MT8709/Judith//Erhardt	Montana St.
258	MT9928	MT8709/Judith//Erhardt	Montana St.
259	MT9929	MT8709/Judith//Erhardt	Montana St.
260	MT9930	MT8709/Nuwest//Erhardt	Montana St.
261	MT9933	MT8709/Tiber//Erhardt	Montana St.
262	MT9935	MT8709/Tiber//Erhardt	Montana St.
263	MT9936	MT8713/Nuwest//Erhardt	Montana St.
264	MT9939	MT8713/Tiber//Erhardt	Montana St.
265	MT9944	S86-736/MT8709	Montana St.
266	MT9951	Tiber/Centurk	Montana St.
267	MT9952	Tiber/Centurk	Montana St.
268	MT9964	S86-736/Arapahoe	Montana St.
269	MT9965	S86-736/Arapahoe	Montana St.
270	MT9970	Judith/Kestrel//Judith/Vanguard	Montana St.
271	MT9978	Erhardt//Nuwest/MT91051	Montana St.
272	MTR99101	Vanguard//CItr2401/2*Judith	Montana St.
273	MT99115	McNeal/Kestrel	Montana St.
274	MT99116	McNeal/Kestrel	Montana St.
275	MT99117	McNeal/Kestrel	Montana St.
276	NW98S026	WA007662-10/KS92WOO20	ARS-Lincoln
277	NW98S028	WA691213-27/N86L177//N91L146	ARS-Lincoln
278	NW98S055	CO850034//T-57/5*TAM107/3/(KS91H174/RBL//S91HW29/Vista)	ARS-Lincoln
279	NW98S059	KS84W063-9-39-3/NE88427	ARS-Lincoln
280	NW98S060	KS84W063-9-39-3/NE88427	ARS-Lincoln
281	NW98S061	KS84W063-9-39-3/NE88427	ARS-Lincoln
282	NW98S062	YUMA//T-57/3/CO850034/4/4*YUMA/5/KS91H184/Arlin-s/KS91H29//NE89526	ARS-Lincoln
283	NW98S069	KS87W822-2-1/NE88427	ARS-Lincoln
284	NW98S078	NE90518/Arlin	ARS-Lincoln
285	NW98S095	WA691213-27/N86L177//AP-WI89-163	ARS-Lincoln
286	NW98S097	WA691213-27/N86L177//AP-WI89-163	ARS-Lincoln
287	NW98S098	WA691213-27/N86L177//AP-WI89-163	ARS-Lincoln
288	NW98S104	KS91H184/3*RBL//N87V106	ARS-Lincoln

Table 1. 2000 Regional Germplasm Observation Nursery

Entry	Line	Cultivar or pedigree	Source
289	NW98S121	N90L119/KS831440-3	ARS-Lincoln
290	NW98S137	KS87W822-2-1/NE88427	ARS-Lincoln
291	NW98S147	KS85W663-1-1/TOMAHAWK	ARS-Lincoln
292	NW98S172	KS84W063-8-2/KARL92	ARS-Lincoln
293	96MD7413-58	NE90616/Ike	ARS-Lincoln
294	96MD7413-36	NE90616/Ike	ARS-Lincoln
295	96MD7110-25	MT8713/NE87612//Ike	ARS-Lincoln
296	96MD7110-71	MT8713/NE87612//Ike	ARS-Lincoln
297	NE98410	KS87H325-2/NE90574 (=RODEO/BRL//ARAPAHOE)	U. Nebraska
298	NE98416	ARAPAHOE/NIOBRARA	U. Nebraska
299	NE94479	Arapahoe/ABILENE//NE86488	U. Nebraska
300	TAM-107	PI 495594	check
301	Karl 92	PI 564245	check
302	Arapahoe	PI 518591	check
303	local check 1	see comments	check
304	local check 2	see comments	check
305	local check 3	see comments	check
306	NE98424	NE89523 (=T105*4/AMIGO//BENN)/NE90461 (=BRL/BEEN)	U. Nebraska
307	NE98425	NE89534 (=COLT//COLTSIB/SXL)/KARL	U. Nebraska
308	NE98445	TX89V4138/NE89657 (ARAPAHOE SEL.)	U. Nebraska
309	NE98466	KS89H50-4/NE90518 (=BRL//SXL/BENN)	U. Nebraska
310	NE98471	NE90461 (=BRL/BEEN)/NIOBRARA	U. Nebraska
311	NE98476	ADVANTAGE/NE88588 (=PRONGHORN SIB)	U. Nebraska
312	NE98502	NE89523 (=T105*4/AMIGO//BENN)/NE90461 (=BRL/BEEN)	U. Nebraska
313	NE98503	NE89523 (=T105*4/AMIGO//BENN)/NE90461 (=BRL/BEEN)	U. Nebraska
314	NE98530	KS91WGRC12/NE90518 (=BRL//SXL/BENN)	U. Nebraska
315	NE98564	NE86501 (=COLT/CODY)/YUMA	U. Nebraska
316	NE98574	CO850267/RAWHIDE	U. Nebraska
317	NE98589	NE87451/NE87612)//NE90625	U. Nebraska
318	NE98594	NE89523 (=T105*4/AMIGO//BENN)/KS88H12//ARAPAHOE	U. Nebraska
319	NE98602	KLASSIC/NE88526//NE89526	U. Nebraska
320	NE98632	NIOBRARA/NE91525 = AIV/NBR/BOLAL//HIPLAINS/3/LOV6/4/REDLAND	U. Nebraska
321	NE98646	TX89V4138/NE89657 (ARAPAHOE SEL.)	U. Nebraska
322	NE98684	NS-L116/OK87630//RAWHIDE	U. Nebraska
323	NE98691	XW591/NE90625 (=TX79A2729/CALDWELL//RDL/SXL)	U. Nebraska
324	NE98692	ALLIANCE/NE90574 (=RODEO/BRL//ARAPAHOE)	U. Nebraska

Table 1. 2000 Regional Germplasm Observation Nursery

Entry	Line	Cultivar or pedigree	Source
325	NE98714	N91L122/ARLIN	U. Nebraska
326	NI98418	NE89526/YUMA	U. Nebraska
327	NI98438	WINDSTAR/NE87612	U. Nebraska
328	NI98439	NE90476/(10Ax88-1643) x 10927 592-1-5	U. Nebraska
329	NI97405	SD3055/KS88H164//NE89646 (=COLT*2/PATRIZANKA)	U. Nebraska
330	NI97435	TAM202/NE86606 (=WRR/SUT//MOW6811/3/AGATE)	U. Nebraska
331	NI99412	PRONGHORN/ARLIN//ABILENE	U. Nebraska
332	IDO513	WA6030/Crane,543-10//2*Borah/3/Neeley/4/Blizzard	U. Idaho
333	IDO550	Manning*2/Survivor	U. Idaho
334	IDO551	Manning/Tam200	U. Idaho
335	KS94U323	Mr Beefy*2/TA 2396	ARS-Manhattan
336	KS95U650	Kamigo94*//TA2378/Karl	ARS-Manhattan
337	KS95U653	Kamigo94*//TA2378/Karl	ARS-Manhattan
338	KS98U672	Tam 107*2/TA759//KS90WGRC10sib*3/TA2397	ARS-Manhattan
339	KS98U670	Jagger/3/Karl*2//PI266844/PI355520	ARS-Manhattan
340	KS99U673	Tam 107*2/TA1715	ARS-Manhattan
341	SD97007	Karl/Niobrara	So. Dakota St.
342	SD97049	ND8889/Karl	So. Dakota St.
343	SD97462	Tomahawk/Tandem	So. Dakota St.
344	SD97475	Windstar/SD89186	So. Dakota St.
345	SD97524	N92L088/KS85663-7-7-3	So. Dakota St.
346	SD97525	N92L088/KS85663-7-7-3	So. Dakota St.
347	SD97529	KS87W822-2-1/NE91564	So. Dakota St.
348	SD97532	Arapahoe/KS87W822-2-1	So. Dakota St.
349	SD97535	KS87W822-2-1/Nekota	So. Dakota St.
350	SD97538	NE90518/Martinof93	So. Dakota St.
351	SD98W115	KS82W418/SPN/3/KS82W422/SWM754308//KS831182/KS82W422	So. Dakota St.
352	SD98W117	KS82W418/SPN/3/KS82W422/SWM754308//KS831182/KS82W422	So. Dakota St.
353	SD98W121	KS82W418/SPN/3/KS82W422/SWM754308//KS831182/KS82W422	So. Dakota St.
354	SD98W123	KS82W418/SPN/3/KS82W422/SWM754308//KS831182/KS82W422	So. Dakota St.
355	SD98W126	KS82W418/SPN/3/KS82W422/SWM754308//KS831182/KS82W422	So. Dakota St.
356	SD98W127	KS82W418/SPN/3/KS82W422/SWM754308//KS831182/KS82W422	So. Dakota St.
357	SD98W174	KS84273BB-10/KSSB110-9//KS831374-141B/YE1110/3/KS82W418/SPN	So. Dakota St.
358	SD98W175	KS84273BB-10/KSSB110-9//KS831374-141B/YE1110/3/KS82W418/SPN	So. Dakota St.
359	SD98W182	79410D-3-3-5-2/K/3/T200/KS831943//K/4/KS82W418/SPN	So. Dakota St.
360	TAM-107	PI 495594	check

Table 1. 2000 Regional Germplasm Observation Nursery

Entry	Line	Cultivar or pedigree	Source
361	Karl 92	PI 564245	check
362	Arapahoe	PI 518591	check
363	local check 1	see comments	check
364	local check 2	see comments	check
365	local check 3	see comments	check
366	SD98W197	KS82W422/SWM754308//KS831182/KS82W422/3/KS82W418/SPN	So. Dakota St.
367	SD98W198	KS82W422/SWM754308//KS831182/KS82W422/3/KS82W418/SPN	So. Dakota St.
368	SD98W206	T200/KSSB369-7/3/T200/K//K/4/KS82W418/SPN	So. Dakota St.
369	SD98W207	T200/KSSB369-7/3/T200/K//K/4/KS82W418/SPN	So. Dakota St.
370	SD98W237	KS82W422/SWM754308//KS831182/KS82W422/3/KS82W418/SPN	So. Dakota St.
371	SD98W239	KS82W422/SWM754308//KS831182/KS82W422/3/KS82W418/SPN	So. Dakota St.
372	SD98W260	KS82W422/SWM754308//KS831182/KS82W422/3/KS82W418/SPN	So. Dakota St.
373	SD98W262	KS82W422/SWM754308//KS831182/KS82W422/3/KS82W418/SPN	So. Dakota St.
374	SD98W265	KS82W422/SWM754308//KS831182/KS82W422/3/KS82W418/SPN	So. Dakota St.
375	TAM-107	PI 495594	check
376	Karl 92	PI 564245	check
377	Arapahoe	PI 518591	check
378	local check 1	see comments	check
379	local check 2	see comments	check
380	local check 3	see comments	check

Table 2. Reaction of entries in the 2000 Regional Germplasm Observation Nursery to Hessian Fly (From C.S. Katsar, USDA-ARS, Manhattan, KS), Russian Wheat Aphid and Greenbug (from C. Baker D. Porter, USDA-ARS, Stillwater, OK; S. Haley, Ft. Collins).

Entry	Line	Reaction to Hessian fly (Manhattan)		Reaction to greenbug biotype E (Stillwater)		Reaction to Russian wheat aphid (Stillwater)		Reaction to Russian Wheat Aphid (Ft. Collins)			
		local checks	reaction type	local checks	reaction type	local checks	reaction type	local checks	reaction type	# plants	# R plants
1	TAM-107		S		S		S		S		
2	Karl 92		S		S		S		S		
3	Arapahoe		R		S		S		S		
4	local check 1	Karl	S	Amigo	S	PI372129	MR	Halt	R		
5	local check 2	Karl	S	Largo	R	Jagger	S	Prairie Red	S		
6	local check 3	Karl	S	GRS1201	R	STARS-9302	R	Carson	S		
7	TX93V5722		R		S		MR		S		
8	TX97U2001		S		S		S		S		
9	TX97U2009		H+		S		R		S		
10	TX97U2011		H		S		S		S		
11	TX97U2012		H		S		S		S		
12	TX97U2032		H		S		S		S		
13	TX98U8018		H		S		S		S		
14	TX98U8035		S		S		S		S		
15	TX98U8042		S		S		S		S		
16	TX98U8054		S		S		S		S		
17	TX98U8061		S		S		S		S		
18	TX98U8065		H		S		S		S		
19	TX98U8082		H+		S		S		S		
20	TX98U8083		H+		S		S		S		
21	TX98U8085		H		S		S		S		
22	TX98U8120		R-		S		S		S		
23	TX98U8126		H		S		S		S		
24	TX98U8128		H		S		S		S		
25	TX98U8134		S		S		S		S		
26	TX98U8166		R		S		S		S		
27	TX98U8184		S		S		S		S		
28	TX98U8185		S		S		S		S		
29	TX98U8186		S		S		S		S		
30	TX95D8697		S		S		S		S		
31	TX96D1073		S		S		S		S		
32	TX96D1682		S		S		S		S		
33	TX96D2264		H		S		S		S		
34	TX97D4032		S		S		S		S		
35	TX97D4242		H		S		S		S		
36	TX97D4341		H		2R--12S		S		S		
37	TX97D4421		R		S		S		S		
38	TX97D4666		S		S		S		S		
39	TX97D5088		H		S		S		S		
40	TX97D5736		S		S		S		S		
41	TX97D6122		R		S		S		S		
42	TX97D6132		S		S		S		S		
43	TX97D6627		S		S		S		S		
44	TX97D6784		S		S		S		S		
45	TX98D1014		S		S		S		S		
46	TX98D1264		S		S		S		S		
47	TX98D1407		S		S		S		S		
48	TX98D1873		S		S		S		S		
49	TX98D1899		S		S		S		S		
50	TX98D2423		H-		S		S		S		
51	TX98D2738		S		S		S		S		
52	TX98D2755		S		S		S		S		
53	TX98D2964		S		S		S		S		
54	TX98D3114		R-		S		S		S		
55	TX98D3231		S		S		S		S		
56	TX98D3261		S		S		S		S		

Table 2. Reaction of entries in the 2000 Regional Germplasm Observation Nursery to Hessian Fly (From C.S. Katsar, USDA-ARS, Manhattan, KS), Russian Wheat Aphid and Greenbug (from C. Baker D. Porter, USDA-ARS, Stillwater, OK; S. Haley, Ft. Collins).

Entry	Line	Reaction to Hessian fly (Manhattan)		Reaction to greenbug biotype E (Stillwater)		Reaction to Russian wheat aphid (Stillwater)		Reaction to Russian Wheat Aphid (Ft. Collins)			
		local checks	reaction type	local checks	reaction type	local checks	reaction type	local checks	reaction type	# plants	# R plants
57	TX98D3305		R-		S		S		S		
58	TX98D3447		S		S		S		S		
59	TX98D3487		S		S		S		S		
60	TAM-107		S		S		S		S		
61	Karl 92		S		S		S		S		
62	Arapahoe		R-		S		S		S		
63	local check 1	Karl	S	Amigo	S	PI372129	MR	Halt	R		
64	local check 2	Karl	S	Largo	R	Jagger	S	Prairie Red	H	12	10
65	local check 3	Karl	S	GRS1201	R	STARS-9302	R	Carson	S		
66	TX99A5016		S		S		S		S		
67	TX99A5033		S		S		S		S		
68	TX99A5211		S		S		S		S		
69	TX99A5231		H-		S		S		S		
70	TX99A5232		H		S		S		S		
71	TX99A5238		H-		S		S		S		
72	TX99A5422		R-		S		S		S		
73	TX99A5431		R		S		S		S		
74	TX99A5432		R		S		S		S		
75	TX99A5433		S		S		S		S		
76	TX99A5437		S		S		S		S		
77	TX99A5438		S		S		S		S		
78	TX99A5440		S		S		S		H	12	2
79	TX99A5608		S		S		S		S		
80	TX99A5610		H-		S		S		S		
81	TX99A5617		H-		S		S		S		
82	TX99A5623		H-		S		S		S		
83	TX99A5811		S		S		S		S		
84	TX99A5819		S		S		S		S		
85	TX99A5832		S		S		S		S		
86	TX99A5840		H		S		S		S		
87	TX99A6018		S		S		S		S		
88	TX99A6027		S		S		S		S		
89	TX99A6029		S		S		S		S		
90	TX99A6030		S		S		S		S		
91	TX99A6411		S		S		S		S		
92	TX99A6426		S		S		S		S		
93	TX99A6436		S		S		S		S		
94	TX99A6616		S		S		S		S		
95	TX99A6632		S		S		S		S		
96	OK98637		S		S		S		S		
97	OK98699		R		S		S		S		
98	OK98697		R		S		S		H	12	2
99	OK98698		R		S		S		S		
100	OK97462		S		S		S		S		
101	OK98680		S		S		S		S		
102	OK98662		S		S		S		S		
103	OK97508		H		S		S		S		
104	OK98690		S		S		S		S		
105	OK98640		H-		S		S		S		
106	OK98650		S		S		S		S		
107	OK96705		S		S		S		S		
108	OK98610		S		S		S		S		
109	OK98631		S		S		S		S		
110	OK96717		S		S		S		S		
111	OK94P549-2C		S		S		S		S		
112	OK98G508W		S		S		S		S		

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Entry	Line	Reaction to Hessian fly (Manhattan)		Reaction to greenbug biotype E (Stillwater)		Reaction to Russian wheat aphid (Stillwater)		Reaction to Russian Wheat Aphid (Ft. Collins)			
		local checks	reaction type	local checks	reaction type	local checks	reaction type	local checks	reaction type	# plants	# R plants
113	OK98G507W		S		S		S		S		
114	OK98G502W		H		S		S		S		
115	OK95G703-98-61416		S		S		S		H	9	2
116	OK95G703-98-61421		S		S		S		S		
117	STARS-99GOb01		S		S		Seg		R		
118	STARS-99GOb05		H-		S		Seg		R		
119	STARS-99GOb10		S		S		Seg		R		
120	TAM-107		S		S		S		S		
121	Karl 92		S		S		S		S		
122	Arapahoe		R		S		S		S		
123	local check 1	Karl	S	Amigo	S	PI372129	MR	Halt	R		
124	local check 2	Karl	S	Largo	R	Jagger	S	Prairie Red	H	11	9
125	local check 3	Karl	S	GRS1201	R	STARS-9302	R	Carson	S		
126	STARS-99GOb15		S		S		Seg		R		
127	STARS-99GOb34		S		S		Seg		R		
128	STARS-99GOb46		S		S		R		R		
129	STARS-99GOb60		S		S		R		R		
130	STARS-99GOb65		S		S		Seg		H	12	10
131	STARS-99GI02		S		S		R		R		
132	STARS-99GI04		S		S		R		R		
133	STARS-99GI05		S		S		R		R		
134	STARS-99GI06		S		S		R		R		
135	STARS-99GI07		S		S		R		R		
136	STARS-99St102		S		S		R		R		
137	STARS-99St104		S		S		R		R		
138	G97019		S		S		S		S		
139	G97050		S		S		S		S		
140	G97099		S		S		S		S		
141	G97159		S		S		S		S		
142	G97187		S		S		S		H	13	2
143	G97209		S		S		S		S		
144	G97237		S		S		S		S		
145	G97246		R-		S		S		S		
146	G97252		S		S		S		S		
147	G97288		S		S		S		S		
148	G97343		S		S		S		S		
149	G97380a		S		S		S		S		
150	G97380b		S		S		S		S		
151	G97393		S		S		S		S		
152	G97447		S		S		S		S		
153	G97454		S		S		S		S		
154	G97466		S		S		S		H	10	1
155	G980103		S		S		S		S		
156	G980143		S		S		S		S		
157	G980406		S		S		S		S		
158	G980643		S		S		S		S		
159	G980871		S		S		S		S		
160	G981028		S		S		S		S		
161	G981043		S		S		S		S		
162	G982131		S		S		S		S		
163	G982159		S		S		S		S		
164	G982241		S		S		S		S		
165	G982244		S		S		S		S		
166	G982383		S		S		S		S		
167	KS98HW151-5		S		S		S		S		
168	KS98HW151-6		S		S		S		S		

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Entry	Line	Reaction to Hessian fly (Manhattan)		Reaction to greenbug biotype E (Stillwater)		Reaction to Russian wheat aphid (Stillwater)		Reaction to Russian Wheat Aphid (Ft. Collins)			
		local checks	reaction type	local checks	reaction type	local checks	reaction type	local checks	reaction type	# plants	# R plants
169	KS98HW180-1		H+		S		S		S		
170	KS98HW180-2		S		S		S		S		
171	KS98HW180-4		H		S		S		S		
172	KS98HW183-4		H		S		S		S		
173	KS98HW185-5		H		S		S		S		
174	KS98HW189-2		S		S		S		S		
175	KS98HW189-3		S		S		S		S		
176	KS98HW189-4		H		S		S		S		
177	KS98HW220-3		S		S		S		S		
178	KS98HW220-5		S		S		S		S		
179	KS98H239		H		S		S		S		
180	TAM-107		S		S		S		S		
181	Karl 92		S		S		S		S		
182	Arapahoe		R-		S		S		S		
183	local check 1	Karl	S	Amigo	S	PI372129	MR	Halt	R		
184	local check 2	Karl	S	Largo	R	Jagger	S	Prairie Red	R		
185	local check 3	Karl	S	GRS1201	R	STARS-9302	R	Carson	S		
186	KS99HW1		S		S		S		S		
187	KS99HW2		S		S		S		S		
188	KS99HW3		S		S		S		S		
189	KS99HW6		S		S		S		S		
190	KS99HW24		R-		S		S		S		
191	KS99HW35		R		S		S		S		
192	KS99HW36		H+		S		S		S		
193	KS99HW37		H		S		S		S		
194	KS99HW41		H		S		S		H	8	2
195	KS99HW55		R		S		S		S		
196	KS99HW56		R		S		S		S		
197	KS99HW78		H		S		S		S		
198	KS99HW79		H		S		S		S		
199	KS99HW80		H+		S		S		S		
200	KS99HW85		H		S		S		S		
201	KS99HW88		S		S		S		S		
202	KS99HW90		R		S		S		S		
203	H9623153		S		S		S		S		
204	H9623156		S		S		S		S		
205	H9626547		S		S		S		S		
206	WX97-2402		S		S		S		S		
207	WX97-2412		S		S		S		S		
208	WX97-2421		S		S		S		S		
209	WX97-2515		S		S		S		S		
210	WX97-3007		S		S		S		S		
211	WX97-3313		S		S		S		S		
212	WX97-4105		S		S		S		S		
213	WX97-4201		S		S		S		S		
214	WX97-4310		S		S		S		S		
215	CO940610		S		S		S		S		
216	CO940611		S		S		S		S		
217	CO950043		S		S		Seg		H	7	2
218	CO960026		S		S		Seg		H	9	2
219	CO960223		S		S		R		R		
220	CO960603		H-		S		S		S		
221	CO970235		S		S		S		S		
222	CO970474		S		S		R		R		
223	CO970498		S		S		Seg		H	11	9
224	CO970531		S		S		Seg		R		

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Entry	Line	Reaction to Hessian fly (Manhattan)		Reaction to greenbug biotype E (Stillwater)		Reaction to Russian wheat aphid (Stillwater)		Reaction to Russian Wheat Aphid (Ft. Collins)			
		local checks	reaction type	local checks	reaction type	local checks	reaction type	local checks	reaction type	# plants	# R plants
225	CO970547		S		S		Seg		H	9	7
226	CO970552		S		S		Seg		H	12	4
227	CO970655		S		S		R		R		
228	CO970769		S		S		Seg		R		
229	CO970773		S		S		S		H	8	6
230	CO970787		S		S		S		H	11	9
231	CO970812		S		S		S		H	10	7
232	CO970866		R-		S		S		R		
233	CO970875		S		S		S		H	11	3
234	CO970883		H+		S		S		H	12	9
235	CO970887		S		S		S		H	11	5
236	CO970901		S		S		S		S		
237	CO970908		S		S		S		S		
238	CO970919		H		S		S		S		
239	CO970940		S		S		S		H	11	4
240	TAM-107		S		S		S		S		
241	Karl 92		S		S		S		S		
242	Arapahoe		R-		S		S		S		
243	local check 1	Karl	S	Amigo	S	PI372129	MR	Halt	R		
244	local check 2	Karl	S	Largo	R	Jagger	S	Prairie Red	H	11	3
245	local check 3	Karl	S	GRS1201	R	STARS-9302	R	Carson	S		
246	CO970943		H		S		S		H	12	2
247	MT9904		S		S		S		S		
248	MT9905		S		S		S		S		
249	MT9906		H		S		S		S		
250	MT9907		S		S		S		S		
251	MT9908		S		S		S		S		
252	MT9918		S		S		S		S		
253	MT9921		S		S		S		S		
254	MT9922		S		S		S		S		
255	MT9923		S		S		S		S		
256	MT9924		S		S		S		S		
257	MT9927		S		S		S		S		
258	MT9928		S		S		S		S		
259	MT9929		S		S		S		S		
260	MT9930		H		S		S		S		
261	MT9933		R-		S		S		S		
262	MT9935		R-		S		S		S		
263	MT9936		H		S		S		S		
264	MT9939		H-		S		S		S		
265	MT9944		S		S		S		S		
266	MT9951		S		S		S		S		
267	MT9952		S		S		S		S		
268	MT9964		S		S		S		S		
269	MT9965		H		S		S		S		
270	MT9970		H-		S		S		H	10	1
271	MT9978		H-		S		S		S		
272	MTR99101		H-		S		R		R		
273	MT99115		S		S		S		S		
274	MT99116		S		S		S		S		
275	MT99117		S		S		S		S		
276	NW98S026		H		S		S		S		
277	NW98S028		S		S		S		S		
278	NW98S055		H		S		S		S		
279	NW98S059		S		S		S		S		
280	NW98S060		H		S		S		S		

Table 2. Reaction of entries in the 2000 Regional Germplasm Observation Nursery to Hessian Fly (From C.S. Katsar, USDA-ARS, Manhattan, KS), Russian Wheat Aphid and Greenbug (from C. Baker D. Porter, USDA-ARS, Stillwater, OK; S. Haley, Ft. Collins).

Entry	Line	Reaction to Hessian fly (Manhattan)		Reaction to greenbug biotype E (Stillwater)		Reaction to Russian wheat aphid (Stillwater)		Reaction to Russian Wheat Aphid (Ft. Collins)			
		local checks	reaction type	local checks	reaction type	local checks	reaction type	local checks	reaction type	# plants	# R plants
281	NW98S061		S		S		S		S		
282	NW98S062		S		S		S		S		
283	NW98S069		S		S		S		S		
284	NW98S078		S		S		S		S		
285	NW98S095		S		S		S		S		
286	NW98S097		S		S		S		S		
287	NW98S098		S		S		S		S		
288	NW98S104		S		S		S		S		
289	NW98S121		H-		S		S		S		
290	NW98S137		H		S		S		S		
291	NW98S147		S		S		S		S		
292	NW98S172		S		S		S		S		
293	96MD7413-58		R		S		S		S		
294	96MD7413-36		R-		S		S		S		
295	96MD7110-25		R		S		S		S		
296	96MD7110-71		R-		S		S		S		
297	NE98410		S		S		S		S		
298	NE98416		S		S		S		S		
299	NE94479		R-		S		S		S		
300	TAM-107		S		S		S		S		
301	Karl 92		S		S		S		S		
302	Arapahoe		R		S		S		S		
303	local check 1	Karl	S	Amigo	S	PI372129	MR	Halt	R		
304	local check 2	Karl	S	Largo	R	Jagger	S	Prairie Red	R		
305	local check 3	Karl	S	GRS1201	R	STARS-9302	R	Carson	S		
306	NE98424		H		S		S		S		
307	NE98425		S		S		S		S		
308	NE98445		S		S		S		S		
309	NE98466		S		S		S		S		
310	NE98471		H-		S		S		S		
311	NE98476		S		S		S		S		
312	NE98502		S		S		S		S		
313	NE98503		S		S		S		S		
314	NE98530		S		S		S		S		
315	NE98564		S		S		S		S		
316	NE98574		S		S		S		S		
317	NE98589		S		S		S		S		
318	NE98594		H-		S		S		S		
319	NE98602		S		S		S		S		
320	NE98632		S		S		S		S		
321	NE98646		S		S		S		S		
322	NE98684		R		S		S		S		
323	NE98691		R		S		S		S		
324	NE98692		S		S		S		S		
325	NE98714		S		S		S		S		
326	NI98418		S		S		S		S		
327	NI98438		S		S		S		S		
328	NI98439		H-		S		S		S		
329	NI97405		S		S		S		S		
330	NI97435		H-		S		S		S		
331	NI99412		S		S		S		S		
332	IDO513		S		S		S		S		
333	IDO550		S		S		S		S		
334	IDO551		S		S		S		S		
335	KS94U323		S		S		S		S		
336	KS95U650		S		S		S		S		

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Entry	Line	Reaction to Hessian fly (Manhattan)		Reaction to greenbug biotype E (Stillwater)		Reaction to Russian wheat aphid (Stillwater)		Reaction to Russian Wheat Aphid (Ft. Collins)			
		local checks	reaction type	local checks	reaction type	local checks	reaction type	local checks	reaction type	# plants	# R plants
337	KS95U653		S		S		S		S		
338	KS98U672		S		S		S		S		
339	KS98U670		S		S		S		H	11	2
340	KS99U673		S		S		S		S		
341	SD97007		S		S		S		S		
342	SD97049		H		S		S		S		
343	SD97462		H-		S		S		S		
344	SD97475		S		S		S		S		
345	SD97524		S		S		S		S		
346	SD97525		S		S		S		S		
347	SD97529		S		S		S		S		
348	SD97532		S		S		S		S		
349	SD97535		S		S		S		S		
350	SD97538		H		S		S		S		
351	SD98W115		S		S		S		S		
352	SD98W117		S		S		S		S		
353	SD98W121		S		S		S		S		
354	SD98W123		S		S		S		S		
355	SD98W126		S		S		S		S		
356	SD98W127		S		S		S		S		
357	SD98W174		S		S		S		S		
358	SD98W175		S		S		S		S		
359	SD98W182		S		S		S		S		
360	TAM-107		S		S		S		S		
361	Karl 92		S		S		S		S		
362	Arapahoe		R-		S		S		S		
363	local check 1	Karl		Amigo	S	PI372129	MR	Halt	R		
364	local check 2	Karl		Largo	R	Jagger	S	Prairie Red	H	10	9
365	local check 3	Karl		GRS1201	R	STARS-9302	R	Carson	S		
366	SD98W197		S		S		S		S		
367	SD98W198		S		S		S		S		
368	SD98W206		S		S		S		S		
369	SD98W207		S		S		S		S		
370	SD98W237		S		S		S		S		
371	SD98W239		S		S		S		S		
372	SD98W260		S		S		S		S		
373	SD98W262		S		S		S		S		
374	SD98W265		S		S		S		S		
375	TAM-107		S		S		S		S		
376	Karl 92		S		S		S		S		
377	Arapahoe		R-		S		S		S		
378	local check 1	Karl	S	Amigo	S	PI372129	MR	Halt	R		
379	local check 2	Karl	S	Largo	R	Jagger	S	Prairie Red	H	9	7
380	local check 3	Karl	S	GRS1201	R	STARS-9302	R	Carson	S		

Table 3. Seedling reaction of entries in the 2000 RGON to selected isolates of stem rust. From Don McVey, USDA-ARS, St. Paul, MN.

		stem rust races						
		69-MN	98-UGA	74-MN	80-BRA	76-IND	72-MEX	81-IN
		399	I	1409	38A	708C	53A	838A
ENTRY	CULTIVAR/LINE	QTHJ	PTKS	TPMK	TTRS	RKRQ	RTQQ	RCRS
1	TAM-107	2=	2-	;1N2=	2=;1N	2=	0	O
2	Karl 92	2	0?	23	2	2+	2+	O
3	Arapahoe	0?	;1N2=	0	;1N	2	;	O
4	local check 1	-	-	-	-	-	-	-
5	local check 2	-	-	-	-	-	-	-
6	local check 3	-	-	-	-	-	-	-
7	TX93V5722	2=	;1N2=	;1N2=	2=	2=	;1	2=
8	TX97U2001	0	0	2=	2=	2=	;	0
9	TX97U2009	;1N	S,2-	2=,S	2	S	;	2
10	TX97U2011	0	0	2=,S	S,2	;2=	;1	2-
11	TX97U2012	22+	S	2=,S	23	;X1N	2	S
12	TX97U2032	S	S	S	23	;X1N	2	S
13	TX98U8018	;1N2	S,2-	2=,S	S,;1N	2=	;1+	;1N2
14	TX98U8035	;1N2=?	0?	2=	;1N	;	;1	;1N
15	TX98U8042	;1N2-	2=	2=	S,2	22-	;12	2
16	TX98U8054	2-	2=	2=,S	2=	2=	;	;1N
17	TX98U8061	;1N?	0?	2=	2=	;	;1	;1N
18	TX98U8065	0	0	2=	2=	;1+	;1	;1N
19	TX98U8082	0?	S,2=?	S	S,2	;2+	22+	22-
20	TX98U8083	0?	2=?	S	23	S	23	S
21	TX98U8085	22-	S,2=	2=,S	S	2+	2+	2
22	TX98U8120	;1N?	;?	2=	S,2	22=	;1	2=
23	TX98U8126	2?	0?	2=,S	S,22-	22=	12	;1N
24	TX98U8128	2-	2=	2=	2=	;1N	;1	;1N
25	TX98U8134	2=	;	2=	2=	2=	2	0
26	TX98U8166	;1N2-	S,2=	2=,S	2	22-	;1	0
27	TX98U8184	;1N2-	;1N2=	0	;1N	;1N	;	0
28	TX98U8185	2=;1N	;1N	0	;1N	;1N	;	0
29	TX98U8186	;1N	;1N	0;	;1N	;	;	;
30	TX95D8697	22-	S	S	S,2	22=	2	2
31	TX96D1073	2	S	S	S	S	;2	2
32	TX96D1682	0	0	S	S,2	2++	2	2+
33	TX96D2264	2=?	;?	S	S,2	2=	21	2-
34	TX97D4032	22-	S	2=	S	S	;1	22-
35	TX97D4242	S	S	S	S	S	;1	2++
36	TX97D4341	2	S	S	S,2	S	;1N	2-
37	TX97D4421	;1N	S	0	;1N	1N	1N	;
38	TX97D4666	22-?	0?	0	2=	1N	1N	0
39	TX97D5088	2	S	S	2-	2=2	0	2
40	TX97D5736	2=;1N	2=	2=	2=	;1N	1N	2=;1N
41	TX97D6122	0	0	S	S	2++	21N	2=
42	TX97D6132	2=;1N	2=;1N	;1N2=	2=	;1N	1+N	2=
43	TX97D6627	2=;1N	;1N2=	;1N2=	2=	;1N	1N	;1N2=
44	TX97D6784	;	2=	;1N	;1N	;1N	0	;1N
45	TX98D1014	;	0	;1N	;1N	;1N	0	;1N
46	TX98D1264	2=;1N	2=	S	S	22=	12	;1N2-
47	TX98D1407	;1N	;1N	;1N	;1N	;1+N	;1N	;1N
48	TX98D1873	2	S	;1N	S	2=,S	2	;2-
49	TX98D1899	22+	S	S	S	2++	22=	S
50	TX98D2423	S	S	S	2-	S	22=	S
51	TX98D2738	22+	2	2-2	2	S	22=	;1N,S
52	TX98D2755	0	0	2=	2=	2	;	;1N
53	TX98D2964	2-	S,;1N	0	0	22+	2	0
54	TX98D3114	2=;1N	2=	2=	2=	0	;	;1N
55	TX98D3231	22+	S	2=,S	0;	;22-	2=	2
56	TX98D3261	0?	S?	0	0;	2	;1	;1+N
57	TX98D3305	0	0	S	2-	22+	;22=	22-

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		stem rust races						
		69-MN 399	98-UGA I	74-MN 1409	80-BRA 38A	76-IND 708C	72-MEX 53A	81-IN 838A
ENTRY	CULTIVAR/LINE	QTHJ	PTKS	TPMK	TTRS	RKRQ	RTQQ	RCRS
58	TX98D3447	2	S	S	2	;1N	22=	2-
59	TX98D3487	;2-2	S	S	2	;2=	2	2
60	TAM-107	;1N2=	2=	2=	2=	2=	2-1N	;1+N
61	Karl 92	;2=2	S	2++	2	2	2	;1N2-
62	Arapahoe	;1N2-	2=	0;	;1N	2-	;	;
63	local check 1	-	-	-	-	-	-	-
64	local check 2	-	-	-	-	-	-	-
65	local check 3	-	-	-	-	-	-	-
66	TX99A5016	2	;	2=	;	;	1N	;1N
67	TX99A5033	2,S	S	2=,S	2-	-	23	;1+N
68	TX99A5211	;1N2	;1N,S	;1N	0	S	2=	0
69	TX99A5231	;1N	;1N	;1N	;1N	;1+	0	;1N
70	TX99A5232	;1N2=	;1N2=	2=	;1N	2=	1N	;1N
71	TX99A5238	;1N2=	;1N2=	2=	2=	2	1N	;1N
72	TX99A5422	2-;1N2	S	S	2	2	2	2
73	TX99A5431	2	S	S	2	2-2	0	2
74	TX99A5432	2	S	0;	2	22-	2=	;
75	TX99A5433	S	S	-	23	S	23	S
76	TX99A5437	22+	S	S	2	S	2+	S
77	TX99A5438	22+	S	S	2	S	2+	2++
78	TX99A5440	22+	S	S	S	S	22+	2++
79	TX99A5608	;1N2=	2=,S	2=,S	22=	22-	;	;1+N
80	TX99A5610	;2=2	2,S	2=,S	2	22+	2	;2-
81	TX99A5617	2=2,S	S	2=,S	22+	22+	;12	;22+
82	TX99A5623	;1N	;1N	0;	2=	;2=	;1	;
83	TX99A5811	S	S	S	23	2,S	32	22+
84	TX99A5819	S	S	S	23	2+,S	32,1N	23
85	TX99A5832	2	S,2=	;	2=	22+	;1N22+	;1+
86	TX99A5840	;1N2=	;1N	;	;1N	2=	;	;1N
87	TX99A6018	S	S	2=,S	S	S	32	23
88	TX99A6027	22-	S	S,;1N	2=	S	21N	;1N
89	TX99A6029	2	S	2=	2=	2;1N	21N	;1N2=
90	TX99A6030	22++	S	;	2-	2++	32,1N	;2=
91	TX99A6411	2	S	2=,S	2-	2++	2	;22-
92	TX99A6426	2+	S,2=	S	2	23	21N	;1N2-
93	TX99A6436	22++	S,2	S	S	S	32	;23
94	TX99A6616	22-	22-	S	23	22+	2	;2=
95	TX99A6632	22-	S	;	2=	S	;1N	;2=
96	OK98637	;1N	0	2=	2=	;	0	;1+N
97	OK98699	S	S	2=,S	S	;1,S	0	S
98	OK98697	S	S	0	S	1+,S	0	;
99	OK98698	S	S	0	S	1+,S	0	0
100	OK97462	2-	2=	2=;1N	2=	;1N	;	;1N2=
101	OK98680	2=	2=	2=	2=	;1+	0	;1N
102	OK98662	2-	2-	2=,S	S	;2-	0	;1+N
103	OK97508	2=	;1N	;1N	;1N	;	;	;1N
104	OK98690	2	S	0	S	S,;2=	2	;
105	OK98640	;	;1N	2=	2=	;1N	0	;1N
106	OK98650	2++	S	S	S,2=	S	0	;1N
107	OK96705	2-2	S,2-	S,2=	2	;1N	;	;1+N2
108	OK98610	2=;1N	;	2=	2=	;1N	;1N	;1N
109	OK98631	;1N	S	2=,S	2	S	;1	;1N22-
110	OK96717	2=;1N	;1N2=	2=	2=	2=;1N	2-1	;1+N
111	OK94P549-2C	22+	S	S,;	S	S	0	;1N
112	OK98G508W	2-;1N	S,2=	S,2=	S	22-	2-1	;1N2=2
113	OK98G507W	22++	S	S	S	S	32	;1N22-
114	OK98G502W	;	S	S,;1N	0	;1N	;	;1N

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		stem rust races						
		69-MN 399	98-UGA I	74-MN 1409	80-BRA 38A	76-IND 708C	72-MEX 53A	81-IN 838A
ENTRY	CULTIVAR/LINE	QTHJ	PTKS	TPMK	TTRS	RKRQ	RTQQ	RCRS
115	OK95G703-98-61416	;	S	;1N	0	;1	;1	;1
116	OK95G703-98-61421	;1N	23	;1N	0;	;1	;1	;1
117	STARS-99GOb01	S	S	S	S	S	32	S
118	STARS-99GOb05	S	S	S	32	S	S,32	S
119	STARS-99GOb10	S	S	S	23	S	S,32	S
120	TAM-107	2=;1N	2=;1N	;1N	2=	;1N	1N	;1N2=
121	Karl 92	2	S	23	23	2	0	2;1N
122	Arapahoe	0?	2=	;0	;1N	2-	0	;
123	local check 1	-	-	-	-	-	-	-
124	local check 2	-	-	-	-	-	-	-
125	local check 3	-	-	-	-	-	-	-
126	STARS-99GOb15	2++	S	S	2	S	23	22-
127	STARS-99GOb34	0	;1N2=	2=,S	2	2-	2-;1	;1N
128	STARS-99GOb46	0?	S?	S	2=	2+	2	22-
129	STARS-99GOb60	S	S	S	2	2+	2	22+
130	STARS-99GOb65	;1N2++	S	S,;1N	S	2+,S	;12	21;
131	STARS-99GI02	S	S	S	2	S	;12++	22-3
132	STARS-99GI04	S	S	S	S	S	3,21N	2+2
133	STARS-99GI05	S	S	S	S	S	32	23
134	STARS-99GI06	S	S	S	S	S	3,22=	22+
135	STARS-99GI07	S	S	S	S	S	23	22-
136	STARS-99St102	;1N	S	S	S	;1N2=	;1N	;1N
137	STARS-99St104	;1N	S	S,2=	S	;1+	1N	;12-
138	G97019	2;1N	S	S	S	2=	12N	;1N
139	G97050	S	S	22-	23	S	23	22=
140	G97099	22+	S	S	S	S	22=	;1N
141	G97159	S	S	S,2++	23	S	23,1N	;1N2
142	G97187	S	S,22-	2=	S	2	2	22-
143	G97209	S	S	;1N	2=	S	2+1N	;
144	G97237	22+	S	;1N	S	2	;1N	;1N
145	G97246	2	S,2+	;0	S	2	0	;1N
146	G97252	2	S	S	S	2	;1	;1N
147	G97288	S	S	32	2	2	0	;1N
148	G97343	;1N	S,2++	2++	S	2=	;1	;1N
149	G97380a	2+2	S	0	32	2	23	;1N2
150	G97380b	2+	S	0;	23	2	23	;12
151	G97393	;1N	2,S	;1N	2=	;1	;	;1N
152	G97447	22=	S	2	2	2	1N2	;1N2
153	G97454	22++	S	2	2=	2	2	;1N2
154	G97466	;1N2-	S	2-	22-	2=	1N	;1N2=
155	G980103	2	S	2=	2	2	22=	;1N2=
156	G980143	S	-	S,;	S	;1N2	XN,S	;22+
157	G980406	S	S	S,2	23	2-	;1N2,S	;22+
158	G980643	S	S	2=	2=	2-	;	;1N
159	G980871	0?	S?	0;	0	0;	;	0
160	G981028	22-	S	22-	0;	2=	;1N	;1N
161	G981043	S	S	22+	2	2-	;1+	;1+2
162	G982131	;	S	2	0	;1-N	;1N	;1N
163	G982159	22+	S	0	0;	2	2-2	2=
164	G982241	S	S	0	23	S	2-2+,S	;2
165	G982244	XIN,S	S	S,2+	0	;1N	;1+	0
166	G982383	S	S	S	S	S	S	22=
167	KS98HW151-5	2-	;1N2=	2=	2=	2=	;1N	;1+2
168	KS98HW151-6	2-	;1N2=	2=	2=	1	;1N	;2=
169	KS98HW180-1	;1N	S,2-	2++	2++	0	0	S

Table 3. Seedling reaction of entries in the 2000 RGON to selected isolates of stem rust. From Don McVey, USDA-ARS, St. Paul, MN.

		stem rust races						
		69-MN	98-UGA	74-MN	80-BRA	76-IND	72-MEX	81-IN
		399	I	1409	38A	708C	53A	838A
ENTRY	CULTIVAR/LINE	QTHJ	PTKS	TPMK	TTRS	RKRQ	RTQQ	RCRS
170	KS98HW180-2	0?	22-?	22++	2++	0;	0	;1+2
171	KS98HW180-4	0;	22-	2++	2++	0;	0	;1N2
172	KS98HW183-4	22+	2++	22+	2+	2	0	22=
173	KS98HW185-5	0;?	2++?	2++	2++	;	0	S,;
174	KS98HW189-2	0;?	S?	0;	0;	;	0	0;
175	KS98HW189-3	0;?	S?	0;	0;	0	;	0;
176	KS98HW189-4	0?	S,2?	0;	0;	0;	0	0;
177	KS98HW220-3	S	2++	2++,S	32	2+	-	22+
178	KS98HW220-5	S	S,2+	S	S	S	0	22-
179	KS98H239	;1N	;1N2=	0	;1N	0	0	0;
180	TAM-107	2=;1N	2=	;1N	2=	2=	;1N	;12-
181	Karl 92	2	2++	22++	2++	22-	2+	;1+N2
182	Arapahoe	;1N	2=	0	2++	2-	1+	;
183	local check 1	-	-	-	-	-	-	-
184	local check 2	-	-	-	-	-	-	-
185	local check 3	-	-	-	-	-	-	-
186	KS99HW1	;1N	;1N2=	2=	2=	;	0	;1N
187	KS99HW2	;1N	;1N	;1N	;1N	;1N	;1N	;1N
188	KS99HW3	;1N	;1N	2=	0;	;1N	;1N	;1N
189	KS99HW6	S	S	2++	S	;	S	2++,;
190	KS99HW24	;1N	2=	S	S	0	-	22=
191	KS99HW35	;1N	S,2=	2	S	0	2-2	;2
192	KS99HW36	2	S,2-	2	0	;1N,2	22+	;1+N
193	KS99HW37	2	2+	22-	0;	;	0	;1N
194	KS99HW41	22-	2-	0;	2-2	2	;	;1N
195	KS99HW55	2	23	S	23	2	22-	22-
196	KS99HW56	S	S	32	32	2	22=	22=
197	KS99HW78	;1N	22-	S	22+	2	22-	;1N2=
198	KS99HW79	;1N	22-	S	23	2	22-	;1N2-
199	KS99HW80	2-	22-	S	22+	2	21N	;1N2=
200	KS99HW85	2	22-	S	23	2	22-	;1N2-2
201	KS99HW88	;1N	;1N22-	S	S	2	22-	;1+N
202	KS99HW90	;1N	2-	0;	2	2	;1+	0;
203	H9623153	22-	22-	S	S	2	;1+	;2=
204	H9623156	2	22=	S	S	2	2-2	;1+N2-
205	H9626547	2-;1N	;1N2=	2=	;1N	;1N	;1N	;1N2=
206	WX97-2402	X1N2++	S	2	2=	2+	;2	0;
207	WX97-2412	;1N2=	2++	;1N	2=	;1+	;1N	;1N
208	WX97-2421	;1N2=	23	;1N	2=	;1N	;1N	;1N
209	WX97-2515	;1N	0	;1N	2=	2	0	;1+N
210	WX97-3007	;1N	;1N	;1N	0;	2-	0	0
211	WX97-3313	;1N2=	2++	;1N	0	2-	;1N	;1N
212	WX97-4105	;1N	23	;1N	0;	2-	;1N	;1N
213	WX97-4201	S?	0?	;1N	-	2+	S	0;
214	WX97-4310	;1N	;1N2=	;1N	0	0	;1N	;1N2=
215	CO940610	;2	22-	2++	2++	2	2+,S	2-
216	CO940611	;1N	2=	0;1N	2=	;1N	;1N	0;
217	CO950043	;2=	2=	S	2+	2	;1+	2=;1N
218	CO960026	;1N	;1N	;1N	0;	;1N	;1N	;1+N
219	CO960223	2;1N	22-,S	22=	22-	;1	;	;1N
220	CO960603	22+	S	S	2	2	;1N	;1N
221	CO970235	;1N	22-	;1N	2=	;1	;1N	;1N
222	CO970474	;1N	;1N2=	2=	2-2	;1	;1N	;1N
223	CO970498	;1N	;2=	2=	2=	;1	;1N	;1N
224	CO970531	22-	2=	0	2+	2=	;1N	0
225	CO970547	22=	2=	0	22-	2=	;1N	0
226	CO970552	;2=	;1N2=	0	22-	2=	;1N	;1N

Table 3. Seedling reaction of entries in the 2000 RGON to selected isolates of stem rust. From Don McVey, USDA-ARS, St. Paul, MN.

		stem rust races						
		69-MN	98-UGA	74-MN	80-BRA	76-IND	72-MEX	81-IN
		399	I	1409	38A	708C	53A	838A
ENTRY	CULTIVAR/LINE	QTHJ	PTKS	TPMK	TTRS	RKRQ	RTQQ	RCRS
227	CO970655	;1N	S	0	2=	;1	;1N	;
228	CO970769	2	22+	2=	2=	2	0	2-;
229	CO970773	2	2	2=2	2=	2	2	;1N2=
230	CO970787	22+	S	2=;1N	S	2	;1+	;1N2=
231	CO970812	22-	22-	23	2	;1	0	;1N2=
232	CO970866	2	S	2++	2	2	;1+	;1N2=
233	CO970875	;1N	2=	2++	2	0	;1+	;1N2=
234	CO970883	;22+	S	23	22-	;1N	;1+	;1N
235	CO970887	2	23	23	2-2	2+	22+	22-
236	CO970901	22+	32	32	2+	S	;1N	2-
237	CO970908	22+	23	22-	2-	S	0	0
238	CO970919	22+	32	0	2=	2	0	0
239	CO970940	;1N2	S	2	23	2	0	22-
240	TAM-107	;2-	2=	;1N	2=	;1N,2	;1N	;1N
241	Karl 92	2	S	2	2	2	22=	;1N2-
242	Arapahoe	0;?	;1N2=	0	;1N	22-	0	;
243	local check 1	-	-	-	-	-	-	-
244	local check 2	-	-	-	-	-	-	-
245	local check 3	-	-	-	-	-	-	-
246	CO970943	2;1N	S	0;	2=	2;1N	;	;1N2=
247	MT9904	2++	S	0;	23	S	2+,S	;1N2=2
248	MT9905	2++	S	S	2=	S	S	2
249	MT9906	;2-?	0?	S	S	2	22-	;1N2=2
250	MT9907	22++	S	0;	22-	2+	2+,S	;22-
251	MT9908	2=22+	S	S	0	2+	;22+	;1+N2=
252	MT9918	0	0	S	32	2	;1+	;2=
253	MT9921	2-2	22=	0	32	2	;1+	;2=
254	MT9922	0	0	S	32	2+	;22=,S	2
255	MT9923	0	;	S	2	2	;1+	2=;
256	MT9924	;1N2	S,2=	0	2	2	;1+	;2=
257	MT9927	0	0	S	2	2	;1+	;1N2=
258	MT9928	0	0	S	S	2	22-	;2-1+
259	MT9929	0	0	S	23	2	;1+	;2-1+
260	MT9930	2?	0?	S	;2	S	2-2,S	2-
261	MT9933	O	0	2+	32	2	2-2	2-1+
262	MT9935	O	0	2	32	2	;1+	2-1+
263	MT9936	O	0	23	32	S	S	22+
264	MT9939	O	0	0	32	22-	;2-	2-1+
265	MT9944	22-	S	0	22-	22+	22-,S	;0
266	MT9951	S	S	0;	S	22+	S	;1N
267	MT9952	2++,S	S	S	S,2	2	S	;1N2
268	MT9964	;1N	2=	2=	2=	;1+	;1N	;1N
269	MT9965	;1N	;1N2-	2=	2=	2-	;1N	;1N
270	MT9970	2	S	0;	22-	2	;21	;1N
271	MT9978	0	0	S	S,2	2	;1N	;1+N
272	MTR99101	2	S	22=	2	2	2+22-	2
273	MT99115	0?	S?	2=	32	0	0	;1N
274	MT99116	;1N	S	22=	2	2	0	;1N2=
275	MT99117	;1N	S	2=	2	2-	0	;1N2=
276	NW98S026	2=	S,2=	0	2-	2=	0	;0
277	NW98S028	;1N	S,2=	0	0	;1N	;	;1N
278	NW98S055	;1N	2-	;1N	0;	;1N	;1N	;1N
279	NW98S059	;1N	S	;1N	0	;1N	0	;1N
280	NW98S060	2	S	0	2=	2	;1+	2=;1N
281	NW98S061	X,2++	S	0	0	2	;1N	;
282	NW98S062	2	S	S	22-	2	2-2	;2-2
283	NW98S069	22-	S	0	0	2	;22-	0

Table 3. Seedling reaction of entries in the 2000 RGON to selected isolates of stem rust. From Don McVey, USDA-ARS, St. Paul, MN.

		stem rust races						
		69-MN	98-UGA	74-MN	80-BRA	76-IND	72-MEX	81-IN
		399	I	1409	38A	708C	53A	838A
ENTRY	CULTIVAR/LINE	QTHJ	PTKS	TPMK	TTRS	RKRQ	RTQQ	RCRS
284	NW98S078	;1N	S	0	2=	2	0	0
285	NW98S095	;1N	2=	2=	2=	2	;1N	;1N
286	NW98S097	;1N	2=	2=,2	2=	2_	;1N	;1N
287	NW98S098	;1N	2=	2=	2=	2_	;1N	;1N
288	NW98S104	;1N	S,2=	2=,S	2	;1	0	;1N2=
289	NW98S121	2	22-	S	S	2	;1+	;1N22-
290	NW98S137	22-	S	S	S	22+	;1+	;1N2=
291	NW98S147	2	S	S	2-	0;	0	;2-
292	NW98S172	2;1N	S	S	2	2	22-	;22-
293	96MD7413-58	2-	2	0	-	2	0	-
294	96MD7413-36	2=;1N	22-	-	32	2	;1N	-
295	96MD7110-25	;1N	-	2=	2=	2	;1N	;1+N
296	96MD7110-71	0	-	S	23	2	0	2
297	NE98410	22-	22=	0	32	2;1N	;1N	;1+N
298	NE98416	2++,S	-	0	23	22+	;1N	22-
299	NE94479	-	-	S,2=	S,2	2-	;1N	;1N
300	TAM-107	;1N	22-	;1N	2=	2-	;1N	;1N2=
301	Karl 92	2	S	2	23	2	2-;1N	;1N2=
302	Arapahoe	;1N	2=	0	2=	2-	0	;
303	local check 1	-	-	-	-	-	-	-
304	local check 2	-	-	-	-	-	-	-
305	local check 3	-	-	-	-	-	-	-
306	NE98424	2-2	2=	S	-	2	0	;1N2
307	NE98425	;1N2-	-	-	-	2	1+N	-
308	NE98445	0	0	0	-	-	0	-
309	NE98466	-	S	0	2=	2=	0	0;
310	NE98471	2+	2++	0	32	2+,S	-	;2
311	NE98476	;1N	2+	0	2=	;1+	;1N	-
312	NE98502	-	2++	-	32	2+	0	0;
313	NE98503	-	-	0	-	-	0	-
314	NE98530	2=;1N	2=	0	0	-	;1N	0
315	NE98564	-	S	0	2=	22+	0	0;
316	NE98574	2-;1N	-	2,S	2-	;1+	0	-
317	NE98589	-	0	0	-	2	;1N	0
318	NE98594	;1N	2=	0	;1N	2-	0	-
319	NE98602	-	-	-	;1N	0	0	0;
320	NE98632	2=	-	0	32	2	0	22+
321	NE98646	-	-	2=	-	-	;1N	2-;1N
322	NE98684	0	0	23	-	2	0	0
323	NE98691	0	-	0	-	-	;1N	;1N
324	NE98692	-	2	0	23	2	0	2
325	NE98714	-	-	-	2-	2	;1+	-
326	NI98418	2	S	-	2+	0	0	;
327	NI98438	;1N	2=	;1N	;1N	2-	;2=	-
328	NI98439	22++	-	-	2	-	0	;1N
329	NI97405	-	32	32	2	2+	0	;1N
330	NI97435	0	0	-	-	2-	0	;1+N
331	NI99412	;2-	2=	2=	-	2	;1N2	2=;1N
332	IDO513	2	2=	32	32	2	22-	2=;1N
333	IDO550	2;1N	22-	32+	32	2	S	2=;1N
334	IDO551	2-	2=	23	23	2	S	;1N2=
335	KS94U323	22++	S	2	2=	2	S	0;
336	KS95U650	22-	23	23	2	2	S	;N2=
337	KS95U653	2	S	32	S	22-	22-	2
338	KS98U672	0	0	2=	2=	;1N	;	;1N2=
339	KS98U670	0?	2-?	22+	23	2	;1+	2-
340	KS99U673	2-	22-	2=	2=	;	0	;1N

Table 3. Seedling reaction of entries in the 2000 RGON to selected isolates of stem rust. From Don McVey, USDA-ARS, St. Paul, MN.

		stem rust races						
		69-MN	98-UGA	74-MN	80-BRA	76-IND	72-MEX	81-IN
		399	I	1409	38A	708C	53A	838A
ENTRY	CULTIVAR/LINE	QTHJ	PTKS	TPMK	TTRS	RKRQ	RTQQ	RCRS
341	SD97007	-	S	23	-	2	0	;1N
342	SD97049	-	-	0	-	2	2+	;1N
343	SD97462	S	S	S	2-	2	;1	-
344	SD97475	S	32	-	0	22+	-	-
345	SD97524	0?	32?	-	-	;	;	-
346	SD97525	2-	2++	S	22+	22+	;	22+
347	SD97529	-	-	0	22+	2++	;1N,S	;1N22+
348	SD97532	2;1N	-	2=2,S	32	;1N	;1+	;1N2=
349	SD97535	2;1N,S	2++	0	32	22+	;1N,S	;1N2++
350	SD97538	;1N	23	;1N	0;	2	;1N	;1N
351	SD98W115	0?	S?	;1N	;1N	;1N	;1N	;1N
352	SD98W117	0?	2++?	;1N	0	;	;1N	;1N
353	SD98W121	0	-	0;	0;	0	-	0;
354	SD98W123	0?	2++?	0	;	0	;	0;
355	SD98W126	0	23	0;	0	0	;	0
356	SD98W127	-	23	-	0	;	0	0;
357	SD98W174	;1N	0	-	0	0	;	0;
358	SD98W175	0	;1N	;	0	;	0	0;
359	SD98W182	2	-	22+	-	-	-	;1N
360	TAM-107	2-	2=	0	2=	2=	;1N2=	;1N
361	Karl 92	2-	2++	23	2++	2++	2-	2++
362	Arapahoe	;1N	2=	0	;	22-	;	0
363	local check 1	-	-	-	-	-	-	-
364	local check 2	-	-	-	-	-	-	-
365	local check 3	-	-	-	-	-	-	-
366	SD98W197	2	2+;1N	32	-	;1N	;1N,2	-
367	SD98W198	;1N	-	-	-	;1N	;1N	;1N
368	SD98W206	;	-	-	-	;	;1N	-
369	SD98W207	;1N	-	0	2=	;	;	;1N
370	SD98W237	;1N	22+	2=	2	-	2-;1+	;1+N2-
371	SD98W239	-	S	-	0	;X2	22-	0;
372	SD98W260	;	S	S	-	;	0	0
373	SD98W262	0?	2++?	2++	32	-	;1N	;1N
374	SD98W265	;1N2++	S	0	2	-	;1N,2	;
375	TAM-107	22-	22-	2=	22-	2=	;1+	;1N2-
376	Karl 92	2	S	32	22+	2	2+	2
377	Arapahoe	;1N	2=	0	;1N	2	;	0
378	local check 1	-	-	-	-	-	-	-
379	local check 2	-	-	-	-	-	-	-
380	local check 3	-	-	-	-	-	-	-
381	MT9942	0	0	2++	32	2	2+,S	2-

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
1	TAM-107		S		40 S
2	Karl 92		S		5 MS
3	Arapahoe		MR		20 MS-S
4	local check 1	Danne	S	TAM 302	TR MS
5	local check 2	Siouxland	R	Sturdy	1 MS
6	local check 3	Thatcher (Lr19)	S	Coker 9835	0
7	TX93V5722		R		1 MS
8	TX97U2001		R		0;
9	TX97U2009		R		0
10	TX97U2011		seg-R		40 S
11	TX97U2012		S		1 R
12	TX97U2032		S		5 MS-S
13	TX98U8018		R		1 MS-S
14	TX98U8035		MR		1 MR
15	TX98U8042		R		0
16	TX98U8054		MR		0;
17	TX98U8061		MR		0
18	TX98U8065		R		0;
19	TX98U8082		seg-R		20 S
20	TX98U8083		R		0;
21	TX98U8085		R		0
22	TX98U8120		R		0
23	TX98U8126		MR		30 S
24	TX98U8128		MR		0;
25	TX98U8134		MR		0
26	TX98U8166		R		0
27	TX98U8184		R		0
28	TX98U8185		R		0;
29	TX98U8186		R		0;
30	TX95D8697		MR		0
31	TX96D1073		MR		1 MR
32	TX96D1682		seg-R		0;
33	TX96D2264		MR		0
34	TX97D4032		R		0
35	TX97D4242		R		0
36	TX97D4341		R		0;
37	TX97D4421		MR		0;
38	TX97D4666		S		0;
39	TX97D5088		S		0;
40	TX97D5736		seg-R		0
41	TX97D6122		R		0
42	TX97D6132		R		0
43	TX97D6627		MR		0
44	TX97D6784		MR		0
45	TX98D1014		MR		0;
46	TX98D1264		seg-R		0
47	TX98D1407		MR		0
48	TX98D1873		R		0
49	TX98D1899		MR		0
50	TX98D2423		R		0
51	TX98D2738		S		5 MR

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
52	TX98D2755		R		0
53	TX98D2964		MS		1 R
54	TX98D3114		R		0
55	TX98D3231		R		0
56	TX98D3261		MR		0;
57	TX98D3305		R		0
58	TX98D3447		R		0
59	TX98D3487		R		30 MS
60	TAM-107		S		30 S
61	Karl 92		S		5 S
62	Arapahoe		MR		1 S
63	local check 1	Danne	S	TAM 302	5 MS
64	local check 2	Siouxland	R	Sturdy	0
65	local check 3	Thatcher (Lr19)	S	Coker 9835	0
66	TX99A5016		S		1 R
67	TX99A5033		R		0
68	TX99A5211		MS		0;
69	TX99A5231		MR		1 MR
70	TX99A5232		MR		0;
71	TX99A5238		R		0
72	TX99A5422		R		0;
73	TX99A5431		R		0
74	TX99A5432		seg-R		5 S
75	TX99A5433		R		0
76	TX99A5437		R		0
77	TX99A5438		R		0
78	TX99A5440		R		0
79	TX99A5608		R		0
80	TX99A5610		R		0
81	TX99A5617		MR		5 MS
82	TX99A5623		MR		0
83	TX99A5811		seg-R		30 S
84	TX99A5819		R		0
85	TX99A5832		MR		1 R
86	TX99A5840		MR		0
87	TX99A6018		R		0
88	TX99A6027		R		0
89	TX99A6029		R		0
90	TX99A6030		seg-R		0
91	TX99A6411		R		0
92	TX99A6426		MR		20 S
93	TX99A6436		R		0
94	TX99A6616		R		0
95	TX99A6632		MR		0
96	OK98637		MR		1 S
97	OK98699		S		1 MR
98	OK98697		S		5 MR
99	OK98698		S		1 MR
100	OK97462		seg-R		0
101	OK98680		MR		0
102	OK98662		S		5 MR

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
103	OK97508		MR		0;
104	OK98690		MR		0
105	OK98640		MR		0
106	OK98650		S		5 MR
107	OK96705		S		10 MR
108	OK98610		R		0;
109	OK98631		S		1 R
110	OK96717		MR		1 MS
111	OK94P549-2C		S		1 R
112	OK98G508W		R		0
113	OK98G507W		S		5 MS
114	OK98G502W		S		5 S-MS
115	OK95G703-98-61416		S		10 S
116	OK95G703-98-61421		MR		20 S
117	STARS-99GOb01		S		30 S
118	STARS-99GOb05		S		30 S
119	STARS-99GOb10		S		50 S
120	TAM-107		S		40 S
121	Karl 92		S		10 MS
122	Arapahoe		MR		10 MS
123	local check 1	Danne	S	TAM 302	1 MR
124	local check 2	Siouxland	R	Sturdy	1 R
125	local check 3	Thatcher (Lr19)	S	Coker 9835	0
126	STARS-99GOb15		S		20 S
127	STARS-99GOb34		MR		10 S
128	STARS-99GOb46		S		1 S
129	STARS-99GOb60		S		30 S
130	STARS-99GOb65		S		20 MS-S
131	STARS-99GI02		S		30 S
132	STARS-99GI04		S		60 S
133	STARS-99GI05		S		60 S
134	STARS-99GI06		S		70 S
135	STARS-99GI07		S		60 S
136	STARS-99St102		S		40 S
137	STARS-99St104		S		30 MS
138	G97019		S		20 MS-S
139	G97050		S		30 S
140	G97099		MR		40 S
141	G97159		S		1 MR
142	G97187		S		20 S
143	G97209		S		60 S
144	G97237		S		50 S
145	G97246		S		50 S
146	G97252		S		50 MS
147	G97288		S		30 S
148	G97343		S		80 S
149	G97380a		MR		0;
150	G97380b		MR		0;
151	G97393		MR		5 MR
152	G97447		S		10 MS
153	G97454		S		20 S

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
154	G97466		S		5 MS
155	G980103		S		60 S
156	G980143		S		1 MS
157	G980406		MR		30 MR
158	G980643		S		70 S
159	G980871		MR		1 MR
160	G981028		MR		10 MR
161	G981043		MR		5 MS
162	G982131		S		1 R
163	G982159		S		5 MR
164	G982241		S		10 MR
165	G982244		MR		0
166	G982383		MR		20 MS-S
167	KS98HW151-5		R		1 R
168	KS98HW151-6		R		0
169	KS98HW180-1		S		10 MR
170	KS98HW180-2		S		10 MS
171	KS98HW180-4		S		10 S
172	KS98HW183-4		S		30 S-MS
173	KS98HW185-5		MR		20 MS-S
174	KS98HW189-2		MR		5 S
175	KS98HW189-3		MR		5 S
176	KS98HW189-4		MR		10 S
177	KS98HW220-3		S		10 MS
178	KS98HW220-5		S		10 MS
179	KS98H239		R		0
180	TAM-107		S		30 S
181	Karl 92		S		10 MS
182	Arapahoe		MR		20 MR
183	local check 1	Danne	S	TAM 302	5 MR
184	local check 2	Siouxland	R	Sturdy	1 MR
185	local check 3	Thatcher (Lr19)	S	Coker 9835	0
186	KS99HW1		MR		20 MS-S
187	KS99HW2		MR		20 MS-S
188	KS99HW3		S		30 MS
189	KS99HW6		S		30 MS-S
190	KS99HW24		S		20 MS
191	KS99HW35		S		20 MS
192	KS99HW36		S		10 MS
193	KS99HW37		S		10 MS
194	KS99HW41		S		70 S
195	KS99HW55		S		5 MS
196	KS99HW56		S		30 MS
197	KS99HW78		S		30 MS
198	KS99HW79		S		30 S
199	KS99HW80		S		30 MS
200	KS99HW85		S		30 MS
201	KS99HW88		S		50 S
202	KS99HW90		S		30 S
203	H9623153		S		10 MS
204	H9623156		seg-R		5 MS

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
205	H9626547		S		20 MS
206	WX97-2402		S		10 MS
207	WX97-2412		MR		20 MS
208	WX97-2421		MR		1 S
209	WX97-2515		MR		0
210	WX97-3007		MR		1 R
211	WX97-3313		MR		0
212	WX97-4105		MR		5 S
213	WX97-4201		S		5 S
214	WX97-4310		MR		0
215	CO940610		MR		90 S
216	CO940611		S		20 S
217	CO950043		S		50 S
218	CO960026		S		60 S
219	CO960223		S		80 S
220	CO960603		S		80 S
221	CO970235		MR		30 MS
222	CO970474		S		40 S
223	CO970498		S		30 S
224	CO970531		S		40 S
225	CO970547		S		40 S
226	CO970552		S		60 S
227	CO970655		S		80 S
228	CO970769		S		40 S
229	CO970773		S		40 S
230	CO970787		S		60 S
231	CO970812		S		50 S
232	CO970866		MR		50 S
233	CO970875		MR		20 MS
234	CO970883		S		50 S
235	CO970887		S		30 S
236	CO970901		S		20 MS
237	CO970908		R		20 MS
238	CO970919		S		10 MS
239	CO970940		S		10 MR
240	TAM-107		S		30 S
241	Karl 92		MR		10 MS
242	Arapahoe		S		10 MS
243	local check 1	Danne	S	TAM 302	1 MR
244	local check 2	Siouxland	S	Sturdy	1 MR
245	local check 3	Thatcher (Lr19)	S	Coker 9835	0
246	CO970943		S		30 S
247	MT9904		S		80 S
248	MT9905		S		80 S
249	MT9906		S		80 S
250	MT9907		S		80 S
251	MT9908		S		80 S
252	MT9918		S		80 S
253	MT9921		S		80 S
254	MT9922		S		80 S
255	MT9923		S		80 S

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
256	MT9924		S		80 S
257	MT9927		S		80 S
258	MT9928		S		80 S
259	MT9929		S		80 S
260	MT9930		S		80 S
261	MT9933		S		80 S
262	MT9935		S		80 S
263	MT9936		S		80 S
264	MT9939		S		80 S
265	MT9944		S		80 S
266	MT9951		S		80 S
267	MT9952		S		80 S
268	MT9964		MR		70 S
269	MT9965		MR		60 S
270	MT9970		S		80 S
271	MT9978		S		80 S
272	MTR99101		S		80 S
273	MT99115		S		80 S
274	MT99116		S		80 S
275	MT99117		S		80 S
276	NW98S026		S		40 S
277	NW98S028		MR		30 MS-S
278	NW98S055		MR		30 MS
279	NW98S059		MR		80 S
280	NW98S060		S		60 S
281	NW98S061		S		30 MS
282	NW98S062		S		70 S
283	NW98S069		S		70 S
284	NW98S078		S		50 MS
285	NW98S095		MR		60 S
286	NW98S097		MR		10 S
287	NW98S098		seg-R		10 S
288	NW98S104		S		40 MS
289	NW98S121		S		70 S
290	NW98S137		S		80 S
291	NW98S147		S		70 S
292	NW98S172		S		70 S
293	96MD7413-58		S		70 S
294	96MD7413-36		S		70 S
295	96MD7110-25		MR		70 S
296	96MD7110-71		S		80 S
297	NE98410		MR		40 S
298	NE98416		S		20 S
299	NE94479		MR		70 S
300	TAM-107		S		40 S
301	Karl 92		S		30 S
302	Arapahoe		MR		30 MS
303	local check 1	Danne	S	TAM 302	10 MS
304	local check 2	Siouxland	R	Sturdy	5 MR
305	local check 3	Thatcher (Lr19)	S	Coker 9835	0
306	NE98424		S		10 MS

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
307	NE98425		S		30 S
308	NE98445		MR		20 MS
309	NE98466		MR		20 S
310	NE98471		S		20 S
311	NE98476		MR		40 S
312	NE98502		MR		60 S
313	NE98503		S		60 S
314	NE98530		MR		1 R
315	NE98564		MR		40 S
316	NE98574		S		30 S-MS
317	NE98589		MR		5 MS
318	NE98594		S		0
319	NE98602		S		20 MS
320	NE98632		MR		50 S
321	NE98646		S		50 S
322	NE98684		S		70 S
323	NE98691		MR		70 S
324	NE98692		S		70 S
325	NE98714		S		40 S
326	NI98418		S		20 MS
327	NI98438		MR		80 S
328	NI98439		S		50 S
329	NI97405		MR		80 S
330	NI97435		S		60 S
331	NI99412		MR		40 MS
332	IDO513		S		70 S
333	IDO550		S		90 S
334	IDO551		S		90 S
335	KS94U323		S		40 S
336	KS95U650		S		0;
337	KS95U653		MR		0
338	KS98U672		S		20 S
339	KS98U670		S		10 S-MS
340	KS99U673		R		5 MR
341	SD97007		S		20 MS
342	SD97049		S		20 S
343	SD97462		S		10 MS
344	SD97475		S		20 S
345	SD97524		S		1 R
346	SD97525		MR		1 R
347	SD97529		MR		20 S
348	SD97532		S		10 S
349	SD97535		S		70 S
350	SD97538		MR		10 MR
351	SD98W115		MR		5 MS
352	SD98W117		MR		5 MS
353	SD98W121		MR		0
354	SD98W123		MR		1 R
355	SD98W126		MR		1 R
356	SD98W127		MR		5 S
357	SD98W174		MR		0

Table 4. Reaction of entries in the 2000 RGON to leaf rust. From Bob Hunger and Jeanmarie Verchot (Stillwater) and Dave Marshall (Prosper).

		Seedling[1] reaction to leaf rust, Stillwater, OK		Adult plant reaction to leaf rust, Prosper, TX,	
Entry	Line	local checks	reaction type	local checks	reaction type
358	SD98W175		MR		0
359	SD98W182		S		1 MR
360	TAM-107		S		30 S
361	Karl 92		S		10 MS
362	Arapahoe		MR		10 MS
363	local check 1		S		1 MR
364	local check 2		R		1 MR
365	local check 3		MR		0
366	SD98W197		MR		1 S
367	SD98W198		MR		0
368	SD98W206		MR		5 MS
369	SD98W207		MR		0
370	SD98W237		S		10 S
371	SD98W239		S		10 S
372	SD98W260		S		10 S
373	SD98W262		S		10 S
374	SD98W265		S		20 S
375	TAM-107		S		50 S
376	Karl 92		S		10 MS
377	Arapahoe		MR		10 MS
378	local check 1	Danne	S	TAM 302	1 MR
379	local check 2	Siouxland	R	Sturdy	1 MR
380	local check 3	Thatcher (Lr19)	S	Coker 9835	0

[1]Reaction to leaf rust was determined on seedlings inoculated with a mixture of Puccinia recondita f. sp. Tritici races collected in Oklahoma during spring, 1999.The avirulence/virulence formula of this mixture of races on a set of single-gene differentials pls selected cultivars was: 2c 9 19 26 SXL / 1 2a 3 3ka 11 16 17 24 30DNE CTY. Reactions were obtained using Stakeman's rating system (USDA Bull.#E617, 1962, 53 pp) and translated for reporting to the following scale:S=susceptible (Stakeman's 3 3- 3+ 4 3+c)MS=moderately susceptible (Stakeman's X3; 3= 3=c 3-c 3-n 3c 3n) MR=moderately resistant (Stakeman's X;3= X;3- X;3=c X;3-n X;3-c 3=n) R=resistant (Stakeman's 0 ; 1 X;3=n X;1)

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
1	TAM-107		5		3	+
2	Karl 92		8		2	+/-
3	Arapahoe		7		2	+
4	local check 1	Trego	5	Vona	3	+
5	local check 2	2137	4	Hawk	1	+/-
6	local check 3	Vista	8	Sierra	1	+/-
7	TX93V5722		5		2	+
8	TX97U2001		9		2	+
9	TX97U2009		9		2	+
10	TX97U2011		9		3	+
11	TX97U2012		4		3	+
12	TX97U2032		4		3	+
13	TX98U8018		5		3	+
14	TX98U8035		7		3	+
15	TX98U8042		8		2	+
16	TX98U8054		9		3	+
17	TX98U8061		8		2	+
18	TX98U8065		9		2	+
19	TX98U8082		7		2	+
20	TX98U8083		9		2	+
21	TX98U8085		6		2	+
22	TX98U8120		9		3	+
23	TX98U8126		8		2	+
24	TX98U8128		8		2	+
25	TX98U8134		8		2	+
26	TX98U8166		9		2	+
27	TX98U8184		6		2	+
28	TX98U8185		6		2	+
29	TX98U8186		6		2	+
30	TX95D8697		8		2	+
31	TX96D1073		8		1	-
32	TX96D1682		7		3	+
33	TX96D2264		4		2	+
34	TX97D4032		5		2	+
35	TX97D4242		6		1	+/-
36	TX97D4341		9		1	-
37	TX97D4421		5		2	+
38	TX97D4666		7		2	+
39	TX97D5088		5		1	-
40	TX97D5736		8		1	+
41	TX97D6122		8		2	+
42	TX97D6132		8		1	+
43	TX97D6627		8		1	+
44	TX97D6784		5		1	+
45	TX98D1014		6		1	+
46	TX98D1264		8		2	+
47	TX98D1407		8		2	+
48	TX98D1873		8		1	+
49	TX98D1899		4		1	-

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
50	TX98D2423		8		1	+
51	TX98D2738		9		2	+
52	TX98D2755		7		2	+
53	TX98D2964		8		2	-
54	TX98D3114		8		1	-
55	TX98D3231		7		1	+
56	TX98D3261		9		3	+
57	TX98D3305		9		3	+
58	TX98D3447		6		3	+
59	TX98D3487		7		4	+
60	TAM-107		4		3	+
61	Karl 92		8		1	-
62	Arapahoe		7		3	+
63	local check 1	Trego	5	Vona	3	+
64	local check 2	2137	4	Hawk	1	+
65	local check 3	Vista	9	Sierra	2	+/-
66	TX99A5016		5		2	+
67	TX99A5033		8		1	-
68	TX99A5211		7		3	+
69	TX99A5231		7		4	+
70	TX99A5232		5		4	+
71	TX99A5238		4		4	+
72	TX99A5422		7		4	+
73	TX99A5431		8		2	+
74	TX99A5432		8		1	+
75	TX99A5433		5		3	+
76	TX99A5437		5		3	+
77	TX99A5438		5		3	+
78	TX99A5440		5		1	-
79	TX99A5608		7		3	+
80	TX99A5610		8		3	+
81	TX99A5617		5		2	+
82	TX99A5623		7		2	+
83	TX99A5811		5		2	+
84	TX99A5819		8		3	+
85	TX99A5832		8		3	+
86	TX99A5840		5		3	+
87	TX99A6018		5		3	+
88	TX99A6027		6		3	+
89	TX99A6029		5		1	+
90	TX99A6030		8		2	+
91	TX99A6411		8		2	+
92	TX99A6426		7		2	+
93	TX99A6436		7		3	+
94	TX99A6616		8		3	+
95	TX99A6632		8		3	+
96	OK98637		4		2	-
97	OK98699		8		2	+
98	OK98697		8		1	-

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
99	OK98698		8		1	-
100	OK97462		8		1	-
101	OK98680		4		3	+
102	OK98662		8		1	+
103	OK97508		7		1	+/-
104	OK98690		8		3	+
105	OK98640		5		2	-
106	OK98650		8		2	-
107	OK96705		7		1	+
108	OK98610		4		1	-
109	OK98631		8		2	-
110	OK96717		8		2	-
111	OK94P549-2C		8		1	+
112	OK98G508W		8		1	+/-
113	OK98G507W		7		1	+/-
114	OK98G502W		7		1	-
115	OK95G703-98-61416		9		1	+/-
116	OK95G703-98-61421		9		1	-
117	STARS-99GOb01		7		4	+
118	STARS-99GOb05		7		4	+
119	STARS-99GOb10		5		3	+
120	TAM-107		5		3	+
121	Karl 92		8		1	+/-
122	Arapahoe		7		3	+
123	local check 1	Trego	4	Vona	3	+
124	local check 2	2137	4	Hawk	2	+/-
125	local check 3	Vista	8	Sierra	2	+/-
126	STARS-99GOb15		8		4	+
127	STARS-99GOb34		8		2	+
128	STARS-99GOb46		8		2	+/-
129	STARS-99GOb60		8		3	+
130	STARS-99GOb65		8		3	+
131	STARS-99GI02		4		2	+
132	STARS-99GI04		4		2	+
133	STARS-99GI05		4		3	+
134	STARS-99GI06		4		3	+
135	STARS-99GI07		7		3	+
136	STARS-99St102		7		1	+/-
137	STARS-99St104		6		1	+/-
138	G97019		8		1	+/-
139	G97050		7		3	+
140	G97099		7		3	+
141	G97159		8		2	+
142	G97187		8		2	-
143	G97209		7		1	-
144	G97237		7		2	-
145	G97246		7		1	-
146	G97252		9		1	+
147	G97288		6		1	-

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
148	G97343		8		2	+/-
149	G97380a		8		2	+
150	G97380b		8		2	+/-
151	G97393		8		2	+
152	G97447		5		2	+
153	G97454		9		2	+
154	G97466		9		1	-
155	G980103		9		1	-
156	G980143		8		2	+
157	G980406		4		1	-
158	G980643		4		1	-
159	G980871		5		1	+/-
160	G981028		5		2	+/-
161	G981043		8		1	-
162	G982131		4		1	-
163	G982159		7		1	-
164	G982241		8		2	+
165	G982244		7		1	-
166	G982383		8		1	-
167	KS98HW151-5		6		2	+
168	KS98HW151-6		4		2	+
169	KS98HW180-1		4		1	+
170	KS98HW180-2		4		1	-
171	KS98HW180-4		4		1	-
172	KS98HW183-4		4		1	+
173	KS98HW185-5		4		1	-
174	KS98HW189-2		1		1	-
175	KS98HW189-3		1		1	-
176	KS98HW189-4		1		1	-
177	KS98HW220-3		7		4	+
178	KS98HW220-5		7		4	+
179	KS98H239		7		1	+
180	TAM-107		6		4	+
181	Karl 92		8		2	-
182	Arapahoe		7		3	+/-
183	local check 1	Trego	5	Vona	3	+
184	local check 2	2137	4	Hawk	1	-
185	local check 3	Vista	8	Sierra	2	-
186	KS99HW1		1		2	+
187	KS99HW2		1		2	+
188	KS99HW3		1		2	+
189	KS99HW6		H		2	+
190	KS99HW24		7		3	+
191	KS99HW35		4		1	+
192	KS99HW36		4		1	+
193	KS99HW37		4		1	-
194	KS99HW41		8		2	+
195	KS99HW55		5		3	-
196	KS99HW56		5		4	+

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
197	KS99HW78		8		3	+
198	KS99HW79		8		3	+
199	KS99HW80		8		3	+
200	KS99HW85		8		3	+
201	KS99HW88		7		3	+
202	KS99HW90		7		2	+
203	H9623153		4		1	-
204	H9623156		6		1	-
205	H9626547		6		1	-
206	WX97-2402		5		1	-
207	WX97-2412		8		1	-
208	WX97-2421		4		1	-
209	WX97-2515		4		1	-
210	WX97-3007		4		1	-
211	WX97-3313		4		1	-
212	WX97-4105		7		1	-
213	WX97-4201		4		1	+
214	WX97-4310		5		1	+/-
215	CO940610		5		3	+
216	CO940611		5		1	+
217	CO950043		8		2	+
218	CO960026		5		1	+/-
219	CO960223		5		3	+
220	CO960603		5		3	+
221	CO970235		5		3	+
222	CO970474		5		3	+
223	CO970498		5		1	+/-
224	CO970531		7		1	+/-
225	CO970547		7		1	-
226	CO970552		8		1	+/-
227	CO970655		8		2	-
228	CO970769		4		3	+
229	CO970773		4		2	+
230	CO970787		4		2	+
231	CO970812		7		4	+
232	CO970866		8		4	+
233	CO970875		8		2	+
234	CO970883		8		2	+
235	CO970887		8		2	+
236	CO970901		4		3	+
237	CO970908		7		3	+
238	CO970919		5		3	+
239	CO970940		9		3	+
240	TAM-107		5		3	+
241	Karl 92		8		1	+/-
242	Arapahoe		5		3	+
243	local check 1	Trego	4	Vona	4	+
244	local check 2	2137	4	Hawk	1	-
245	local check 3	Vista	8	Sierra	2	+/-

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
246	CO970943		5		2	+
247	MT9904		4		3	+
248	MT9905		4		3	+
249	MT9906		9		3	+
250	MT9907		8		3	+
251	MT9908		8		2	+
252	MT9918		9		3	+
253	MT9921		9		2	+/-
254	MT9922		9		3	+
255	MT9923		9		2	+/-
256	MT9924		9		1	+/-
257	MT9927		9		1	+
258	MT9928		9		1	+
259	MT9929		9		2	+
260	MT9930		9		2	+
261	MT9933		9		2	+
262	MT9935		9		2	+
263	MT9936		9		2	+
264	MT9939		9		2	+
265	MT9944		8		2	+
266	MT9951		5		2	+
267	MT9952		5		2	+
268	MT9964		4		3	+
269	MT9965		5		3	+
270	MT9970		8		1	+/-
271	MT9978		9		2	+
272	MTR99101		6		2	+
273	MT99115		6		3	+
274	MT99116		5		2	+
275	MT99117		4		2	+
276	NW98S026		5		1	+/-
277	NW98S028		7		1	-
278	NW98S055		5		1	+/-
279	NW98S059		6		2	+
280	NW98S060		4		1	+
281	NW98S061		4		1	+/-
282	NW98S062		4		1	+/-
283	NW98S069		7		2	+
284	NW98S078		7		1	+/-
285	NW98S095		5		1	+/-
286	NW98S097		5		1	-
287	NW98S098		8		1	+/-
288	NW98S104		7		4	+
289	NW98S121		7		2	-
290	NW98S137		5		2	+/-
291	NW98S147		7		1	+/-
292	NW98S172		5		3	+
293	96MD7413-58		8		1	+
294	96MD7413-36		8		3	+

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
295	96MD7110-25		8		3	+
296	96MD7110-71		7		2	+
297	NE98410		8		1	+
298	NE98416		5		1	-
299	NE94479		5		2	-
300	TAM-107		4		2	+
301	Karl 92		8		1	-
302	Arapahoe		5		3	+
303	local check 1	Trego	5	Vona	3	+
304	local check 2	2137	4	Hawk	1	-
305	local check 3	Vista	8	Sierra	2	+/-
306	NE98424		8		1	-
307	NE98425		8		1	+
308	NE98445		7		3	+
309	NE98466		8		2	+
310	NE98471		5		3	+
311	NE98476		8		4	+
312	NE98502		5		3	+
313	NE98503		5		2	+
314	NE98530		4		2	+
315	NE98564		8		2	+
316	NE98574		8		2	+
317	NE98589		5		3	+
318	NE98594		5		2	-
319	NE98602		5		2	+
320	NE98632		4		2	+
321	NE98646		7		2	+
322	NE98684		8		2	+
323	NE98691		6		1	-
324	NE98692		5		2	+
325	NE98714		6		2	+
326	NI98418		4		3	+
327	NI98438		6		3	+
328	NI98439		7		2	+
329	NI97405		5		2	+
330	NI97435		8		2	+
331	NI99412		5		1	+
332	IDO513		5		4	+
333	IDO550		5		2	+
334	IDO551		8		2	+
335	KS94U323		4		1	-
336	KS95U650		9		2	+
337	KS95U653		9		1	-
338	KS98U672		5		2	-
339	KS98U670		7		1	-
340	KS99U673		8		2	+
341	SD97007		8		2	+
342	SD97049		4		3	+
343	SD97462		7		3	+

Table 5. Reaction of entries in the 2000 RGON to infection by WSMV and SBMV. From Joe Martin and Clayton Seaman (Hays), Bob Hunger and Jeanmarie Verchot (Stillwater).

		Wheat Streak Mosaic Virus (WSMV), Hays, KS,		[1]Wheat soilborne mosaic virus (WSBMV), Stillwater, OK		
Entry	Line	local checks	reaction (0-9)	local checks	reaction (1-4)	ELISA
344	SD97475		8		1	-
345	SD97524		4		2	+
346	SD97525		8		2	-
347	SD97529		5		1	+
348	SD97532		7		2	+
349	SD97535		4		2	+
350	SD97538		5		3	+
351	SD98W115		4		1	-
352	SD98W117		4		1	-
353	SD98W121		8		1	-
354	SD98W123		8		1	-
355	SD98W126		8		1	+
356	SD98W127		8		1	-
357	SD98W174		5		2	+
358	SD98W175		6		2	-
359	SD98W182		8		1	-
360	TAM-107		5		4	+
361	Karl 92		8		4	+
362	Arapahoe		5		2	+
363	local check 1		4		3	+
364	local check 2		4		1	-
365	local check 3		7		2	-
366	SD98W197		8		2	-
367	SD98W198		8		4	+/-
368	SD98W206		6		2	+
369	SD98W207		5		2	-
370	SD98W237		4		1	+/-
371	SD98W239		5		1	-
372	SD98W260		5		1	+/-
373	SD98W262		5		2	+/-
374	SD98W265		4		1	-
375	TAM-107		4		3	+
376	Karl 92		8		1	+/-
377	Arapahoe		7		4	+
378	local check 1	Trego	4	Vona	4	+
379	local check 2	2137	4	Hawk	2	+/-
380	local check 3	Vista	8	Sierra	4	-

[1]One, 1-ft row of each entry was rated for WSBMV symptoms on 06 March 00, where:1=no mosaic, 2=slight mosaic and/or slight stunting, 3=moderate mosaic and/or moderate stunting, 4=severe mosaic and/or severe stunting. ELISA=enzyme linked immunosorbent assay. Values from ELISA indicate the presence or absence of virus in tissue, but should not be used exclusively to determine reaction (I.e., resistance or susceptibility) to WSBMV. For additional explanation regarding the use of ELISA in evaluating reaction to WSBMV, see Hunger et al. 1991.Crop Science 31:900-905. For WSBMV, values from ELISA are the average of three wells per entry; where - = no virus detected -/+ = little virus detected + = virus.

Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
1	TAM-107	5	5	5	5.0
2	Karl 92	5	5	5	5.0
3	Arapahoe	4	4	4	4.0
4	Jagger	3	2	2	2.3
5	OK94P549-2C	2	1	1	1.3
6	Ok101	3	2	2	2.3
7	TX93V5722	2	1	1	1.3
8	TX97U2001	4	4	4	4.0
9	TX97U2009	3	1	2	2.0
10	TX97U2011	4	3	3	3.3
11	TX97U2012	5	5	5	5.0
12	TX97U2032	5	2	2	3.0
13	TX98U8018	4	3	3	3.3
14	TX98U8035	4	3	3	3.3
15	TX98U8042	3	3	3	3.0
16	TX98U8054	3	3	3	3.0
17	TX98U8061	5	5	5	5.0
18	TX98U8065	3	2	1	2.0
19	TX98U8082	2	2	2	2.0
20	TX98U8083	2	2	2	2.0
21	TX98U8085	3	2	2	2.3
22	TX98U8120	3	2	2	2.3
23	TX98U8126	4	3	3	3.3
24	TX98U8128	4	4	4	4.0
25	TX98U8134	4	3	3	3.3
26	TX98U8166	2	2	1	1.7
27	TX98U8184	5	5	4	4.7
28	TX98U8185	5	4	4	4.3
29	TX98U8186	4	4	4	4.0
30	TX95D8697	3	3	2	2.7
31	TX96D1073	4	3	3	3.3
32	TX96D1682	4	4	4	4.0
33	TX96D2264	1	2	2	1.7
34	TX97D4032	5	5	5	5.0
35	TX97D4242	5	5	5	5.0
36	TX97D4341	5	5	5	5.0
37	TX97D4421	5	4	4	4.3
38	TX97D4666	5	5	5	5.0
39	TX97D5088	2	2	2	2.0
40	TX97D5736	4	3	3	3.3
41	TX97D6122	4	3	3	3.3
42	TX97D6132	5	5	5	5.0
43	TX97D6627	3	2	3	2.7
44	TX97D6784	5	5	5	5.0
45	TX98D1014	3	3	3	3.0
46	TX98D1264	4	4	4	4.0
47	TX98D1407	3	2	3	2.7
48	TX98D1873	3	2	3	2.7
49	TX98D1899	2	2	2	2.0

The standard cultivar used to determine acid-soil tolerance (AST) was 2163, with an assigned AST of 2. AST scale = 1(tolerant) - 5 (susceptible).

Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
50	TX98D2423	3	3	2	2.7
51	TX98D2738	3	2	3	2.7
52	TX98D2755	3	3	3	3.0
53	TX98D2964	3	3	4	3.3
54	TX98D3114	3	2	3	2.7
55	TX98D3231	4	4	4	4.0
56	TX98D3261	3	3	3	3.0
57	TX98D3305	4	4	4	4.0
58	TX98D3447	4	3	4	3.7
59	TX98D3487	5	4	4	4.3
60	TAM-107	5	5	5	5.0
61	Karl 92	5	5	5	5.0
62	Arapahoe	4	4	4	4.0
63	Jagger	3	2	2	2.3
64	OK94P549-2C	2	2	2	2.0
65	Ok101	2	2	3	2.3
66	TX99A5016	3	3	2	2.7
67	TX99A5033	5	5	5	5.0
68	TX99A5211	4	4	4	4.0
69	TX99A5231	5	5	5	5.0
70	TX99A5232	4	4	4	4.0
71	TX99A5238	4	4	4	4.0
72	TX99A5422	5	5	5	5.0
73	TX99A5431	5	5	5	5.0
74	TX99A5432	5	5	5	5.0
75	TX99A5433	3	1	1	1.7
76	TX99A5437	3	2	3	2.7
77	TX99A5438	3	2	3	2.7
78	TX99A5440	3	2	3	2.7
79	TX99A5608	4	4	4	4.0
80	TX99A5610	4	3	3	3.3
81	TX99A5617	3	3	3	3.0
82	TX99A5623	4	4	4	4.0
83	TX99A5811	4	2	2	2.7
84	TX99A5819	4	4	4	4.0
85	TX99A5832	5	5	5	5.0
86	TX99A5840	4	3	4	3.7
87	TX99A6018	5	5	5	5.0
88	TX99A6027	4	3	4	3.7
89	TX99A6029	4	3	4	3.7
90	TX99A6030	2	2	2	2.0
91	TX99A6411	2	2	1	1.7
92	TX99A6426	5	5	4	4.7
93	TX99A6436	4	4	4	4.0
94	TX99A6616	4	3	3	3.3
95	TX99A6632	3	2	2	2.3
96	OK98637	5	5	5	5.0
97	OK98699	5	4	4	4.3
98	OK98697	5	4	5	4.7

The standard cultivar used to determine acid-soil tolerance (AST) was 2163, with an assigned AST of 2. AST scale = 1(tolerant) - 5 (susceptible).

Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
99	OK98698	5	5	5	5.0
100	OK97462	4	3	3	3.3
101	OK98680	5	5	5	5.0
102	OK98662	2	2	2	2.0
103	OK97508	3	3	4	3.3
104	OK98690	4	3	4	3.7
105	OK98640	4	4	4	4.0
106	OK98650	3	3	3	3.0
107	OK96705	3	2	3	2.7
108	OK98610	4	3	4	3.7
109	OK98631	5	5	5	5.0
110	OK96717	5	4	4	4.3
111	OK94P549-2C	2	1	1	1.3
112	OK98G508W	5	5	4	4.7
113	OK98G507W	2	2	3	2.3
114	OK98G502W	4	4	4	4.0
115	OK95G703-98-61416	2	2	2	2.0
116	OK95G703-98-61421	2	2	3	2.3
117	STARS-99GOb01	3	3	4	3.3
118	STARS-99GOb05	4	4	4	4.0
119	STARS-99GOb10	4	3	4	3.7
120	TAM-107	5	5	5	5.0
121	Karl 92	5	5	5	5.0
122	Arapahoe	4	4	4	4.0
123	Jagger	3	2	3	2.7
124	OK94P549-2C	2	2	1	1.7
125	Ok101	2	2	2	2.0
126	STARS-99GOb15	5	5	5	5.0
127	STARS-99GOb34	5	5	5	5.0
128	STARS-99GOb46	4	3	4	3.7
129	STARS-99GOb60	4	3	4	3.7
130	STARS-99GOb65	5	4	5	4.7
131	STARS-99GI02	3	3	4	3.3
132	STARS-99GI04	4	4	4	4.0
133	STARS-99GI05	4	4	4	4.0
134	STARS-99GI06	3	3	4	3.3
135	STARS-99GI07	4	4	4	4.0
136	STARS-99St102	4	3	4	3.7
137	STARS-99St104	3	2	3	2.7
138	G97019	5	4	4	4.3
139	G97050	4	5	5	4.7
140	G97099	4	5	5	4.7
141	G97159	5	5	5	5.0
142	G97187	4	5	5	4.7
143	G97209	5	5	5	5.0
144	G97237	5	5	5	5.0
145	G97246	5	5	5	5.0
146	G97252	4	3	3	3.3
147	G97288	3	1	2	2.0

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Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
148	G97343	5	5	5	5.0
149	G97380a	5	4	4	4.3
150	G97380b	4	4	4	4.0
151	G97393	5	5	5	5.0
152	G97447	4	4	5	4.3
153	G97454	5	5	5	5.0
154	G97466	3	3	4	3.3
155	G980103	5	4	4	4.3
156	G980143	5	4	4	4.3
157	G980406	4	4	4	4.0
158	G980643	2	1	2	1.7
159	G980871	5	5	5	5.0
160	G981028	3	2	2	2.3
161	G981043	3	2	3	2.7
162	G982131	3	2	2	2.3
163	G982159	3	4	4	3.7
164	G982241	4	4	4	4.0
165	G982244	4	4	4	4.0
166	G982383	5	5	5	5.0
167	KS98HW151-5	5	5	5	5.0
168	KS98HW151-6	4	5	5	4.7
169	KS98HW180-1	2	2	2	2.0
170	KS98HW180-2	2	1	2	1.7
171	KS98HW180-4	2	1	2	1.7
172	KS98HW183-4	2	1	2	1.7
173	KS98HW185-5	4	5	5	4.7
174	KS98HW189-2	2	2	2	2.0
175	KS98HW189-3	2	2	3	2.3
176	KS98HW189-4	2	1	2	1.7
177	KS98HW220-3	2	2	3	2.3
178	KS98HW220-5	3	3	3	3.0
179	KS98H239	4	5	5	4.7
180	TAM-107	5	5	5	5.0
181	Karl 92	5	5	5	5.0
182	Arapahoe	4	4	4	4.0
183	Jagger	1	1	1	1.0
184	OK94P549-2C	3	2	2	2.3
185	Ok101	1	2	1	1.3
186	KS99HW1	5	5	5	5.0
187	KS99HW2	5	5	5	5.0
188	KS99HW3	5	5	5	5.0
189	KS99HW6	2	2	2	2.0
190	KS99HW24	4	4	4	4.0
191	KS99HW35	3	2	2	2.3
192	KS99HW36	2	2	2	2.0
193	KS99HW37	3	3	3	3.0
194	KS99HW41	5	5	5	5.0
195	KS99HW55	4	4	4	4.0
196	KS99HW56	4	4	4	4.0

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Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
197	KS99HW78	5	5	4	4.7
198	KS99HW79	5	5	4	4.7
199	KS99HW80	5	5	5	5.0
200	KS99HW85	5	5	5	5.0
201	KS99HW88	5	5	5	5.0
202	KS99HW90	4	5	5	4.7
203	H9623153	2	1	1	1.3
204	H9623156	1	1	2	1.3
205	H9626547	2	1	2	1.7
206	WX97-2402	2	1	2	1.7
207	WX97-2412	2	2	2	2.0
208	WX97-2421	2	2	2	2.0
209	WX97-2515	2	1	2	1.7
210	WX97-3007	2	1	2	1.7
211	WX97-3313	4	3	3	3.3
212	WX97-4105	2	2	2	2.0
213	WX97-4201	2	2	2	2.0
214	WX97-4310	2	1	2	1.7
215	CO940610	2	2	2	2.0
216	CO940611	5	5	5	5.0
217	CO950043	4	3	3	3.3
218	CO960026	4	4	5	4.3
219	CO960223	5	5	5	5.0
220	CO960603	3	3	3	3.0
221	CO970235	2	2	2	2.0
222	CO970474	5	4	4	4.3
223	CO970498	4	4	4	4.0
224	CO970531	4	4	3	3.7
225	CO970547	4	4	4	4.0
226	CO970552	4	3	4	3.7
227	CO970655	3	2	2	2.3
228	CO970769	3	2	3	2.7
229	CO970773	3	2	2	2.3
230	CO970787	3	2	3	2.7
231	CO970812	3	2	3	2.7
232	CO970866	3	3	4	3.3
233	CO970875	2	1	1	1.3
234	CO970883	3	4	4	3.7
235	CO970887	3	2	3	2.7
236	CO970901	3	2	3	2.7
237	CO970908	2	2	2	2.0
238	CO970919	3	3	3	3.0
239	CO970940	2	1	2	1.7
240	TAM-107	4	4	5	4.3
241	Karl 92	4	4	4	4.0
242	Arapahoe	3	3	4	3.3
243	Jagger	2	2	1	1.7
244	OK94P549-2C	2	2	2	2.0
245	Ok101	2	1	2	1.7

The standard cultivar used to determine acid-soil tolerance (AST) was 2163, with an assigned AST of 2. AST scale = 1(tolerant) - 5 (susceptible).

Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
246	CO970943	4	3	3	3.3
247	MT9904	4	3	4	3.7
248	MT9905	3	2	3	2.7
249	MT9906	5	5	5	5.0
250	MT9907	3	3	3	3.0
251	MT9908	3	3	3	3.0
252	MT9918	5	5	5	5.0
253	MT9921	5	5	5	5.0
254	MT9922	5	5	5	5.0
255	MT9923	4	5	5	4.7
256	MT9924	5	5	5	5.0
257	MT9927	5	5	5	5.0
258	MT9928	5	4	4	4.3
259	MT9929	5	5	5	5.0
260	MT9930	5	5	5	5.0
261	MT9933	4	4	4	4.0
262	MT9935	5	5	5	5.0
263	MT9936	4	5	5	4.7
264	MT9939	4	5	5	4.7
265	MT9944	2	2	3	2.3
266	MT9951	3	3	3	3.0
267	MT9952	4	3	4	3.7
268	MT9964	3	3	4	3.3
269	MT9965	3	2	2	2.3
270	MT9970	5	4	5	4.7
271	MT9978	5	5	5	5.0
272	MTR99101	4	4	4	4.0
273	MT99115	2	2	3	2.3
274	MT99116	3	2	3	2.7
275	MT99117	3	2	3	2.7
276	NW98S026	4	5	5	4.7
277	NW98S028	2	2	2	2.0
278	NW98S055	3	2	2	2.3
279	NW98S059	4	4	4	4.0
280	NW98S060	2	2	2	2.0
281	NW98S061	3	3	3	3.0
282	NW98S062	3	3	3	3.0
283	NW98S069	5	5	5	5.0
284	NW98S078	4	3	3	3.3
285	NW98S095	5	5	5	5.0
286	NW98S097	4	5	5	4.7
287	NW98S098	5	5	5	5.0
288	NW98S104	5	5	5	5.0
289	NW98S121	4	4	4	4.0
290	NW98S137	4	4	4	4.0
291	NW98S147	3	2	2	2.3
292	NW98S172	3	3	3	3.0
293	96MD7413-58	4	3	3	3.3
294	96MD7413-36	4	3	3	3.3

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Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
295	96MD7110-25	5	5	5	5.0
296	96MD7110-71	5	5	5	5.0
297	NE98410	4	4	4	4.0
298	NE98416	3	4	4	3.7
299	NE94479	4	3	3	3.3
300	TAM-107	5	5	5	5.0
301	Karl 92	4	4	4	4.0
302	Arapahoe	4	4	3	3.7
303	Jagger	2	2	2	2.0
304	OK94P549-2C	2	2	2	2.0
305	Ok101	1	2	2	1.7
306	NE98424	2	2	2	2.0
307	NE98425	4	4	4	4.0
308	NE98445	5	4	4	4.3
309	NE98466	4	4	3	3.7
310	NE98471	3	3	3	3.0
311	NE98476	3	3	3	3.0
312	NE98502	4	4	4	4.0
313	NE98503	4	4	4	4.0
314	NE98530	4	3	3	3.3
315	NE98564	4	4	4	4.0
316	NE98574	4	3	4	3.7
317	NE98589	3	2	3	2.7
318	NE98594	3	2	3	2.7
319	NE98602	3	2	3	2.7
320	NE98632	4	3	3	3.3
321	NE98646	4	3	4	3.7
322	NE98684	2	2	2	2.0
323	NE98691	4	4	4	4.0
324	NE98692	3	3	3	3.0
325	NE98714	3	3	3	3.0
326	NI98418	3	2	3	2.7
327	NI98438	4	4	4	4.0
328	NI98439	3	3	3	3.0
329	NI97405	3	2	3	2.7
330	NI97435	3	2	3	2.7
331	NI99412	3	3	2	2.7
332	IDO513	5	5	4	4.7
333	IDO550á	5	5	5	5.0
334	IDO551	5	5	5	5.0
335	KS94U323	2	2	2	2.0
336	KS95U650	4	4	3	3.7
337	KS95U653	4	4	4	4.0
338	KS98U672	4	3	3	3.3
339	KS98U670	3	2	2	2.3
340	KS99U673	5	4	4	4.3
341	SD97007	5	3	4	4.0
342	SD97049	4	3	3	3.3
343	SD97462	4	4	3	3.7

The standard cultivar used to determine acid-soil tolerance (AST) was 2163, with an assigned AST of 2. AST scale = 1(tolerant) - 5 (susceptible).

Table 6. Tolerance to acid soils.

ENTRY	SELECTION OR PEDIGREE	December 26, 1999	April 8, 2000	May 14, 2000	AST Average
344	SD97475	5	5	4	4.7
345	SD97524	3	3	3	3.0
346	SD97525	3	2	3	2.7
347	SD97529	3	2	2	2.3
348	SD97532	3	3	2	2.7
349	SD97535	3	3	3	3.0
350	SD97538	3	3	3	3.0
351	SD98W115	2	3	3	2.7
352	SD98W117	3	2	3	2.7
353	SD98W121	3	4	3	3.3
354	SD98W123	3	4	3	3.3
355	SD98W126	3	3	3	3.0
356	SD98W127	3	2	3	2.7
357	SD98W174	4	3	3	3.3
358	SD98W175	3	3	3	3.0
359	SD98W182	4	3	3	3.3
360	TAM-107	5	5	4	4.7
361	Karl 92	5	5	5	5.0
362	Arapahoe	4	3	3	3.3
363	Jagger	3	2	2	2.3
364	OK94P549-2C	2	2	2	2.0
365	Ok101	2	2	3	2.3
366	SD98W197	4	3	3	3.3
367	SD98W198	4	2	3	3.0
368	SD98W206	5	4	4	4.3
369	SD98W207	5	4	4	4.3
370	SD98W237	5	4	4	4.3
371	SD98W239	3	2	2	2.3
372	SD98W260	4	3	3	3.3
373	SD98W262	4	3	3	3.3
374	SD98W265	4	3	3	3.3
375	TAM-107	5	5	5	5.0
376	Karl 92	5	5	5	5.0
377	Arapahoe	4	4	4	4.0

The standard cultivar used to determine acid-soil tolerance (AST) was 2163, with an assigned AST of 2. AST scale = 1(tolerant) - 5 (susceptible).