

2012

Marker Reports for all Alleles

Cooperative Scab Nurseries

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

Eastern Regional Small Grains Genotyping Lab

Collaborator: Gina Brown-Guedira

USDA-ARS

Notes

"nd" = not determined or lack of amplification

if marker is dominant, samples with no amplification are left blank 2008-2010; in 2011-2012 dominant markers are indicated with **

"?" 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 bold italics**

NT = marker Not Tested on those samples

Rht = dwarfing allele = yes

Ppd-D1a = photoperiod insensitive = yes

Texture for pina_taqman = AlleleX = hard

Texture for **pinb D1a-b_taqman = AlleleY=D1a=soft; pinb D1a-d_taqman=AlleleX=D1a=soft**

* pedigrees, contributors and other notes that were available, are at the far right side of the tables

2012 Cooperative Scab Nurseries

ID	Year	Nursery	Entry	Sample Name	Pedigree	Plant Source	1st Yr in Nursery
A000270	2012	NUWWSN	1	Ernie		A	
A000271	2012	NUWWSN	2	Freedom		A	
A000272	2012	NUWWSN	3	Truman		A	
A000273	2012	NUWWSN	4	Pioneer2545		A	
A000274	2012	NUWWSN	5	NY103-208-7263		COR	
A000275	2012	NUWWSN	6	NY94052-3329		COR	
A000276	2012	NUWWSN	7	NY05072&75-1		COR	
A000277	2012	NUWWSN	8	KWS007		KWS	
A000278	2012	NUWWSN	9	KWS001		KWS	
A000279	2012	NUWWSN	10	KWS002		KWS	
A000280	2012	NUWWSN	11	KWS003		KWS	
A000281	2012	NUWWSN	12	LCS19214		LIM	
A000282	2012	NUWWSN	13	LCS19209		LIM	
A000283	2012	NUWWSN	14	LCS19231		LIM	
A000284	2012	NUWWSN	15	LCS19103		LIM	
A000285	2012	NUWWSN	16	LCS19104		LIM	
A000286	2012	NUWWSN	17	E9021R		MSU	
A000287	2012	NUWWSN	18	OH05-200-74		MSU	
A000288	2012	NUWWSN	19	OH06-159-6		MSU	
A000289	2012	NUWWSN	20	F0065		MSU	
A000290	2012	NUWWSN	21	OH08-133-25		OSU	
A000291	2012	NUWWSN	22	OH06-180-57		OSU	
A000292	2012	NUWWSN	23	OH07-166-41		OSU	
A000293	2012	NUWWSN	24	OH07-263-3		OSU	
A000294	2012	NUWWSN	25	P04606RA1-1-7-1-6		PUR	
A000295	2012	NUWWSN	26	P0537A1-3-12		PUR	
A000296	2012	NUWWSN	27	P0566A1-3-1-67		PUR	
A000297	2012	NUWWSN	28	P05222A1-1-2-7		PUR	
A000298	2012	NUWWSN	29	MH07-7483		SYN	
A000299	2012	NUWWSN	30	MH07-7474		SYN	
A000300	2012	NUWWSN	31	M08-8036#		SYN	
A000301	2012	NUWWSN	32	M08-8214		SYN	
A000302	2012	NUWWSN	33	DH1-46		UGR	
A000303	2012	NUWWSN	34	DH1-62		UGR	
A000304	2012	NUWWSN	35	DH2-4		UGR	
A000305	2012	NUWWSN	36	DH2-45		UGR	
A000306	2012	NUWWSN	37	DH5-56		UGR	
A000307	2012	NUWWSN	38	IL06-13721		UIL	
A000308	2012	NUWWSN	39	IL06-23571		UIL	
A000309	2012	NUWWSN	40	IL07-4415		UIL	
A000310	2012	NUWWSN	41	IL07-19334		UIL	
A000311	2012	NUWWSN	42	KY04C-2004-1-1-3		UKY	
A000312	2012	NUWWSN	43	KY03C-1224-10-12-3		UKY	
A000313	2012	NUWWSN	44	KY03C-1195-10-8-5		UKY	
A000314	2012	NUWWSN	45	KY04C-2031-29-7-3		UKY	

2012 Cooperative Scab Nurseries

ID	Year	Nursery	Entry	Sample Name	Pedigree	Plant Source	1st Yr in Nursery
A000315	2012	NUWWSN	46	MD08-22-1-6-2		UMD	
A000316	2012	NUWWSN	47	MD08-22-32		UMD	
A000317	2012	NUWWSN	48	MO090932		UMO	
A000318	2012	NUWWSN	49	MO081320		UMO	
A000319	2012	NUWWSN	50	MO090478		UMO	
A000320	2012	NUWWSN	51	MO091068		UMO	
A000321	2012	NUWWSN	52	NE10514		UNE	
A000322	2012	NUWWSN	53	NE10449		UNE	
A000323	2012	NUWWSN	54	NW03666		UNE	
A000324	2012	NUWWSN	55	NW10401		UNE	
A000325	2012	NUWWSN	56	NE10418		UNE	
A000326	2012	NUWWSN	57	WA09W-52		VAT	
A000327	2012	NUWWSN	58	VA09W-73		VAT	
A000328	2012	NUWWSN	59	VA10W-21		VAT	
A000329	2012	NUWWSN	60	VA09W-75		VAT	
A000330	2012	PNUWWSN	1	Ernie		A	
A000331	2012	PNUWWSN	2	Freedom		A	
A000332	2012	PNUWWSN	3	Truman		A	
A000333	2012	PNUWWSN	4	Pioneer2545		A	
A000334	2012	PNUWWSN	5	KWS006		KWS	
A000335	2012	PNUWWSN	6	KWS004		KWS	
A000336	2012	PNUWWSN	7	KWS005		KWS	
A000337	2012	PNUWWSN	8	F0051R		MSU	
A000338	2012	PNUWWSN	9	F0014		MSU	
A000339	2012	PNUWWSN	10	F0038		MSU	
A000340	2012	PNUWWSN	11	F0036R		MSU	
A000341	2012	PNUWWSN	12	OH08-172-42		MSU	
A000342	2012	PNUWWSN	13	7x831-1-I-03Ser (2)		OSU	
A000343	2012	PNUWWSN	14	OH08-172-42		OSU	
A000344	2012	PNUWWSN	15	OH08-180-48		OSU	
A000345	2012	PNUWWSN	16	OH08-269-58		OSU	
A000346	2012	PNUWWSN	17	OH07-254-11		OSU	
A000347	2012	PNUWWSN	18	P05247A1-7-7-3-1		PUR	
A000348	2012	PNUWWSN	19	P0566A1-3-1-65		PUR	
A000349	2012	PNUWWSN	20	P05247A1-7-3-27		PUR	
A000350	2012	PNUWWSN	21	P05247A1-7-3-120		PUR	
A000351	2012	PNUWWSN	22	P0762A1-2-8		PUR	
A000352	2012	PNUWWSN	23	P07287RA1-14		PUR	
A000353	2012	PNUWWSN	24	M09-9811#		SYN	
A000354	2012	PNUWWSN	25	M09-9826#		SYN	
A000355	2012	PNUWWSN	26	IL07-21847		UIL	
A000356	2012	PNUWWSN	27	IL08-8844		UIL	
A000357	2012	PNUWWSN	28	IL08-22206		UIL	

2012 Cooperative Scab Nurseries

ID	Year	Nursery	Entry	Sample Name	Pedigree	Plant Source	1st Yr in Nursery
A000358	2012	PNUWWSN	29	IL08-33373		UIL	
A000359	2012	PNUWWSN	30	IL07-20728		UIL	
A000360	2012	PNUWWSN	31	IL07-20743		UIL	
A000361	2012	PNUWWSN	32	KY04C-2031-29-6-1		UKY	
A000362	2012	PNUWWSN	33	KY03C-2022-16-18-1		UKY	
A000363	2012	PNUWWSN	34	KY04C-2006-45-5-1		UKY	
A000364	2012	PNUWWSN	35	KY04C-2150-66-16-5		UKY	
A000365	2012	PNUWWSN	36	KY04C-2150-64-16-1		UKY	
A000366	2012	PNUWWSN	37	KY04C-2150-64-17-1		UKY	
A000367	2012	PNUWWSN	38	MO100295		UMO	
A000368	2012	PNUWWSN	39	MO101235		UMO	
A000369	2012	PNUWWSN	40	MO100532		UMO	
A000370	2012	PNUWWSN	41	MO100314		UMO	
A000371	2012	PNUWWSN	42	MO100410		UMO	
A000372	2012	PNUWWSN	43	MO101259		UMO	
A000373	2012	PNUWWSN	44	MO081765		UMO	
A000374	2012	PNUWWSN	45	VA08W-613		VAT	
A000375	2012	PNUWWSN	46	VA09W-608		VAT	
A000376	2012	PNUWWSN	47	VA10W-663		VAT	
A000377	2012	PNUWWSN	48	VA10W-28		VAT	
A000378	2012	PNUWWSN	49	VA09W-654		VAT	
A000379	2012	PNUWWSN	50	VA10W-617		VAT	
A000380	2012	USFHBN	1	ERNIE	<i>Check</i>	CHECK(RES)	1999-00
A000381	2012	USFHBN	2	COKER 9835	<i>Check</i>	CHECK(SUS)	2000-01
A000382	2012	USFHBN	3	BESS	<i>MO11769/Madison</i>	CHECK(RES)	2006-07
A000383	2012	USFHBN	4	JAMESTOWN	<i>Roane / Pioneer 2691</i>	Check (RES)	2007-08
A000384	2012	USFHBN	5	NC09-21916	<i>B990081 / NC96BGTA6 // McCormick</i> envelope says NC06-16-26-988 [kim]	Murphy	2111-12
A000385	2012	USFHBN	6	VA08W-613	<i>FREEDOM / NEUSE"S" // VA98W-688</i>	Griffey	2010-11
A000386	2012	USFHBN	7	M08-8036#	<i>COKER 9511/BRANSON</i>	Fogleman	2010-11
A000387	2012	USFHBN	8	IL02-18228	<i>Pio25R26/ IL9634-24437 (IL90-4813/IL85-3132//Ning 7840) // IL95-4162</i>	Kolb	2010-11
A000388	2012	USFHBN	9	ARS07-1214	<i>McCormick/Dominator</i>	Marshall	2011-12
A000389	2012	USFHBN	10	ARS09-173	<i>GA961565-27-6/TAM303</i>	Marshall	2011-12
A000390	2012	USFHBN	11	ARS09-367	<i>McCormick/Dominator</i>	Marshall	2011-12
A000391	2012	USFHBN	12	ARS09-446	<i>FL89250/WX02ARS130</i>	Marshall	2011-12
A000392	2012	USFHBN	13	ARS09-513	<i>GA931233-1-5/PI434658</i>	Marshall	2011-12
A000393	2012	USFHBN	14	ARS09-595	<i>KS2055/NC96BGTD3</i>	Marshall	2011-12
A000394	2012	USFHBN	15	ARS09-643	<i>LA95283CA78-1-2-B/TAM303</i>	Marshall	2011-12
A000395	2012	USFHBN	16	ARS09-724	<i>AR800-1-3-1/WX03ARS0011</i>	Marshall	2011-12
A000396	2012	USFHBN	17	GA 051173W-S11	<i>Truman /AGS 2010</i>	Johnson	
A000397	2012	USFHBN	18	GA 051207-S19	<i>AGS 2000/SC996284//IN 981359C1</i>	Johnson	2011-12
A000398	2012	USFHBN	19	GA 051207-S21	<i>AGS 2000/SC996284//IN 981359C1</i>	Johnson	2011-12
A000399	2012	USFHBN	20	GA 051173-S25	<i>Truman /AGS 2010</i>	Johnson	2011-12
A000400	2012	USFHBN	21	GA 051173-S18	<i>Truman /AGS 2010</i>	Johnson	2011-12

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ID	Year	Nursery	Entry	Sample Name	Pedigree	Plant Source	1st Yr in Nursery
A000401	2012	USFHBN	22	GAMD08-27-E9-S13	<i>SS 8641/McCormick 82/Ning 7840</i>	Johnson	
A000402	2012	USFHBN	23	GAMD08-27-E9-S14	<i>SS 8641/McCormick 82/Ning 7840</i>	Johnson	2011-12
A000403	2012	USFHBN	24	GAMD08-27-E9-S15	<i>SS 8641/McCormick 82/Ning 7840</i>	Johnson	2011-12
A000404	2012	USFHBN	25	LA'04039C-14-8	<i>AGS 2060/ARLA97-1047-4-2</i>	Milus/Harrison	2011-12
A000405	2012	USFHBN	26	LA'04039C-10-6	<i>AGS 2060/ARLA97-1047-4-2</i>	Milus/Harrison	2011-12
A000406	2012	USFHBN	27	LA05102C-1-2	<i>LA96140BUA70-2/JAMESTOWN</i>	Milus/Harrison	2011-12
A000407	2012	USFHBN	28	LA05102C-8-8	<i>LA96140BUA70-2/JAMESTOWN</i>	Milus/Harrison	2011-12
A000408	2012	USFHBN	29	LA05079D-55	<i>(LA04153)GA971127-14-6-6/LA841,F1//ARLA97-1033-3-5(Freedom/Catbird)</i>	Harrison	
A000409	2012	USFHBN	30	LA05079F-P01	<i>(LA04153)GA971127-14-6-6/LA841,F1//ARLA97-1033-3-5(Freedom/Catbird)</i>	Harrison	2011-12
A000410	2012	USFHBN	31	LA05079F-P03	<i>(LA04153)GA971127-14-6-6/LA841,F1//ARLA97-1033-3-5(Freedom/Catbird)</i>	Harrison	2011-12
A000411	2012	USFHBN	32	LA05145D-12	<i>JAMESTOWN/LA97113UC-124 - USED IN MAP STUDY</i>	Harrison	2011-12
A000412	2012	USFHBN	33	LA05145D-24	<i>JAMESTOWN/LA97113UC-124 - USED IN MAP STUDY</i>	Harrison	2011-12
A000413	2012	USFHBN	34	MD03W61-11-2(11PW#108)	<i>25R42/Chesapeake</i>	Costa	
A000414	2012	USFHBN	35	MD03W61-11-3(11PW#109)	<i>25R42/Chesapeake</i>	Costa	2011-12
A000415	2012	USFHBN	36	UX0066-4-79(11PW#183)	<i>Neuse*2/VA01W-476//SS8641</i>	Costa	2011-12
A000416	2012	USFHBN	37	MD08-22-1-6-4(11PW#189)	<i>Ning7840*3/McCormick</i>	Costa	2011-12
A000417	2012	USFHBN	38	MD08-26-H2-23(11CVM-3)	<i>Ning7840*3/McCormick//SS8641</i>	Costa	2011-12
A000418	2012	USFHBN	39	MH07-7483	<i>M95-2994-1/P 25R57</i>	Fogleman	2011-12
A000419	2012	USFHBN	40	M09-9826#	<i>COKER 9511/M03-3002</i>	Fogleman	2011-12
A000420	2012	USFHBN	41	NC08-23323	<i>B960164 / NC94-7197 // McCormick</i>	Murphy	2011-12
A000421	2012	USFHBN	42	NC08-23324	<i>B960164 / NC94-7197 // McCormick</i>	Murphy	2011-12
A000422	2012	USFHBN	43	NC09-22422 (<i>Fhb1</i>)	<i>NC00-15332 / VA01-476 // Dominion</i>	Murphy	2011-12
A000423	2012	USFHBN	44	NC09-20986 (<i>Fhb1</i>)	<i>NC00-15332 / VA01-476 // Dominion</i>	Murphy	2011-12
A000424	2012	USFHBN	45	NC8355-4 (<i>Fhb1</i>)	<i>Oglethorpe / NC03-11465</i>	Murphy	2011-12
A000425	2012	USFHBN	46	NC8452-2	<i>VA05W-500 / NC-Neuse</i>	Murphy	2011-12
A000426	2012	USFHBN	47	VA09W-52	<i>GF921221E16 / McCormick"S" // VA99W-200</i>	Griffey	2011-12
A000427	2012	USFHBN	48	VA09W-73	<i>SS 520 (VA96W-158) / VA99W-188 // TRIBUTE</i>	Griffey	2011-12
A000428	2012	USFHBN	49	VA09W-75	<i>SS 520 (VA96W-158) / VA99W-188 // TRIBUTE</i>	Griffey	2011-12
A000429	2012	USFHBN	50	VA10W-42	<i>JAMESTOWN / M99*3098 (TX85-264/VA88-52-69)</i>	Griffey	2011-12
A000430	2012	USFHBN	51	VA10W-140	<i>VA01W-210 / SS 520 (VA96W-158) // TRIBUTE</i>	Griffey	2011-12

2012 Cooperative FHB Nurseries				Dwarfing alleles			Vernalization alleles	
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c	vrn-A1	vrn-B1
2012	NUWWSN	1	Ernie	Rht-B1b	no	no	vrn-A1 long	nd
2012	NUWWSN	2	Freedom	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	NUWWSN	3	Truman	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	4	Pioneer2545	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	5	NY103-208-7263	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	6	NY94052-3329	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	7	NY05072&75-1	no	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	8	KWS007	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	9	KWS001	Rht-B1b	no	Rht8c het	vrn-A1 long	vrn-B1 long
2012	NUWWSN	10	KWS002	no	Rht-D1b het	Rht8c het	vrn-A1 long	vrn-B1 long
2012	NUWWSN	11	KWS003	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	12	LCS19214	no	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	13	LCS19209	no	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	14	LCS19231	no	no	no	vrn-A1 short	vrn-B1 long
2012	NUWWSN	15	LCS19103	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	16	LCS19104	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	17	E9021R	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	18	OH05-200-74	Rht-B1b	no	no	vrn-A1 long	nd
2012	NUWWSN	19	OH06-159-6	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	20	F0065	no	Rht-D1b	Rht8c	vrn-A1 long	vrn-B1 long
2012	NUWWSN	21	OH08-133-25	no	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	22	OH06-180-57	no	no	Rht8c	vrn-A1 long	vrn-B1 long
2012	NUWWSN	23	OH07-166-41	Rht-B1b	no	Rht8c het	vrn-A1 long	vrn-B1 short
2012	NUWWSN	24	OH07-263-3	no	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	25	P04606RA1-1-7-1-6	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	26	P0537A1-3-12	no	Rht-D1b	no	vrn-A1 long	vrn-B1 short
2012	NUWWSN	27	P0566A1-3-1-67	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	NUWWSN	28	P05222A1-1-2-7	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	NUWWSN	29	MH07-7483	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	NUWWSN	30	MH07-7474	Rht-B1b	no	no	vrn-A1 long	vrn-B1 het
2012	NUWWSN	31	M08-8036#	no	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	32	M08-8214	no	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	33	DH1-46	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	34	DH1-62	no	Rht-D1b	no	nd	vrn-B1 long
2012	NUWWSN	35	DH2-4	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	36	DH2-45	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	37	DH5-56	no	Rht-D1b	Rht8c	vrn-A1 long	vrn-B1 short
2012	NUWWSN	38	IL06-13721	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	39	IL06-23571	Rht-B1b	no	Rht8c	vrn-A1 long	vrn-B1 long
2012	NUWWSN	40	IL07-4415	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	41	IL07-19334	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	42	KY04C-2004-1-1-3	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	43	KY03C-1224-10-12-3	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	NUWWSN	44	KY03C-1195-10-8-5	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long

2012 Cooperative FHB Nurseries				Dwarfing alleles			Vernalization alleles	
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c	vrn-A1	vrn-B1
2012	NUWWSN	45	KY04C-2031-29-7-3	Rht-B1b	no	no	vrn-A1 long	vrn-B1 het
2012	NUWWSN	46	MD08-22-1-6-2	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	47	MD08-22-32	no	Rht-D1b	Rht8c	vrn-A1 long	vrn-B1 long
2012	NUWWSN	48	MO090932	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	49	MO081320	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	50	MO090478	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	51	MO091068	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	52	NE10514	Rht-B1b	no	Rht8c het	vrn-A1 long	vrn-B1 long
2012	NUWWSN	53	NE10449	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	54	NW03666	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	55	NW10401	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	56	NE10418	Rht-B1b	no	nd	vrn-A1 long	vrn-B1 long
2012	NUWWSN	57	WA09W-52	no	Rht-D1b	no	vrn-A1 short	vrn-B1 het
2012	NUWWSN	58	VA09W-73	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	59	VA10W-21	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	NUWWSN	60	VA09W-75	no	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	1	Ernie	Rht-B1b	no	no	nd	vrn-B1 long
2012	PNUWWSN	2	Freedom	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	3	Truman	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	4	Pioneer2545	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	5	KWS006	Rht-B1b	no	no	vrn-A1 long	vrn-B1 het
2012	PNUWWSN	6	KWS004	no	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	7	KWS005	no	no	Rht8c het	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	8	F0051R	no	Rht-D1b	no	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	9	F0014	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	10	F0038	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	11	F0036R	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	12	OH08-172-42	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	13	7x831-1-I-03Ser (2)	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	14	OH08-172-42	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	15	OH08-180-48	Rht-B1b	no	Rht8c	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	16	OH08-269-58	Rht-B1b	no	Rht8c	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	17	OH07-254-11	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	18	P05247A1-7-7-3-1	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	19	P0566A1-3-1-65	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	20	P05247A1-7-3-27	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	21	P05247A1-7-3-120	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	22	P0762A1-2-8	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	23	P07287RA1-14	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	24	M09-9811#	no	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	25	M09-9826#	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	26	IL07-21847	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	27	IL08-8844	Rht-B1b	no	Rht8c het	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	28	IL08-22206	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long

2012 Cooperative FHB Nurseries				Dwarfing alleles			Vernalization alleles	
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c	vrn-A1	vrn-B1
2012	PNUWWSN	29	IL08-33373	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	30	IL07-20728	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	31	IL07-20743	no	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	32	KY04C-2031-29-6-1	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	33	KY03C-2022-16-18-1	Rht-B1b	no	Rht8c	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	34	KY04C-2006-45-5-1	nd	no	Rht8c	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	35	KY04C-2150-66-16-5	nd	no	Rht8c	vrn-A1 long	vrn-B1 short
2012	PNUWWSN	36	KY04C-2150-64-16-1	Rht-B1b	no	no	vrn-A1 long	nd
2012	PNUWWSN	37	KY04C-2150-64-17-1	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	38	MO100295	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	39	MO101235	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	40	MO100532	Rht-B1b het	no	Rht8c	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	41	MO100314	no	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	42	MO100410	no	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	43	MO101259	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	44	MO081765	no	no	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	45	VA08W-613	no	Rht-D1b	no	vrn-A1 short	vrn-B1 long
2012	PNUWWSN	46	VA09W-608	Rht-B1b het	no	no	vrn-A1 long	vrn-B1 het
2012	PNUWWSN	47	VA10W-663	Rht-B1b	no	no	vrn-A1 short	vrn-B1 het
2012	PNUWWSN	48	VA10W-28	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	PNUWWSN	49	VA09W-654	no	no	no	vrn-A1 short	vrn-B1 long
2012	PNUWWSN	50	VA10W-617	no	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	1	ERNIE	Rht-B1b het	no	no	vrn-A1 het	vrn-B1 long
2012	USFHBN	2	COKER 9835	no	Rht-D1b	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	3	BESS	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	4	JAMESTOWN	no	Rht-D1b	no	vrn-A1 short	vrn-B1 long
2012	USFHBN	5	NC09-21916	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	6	VA08W-613	no	Rht-D1b	no	vrn-A1 short	vrn-B1 long
2012	USFHBN	7	M08-8036#	no	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	8	IL02-18228	Rht-B1b	Rht-D1b het	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	9	ARS07-1214	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	10	ARS09-173	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	11	ARS09-367	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	12	ARS09-446	no	no	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	13	ARS09-513	no	no	Rht8c het	vrn-A1 long	vrn-B1 short
2012	USFHBN	14	ARS09-595	no	no	no	vrn-A1 short	vrn-B1 long
2012	USFHBN	15	ARS09-643	no	Rht-D1b	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	16	ARS09-724	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	17	GA 051173W-S11	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	18	GA 051207-S19	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	19	GA 051207-S21	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	20	GA 051173-S25	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	21	GA 051173-S18	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	22	GAMD08-27-E9-S13	no	Rht-D1b	no	vrn-A1 long	vrn-B1 het

2012 Cooperative FHB Nurseries				Dwarfing alleles			Vernalization alleles	
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c	vrn-A1	vrn-B1
2012	USFHBN	23	GAMD08-27-E9-S14	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	24	GAMD08-27-E9-S15	no	Rht-D1b	no	vrn-A1 long	vrn-B1 het
2012	USFHBN	25	LA'04039C-14-8	no	no	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	26	LA'04039C-10-6	no	no	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	27	LA05102C-1-2	no	no	no	vrn-A1 het	vrn-B1 het
2012	USFHBN	28	LA05102C-8-8	no	no	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	29	LA05079D-55	Rht-B1b	no	no	vrn-A1 long	vrn-B1 het
2012	USFHBN	30	LA05079F-P01	Rht-B1b	no	no	vrn-A1 long	vrn-B1 het
2012	USFHBN	31	LA05079F-P03	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	32	LA05145D-12	no	Rht-D1b	no	vrn-A1 short	vrn-B1 long
2012	USFHBN	33	LA05145D-24	no	Rht-D1b	no	vrn-A1 short	vrn-B1 long
2012	USFHBN	34	MD03W61-11-2(11PW#108)	no	Rht-D1b	nd	vrn-A1 long	vrn-B1 long
2012	USFHBN	35	MD03W61-11-3(11PW#109)	no	Rht-D1b	no	vrn-A1 long	vrn-B1 het
2012	USFHBN	36	UX0066-4-79(11PW#183)	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	37	MD08-22-1-6-4(11PW#189)	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	38	MD08-26-H2-23(11CVM-3)	no	Rht-D1b	no	vrn-A1 long	vrn-B1 het
2012	USFHBN	39	MH07-7483	Rht-B1b	no	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	40	M09-9826#	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	41	NC08-23323	no	Rht-D1b	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	42	NC08-23324	no	Rht-D1b	no	vrn-A1 long	vrn-B1 short
2012	USFHBN	43	NC09-22422 (<i>Fhb1</i>)	Rht-B1b het	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	44	NC09-20986 (<i>Fhb1</i>)	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	45	NC8355-4 (<i>Fhb1</i>)	no	Rht-D1b	no	vrn-A1 short	vrn-B1 long
2012	USFHBN	46	NC8452-2	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	47	VA09W-52	no	Rht-D1b	no	vrn-A1 short	vrn-B1 long
2012	USFHBN	48	VA09W-73	no	Rht-D1b het	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	49	VA09W-75	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	50	VA10W-42	Rht-B1b	no	no	vrn-A1 long	vrn-B1 long
2012	USFHBN	51	VA10W-140	no	Rht-D1b	no	vrn-A1 long	vrn-B1 long

2012 Cooperative FHB Nurseries				Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy
2012	NUWWSN	1	Ernie	no	no	no
2012	NUWWSN	2	Freedom	no	null	no
2012	NUWWSN	3	Truman	no	no	no
2012	NUWWSN	4	Pioneer2545	Ppd-D1a insens	no	no
2012	NUWWSN	5	NY103-208-7263	no	no	no
2012	NUWWSN	6	NY94052-3329	no	no	no
2012	NUWWSN	7	NY05072&75-1	no	no	no
2012	NUWWSN	8	KWS007	no	no	no
2012	NUWWSN	9	KWS001	no	no	no
2012	NUWWSN	10	KWS002	no	no	no
2012	NUWWSN	11	KWS003	no	Ppd-B1 CS insens	no
2012	NUWWSN	12	LCS19214	no	Ppd-B1 CS insens	no
2012	NUWWSN	13	LCS19209	no	Ppd-B1 CS insens	no
2012	NUWWSN	14	LCS19231	no	no	no
2012	NUWWSN	15	LCS19103	Ppd-D1a insens het	no	no
2012	NUWWSN	16	LCS19104	no	no	no
2012	NUWWSN	17	E9021R	Ppd-D1a insens	no	no
2012	NUWWSN	18	OH05-200-74	no	no	Ppd-B1 S64 insens
2012	NUWWSN	19	OH06-159-6	Ppd-D1a insens	no	no
2012	NUWWSN	20	F0065	Ppd-D1a insens	no	no
2012	NUWWSN	21	OH08-133-25	no	Ppd-B1 CS insens	no
2012	NUWWSN	22	OH06-180-57	Ppd-D1a insens	no	no
2012	NUWWSN	23	OH07-166-41	Ppd-D1a insens	no	no
2012	NUWWSN	24	OH07-263-3	no	null	no
2012	NUWWSN	25	P04606RA1-1-7-1-6	no	no	no
2012	NUWWSN	26	P0537A1-3-12	Ppd-D1a insens	no	no
2012	NUWWSN	27	P0566A1-3-1-67	Ppd-D1a insens	no	no
2012	NUWWSN	28	P05222A1-1-2-7	no	Ppd-B1 CS insens	no
2012	NUWWSN	29	MH07-7483	Ppd-D1a insens	no	no
2012	NUWWSN	30	MH07-7474	Ppd-D1a insens het	no	no
2012	NUWWSN	31	M08-8036#	Ppd-D1a insens	null	no
2012	NUWWSN	32	M08-8214	Ppd-D1a insens	no	no
2012	NUWWSN	33	DH1-46	no	no	no
2012	NUWWSN	34	DH1-62	no	no	no
2012	NUWWSN	35	DH2-4	no	no	no
2012	NUWWSN	36	DH2-45	Ppd-D1a insens het	no	no
2012	NUWWSN	37	DH5-56	no	no	no
2012	NUWWSN	38	IL06-13721	no	Ppd-B1 CS insens	no
2012	NUWWSN	39	IL06-23571	Ppd-D1a insens	no	no
2012	NUWWSN	40	IL07-4415	no	no	no
2012	NUWWSN	41	IL07-19334	Ppd-D1a insens het	no	no
2012	NUWWSN	42	KY04C-2004-1-1-3	Ppd-D1a insens het	no	no
2012	NUWWSN	43	KY03C-1224-10-12-3	Ppd-D1a insens	Ppd-B1 CS insens	no
2012	NUWWSN	44	KY03C-1195-10-8-5	no	Ppd-B1 CS insens	no

2012 Cooperative FHB Nurseries				Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy
2012	NUWWSN	45	KY04C-2031-29-7-3	no	Ppd-B1 CS insens	no
2012	NUWWSN	46	MD08-22-1-6-2	no	no	no
2012	NUWWSN	47	MD08-22-32	no	no	no
2012	NUWWSN	48	MO090932	no	no	no
2012	NUWWSN	49	MO081320	no	no	no
2012	NUWWSN	50	MO090478	Ppd-D1a insens	no	no
2012	NUWWSN	51	MO091068	no	Ppd-B1 CS insens	Ppd-B1 S64 insens
2012	NUWWSN	52	NE10514	no	no	no
2012	NUWWSN	53	NE10449	no	no	no
2012	NUWWSN	54	NW03666	no	no	no
2012	NUWWSN	55	NW10401	Ppd-D1a insens het	no	Ppd-B1 S64 insens
2012	NUWWSN	56	NE10418	Ppd-D1a insens het	no	no
2012	NUWWSN	57	WA09W-52	Ppd-D1a insens	no	no
2012	NUWWSN	58	VA09W-73	no	no	no
2012	NUWWSN	59	VA10W-21	Ppd-D1a insens	no	no
2012	NUWWSN	60	VA09W-75	Ppd-D1a insens	no	no
2012	PNUWWSN	1	Ernie	Ppd-D1a insens	no	no
2012	PNUWWSN	2	Freedom	no	null	no
2012	PNUWWSN	3	Truman	no	no	no
2012	PNUWWSN	4	Pioneer2545	Ppd-D1a insens	no	no
2012	PNUWWSN	5	KWS006	no	no	no
2012	PNUWWSN	6	KWS004	Ppd-D1a insens	no	no
2012	PNUWWSN	7	KWS005	Ppd-D1a insens	no	no
2012	PNUWWSN	8	F0051R	Ppd-D1a insens	no	no
2012	PNUWWSN	9	F0014	Ppd-D1a insens	no	no
2012	PNUWWSN	10	F0038	no	no	no
2012	PNUWWSN	11	F0036R	Ppd-D1a insens	no	no
2012	PNUWWSN	12	OH08-172-42	no	no	no
2012	PNUWWSN	13	7x831-1-I-03Ser (2)	no	null	no
2012	PNUWWSN	14	OH08-172-42	Ppd-D1a insens het	no	no
2012	PNUWWSN	15	OH08-180-48	no	no	no
2012	PNUWWSN	16	OH08-269-58	Ppd-D1a insens	no	no
2012	PNUWWSN	17	OH07-254-11	Ppd-D1a insens	Ppd-B1 CS insens	no
2012	PNUWWSN	18	P05247A1-7-7-3-1	Ppd-D1a insens het	no	no
2012	PNUWWSN	19	P0566A1-3-1-65	Ppd-D1a insens	no	no
2012	PNUWWSN	20	P05247A1-7-3-27	no	no	no
2012	PNUWWSN	21	P05247A1-7-3-120	no	no	no
2012	PNUWWSN	22	P0762A1-2-8	Ppd-D1a insens	no	Ppd-B1 S64 insens
2012	PNUWWSN	23	P07287RA1-14	Ppd-D1a insens	no	no
2012	PNUWWSN	24	M09-9811#	no	null	no
2012	PNUWWSN	25	M09-9826#	no	no	no
2012	PNUWWSN	26	IL07-21847	no	no	no
2012	PNUWWSN	27	IL08-8844	no	Ppd-B1 CS insens	no
2012	PNUWWSN	28	IL08-22206	no	no	no

2012 Cooperative FHB Nurseries				Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy
2012	PNUWWSN	29	IL08-33373	no	no	no
2012	PNUWWSN	30	IL07-20728	no	no	no
2012	PNUWWSN	31	IL07-20743	no	no	no
2012	PNUWWSN	32	KY04C-2031-29-6-1	no	no	no
2012	PNUWWSN	33	KY03C-2022-16-18-1	Ppd-D1a insens	no	no
2012	PNUWWSN	34	KY04C-2006-45-5-1	no	no	no
2012	PNUWWSN	35	KY04C-2150-66-16-5	Ppd-D1a insens het	Ppd-B1 CS insens	no
2012	PNUWWSN	36	KY04C-2150-64-16-1	Ppd-D1a insens	no	no
2012	PNUWWSN	37	KY04C-2150-64-17-1	Ppd-D1a insens	no	no
2012	PNUWWSN	38	MO100295	no	no	no
2012	PNUWWSN	39	MO101235	no	no	no
2012	PNUWWSN	40	MO100532	no	no	no
2012	PNUWWSN	41	MO100314	no	no	no
2012	PNUWWSN	42	MO100410	no	no	no
2012	PNUWWSN	43	MO101259	no	no	no
2012	PNUWWSN	44	MO081765	Ppd-D1a insens	no	no
2012	PNUWWSN	45	VA08W-613	Ppd-D1a insens	no	no
2012	PNUWWSN	46	VA09W-608	Ppd-D1a insens	null	no
2012	PNUWWSN	47	VA10W-663	Ppd-D1a insens	null	no
2012	PNUWWSN	48	VA10W-28	Ppd-D1a insens het	no	no
2012	PNUWWSN	49	VA09W-654	Ppd-D1a insens het	no	no
2012	PNUWWSN	50	VA10W-617	no	Ppd-B1 CS insens	no
2012	USFHBN	1	ERNIE	Ppd-D1a insens het	no	no
2012	USFHBN	2	COKER 9835	Ppd-D1a insens	null	no
2012	USFHBN	3	BESS	no	no	no
2012	USFHBN	4	JAMESTOWN	Ppd-D1a insens	no	no
2012	USFHBN	5	NC09-21916	Ppd-D1a insens	no	no
2012	USFHBN	6	VA08W-613	Ppd-D1a insens	no	no
2012	USFHBN	7	M08-8036#	Ppd-D1a insens	null	no
2012	USFHBN	8	IL02-18228	no	no	no
2012	USFHBN	9	ARS07-1214	no	no	no
2012	USFHBN	10	ARS09-173	Ppd-D1a insens	no	no
2012	USFHBN	11	ARS09-367	no	no	no
2012	USFHBN	12	ARS09-446	no	Ppd-B1 CS insens	no
2012	USFHBN	13	ARS09-513	Ppd-D1a insens	no	no
2012	USFHBN	14	ARS09-595	Ppd-D1a insens	null	no
2012	USFHBN	15	ARS09-643	Ppd-D1a insens	no	no
2012	USFHBN	16	ARS09-724	Ppd-D1a insens	no	no
2012	USFHBN	17	GA 051173W-S11	Ppd-D1a insens het	no	Ppd-B1 S64 insens
2012	USFHBN	18	GA 051207-S19	Ppd-D1a insens	no	no
2012	USFHBN	19	GA 051207-S21	Ppd-D1a insens	no	no
2012	USFHBN	20	GA 051173-S25	Ppd-D1a insens	no	no
2012	USFHBN	21	GA 051173-S18	Ppd-D1a insens	no	Ppd-B1 S64 insens
2012	USFHBN	22	GAMD08-27-E9-S13	no	no	no

2012 Cooperative FHB Nurseries				Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy
2012	USFHBN	23	GAMD08-27-E9-S14	no	no	no
2012	USFHBN	24	GAMD08-27-E9-S15	no	no	no
2012	USFHBN	25	LA'04039C-14-8	Ppd-D1a insens het	Ppd-B1 CS insens	no
2012	USFHBN	26	LA'04039C-10-6	Ppd-D1a insens het	Ppd-B1 CS insens	no
2012	USFHBN	27	LA05102C-1-2	Ppd-D1a insens	no	no
2012	USFHBN	28	LA05102C-8-8	Ppd-D1a insens	null	no
2012	USFHBN	29	LA05079D-55	no	no	no
2012	USFHBN	30	LA05079F-P01	no	no	no
2012	USFHBN	31	LA05079F-P03	Ppd-D1a insens het	no	no
2012	USFHBN	32	LA05145D-12	Ppd-D1a insens	null	no
2012	USFHBN	33	LA05145D-24	Ppd-D1a insens	no	no
2012	USFHBN	34	MD03W61-11-2(11PW#108)	Ppd-D1a insens	no	no
2012	USFHBN	35	MD03W61-11-3(11PW#109)	Ppd-D1a insens	no	Ppd-B1 S64 insens
2012	USFHBN	36	UX0066-4-79(11PW#183)	Ppd-D1a insens	null	no
2012	USFHBN	37	MD08-22-1-6-4(11PW#189)	no	no	no
2012	USFHBN	38	MD08-26-H2-23(11CVM-3)	Ppd-D1a insens	no	no
2012	USFHBN	39	MH07-7483	Ppd-D1a insens	no	no
2012	USFHBN	40	M09-9826#	Ppd-D1a insens het	no	no
2012	USFHBN	41	NC08-23323	Ppd-D1a insens	no	no
2012	USFHBN	42	NC08-23324	Ppd-D1a insens het	no	no
2012	USFHBN	43	NC09-22422 (<i>Fhb1</i>)	Ppd-D1a insens het	no	no
2012	USFHBN	44	NC09-20986 (<i>Fhb1</i>)	Ppd-D1a insens het	no	no
2012	USFHBN	45	NC8355-4 (<i>Fhb1</i>)	Ppd-D1a insens	null	no
2012	USFHBN	46	NC8452-2	Ppd-D1a insens	null	no
2012	USFHBN	47	VA09W-52	Ppd-D1a insens	no	no
2012	USFHBN	48	VA09W-73	no	no	no
2012	USFHBN	49	VA09W-75	Ppd-D1a insens het	no	no
2012	USFHBN	50	VA10W-42	Ppd- D1a insens	no	no
2012	USFHBN	51	VA10W-140	Ppd- D1a insens	no	no

2012 Cooperative FHB Nurseries				Fusarium Head Blight alleles					
Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840	
2012	NUWWSN	1	Ernie	no	Fhb Ernie 3Bc het?	no	Fhb 5A Ernie het?	no	
2012	NUWWSN	2	Freedom	no	Fhb Ernie 3Bc?	no	no	no	
2012	NUWWSN	3	Truman	no	no	no	no	no	
2012	NUWWSN	4	Pioneer2545	no	no	nd	no	no	
2012	NUWWSN	5	NY103-208-7263	no	no	no	no	no	
2012	NUWWSN	6	NY94052-3329	no	no	no	no	no	
2012	NUWWSN	7	NY05072&75-1	no	no	no	no	no	
2012	NUWWSN	8	KWS007	no	no	nd	no	no	
2012	NUWWSN	9	KWS001	no	no	no	no	no	
2012	NUWWSN	10	KWS002	no	no	no	no	no	
2012	NUWWSN	11	KWS003	no	no	no	no	no	
2012	NUWWSN	12	LCS19214	no	no	no	no	no	
2012	NUWWSN	13	LCS19209	no	no	no	no	no	
2012	NUWWSN	14	LCS19231	no	no	no	Fhb 5A Ernie	no	
2012	NUWWSN	15	LCS19103	no	no	no	no	no	
2012	NUWWSN	16	LCS19104	no	no	no	no	no	
2012	NUWWSN	17	E9021R	no	no	no	no	no	
2012	NUWWSN	18	OH05-200-74	no	Fhb Ernie 3Bc het?	no	no	no	
2012	NUWWSN	19	OH06-159-6	no	no	no	no	no	
2012	NUWWSN	20	F0065	no	no	no	no	no	
2012	NUWWSN	21	OH08-133-25	no	no	nd	no	no	
2012	NUWWSN	22	OH06-180-57	no	no	no	no	Fhb 5A Ning7840?	
2012	NUWWSN	23	OH07-166-41	no	Fhb Ernie 3Bc?	no	no	no	
2012	NUWWSN	24	OH07-263-3	no	no	no	no	no	
2012	NUWWSN	25	P04606RA1-1-7-1-6	no	no	no	no	no	
2012	NUWWSN	26	P0537A1-3-12	no	no	no	no	no	
2012	NUWWSN	27	P0566A1-3-1-67	no	no	no	no	no	
2012	NUWWSN	28	P05222A1-1-2-7	no	no	no	Fhb 5A Ernie	no	
2012	NUWWSN	29	MH07-7483	no	no	no	no	no	
2012	NUWWSN	30	MH07-7474	no	no	no	no	no	
2012	NUWWSN	31	M08-8036#	no	no	no	no	no	
2012	NUWWSN	32	M08-8214	no	no	no	no	no	
2012	NUWWSN	33	DH1-46	no	no	no	no	no	
2012	NUWWSN	34	DH1-62	no	no	no	no	no	
2012	NUWWSN	35	DH2-4	no	no	no	no	no	
2012	NUWWSN	36	DH2-45	no	no	no	no	no	
2012	NUWWSN	37	DH5-56	no	no	no	no	no	
2012	NUWWSN	38	IL06-13721	no	no	no	no	no	
2012	NUWWSN	39	IL06-23571	no	no	no	no	no	
2012	NUWWSN	40	IL07-4415	no	Fhb Ernie 3Bc	no	no	no	
2012	NUWWSN	41	IL07-19334	no	Fhb Ernie 3Bc	no	no	Fhb 5A Ning7840?	
2012	NUWWSN	42	KY04C-2004-1-1-3	no	no	no	no	no	
2012	NUWWSN	43	KY03C-1224-10-12-3	Fhb1	no	no	no	no	
2012	NUWWSN	44	KY03C-1195-10-8-5	Fhb1	no	no	no	no	

2012 Cooperative FHB Nurseries				Fusarium Head Blight alleles					
Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840	
2012	NUWWSN	45	KY04C-2031-29-7-3	no	no	no	no	no	
2012	NUWWSN	46	MD08-22-1-6-2	Fhb1	no	no	no	Fhb 5A Ning7840	
2012	NUWWSN	47	MD08-22-32	Fhb1	no	no	no	Fhb 5A Ning7840	
2012	NUWWSN	48	MO090932	no	no	no	no	no	
2012	NUWWSN	49	MO081320	no	no	no	Fhb 5A Ernie het	no	
2012	NUWWSN	50	MO090478	no	no	no	Fhb 5A Ernie	no	
2012	NUWWSN	51	MO091068	no	no	no	Fhb 5A Ernie het?	no	
2012	NUWWSN	52	NE10514	no	no	no	no	no	
2012	NUWWSN	53	NE10449	no	no	no	no	no	
2012	NUWWSN	54	NW03666	Fhb1	no	Fhb 2DL-wuhan/W14	no	no	
2012	NUWWSN	55	NW10401	no	no	no	no	no	
2012	NUWWSN	56	NE10418	no	no	no	no	no	
2012	NUWWSN	57	WA09W-52	no	no	no	no	no	
2012	NUWWSN	58	VA09W-73	no	no	no	no	no	
2012	NUWWSN	59	VA10W-21	no	no	no	no	no	
2012	NUWWSN	60	VA09W-75	no	no	nd	no	no	
2012	PNUWWSN	1	Ernie	no	Fhb Ernie 3Bc	no	Fhb 5A Ernie het?	no	
2012	PNUWWSN	2	Freedom	no	Fhb Ernie 3Bc?	no	no	no	
2012	PNUWWSN	3	Truman	no	no	no	no	no	
2012	PNUWWSN	4	Pioneer2545	no	no	nd	no	no	
2012	PNUWWSN	5	KWS006	no	no	no	Fhb 5A Ernie	no	
2012	PNUWWSN	6	KWS004	no	no	no	no	no	
2012	PNUWWSN	7	KWS005	no	no	no	no	no	
2012	PNUWWSN	8	F0051R	no	no	no	no	no	
2012	PNUWWSN	9	F0014	no	no	no	no	no	
2012	PNUWWSN	10	F0038	no	no	no	no	no	
2012	PNUWWSN	11	F0036R	no	no	no	no	no	
2012	PNUWWSN	12	OH08-172-42	no	Fhb Ernie 3Bc het?	no	no	no	
2012	PNUWWSN	13	7x831-1-I-03Ser (2)	no	Fhb Ernie 3Bc het?	no	Fhb 5A Ernie	no	
2012	PNUWWSN	14	OH08-172-42	no	Fhb Ernie 3Bc het?	no	no	no	
2012	PNUWWSN	15	OH08-180-48	no	no	no	no	no	
2012	PNUWWSN	16	OH08-269-58	no	Fhb Ernie 3Bc	no	no	no	
2012	PNUWWSN	17	OH07-254-11	no	no	no	no	no	
2012	PNUWWSN	18	P05247A1-7-7-3-1	no	no	no	Fhb 5A Ernie	no	
2012	PNUWWSN	19	P0566A1-3-1-65	no	no	no	no	no	
2012	PNUWWSN	20	P05247A1-7-3-27	no	no	no	Fhb 5A Ernie het	no	
2012	PNUWWSN	21	P05247A1-7-3-120	no	no	no	Fhb 5A Ernie	no	
2012	PNUWWSN	22	P0762A1-2-8	Fhb1?	no	nd	Fhb 5A Ernie het	no	
2012	PNUWWSN	23	P07287RA1-14	no	no	no	no	no	
2012	PNUWWSN	24	M09-9811#	no	no	no	no	no	
2012	PNUWWSN	25	M09-9826#	no	Fhb Ernie 3Bc?	no	no	no	
2012	PNUWWSN	26	IL07-21847	no	no	no	no	no	
2012	PNUWWSN	27	IL08-8844	no	no	no	no	Fhb 5A Ning7840?	
2012	PNUWWSN	28	IL08-22206	no	no	no	Fhb 5A Ernie het	no	

2012 Cooperative FHB Nurseries				Fusarium Head Blight alleles					
Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840	
2012	PNUWWSN	29	IL08-33373	no	no	no	Fhb 5A Ernie	no	
2012	PNUWWSN	30	IL07-20728	no	no	no	no	no	
2012	PNUWWSN	31	IL07-20743	no	no	no	no	no	
2012	PNUWWSN	32	KY04C-2031-29-6-1	no	no	no	Fhb 5A Ernie het	no	
2012	PNUWWSN	33	KY03C-2022-16-18-1	no	no	no	no	no	
2012	PNUWWSN	34	KY04C-2006-45-5-1	no	no	no	no	no	
2012	PNUWWSN	35	KY04C-2150-66-16-5	Fhb1	no	nd	no	no	
2012	PNUWWSN	36	KY04C-2150-64-16-1	no	no	no	no	no	
2012	PNUWWSN	37	KY04C-2150-64-17-1	no	no	no	no	no	
2012	PNUWWSN	38	MO100295	no	no	no	no	no	
2012	PNUWWSN	39	MO101235	no	no	no	Fhb 5A Ernie het	no	
2012	PNUWWSN	40	MO100532	no	no	no	no	no	
2012	PNUWWSN	41	MO100314	no	Fhb Ernie 3Bc?	no	Fhb 5A Ernie het	no	
2012	PNUWWSN	42	MO100410	no	no	no	no	no	
2012	PNUWWSN	43	MO101259	no	no	no	no	no	
2012	PNUWWSN	44	MO081765	no	no	no	no	no	
2012	PNUWWSN	45	VA08W-613	no	no	no	no	no	
2012	PNUWWSN	46	VA09W-608	no	no	no	no	no	
2012	PNUWWSN	47	VA10W-663	no	no	no	no	no	
2012	PNUWWSN	48	VA10W-28	no	no	no	no	no	
2012	PNUWWSN	49	VA09W-654	no	no	no	no	no	
2012	PNUWWSN	50	VA10W-617	no	no	no	no	no	
2012	USFHBN	1	ERNIE	no	Fhb Ernie 3Bc	no	Fhb 5A Ernie	no	
2012	USFHBN	2	COKER 9835	no	no	no	no	no	
2012	USFHBN	3	BESS	no	no	no	no	no	
2012	USFHBN	4	JAMESTOWN	no	no	no	no	no	
2012	USFHBN	5	NC09-21916	no	no	no	no	no	
2012	USFHBN	6	VA08W-613	no	no	no	no	no	
2012	USFHBN	7	M08-8036#	no	no	no	no	no	
2012	USFHBN	8	IL02-18228	no	no	no	no	no	
2012	USFHBN	9	ARS07-1214	no	no	no	no	no	
2012	USFHBN	10	ARS09-173	no	no	no	no	no	
2012	USFHBN	11	ARS09-367	no	no	no	no	no	
2012	USFHBN	12	ARS09-446	no	no	no	no	no	
2012	USFHBN	13	ARS09-513	nd	no	no	no	no	
2012	USFHBN	14	ARS09-595	no	no	no	no	no	
2012	USFHBN	15	ARS09-643	no	no	no	no	no	
2012	USFHBN	16	ARS09-724	no	no	no	no	no	
2012	USFHBN	17	GA 051173W-S11	no	no	no	no	no	
2012	USFHBN	18	GA 051207-S19	no	no	no	no	no	
2012	USFHBN	19	GA 051207-S21	no	no	no	no	no	
2012	USFHBN	20	GA 051173-S25	no	no	no	no	no	
2012	USFHBN	21	GA 051173-S18	no	no	no	no	no	
2012	USFHBN	22	GAMD08-27-E9-S13	Fhb1	no	no	no	Fhb 5A Ning7840	

2012 Cooperative FHB Nurseries				Fusarium Head Blight alleles					
Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840	
2012	USFHBN	23	GAMD08-27-E9-S14	Fhb1	no	no	no	Fhb 5A Ning7840	
2012	USFHBN	24	GAMD08-27-E9-S15	Fhb1	no	no	no	Fhb 5A Ning7840	
2012	USFHBN	25	LA'04039C-14-8	no	no	no	no	<i>no</i>	
2012	USFHBN	26	LA'04039C-10-6	no	no	no	no	<i>no</i>	
2012	USFHBN	27	LA05102C-1-2	no	no	no	no	<i>no</i>	
2012	USFHBN	28	LA05102C-8-8	no	no	no	no	<i>no</i>	
2012	USFHBN	29	LA05079D-55	no	no	no	no	<i>no</i>	
2012	USFHBN	30	LA05079F-P01	no	no	no	no	<i>no</i>	
2012	USFHBN	31	LA05079F-P03	no	no	no	no	<i>no</i>	
2012	USFHBN	32	LA05145D-12	no	no	no	no	<i>no</i>	
2012	USFHBN	33	LA05145D-24	no	no	no	no	<i>no</i>	
2012	USFHBN	34	MD03W61-11-2(11PW#108)	no	Fhb Ernie 3Bc?	no	no	<i>no</i>	
2012	USFHBN	35	MD03W61-11-3(11PW#109)	no	no	no	no	<i>no</i>	
2012	USFHBN	36	UX0066-4-79(11PW#183)	Fhb1?	no	no	Fhb 5A Ernie het	<i>no</i>	
2012	USFHBN	37	MD08-22-1-6-4(11PW#189)	Fhb1	no	no	no	Fhb 5A Ning7840	
2012	USFHBN	38	MD08-26-H2-23(11CVM-3)	Fhb1	no	no	no	Fhb 5A Ning7840 het	
2012	USFHBN	39	MH07-7483	no	no	no	no	<i>no</i>	
2012	USFHBN	40	M09-9826#	no	Fhb Ernie 3Bc het?	no	no	<i>no</i>	
2012	USFHBN	41	NC08-23323	no	no	no	no	<i>no</i>	
2012	USFHBN	42	NC08-23324	no	no	no	no	<i>no</i>	
2012	USFHBN	43	NC09-22422 (<i>Fhb1</i>)	Fhb1	no	no	no	<i>no</i>	
2012	USFHBN	44	NC09-20986 (<i>Fhb1</i>)	Fhb1	no	no	no	<i>no</i>	
2012	USFHBN	45	NC8355-4 (<i>Fhb1</i>)	Fhb1	no	no	no	<i>no</i>	
2012	USFHBN	46	NC8452-2	no	no	no	Fhb 5A Ernie het	<i>no</i>	
2012	USFHBN	47	VA09W-52	no	no	no	no	<i>no</i>	
2012	USFHBN	48	VA09W-73	no	no	no	no	<i>no</i>	
2012	USFHBN	49	VA09W-75	no	no	no	no	<i>no</i>	
2012	USFHBN	50	VA10W-42	no	no	no	no	<i>no</i>	
2012	USFHBN	51	VA10W-140	no	no	no	no	<i>no</i>	

2012 Cooperative FHB Nurseries				Leaf, Stem & Stripe Rusts and Powdery Mildew alleles									
Year	Nursery	Entry	Sample Name	Sr2	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	Lr34/Yr18	Sr9a	Lr9	Lr19/Sr25	Qyr.uga-2AS	
2012	NUWWSN	1	Ernie	no	Sr36 het	no	no	no	no	no	no	no	
2012	NUWWSN	2	Freedom	no	Sr36	no	no	no	no	no	no	no	
2012	NUWWSN	3	Truman	no	no	no	no	no	nd	no	no	no	
2012	NUWWSN	4	Pioneer2545	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	5	NY103-208-7263	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	6	NY94052-3329	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	7	NY05072&75-1	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	8	KWS007	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	9	KWS001	no	no	no	no	no	nd	no	no	APR Yr P26R61?	
2012	NUWWSN	10	KWS002	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	11	KWS003	no	Sr36	no	no	no	no	no	no	no	
2012	NUWWSN	12	LCS19214	no	Sr36	no	no	no	no	no	no	no	
2012	NUWWSN	13	LCS19209	no	Sr36	no	no	no	no	no	no	no	
2012	NUWWSN	14	LCS19231	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	15	LCS19103	no	no	no	no	no	nd	no	no	no	
2012	NUWWSN	16	LCS19104	no	no	no	no	no	nd	no	no	no	
2012	NUWWSN	17	E9021R	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	18	OH05-200-74	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	19	OH06-159-6	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no	
2012	NUWWSN	20	F0065	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	21	OH08-133-25	no	Sr36	no	no	no	no	no	no	no	
2012	NUWWSN	22	OH06-180-57	no	no	no	no	nd	no	no	no	no	
2012	NUWWSN	23	OH07-166-41	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	24	OH07-263-3	no	no	no	no	no	nd	no	no	no	
2012	NUWWSN	25	P04606RA1-1-7-1-6	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	26	P0537A1-3-12	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	27	P0566A1-3-1-67	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no	
2012	NUWWSN	28	P05222A1-1-2-7	no	Sr36	no	Yr17Lr37/Sr38	no	no	no	no	no	
2012	NUWWSN	29	MH07-7483	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	30	MH07-7474	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	31	M08-8036#	no	Sr36	no	no	no	no	Lr9	no	no	
2012	NUWWSN	32	M08-8214	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	33	DH1-46	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	34	DH1-62	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	35	DH2-4	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	36	DH2-45	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	37	DH5-56	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	38	IL06-13721	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	39	IL06-23571	no	no	no	no	no	nd	no	no	no	
2012	NUWWSN	40	IL07-4415	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no	
2012	NUWWSN	41	IL07-19334	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	42	KY04C-2004-1-1-3	no	no	no	no	no	nd	no	no	no	
2012	NUWWSN	43	KY03C-1224-10-12-3	no	no	no	no	no	no	no	no	no	
2012	NUWWSN	44	KY03C-1195-10-8-5	no	no	no	no	Lr34/Yr18	nd	no	no	no	

2012 Cooperative FHB Nurseries				Leaf, Stem & Stripe Rusts and Powdery Mildew alleles								
Year	Nursery	Entry	Sample Name	Sr2	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	Lr34/Yr18	Sr9a	Lr9	Lr19/Sr25	Qyr.uga-2AS
2012	NUWWSN	45	KY04C-2031-29-7-3	no	Sr36	no	no	no	no	no	no	no
2012	NUWWSN	46	MD08-22-1-6-2	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	NUWWSN	47	MD08-22-32	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	NUWWSN	48	MO090932	no	no	no	no	no	no	no	no	no
2012	NUWWSN	49	MO081320	no	no	no	no	no	nd	no	no	no
2012	NUWWSN	50	MO090478	no	Sr36	no	no	no	no	no	no	no
2012	NUWWSN	51	MO091068	no	no	no	Yr17Lr37/Sr38 het	no	no	no	no	no
2012	NUWWSN	52	NE10514	no	no	no	no	no	no	no	no	no
2012	NUWWSN	53	NE10449	no	no	no	no	no	no	no	no	no
2012	NUWWSN	54	NW03666	no	no	no	no	Lr34/Yr18	no	no	no	no
2012	NUWWSN	55	NW10401	no	no	no	no	Lr34/Yr18	no	no	no	no
2012	NUWWSN	56	NE10418	no	no	no	no	no	no	no	no	no
2012	NUWWSN	57	WA09W-52	no	no	no	no	no	no	Lr9	no	no
2012	NUWWSN	58	VA09W-73	no	no	no	no	no	no	Lr9	no	no
2012	NUWWSN	59	VA10W-21	no	no	no	no	no	no	no	no	no
2012	NUWWSN	60	VA09W-75	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	1	Ernie	no	Sr36 het	no	no	no	no	no	no	no
2012	PNUWWSN	2	Freedom	no	Sr36	no	no	no	no	no	no	no
2012	PNUWWSN	3	Truman	no	no	no	no	no	nd	no	no	no
2012	PNUWWSN	4	Pioneer2545	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	5	KWS006	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	6	KWS004	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	7	KWS005	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	8	F0051R	no	no	no	no	nd	no	no	no	no
2012	PNUWWSN	9	F0014	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	10	F0038	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	11	F0036R	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	12	OH08-172-42	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	PNUWWSN	13	7x831-1-I-03Ser (2)	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	14	OH08-172-42	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	PNUWWSN	15	OH08-180-48	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	PNUWWSN	16	OH08-269-58	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	17	OH07-254-11	no	Sr36 het	no	no	no	no	no	no	no
2012	PNUWWSN	18	P05247A1-7-7-3-1	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	PNUWWSN	19	P0566A1-3-1-65	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	PNUWWSN	20	P05247A1-7-3-27	no	no	no	Yr17Lr37/Sr38 het	no	no	no	no	no
2012	PNUWWSN	21	P05247A1-7-3-120	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	PNUWWSN	22	P0762A1-2-8	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	PNUWWSN	23	P07287RA1-14	no	no	no	Yr17Lr37/Sr38 het	no	nd	no	no	no
2012	PNUWWSN	24	M09-9811#	Sr2	Sr36	no	no	no	no	Lr9	no	no
2012	PNUWWSN	25	M09-9826#	no	Sr36 het	no	no	nd	no	Lr9	no	no
2012	PNUWWSN	26	IL07-21847	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	27	IL08-8844	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	28	IL08-22206	no	no	no	no	nd	no	no	no	no

2012 Cooperative FHB Nurseries				Leaf, Stem & Stripe Rusts and Powdery Mildew alleles								
Year	Nursery	Entry	Sample Name	Sr2	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	Lr34/Yr18	Sr9a	Lr9	Lr19/Sr25	Qyr.uga-2AS
2012	PNUWWSN	29	IL08-33373	no	no	no	no	no	nd	no	no	no
2012	PNUWWSN	30	IL07-20728	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	PNUWWSN	31	IL07-20743	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	PNUWWSN	32	KY04C-2031-29-6-1	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	33	KY03C-2022-16-18-1	no	no	no	no	no	nd	no	no	no
2012	PNUWWSN	34	KY04C-2006-45-5-1	no	no	no	no	no	no	no	no	no
2012	PNUWWSN	35	KY04C-2150-66-16-5	no	no	no	no	Lr34/Yr18 het	nd	no	no	no
2012	PNUWWSN	36	KY04C-2150-64-16-1	no	no	no	no	Lr34/Yr18	no	NT	NT	no
2012	PNUWWSN	37	KY04C-2150-64-17-1	no	no	no	no	Lr34/Yr18	nd	NT	NT	no
2012	PNUWWSN	38	MO100295	no	no	no	no	no	nd	NT	NT	no
2012	PNUWWSN	39	MO101235	no	no	no	no	no	nd	NT	NT	no
2012	PNUWWSN	40	MO100532	no	no	no	no	Lr34/Yr18?	no	NT	NT	no
2012	PNUWWSN	41	MO100314	no	no	no	no	no	no	NT	NT	no
2012	PNUWWSN	42	MO100410	no	no	no	no	no	no	NT	NT	no
2012	PNUWWSN	43	MO101259	no	no	no	no	no	nd	NT	NT	APR Yr P26R61 het
2012	PNUWWSN	44	MO081765	no	no	no	no	no	no	NT	NT	no
2012	PNUWWSN	45	VA08W-613	no	no	no	no	no	no	NT	NT	no
2012	PNUWWSN	46	VA09W-608	no	Sr36	no	no	Lr34/Yr18 het	no	NT	NT	no
2012	PNUWWSN	47	VA10W-663	no	Sr36	no	no	no	no	NT	NT	no
2012	PNUWWSN	48	VA10W-28	no	no	no	no	no	no	NT	NT	no
2012	PNUWWSN	49	VA09W-654	no	no	no	no	no	no	NT	NT	no
2012	PNUWWSN	50	VA10W-617	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	1	ERNIE	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	2	COKER 9835	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	3	BESS	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	4	JAMESTOWN	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	5	NC09-21916	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	6	VA08W-613	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	7	M08-8036#	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	8	IL02-18228	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	9	ARS07-1214	no	no	Sr24/Lr24	no	no	no	NT	NT	no
2012	USFHBN	10	ARS09-173	no	no	no	Yr17Lr37/Sr38	no	no	NT	NT	no
2012	USFHBN	11	ARS09-367	no	no	Sr24/Lr24	no	no	no	NT	NT	no
2012	USFHBN	12	ARS09-446	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	13	ARS09-513	no	Sr36 het	no	no	no	no	NT	NT	no
2012	USFHBN	14	ARS09-595	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	15	ARS09-643	no	no	no	Yr17Lr37/Sr38 het	no	no	NT	NT	no
2012	USFHBN	16	ARS09-724	no	no	no	Yr17Lr37/Sr38	no	no	NT	NT	no
2012	USFHBN	17	GA 051173W-S11	no	no	no	Yr17Lr37/Sr38	no	nd	NT	NT	no
2012	USFHBN	18	GA 051207-S19	no	no	no	Yr17Lr37/Sr38	no	nd	NT	NT	no
2012	USFHBN	19	GA 051207-S21	no	no	no	Yr17Lr37/Sr38	no	nd	NT	NT	no
2012	USFHBN	20	GA 051173-S25	no	no	no	Yr17Lr37/Sr38	no	nd	NT	NT	no
2012	USFHBN	21	GA 051173-S18	no	no	no	Yr17Lr37/Sr38	no	nd	NT	NT	no
2012	USFHBN	22	GAMD08-27-E9-S13	no	no	no	Yr17Lr37/Sr38 het	no	nd	NT	NT	no

2012 Cooperative FHB Nurseries				Leaf, Stem & Stripe Rusts and Powdery Mildew alleles								
Year	Nursery	Entry	Sample Name	Sr2	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	Lr34/Yr18	Sr9a	Lr9	Lr19/Sr25	Qyr.uga-2AS
2012	USFHBN	23	GAMD08-27-E9-S14	no	no	no	Yr17Lr37/Sr38	no	no	NT	NT	no
2012	USFHBN	24	GAMD08-27-E9-S15	no	no	no	Yr17Lr37/Sr38 het	no	nd	NT	NT	no
2012	USFHBN	25	LA'04039C-14-8	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	26	LA'04039C-10-6	no	Sr36	Sr24/Lr24	no	no	no	NT	NT	APR Yr P26R61
2012	USFHBN	27	LA05102C-1-2	no	Sr36	no	no	no	no	NT	NT	APR Yr P26R61
2012	USFHBN	28	LA05102C-8-8	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	29	LA05079D-55	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	30	LA05079F-P01	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	31	LA05079F-P03	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	32	LA05145D-12	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	33	LA05145D-24	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	34	MD03W61-11-2(11PW#108)	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	35	MD03W61-11-3(11PW#109)	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	36	UX0066-4-79(11PW#183)	no	Sr36	no	no	no	no	NT	NT	APR Yr P26R61
2012	USFHBN	37	MD08-22-1-6-4(11PW#189)	no	no	Sr24/Lr24	no	no	no	NT	NT	no
2012	USFHBN	38	MD08-26-H2-23(11CVM-3)	no	no	Sr24/Lr24	Yr17Lr37/Sr38	no	no	NT	NT	no
2012	USFHBN	39	MH07-7483	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	40	M09-9826#	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	41	NC08-23323	no	no	no	no	no	nd	NT	NT	no
2012	USFHBN	42	NC08-23324	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	43	NC09-22422 (<i>Fhb1</i>)	no	no	no	Yr17Lr37/Sr38	no	no	NT	NT	no
2012	USFHBN	44	NC09-20986 (<i>Fhb1</i>)	no	no	no	Yr17Lr37/Sr38	no	no	NT	NT	no
2012	USFHBN	45	NC8355-4 (<i>Fhb1</i>)	no	Sr36	no	no	no	no	NT	NT	no
2012	USFHBN	46	NC8452-2	no	Sr36 het	Sr24/Lr24	no	no	no	NT	NT	APR Yr P26R61 het?
2012	USFHBN	47	VA09W-52	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	48	VA09W-73	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	49	VA09W-75	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	50	VA10W-42	no	no	no	no	no	no	NT	NT	no
2012	USFHBN	51	VA10W-140	no	no	no	no	no	no	NT	NT	no

2012 Cooperative FHB Nurseries				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	NUWWSN	1	Ernie	non-1RS	no	no	no	no
2012	NUWWSN	2	Freedom	1RS:1BL	no	no	no	no
2012	NUWWSN	3	Truman	non-1RS	no	no	no	Sbm1
2012	NUWWSN	4	Pioneer2545	non-1RS	no	no	no	Sbm1
2012	NUWWSN	5	NY103-208-7263	non-1RS	no	no	no	Sbm1
2012	NUWWSN	6	NY94052-3329	non-1RS	no	no	no	no
2012	NUWWSN	7	NY05072&75-1	non-1RS	no	no	no	Sbm1
2012	NUWWSN	8	KWS007	non-1RS	no	no	no	Sbm1
2012	NUWWSN	9	KWS001	1RS:1BL	no	no	no	Sbm1
2012	NUWWSN	10	KWS002	1RS:1AL het	no	no	no	Sbm1
2012	NUWWSN	11	KWS003	non-1RS	no	no	no	Sbm1
2012	NUWWSN	12	LCS19214	non-1RS	no	no	no	no
2012	NUWWSN	13	LCS19209	non-1RS	no	no	no	no
2012	NUWWSN	14	LCS19231	non-1RS	no	no	no	Sbm1
2012	NUWWSN	15	LCS19103	non-1RS	no	no	no	Sbm1
2012	NUWWSN	16	LCS19104	non-1RS	no	no	no	Sbm1
2012	NUWWSN	17	E9021R	non-1RS	no	no	no	Sbm1
2012	NUWWSN	18	OH05-200-74	1RS:1AL	no	nd	no	Sbm1
2012	NUWWSN	19	OH06-159-6	non-1RS?	no	no	no	no
2012	NUWWSN	20	F0065	1RS:1BL	no	no	no	no
2012	NUWWSN	21	OH08-133-25	non-1RS	no	no	no	no
2012	NUWWSN	22	OH06-180-57	1RS:1BL	no	no	no	no
2012	NUWWSN	23	OH07-166-41	non-1RS	no	no	no	Sbm1
2012	NUWWSN	24	OH07-263-3	1RS:1BL het	no	no	no	Sbm1
2012	NUWWSN	25	P04606RA1-1-7-1-6	1RS:1BL	no	no	Bdv2/3	Sbm1
2012	NUWWSN	26	P0537A1-3-12	non-1RS	no	no	no	Sbm1
2012	NUWWSN	27	P0566A1-3-1-67	non-1RS	no	no	Bdv2/3	Sbm1
2012	NUWWSN	28	P05222A1-1-2-7	1RS:1BL	no	no	Bdv2/3	Sbm1
2012	NUWWSN	29	MH07-7483	1RS:1BL	no	no	no	Sbm1 het
2012	NUWWSN	30	MH07-7474	1RS:1BL het	no	no	no	Sbm1
2012	NUWWSN	31	M08-8036#	non-1RS	no	no	no	Sbm1
2012	NUWWSN	32	M08-8214	non-1RS	no	no	no	Sbm1
2012	NUWWSN	33	DH1-46	non-1RS	no	no	no	no
2012	NUWWSN	34	DH1-62	non-1RS	no	no	no	no
2012	NUWWSN	35	DH2-4	non-1RS	no	no	no	Sbm1
2012	NUWWSN	36	DH2-45	non-1RS	no	no	no	Sbm1
2012	NUWWSN	37	DH5-56	non-1RS	no	H9	no	Sbm1
2012	NUWWSN	38	IL06-13721	non-1RS	no	no	no	Sbm1
2012	NUWWSN	39	IL06-23571	non-1RS	no	no	no	Sbm1
2012	NUWWSN	40	IL07-4415	non-1RS	no	no	no	Sbm1
2012	NUWWSN	41	IL07-19334	non-1RS	no	no	no	no
2012	NUWWSN	42	KY04C-2004-1-1-3	non-1RS	no	no	no	Sbm1
2012	NUWWSN	43	KY03C-1224-10-12-3	1RS:1BL	no	no	no	Sbm1
2012	NUWWSN	44	KY03C-1195-10-8-5	non-1RS	no	no	no	Sbm1

2012 Cooperative FHB Nurseries				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	NUWWSN	45	KY04C-2031-29-7-3	1RS:1BL het	no	no	no	Sbm1
2012	NUWWSN	46	MD08-22-1-6-2	1RS:1AL	no	nd	no	Sbm1
2012	NUWWSN	47	MD08-22-32	1RS:1AL	no	nd	no	Sbm1
2012	NUWWSN	48	MO090932	non-1RS	no	no	no	Sbm1
2012	NUWWSN	49	MO081320	non-1RS	no	no	no	no
2012	NUWWSN	50	MO090478	non-1RS	no	no	no	Sbm1
2012	NUWWSN	51	MO091068	non-1RS	no	no	no	Sbm1 het
2012	NUWWSN	52	NE10514	non-1RS	no	no	no	no
2012	NUWWSN	53	NE10449	non-1RS	no	no	no	Sbm1
2012	NUWWSN	54	NW03666	non-1RS	no	no	no	Sbm1
2012	NUWWSN	55	NW10401	non-1RS	no	no	no	Sbm1
2012	NUWWSN	56	NE10418	non-1RS	no	no	no	Sbm1
2012	NUWWSN	57	WA09W-52	1RS:1AL het	no	no	no	Sbm1 het
2012	NUWWSN	58	VA09W-73	non-1RS	no	no	no	no
2012	NUWWSN	59	VA10W-21	1RS:1BL het	no	no	no	Sbm1
2012	NUWWSN	60	VA09W-75	1RS:1BL	no	no	no	Sbm1
2012	PNUWWSN	1	Ernie	1RS:1BL het	no	no	no	Sbm1 het
2012	PNUWWSN	2	Freedom	1RS:1BL	no	no	no	no
2012	PNUWWSN	3	Truman	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	4	Pioneer2545	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	5	KWS006	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	6	KWS004	non-1RS	no	no	no	Sbm1 het
2012	PNUWWSN	7	KWS005	non-1RS	no	no	no	no
2012	PNUWWSN	8	F0051R	1RS:1BL	no	no	no	Sbm1
2012	PNUWWSN	9	F0014	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	10	F0038	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	11	F0036R	1RS:1BL	no	no	no	no
2012	PNUWWSN	12	OH08-172-42	1RS:1AL	no	no	no	no
2012	PNUWWSN	13	7x831-1-I-03Ser (2)	non-1RS	no	no	no	no
2012	PNUWWSN	14	OH08-172-42	1RS:1AL	no	no	no	no
2012	PNUWWSN	15	OH08-180-48	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	16	OH08-269-58	non-1RS	no	H9	no	Sbm1
2012	PNUWWSN	17	OH07-254-11	1RS:1BL	no	no	no	no
2012	PNUWWSN	18	P05247A1-7-7-3-1	1RS:1BL	no	H9	Bdv2/3	no
2012	PNUWWSN	19	P0566A1-3-1-65	non-1RS	no	no	Bdv2/3	no
2012	PNUWWSN	20	P05247A1-7-3-27	1RS:1BL	no	no	Bdv2/3 het	no
2012	PNUWWSN	21	P05247A1-7-3-120	1RS:1BL	no	H9	Bdv2/3	Sbm1
2012	PNUWWSN	22	P0762A1-2-8	non-1RS	no	no	Bdv2/3 het	no
2012	PNUWWSN	23	P07287RA1-14	non-1RS?	no	no	no	no
2012	PNUWWSN	24	M09-9811#	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	25	M09-9826#	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	26	IL07-21847	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	27	IL08-8844	1RS:1AL?	no	no	no	Sbm1
2012	PNUWWSN	28	IL08-22206	non-1RS	no	no	no	Sbm1

2012 Cooperative FHB Nurseries				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	PNUWWSN	29	IL08-33373	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	30	IL07-20728	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	31	IL07-20743	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	32	KY04C-2031-29-6-1	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	33	KY03C-2022-16-18-1	non-1RS?	no	no	no	Sbm1
2012	PNUWWSN	34	KY04C-2006-45-5-1	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	35	KY04C-2150-66-16-5	1RS:1BL	no	no	no	Sbm1
2012	PNUWWSN	36	KY04C-2150-64-16-1	1RS:1BL	no	no	no	Sbm1
2012	PNUWWSN	37	KY04C-2150-64-17-1	1RS:1BL	no	no	no	Sbm1
2012	PNUWWSN	38	MO100295	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	39	MO101235	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	40	MO100532	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	41	MO100314	1RS:1BL	no	nd	no	Sbm1
2012	PNUWWSN	42	MO100410	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	43	MO101259	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	44	MO081765	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	45	VA08W-613	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	46	VA09W-608	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	47	VA10W-663	1RS:1AL?	no	no	no	Sbm1
2012	PNUWWSN	48	VA10W-28	1RS:1AL	no	nd	no	no
2012	PNUWWSN	49	VA09W-654	non-1RS	no	no	no	Sbm1
2012	PNUWWSN	50	VA10W-617	non-1RS	no	no	no	Sbm1
2012	USFHBN	1	ERNIE	non-1RS	no	no	no	no
2012	USFHBN	2	COKER 9835	non-1RS	no	no	no	Sbm1
2012	USFHBN	3	BESS	non-1RS	no	no	no	Sbm1
2012	USFHBN	4	JAMESTOWN	non-1RS	no	no	no	Sbm1
2012	USFHBN	5	NC09-21916	non-1RS	no	no	no	Sbm1
2012	USFHBN	6	VA08W-613	non-1RS	no	no	no	Sbm1
2012	USFHBN	7	M08-8036#	non-1RS	no	no	no	Sbm1
2012	USFHBN	8	IL02-18228	non-1RS	no	no	no	Sbm1
2012	USFHBN	9	ARS07-1214	non-1RS	no	no	no	Sbm1
2012	USFHBN	10	ARS09-173	non-1RS	H13 het	no	no	Sbm1
2012	USFHBN	11	ARS09-367	non-1RS	no	no	no	Sbm1
2012	USFHBN	12	ARS09-446	non-1RS	no	no	no	no
2012	USFHBN	13	ARS09-513	non-1RS	no	no	no	no
2012	USFHBN	14	ARS09-595	non-1RS	no	no	no	Sbm1
2012	USFHBN	15	ARS09-643	1RS:1AL	no	nd	no	Sbm1
2012	USFHBN	16	ARS09-724	non-1RS	no	no	no	no
2012	USFHBN	17	GA 051173W-S11	non-1RS	H13	no	no	Sbm1
2012	USFHBN	18	GA 051207-S19	non-1RS?	no	H9	no	Sbm1
2012	USFHBN	19	GA 051207-S21	1RS:1BL?	no	H9	no	Sbm1
2012	USFHBN	20	GA 051173-S25	non-1RS	H13	no	no	Sbm1
2012	USFHBN	21	GA 051173-S18	non-1RS	H13	no	no	Sbm1
2012	USFHBN	22	GAMD08-27-E9-S13	1RS:1AL	no	nd	no	Sbm1

2012 Cooperative FHB Nurseries				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	USFHBN	23	GAMD08-27-E9-S14	1RS:1AL	no	nd	no	Sbm1
2012	USFHBN	24	GAMD08-27-E9-S15	1RS:1AL	no	nd	no	Sbm1
2012	USFHBN	25	LA'04039C-14-8	1RS:1BL	no	no	no	no
2012	USFHBN	26	LA'04039C-10-6	1RS:1BL	no	no	no	no
2012	USFHBN	27	LA05102C-1-2	non-1RS	no	no	no	Sbm1
2012	USFHBN	28	LA05102C-8-8	non-1RS	no	no	no	Sbm1
2012	USFHBN	29	LA05079D-55	non-1RS	no	no	no	Sbm1
2012	USFHBN	30	LA05079F-P01	non-1RS	no	no	no	Sbm1
2012	USFHBN	31	LA05079F-P03	non-1RS	no	no	no	Sbm1 het
2012	USFHBN	32	LA05145D-12	1RS:1BL	no	no	no	Sbm1
2012	USFHBN	33	LA05145D-24	non-1RS	no	no	no	Sbm1
2012	USFHBN	34	MD03W61-11-2(11PW#108)	non-1RS	no	nd	no	Sbm1
2012	USFHBN	35	MD03W61-11-3(11PW#109)	non-1RS	no	no	no	Sbm1
2012	USFHBN	36	UX0066-4-79(11PW#183)	non-1RS	no	no	no	Sbm1
2012	USFHBN	37	MD08-22-1-6-4(11PW#189)	1RS:1AL	no	nd	no	Sbm1
2012	USFHBN	38	MD08-26-H2-23(11CVM-3)	non-1RS	no	no	no	Sbm1
2012	USFHBN	39	MH07-7483	1RS:1BL	no	no	no	Sbm1
2012	USFHBN	40	M09-9826#	non-1RS	no	no	no	Sbm1
2012	USFHBN	41	NC08-23323	1RS:1AL het	no	nd	no	Sbm1
2012	USFHBN	42	NC08-23324	1RS:1AL	no	nd	no	Sbm1
2012	USFHBN	43	NC09-22422 (<i>Fhb1</i>)	non-1RS	H13	no	no	Sbm1
2012	USFHBN	44	NC09-20986 (<i>Fhb1</i>)	non-1RS	H13 het	no	no	Sbm1
2012	USFHBN	45	NC8355-4 (<i>Fhb1</i>)	non-1RS	no	no	no	Sbm1
2012	USFHBN	46	NC8452-2	1RS:1AL het	no	no	no	Sbm1
2012	USFHBN	47	VA09W-52	1RS:1AL het	no	no	no	Sbm1
2012	USFHBN	48	VA09W-73	non-1RS	no	no	no	no
2012	USFHBN	49	VA09W-75	1RS:1AL	no	nd	no	no
2012	USFHBN	50	VA10W-42	non-1RS	no	no	no	Sbm1
2012	USFHBN	51	VA10W-140	non-1RS	no	no	no	no

2012 Cooperative FHB Nurseries				Glutenin alleles			Mill Quality	Kernel Color Genes		
Year	Nursery	Entry	Sample Name	Glu-B1	Glu-D1	Glu-A1	sucrose synthase	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	1	Ernie	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	NUWWSN	2	Freedom	no	2+12	het	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	3	Truman	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	NUWWSN	4	Pioneer2545	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	5	NY103-208-7263	no	2+12	Ax2*	no	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	6	NY94052-3329	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	7	NY05072&75-1	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	8	KWS007	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	9	KWS001	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	NUWWSN	10	KWS002	no	het	het	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	11	KWS003	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	12	LCS19214	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	NUWWSN	13	LCS19209	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	NUWWSN	14	LCS19231	no	2+12	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	15	LCS19103	no	5+10	Ax2*	no	R-A1	R-B1	r-D1 white
2012	NUWWSN	16	LCS19104	no	5+10	Ax2*	no	R-A1	R-B1	r-D1 white
2012	NUWWSN	17	E9021R	Bx7oe	5+10	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	NUWWSN	18	OH05-200-74	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	NUWWSN	19	OH06-159-6	Bx7oe	het	Ax1 or null	no	R-A1	R-B1	R-D1
2012	NUWWSN	20	F0065	no	het	Ax2*	no	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	21	OH08-133-25	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	NUWWSN	22	OH06-180-57	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	23	OH07-166-41	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	24	OH07-263-3	no	het	Ax2*	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	25	P04606RA1-1-7-1-6	Bx7oe	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	26	P0537A1-3-12	Bx7oe	2+12	Ax2*	no	R-A1	r-B1 het	R-D1
2012	NUWWSN	27	P0566A1-3-1-67	Bx7oe	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	NUWWSN	28	P05222A1-1-2-7	Bx7oe	2+12	Ax1 or null	TaSus2-2B	r-A1 white	R-B1	r-D1 white
2012	NUWWSN	29	MH07-7483	no	5+10	Ax1 or null	no	R-A1	R-B1	r-D1 white
2012	NUWWSN	30	MH07-7474	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	31	M08-8036#	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	32	M08-8214	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	NUWWSN	33	DH1-46	no	5+10	Ax1 or null	no	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	34	DH1-62	no	5+10	Ax1 or null	no	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	35	DH2-4	no	2+12	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	36	DH2-45	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	37	DH5-56	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	38	IL06-13721	no	5+10	Ax2*	no	R-A1	R-B1	r-D1 white
2012	NUWWSN	39	IL06-23571	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	NUWWSN	40	IL07-4415	no	5+10	Ax1 or null	TaSus2-2B	R-A1	R-B1	R-D1
2012	NUWWSN	41	IL07-19334	no	5+10	Ax2*	no	R-A1	R-B1	r-D1 white
2012	NUWWSN	42	KY04C-2004-1-1-3	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	NUWWSN	43	KY03C-1224-10-12-3	no	5+10	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	44	KY03C-1195-10-8-5	Bx7oe	5+10	Ax2*	no	R-A1	r-B1 white	R-D1

2012 Cooperative FHB Nurseries				Glutenin alleles			Mill Quality	Kernel Color Genes		
Year	Nursery	Entry	Sample Name	Glu-B1	Glu-D1	Glu-A1	sucrose synthase	r-A1 white	r-B1 white	r-D1 white
2012	NUWWSN	45	KY04C-2031-29-7-3	no	het	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	NUWWSN	46	MD08-22-1-6-2	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	47	MD08-22-32	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	48	MO090932	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	49	MO081320	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	NUWWSN	50	MO090478	no	het	het	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	NUWWSN	51	MO091068	no	2+12	Ax1 or null	TaSus2-2B het	R-A1	R-B1	R-D1
2012	NUWWSN	52	NE10514	no	5+10	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	NUWWSN	53	NE10449	no	5+10	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	NUWWSN	54	NW03666	no	5+10	het	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	55	NW10401	Bx7oe	het	Ax2*	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	56	NE10418	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	57	WA09W-52	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	58	VA09W-73	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	59	VA10W-21	no	5+10	het	no	R-A1	r-B1 white	R-D1
2012	NUWWSN	60	VA09W-75	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	PNUWWSN	1	Ernie	no	2+12	het	TaSus2-2B het	R-A1	r-B1 white	R-D1
2012	PNUWWSN	2	Freedom	no	2+12	het	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	PNUWWSN	3	Truman	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	PNUWWSN	4	Pioneer2545	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	5	KWS006	Bx7oe het	het	het	no	R-A1	R-B1	R-D1
2012	PNUWWSN	6	KWS004	no	het	het	no	R-A1	r-B1 het	R-D1
2012	PNUWWSN	7	KWS005	Bx7oe het	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	PNUWWSN	8	F0051R	Bx7oe het	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	PNUWWSN	9	F0014	Bx7oe	2+12	Ax2*	no	r-A1 white	r-B1 white	r-D1 white
2012	PNUWWSN	10	F0038	no	2+12	Ax2*	no	r-A1 white	r-B1 white	r-D1 white
2012	PNUWWSN	11	F0036R	no	2+12	Ax1 or null	TaSus2-2B het	R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	12	OH08-172-42	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	PNUWWSN	13	7x831-1-I-03Ser (2)	no	5+10	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	14	OH08-172-42	no	5+10	Ax2*	no	R-A1	r-B1 het	R-D1
2012	PNUWWSN	15	OH08-180-48	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	PNUWWSN	16	OH08-269-58	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	17	OH07-254-11	no	2+12	Ax1 or null	TaSus2-2B het	r-A1 white	r-B1 white	r-D1 white
2012	PNUWWSN	18	P05247A1-7-7-3-1	Bx7oe	2+12	Ax2*	no	R-A1	R-B1	r-D1 white
2012	PNUWWSN	19	P0566A1-3-1-65	no	2+12	Ax1 or null	TaSus2-2B het	R-A1	R-B1	r-D1 white
2012	PNUWWSN	20	P05247A1-7-3-27	Bx7oe het	2+12	Ax2*	no	R-A1	R-B1	r-D1 white
2012	PNUWWSN	21	P05247A1-7-3-120	Bx7oe	2+12	Ax2*	no	R-A1	R-B1	r-D1 white
2012	PNUWWSN	22	P0762A1-2-8	Bx7oe	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	23	P07287RA1-14	Bx7oe	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	PNUWWSN	24	M09-9811#	no	het	Ax1 or null	TaSus2-2B	r-A1 white	R-B1	R-D1
2012	PNUWWSN	25	M09-9826#	no	5+10	het	TaSus2-2B het	R-A1	r-B1 het	R-D1
2012	PNUWWSN	26	IL07-21847	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	PNUWWSN	27	IL08-8844	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	PNUWWSN	28	IL08-22206	no	2+12	Ax2*	no	R-A1	nd	R-D1

2012 Cooperative FHB Nurseries				Glutenin alleles			Mill Quality		Kernel Color Genes		
Year	Nursery	Entry	Sample Name	Glu-B1	Glu-D1	Glu-A1	sucrose synthase		r-A1 white	r-B1 white	r-D1 white
2012	PNUWWSN	29	IL08-33373	no	5+10	Ax2*	no		R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	30	IL07-20728	no	2+12	Ax2*	no		R-A1	R-B1	R-D1
2012	PNUWWSN	31	IL07-20743	no	2+12	Ax2*	no		R-A1	R-B1	R-D1
2012	PNUWWSN	32	KY04C-2031-29-6-1	no	het	Ax2*	no		R-A1	r-B1 white	R-D1
2012	PNUWWSN	33	KY03C-2022-16-18-1	no	5+10	Ax1 or null	no		R-A1	r-B1 white	R-D1
2012	PNUWWSN	34	KY04C-2006-45-5-1	no	2+12	Ax2*	no		R-A1	r-B1 white	R-D1
2012	PNUWWSN	35	KY04C-2150-66-16-5	no	het	Ax2*	no		R-A1	r-B1 white	R-D1
2012	PNUWWSN	36	KY04C-2150-64-16-1	no	2+12	Ax2*	no		R-A1	r-B1 white	R-D1
2012	PNUWWSN	37	KY04C-2150-64-17-1	no	2+12	Ax2*	no		R-A1	r-B1 white	R-D1
2012	PNUWWSN	38	MO100295	no	5+10	Ax1 or null	no		R-A1	r-B1 white	R-D1
2012	PNUWWSN	39	MO101235	no	5+10	het	no		R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	40	MO100532	no	2+12	Ax2*	no		R-A1	R-B1	R-D1
2012	PNUWWSN	41	MO100314	no	2+12	Ax1 or null	no		R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	42	MO100410	no	2+12	Ax1 or null	no		r-A1 white	r-B1 white	R-D1
2012	PNUWWSN	43	MO101259	no	5+10	Ax1 or null	no		r-A1 white	r-B1 white	R-D1
2012	PNUWWSN	44	MO081765	no	5+10	Ax2*	no		R-A1	r-B1 het	R-D1
2012	PNUWWSN	45	VA08W-613	no	2+12	Ax2*	no		R-A1	R-B1	R-D1
2012	PNUWWSN	46	VA09W-608	no	5+10	Ax1 or null	TaSus2-2B		R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	47	VA10W-663	no	5+10	Ax2*	TaSus2-2B		R-A1	r-B1 white	R-D1
2012	PNUWWSN	48	VA10W-28	no	2+12	Ax2*	no		R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	49	VA09W-654	no	5+10	Ax1 or null	no		R-A1	r-B1 white	r-D1 white
2012	PNUWWSN	50	VA10W-617	no	5+10	Ax1 or null	no		R-A1	r-B1 white	r-D1 white
2012	USFHBN	1	ERNIE	no	2+12	Ax1 or null	TaSus2-2B		R-A1	r-B1 white	r-D1 white
2012	USFHBN	2	COKER 9835	no	2+12	Ax2*	TaSus2-2B		r-A1 white	R-B1	R-D1
2012	USFHBN	3	BESS	no	2+12	Ax1 or null	no		r-A1 white	r-B1 white	R-D1
2012	USFHBN	4	JAMESTOWN	no	2+12	Ax2*	no		R-A1	R-B1	R-D1
2012	USFHBN	5	NC09-21916	no	5+10	Ax2*	no		R-A1	r-B1 white	R-D1
2012	USFHBN	6	VA08W-613	no	2+12	Ax2*	no		R-A1	R-B1	R-D1
2012	USFHBN	7	M08-8036#	no	2+12	Ax2*	TaSus2-2B		R-A1	r-B1 white	r-D1 white
2012	USFHBN	8	IL02-18228	no	5+10	Ax1 or null	no		R-A1	r-B1 white	R-D1
2012	USFHBN	9	ARS07-1214	no	5+10	Ax1 or null	no		R-A1	r-B1 white	r-D1 white
2012	USFHBN	10	ARS09-173	no	2+12	Ax2*	no		R-A1	r-B1 white	r-D1 white
2012	USFHBN	11	ARS09-367	no	5+10	Ax1 or null	no		R-A1	r-B1 white	r-D1 white
2012	USFHBN	12	ARS09-446	no	5+10	Ax2*	TaSus2-2B		R-A1	r-B1 white	R-D1
2012	USFHBN	13	ARS09-513	no	2+12	Ax1 or null	TaSus2-2B het		R-A1	r-B1 white	R-D1
2012	USFHBN	14	ARS09-595	no	5+10	Ax2*	TaSus2-2B		r-A1 white	r-B1 white	R-D1
2012	USFHBN	15	ARS09-643	Bx7oe het	2+12	Ax2*	no		R-A1	r-B1 white	R-D1
2012	USFHBN	16	ARS09-724	no	2+12	Ax1 or null	no		R-A1	r-B1 white	r-D1 white
2012	USFHBN	17	GA 051173W-S11	no	2+12	het	no		r-A1 white	r-B1 white	r-D1 white
2012	USFHBN	18	GA 051207-S19	no	5+10	Ax2*	no		R-A1	r-B1 white	r-D1 white
2012	USFHBN	19	GA 051207-S21	no	5+10	Ax2*	no		R-A1	r-B1 white	r-D1 white
2012	USFHBN	20	GA 051173-S25	no	2+12	Ax1 or null	no		r-A1 white	r-B1 white	R-D1
2012	USFHBN	21	GA 051173-S18	no	2+12	Ax1 or null	no		r-A1 white	r-B1 white	R-D1
2012	USFHBN	22	GAMD08-27-E9-S13	no	2+12	Ax2*	no		R-A1	R-B1	R-D1

2012 Cooperative FHB Nurseries				Glutenin alleles			Mill Quality	Kernel Color Genes		
Year	Nursery	Entry	Sample Name	Glu-B1	Glu-D1	Glu-A1	sucrose synthase	r-A1 white	r-B1 white	r-D1 white
2012	USFHBN	23	GAMD08-27-E9-S14	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	USFHBN	24	GAMD08-27-E9-S15	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	USFHBN	25	LA'04039C-14-8	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	USFHBN	26	LA'04039C-10-6	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	USFHBN	27	LA05102C-1-2	no	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	R-D1
2012	USFHBN	28	LA05102C-8-8	no	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	r-D1 white
2012	USFHBN	29	LA05079D-55	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	USFHBN	30	LA05079F-P01	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	USFHBN	31	LA05079F-P03	Bx7oe	5+10	Ax2*	TaSus2-2B	R-A1	R-B1	R-D1
2012	USFHBN	32	LA05145D-12	Bx7oe het	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	USFHBN	33	LA05145D-24	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	USFHBN	34	MD03W61-11-2(11PW#108)	no	2+12	Ax2*	TaSus2-2B het	R-A1	R-B1	r-D1 white
2012	USFHBN	35	MD03W61-11-3(11PW#109)	no	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	R-D1
2012	USFHBN	36	UX0066-4-79(11PW#183)	no	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	R-D1
2012	USFHBN	37	MD08-22-1-6-4(11PW#189)	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	USFHBN	38	MD08-26-H2-23(11CVM-3)	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	USFHBN	39	MH07-7483	no	het?	Ax1 or null	no	R-A1	R-B1	R-D1
2012	USFHBN	40	M09-9826#	no	het?	Ax2*	TaSus2-2B	r-A1 white	R-B1	R-D1
2012	USFHBN	41	NC08-23323	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	r-D1 white
2012	USFHBN	42	NC08-23324	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	r-D1 white
2012	USFHBN	43	NC09-22422 (<i>Fhb1</i>)	no	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	USFHBN	44	NC09-20986 (<i>Fhb1</i>)	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	USFHBN	45	NC8355-4 (<i>Fhb1</i>)	no	5+10	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	USFHBN	46	NC8452-2	no	2+12	Ax2*	TaSus2-2B het	R-A1	r-B1 white	R-D1
2012	USFHBN	47	VA09W-52	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	USFHBN	48	VA09W-73	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	USFHBN	49	VA09W-75	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	USFHBN	50	VA10W-42	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	USFHBN	51	VA10W-140	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1