

2008

Cooperative Scab Nurseries

Northern Uniform Winter Wheat Scab Nursery
Preliminary Northern Uniform Winter Wheat Scab Nursery
Uniform Southern FHB Nursery

Marker Reports

Eastern Regional Small Grains Genotyping Lab

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USDA-ARS

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Some details of notations in the Marker tables

"nd" = not determined or lack of amplification

if marker is dominant, samples with no amplification are left blank

"?" indicates that markers may not be diagnostic or data was not clear; therefore,
can not be sure if gene is present or not

All numbers are size in base pairs of amplified fragments

Target alleles are in **bold** or *italics*

2008 Northern Uniform Winter Wheat Scab Nursery

Entry List

Nursery	Entry	Sample Name	Pedigree	Previous testing
NUWWSN	1	ERNIE	CHECK	
NUWWSN	2	TRUMAN	CHECK	
NUWWSN	3	FREEDOM	CHECK	
NUWWSN	4	PIONEER 2545	CHECK	
NUWWSN	5	MSU Line E6002	VA96W-403-WS / CJ9403	2007 NUWWSN
NUWWSN	6	MSU Line E6001	Pioneer 25W60 / CJ 9306	2007 NUWWSN
NUWWSN	7	MSU Line E6003	VA96W-403-WS / W14	2007 NUWWSN
NUWWSN	8	MSU Line E5011	Caledonia / NY88024-117	
NUWWSN	9	P.99600A2-4-93	9560//9811/3/Fdm/201R	
NUWWSN	10	P.0179A1-17	Fdm/Gfd//92829/Patton	
NUWWSN	11	P.011010A1-15	97395/981129//INW0316	
NUWWSN	12	P.03112A1-7-3	97395//INW0315/99794	
NUWWSN	13	KS980512-2-2	T67/X84W063-9-45//K92/3/SNF/4/X86509-1-1/X84W063-9-39-2//K92	
NUWWSN	14	KS05HW14-3	KS98HW452(KS91H153/KS93HW255)/CO960293//KS920709B-5-2(T67/X84W063-9-45//K92)	
NUWWSN	15	MO050143	MO 11769/Madison	2007 NUWWSN
NUWWSN	16	MO050699	950016/3/950016//90X54-1-1/MO 91-1009	2007 PNUWWSN
NUWWSN	17	MO050921	Ernie/Truman "S"	2007 PNUWWSN
NUWWSN	18	MO050101	MO 11769/Madison	2007 NUWWSN
NUWWSN	19	VA05W-425	Roane/3/Ning7840/Coker9904//Pioneer2552	
NUWWSN	20	VA05W-775	3010-9-30-5 (Roane*2//Futai 8944/ Roane/3/Roane), BC3F6	
NUWWSN	21	VA05W-777	3007-8-12-2 (Roane*2//W14/Roane /3/Roane), BC3F6	
NUWWSN	22	VA05W-534	Goldfield/Tribute//Gibson	
NUWWSN	23	MD01W233-06-1	McCormick/Choptank	
NUWWSN	24	MD01W233-06-16	McCormick/Choptank	
NUWWSN	25	MD99W483-06-11	VA97W358/RENWOOD3260	
NUWWSN	26	NYCalresel-L	Reselection from Caledonia	
NUWWSN	27	NY94052-9340	Pio2737w/Harus	
NUWWSN	28	NYW103-1-9100	Cayuga/Caledonia	
NUWWSN	29	NYW103-70-9232	Cayuga/Caledonia	
NUWWSN	30	NY93246SP-9070	Harus/3/92145:91009(Geneva/U1273-5-18-8)/NY73116-4W	

cont.

2008 Northern Uniform Winter Wheat Scab Nursery

Entry List

Nursery	Entry	Sample Name	Pedigree	Previous testing
NUWWSN	31	SE911492-4	TAISHANG1/GR863//CARDINAL	2007 PNUWWSN
NUWWSN	32	SE89-1873-2	NASW84-345/Coker9835//OH419/OH389	
NUWWSN	33	SE98-1089-34	P25R57/SE1694-12	2007 PNUWWSN
NUWWSN	34	SE93-1094-8	OH489/OH490	
NUWWSN	35	NE05418	Betty (KS84063-11-6-42)/ SD97457 (= Tomahawk/Bennet)	
NUWWSN	36	NE05549	NI98414 (=NE90614/NE87612//NE87612)/Wesley	
NUWWSN	37	NE05537	NI97435 (=TAM202/NE86606 (=WRR/SUT//MOW6811/3/AGATE..))/NE94632 (=ABILENE/NORKAN//RAWHIDE)/2/ KS89180B-2-1 (=KS8910-73/KS8010-1-4-2//107349/KARL)	
NUWWSN	38	NE03488	KARIEGA/PRONGHORN//Millennium sib	
NUWWSN	39	NE01643	Millennium sib//Seward/Archer	2007 NUWWSN
NUWWSN	40	KY00C-2059-16	91C-170-3/2552	
NUWWSN	41	KY00C-2143-08	90C-048-59/90C-160-14	
NUWWSN	42	KY00C-2755-03	2552/Allegiance	
NUWWSN	43	KY97C-0321-05-2	Kristy/VA94-52-25//2540	
NUWWSN	44	M04*5109	VA94-54-479/PIO2628	2007 PNUWWSN
NUWWSN	45	M04-4802	FFR518//ELKHART/MV18	
NUWWSN	46	M03-3616-B11	HOPEWELL/PATTON	2007 NUWWSN (M03-3616)
NUWWSN	47	M03-3616-C10	HOPEWELL/PATTON	2007 NUWWSN (M03-3616)
NUWWSN	48	OH02-13567	OH581/IN83127E1-24-5-2-1-31//5088B-D-32-1/OH601	2007 NUWWSN
NUWWSN	49	OH03-235-2	OH552/HOPEWELL	2007 PNUWWSN
NUWWSN	50	OH02-12678	FOSTER/HOPEWELL//OH581/OH569	2007 NUWWSN
NUWWSN	51	OH02-7217	P92118B4-2/OH561	
NUWWSN	52	DH 22/8	Ruby/Frontana #1 x AC RON/ Ruby/Frontana #1	
NUWWSN	53	DH 22/24	Ruby/Frontana #1 x AC RON/ Ruby/Frontana #1	
NUWWSN	54	DH 19/176B	AC RON/WEKO609H3 x AC RON	
NUWWSN	55	DH F/SF, 23	Frontana x Sumai 3	
NUWWSN	56	IL02-18228	Pio25R26/9634-24437//95-4162	
NUWWSN	57	IL02-19463	Patton / Cardinal // IL96-2550	2007 NUWWSN
NUWWSN	58	IL04-10118	IL95-2516/ IL98-12212	
NUWWSN	59	IL04-10721	IL95-4162/ IL97-7010	
NUWWSN	60	IL04-10741	IL95-4162/ IL97-7010	

2008 Northern Uniform Winter Wheat Scab Nursery

Summary of all Markers

Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Bx7 over-expressing
NUWWSN	1	ERNIE	non-1RS	no	no	no	no
NUWWSN	2	TRUMAN	non-1RS	no	no	no	no
NUWWSN	3	FREEDOM	1RS.1BL	no	no	no	no
NUWWSN	4	PIONEER 2545	non-1RS	no	no	no	no
NUWWSN	5	MSU Line E6002	non-1RS	no	no	no	no
NUWWSN	6	MSU Line E6001	1RS.1BL	no	nd	no	no
NUWWSN	7	MSU Line E6003	non-1RS	no	no	no	no
NUWWSN	8	MSU Line E5011	non-1RS	no	no	no	no
NUWWSN	9	P.99600A2-4-93	non-1RS	no	nd	no	no
NUWWSN	10	P.0179A1-17	1RS.1BL	no	no	yes	yes
NUWWSN	11	P.011010A1-15	non-1RS	no	no	het	no
NUWWSN	12	P.03112A1-7-3	1RS.1BL	no	no	yes	no
NUWWSN	13	KS980512-2-2	1RS.1AL	no	no	nd	no
NUWWSN	14	KS05HW14-3	non-1RS	no	no	no	no
NUWWSN	15	MO050143	non-1RS	no	no	no	no
NUWWSN	16	MO050699	non-1RS	no	no	no	no
NUWWSN	17	MO050921	non-1RS	no	no	no	no
NUWWSN	18	MO050101	non-1RS	no	no	no	no
NUWWSN	19	VA05W-425	non-1RS	no	nd	no	no
NUWWSN	20	VA05W-775	non-1RS	no	no	no	no
NUWWSN	21	VA05W-777	non-1RS	no	no	no	no
NUWWSN	22	VA05W-534	1RS.1AL	no	no	no	no
NUWWSN	23	MD01W233-06-1	1RS.1AL	no	no	no	no
NUWWSN	24	MD01W233-06-16	1RS.1AL	no	no	no	no
NUWWSN	25	MD99W483-06-11	non-1RS	no	no	no	no
NUWWSN	26	NYCalresel-L	non-1RS	no	no	no	no
NUWWSN	27	NY94052-9340	non-1RS	no	no	no	no
NUWWSN	28	NYW103-1-9100	non-1RS	no	no	no	no
NUWWSN	29	NYW103-70-9232	non-1RS	no	no	no	no
NUWWSN	30	NY93246SP-9070	non-1RS	no	no	no	no
NUWWSN	31	SE911492-4	1RS.1AL	no	no	no	no
NUWWSN	32	SE89-1873-2	non-1RS	no	no	no	no
NUWWSN	33	SE98-1089-34	non-1RS	no	no	no	no
NUWWSN	34	SE93-1094-8	1RS.1AL	no	no	no	no
NUWWSN	35	NE05418	non-1RS	no	no	no	no
NUWWSN	36	NE05549	non-1RS	no	no	no	no
NUWWSN	37	NE05537	non-1RS	no	no	no	no
NUWWSN	38	NE03488	non-1RS	no	no	no	no
NUWWSN	39	NE01643	1RS.1AL	no	no	no	no
NUWWSN	40	KY00C-2059-16	non-1RS	no	no	no	no
NUWWSN	41	KY00C-2143-08	1RS.1BL	no	nd	no	no
NUWWSN	42	KY00C-2755-03	non-1RS	no	no	no	yes
NUWWSN	43	KY97C-0321-05-2	non-1RS	no	no	no	no
NUWWSN	44	M04*5109	non-1RS	no	no	no	no
NUWWSN	45	M04-4802	non-1RS	no	no	no	het
NUWWSN	46	M03-3616-B11	1RS:1BL	no	nd	no	nd
NUWWSN	47	M03-3616-C10	1RS:1BL 1RS:1AL	no	no	no	no
NUWWSN	48	OH02-13567	non-1RS	no	no	no	no
NUWWSN	49	OH03-235-2	non-1RS	no	no	no	no
NUWWSN	50	OH02-12678	1RS.1AL	no	nd	no	no
NUWWSN	51	OH02-7217	non-1RS	no	no	no	no
NUWWSN	52	DH 22/8	non-1RS	no	no	no	nd
NUWWSN	53	DH 22/24	non-1RS	no	no	no	no
NUWWSN	54	DH 19/176B	non-1RS	no	no	no	no
NUWWSN	55	DH F/SF, 23	non-1RS	no	no	no	yes
NUWWSN	56	IL02-18228	nd	nd	nd	nd	nd
NUWWSN	57	IL02-19463	non-1RS	no	no	no	no
NUWWSN	58	IL04-10118	1RS.1AL	no	no	no	no
NUWWSN	59	IL04-10721	non-1RS	no	no	no	no
NUWWSN	60	IL04-10741	non-1RS	no	no	no	nd

FHB QTLs

2008

Nursery	Entry	Sample Name	umn	umn	gwm	gwm	gwm	Fhb1	gwm	gwm	wmc	wmc	wmc	wmc	Fhb Ernie 3Bc
			10	10	533	533	533		285	285	612	612	307	307	
NUWWSN	1	ERNIE	236		119			no	219	246	286		142		yes
NUWWSN	2	TRUMAN	236		119			no	250		290		139		no
NUWWSN	3	FREEDOM	236		119			no	219	246	268	286	142	144	het
NUWWSN	4	PIONEER 2545	236		129			no	224		282		144		no
NUWWSN	5	MSU Line E6002	236		119			no	226		290		144		no
NUWWSN	6	MSU Line E6001	nd		143			nd	221		280		142	144	no
NUWWSN	7	MSU Line E6003	nd		143			nd	221		280		142		no
NUWWSN	8	MSU Line E5011	236		148			no	217		282		142		no
NUWWSN	9	P.99600A2-4-93	236		119			no	294		268		144		no
NUWWSN	10	P.0179A1-17	nd		119			nd	219		288		142		no
NUWWSN	11	P.011010A1-15	236		119			no	219		288		142		no
NUWWSN	12	P.03112A1-7-3	236	239	119			no	219		288		142		no
NUWWSN	13	KS980512-2-2	236		119			no	221		280		142		no
NUWWSN	14	KS05HW14-3	236		119			no	221		274		144		no
NUWWSN	15	MO050143	236		119			no	250		290		139		no
NUWWSN	16	MO050699	236		119			no	246	250	290		139	144	no
NUWWSN	17	MO050921	236		119			no	219	246	286		142		yes
NUWWSN	18	MO050101	236		119			no	250		290		139		no
NUWWSN	19	VA05W-425	228		156			no	226		282		144		no
NUWWSN	20	VA05W-775	239		143			no	246		282		142		?
NUWWSN	21	VA05W-777	228		156			no	246		282		142		?
NUWWSN	22	VA05W-534	236		119			no	246		286		142		yes
NUWWSN	23	MD01W233-06-1	228	236	147	156		no	219	244	282	288	142		no
NUWWSN	24	MD01W233-06-16	236		147	156		no	219	244	282	288	142		no
NUWWSN	25	MD99W483-06-11	236		nd			no	226		290		144		no
NUWWSN	26	NYCalresel-L	236		119			no	219		268		142		no
NUWWSN	27	NY94052-9340	236		119			no	217	219	268		142		no
NUWWSN	28	NYW103-1-9100	236		119			no	219		276		144		no
NUWWSN	29	NYW103-70-9232	236		119			no	219		268	276	144		no
NUWWSN	30	NY93246SP-9070	236		nd			no	217		268		142		no
NUWWSN	31	SE911492-4	236		119			no	224		282		147		no
NUWWSN	32	SE89-1873-2	236		119			no	226		282		144		no
NUWWSN	33	SE98-1089-34	236		nd			no	219		276		144		no
NUWWSN	34	SE93-1094-8	236		129			no	219		276		144		no
NUWWSN	35	NE05418	228		141			no	226		280		142		no
NUWWSN	36	NE05549	236		119			no	217		278		142		no
NUWWSN	37	NE05537	236		119			no	226		280		142		no
NUWWSN	38	NE03488	236		119			no	221		280		142		no
NUWWSN	39	NE01643	236		162			no	221		274		144		no
NUWWSN	40	KY00C-2059-16	236		119			no	226		282		144		no
NUWWSN	41	KY00C-2143-08	228		147	156		no	219		282		142		no
NUWWSN	42	KY00C-2755-03	236		119			no	226		290		144		no
NUWWSN	43	KY97C-0321-05-2	236		119			no	224		280		144		no
NUWWSN	44	M04*5109	236		119			no	226		284		144		no
NUWWSN	45	M04-4802	228	236	119			no	221	226	274	290	144		no
NUWWSN	46	M03-3616-B11	236		129			no	219		276		144		no
NUWWSN	47	M03-3616-C10	236		119			no	219		276		144		no
NUWWSN	48	OH02-13567	228	236	148	156		no	246		286		142		yes
NUWWSN	49	OH03-235-2	228		148	156		no	219		276		144		no
NUWWSN	50	OH02-12678	236		119			no	219		274		142		no
NUWWSN	51	OH02-7217	236		129			no	246		286		142		yes
NUWWSN	52	DH 22/8	236		119			no	nd		244		147		no
NUWWSN	53	DH 22/24	239		143			no	221		274		144		no
NUWWSN	54	DH 19/176B	236		119			no	221		268		144		no
NUWWSN	55	DH F/SF, 23	236		129			no	244		286		142		no
NUWWSN	56	IL02-18228	nd		nd			nd	nd		nd		nd		nd
NUWWSN	57	IL02-19463	236		119			no	219		278		144		no
NUWWSN	58	IL04-10118	228		148	156		no	219		284		142		no
NUWWSN	59	IL04-10721	228		148	156		no	246		286		142		yes
NUWWSN	60	IL04-10741	236		119			no	221		282		144		no

FHB QTLs

2008

Nursery	Entry	Sample Name	cf	cf	gwm	gwm	gwm	gwm	Fhb 2DL- Wuhan1/W14
			233	233	539	539	608	608	
NUWWSN	1	ERNIE	284		137		150		no
NUWWSN	2	TRUMAN	290		137		162		no
NUWWSN	3	FREEDOM	288	290	124	137	162		no
NUWWSN	4	PIONEER 2545	270		139		156		no
NUWWSN	5	MSU Line E6002	276		128		152		no
NUWWSN	6	MSU Line E6001	276		126		152		yes?
NUWWSN	7	MSU Line E6003	276		126		152		yes?
NUWWSN	8	MSU Line E5011	288		139		152		no
NUWWSN	9	P.99600A2-4-93	290		161		152		no
NUWWSN	10	P.0179A1-17	278		139		150		no
NUWWSN	11	P.011010A1-15	278		139		150		no
NUWWSN	12	P.03112A1-7-3	278	288	139		154		no
NUWWSN	13	KS980512-2-2	276		157		154		no
NUWWSN	14	KS05HW14-3	270		135		156		no
NUWWSN	15	MO050143	290		137		162		no
NUWWSN	16	MO050699	278		161		150		no
NUWWSN	17	MO050921	284	290	137		150	162	no
NUWWSN	18	MO050101	290		137		162		no
NUWWSN	19	VA05W-425	276		126		152	156	yes?
NUWWSN	20	VA05W-775	282		131		150		no
NUWWSN	21	VA05W-777	280		131		150		no
NUWWSN	22	VA05W-534	278		139		150		no
NUWWSN	23	MD01W233-06-1	272	278	135		150	154	no
NUWWSN	24	MD01W233-06-16	272		131		154		no
NUWWSN	25	MD99W483-06-11	272		137		154		no
NUWWSN	26	NYCalresel-L	274		139		154		no
NUWWSN	27	NY94052-9340	274	278	nd		150	154	no
NUWWSN	28	NYW103-1-9100	288		141		152		no
NUWWSN	29	NYW103-70-9232	288		141		152		no
NUWWSN	30	NY93246SP-9070	288		163		152		no
NUWWSN	31	SE911492-4	290		137		156		no
NUWWSN	32	SE89-1873-2	270		133		156		no
NUWWSN	33	SE98-1089-34	284		144		150		no
NUWWSN	34	SE93-1094-8	270		126	131	156		no
NUWWSN	35	NE05418	274	288	124	137	156		no
NUWWSN	36	NE05549	274		124	126	156		no
NUWWSN	37	NE05537	270	274	124		152	156	no
NUWWSN	38	NE03488	274		124		154		no
NUWWSN	39	NE01643	270		126		154		no
NUWWSN	40	KY00C-2059-16	270		133		156		no
NUWWSN	41	KY00C-2143-08	272		137		150		no
NUWWSN	42	KY00C-2755-03	272		137		158		no
NUWWSN	43	KY97C-0321-05-2	270		133		156		no
NUWWSN	44	M04*5109	270		133		156		no
NUWWSN	45	M04-4802	270	280	131	137	150	156	no
NUWWSN	46	M03-3616-B11	290		131		154		no
NUWWSN	47	M03-3616-C10	270		131		150		no
NUWWSN	48	OH02-13567	270		155		150		no
NUWWSN	49	OH03-235-2	270		131		150		no
NUWWSN	50	OH02-12678	278		131		150		no
NUWWSN	51	OH02-7217	270		155		150		no
NUWWSN	52	DH 22/8	278		146		150		no
NUWWSN	53	DH 22/24	278		126		150		no
NUWWSN	54	DH 19/176B	278		141		150		no
NUWWSN	55	DH F/SF, 23	270		133		156		no
NUWWSN	56	IL02-18228	nd		nd		nd		nd
NUWWSN	57	IL02-19463	278		137		150		no
NUWWSN	58	IL04-10118	278		137		150		no
NUWWSN	59	IL04-10721	280		131		150		no
NUWWSN	60	IL04-10741	280		131		150		no

FHB QTLs

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Nursery	Entry	Sample Name	gwm	gwm	wmc	wmc	barc	barc	barc	barc	Fhb 5A	Fhb 5A
			304	304	705	705	117	117	186	186	Ernie	Ning7840
NUWWSN	1	ERNIE	199	220	135	162	221		203		het?	no
NUWWSN	2	TRUMAN	199		162	164	217		203		no	no
NUWWSN	3	FREEDOM	197	217	139	162	217	221	203	213	no	no
NUWWSN	4	PIONEER 2545	201		133		217		203		no	no
NUWWSN	5	MSU Line E6002	203		139		217		215		no	no
NUWWSN	6	MSU Line E6001	217		172		221		213		no	yes
NUWWSN	7	MSU Line E6003	217		172		221		213		no	yes
NUWWSN	8	MSU Line E5011	197		158		217		203		no	no
NUWWSN	9	P.99600A2-4-93	222		135		221		203		no	no
NUWWSN	10	P.0179A1-17	203		139		217		203		no	no
NUWWSN	11	P.011010A1-15	203		139		217		203		no	no
NUWWSN	12	P.03112A1-7-3	220		135		221		203		yes	no
NUWWSN	13	KS980512-2-2	201		137		217		nd		no	no
NUWWSN	14	KS05HW14-3	201		137		217		203		no	no
NUWWSN	15	MO050143	199		164		217		203		no	no
NUWWSN	16	MO050699	220		135		221		203		yes	no
NUWWSN	17	MO050921	199		133	164	217		203		no	no
NUWWSN	18	MO050101	199		164		217		203		no	no
NUWWSN	19	VA05W-425	199	217	nd		nd		203	213	no	?
NUWWSN	20	VA05W-775	199		164		217		203		no	no
NUWWSN	21	VA05W-777	199		164		217		203		no	no
NUWWSN	22	VA05W-534	199		164		217		203		no	no
NUWWSN	23	MD01W233-06-1	199	201	133	162	217		203		no	no
NUWWSN	24	MD01W233-06-16	199	201	133	162	217		203		no	no
NUWWSN	25	MD99W483-06-11	199		162		217		203		no	no
NUWWSN	26	NYCalresel-L	201		135		217		203		no	no
NUWWSN	27	NY94052-9340	201		135		217		203		no	no
NUWWSN	28	NYW103-1-9100	201		135		217		203		no	no
NUWWSN	29	NYW103-70-9232	201		133		217		203		no	no
NUWWSN	30	NY93246SP-9070	201		133		217		203		no	no
NUWWSN	31	SE911492-4	222		139		221		203		no	no
NUWWSN	32	SE89-1873-2	215		133		225		213		no	no
NUWWSN	33	SE98-1089-34	199	201	162		217		203		no	no
NUWWSN	34	SE93-1094-8	197		139		217		215		no	no
NUWWSN	35	NE05418	213		139	162	217	221	213	215	no	no
NUWWSN	36	NE05549	213		162		221		213		no	no
NUWWSN	37	NE05537	201		133		217		203		no	no
NUWWSN	38	NE03488	213		162		221		213		no	no
NUWWSN	39	NE01643	201		135		217		203		no	no
NUWWSN	40	KY00C-2059-16	199		164		217		203		no	no
NUWWSN	41	KY00C-2143-08	215		133		225		213		no	no
NUWWSN	42	KY00C-2755-03	199		164		217		203		no	no
NUWWSN	43	KY97C-0321-05-2	201		162		217		203		no	no
NUWWSN	44	M04*5109	199		164		217		203		no	no
NUWWSN	45	M04-4802	199		164		217		203		no	no
NUWWSN	46	M03-3616-B11	220		135		221		203		yes	no
NUWWSN	47	M03-3616-C10	220		135		221		203		yes	no
NUWWSN	48	OH02-13567	220		135		221		203		yes	no
NUWWSN	49	OH03-235-2	220		135		221		203		yes	no
NUWWSN	50	OH02-12678	217		nd		221		213		no	yes?
NUWWSN	51	OH02-7217	220		135		221		203		yes	no
NUWWSN	52	DH 22/8	215		137		225		215		no	no
NUWWSN	53	DH 22/24	215		133		225		213		no	no
NUWWSN	54	DH 19/176B	201		133		217		203		no	no
NUWWSN	55	DH F/SF, 23	201		133		217		203		no	no
NUWWSN	56	IL02-18228	nd		nd		nd		nd		nd	nd
NUWWSN	57	IL02-19463	199		162		217		203		no	no
NUWWSN	58	IL04-10118	199		164		217		203		no	no
NUWWSN	59	IL04-10721	213		137		221		213		no	no
NUWWSN	60	IL04-10741	213		137		221		213		no	no

Leaf, Stripe & Stem Rusts

2008

Nursery	Entry	Sample Name	wmc	wmc	Sr36	barc	barc	Sr24/Lr24	ventriup	Yr17/Lr37/Sr38
			477	477		71	71			
NUWWSN	1	ERNIE	169	186	het	113		no		no
NUWWSN	2	TRUMAN	169		no	113		no		no
NUWWSN	3	FREEDOM	169	186	het	105		no		no
NUWWSN	4	PIONEER 2545	169		no	105		no		no
NUWWSN	5	MSU Line E6002	167		no	118		no		no
NUWWSN	6	MSU Line E6001	167		no	118		no		no
NUWWSN	7	MSU Line E6003	164		no	118		no		no
NUWWSN	8	MSU Line E5011	162	167	no	105		no		no
NUWWSN	9	P.99600A2-4-93	167		no	105		no	256	yes
NUWWSN	10	P.0179A1-17	186		yes	105		no		no
NUWWSN	11	P.011010A1-15	169	186	het	105		no	256	yes
NUWWSN	12	P.03112A1-7-3	186		yes	105		no	256	yes
NUWWSN	13	KS980512-2-2	169		no	105		no	256	yes
NUWWSN	14	KS05HW14-3	169		no	113		no		no
NUWWSN	15	MO050143	169		no	113		no		no
NUWWSN	16	MO050699	186		yes	113		no		no
NUWWSN	17	MO050921	169	186	het	113		no		no
NUWWSN	18	MO050101	169		no	113		no		no
NUWWSN	19	VA05W-425	164		no	nd	nd			no
NUWWSN	20	VA05W-775	164		no	105		no		no
NUWWSN	21	VA05W-777	164		no	105		no		no
NUWWSN	22	VA05W-534	164		no	105		no		no
NUWWSN	23	MD01W233-06-1	164		no	105	113	no		no
NUWWSN	24	MD01W233-06-16	167		no	88	105	yes		no
NUWWSN	25	MD99W483-06-11	186		yes	105		no		no
NUWWSN	26	NYCalresel-L	162		no	105		no		no
NUWWSN	27	NY94052-9340	162	169	no	105		no		no
NUWWSN	28	NYW103-1-9100	169		no	105		no		no
NUWWSN	29	NYW103-70-9232	169		no	105		no		no
NUWWSN	30	NY93246SP-9070	169		no	88	105	yes		no
NUWWSN	31	SE911492-4	167		no	88	105	yes		no
NUWWSN	32	SE89-1873-2	169		no	105		no		no
NUWWSN	33	SE98-1089-34	167		no	113		no		no
NUWWSN	34	SE93-1094-8	167		no	105		no		no
NUWWSN	35	NE05418	169		no	105		no		no
NUWWSN	36	NE05549	169		no	88		yes		no
NUWWSN	37	NE05537	169		no	88	113	yes	256	yes
NUWWSN	38	NE03488	169		no	105		no	256	yes
NUWWSN	39	NE01643	169		no	105		no		no
NUWWSN	40	KY00C-2059-16	169		no	105		no		no
NUWWSN	41	KY00C-2143-08	186		yes	113		no		no
NUWWSN	42	KY00C-2755-03	169		no	nd		nd		no
NUWWSN	43	KY97C-0321-05-2	162		no	105		no		no
NUWWSN	44	M04*5109	162		no	105		no		no
NUWWSN	45	M04-4802	167		no	105	113	no		no
NUWWSN	46	M03-3616-B11	164		no	105		no		no
NUWWSN	47	M03-3616-C10	164		no	105		no		no
NUWWSN	48	OH02-13567	162		no	105		no		no
NUWWSN	49	OH03-235-2	167		no	105		no		no
NUWWSN	50	OH02-12678	162		no	113		no		no
NUWWSN	51	OH02-7217	162		no	105		no		no
NUWWSN	52	DH 22/8	167		no	113		no		no
NUWWSN	53	DH 22/24	162		no	105		no		no
NUWWSN	54	DH 19/176B	169		no	105		no		no
NUWWSN	55	DH F/SF, 23	169		no	105		no		no
NUWWSN	56	IL02-18228	nd		nd	nd		nd	nd	nd
NUWWSN	57	IL02-19463	169		no	113		no		no
NUWWSN	58	IL04-10118	164		no	105		no		no
NUWWSN	59	IL04-10721	164		no	105		no		no
NUWWSN	60	IL04-10741	169		no	105		no		no

Rye Translocation -- Hessian Fly -- Barley Yellow Dwarf Virus

2008

Nursery	Entry	Sample Name	scm	scm	IRS	cf	H13	cfa	cfa	H9	Bdv3	Bdv3	Bdv2/3
			9	9		132		2153	2153				
NUWWSN	1	ERNIE			non-1RS	115	no	194	221	no	184		no
NUWWSN	2	TRUMAN			non-1RS	115	no	221		no	184		no
NUWWSN	3	FREEDOM	208		1RS:1BL	115	no	194	196	no	184		no
NUWWSN	4	PIONEER 2545			non-1RS	115	no	196		no	184		no
NUWWSN	5	MSU Line E6002			non-1RS	115	no	200		no	184		no
NUWWSN	6	MSU Line E6001	208		1RS:1BL	115	no	nd		nd	184		no
NUWWSN	7	MSU Line E6003			non-1RS	115	no	204		no	181		no
NUWWSN	8	MSU Line E5011			non-1RS	115	no	204		no	184		no
NUWWSN	9	P.99600A2-4-93			non-1RS	115	no	nd		nd	184		no
NUWWSN	10	P.0179A1-17	208		1RS:1BL	115	no	204		no	200		yes
NUWWSN	11	P.011010A1-15			non-1RS	115	no	194		no	184	200	het
NUWWSN	12	P.03112A1-7-3	208		1RS:1BL	115	no	196		no	200		yes
NUWWSN	13	KS980512-2-2		224	1RS:1AL	115	no	213		no	nd		nd
NUWWSN	14	KS05HW14-3			non-1RS	115	no	198		no	184		no
NUWWSN	15	MO050143			non-1RS	115	no	194	204	no	184		no
NUWWSN	16	MO050699			non-1RS	115	no	204	221	no	184		no
NUWWSN	17	MO050921			non-1RS	115	no	194	221	no	184		no
NUWWSN	18	MO050101			non-1RS	115	no	221		no	184		no
NUWWSN	19	VA05W-425			non-1RS	115	no	nd		nd	184		no
NUWWSN	20	VA05W-775			non-1RS	115	no	196		no	184		no
NUWWSN	21	VA05W-777			non-1RS	115	no	196		no	184		no
NUWWSN	22	VA05W-534		224	1RS:1AL	115	no	204		no	184		no
NUWWSN	23	MD01W233-06-1		224	1RS:1AL	115	no	196		no	184		no
NUWWSN	24	MD01W233-06-16		224	1RS:1AL	115	no	202		no	184		no
NUWWSN	25	MD99W483-06-11			non-1RS	115	no	213		no	184		no
NUWWSN	26	NYCalresel-L			non-1RS	115	no	192		no	184		no
NUWWSN	27	NY94052-9340			non-1RS	115	no	192	196	no	184		no
NUWWSN	28	NYW103-1-9100			non-1RS	115	no	196		no	184		no
NUWWSN	29	NYW103-70-9232			non-1RS	115	no	196	204	no	184		no
NUWWSN	30	NY93246SP-9070			non-1RS	115	no	196		no	184		no
NUWWSN	31	SE911492-4		224	1RS:1AL	115	no	204		no	184		no
NUWWSN	32	SE89-1873-2			non-1RS	115	no	196		no	184		no
NUWWSN	33	SE98-1089-34			non-1RS	115	no	196		no	184		no
NUWWSN	34	SE93-1094-8		224	1RS:1AL	115	no	196		no	184		no
NUWWSN	35	NE05418			non-1RS	115	no	200	223	no	184		no
NUWWSN	36	NE05549			non-1RS	115	no	196		no	183	188	no
NUWWSN	37	NE05537			non-1RS	115	no	202		no	184		no
NUWWSN	38	NE03488			non-1RS	115	no	196		no	183	188	no
NUWWSN	39	NE01643		224	1RS:1AL	115	no	182		no	184		no
NUWWSN	40	KY00C-2059-16			non-1RS	115	no	204		no	184		no
NUWWSN	41	KY00C-2143-08	208		1RS:1BL	115	no	nd		nd	184		no
NUWWSN	42	KY00C-2755-03			non-1RS	115	no	208		no	184		no
NUWWSN	43	KY97C-0321-05-2			non-1RS	115	no	204		no	184		no
NUWWSN	44	M04*5109			non-1RS	115	no	204		no	184		no
NUWWSN	45	M04-4802			non-1RS	115	no	196	213	no	184		no
NUWWSN	46	M03-3616-B11	208		1RS:1BL	115	no	nd		nd	184		no
NUWWSN	47	M03-3616-C10	208	224	1RS:1BL 1RS:1AL	115	no	196	204	no	184		no
NUWWSN	48	OH02-13567			non-1RS	115	no	196		no	184		no
NUWWSN	49	OH03-235-2			non-1RS	115	no	196		no	184		no
NUWWSN	50	OH02-12678		224	1RS:1AL	115	no	nd		nd	184		no
NUWWSN	51	OH02-7217			non-1RS	115	no	196		no	184		no
NUWWSN	52	DH 22/8			non-1RS	115	no	201		no	184		no
NUWWSN	53	DH 22/24			non-1RS	115	no	204		no	184		no
NUWWSN	54	DH 19/176B			non-1RS	115	no	196		no	184		no
NUWWSN	55	DH F/SF, 23			non-1RS	115	no	204		no	184		no
NUWWSN	56	IL02-18228	nd	nd	nd	nd	nd	nd		nd	nd		nd
NUWWSN	57	IL02-19463			non-1RS	115	no	200		no	184		no
NUWWSN	58	IL04-10118		224	1RS:1AL	115	no	204		no	184		no
NUWWSN	59	IL04-10721			non-1RS	115	no	200		no	184		no
NUWWSN	60	IL04-10741			non-1RS	115	no	200		no	184		no

Quality Traits

2008

Nursery	Entry	Sample Name	bx7oe	bx7oe	Bx7 over-expressing
NUWWSN	1	ERNIE	404		no
NUWWSN	2	TRUMAN	404		no
NUWWSN	3	FREEDOM	404		no
NUWWSN	4	PIONEER 2545	404		no
NUWWSN	5	MSU Line E6002	404		no
NUWWSN	6	MSU Line E6001	404		no
NUWWSN	7	MSU Line E6003	404		no
NUWWSN	8	MSU Line E5011	404		no
NUWWSN	9	P.99600A2-4-93	404		no
NUWWSN	10	P.0179A1-17		449	yes
NUWWSN	11	P.011010A1-15	404		no
NUWWSN	12	P.03112A1-7-3	404		no
NUWWSN	13	KS980512-2-2	404		no
NUWWSN	14	KS05HW14-3	404		no
NUWWSN	15	MO050143	404		no
NUWWSN	16	MO050699	404		no
NUWWSN	17	MO050921	404		no
NUWWSN	18	MO050101	404		no
NUWWSN	19	VA05W-425	404		no
NUWWSN	20	VA05W-775	404		no
NUWWSN	21	VA05W-777	404		no
NUWWSN	22	VA05W-534	404		no
NUWWSN	23	MD01W233-06-1	404		no
NUWWSN	24	MD01W233-06-16	404		no
NUWWSN	25	MD99W483-06-11	404		no
NUWWSN	26	NYCalresel-L	404		no
NUWWSN	27	NY94052-9340	404		no
NUWWSN	28	NYW103-1-9100	404		no
NUWWSN	29	NYW103-70-9232	404		no
NUWWSN	30	NY93246SP-9070	404		no
NUWWSN	31	SE911492-4	404		no
NUWWSN	32	SE89-1873-2	404		no
NUWWSN	33	SE98-1089-34	404		no
NUWWSN	34	SE93-1094-8	404		no
NUWWSN	35	NE05418	404		no
NUWWSN	36	NE05549	404		no
NUWWSN	37	NE05537	404		no
NUWWSN	38	NE03488	404		no
NUWWSN	39	NE01643	404		no
NUWWSN	40	KY00C-2059-16	404		no
NUWWSN	41	KY00C-2143-08	404		no
NUWWSN	42	KY00C-2755-03		449	yes
NUWWSN	43	KY97C-0321-05-2	404		no
NUWWSN	44	M04*5109	404		no
NUWWSN	45	M04-4802	404	449	het
NUWWSN	46	M03-3616-B11	nd		nd
NUWWSN	47	M03-3616-C10	404		no
NUWWSN	48	OH02-13567	404		no
NUWWSN	49	OH03-235-2	404		no
NUWWSN	50	OH02-12678	404		no
NUWWSN	51	OH02-7217	404		no
NUWWSN	52	DH 22/8	nd		nd
NUWWSN	53	DH 22/24	404		no
NUWWSN	54	DH 19/176B	404		no
NUWWSN	55	DH F/SF, 23		449	yes
NUWWSN	56	IL02-18228	nd		nd
NUWWSN	57	IL02-19463	404		no
NUWWSN	58	IL04-10118	404		no
NUWWSN	59	IL04-10721	404		no
NUWWSN	60	IL04-10741	nd		nd

2008 Preliminary Northern Uniform Winter Wheat Scab Nursery

Entry List

Nursery	Entry	Sample Name	Pedigree	Previous testing
PNUWWSN	1	ERNIE	CHECK	
PNUWWSN	2	TRUMAN	CHECK	
PNUWWSN	3	FREEDOM	CHECK	
PNUWWSN	4	PIONEER 2545	CHECK	
PNUWWSN	5	MSU Line E2043	Pioneer 2552/Pioneer 2737W	
PNUWWSN	6	MSU Line E6059	D9070 / Pioneer 2552	
PNUWWSN	7	MSU Line E6042	VA96W-403-WS / CJ9403	
PNUWWSN	8	MSU Line E6038	VA96W-403-WS / CJ9403	
PNUWWSN	9	MSU Line E5024	D6234 / Pioneer 25W33	
PNUWWSN	10	P.992192A1-5-4-5-81	92145//201R/Patton	
PNUWWSN	11	P.0172A1-12-1	97395/981129	
PNUWWSN	12	P.0175A1-37-4	981419/97397	
PNUWWSN	13	P.04281A1-4-5	INW0304/9811//92823/Ernie	
PNUWWSN	14	P.04287A1-16	INW0316*2/INW0304//9346/CS5A	
PNUWWSN	15	P.03630A1-18	99751/INW0315//981358/97462	
PNUWWSN	16	MO050600	MO 960903/Bess 'S'	2007 PNUWWSN
PNUWWSN	17	MO050261	MO 94-182/VA 91-54-219	
PNUWWSN	18	MO051150	960815/IL 91-14163	
PNUWWSN	19	MO050617	960815/IL 91-14163	
PNUWWSN	20	MO041020	960429/960112	
PNUWWSN	21	MO050917	Truman 'S'/960815	
PNUWWSN	22	VA06W-553	Roane/3/Ning7840/Coker9904//Pioneer2552	
PNUWWSN	23	VA06W-558	VA96W-348/P92823A1-1-4-4-5(Clark*4/ Ning7840)// McCormick	
PNUWWSN	24	VA06W-561	OH618//Roane/Sisson'S" (VA96W234)	
PNUWWSN	25	VA06W-615	Roane/OH 552//RC-Strategy (VA98W-586)	
PNUWWSN	26	VA06W-622	IL89-6489/Sisson'S" (VA97W-375)// Ernie	
PNUWWSN	27	TRIBUTE	VA98W-593=VA92-51-39(IN71761A4-31-5-48//71-54-147/MCN1813)/AL870365 (CK747*2/Amigo)	
PNUWWSN	28	BDLS. HONEY-6	NASW84-345/Coker9835//0H419/OH389	
PNUWWSN	29	SE98 1083-14	PION25R57/OH546	
PNUWWSN	30	SEKY93 C-1699-14	MO800071-56/PION2545//KY88C	

cont.

2008 Preliminary Northern Uniform Winter Wheat Scab Nursery

Entry List

Nursery	Entry	Sample Name	Pedigree	Previous testing
PNUWWSN	31	SE94 C-0480-2-2	84C-048-2-1/PION2510//FFR555	
PNUWWSN	32	SE98 1106-6	OH546/SE1694-12	
PNUWWSN	33	SE94-1012-25	T814/L880119	
PNUWWSN	34	KY02C-3005-25	25R18/MCCORMICK	
PNUWWSN	35	KY02C-3005-44	25R18/MCCORMICK	
PNUWWSN	36	KY02C-3008-05	25R18/92C-0010-17	
PNUWWSN	37	KY02C-3004-04	25R18/Tribute	
PNUWWSN	38	KY01C-1542-07	Tribute/BL 940582//Tribute/91C-170-3	
PNUWWSN	39	KY99C-1205-06-1	25R26/ USG 3209//2540	
PNUWWSN	40	M04-4566	BRADLEY/ROANE	
PNUWWSN	41	M04-4715	MASON/ERNIE	
PNUWWSN	42	M05-1172	M94-1048-1/IO2552	
PNUWWSN	43	M05*1589	GA871339/PIO2540	
PNUWWSN	44	M05-1531	LA87167-D8-/P92118B4-2	
PNUWWSN	45	OH04-213-39	HOPEWELL/IL94-6858	
PNUWWSN	46	OH04-264-58	OH645/HOPEWELL	
PNUWWSN	47	OH04-268-39	HOPEWELL/VA96-54-372	
PNUWWSN	48	OH04-176-29	P.92227C5-1-1/BL930390	
PNUWWSN	49	OH03-41-45	IL91-14167/OH599	2007 PNUWWSN
PNUWWSN	50	DH ACF112103 -8T	AC RON x SD97060	
PNUWWSN	51	RCUOGF110202D/4	SD97060 x Ringo Star	2007 NUWWSN
PNUWWSN	52	RCUOGDHACF1109O2D	SD97060 x Freedom	2007 NUWWSN
PNUWWSN	53	RCATTF174/1C	AC Ron x 25R18	
PNUWWSN	54	RCATTF203/2	AC Ron x 25R18	
PNUWWSN	55	RCATL31	Ruby/Frontana #1 x ACRON/ AC RON x SVP72017-17-5-10-1	
PNUWWSN	56	IL01-34159	IL84-2191 / IL87-2834 // IL90-6364 / IL96-24851 (= IL90-6364 // IL90-9464 / Ning 7840)	2007 PNUWWSN
PNUWWSN	57	IL79-002T-B-B	IL94-6727 / IL96-6472	
PNUWWSN	58	IL04-7874	G65201/ IL98-12212	
PNUWWSN	59	IL04-8445	IL94-1653/ IL97-3578	
PNUWWSN	60	IL04-17204	IL97-3578/ Ernie	

2008 Preliminary Northern Uniform Winter Wheat Scab Nursery

Summary of all Markers

Nursery	Entry	Sample Name	Fhb Ernie		Fhb 2DL-	Fhb 5A	Fhb 5A	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38
			Fhb1	3Bc	Wuhan1/W14	Ernie	Ning7840			
PNUWWSN	1	ERNIE	no	yes	no	yes	no	yes	no	no
PNUWWSN	2	TRUMAN	no	no	no	no	no	no	no	no
PNUWWSN	3	FREEDOM	no	yes	no	no	no	het	no	no
PNUWWSN	4	PIONEER 2545	no	no	no	no	no	no	no	no
PNUWWSN	5	MSU Line E2043	no	no	no	no	no	no	no	no
PNUWWSN	6	MSU Line E6059	no	no	no	no	no	no	no	no
PNUWWSN	7	MSU Line E6042	no	no	yes?	no	no	no	no	no
PNUWWSN	8	MSU Line E6038	no	no	yes?	no	no	no	no	no
PNUWWSN	9	MSU Line E5024	no	no	no	yes	no	no	yes	no
PNUWWSN	10	P.992192A1-5-4-5-81	no	no	no	no	no	no	no	no
PNUWWSN	11	P.0172A1-12-1	no	no	no	no	no	no	no	no
PNUWWSN	12	P.0175A1-37-4	no	no	no	no	yes?	yes	no	no
PNUWWSN	13	P.04281A1-4-5	no	yes	no	no	no	yes	nd	no
PNUWWSN	14	P.04287A1-16	no	no	no	no	no	yes	no	no
PNUWWSN	15	P.03630A1-18	het	no	no	het?	no	no	no	no
PNUWWSN	16	MO050600	no	no	no	no	no	no	no	no
PNUWWSN	17	MO050261	no	no	no	no	no	no	no	no
PNUWWSN	18	MO051150	no	no	no	no	no	no	no	no
PNUWWSN	19	MO050617	no	no	no	no	no	no	no	no
PNUWWSN	20	MO041020	no	no	no	no	no	no	no	no
PNUWWSN	21	MO050917	no	no	no	no	no	no	no	no
PNUWWSN	22	VA06W-553	no	no	yes?	het	het	no	no	yes
PNUWWSN	23	VA06W-558	no	no	no	het?	no	no	no	no
PNUWWSN	24	VA06W-561	no	no	no	no	no	no	no	no
PNUWWSN	25	VA06W-615	no	no	no	het	no	yes	no	no
PNUWWSN	26	VA06W-622	no	no	no	no	no	yes	no	no
PNUWWSN	27	TRIBUTE	nd	nd	nd	nd	nd	nd	nd	nd
PNUWWSN	28	BDLS. HONEY-6	no	no	no	no		no	no	no
PNUWWSN	29	SE98 1083-14	no	no	no	yes	no	no	no	no
PNUWWSN	30	SEKY93 C-1699-14	no	no	no	no	no	no	no	no
PNUWWSN	31	SE94 C-0480-2-2	no	no	no	no	no	yes	no	no
PNUWWSN	32	SE98 1106-6	no	no	no	no	no	no	no	no
PNUWWSN	33	SE94-1012-25	no	no	no	no	no	no	no	no
PNUWWSN	34	KY02C-3005-25	yes	no	no	no	no	no	yes	no
PNUWWSN	35	KY02C-3005-44	?	no	no	no	no	no	no	no
PNUWWSN	36	KY02C-3008-05	yes	no	no	no	no	no	no	no
PNUWWSN	37	KY02C-3004-04	het	no	no	no	no	no	no	no
PNUWWSN	38	KY01C-1542-07	no	no	no	no	no	no	yes	no
PNUWWSN	39	KY99C-1205-06-1	no	no	no	no	no	yes	no	no
PNUWWSN	40	M04-4566	no	no	no	no	no	no	no	no
PNUWWSN	41	M04-4715	no	yes	no	yes	no	no	no	no
PNUWWSN	42	M05-1172	no	het	no	no	no	no	no	no
PNUWWSN	43	M05*1589	no	?	no	no	no	no	no	no
PNUWWSN	44	M05-1531	no	yes?	no	yes	no	no	no	no
PNUWWSN	45	OH04-213-39	no	no	no	no	no	no	no	no
PNUWWSN	46	OH04-264-58	nd	no	no	no	no	no	no	no
PNUWWSN	47	OH04-268-39	no	no	no	no	no	no	no	no
PNUWWSN	48	OH04-176-29	no	no	no	no	no	no	nd	no
PNUWWSN	49	OH03-41-45	no	no	no	no	no	no	no	no
PNUWWSN	50	DH ACF112103 -8T	no	no	no	no	no	no	no	no
PNUWWSN	51	RCUOGF110202D/4	no	no	no	no	no	yes	no	no
PNUWWSN	52	RCUOGDHACF110902D	no	no	no	no	no	no	no	no
PNUWWSN	53	RCATTF174/1C	no	no	no	no	no	no	no	no
PNUWWSN	54	RCATTF203/2	no	no	no	no	no	no	no	no
PNUWWSN	55	RCATL31	no	no	no	no	no	no	no	no
PNUWWSN	56	IL01-34159	yes	yes	no	yes	no	no	no	no
PNUWWSN	57	IL79-002T-B-B	no	no	no	yes	no	no	no	no
PNUWWSN	58	IL04-7874	no	yes	no	no	no	no	no	no
PNUWWSN	59	IL04-8445	no	no	no	no	no	no	no	no
PNUWWSN	60	IL04-17204	no	no	no	no	no	yes	no	no

2008 Preliminary Northern Uniform Winter Wheat Scab Nursery

Summary of all Markers

Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Bx7 over-expressing
PNUWWSN	1	ERNIE	non-1RS	no	no	no	no
PNUWWSN	2	TRUMAN	non-1RS	no	no	no	no
PNUWWSN	3	FREEDOM	1RS.1BL	no	no	no	no
PNUWWSN	4	PIONEER 2545	non-1RS	no	nd	no	no
PNUWWSN	5	MSU Line E2043	non-1RS	no	no	no	no
PNUWWSN	6	MSU Line E6059	non-1RS	no	no	no	nd
PNUWWSN	7	MSU Line E6042	non-1RS	no	no	no	nd
PNUWWSN	8	MSU Line E6038	non-1RS	no	no	no	no
PNUWWSN	9	MSU Line E5024	1RS.1BL	no	no	no	no
PNUWWSN	10	P.992192A1-5-4-5-81	1RS.1BL	no	no	no	no
PNUWWSN	11	P.0172A1-12-1	non-1RS	no	no	no	no
PNUWWSN	12	P.0175A1-37-4	1RS.1BL	no	no	no	yes
PNUWWSN	13	P.04281A1-4-5	non-1RS	no	no	yes	no
PNUWWSN	14	P.04287A1-16	1RS.1BL	no	no	yes	no
PNUWWSN	15	P.03630A1-18	1RS.1BL	no	no	no	nd
PNUWWSN	16	MO050600	non-1RS	no	no	no	nd
PNUWWSN	17	MO050261	non-1RS	no	no	no	no
PNUWWSN	18	MO051150	non-1RS	no	nd	no	no
PNUWWSN	19	MO050617	non-1RS	no	no	no	no
PNUWWSN	20	MO041020	non-1RS	no	no	no	no
PNUWWSN	21	MO050917	non-1RS	no	no	no	no
PNUWWSN	22	VA06W-553	non-1RS	no	no	no	no
PNUWWSN	23	VA06W-558	1RS.1AL	no	no	no	no
PNUWWSN	24	VA06W-561	non-1RS	no	no	no	no
PNUWWSN	25	VA06W-615	non-1RS	no	no	no	nd
PNUWWSN	26	VA06W-622	non-1RS	no	no	no	no
PNUWWSN	27	TRIBUTE	nd	nd	nd	nd	nd
PNUWWSN	28	BDLS. HONEY-6	non-1RS	no	nd	no	no
PNUWWSN	29	SE98 1083-14	non-1RS	no	no	nd	no
PNUWWSN	30	SEKY93 C-1699-14	1RS.1BL	no	no	no	no
PNUWWSN	31	SE94 C-0480-2-2	non-1RS	no	no	no	no
PNUWWSN	32	SE98 1106-6	non-1RS	no	no	no	no
PNUWWSN	33	SE94-1012-25	1RS.1BL	no	no	no	no
PNUWWSN	34	KY02C-3005-25	1RS.1AL	no	nd	no	no
PNUWWSN	35	KY02C-3005-44	1RS.1BL	no	no	no	no
PNUWWSN	36	KY02C-3008-05	1RS.1BL	no	no	no	no
PNUWWSN	37	KY02C-3004-04	1RS.1BL	no	no	no	no
PNUWWSN	38	KY01C-1542-07	non-1RS	no	no	no	nd
PNUWWSN	39	KY99C-1205-06-1	non-1RS	no	no	no	no
PNUWWSN	40	M04-4566	1RS.1BL	no	no	no	no
PNUWWSN	41	M04-4715	1RS.1BL	no	no	no	yes
PNUWWSN	42	M05-1172	non-1RS	no	no	no	yes
PNUWWSN	43	M05*1589	non-1RS	no	no	no	no
PNUWWSN	44	M05-1531	1RS.1BL	no	no	no	no
PNUWWSN	45	OH04-213-39	non-1RS	no	no	no	no
PNUWWSN	46	OH04-264-58	non-1RS	no	no	no	yes
PNUWWSN	47	OH04-268-39	non-1RS	no	no	no	no
PNUWWSN	48	OH04-176-29	non-1RS	no	no	no	no
PNUWWSN	49	OH03-41-45	1RS.1AL	no	no	no	no
PNUWWSN	50	DH ACF112103 -8T	1RS.1AL	no	nd	no	no
PNUWWSN	51	RCUOGF110202D/4	1RS:1BL 1RS:1AL	no	no	no	no
PNUWWSN	52	RCUOGDHACF1109O2D	1RS:1BL 1RS:1AL	no	no	no	no
PNUWWSN	53	RCATTF174/1C	non-1RS	no	no	no	no
PNUWWSN	54	RCATTF203/2	non-1RS	no	no	no	no
PNUWWSN	55	RCATL31	non-1RS	no	no	no	het
PNUWWSN	56	IL01-34159	non-1RS	no	no	no	no
PNUWWSN	57	IL79-002T-B-B	non-1RS	no	no	no	no
PNUWWSN	58	IL04-7874	non-1RS	no	nd	no	no
PNUWWSN	59	IL04-8445	non-1RS	no	no	no	no
PNUWWSN	60	IL04-17204	non-1RS	no	no	no	no

FHB QTLs

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Nursery	Entry	Sample Name	umn	umn	gwm	gwm	gwm	Fhb1	gwm	gwm	wmc	wmc	wmc	wmc	Fhb Ernie 3Bc
			10	10	533	533	533		285	285	612	612	307	307	
PNUWWSN	1	ERNIE	236		119			no	246		286		142		yes
PNUWWSN	2	TRUMAN	236		119			no	250		290		139		no
PNUWWSN	3	FREEDOM	236		119	129		no	219	246	276	286	142		yes
PNUWWSN	4	PIONEER 2545	236		129			no	224		282		144		no
PNUWWSN	5	MSU Line E2043	236		119			no	217		268		142		no
PNUWWSN	6	MSU Line E6059	236		119			no	226	244	290		144		no
PNUWWSN	7	MSU Line E6042	236		119			no	226		290		144		no
PNUWWSN	8	MSU Line E6038	236		119			no	226		290		144		no
PNUWWSN	9	MSU Line E5024	236		119			no	221		274		144		no
PNUWWSN	10	P.992192A1-5-4-5-81	236		119			no	306		268		144		no
PNUWWSN	11	P.0172A1-12-1	239		143			no	219	221	288		142		no
PNUWWSN	12	P.0175A1-37-4	239		129			no	219		288		142		no
PNUWWSN	13	P.04281A1-4-5	236		nd			no	246		286		142		yes
PNUWWSN	14	P.04287A1-16	236		119			no	219		282	288	142	144	no
PNUWWSN	15	P.03630A1-18	236	239	119	145		het	219	221	282	288	142	144	no
PNUWWSN	16	MO050600	236		119			no	250		nd		142		no
PNUWWSN	17	MO050261	228		156			no	219		282		144		no
PNUWWSN	18	MO051150	228		147	156	162	no	221		280	288	142		no
PNUWWSN	19	MO050617	228	236	145	162		no	221		280		142	147	no
PNUWWSN	20	MO041020	236		119			no	250		290		139		no
PNUWWSN	21	MO050917	236		162			no	221		280		142		no
PNUWWSN	22	VA06W-553	228	236	119			no	226	246	290		144		no
PNUWWSN	23	VA06W-558	228		119	147	156	no	219	226	280	290	142	144	no
PNUWWSN	24	VA06W-561	236		129			no	219		nd		144		no
PNUWWSN	25	VA06W-615	236		129			no	226		290		144		no
PNUWWSN	26	VA06W-622	236		nd			no	250		290		139		no
PNUWWSN	27	TRIBUTE	nd		nd			nd	nd		nd		nd		nd
PNUWWSN	28	BDLS. HONEY-6	236		119			no	226	244	282		144		no
PNUWWSN	29	SE98 1083-14	228		119	147	156	no	221	250	252	282	142		no
PNUWWSN	30	SEKY93 C-1699-14	228		147	156		no	221		274		144		no
PNUWWSN	31	SE94 C-0480-2-2	236		148			no	226		290		144		no
PNUWWSN	32	SE98 1106-6	236		119	148		no	250		nd		139		no
PNUWWSN	33	SE94-1012-25	228		148	156		no	221		nd		144		no
PNUWWSN	34	KY02C-3005-25	239		145			yes	219		282		142		no
PNUWWSN	35	KY02C-3005-44	239		nd			?	221		274		144		no
PNUWWSN	36	KY02C-3008-05	239		145			yes	221		274		144		no
PNUWWSN	37	KY02C-3004-04	236	239	145	148		het	219		282		142		no
PNUWWSN	38	KY01C-1542-07	236		119			no	219		282		142		no
PNUWWSN	39	KY99C-1205-06-1	236		129			no	219		278		144		no
PNUWWSN	40	M04-4566	236		141			no	221		276	282	144		no
PNUWWSN	41	M04-4715	236		nd			no	246		286		142		yes
PNUWWSN	42	M05-1172	236		119			no	226	246	286	290	142	144	het
PNUWWSN	43	M05*1589	228		156			no	246		282		142		?
PNUWWSN	44	M05-1531	236		119			no	nd		286		142		yes?
PNUWWSN	45	OH04-213-39	236		119			no	219		276		144		no
PNUWWSN	46	OH04-264-58	nd		nd			nd	219		278		144		no
PNUWWSN	47	OH04-268-39	236		nd			no	226		nd		144		no
PNUWWSN	48	OH04-176-29	236		119			no	219		262		142		no
PNUWWSN	49	OH03-41-45	228		nd			no	219		280		142		no
PNUWWSN	50	DH ACF112103 -8T	236		119			no	226		280		142		no
PNUWWSN	51	RCUOGF110202D/4	236		119			no	226	246	268	280	142		no
PNUWWSN	52	RCUOGDHACF110902D	236		143			no	221	226	274	280	142	144	no
PNUWWSN	53	RCATTF174/1C	236		119			no	221		274		144		no
PNUWWSN	54	RCATTF203/2	236		119			no	221		274		144		no
PNUWWSN	55	RCATL31	236		119			no	217		270		142		no
PNUWWSN	56	IL01-34159	239		145	148		yes	246		286		142		yes
PNUWWSN	57	IL79-002T-B-B	228		148	156		no	219		282		142	144	no
PNUWWSN	58	IL04-7874	228		148	156		no	246		286		142		yes
PNUWWSN	59	IL04-8445	228		148	156		no	219		286		144		no
PNUWWSN	60	IL04-17204	236		119			no	219		nd		144		no

FHB QTLs

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Nursery	Entry	Sample Name	cf 233	cf 233	gwm 539	gwm 539	gwm 608	gwm 608	Fhb 2DL- Wuhan1/W14
PNUWWSN	1	ERNIE	284		137		150		no
PNUWWSN	2	TRUMAN	290		137		162		no
PNUWWSN	3	FREEDOM	270	290	124	137	150	162	no
PNUWWSN	4	PIONEER 2545	270		139		156		no
PNUWWSN	5	MSU Line E2043	270		133		156		no
PNUWWSN	6	MSU Line E6059	278		133		150		no
PNUWWSN	7	MSU Line E6042	276		127		152		yes?
PNUWWSN	8	MSU Line E6038	276		127		152		yes?
PNUWWSN	9	MSU Line E5024	nd		133		nd		no
PNUWWSN	10	P.992192A1-5-4-5-81	278		161		150		no
PNUWWSN	11	P.0172A1-12-1	278		124		150		no
PNUWWSN	12	P.0175A1-37-4	270		139		150		no
PNUWWSN	13	P.04281A1-4-5	284		137		150		no
PNUWWSN	14	P.04287A1-16	278		139		150		no
PNUWWSN	15	P.03630A1-18	278		137	139	150		no
PNUWWSN	16	MO050600	290		137		162		no
PNUWWSN	17	MO050261	280		133		150		no
PNUWWSN	18	MO051150	290		124		154		no
PNUWWSN	19	MO050617	290		131	137	154		no
PNUWWSN	20	MO041020	290		131	137	162		no
PNUWWSN	21	MO050917	290		131		154		no
PNUWWSN	22	VA06W-553	276		126	131	152		yes?
PNUWWSN	23	VA06W-558	280		131	139	150		no
PNUWWSN	24	VA06W-561	272		126	135	150		no
PNUWWSN	25	VA06W-615	278	280	124	135	150	154	no
PNUWWSN	26	VA06W-622	290		137		162		no
PNUWWSN	27	TRIBUTE	nd		nd		nd		nd
PNUWWSN	28	BDLS. HONEY-6	270		133	137			no
PNUWWSN	29	SE98 1083-14	282		131	142	154		no
PNUWWSN	30	SEKY93 C-1699-14	288		137				no
PNUWWSN	31	SE94 C-0480-2-2	272		137		156		no
PNUWWSN	32	SE98 1106-6	270		131		150		no
PNUWWSN	33	SE94-1012-25	272	288	137		156	158	no
PNUWWSN	34	KY02C-3005-25	288		126		156		no
PNUWWSN	35	KY02C-3005-44	288		126		156		no
PNUWWSN	36	KY02C-3008-05	288		126		156		no
PNUWWSN	37	KY02C-3004-04	288		126		156		no
PNUWWSN	38	KY01C-1542-07	270		133		156		no
PNUWWSN	39	KY99C-1205-06-1	270		133		156		no
PNUWWSN	40	M04-4566	270		137		150		no
PNUWWSN	41	M04-4715	290		139		154		no
PNUWWSN	42	M05-1172	290	292	133		154		no
PNUWWSN	43	M05*1589	270		133		156		no
PNUWWSN	44	M05-1531	290		139		154		no
PNUWWSN	45	OH04-213-39	270	278	131		150		no
PNUWWSN	46	OH04-264-58	270		133		156		no
PNUWWSN	47	OH04-268-39	270		131		150		no
PNUWWSN	48	OH04-176-29	278		131		150		no
PNUWWSN	49	OH03-41-45	288		124	133	nd		no
PNUWWSN	50	DH ACF112103 -8T	276		131		150		no
PNUWWSN	51	RCUOGF110202D/4	276	284	131		150		no
PNUWWSN	52	RCUOGDHACF110902D	276	278	nd		150		no
PNUWWSN	53	RCATTF174/1C	278		133		150		no
PNUWWSN	54	RCATTF203/2	278		133	135	150		no
PNUWWSN	55	RCATL31	278		142		150		no
PNUWWSN	56	IL01-34159	280		131		150		no
PNUWWSN	57	IL79-002T-B-B	278		124	139	150		no
PNUWWSN	58	IL04-7874	278		137		154		no
PNUWWSN	59	IL04-8445	280		124		154		no
PNUWWSN	60	IL04-17204	284		152		150		no

FHB QTLs

2008

Nursery	Entry	Sample Name	gwm	gwm	wmc	wmc	barc	barc	barc	barc	Fhb 5A	Fhb 5A
			304	304	705	705	117	117	186	186	Ernie	Ning7840
PNUWWSN	1	ERNIE	220		135		221		203		yes	no
PNUWWSN	2	TRUMAN	199		164		217		203		no	no
PNUWWSN	3	FREEDOM	215	217	133	162	221	225	203	213	no	no
PNUWWSN	4	PIONEER 2545	201		133		217		203		no	no
PNUWWSN	5	MSU Line E2043	201		133		217		203		no	no
PNUWWSN	6	MSU Line E6059	201		133		217		203		no	no
PNUWWSN	7	MSU Line E6042	199		162		217		203		no	no
PNUWWSN	8	MSU Line E6038	203		139		217		215		no	no
PNUWWSN	9	MSU Line E5024	220		135		221		203		yes	no
PNUWWSN	10	P.992192A1-5-4-5-81	201		133		217		203		no	no
PNUWWSN	11	P.0172A1-12-1	220		135		221		203		no	no
PNUWWSN	12	P.0175A1-37-4	217		nd		221		213		no	yes?
PNUWWSN	13	P.04281A1-4-5	213		139		221		213		no	no
PNUWWSN	14	P.04287A1-16	203		139		217		203		no	no
PNUWWSN	15	P.03630A1-18	213	220	135	139	221		203		het?	no
PNUWWSN	16	MO050600	199		164		217		203		no	no
PNUWWSN	17	MO050261	199		164		217		203		no	no
PNUWWSN	18	MO051150	199		164		217		203		no	no
PNUWWSN	19	MO050617	199	201	133	164	217		203		no	no
PNUWWSN	20	MO041020	199		164		217		203		no	no
PNUWWSN	21	MO050917	199		nd		nd		203		no	no
PNUWWSN	22	VA06W-553	217	220	135	168	221		203	213	het	het
PNUWWSN	23	VA06W-558	215	220	135		221	225	203		het?	no
PNUWWSN	24	VA06W-561	215		133		225		213		no	no
PNUWWSN	25	VA06W-615	199	220	135	164	217	221	203		het	no
PNUWWSN	26	VA06W-622	220		135		nd		213		no	no
PNUWWSN	27	TRIBUTE	nd		nd		nd		nd		nd	nd
PNUWWSN	28	BDLS. HONEY-6	197	215	133	164	217	225	203	213	no	
PNUWWSN	29	SE98 1083-14	220		135		221		203		yes	no
PNUWWSN	30	SEKY93 C-1699-14	215		133		225		213		no	no
PNUWWSN	31	SE94 C-0480-2-2	199	222	139	164	217	221	203		no	no
PNUWWSN	32	SE98 1106-6	197		139		217		213		no	no
PNUWWSN	33	SE94-1012-25	199	217	164		217		203		no	no
PNUWWSN	34	KY02C-3005-25	215		133		225		213		no	no
PNUWWSN	35	KY02C-3005-44	215		133		225		213		no	no
PNUWWSN	36	KY02C-3008-05	215		133		225		213		no	no
PNUWWSN	37	KY02C-3004-04	199		162		217		203		no	no
PNUWWSN	38	KY01C-1542-07	199		162		217		203		no	no
PNUWWSN	39	KY99C-1205-06-1	199		162		217		203		no	no
PNUWWSN	40	M04-4566	199		164		217		203		no	no
PNUWWSN	41	M04-4715	220		135		221		203		yes	no
PNUWWSN	42	M05-1172	199		137	164	217		203		no	no
PNUWWSN	43	M05*1589	199		162		217		203		no	no
PNUWWSN	44	M05-1531	220		135		221		203		yes	no
PNUWWSN	45	OH04-213-39	197		139		217		213		no	no
PNUWWSN	46	OH04-264-58	199		162		217		203		no	no
PNUWWSN	47	OH04-268-39	197		139		nd		213		no	no
PNUWWSN	48	OH04-176-29	222		135		221		203		no	no
PNUWWSN	49	OH03-41-45	199		164		217		203		no	no
PNUWWSN	50	DH ACF112103 -8T	199		158		217		203		no	no
PNUWWSN	51	RCUOGF110202D/4	201	220	133	164	217	221	203		no	no
PNUWWSN	52	RCUOGDHACF1109O2D	201	215	133		217	225	203	213	no	no
PNUWWSN	53	RCATTF174/1C	201	215	133		217	225	203	213	no	no
PNUWWSN	54	RCATTF203/2	215		133		225		213		no	no
PNUWWSN	55	RCATL31	201		133		217		203		no	no
PNUWWSN	56	IL01-34159	220		135		221		203		yes	no
PNUWWSN	57	IL79-002T-B-B	199	220	135		221		203		yes	no
PNUWWSN	58	IL04-7874	199		164		217		203		no	no
PNUWWSN	59	IL04-8445	199		164		217		203		no	no
PNUWWSN	60	IL04-17204	199		164		217		203		no	no

Leaf, Stripe & Stem Rusts

2008

Nursery	Entry	Sample Name	wmc	wmc	Sr36	barc	barc	Sr24/Lr24	ventriup	Yr17/Lr37/Sr38
			477	477		71	71			
PNUWWSN	1	ERNIE	186		yes	113		no		no
PNUWWSN	2	TRUMAN	169		no	113		no		no
PNUWWSN	3	FREEDOM	164	186	het	105		no		no
PNUWWSN	4	PIONEER 2545	169		no	105		no		no
PNUWWSN	5	MSU Line E2043	162		no	105		no		no
PNUWWSN	6	MSU Line E6059	169		no	105		no		no
PNUWWSN	7	MSU Line E6042	169		no	118		no		no
PNUWWSN	8	MSU Line E6038	167		no	118		no		no
PNUWWSN	9	MSU Line E5024	169		no	88	105	yes		no
PNUWWSN	10	P.992192A1-5-4-5-81	167		no	105		no		no
PNUWWSN	11	P.0172A1-12-1	169		no	118		no		no
PNUWWSN	12	P.0175A1-37-4	186		yes	105		no		no
PNUWWSN	13	P.04281A1-4-5	186		yes	nd		nd		no
PNUWWSN	14	P.04287A1-16	186		yes	105		no		no
PNUWWSN	15	P.03630A1-18	169		no	105		no		no
PNUWWSN	16	MO050600	169		no	105		no		no
PNUWWSN	17	MO050261	167		no	105		no		no
PNUWWSN	18	MO051150	169		no	93		no		no
PNUWWSN	19	MO050617	167		no	113		no		no
PNUWWSN	20	MO041020	169		no	113		no		no
PNUWWSN	21	MO050917	169		no	93		no		no
PNUWWSN	22	VA06W-553	164		no	105	113	no	256	yes
PNUWWSN	23	VA06W-558	167		no	105	113	no		no
PNUWWSN	24	VA06W-561	167		no	113		no		no
PNUWWSN	25	VA06W-615	186		yes	113		no		no
PNUWWSN	26	VA06W-622	186		yes	113		no		no
PNUWWSN	27	TRIBUTE	nd		nd	nd		nd	nd	nd
PNUWWSN	28	BDLS. HONEY-6	169		no	105		no		no
PNUWWSN	29	SE98 1083-14	169		no	118		no		no
PNUWWSN	30	SEKY93 C-1699-14	167		no	113		no		no
PNUWWSN	31	SE94 C-0480-2-2	186		yes	113		no		no
PNUWWSN	32	SE98 1106-6	167		no	105		no		no
PNUWWSN	33	SE94-1012-25	167		no	105		no		no
PNUWWSN	34	KY02C-3005-25	167		no	88	105	yes		no
PNUWWSN	35	KY02C-3005-44	169		no	105		no		no
PNUWWSN	36	KY02C-3008-05	169		no	105		no		no
PNUWWSN	37	KY02C-3004-04	167		no	105		no		no
PNUWWSN	38	KY01C-1542-07	162		no	88		yes		no
PNUWWSN	39	KY99C-1205-06-1	186		yes	105		no		no
PNUWWSN	40	M04-4566	167		no	105		no		no
PNUWWSN	41	M04-4715	164		no	113		no		no
PNUWWSN	42	M05-1172	164		no	105		no		no
PNUWWSN	43	M05*1589	162		no	105		no		no
PNUWWSN	44	M05-1531	164		no	105		no		no
PNUWWSN	45	OH04-213-39	167		no	105		no		no
PNUWWSN	46	OH04-264-58	162		no	93		no		no
PNUWWSN	47	OH04-268-39	167		no	105		no		no
PNUWWSN	48	OH04-176-29	162		no	nd		nd		no
PNUWWSN	49	OH03-41-45	169		no	105	113	no		no
PNUWWSN	50	DH ACF112103 -8T	169		no	105		no		no
PNUWWSN	51	RCUOGF110202D/4	186		yes	105	113	no		no
PNUWWSN	52	RCUOGDHACF110902D	169		no	105		no		no
PNUWWSN	53	RCATTF174/1C	169		no	105		no		no
PNUWWSN	54	RCATTF203/2	169		no	105		no		no
PNUWWSN	55	RCATL31	169		no	105		no		no
PNUWWSN	56	IL01-34159	169		no	105		no		no
PNUWWSN	57	IL79-002T-B-B	162	169	no	105		no		no
PNUWWSN	58	IL04-7874	164		no	105		no		no
PNUWWSN	59	IL04-8445	169		no	105		no		no
PNUWWSN	60	IL04-17204	186		yes	113		no		no

Rye Translocation -- Hessian Fly -- Barley Yellow Dwarf Virus

2008

Nursery	Entry	Sample Name	scm	scm	IRS	cfb	H13	cfa	cfa	H9	Bdv	Bdv	Bdv2/3
			9	9		132		2153	2153		3	3	
PNUWWSN	1	ERNIE			non-IRS	115	no	194		no	184		no
PNUWWSN	2	TRUMAN			non-IRS	115	no	204		no	184		no
PNUWWSN	3	FREEDOM	208		IRS:1BL	115	no	196	200	no	184		no
PNUWWSN	4	PIONEER 2545			non-IRS	115	no	nd		nd	184		no
PNUWWSN	5	MSU Line E2043			non-IRS	115	no	192		no	184		no
PNUWWSN	6	MSU Line E6059			non-IRS	115	no	213		no	184		no
PNUWWSN	7	MSU Line E6042			non-IRS	115	no	200		no	184		no
PNUWWSN	8	MSU Line E6038			non-IRS	115	no	200	200	no	184		no
PNUWWSN	9	MSU Line E5024	208		IRS:1BL	115	no	204		no	184		no
PNUWWSN	10	P.992192A1-5-4-5-81	208		IRS:1BL	115	no	204		no	184		no
PNUWWSN	11	P.0172A1-12-1			non-IRS	115	no	170		no	184		no
PNUWWSN	12	P.0175A1-37-4	208		IRS:1BL	115	no	196		no	184		no
PNUWWSN	13	P.04281A1-4-5			non-IRS	115	no	194		no	200		yes
PNUWWSN	14	P.04287A1-16	208		IRS:1BL	115	no	204		no	200		yes
PNUWWSN	15	P.03630A1-18	208		IRS:1BL	115	no	194	204	no	184		no
PNUWWSN	16	MO050600			non-IRS	115	no	221		no	184		no
PNUWWSN	17	MO050261			non-IRS	115	no	196		no	184		no
PNUWWSN	18	MO051150			non-IRS	115	no	nd		nd	184		no
PNUWWSN	19	MO050617			non-IRS	115	no	196		no	184		no
PNUWWSN	20	MO041020			non-IRS	115	no	221		no	184		no
PNUWWSN	21	MO050917			non-IRS	115	no	221		no	184		no
PNUWWSN	22	VA06W-553			non-IRS	115	no	195	213	no	184		no
PNUWWSN	23	VA06W-558		224	IRS:1AL	115	no	204		no	184		no
PNUWWSN	24	VA06W-561			non-IRS	115	no	208		no	184		no
PNUWWSN	25	VA06W-615			non-IRS	115	no	204	221	no	184		no
PNUWWSN	26	VA06W-622			non-IRS	115	no	204		no	184		no
PNUWWSN	27	TRIBUTE	nd	nd	nd	nd	nd	nd		nd	nd		nd
PNUWWSN	28	BDLS. HONEY-6			non-IRS	115	no	nd		nd	184		no
PNUWWSN	29	SE98 1083-14			non-IRS	115	no	204	221	no	nd		nd
PNUWWSN	30	SEKY93 C-1699-14	208		IRS:1BL	115	no	194		no	184		no
PNUWWSN	31	SE94 C-0480-2-2			non-IRS	115	no	208		no	184		no
PNUWWSN	32	SE98 1106-6			non-IRS	115	no	221		no	184		no
PNUWWSN	33	SE94-1012-25	208		IRS:1BL	115	no	194	204	no	184		no
PNUWWSN	34	KY02C-3005-25		224	IRS:1AL	115	no	nd		nd	184		no
PNUWWSN	35	KY02C-3005-44	208		IRS:1BL	115	no	194		no	184		no
PNUWWSN	36	KY02C-3008-05	208		IRS:1BL	115	no	194		no	184		no
PNUWWSN	37	KY02C-3004-04	208		IRS:1BL	115	no	194		no	181	184	no
PNUWWSN	38	KY01C-1542-07			non-IRS	115	no	204		no	184		no
PNUWWSN	39	KY99C-1205-06-1			non-IRS	115	no	204		no	184		no
PNUWWSN	40	M04-4566	208		IRS:1BL	115	no	213		no	184	186	no
PNUWWSN	41	M04-4715	208		IRS:1BL	115	no	208		no	184		no
PNUWWSN	42	M05-1172			non-IRS	115	no	170	208	no	184		no
PNUWWSN	43	M05*1589			non-IRS	115	no	204		no	184		no
PNUWWSN	44	M05-1531	208		IRS:1BL	115	no	170		no	184		no
PNUWWSN	45	OH04-213-39			non-IRS	115	no	204		no	184		no
PNUWWSN	46	OH04-264-58			non-IRS	115	no	204		no	184		no
PNUWWSN	47	OH04-268-39			non-IRS	115	no	196	204	no	184		no
PNUWWSN	48	OH04-176-29			non-IRS	115	no	204		no	181	184	no
PNUWWSN	49	OH03-41-45		224	IRS:1AL	115	no	196		no	184		no
PNUWWSN	50	DH ACF112103 -8T		224	IRS:1AL	115	no	nd		nd	184		no
PNUWWSN	51	RCUOGF110202D/4	208	224	IRS:1BL IRS:1AL	115	no	194		no	184		no
PNUWWSN	52	RCUOGDHACF110902D	208	224	IRS:1BL IRS:1AL	115	no	204		no	184		no
PNUWWSN	53	RCATTF174/1C			non-IRS	115	no	194		no	184		no
PNUWWSN	54	RCATTF203/2			non-IRS	115	no	194		no	184		no
PNUWWSN	55	RCATL31			non-IRS	115	no	200		no	184		no
PNUWWSN	56	IL01-34159			non-IRS	115	no	200		no	184		no
PNUWWSN	57	IL79-002T-B-B			non-IRS	115	no	196		no	184		no
PNUWWSN	58	IL04-7874			non-IRS	115	no	nd		nd	184		no
PNUWWSN	59	IL04-8445			non-IRS	115	no	204		no	184		no
PNUWWSN	60	IL04-17204			non-IRS	115	no	196		no	184		no

Quality Traits

2008

Nursery	Entry	Sample Name	bx7oe	bx7oe	Bx7 over-expressing
PNUWWSN	1	ERNIE	404		no
PNUWWSN	2	TRUMAN	404		no
PNUWWSN	3	FREEDOM	404		no
PNUWWSN	4	PIONEER 2545	404		no
PNUWWSN	5	MSU Line E2043	404		no
PNUWWSN	6	MSU Line E6059	nd		nd
PNUWWSN	7	MSU Line E6042	nd		nd
PNUWWSN	8	MSU Line E6038	404		no
PNUWWSN	9	MSU Line E5024	404		no
PNUWWSN	10	P.992192A1-5-4-5-81	404		no
PNUWWSN	11	P.0172A1-12-1	404		no
PNUWWSN	12	P.0175A1-37-4		449	yes
PNUWWSN	13	P.04281A1-4-5	404		no
PNUWWSN	14	P.04287A1-16	404		no
PNUWWSN	15	P.03630A1-18	nd		nd
PNUWWSN	16	MO050600	nd		nd
PNUWWSN	17	MO050261	404		no
PNUWWSN	18	MO051150	404		no
PNUWWSN	19	MO050617	404		no
PNUWWSN	20	MO041020	404		no
PNUWWSN	21	MO050917	404		no
PNUWWSN	22	VA06W-553	404		no
PNUWWSN	23	VA06W-558	404		no
PNUWWSN	24	VA06W-561	404		no
PNUWWSN	25	VA06W-615	nd		nd
PNUWWSN	26	VA06W-622	404		no
PNUWWSN	27	TRIBUTE	nd		nd
PNUWWSN	28	BDLS. HONEY-6	404		no
PNUWWSN	29	SE98 1083-14	404		no
PNUWWSN	30	SEKY93 C-1699-14	404		no
PNUWWSN	31	SE94 C-0480-2-2	404		no
PNUWWSN	32	SE98 1106-6	404		no
PNUWWSN	33	SE94-1012-25	404		no
PNUWWSN	34	KY02C-3005-25	404		no
PNUWWSN	35	KY02C-3005-44	404		no
PNUWWSN	36	KY02C-3008-05	404		no
PNUWWSN	37	KY02C-3004-04	404		no
PNUWWSN	38	KY01C-1542-07	nd		nd
PNUWWSN	39	KY99C-1205-06-1	404		no
PNUWWSN	40	M04-4566	404		no
PNUWWSN	41	M04-4715		449	yes
PNUWWSN	42	M05-1172		449	yes
PNUWWSN	43	M05*1589	404		no
PNUWWSN	44	M05-1531	404		no
PNUWWSN	45	OH04-213-39	404		no
PNUWWSN	46	OH04-264-58		449	yes
PNUWWSN	47	OH04-268-39	404		no
PNUWWSN	48	OH04-176-29	404		no
PNUWWSN	49	OH03-41-45	404		no
PNUWWSN	50	DH ACF112103 -8T	404		no
PNUWWSN	51	RCUOGF110202D/4	404		no
PNUWWSN	52	RCUOGDHACF1109O2D	404		no
PNUWWSN	53	RCATTF174/1C	404		no
PNUWWSN	54	RCATTF203/2	404		no
PNUWWSN	55	RCATL31	404	449	het
PNUWWSN	56	IL01-34159	404		no
PNUWWSN	57	IL79-002T-B-B	404		no
PNUWWSN	58	IL04-7874	404		no
PNUWWSN	59	IL04-8445	404		no
PNUWWSN	60	IL04-17204	404		no

2008 Uniform Southern FHB Nursery

Entry List

Nusery	Entry	Sample Name	Pedigree	Source
USFHBN	1	ERNIE	Pike /3/ Stoddard / Blueboy // Stoddard D1707	CHECK(RES)
USFHBN	2	COKER 9835	CK68-19 // CK61-19*3 / IN4946A4-18-2-10-2 /4/ Bb /3/ CK65-20*5 / W17-TRANS // TIFT /5/ P 2550	CHECK(SUS)
USFHBN	3	BESS		CHECK(RES)
USFHBN	4	JAMESTOWN	Roane / Pioneer 2691	Check (RES)
USFHBN	5	TRIBUTE	VA98W-593=92-51-39(IN71761A4-31-5-48// 71-54-147/MCN1813)/AL870365 (CK747*2/Amigo)	Check (RES)
USFHBN	6	AR 97002-10-2	AR 369-4-2 / NING 8026	Bacon
USFHBN	7	AR 97002-2-1	AR 369-4-2 / NING 8026	Bacon
USFHBN	8	AR 97124-4-2	P88288C1-6-1-2 / TERRA SR204	Bacon
USFHBN	9	MD01W233-06-1	McCormick/Choptank	Costa
USFHBN	10	GA991109-6E8	Ernie / Pio 2684 // 901146	Johnson
USFHBN	11	GA991371-6E12	GA931521 / 2*AGS 2000	Johnson
USFHBN	12	AR 99028-1-1	Sabbe / P89204A8-1-59	Bacon
USFHBN	13	AR 99039-5-2	ARR664-21-1 / NC97BGTD7	Bacon
USFHBN	14	AR 99263-7-1	P2118b4 / Jaypee	Bacon
USFHBN	15	ARGE97-1047-2	P2684/3/N7840//Parula/Veery#6	Harrison / Milus
USFHBN	16	B030543	VA93-54-429/LA85422	Hancock
USFHBN	17	D04*5546	MASON/PIO26R61	Hancock
USFHBN	18	D05*6437	PIO2552/L96*9266	Hancock
USFHBN	19	GA031454-DH7	VA01W-461 / USG 3592	Johnson
USFHBN	20	GA031454-DH31	VA01W-461 / USG 3592	Johnson
USFHBN	21	GA031307-DH6	AGS 2000 / VA01W-461	Johnson
USFHBN	22	GA031307-DH14	AGS 2000 / VA01W-461	Johnson
USFHBN	23	GA031354-DH30	VA01W-461 / USG 3592	Johnson
USFHBN	24	GA981621-5E34	AGS 2485 / P26R61	Johnson
USFHBN	25	LA01141D-138-4-B	LA841/PI225160//LA841	Harrison
USFHBN	26	LA01150D-79-7-B	CK9663/FUTAI8944//AGS2000	Harrison
USFHBN	27	LA01162D-131-8-B	LA422/CIM1FHBN#5//PIONEER 26R61	Harrison
USFHBN	28	LA01162D-136-8-B	LA422/CIM1FHBN#5//PIONEER 26R61	Harrison
USFHBN	29	LA01164D-94-2-B	LA422/FUTAI8944//PIONEER 26R61	Harrison
USFHBN	30	NC05-25062	SHAAN85-15 / SS 520 // NC-NEUSE(SCAB)	Murphy
USFHBN	31	NC05-25059	SHAAN85-15 / SS 520 // NC-NEUSE(SCAB)	Murphy
USFHBN	32	NC05-25066	SHAAN85-15 / SS 520 // NC-NEUSE(SCAB)	Murphy
USFHBN	33	NC05-21090	BURR / NC96BGTA6 SIB // NATCHEZ	Murphy
USFHBN	34	NC05-19896	BURR / NC96BGTA6 SIB // NATCHEZ	Murphy
USFHBN	35	NC05-24730	NC-NEUSE SIB / C9663	Murphy
USFHBN	36	NC05-24112	TRIBUTE / NC98-25388(CLB)	Murphy
USFHBN	37	MD01W233-06-16	McCormick/Choptank	Costa
USFHBN	38	MD99W483-06-11	VA97W358/RENWOOD3260	Costa
USFHBN	39	M03-3616B	HOPEWELL/PATTON	Fogleman
USFHBN	40	M03-3616C	HOPEWELL/PATTON	Fogleman
USFHBN	41	M04-4802	FFR518//ELKHART/MV18	Fogleman
USFHBN	42	M04-4566	BRADLEY/ROANE	Fogleman
USFHBN	43	M04-4715	MASON/ERNIE	Fogleman
USFHBN	44	M04*5109	VA94-54-479/PIO2628	Fogleman
USFHBN	45	M05-1172	M94-1048-1/PIO2552	Fogleman
USFHBN	46	M05*1589	GA871339/PIO2540	Fogleman
USFHBN	47	VA04W-360	French Line VR95B717/Roane//VA96W-391 (IN81401A1-32-2/ CK9803)	Griffey
USFHBN	48	VA05W-510	Roane / Pion 2684 // OH 552	Griffey
USFHBN	49	VA05W-714	Pion2684*2//Futai8944/Pion2684	Griffey
USFHBN	50	VA05W-641	Renwood 3260*2//Futai8944/Renwood 3260/3/Renwood 3260	Griffey
USFHBN	51	VA06W-600	Goldfield (P89118RC1-X-9-3-3-1=INW9241/P79410D1-3// Clark)/Tribute // Gibson (M94-1069)	Griffey
USFHBN	52	VA06W-608	Freedom/Neuse"S" (NC96-13374)/RC-Strategy (VA98W-586)	Griffey
USFHBN	53	F96831G6-1001		Ittu
USFHBN	54	F96031G19-103		Ittu
USFHBN	55	F00030G4-2		Ittu

2008 Uniform Southern FHB Nursery

Summary of all Markers

Nusery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Bx7 over-expressing
USFHBN	1	ERNIE	non-1RS	no	no	no	no
USFHBN	2	COKER 9835	non-1RS	no	no	no	no
USFHBN	3	BESS	non-1RS	no	no	no	no
USFHBN	4	JAMESTOWN	non-1RS	no	no	no	no
USFHBN	5	TRIBUTE	1RS:1AL	no	no	no	no
USFHBN	6	AR 97002-10-2	non-1RS	no	no	no	no
USFHBN	7	AR 97002-2-1	non-1RS	no	no	no	no
USFHBN	8	AR 97124-4-2	non-1RS	no	no	no	no
USFHBN	9	MD01W233-06-1	1RS:1AL	no	nd	no	no
USFHBN	10	GA991109-6E8	non-1RS	no	no	no	no
USFHBN	11	GA991371-6E12	1RS:1AL	no	no	no	no
USFHBN	12	AR 99028-1-1	non-1RS	no	no	nd	no
USFHBN	13	AR 99039-5-2	non-1RS	no	no	no	no
USFHBN	14	AR 99263-7-1	non-1RS	no	no	no	no
USFHBN	15	ARGE97-1047-2	1RS:1BL	no	no	no	no
USFHBN	16	B030543	non-1RS	no	no	no	no
USFHBN	17	D04*5546	1RS:1BL	no	no	no	yes
USFHBN	18	D05*6437	non-1RS	no	no	no	no
USFHBN	19	GA031454-DH7	non-1RS	no	no	no	no
USFHBN	20	GA031454-DH31	non-1RS	no	no	no	no
USFHBN	21	GA031307-DH6	1RS:1BL	no	no	no	no
USFHBN	22	GA031307-DH14	non-1RS	no	no	nd	yes
USFHBN	23	GA031354-DH30	non-1RS	no	no	no	no
USFHBN	24	GA981621-5E34	1RS:1BL	no	no	no	yes
USFHBN	25	LA01141D-138-4-B	non-1RS	no	no	no	yes
USFHBN	26	LA01150D-79-7-B	non-1RS	no	no	no	no
USFHBN	27	LA01162D-131-8-B	non-1RS	no	no	no	yes
USFHBN	28	LA01162D-136-8-B	nd	nd	nd	nd	nd
USFHBN	29	LA01164D-94-2-B	non-1RS	no	no	no	yes
USFHBN	30	NC05-25062	non-1RS	no	no	no	no
USFHBN	31	NC05-25059	non-1RS	no	no	no	nd
USFHBN	32	NC05-25066	non-1RS	no	no	no	nd
USFHBN	33	NC05-21090	non-1RS	no	no	no	no
USFHBN	34	NC05-19896	non-1RS	no	no	no	no
USFHBN	35	NC05-24730	non-1RS	no	no	no	no
USFHBN	36	NC05-24112	1RS:1AL	no	no	no	no
USFHBN	37	MD01W233-06-16	1RS:1AL	no	nd	no	no
USFHBN	38	MD99W483-06-11	non-1RS	no	no	no	no
USFHBN	39	M03-3616B	non-1RS	no	no	no	no
USFHBN	40	M03-3616C	1RS:1BL	no	no	no	nd
USFHBN	41	M04-4802	non-1RS	no	no	no	nd
USFHBN	42	M04-4566	1RS:1BL	no	no	no	nd
USFHBN	43	M04-4715	1RS:1BL	no	no	no	nd
USFHBN	44	M04*5109	non-1RS	no	no	no	het
USFHBN	45	M05-1172	non-1RS	no	no	no	no
USFHBN	46	M05*1589	non-1RS	no	no	no	no
USFHBN	47	VA04W-360	non-1RS	no	no	no	no
USFHBN	48	VA05W-510	nd	nd	nd	nd	nd
USFHBN	49	VA05W-714	nd	nd	nd	nd	nd
USFHBN	50	VA05W-641	nd	nd	nd	nd	nd
USFHBN	51	VA06W-600	nd	nd	nd	nd	nd
USFHBN	52	VA06W-608	non-1RS	no	no	no	no
USFHBN	53	F96831G6-1001	nd	nd	nd	nd	nd
USFHBN	54	F96031G19-103	nd	nd	nd	nd	nd
USFHBN	55	F00030G4-2	nd	nd	nd	nd	nd

FHB OTLs

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Nusery	Entry	Sample Name	umn	wmn	gwm	gwm	Fhb1	gwm	gwm	wmc	wmc	wmc	wmc	Fhb Ernie
			10	10	533	533		285	285	612	612	307	307	3Bc
USFHBN	1	ERNIE	236		119		no	246		286		142		yes
USFHBN	2	COKER 9835	236		119		no	223	226	282	290	147		no
USFHBN	3	BESS	236		119		no	250		290		139		no
USFHBN	4	JAMESTOWN	236		nd		no	246		284		142		?
USFHBN	5	TRIBUTE	236		nd		no	219	226	282	290	142	144	no
USFHBN	6	AR 97002-10-2	236		119		no	219		288		142		no
USFHBN	7	AR 97002-2-1	236		119		no	219		284		144		no
USFHBN	8	AR 97124-4-2	236		119		no	219		282	288	142	144	no
USFHBN	9	MD01W233-06-1	236		119		no	219		282	288	142		no
USFHBN	10	GA991109-6E8	236		119		no	226		290		142		no
USFHBN	11	GA991371-6E12	236		119		no	226		290		142		no
USFHBN	12	AR 99028-1-1	228		148	156	no	219		278		142		no
USFHBN	13	AR 99039-5-2	236		119		no	246		nd		142		?
USFHBN	14	AR 99263-7-1	236		119		no	219		282		144		no
USFHBN	15	ARGE97-1047-2	236		nd		no	226		290		142		no
USFHBN	16	B030543	236		119		no	221		280		144		no
USFHBN	17	D04*5546	236		119		no	226		288		144		no
USFHBN	18	D05*6437	236		119		no	226		290		144		no
USFHBN	19	GA031454-DH7	236		119		no	226		290		144		no
USFHBN	20	GA031454-DH31	236		119		no	226		284		142		no
USFHBN	21	GA031307-DH6	236		119		no	226		282		142		no
USFHBN	22	GA031307-DH14	236		119		no	221		274		144		no
USFHBN	23	GA031354-DH30	236		119		no	226		290		144		no
USFHBN	24	GA981621-5E34	236		119		no	226		290		142		no
USFHBN	25	LA01141D-138-4-B	239		119		no	221		280		142		no
USFHBN	26	LA01150D-79-7-B	239		119		no	221		280		142		no
USFHBN	27	LA01162D-131-8-B	239		145		yes	221	226	280	290	144		no
USFHBN	28	LA01162D-136-8-B	nd		nd		nd	nd		nd		nd	nd	nd
USFHBN	29	LA01164D-94-2-B	239		145		yes	221	226	280	290	144		no
USFHBN	30	NC05-25062	239		145		yes	226		282		139		no
USFHBN	31	NC05-25059	239		145		yes	226		282	290	139	144	no
USFHBN	32	NC05-25066	239		145		yes	226		282		139		no
USFHBN	33	NC05-21090	236		129		no	246		282		142		?
USFHBN	34	NC05-19896	236		nd		no	226	246	282	290	142	144	no
USFHBN	35	NC05-24730	236		nd		no	221	226	290		144		no
USFHBN	36	NC05-24112	236		119		no	219		280	290	142		no
USFHBN	37	MD01W233-06-16	236		119		no	219	244	nd		142		no
USFHBN	38	MD99W483-06-11	236		119		no	226		290		144		no
USFHBN	39	M03-3616B	236		nd		no	219		276		144		no
USFHBN	40	M03-3616C	236		119		no	219		276		144		no
USFHBN	41	M04-4802	236		119		no	226	246	286	290	142	144	het
USFHBN	42	M04-4566	236		nd		no	221		276	282	144		no
USFHBN	43	M04-4715	236		nd		no	246		286		142		yes
USFHBN	44	M04*5109	236		119		no	226		284		144		no
USFHBN	45	M05-1172	236		119		no	219		282		144		no
USFHBN	46	M05*1589	228	236	119		no	224	246	282		142	144	?
USFHBN	47	VA04W-360	228		nd		no	226		290		144		no
USFHBN	48	VA05W-510	nd		162		no	nd		nd		nd		nd
USFHBN	49	VA05W-714	nd		162		no	nd		nd		nd		nd
USFHBN	50	VA05W-641	nd		119		no	nd		nd		nd		nd
USFHBN	51	VA06W-600	nd		119		no	nd		nd		nd		nd
USFHBN	52	VA06W-608	236		119		no	246		286		142		yes
USFHBN	53	F96831G6-1001	nd		nd		nd	nd		nd		nd		nd
USFHBN	54	F96031G19-103	nd		nd		nd	nd		nd		nd		nd
USFHBN	55	F00030G4-2	nd		nd		nd	nd		nd		nd		nd

FHB OTLs

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Nusery	Entry	Sample Name	cf 233	cf 233	gwm 539	gwm 539	gwm 608	gwm 608	Fhb 2DL- Wuhan1/W14
USFHBN	1	ERNIE	284		137		150		no
USFHBN	2	COKER 9835	272		131	139	158		no
USFHBN	3	BESS	290		137		162		no
USFHBN	4	JAMESTOWN	272		133		154		no
USFHBN	5	TRIBUTE	278		135	139	150		no
USFHBN	6	AR 97002-10-2	286		126		nd		no
USFHBN	7	AR 97002-2-1	278		139		150		no
USFHBN	8	AR 97124-4-2	278		139		150		no
USFHBN	9	MD01W233-06-1	278		135		150		no
USFHBN	10	GA991109-6E8	270		137		158		no
USFHBN	11	GA991371-6E12	278		135		158		no
USFHBN	12	AR 99028-1-1	290		139		162		no
USFHBN	13	AR 99039-5-2	272		131		156		no
USFHBN	14	AR 99263-7-1	280		131		150		no
USFHBN	15	ARGE97-1047-2	278		135	137	158	162	no
USFHBN	16	B030543	280		131		150		no
USFHBN	17	D04*5546	288		137		156	164	no
USFHBN	18	D05*6437	270		133		156		no
USFHBN	19	GA031454-DH7	280		137		150		no
USFHBN	20	GA031454-DH31	280		137		150		no
USFHBN	21	GA031307-DH6	278		146		158		no
USFHBN	22	GA031307-DH14	272		131		156		no
USFHBN	23	GA031354-DH30	270		146		150		no
USFHBN	24	GA981621-5E34	288		135		156		no
USFHBN	25	LA01141D-138-4-B	272		133		156		no
USFHBN	26	LA01150D-79-7-B	nd		133		nd		no
USFHBN	27	LA01162D-131-8-B	272		133	137	156		no
USFHBN	28	LA01162D-136-8-B	nd		nd		nd		nd
USFHBN	29	LA01164D-94-2-B	nd		137		nd		no
USFHBN	30	NC05-25062	276		152		nd		no
USFHBN	31	NC05-25059	276		155		nd		no
USFHBN	32	NC05-25066	276		155		nd		no
USFHBN	33	NC05-21090	282		152		160		no
USFHBN	34	NC05-19896	282		131		160		no
USFHBN	35	NC05-24730	278	284	144	152	150	158	no
USFHBN	36	NC05-24112	278		139		150		no
USFHBN	37	MD01W233-06-16	272		131		154		no
USFHBN	38	MD99W483-06-11	272		137		154		no
USFHBN	39	M03-3616B	290		131		154		no
USFHBN	40	M03-3616C	270		131		150		no
USFHBN	41	M04-4802	270	280	131	137	150	156	no
USFHBN	42	M04-4566	270		137		150		no
USFHBN	43	M04-4715	290		139		154		no
USFHBN	44	M04*5109	270		nd		156		no
USFHBN	45	M05-1172	280		131		150		no
USFHBN	46	M05*1589	270	280	133		150	156	no
USFHBN	47	VA04W-360	278		135	137	158		no
USFHBN	48	VA05W-510	nd		nd		nd		nd
USFHBN	49	VA05W-714	nd		nd		nd		nd
USFHBN	50	VA05W-641	nd		nd		nd		nd
USFHBN	51	VA06W-600	nd		nd		nd		nd
USFHBN	52	VA06W-608	290		137		162		no
USFHBN	53	F96831G6-1001	nd		nd		nd		nd
USFHBN	54	F96031G19-103	nd		nd		nd		nd
USFHBN	55	F00030G4-2	nd		nd		nd		nd

FHB QTLs

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Nusery	Entry	Sample Name	gwm 304	gwm 304	wmc 705	wmc 705	barc 117	barc 117	barc 186	barc 186	Fhb 5A Ernie	Fhb 5A Ning7840
USFHBN	1	ERNIE	220		135		221		203		yes	no
USFHBN	2	COKER 9835	199		162		217		203		no	no
USFHBN	3	BESS	199		164		217		203		no	no
USFHBN	4	JAMESTOWN	201		133		217		203		no	no
USFHBN	5	TRIBUTE	199		162		217		203		no	no
USFHBN	6	AR 97002-10-2	199	217	164	168	217	221	203	213	no	het
USFHBN	7	AR 97002-2-1	217		168		221		213		no	yes
USFHBN	8	AR 97124-4-2	199		135	164	217		203		no	no
USFHBN	9	MD01W233-06-1	199	201	133	162	217		203		no	no
USFHBN	10	GA991109-6E8	217		137		221		213		no	no
USFHBN	11	GA991371-6E12	199		166		217		203		no	no
USFHBN	12	AR 99028-1-1	203		139		217		203		no	no
USFHBN	13	AR 99039-5-2	199		164		217		203		no	no
USFHBN	14	AR 99263-7-1	217		nd		221		213		no	no
USFHBN	15	ARGE97-1047-2	199		nd		nd		203		no	no
USFHBN	16	B030543	199		164		217		203		no	no
USFHBN	17	D04*5546	201		133		217		203		no	no
USFHBN	18	D05*6437	199		164		217		203		no	no
USFHBN	19	GA031454-DH7	199		164		217		203		no	no
USFHBN	20	GA031454-DH31	222		156		221		213		no	no
USFHBN	21	GA031307-DH6	199		166		217		203		no	no
USFHBN	22	GA031307-DH14	203		139		217		203		no	no
USFHBN	23	GA031354-DH30	222		156		221		213		no	no
USFHBN	24	GA981621-5E34	199		162		217		b		no	no
USFHBN	25	LA01141D-138-4-B	199		162		217		203		no	no
USFHBN	26	LA01150D-79-7-B	199		162		217		203		no	no
USFHBN	27	LA01162D-131-8-B	199		162		217		203		no	no
USFHBN	28	LA01162D-136-8-B	nd		nd		nd		nd		no	nd
USFHBN	29	LA01164D-94-2-B	217		168		221		203	213	no	yes
USFHBN	30	NC05-25062	201		133		217		203		no	no
USFHBN	31	NC05-25059	201		133		217		203		no	no
USFHBN	32	NC05-25066	201		133		217		203		no	no
USFHBN	33	NC05-21090	199		nd		nd		203		no	no
USFHBN	34	NC05-19896	199	220	135	164	217	221	203		het	no
USFHBN	35	NC05-24730	199		162		217		203		no	no
USFHBN	36	NC05-24112	199	222	137	162	217		203		no	no
USFHBN	37	MD01W233-06-16	199	201	133	162	217		203		no	no
USFHBN	38	MD99W483-06-11	199		162		217		203		no	no
USFHBN	39	M03-3616B	220		135		221		203		yes	no
USFHBN	40	M03-3616C	220		135		221		203		yes	no
USFHBN	41	M04-4802	199	201	133	164	217		203		no	no
USFHBN	42	M04-4566	199		164		217		203		no	no
USFHBN	43	M04-4715	220		nd		nd		203		no	no
USFHBN	44	M04*5109	nd		164		217		203		no	no
USFHBN	45	M05-1172	199		162		217		203		no	no
USFHBN	46	M05*1589	199		162	164	217		203		no	no
USFHBN	47	VA04W-360	199		164		217		nd		no	no
USFHBN	48	VA05W-510	nd		nd		nd		nd		nd	nd
USFHBN	49	VA05W-714	nd		nd		nd		nd		nd	nd
USFHBN	50	VA05W-641	nd		nd		nd		nd		nd	nd
USFHBN	51	VA06W-600	nd		nd		nd		nd		nd	nd
USFHBN	52	VA06W-608	199		166		217		203		no	no
USFHBN	53	F96831G6-1001	nd		nd		nd		nd		nd	nd
USFHBN	54	F96031G19-103	nd		nd		nd		nd		nd	nd
USFHBN	55	F00030G4-2	nd		nd		nd		nd		nd	nd

Leaf, Stripe & Stem Rusts

2008

Nusery	Entry	Sample Name	wmc	wmc	Sr36	barc	barc	Sr24/Lr24	ventriup	Yr17/Lr37/Sr38	cslv	cslv	L434/Yr18 /Pm38
			477	477		71	71				34	34	
USFHBN	1	ERNIE	186		yes	113		no		no	235		no
USFHBN	2	COKER 9835	162		no	105		no		no	235		no
USFHBN	3	BESS	169		no	113		no		no	235		no
USFHBN	4	JAMESTOWN	164		no	105		no		no	235		no
USFHBN	5	TRIBUTE	167		no	88	113	yes		no	235		no
USFHBN	6	AR 97002-10-2	167		no	105		no		no	235		no
USFHBN	7	AR 97002-2-1	186		yes	113		no		no	235		no
USFHBN	8	AR 97124-4-2	167		no	113		no		no	235		no
USFHBN	9	MD01W233-06-1	164		no	105		no		no	235		no
USFHBN	10	GA991109-6E8	167		no	105		no		no	235		no
USFHBN	11	GA991371-6E12	164		no	105		no	256	yes	235		no
USFHBN	12	AR 99028-1-1	162		no	113		no		no	235		no
USFHBN	13	AR 99039-5-2	169		no	113		no		no	235		no
USFHBN	14	AR 99263-7-1	162		no	105		no		no	235		no
USFHBN	15	ARGE97-1047-2	164		no	113		no		no	235		no
USFHBN	16	B030543	186		yes	105		no		no	235		no
USFHBN	17	D04*5546	nd		nd	113		no		no	235		no
USFHBN	18	D05*6437	162		no	105		no		no	235		no
USFHBN	19	GA031454-DH7	162		no	105		no	256	yes	235		no
USFHBN	20	GA031454-DH31	167		no	113		no	256	yes	235		no
USFHBN	21	GA031307-DH6	164		no	113		no		no	235		no
USFHBN	22	GA031307-DH14	169		no	113		no	256	yes	235		no
USFHBN	23	GA031354-DH30	162		no	nd		nd		no	235		no
USFHBN	24	GA981621-5E34	164		no	113		no		no	235		no
USFHBN	25	LA01141D-138-4-B	162		no	113		no	256	yes	235		no
USFHBN	26	LA01150D-79-7-B	162		no	113		no	256	yes	235		no
USFHBN	27	LA01162D-131-8-B	162		no	113		no	256	yes	235		no
USFHBN	28	LA01162D-136-8-B	nd		nd	nd		nd	nd	nd	nd		nd
USFHBN	29	LA01164D-94-2-B	186		yes	118		no	256	yes	235		no
USFHBN	30	NC05-25062	186		yes	105		no		no	235		no
USFHBN	31	NC05-25059	186		yes	105		no		no	nd		nd
USFHBN	32	NC05-25066	186		yes	nd		nd		no	235		no
USFHBN	33	NC05-21090	186		yes	105		no	256	yes	235		no
USFHBN	34	NC05-19896	186		yes	105		no	256	yes	235		no
USFHBN	35	NC05-24730	186		yes	105		no		no	235		no
USFHBN	36	NC05-24112	186		yes	88	105	yes		no	nd		nd
USFHBN	37	MD01W233-06-16	167		no	88	105	yes		no	235		no
USFHBN	38	MD99W483-06-11	186		yes	105		no		no	235		no
USFHBN	39	M03-3616B	164		no	105		no		no	235		no
USFHBN	40	M03-3616C	164		no	105		no		no	235		no
USFHBN	41	M04-4802	162	164	no	113		no		no	235		no
USFHBN	42	M04-4566	167		no	105		no		no	235		no
USFHBN	43	M04-4715	164		no	113		no		no	235		no
USFHBN	44	M04*5109	162		no	105		no		no	235		no
USFHBN	45	M05-1172	186		yes	105		no		no	235		no
USFHBN	46	M05*1589	164		no	113		no		no	155		yes
USFHBN	47	VA04W-360	186		yes	113		no		no	155	235	het
USFHBN	48	VA05W-510	nd		nd	nd		nd	nd	nd	nd		nd
USFHBN	49	VA05W-714	nd		nd	nd		nd	nd	nd	nd		nd
USFHBN	50	VA05W-641	nd		nd	nd		nd	nd	nd	nd		nd
USFHBN	51	VA06W-600	nd		nd	nd		nd	nd	nd	nd		nd
USFHBN	52	VA06W-608	186		yes	nd		nd		no	235		no
USFHBN	53	F96831G6-1001	nd		nd	nd		nd	nd	nd	nd		nd
USFHBN	54	F96031G19-103	nd		nd	nd		nd	nd	nd	nd		nd
USFHBN	55	F00030G4-2	nd		nd	nd		nd	nd	nd	nd		nd

Rye Translocation -- Hessian Fly -- Barley Yellow Dwarf Virus

2008

Nusery	Entry	Sample Name	scm	scm	IRS	cfb	H13	cfb	cfb	H9	Bdv3	Bdv3	Bdv2/3
			9	9		132		2153	2153		184	184	184
USFHBN	1	ERNIE			non-IRS	115	no	194	204	no	184		no
USFHBN	2	COKER 9835			non-IRS	115	no	196	204	no	184		no
USFHBN	3	BESS			non-IRS	115	no	221		no	184		no
USFHBN	4	JAMESTOWN			non-IRS	115	no	196		no	184		no
USFHBN	5	TRIBUTE		224	IRS.1AL	115	no	213		no	181	184	no
USFHBN	6	AR 97002-10-2			non-IRS	115	no	196		no	184		no
USFHBN	7	AR 97002-2-1			non-IRS	115	no	196		no	184		no
USFHBN	8	AR 97124-4-2			non-IRS	115	no	204		no	184		no
USFHBN	9	MD01W233-06-1		224	IRS.1AL	115	no	nd		nd	184		no
USFHBN	10	GA991109-6E8			non-IRS	115	no	204		no	184		no
USFHBN	11	GA991371-6E12		224	IRS.1AL	115	no	204		no	184		no
USFHBN	12	AR 99028-1-1			non-IRS	115	no	204		no	nd		nd
USFHBN	13	AR 99039-5-2			non-IRS	115	no	204		no	184		no
USFHBN	14	AR 99263-7-1			non-IRS	115	no	221		no	184		no
USFHBN	15	ARGE97-1047-2	208		IRS:1BL	115	no	204		no	184		no
USFHBN	16	B030543			non-IRS	115	no	196	204	no	184		no
USFHBN	17	D04*5546	208		IRS:1BL	115	no	204		no	184		no
USFHBN	18	D05*6437			non-IRS	115	no	204		no	184		no
USFHBN	19	GA031454-DH7			non-IRS	115	no	200		no	184		no
USFHBN	20	GA031454-DH31			non-IRS	115	no	200		no	184		no
USFHBN	21	GA031307-DH6	208		IRS:1BL	115	no	200		no	184		no
USFHBN	22	GA031307-DH14			non-IRS	115	no	201		no	nd		nd
USFHBN	23	GA031354-DH30			non-IRS	115	no	204		no	184		no
USFHBN	24	GA981621-5E34	208		IRS:1BL	115	no	204		no	184		no
USFHBN	25	LA01141D-138-4-B			non-IRS	115	no	200		no	184	186	no
USFHBN	26	LA01150D-79-7-B			non-IRS	115	no	213		no	184	186	no
USFHBN	27	LA01162D-131-8-B			non-IRS	115	no	204		no	184		no
USFHBN	28	LA01162D-136-8-B	nd	nd	nd	nd	nd	nd		nd	nd		nd
USFHBN	29	LA01164D-94-2-B			non-IRS	115	no	nd		no	184	186	no
USFHBN	30	NC05-25062			non-IRS	115	no	208		no	184		no
USFHBN	31	NC05-25059			non-IRS	115	no	208		no	184		no
USFHBN	32	NC05-25066			non-IRS	115	no	200		no	184		no
USFHBN	33	NC05-21090			non-IRS	115	no	196	208	no	184		no
USFHBN	34	NC05-19896			non-IRS	115	no	208		no	184		no
USFHBN	35	NC05-24730			non-IRS	115	no	204	208	no	184		no
USFHBN	36	NC05-24112		224	IRS.1AL	115	no	202		no	184		no
USFHBN	37	MD01W233-06-16		224	IRS.1AL	115	no	nd		nd	184		no
USFHBN	38	MD99W483-06-11			non-IRS	115	no	213		no	184		no
USFHBN	39	M03-3616B			non-IRS	115	no	170		no	184		no
USFHBN	40	M03-3616C	208		IRS:1BL	115	no	170		no	184		no
USFHBN	41	M04-4802			non-IRS	115	no	208	213	no	184		no
USFHBN	42	M04-4566	208		IRS:1BL	115	no	213		no	184	186	no
USFHBN	43	M04-4715	208		IRS:1BL	115	no	208		no	184		no
USFHBN	44	M04*5109			non-IRS	115	no	204		no	184		no
USFHBN	45	M05-1172			non-IRS	115	no	204		no	184		no
USFHBN	46	M05*1589			non-IRS	115	no	196	204	no	184		no
USFHBN	47	VA04W-360			non-IRS	115	no	170		no	184		no
USFHBN	48	VA05W-510	nd	nd	nd	nd	nd	nd		nd	nd		nd
USFHBN	49	VA05W-714	nd	nd	nd	nd	nd	nd		nd	nd		nd
USFHBN	50	VA05W-641	nd	nd	nd	nd	nd	nd		nd	nd		nd
USFHBN	51	VA06W-600	nd	nd	nd	nd	nd	nd		nd	nd		nd
USFHBN	52	VA06W-608			non-IRS	115	no	196	204	no	184		no
USFHBN	53	F96831G6-1001	nd	nd	nd	nd	nd	nd		nd	nd		nd
USFHBN	54	F96031G19-103	nd	nd	nd	nd	nd	nd		nd	nd		nd
USFHBN	55	F00030G4-2	nd	nd	nd	nd	nd	nd		nd	nd		nd

Quality Traits

2008

Nusery	Entry	Sample Name	bx7oe	bx7oe	Bx7 over-expressing
USFHBN	1	ERNIE	404		no
USFHBN	2	COKER 9835	404		no
USFHBN	3	BESS	404		no
USFHBN	4	JAMESTOWN	404		no
USFHBN	5	TRIBUTE	404		no
USFHBN	6	AR 97002-10-2	404		no
USFHBN	7	AR 97002-2-1	404		no
USFHBN	8	AR 97124-4-2	404		no
USFHBN	9	MD01W233-06-1	404		no
USFHBN	10	GA991109-6E8	404		no
USFHBN	11	GA991371-6E12	404		no
USFHBN	12	AR 99028-1-1	404		no
USFHBN	13	AR 99039-5-2	404		no
USFHBN	14	AR 99263-7-1	404		no
USFHBN	15	ARGE97-1047-2	404		no
USFHBN	16	B030543	404		no
USFHBN	17	D04*5546		449	yes
USFHBN	18	D05*6437	404		no
USFHBN	19	GA031454-DH7	404		no
USFHBN	20	GA031454-DH31	404		no
USFHBN	21	GA031307-DH6	404		no
USFHBN	22	GA031307-DH14		449	yes
USFHBN	23	GA031354-DH30	404		no
USFHBN	24	GA981621-5E34		449	yes
USFHBN	25	LA01141D-138-4-B		449	yes
USFHBN	26	LA01150D-79-7-B	404		no
USFHBN	27	LA01162D-131-8-B		449	yes
USFHBN	28	LA01162D-136-8-B	nd		nd
USFHBN	29	LA01164D-94-2-B		449	yes
USFHBN	30	NC05-25062	404		no
USFHBN	31	NC05-25059	nd		nd
USFHBN	32	NC05-25066	nd		nd
USFHBN	33	NC05-21090	404		no
USFHBN	34	NC05-19896	404		no
USFHBN	35	NC05-24730	404		no
USFHBN	36	NC05-24112	404		no
USFHBN	37	MD01W233-06-16	404		no
USFHBN	38	MD99W483-06-11	404		no
USFHBN	39	M03-3616B	404		no
USFHBN	40	M03-3616C	nd		nd
USFHBN	41	M04-4802	nd		nd
USFHBN	42	M04-4566	nd		nd
USFHBN	43	M04-4715	nd		nd
USFHBN	44	M04*5109	404	449	het
USFHBN	45	M05-1172	404		no
USFHBN	46	M05*1589	404		no
USFHBN	47	VA04W-360	404		no
USFHBN	48	VA05W-510	nd		nd
USFHBN	49	VA05W-714	nd		nd
USFHBN	50	VA05W-641	nd		nd
USFHBN	51	VA06W-600	nd		nd
USFHBN	52	VA06W-608	404		no
USFHBN	53	F96831G6-1001	nd		nd
USFHBN	54	F96031G19-103	nd		nd
USFHBN	55	F00030G4-2	nd		nd