

2013

Marker Reports for all Alleles

Eastern Regional Nurseries

5-State Advanced & Preliminary

Mason-Dixon

Gulf Atlantic Wheat Nursery

Eastern Regional Small Grains Genotyping Lab

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USDA-ARS

Notes

"nd" = not determined or lack of amplification

if marker is dominant, samples with no amplification are left blank 2008-2010; in 2011-2013 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
HEX? = not quite a Y allele; FAM? = not quite an X allele
Target alleles are in **bold or bold italics**

NT = marker Not Tested on those samples

Rht-B1b = dwarfing allele; Rht-B1a = tall allele

Rht-D1b = dwarfing allele; RhtD1a = tall allele

Ppd-D1a = photoperiod insensitive; Ppd-D1b = photosensitive allele

Ppd-B1a = photoperiod insensitive for either Chinese Spring [CS] or Sonora 64/Timstein [S64]; null = photosensitive allele

Ppd-A1a = photoperiod insensitive allele Ppd-A1a.1 in Japanese winter wheat cultivar Chikokukomugi; Ppd-A1b = photosensitive allele

vrn-A1 = short vernalization allele

vrn-B1 = short vernalization allele - in 2013 wmc75 for vrn-B1 was replaced by a SNP marker with the short vernalization allele present in AGS2000 which identifies fewer lines as having the short vern allele

Vrn-D1a = spring type; vrn-D1 = winter type

in 2013 - KASP markers for the Fhb QTL on 3BL reported in Massey were identified (thought to be the same as the one in Ernie) and are reported in a new column as **Fhb_Massey_3BL** following the **Fhb Ernie 3Bc** column. The new markers have been integrated with the old markers in the order of their chromosome location

in 2013 - the columns **Fhb 5A Ernie & Fhb 5A Ning7840** were combined into a single column **Fhb_5A**

Lr34/Yr18 - lines identified as **Lr34/Yr18** are checked with Lr34Jagger marker - presence of Jagger allele reported as nonfunctional-Lr34/Yr18

Lr9 - Y:Y? were reported as 'no' for Lr9 based on correlation of data from Jim Kolmer at the Cereal Disease Lab

Tsn1 = susceptibility to the necrotrophic effector SnToxA involved in development of Stagonospora leaf blotch and tan spot. This is a dominant marker since the gene is deleted in lines that are not susceptible.

in 2013 - **Texture** = **Pina-D1** is **pina-D1a_soft**; D1b = hard and **Pinb-D1** is **pinb_D1_soft**; D1b = hard
previously Texture was pina_taqman(AlleleX) = hard; **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

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Entry Lists of Regional Nurseries

Summary of Marker Data

All Marker Data

Dwarfing, Photoperiod Insensitive & Vernalization alleles

FHB QTLs

Leaf, Stem & Stripe Rusts and Powdery Mildew

Rye Translocations, Hessian Fly, Barley Yellow Dwarf Virus, Soil Borne Mosaic Virus, Stagonospora Leaf Blotch and Tan Spot

Quality Traits - Glutenins, Pre-Harvest sprouting, Hardness & Mill Quality (Sucrose Synthase)

Kernel Color

Year	Nursery	Entry	Sample Name	Pedigree	Contributor	Plant Source
2013	5 State ADV	1	MO100231		Anne McKendry	
2013	5 State ADV	2	MO110243		Anne McKendry	
2013	5 State ADV	3	MO110686		Anne McKendry	
2013	5 State ADV	4	MO120187		Anne McKendry	
2013	5 State ADV	5	Bess		Anne McKendry	
2013	5 State ADV	6	IL07-16075		Anne McKendry	
2013	5 State ADV	7	IL07-20743		Anne McKendry	
2013	5 State ADV	8	IL09-14375		Anne McKendry	
2013	5 State ADV	9	IL09-17057		Anne McKendry	
2013	5 State ADV	10	IL00-8530		Anne McKendry	
2013	5 State ADV	11	P02444A1-23-1-3		Anne McKendry	
2013	5 State ADV	12	P05247A1-7-7-3-1		Anne McKendry	
2013	5 State ADV	13	P04606RA1-1-7-1-6		Anne McKendry	
2013	5 State ADV	14	P05222A1-1-2-7		Anne McKendry	
2013	5 State ADV	15	P0762A1-2-8		Anne McKendry	
2013	5 State ADV	16	OH07-263-3		Anne McKendry	
2013	5 State ADV	17	OH08-269-58		Anne McKendry	
2013	5 State ADV	18	OH08-99-50		Anne McKendry	
2013	5 State ADV	19	OH09-101-35		Anne McKendry	
2013	5 State ADV	20	Bromfield		Anne McKendry	
2013	5 State ADV	21	KY05C-1033-30-17-3		Anne McKendry	
2013	5 State ADV	22	KY05C-1105-44-10-1		Anne McKendry	
2013	5 State ADV	23	KY05C-1112-125-20-1		Anne McKendry	
2013	5 State ADV	24	KY06C-1003-139-20-3		Anne McKendry	
2013	5 State ADV	25	Pembroke		Anne McKendry	
2013	5 State PRE	1	MO111752		Anne McKendry	
2013	5 State PRE	2	MO120109		Anne McKendry	
2013	5 State PRE	3	MO120355		Anne McKendry	
2013	5 State PRE	4	MO122042		Anne McKendry	
2013	5 State PRE	5	Milton		Anne McKendry	
2013	5 State PRE	6	IL09-3259		Anne McKendry	
2013	5 State PRE	7	IL09-3264		Anne McKendry	
2013	5 State PRE	8	IL09-8616		Anne McKendry	
2013	5 State PRE	9	IL09-24328		Anne McKendry	
2013	5 State PRE	10	IL00-8530		Anne McKendry	
2013	5 State PRE	11	P0125A1-37-5-1-2		Anne McKendry	
2013	5 State PRE	12	P0762A1-2-8		Anne McKendry	
2013	5 State PRE	13	P05287A1-1-13		Anne McKendry	
2013	5 State PRE	14	P07320A1-3		Anne McKendry	
2013	5 State PRE	15	P0566A1-3-1-48		Anne McKendry	
2013	5 State PRE	16	OH07-159-62		Anne McKendry	
2013	5 State PRE	17	OH08-206-69		Anne McKendry	
2013	5 State PRE	18	OH08-207-56		Anne McKendry	
2013	5 State PRE	19	OH08-235-33		Anne McKendry	
2013	5 State PRE	20	OH08-180-48		Anne McKendry	
2013	5 State PRE	21	KY05C-1525-15-15-3		Anne McKendry	
2013	5 State PRE	22	KY05C-1112-127-11-3		Anne McKendry	
2013	5 State PRE	23	KY06C-1003-139-16-5		Anne McKendry	
2013	5 State PRE	24	KY06C-1204-150-6-3		Anne McKendry	

2013 Soft Red Winter Wheat Cooperative Nurseries

Year	Nursery	Entry	Sample Name	Pedigree	Contributor	Plant Source
2013	Mason Dixon	1	Pioneer 26R15		Carl Griffey	
2013	Mason Dixon	2	Branson	M00-3701	Carl Griffey	
2013	Mason Dixon	3	Shirley	VA03W-409 = VA94-52-25 / CK9835 // SISSON"S"	Carl Griffey	
2013	Mason Dixon	4	SS 8700	SS EXP8700	Carl Griffey	
2013	Mason Dixon	5	VA10W-119	KY97C-0540-04 / GF951079-2E31	Carl Griffey	
2013	Mason Dixon	6	VA10W-28	SS-MPV57 (VA97W-24) / M99*3098	Carl Griffey	
2013	Mason Dixon	7	VA10W-123	PIONEER 25R47 / GF951079-2E31	Carl Griffey	
2013	Mason Dixon	8	VA10W-140	VA01W-210 / SS 520 (VA96W-158) // Tribute	Carl Griffey	
2013	Mason Dixon	9	VA10W-42	JAMESTOWN / M99*3098	Carl Griffey	
2013	Mason Dixon	10	VA10W-96	FG 95195 / Jamestown	Carl Griffey	
2013	Mason Dixon	11	VA10W-112	KY97C-0540-04 / GF951079-2E31	Carl Griffey	
2013	Mason Dixon	12	VA10W-118	KY97C-0540-04 / GF951079-2E31	Carl Griffey	
2013	Mason Dixon	13	VA10W-126	PIONEER 25R47 / JAMESTOWN	Carl Griffey	
2013	Mason Dixon	14	VA08W-672	VA01W-462 / USG 3706 (VA98W-706)	Carl Griffey	
2013	Mason Dixon	15	VA10W-669	Chesapeake / COKER 9511	Carl Griffey	
2013	Mason Dixon	16	VA11W-31	FG 95195 / Jamestown	Carl Griffey	
2013	Mason Dixon	17	VA11W-106	PIONEER 25R47 / JAMESTOWN	Carl Griffey	
2013	Mason Dixon	18	VA11W-108	PIONEER 25R47 / JAMESTOWN	Carl Griffey	
2013	Mason Dixon	19	VA11W-165	VA03W-192 / VA03W-436	Carl Griffey	
2013	Mason Dixon	20	VA11W-195	SS-MPV57 (VA97W-24) / M99*3098 // VA03W-434	Carl Griffey	
2013	Mason Dixon	21	VA11W-196	SS-MPV57 (VA97W-24) / M99*3098 // VA03W-434	Carl Griffey	
2013	Mason Dixon	22	VA11W-230	SS 520 (VA96W-158) / GF951208-2E35 // Jamestown	Carl Griffey	
2013	Mason Dixon	23	VA11W-278	NC00-15389 / GF951079-2E31 // USG 3555 (VA02W-555)	Carl Griffey	
2013	Mason Dixon	24	VA11W-301	PIONEER 26R47 / NC00-15389 // Jamestown	Carl Griffey	
2013	Mason Dixon	25	MD05W10208-12-6	Tribute/25R42//Chesapeake	Carl Griffey	
2013	Mason Dixon	26	MD05W10208-12-7	Tribute/25R42//Chesapeake	Carl Griffey	
2013	Mason Dixon	27	MD05W10208-12-12	Tribute/25R42//Chesapeake	Carl Griffey	
2013	Mason Dixon	28	MD05W10208-12-14	Tribute/25R42//Chesapeake	Carl Griffey	
2013	Mason Dixon	29	MD05W10208-12-16	Tribute/25R42//Chesapeake	Carl Griffey	
2013	Mason Dixon	30	MD05W56-12-5	25R42/MD71-5//Tribute	Carl Griffey	
2013	Mason Dixon	31	MD06W165-12-1	SS8641/4/ARGE97-1064-13-5(Mason//Freedom/Super Zlatno)/3/Saluda//Jagger/1115	Carl Griffey	
2013	Mason Dixon	32	MD06W165-12-3	SS8641/4/ARGE97-1064-13-5(Mason//Freedom/Super Zlatno)/3/Saluda//Jagger/1115	Carl Griffey	
2013	Mason Dixon	33	MDC07026-12-10	SS8641//MCC*2/NING7840	Carl Griffey	
2013	Mason Dixon	34	MDC07026-12-30	SS8641//MCC*2/NING7840	Carl Griffey	
2013	Mason Dixon	35	MDC07026-H2-7-12-9	SS8641//MCC*2/NING7840	Carl Griffey	
2013	Mason Dixon	36	MDC07026-H2-7-12-21	SS8641//MCC*2/NING7840	Carl Griffey	
2013	Mason Dixon	37	MDC07026-12-42	SS8641//MCC*2/NING7840	Carl Griffey	
2013	Mason Dixon	38	MD06W146A-12-1	VA02W713//AR 857-1-1(Madison / YMI 6)/Tribute	Carl Griffey	
2013	Mason Dixon	39	MD06W404A-12-1	Dominion/4/Roane/3/Saluda//Jagger/1115	Carl Griffey	
2013	Mason Dixon	40	MD07W280-12-3	Jamestown//VA02W713/25R42	Carl Griffey	
2013	Mason Dixon	41	MD07W280-12-4	Jamestown//VA02W713/25R42	Carl Griffey	
2013	Mason Dixon	42	MD04W8-12-1	Chesapeake/25R42	Carl Griffey	
2013	Mason Dixon	43	MD04W8-12-3	Chesapeake/25R42	Carl Griffey	
2013	Mason Dixon	44	MD03W129-12-6	Tribute/26R61	Carl Griffey	
2013	Mason Dixon	45	ARS07-0525	GA951395-10-7/WX98D011-U38	Carl Griffey	

2013 Soft Red Winter Wheat Cooperative Nurseries

Year	Nursery	Entry	Sample_Name	Pedigree	Contributor	Plant Source
2013	Mason Dixon	46	ARS08-0047	AWD99*5725/WX02ARS086	Carl Griffey	
2013	Mason Dixon	47	ARS09-061	FL9547/SS566	Carl Griffey	
2013	Mason Dixon	48	ARS09-155	GA951395-10-7/TX98D3447	Carl Griffey	
2013	Mason Dixon	49	ARS09-162	GA961565-27-6/LA95283CA-78-1-2	Carl Griffey	
2013	Mason Dixon	50	ARS09-437	AWD99*5725/TX99D4628	Carl Griffey	
2013	Mason Dixon	51	ARS09-692	NC00-15546/TX99D4628	Carl Griffey	
2013	Mason Dixon	52	ARS09-744	GA951079-3-5/WX03ARS0256	Carl Griffey	
2013	Mason Dixon	53	ARS09-750	GA95652-16-9/WX03ARS0254	Carl Griffey	
2013	Mason Dixon	54	ARS10-085	TX99D4628/TX98D1519	Carl Griffey	
2013	Mason Dixon	55	ARS10-094	TX99D4628/TX98D1519	Carl Griffey	
2013	Mason Dixon	56	ARS10-096	TX99D4628/TX98D1519	Carl Griffey	
2013	Mason Dixon	57	ARS10-211	Roane/WX02ARS151	Carl Griffey	
2013	Mason Dixon	58	ARS10-235	VA01W-18/WX02ARS114	Carl Griffey	
2013	Mason Dixon	59	ARS10-470	VA01W-205/WX03ARS0987	Carl Griffey	
2013	Mason Dixon	60	KY05C-1140-8-4-1	CG 514W/VA01W-476//KY98C-1161-03	Carl Griffey	
2013	Mason Dixon	61	KY05C-1140-9-8-5	CG 514W/VA01W-476//KY98C-1161-03	Carl Griffey	
2013	Mason Dixon	62	KY05C-1142-10-1-1	CG 514W/VA01W-476//KY98C-1169-06	Carl Griffey	
2013	Mason Dixon	63	KY05C-1369-14-6-3	KY93C-0004-22-1/VA01W-476//KY98C-1517-01	Carl Griffey	
2013	Mason Dixon	64	KY05C-1105-42-20-1	Roane/Truman//KY98C-1440-01	Carl Griffey	
2013	Mason Dixon	65	KY05C-1105-43-6-1	Roane/Truman//KY98C-1440-01	Carl Griffey	
2013	Mason Dixon	66	KY05C-1118-48-20-1	McCormick/Tribute//KY97C-0574-01	Carl Griffey	
2013	Mason Dixon	67	KY05C-1126-50-12-1	McCormick/Allegiance//KY97C-0554-02	Carl Griffey	
2013	Mason Dixon	68	KY05C-1381-77-7-5	KY93C-1238-17-5/CG 514W//KY96C-0769-7-1	Carl Griffey	
2013	Mason Dixon	69	KY05C-1381-77-17-1	KY93C-1238-17-5/CG 514W//KY96C-0769-7-1	Carl Griffey	
2013	Mason Dixon	70	KY05C-1519-89-1-3	KY93C-0004-22-1/26R58//KY96C-0769-7-1	Carl Griffey	
2013	Mason Dixon	71	KY05C-1713-104-7-3	McCormick/Grayman//KY97C-0554-02	Carl Griffey	
2013	Mason Dixon	72	KY05C-1713-107-13-1	McCormick/Grayman//KY97C-0554-02	Carl Griffey	
2013	Mason Dixon	73	KY05C-1717-115-3-1	McCormick/SS 550//KY97C-0574-01	Carl Griffey	
2013	Mason Dixon	74	KY05C-1719-119-12-1	McCormick/SS 550//KY97C-0554-02	Carl Griffey	
2013	Mason Dixon	75	KY05C-1719-121-8-3	McCormick/SS 550//KY97C-0554-02	Carl Griffey	
2013	Mason Dixon	76	KY05C-1112-127-18-5	Tribute/Truman//KY93C-1238-17-5	Carl Griffey	
2013	Mason Dixon	77	KY05C-1121-130-4-5	McCormick/Tribute//KY98C-1440-01	Carl Griffey	
2013	Mason Dixon	78	KY05C-1121-130-5-1	McCormick/Tribute//KY98C-1440-01	Carl Griffey	
2013	Mason Dixon	79	KY05C-1121-131-3-3	McCormick/Tribute//KY98C-1440-01	Carl Griffey	

2013 Soft Red Winter Wheat Cooperative Nurseries

Year	Nursery	Entry	Sample Name	Pedigree	Contributor	Plant Source
2013	GAWN	1	NC09-21916 (A6)		Murphy	GAWN13NC-1
2013	GAWN	2	NC09-20036		Murphy	GAWN13NC-2
2013	GAWN	3	NC09-20986 (Fhb1)		Murphy	GAWN13NC-3
2013	GAWN	4	NC10-23407		Murphy	GAWN13NC-4
2013	GAWN	5	NC10-23730		Murphy	GAWN13NC-5
2013	GAWN	6	NC10-23663 (Bdv2)		Murphy	GAWN13NC-6
2013	GAWN	7	NC10-23720		Murphy	GAWN13NC-7
2013	GAWN	8	NC10-22592		Murphy	GAWN13NC-8
2013	GAWN	9	NC10-25196		Murphy	GAWN13NC-9
2013	GAWN	10	NC8170-4-3 (Fhb1)		Murphy	GAWN13NC-10
2013	GAWN	11	NC10-22614		Murphy	GAWN13NC-11
2013	GAWN	12	NC10-22642		Murphy	GAWN13NC-12
2013	GAWN	13	AGS2060	CHECK - HARISON PROVIDES SEED	Harrison	CK3
2013	GAWN	14	SS8641	CHECK - JOHNSON PROVIDES SEED	Johnson	CK4
2013	GAWN	15	GA 03564-12E6		Johnson	GAWN13GA-1
2013	GAWN	16	GA 05304-12E35		Johnson	GAWN13GA-2
2013	GAWN	17	GA 041272-12E42		Johnson	GAWN13GA-3
2013	GAWN	18	GA 04268-12E4		Johnson	GAWN13GA-4
2013	GAWN	19	GA 07270-12E15		Johnson	GAWN13GA-5
2013	GAWN	20	GA 051304-12E28		Johnson	GAWN13GA-6
2013	GAWN	21	GA 04417-12E33		Johnson	GAWN13GA-7
2013	GAWN	22	GA 071630-12LE9		Johnson	GAWN13GA-8
2013	GAWN	23	GA 03185-12LE29		Johnson	GAWN13GA-9
2013	GAWN	24	GA 04434-12LE28		Johnson	GAWN13GA-10
2013	GAWN	25	GA 04244-12LE16		Johnson	GAWN13GA-11
2013	GAWN	26	GA 051754-12LE13		Johnson	GAWN13GA-12
2013	GAWN	27	USG 3555	CHECK - GRIFFEY PROVIDES SEED - seed also from Murphy	Griffey	CK1
2013	GAWN	28	Shirley	CHECK - GRIFFEY PROVIDES SEED - seed also from Murphy	Griffey	CK2
2013	GAWN	29	VA10W-96		Griffey	GAWN13VA-1
2013	GAWN	30	VA10W-112		Griffey	GAWN13VA-2
2013	GAWN	31	VA10W-118		Griffey	GAWN13VA-3
2013	GAWN	32	VA11W-31		Griffey	GAWN13VA-4
2013	GAWN	33	VA11W-106		Griffey	GAWN13VA-5
2013	GAWN	34	VA11W-108		Griffey	GAWN13VA-6
2013	GAWN	35	VA11W-165		Griffey	GAWN13VA-7
2013	GAWN	36	VA11W-195		Griffey	GAWN13VA-8
2013	GAWN	37	VA11W-196		Griffey	GAWN13VA-9
2013	GAWN	38	VA11W-230		Griffey	GAWN13VA-10
2013	GAWN	39	VA11W-278		Griffey	GAWN13VA-11
2013	GAWN	40	VA11W-301		Griffey	GAWN13VA-12
2013	GAWN	41	AR04001-3		Mason	GAWN13AR-1
2013	GAWN	42	AR04002-3		Mason	GAWN13AR-2
2013	GAWN	43	AR04006-1		Mason	GAWN13AR-3
2013	GAWN	44	AR04008-5		Mason	GAWN13AR-4
2013	GAWN	45	AR04015-5		Mason	GAWN13AR-5

2013 Soft Red Winter Wheat Cooperative Nurseries

Year	Nursery	Entry	Sample_Name	Pedigree	Contributor	Plant Source
2013	GAWN	46	AR04016-4		Mason	GAWN13AR-6
2013	GAWN	47	AR04025-3		Mason	GAWN13AR-7
2013	GAWN	48	AR04029-4		Mason	GAWN13AR-8
2013	GAWN	49	AR04029-4-5		Mason	GAWN13AR-9
2013	GAWN	50	AR04032-2		Mason	GAWN13AR-10
2013	GAWN	51	AR04084-1-3		Mason	GAWN13AR-11
2013	GAWN	52	AR04119-3		Mason	GAWN13AR-12
2013	GAWN	53	FL04363E-P23		Harrison	GAWN13LA-1
2013	GAWN	54	LA03200E-23		Harrison	GAWN13LA-2
2013	GAWN	55	LA05027D-26		Harrison	GAWN13LA-3
2013	GAWN	56	LA05032D-136		Harrison	GAWN13LA-4
2013	GAWN	57	LA05079F-P01		Harrison	GAWN13LA-5
2013	GAWN	58	LA05079F-P05		Harrison	GAWN13LA-6
2013	GAWN	59	LA05120F-P12		Harrison	GAWN13LA-7
2013	GAWN	60	LA06020E-P16		Harrison	GAWN13LA-8
2013	GAWN	61	LA06036E-P04		Harrison	GAWN13LA-9
2013	GAWN	62	LA06069E-P01		Harrison	GAWN13LA-10
2013	GAWN	63	LA06146E-P04		Harrison	GAWN13LA-11
2013	GAWN	64	LA07040D-P01		Harrison	GAWN13LA-12

2013 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample_Name	Rht-B1	Rht-D1	Rht8c
2013	Mason Dixon	1	Pioneer 26R15	Rht-B1b	Rht-D1a	nd
2013	Mason Dixon	2	Branson	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	3	Shirley	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	4	SS 8700	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	5	VA10W-119	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	6	VA10W-28	Rht-B1a	Rht-D1a	no
2013	Mason Dixon	7	VA10W-123	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	8	VA10W-140	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	9	VA10W-42	Rht-B1b	Rht-D1a	Rht8c
2013	Mason Dixon	10	VA10W-96	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	11	VA10W-112	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	12	VA10W-118	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	13	VA10W-126	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	14	VA08W-672	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	15	VA10W-669	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	16	VA11W-31	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	17	VA11W-106	Rht-B1a	Rht-D1b	nd
2013	Mason Dixon	18	VA11W-108	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	19	VA11W-165	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	20	VA11W-195	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	21	VA11W-196	Rht-B1b	Rht-D1a	nd
2013	Mason Dixon	22	VA11W-230	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	23	VA11W-278	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	24	VA11W-301	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	25	MD05W10208-12-6	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	26	MD05W10208-12-7	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	27	MD05W10208-12-12	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	28	MD05W10208-12-14	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	29	MD05W10208-12-16	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	30	MD05W56-12-5	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	31	MD06W165-12-1	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	32	MD06W165-12-3	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	33	MDC07026-12-10	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	34	MDC07026-12-30	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	35	MDC07026-H2-7-12-9	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	36	MDC07026-H2-7-12-21	Rht-B1a	Rht-D1b	nd
2013	Mason Dixon	37	MDC07026-12-42	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	38	MD06W146A-12-1	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	39	MD06W404A-12-1	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	40	MD07W280-12-3	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	41	MD07W280-12-4	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	42	MD04W8-12-1	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	43	MD04W8-12-3	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	44	MD03W129-12-6	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	45	ARS07-0525	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	46	ARS08-0047	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	47	ARS09-061	Rht-B1b_het	Rht-D1b	no
2013	Mason Dixon	48	ARS09-155	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	49	ARS09-162	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	50	ARS09-437	Rht-B1b_het	Rht-D1b_het	no
2013	Mason Dixon	51	ARS09-692	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	52	ARS09-744	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	53	ARS09-750	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	54	ARS10-085	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	55	ARS10-094	Rht-B1a	Rht-D1b	nd
2013	Mason Dixon	56	ARS10-096	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	57	ARS10-211	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	58	ARS10-235	Rht-B1a	Rht-D1b	no

2013 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample_Name	Rht-B1	Rht-D1	Rht8c
2013	Mason Dixon	59	ARS10-470	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	60	KY05C-1140-8-4-1	Rht-B1a	Rht-D1a	no
2013	Mason Dixon	61	KY05C-1140-9-8-5	Rht-B1a	Rht-D1a	Rht8c
2013	Mason Dixon	62	KY05C-1142-10-1-1	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	63	KY05C-1369-14-6-3	Rht-B1a	Rht-D1a	no
2013	Mason Dixon	64	KY05C-1105-42-20-1	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	65	KY05C-1105-43-6-1	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	66	KY05C-1118-48-20-1	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	67	KY05C-1126-50-12-1	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	68	KY05C-1381-77-7-5	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	69	KY05C-1381-77-17-1	Rht-B1b	Rht-D1a	Rht8c_het
2013	Mason Dixon	70	KY05C-1519-89-1-3	Rht-B1a	Rht-D1a	no
2013	Mason Dixon	71	KY05C-1713-104-7-3	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	72	KY05C-1713-107-13-1	Rht-B1b_het	Rht-D1a	no
2013	Mason Dixon	73	KY05C-1717-115-3-1	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	74	KY05C-1719-119-12-1	Rht-B1a	Rht-D1a	no
2013	Mason Dixon	75	KY05C-1719-121-8-3	Rht-B1a	Rht-D1b	no
2013	Mason Dixon	76	KY05C-1112-127-18-5	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	77	KY05C-1121-130-4-5	Rht-B1b	Rht-D1a	no
2013	Mason Dixon	78	KY05C-1121-130-5-1	Rht-B1a	Rht-D1a	no
2013	Mason Dixon	79	KY05C-1121-131-3-3	Rht-B1a	Rht-D1a	no
2013	GAWN	1	NC09-21916 (A6)	Rht-B1a	Rht-D1b	no
2013	GAWN	2	NC09-20036	Rht-B1a	Rht-D1b	no
2013	GAWN	3	NC09-20986 (Fhb1)	Rht-B1b	Rht-D1a	no
2013	GAWN	4	NC10-23407	Rht-B1a	Rht-D1b	no
2013	GAWN	5	NC10-23730	Rht-B1a	Rht-D1b	no
2013	GAWN	6	NC10-23663 (Bdv2)	Rht-B1a	Rht-D1b	no
2013	GAWN	7	NC10-23720	Rht-B1a	Rht-D1b	no
2013	GAWN	8	NC10-22592	Rht-B1a	Rht-D1b	no
2013	GAWN	9	NC10-25196	Rht-B1a	Rht-D1b	no
2013	GAWN	10	NC8170-4-3 (Fhb1)	Rht-B1a	Rht-D1b	no
2013	GAWN	11	NC10-22614	Rht-B1a	Rht-D1b	no
2013	GAWN	12	NC10-22642	Rht-B1a	Rht-D1b	no
2013	GAWN	13	AGS2060	Rht-B1a	Rht-D1a	no
2013	GAWN	14	SS8641	Rht-B1a	Rht-D1b	no
2013	GAWN	15	GA 03564-12E6	Rht-B1a	Rht-D1b	no
2013	GAWN	16	GA 05304-12E35	Rht-B1a	Rht-D1b	no
2013	GAWN	17	GA 041272-12E42	Rht-B1a	Rht-D1b	no
2013	GAWN	18	GA 04268-12E4	Rht-B1b	Rht-D1a	nd
2013	GAWN	19	GA 07270-12E15	Rht-B1a	Rht-D1b	no
2013	GAWN	20	GA 051304-12E28	Rht-B1a	Rht-D1b	no
2013	GAWN	21	GA 04417-12E33	Rht-B1a	Rht-D1b	no
2013	GAWN	22	GA 071630-12LE9	Rht-B1a	Rht-D1b	no
2013	GAWN	23	GA 03185-12LE29	Rht-B1a	Rht-D1b	no
2013	GAWN	24	GA 04434-12LE28	Rht-B1a	Rht-D1b	no
2013	GAWN	25	GA 04244-12LE16	Rht-B1a	Rht-D1b	no
2013	GAWN	26	GA 051754-12LE13	Rht-B1a	Rht-D1b	no
2013	GAWN	27	USG 3555	Rht-B1a	Rht-D1b	no
2013	GAWN	28	Shirley	Rht-B1b	Rht-D1a	no
2013	GAWN	29	VA10W-96	Rht-B1a	Rht-D1b	no
2013	GAWN	30	VA10W-112	Rht-B1a	Rht-D1b	no
2013	GAWN	31	VA10W-118	Rht-B1a	Rht-D1b	no
2013	GAWN	32	VA11W-31	Rht-B1a	Rht-D1b	no
2013	GAWN	33	VA11W-106	Rht-B1a	Rht-D1b	no
2013	GAWN	34	VA11W-108	Rht-B1a	Rht-D1b	nd

2013 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample_Name	Rht-B1	Rht-D1	Rht8c
2013	GAWN	35	VA11W-165	Rht-B1b	Rht-D1a	no
2013	GAWN	36	VA11W-195	Rht-B1b	Rht-D1a	no
2013	GAWN	37	VA11W-196	Rht-B1b	Rht-D1a	no
2013	GAWN	38	VA11W-230	Rht-B1a	Rht-D1b	nd
2013	GAWN	39	VA11W-278	Rht-B1a	Rht-D1b	no
2013	GAWN	40	VA11W-301	Rht-B1b	Rht-D1a	no
2013	GAWN	41	AR04001-3	Rht-B1b	Rht-D1a	no
2013	GAWN	42	AR04002-3	Rht-B1b	Rht-D1a	no
2013	GAWN	43	AR04006-1	Rht-B1b	Rht-D1a	no
2013	GAWN	44	AR04008-5	Rht-B1b	Rht-D1a	no
2013	GAWN	45	AR04015-5	Rht-B1b	Rht-D1a	no
2013	GAWN	46	AR04016-4	Rht-B1b	Rht-D1a	no
2013	GAWN	47	AR04025-3	Rht-B1b	Rht-D1a	no
2013	GAWN	48	AR04029-4	Rht-B1b	Rht-D1a	no
2013	GAWN	49	AR04029-4-5	Rht-B1b	Rht-D1a	no
2013	GAWN	50	AR04032-2	Rht-B1b	Rht-D1a	no
2013	GAWN	51	AR04084-1-3	Rht-B1a	Rht-D1b	no
2013	GAWN	52	AR04119-3	Rht-B1a	Rht-D1a	no
2013	GAWN	53	FL04363E-P23	Rht-B1a	Rht-D1b	nd
2013	GAWN	54	LA03200E-23	Rht-B1a	Rht-D1b	no
2013	GAWN	55	LA05027D-26	Rht-B1a	Rht-D1b	no
2013	GAWN	56	LA05032D-136	Rht-B1a	Rht-D1b	no
2013	GAWN	57	LA05079F-P01	Rht-B1b	Rht-D1a	no
2013	GAWN	58	LA05079F-P05	Rht-B1b	Rht-D1a	no
2013	GAWN	59	LA05120F-P12	Rht-B1a	Rht-D1b	no
2013	GAWN	60	LA06020E-P16	Rht-B1a	Rht-D1b	no
2013	GAWN	61	LA06036E-P04	Rht-B1a	Rht-D1a	no
2013	GAWN	62	LA06069E-P01	Rht-B1a	Rht-D1b	no
2013	GAWN	63	LA06146E-P04	Rht-B1a	Rht-D1b	no
2013	GAWN	64	LA07040D-P01	Rht-B1a	Rht-D1b	no

2013 Soft Red Winter Wheat Cooperative Nursery				Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample_Name	Ppd-D1	Ppd-B1	Ppd-A1
2013	Mason Dixon	1	Pioneer 26R15	Ppd-D1a_insens	**	nd
2013	Mason Dixon	2	Branson	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	3	Shirley	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	Mason Dixon	4	SS 8700	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	5	VA10W-119	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	6	VA10W-28	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	7	VA10W-123	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	Mason Dixon	8	VA10W-140	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	9	VA10W-42	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	10	VA10W-96	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	11	VA10W-112	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	Mason Dixon	12	VA10W-118	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	Mason Dixon	13	VA10W-126	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	14	VA08W-672	Ppd-D1b	**	Ppd-A1a.1_insens
2013	Mason Dixon	15	VA10W-669	Ppd-D1a_insens	Ppd-B1a_CS_insens	Ppd-A1b
2013	Mason Dixon	16	VA11W-31	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	17	VA11W-106	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	18	VA11W-108	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	19	VA11W-165	Ppd-D1b	Ppd-B1a_CS_het?	Ppd-A1a.1_insens
2013	Mason Dixon	20	VA11W-195	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	Mason Dixon	21	VA11W-196	Ppd-D1a_insens	null	Ppd-A1a.1_het
2013	Mason Dixon	22	VA11W-230	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	23	VA11W-278	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	Mason Dixon	24	VA11W-301	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	Mason Dixon	25	MD05W10208-12-6	Ppd-D1b	**	Ppd-A1a.1_insens
2013	Mason Dixon	26	MD05W10208-12-7	Ppd-D1b	**	Ppd-A1a.1_insens
2013	Mason Dixon	27	MD05W10208-12-12	Ppd-D1a_insens	null	Ppd-A1b
2013	Mason Dixon	28	MD05W10208-12-14	Ppd-D1a_insens	null	Ppd-A1b
2013	Mason Dixon	29	MD05W10208-12-16	Ppd-D1a_insens	Ppd-B1a_CS_insens	Ppd-A1b
2013	Mason Dixon	30	MD05W56-12-5	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	31	MD06W165-12-1	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	32	MD06W165-12-3	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	33	MDC07026-12-10	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	34	MDC07026-12-30	Ppd-D1a_insens	**	Ppd-A1a.1_het
2013	Mason Dixon	35	MDC07026-H2-7-12-9	Ppd-D1a_insens	**	Ppd-A1a.1_het
2013	Mason Dixon	36	MDC07026-H2-7-12-21	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	37	MDC07026-12-42	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	38	MD06W146A-12-1	Ppd-D1b	**	Ppd-A1a.1_insens
2013	Mason Dixon	39	MD06W404A-12-1	Ppd-D1b	**	Ppd-A1a.1_insens
2013	Mason Dixon	40	MD07W280-12-3	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	41	MD07W280-12-4	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	42	MD04W8-12-1	Ppd-D1a_insens	Ppd-B1a_CS_insens	Ppd-A1b
2013	Mason Dixon	43	MD04W8-12-3	Ppd-D1a_insens	Ppd-B1a_CS_insens	Ppd-A1b
2013	Mason Dixon	44	MD03W129-12-6	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	45	ARS07-0525	Ppd-D1b	Ppd-B1a_CS_insens	Ppd-A1b
2013	Mason Dixon	46	ARS08-0047	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	47	ARS09-061	Ppd-D1b	Ppd-B1a_S64_insens	Ppd-A1a.1_insens
2013	Mason Dixon	48	ARS09-155	Ppd-D1a_insens	Ppd-B1a_CS_insens	Ppd-A1b
2013	Mason Dixon	49	ARS09-162	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	50	ARS09-437	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	51	ARS09-692	Ppd-D1b	Ppd-B1a_CS_insens	Ppd-A1a.1_insens
2013	Mason Dixon	52	ARS09-744	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	Mason Dixon	53	ARS09-750	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	54	ARS10-085	Ppd-D1a_insens	null	Ppd-A1b
2013	Mason Dixon	55	ARS10-094	Ppd-D1a_insens	null	Ppd-A1b
2013	Mason Dixon	56	ARS10-096	Ppd-D1a_insens	null	Ppd-A1b
2013	Mason Dixon	57	ARS10-211	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	58	ARS10-235	Ppd-D1a_insens	null	Ppd-A1b

2013 Soft Red Winter Wheat Cooperative Nursery				Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample_Name	Ppd-D1	Ppd-B1	Ppd-A1
2013	Mason Dixon	59	ARS10-470	Ppd-D1a_insens	Ppd-B1a_CS_insens	Ppd-A1b
2013	Mason Dixon	60	KY05C-1140-8-4-1	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	61	KY05C-1140-9-8-5	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	62	KY05C-1142-10-1-1	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	63	KY05C-1369-14-6-3	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	64	KY05C-1105-42-20-1	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	65	KY05C-1105-43-6-1	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	66	KY05C-1118-48-20-1	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	67	KY05C-1126-50-12-1	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	68	KY05C-1381-77-7-5	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	69	KY05C-1381-77-17-1	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	Mason Dixon	70	KY05C-1519-89-1-3	Ppd-D1a_insens	**	Ppd-A1a.1_het
2013	Mason Dixon	71	KY05C-1713-104-7-3	Ppd-D1b	**	Ppd-A1a.1_insens
2013	Mason Dixon	72	KY05C-1713-107-13-1	Ppd-D1a_insens	**	Ppd-A1a.1_het
2013	Mason Dixon	73	KY05C-1717-115-3-1	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	74	KY05C-1719-119-12-1	Ppd-D1a_insens	Ppd-B1a_CS_insens	Ppd-A1a.1_insens
2013	Mason Dixon	75	KY05C-1719-121-8-3	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	Mason Dixon	76	KY05C-1112-127-18-5	Ppd-D1b	**	Ppd-A1a.1_insens
2013	Mason Dixon	77	KY05C-1121-130-4-5	Ppd-D1a_het	**	Ppd-A1a.1_insens
2013	Mason Dixon	78	KY05C-1121-130-5-1	Ppd-D1a_insens	**	Ppd-A1b
2013	Mason Dixon	79	KY05C-1121-131-3-3	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	1	NC09-21916 (A6)	Ppd-D1a_het	**	Ppd-A1a.1_insens
2013	GAWN	2	NC09-20036	Ppd-D1a_insens	null	Ppd-A1a.1_het
2013	GAWN	3	NC09-20986 (Fhb1)	Ppd-D1a_het	**	Ppd-A1a.1_insens
2013	GAWN	4	NC10-23407	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	5	NC10-23730	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	6	NC10-23663 (Bdv2)	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	7	NC10-23720	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	GAWN	8	NC10-22592	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	9	NC10-25196	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	10	NC8170-4-3 (Fhb1)	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	GAWN	11	NC10-22614	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	12	NC10-22642	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	13	AGS2060	Ppd-D1b	Ppd-B1a_CS_insens	Ppd-A1b
2013	GAWN	14	SS8641	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	15	GA 03564-12E6	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1a.1_insens
2013	GAWN	16	GA 05304-12E35	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	17	GA 041272-12E42	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	18	GA 04268-12E4	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	19	GA 07270-12E15	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	20	GA 051304-12E28	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	21	GA 04417-12E33	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	22	GA 071630-12LE9	Ppd-D1b	Ppd-B1a_S64_insens	Ppd-A1b
2013	GAWN	23	GA 03185-12LE29	Ppd-D1b	Ppd-B1a_S64_insens	Ppd-A1b
2013	GAWN	24	GA 04434-12LE28	Ppd-D1a_insens	**	nd
2013	GAWN	25	GA 04244-12LE16	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	26	GA 051754-12LE13	Ppd-D1b	Ppd-B1a_S64_insens	Ppd-A1a.1_insens
2013	GAWN	27	USG 3555	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	28	Shirley	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	GAWN	29	VA10W-96	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	GAWN	30	VA10W-112	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	GAWN	31	VA10W-118	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	GAWN	32	VA11W-31	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	GAWN	33	VA11W-106	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	34	VA11W-108	Ppd-D1a_insens	**	Ppd-A1a.1_insens

2013 Soft Red Winter Wheat Cooperative Nursery				Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample_Name	Ppd-D1	Ppd-B1	Ppd-A1
2013	GAWN	35	VA11W-165	Ppd-D1b	Ppd-B1a_CS_insens_and_Ppd-B1a_S64_het?	Ppd-A1a.1_insens
2013	GAWN	36	VA11W-195	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	GAWN	37	VA11W-196	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	GAWN	38	VA11W-230	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	39	VA11W-278	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b
2013	GAWN	40	VA11W-301	Ppd-D1a_insens	null	Ppd-A1a.1_insens
2013	GAWN	41	AR04001-3	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	42	AR04002-3	Ppd-D1b	Ppd-B1a_S64_insens	Ppd-A1a.1_insens
2013	GAWN	43	AR04006-1	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	44	AR04008-5	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	45	AR04015-5	Ppd-D1b	null	Ppd-A1a.1_insens
2013	GAWN	46	AR04016-4	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	47	AR04025-3	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	48	AR04029-4	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	49	AR04029-4-5	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	50	AR04032-2	Ppd-D1b	Ppd-B1a_S64_insens	Ppd-A1a.1_insens
2013	GAWN	51	AR04084-1-3	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	52	AR04119-3	Ppd-D1b	Ppd-B1a_CS_insens	Ppd-A1b
2013	GAWN	53	FL04363E-P23	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	GAWN	54	LA03200E-23	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	55	LA05027D-26	Ppd-D1a_insens	null	Ppd-A1b
2013	GAWN	56	LA05032D-136	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	57	LA05079F-P01	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	58	LA05079F-P05	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	59	LA05120F-P12	Ppd-D1b	**	Ppd-A1a.1_insens
2013	GAWN	60	LA06020E-P16	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	61	LA06036E-P04	Ppd-D1b	Ppd-B1a_CS_insens	Ppd-A1b
2013	GAWN	62	LA06069E-P01	Ppd-D1a_insens	**	Ppd-A1a.1_insens
2013	GAWN	63	LA06146E-P04	Ppd-D1a_insens	**	Ppd-A1b
2013	GAWN	64	LA07040D-P01	Ppd-D1a_insens	Ppd-B1a_S64_insens	Ppd-A1b

2013 Soft Red Winter Wheat Cooperative Nursery				Vernalization alleles		
Year	Nursery	Entry	Sample_Name	vrn-A1	vrn-B1	Vrn-D1
2013	Mason Dixon	1	Pioneer 26R15	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	2	Branson	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	3	Shirley	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	4	SS 8700	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	5	VA10W-119	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	6	VA10W-28	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	7	VA10W-123	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	8	VA10W-140	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	9	VA10W-42	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	10	VA10W-96	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	11	VA10W-112	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	12	VA10W-118	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	13	VA10W-126	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	14	VA08W-672	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	15	VA10W-669	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	16	VA11W-31	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	17	VA11W-106	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	18	VA11W-108	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	19	VA11W-165	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	20	VA11W-195	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	21	VA11W-196	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	22	VA11W-230	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	23	VA11W-278	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	24	VA11W-301	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	25	MD05W10208-12-6	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	26	MD05W10208-12-7	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	27	MD05W10208-12-12	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	28	MD05W10208-12-14	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	29	MD05W10208-12-16	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	30	MD05W56-12-5	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	31	MD06W165-12-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	32	MD06W165-12-3	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	33	MDC07026-12-10	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	34	MDC07026-12-30	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	35	MDC07026-H2-7-12-9	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	36	MDC07026-H2-7-12-21	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	37	MDC07026-12-42	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	38	MD06W146A-12-1	vrn-A1	vrn-B1	Vrn-D1a_spring
2013	Mason Dixon	39	MD06W404A-12-1	vrn-A1	vrn-B1	Vrn-D1a_spring
2013	Mason Dixon	40	MD07W280-12-3	vrn-A1_short	vrn-B1	vrn-D1
2013	Mason Dixon	41	MD07W280-12-4	vrn-A1_short	vrn-B1	vrn-D1
2013	Mason Dixon	42	MD04W8-12-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	43	MD04W8-12-3	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	44	MD03W129-12-6	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	45	ARS07-0525	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	46	ARS08-0047	vrn-A1_short	vrn-B1	vrn-D1
2013	Mason Dixon	47	ARS09-061	vrn-A1	vrn-B1_het	vrn-D1
2013	Mason Dixon	48	ARS09-155	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	49	ARS09-162	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	50	ARS09-437	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	51	ARS09-692	vrn-A1	vrn-B1_het	vrn-D1
2013	Mason Dixon	52	ARS09-744	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	53	ARS09-750	vrn-A1_short	vrn-B1	vrn-D1
2013	Mason Dixon	54	ARS10-085	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	55	ARS10-094	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	56	ARS10-096	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	57	ARS10-211	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	58	ARS10-235	vrn-A1	vrn-B1	vrn-D1

2013 Soft Red Winter Wheat Cooperative Nursery				Vernalization alleles		
Year	Nursery	Entry	Sample_Name	vrn-A1	vrn-B1	Vrn-D1
2013	Mason Dixon	59	ARS10-470	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	60	KY05C-1140-8-4-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	61	KY05C-1140-9-8-5	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	62	KY05C-1142-10-1-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	63	KY05C-1369-14-6-3	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	64	KY05C-1105-42-20-1	vrn-A1	vrn-B1_het	vrn-D1
2013	Mason Dixon	65	KY05C-1105-43-6-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	66	KY05C-1118-48-20-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	67	KY05C-1126-50-12-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	68	KY05C-1381-77-7-5	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	69	KY05C-1381-77-17-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	70	KY05C-1519-89-1-3	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	71	KY05C-1713-104-7-3	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	72	KY05C-1713-107-13-1	vrn-A1	vrn-B1_short	vrn-D1
2013	Mason Dixon	73	KY05C-1717-115-3-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	74	KY05C-1719-119-12-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	75	KY05C-1719-121-8-3	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	76	KY05C-1112-127-18-5	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	77	KY05C-1121-130-4-5	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	78	KY05C-1121-130-5-1	vrn-A1	vrn-B1	vrn-D1
2013	Mason Dixon	79	KY05C-1121-131-3-3	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	1	NC09-21916 (A6)	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	2	NC09-20036	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	3	NC09-20986 (Fhb1)	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	4	NC10-23407	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	5	NC10-23730	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	6	NC10-23663 (Bdv2)	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	7	NC10-23720	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	8	NC10-22592	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	9	NC10-25196	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	10	NC8170-4-3 (Fhb1)	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	11	NC10-22614	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	12	NC10-22642	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	13	AGS2060	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	14	SS8641	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	15	GA 03564-12E6	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	16	GA 05304-12E35	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	17	GA 041272-12E42	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	18	GA 04268-12E4	vrn-A1_short	vrn-B1	vrn-D1
2013	GAWN	19	GA 07270-12E15	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	20	GA 051304-12E28	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	21	GA 04417-12E33	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	22	GA 071630-12LE9	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	23	GA 03185-12LE29	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	24	GA 04434-12LE28	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	25	GA 04244-12LE16	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	26	GA 051754-12LE13	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	27	USG 3555	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	28	Shirley	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	29	VA10W-96	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	30	VA10W-112	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	31	VA10W-118	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	32	VA11W-31	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	33	VA11W-106	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	34	VA11W-108	vrn-A1	vrn-B1	vrn-D1

2013 Soft Red Winter Wheat Cooperative Nursery				Vernalization alleles		
Year	Nursery	Entry	Sample_Name	vrn-A1	vrn-B1	Vrn-D1
2013	GAWN	35	VA11W-165	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	36	VA11W-195	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	37	VA11W-196	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	38	VA11W-230	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	39	VA11W-278	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	40	VA11W-301	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	41	AR04001-3	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	42	AR04002-3	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	43	AR04006-1	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	44	AR04008-5	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	45	AR04015-5	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	46	AR04016-4	vrn-A1_het	vrn-B1	vrn-D1
2013	GAWN	47	AR04025-3	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	48	AR04029-4	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	49	AR04029-4-5	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	50	AR04032-2	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	51	AR04084-1-3	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	52	AR04119-3	vrn-A1	vrn-B1_short	vrn-D1
2013	GAWN	53	FL04363E-P23	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	54	LA03200E-23	vrn-A1_short	vrn-B1	vrn-D1
2013	GAWN	55	LA05027D-26	vrn-A1_short	vrn-B1	vrn-D1
2013	GAWN	56	LA05032D-136	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	57	LA05079F-P01	vrn-A1	vrn-B1_het	vrn-D1
2013	GAWN	58	LA05079F-P05	vrn-A1	vrn-B1_het	vrn-D1
2013	GAWN	59	LA05120F-P12	vrn-A1_short	vrn-B1_short	vrn-D1
2013	GAWN	60	LA06020E-P16	vrn-A1_short	vrn-B1	vrn-D1
2013	GAWN	61	LA06036E-P04	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	62	LA06069E-P01	vrn-A1	vrn-B1	vrn-D1
2013	GAWN	63	LA06146E-P04	vrn-A1_short	vrn-B1_short	vrn-D1
2013	GAWN	64	LA07040D-P01	vrn-A1	vrn-B1	vrn-D1

2013 Soft Red Winter Wheat Cooperative Nursery

Fusarium Head Blight alleles

Year	Nursery	Entry	Sample_Name	Fhb1	Fhb_Massey_3BL	Fhb_2DL-Wuhan1/W14	Fhb_5A
2013	Mason Dixon	1	Pioneer 26R15	no	no	no	no
2013	Mason Dixon	2	Branson	no	Fhb_Massey_3BL	no	no
2013	Mason Dixon	3	Shirley	no	no	no	no
2013	Mason Dixon	4	SS 8700	no	no	no	no
2013	Mason Dixon	5	VA10W-119	no	no	no	no
2013	Mason Dixon	6	VA10W-28	no	no	no	no
2013	Mason Dixon	7	VA10W-123	no	no	no	no
2013	Mason Dixon	8	VA10W-140	no	no	no	no
2013	Mason Dixon	9	VA10W-42	no	no	no	no
2013	Mason Dixon	10	VA10W-96	no	no	no	no
2013	Mason Dixon	11	VA10W-112	no	no	no	no
2013	Mason Dixon	12	VA10W-118	no	no	no	no
2013	Mason Dixon	13	VA10W-126	no	no	no	no
2013	Mason Dixon	14	VA08W-672	no	no	no	Fhb_5A_Ernie
2013	Mason Dixon	15	VA10W-669	no	no	no	no
2013	Mason Dixon	16	VA11W-31	no	no	no	no
2013	Mason Dixon	17	VA11W-106	no	no	no	no
2013	Mason Dixon	18	VA11W-108	no	no	no	no
2013	Mason Dixon	19	VA11W-165	no	Fhb_Massey_3BL	no	no
2013	Mason Dixon	20	VA11W-195	no	Fhb_Massey_3BL	no	no
2013	Mason Dixon	21	VA11W-196	no	Fhb_Massey_3BL	no	no
2013	Mason Dixon	22	VA11W-230	no	no	no	no
2013	Mason Dixon	23	VA11W-278	no	Fhb_Massey_3BL	no	no
2013	Mason Dixon	24	VA11W-301	no	no	no	no
2013	Mason Dixon	25	MD05W10208-12-6	no	no	no	no
2013	Mason Dixon	26	MD05W10208-12-7	Fhb1_het	no	no	<i>Fhb_5A_Ning7840_het</i>
2013	Mason Dixon	27	MD05W10208-12-12	no	no	no	no
2013	Mason Dixon	28	MD05W10208-12-14	no	no	no	no
2013	Mason Dixon	29	MD05W10208-12-16	Fhb1	no	no	no
2013	Mason Dixon	30	MD05W56-12-5	no	no	no	no
2013	Mason Dixon	31	MD06W165-12-1	no	no	no	no
2013	Mason Dixon	32	MD06W165-12-3	no	no	no	no
2013	Mason Dixon	33	MDC07026-12-10	Fhb1	no	no	<i>Fhb_5A_Ning7840</i>
2013	Mason Dixon	34	MDC07026-12-30	Fhb1	no	no	<i>Fhb_5A_Ning7840_het</i>
2013	Mason Dixon	35	MDC07026-H2-7-12-9	Fhb1	no	Fhb_2DL-Wuhan1/W14	<i>Fhb_5A_Ning7840</i>
2013	Mason Dixon	36	MDC07026-H2-7-12-21	Fhb1	no	Fhb_2DL-Wuhan1/W14	<i>Fhb_5A_Ning7840</i>
2013	Mason Dixon	37	MDC07026-12-42	Fhb1	no	no	<i>Fhb_5A_Ning7840</i>
2013	Mason Dixon	38	MD06W146A-12-1	Fhb1_het	no	Fhb_2DL-Wuhan1/W14_het	no
2013	Mason Dixon	39	MD06W404A-12-1	no	no	no	no
2013	Mason Dixon	40	MD07W280-12-3	no	no	no	no
2013	Mason Dixon	41	MD07W280-12-4	no	no	no	no
2013	Mason Dixon	42	MD04W8-12-1	no	no	no	no
2013	Mason Dixon	43	MD04W8-12-3	no	no	no	no
2013	Mason Dixon	44	MD03W129-12-6	no	no	no	no
2013	Mason Dixon	45	ARS07-0525	no	Fhb_Massey_3BL	no	no
2013	Mason Dixon	46	ARS08-0047	no	no	no	Fhb_5A_Ernie
2013	Mason Dixon	47	ARS09-061	no	no	no	no
2013	Mason Dixon	48	ARS09-155	no	no	no	no
2013	Mason Dixon	49	ARS09-162	no	no	no	no
2013	Mason Dixon	50	ARS09-437	no	no	no	Fhb_5A_Ernie_het
2013	Mason Dixon	51	ARS09-692	no	no	no	no
2013	Mason Dixon	52	ARS09-744	no	no	no	no
2013	Mason Dixon	53	ARS09-750	no	no	no	no
2013	Mason Dixon	54	ARS10-085	no	no	no	no
2013	Mason Dixon	55	ARS10-094	no	no	no	no
2013	Mason Dixon	56	ARS10-096	no	no	no	no
2013	Mason Dixon	57	ARS10-211	no	no	no	no
2013	Mason Dixon	58	ARS10-235	no	no	no	no

2013 Soft Red Winter Wheat Cooperative Nursery

Fusarium Head Blight alleles

Year	Nursery	Entry	Sample_Name	Fhb1	Fhb_Massey_3BL	Fhb_2DL-Wuhan1/W14	Fhb_5A
2013	Mason Dixon	59	ARS10-470	no	no	no	no
2013	Mason Dixon	60	KY05C-1140-8-4-1	no	no	no	no
2013	Mason Dixon	61	KY05C-1140-9-8-5	no	no	no	no
2013	Mason Dixon	62	KY05C-1142-10-1-1	no	Fhb_Massey_3BL_het	no	no
2013	Mason Dixon	63	KY05C-1369-14-6-3	Fhb1	no	no	no
2013	Mason Dixon	64	KY05C-1105-42-20-1	no	no	no	no
2013	Mason Dixon	65	KY05C-1105-43-6-1	no	no	no	no
2013	Mason Dixon	66	KY05C-1118-48-20-1	no	no	no	no
2013	Mason Dixon	67	KY05C-1126-50-12-1	no	no	no	no
2013	Mason Dixon	68	KY05C-1381-77-7-5	no	no	no	no
2013	Mason Dixon	69	KY05C-1381-77-17-1	no	no	no	no
2013	Mason Dixon	70	KY05C-1519-89-1-3	no	no	no	no
2013	Mason Dixon	71	KY05C-1713-104-7-3	no	no	no	no
2013	Mason Dixon	72	KY05C-1713-107-13-1	no	no	no	no
2013	Mason Dixon	73	KY05C-1717-115-3-1	no	no	no	no
2013	Mason Dixon	74	KY05C-1719-119-12-1	no	no	no	no
2013	Mason Dixon	75	KY05C-1719-121-8-3	no	Fhb_Massey_3BL	no	no
2013	Mason Dixon	76	KY05C-1112-127-18-5	no	no	no	no
2013	Mason Dixon	77	KY05C-1121-130-4-5	no	no	no	no
2013	Mason Dixon	78	KY05C-1121-130-5-1	no	no	no	no
2013	Mason Dixon	79	KY05C-1121-131-3-3	no	no	no	no
2013	GAWN	1	NC09-21916 (A6)	no	no	no	no
2013	GAWN	2	NC09-20036	no	no	no	no
2013	GAWN	3	NC09-20986 (Fhb1)	Fhb1_het	no	no	no
2013	GAWN	4	NC10-23407	no	no	no	Fhb_5A_Ernie_het
2013	GAWN	5	NC10-23730	no	no	no	no
2013	GAWN	6	NC10-23663 (Bdv2)	no	no	no	no
2013	GAWN	7	NC10-23720	no	no	no	no
2013	GAWN	8	NC10-22592	no	no	no	no
2013	GAWN	9	NC10-25196	no	no	no	no
2013	GAWN	10	NC8170-4-3 (Fhb1)	Fhb1	no	no	no
2013	GAWN	11	NC10-22614	no	no	no	no
2013	GAWN	12	NC10-22642	no	no	no	Fhb_5A_Ernie
2013	GAWN	13	AGS2060	no	no	no	no
2013	GAWN	14	SS8641	no	no	no	no
2013	GAWN	15	GA 03564-12E6	no	no	no	no
2013	GAWN	16	GA 05304-12E35	no	no	no	no
2013	GAWN	17	GA 041272-12E42	no	no	no	no
2013	GAWN	18	GA 04268-12E4	no	no	no	no
2013	GAWN	19	GA 07270-12E15	no	no	no	no
2013	GAWN	20	GA 051304-12E28	no	no	no	no
2013	GAWN	21	GA 04417-12E33	no	no	no	no
2013	GAWN	22	GA 071630-12LE9	no	no	no	no
2013	GAWN	23	GA 03185-12LE29	no	no	no	no
2013	GAWN	24	GA 04434-12LE28	no	no	no	no
2013	GAWN	25	GA 04244-12LE16	no	no	no	no
2013	GAWN	26	GA 051754-12LE13	no	no	no	no
2013	GAWN	27	USG 3555	no	Fhb_Massey_3BL	no	no
2013	GAWN	28	Shirley	no	no	no	no
2013	GAWN	29	VA10W-96	no	no	no	no
2013	GAWN	30	VA10W-112	no	no	no	no
2013	GAWN	31	VA10W-118	no	no	no	no
2013	GAWN	32	VA11W-31	no	no	no	no
2013	GAWN	33	VA11W-106	no	no	no	no
2013	GAWN	34	VA11W-108	no	no	no	no

2013 Soft Red Winter Wheat Cooperative Nursery

Fusarium Head Blight alleles

Year	Nursery	Entry	Sample_Name	Fhb1	Fhb_Massey_3BL	Fhb_2DL-Wuhan1/W14	Fhb_5A
2013	GAWN	35	VA11W-165	no	Fhb_Massey_3BL	no	no
2013	GAWN	36	VA11W-195	no	Fhb_Massey_3BL	no	no
2013	GAWN	37	VA11W-196	no	Fhb_Massey_3BL	no	no
2013	GAWN	38	VA11W-230	no	no	no	no
2013	GAWN	39	VA11W-278	no	Fhb_Massey_3BL	no	no
2013	GAWN	40	VA11W-301	no	no	no	no
2013	GAWN	41	AR04001-3	no	no	no	no
2013	GAWN	42	AR04002-3	no	no	no	no
2013	GAWN	43	AR04006-1	no	Fhb_Massey_3BL	no	no
2013	GAWN	44	AR04008-5	no	no	no	no
2013	GAWN	45	AR04015-5	no	Fhb_Massey_3BL	no	no
2013	GAWN	46	AR04016-4	no	Fhb_Massey_3BL	no	no
2013	GAWN	47	AR04025-3	no	no	no	no
2013	GAWN	48	AR04029-4	no	no	no	no
2013	GAWN	49	AR04029-4-5	no	no	no	no
2013	GAWN	50	AR04032-2	no	Fhb_Massey_3BL	no	no
2013	GAWN	51	AR04084-1-3	no	no	no	no
2013	GAWN	52	AR04119-3	no	no	no	no
2013	GAWN	53	FL04363E-P23	no	no	no	no
2013	GAWN	54	LA03200E-23	no	no	no	no
2013	GAWN	55	LA05027D-26	no	no	no	no
2013	GAWN	56	LA05032D-136	no	no	no	no
2013	GAWN	57	LA05079F-P01	no	no	no	no
2013	GAWN	58	LA05079F-P05	no	no	no	no
2013	GAWN	59	LA05120F-P12	no	no	no	no
2013	GAWN	60	LA06020E-P16	no	no	no	no
2013	GAWN	61	LA06036E-P04	no	no	no	no
2013	GAWN	62	LA06069E-P01	no	no	no	no
2013	GAWN	63	LA06146E-P04	no	no	no	no
2013	GAWN	64	LA07040D-P01	no	no	no	no

2013 Soft Red Winter Wheat Cooperative Nursery				Leaf, Stem and Stripe Rusts & Powdery Mildew alleles					
Year	Nursery	Entry	Sample_Name	Sr2	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	Lr34/Yr18	Lr9
2013	Mason Dixon	1	Pioneer 26R15	no	no	no	no	no	no
2013	Mason Dixon	2	Branson	no	no	no	no	no	no
2013	Mason Dixon	3	Shirley	no	Sr36	no	no	no	no
2013	Mason Dixon	4	SS 8700	no	no	no	no	no	no
2013	Mason Dixon	5	VA10W-119	no	no	no	no	no	no
2013	Mason Dixon	6	VA10W-28	no	no	no	no	no	no
2013	Mason Dixon	7	VA10W-123	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	8	VA10W-140	no	no	Sr24/Lr24	no	no	Lr9
2013	Mason Dixon	9	VA10W-42	no	no	no	no	no	no
2013	Mason Dixon	10	VA10W-96	no	no	no	Yr17/Lr37/Sr38_het	no	no
2013	Mason Dixon	11	VA10W-112	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	12	VA10W-118	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	13	VA10W-126	no	no	no	no	no	no
2013	Mason Dixon	14	VA08W-672	no	Sr36_het	no	no	no	no
2013	Mason Dixon	15	VA10W-669	no	no	no	no	no	Lr9
2013	Mason Dixon	16	VA11W-31	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	17	VA11W-106	no	no	no	no	no	no
2013	Mason Dixon	18	VA11W-108	no	no	no	no	no	no
2013	Mason Dixon	19	VA11W-165	no	Sr36	no	no	no	no
2013	Mason Dixon	20	VA11W-195	no	Sr36	no	no	no	no
2013	Mason Dixon	21	VA11W-196	no	Sr36	no	no	no	no
2013	Mason Dixon	22	VA11W-230	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	23	VA11W-278	no	Sr36_het?	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	24	VA11W-301	no	Sr36	no	no	no	no
2013	Mason Dixon	25	MD05W10208-12-6	no	no	no	no	no	no
2013	Mason Dixon	26	MD05W10208-12-7	no	no	Sr24/Lr24	no	no	no
2013	Mason Dixon	27	MD05W10208-12-12	no	Sr36	Sr24/Lr24	no	no	no
2013	Mason Dixon	28	MD05W10208-12-14	no	Sr36	no	no	no	no
2013	Mason Dixon	29	MD05W10208-12-16	no	Sr36	Sr24/Lr24	no	no	no
2013	Mason Dixon	30	MD05W56-12-5	no	no	Sr24/Lr24	no	no	no
2013	Mason Dixon	31	MD06W165-12-1	no	no	no	no	no	no
2013	Mason Dixon	32	MD06W165-12-3	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	33	MDC07026-12-10	no	no	Sr24/Lr24	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	34	MDC07026-12-30	no	no	Sr24/Lr24	no	no	no
2013	Mason Dixon	35	MDC07026-H2-7-12-9	no	no	Sr24/Lr24	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	36	MDC07026-H2-7-12-21	no	no	Sr24/Lr24	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	37	MDC07026-12-42	no	no	no	no	no	no
2013	Mason Dixon	38	MD06W146A-12-1	no	no	Sr24/Lr24	no	no	no
2013	Mason Dixon	39	MD06W404A-12-1	no	no	no	no	no	no
2013	Mason Dixon	40	MD07W280-12-3	no	no	no	no	no	no
2013	Mason Dixon	41	MD07W280-12-4	no	no	no	no	no	no
2013	Mason Dixon	42	MD04W8-12-1	no	no	no	no	no	no
2013	Mason Dixon	43	MD04W8-12-3	no	no	no	no	no	no
2013	Mason Dixon	44	MD03W129-12-6	no	no	no	no	no	no
2013	Mason Dixon	45	ARS07-0525	no	Sr36	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	46	ARS08-0047	no	Sr36_het?	no	no	no	no
2013	Mason Dixon	47	ARS09-061	no	Sr36_het	no	?	no	no
2013	Mason Dixon	48	ARS09-155	no	Sr36	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	49	ARS09-162	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	50	ARS09-437	no	Sr36_het?	no	no	no	Lr9
2013	Mason Dixon	51	ARS09-692	no	Sr36	no	no	no	Lr9
2013	Mason Dixon	52	ARS09-744	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	53	ARS09-750	no	no	no	Yr17/Lr37/Sr38	no	no
2013	Mason Dixon	54	ARS10-085	no	Sr36	no	no	no	Lr9
2013	Mason Dixon	55	ARS10-094	no	Sr36	no	no	no	Lr9
2013	Mason Dixon	56	ARS10-096	no	Sr36	no	no	no	Lr9
2013	Mason Dixon	57	ARS10-211	no	no	Sr24/Lr24	no	no	no
2013	Mason Dixon	58	ARS10-235	no	Sr36	no	no	no	Lr9

2013 Soft Red Winter Wheat Cooperative Nursery				Leaf, Stem and Stripe Rusts & Powdery Mildew alleles					
Year	Nursery	Entry	Sample_Name	Sr2	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	Lr34/Yr18	Lr9
2013	Mason Dixon	59	ARS10-470	no	Sr36	no	no	no	no
2013	Mason Dixon	60	KY05C-1140-8-4-1	no	no	no	no	no	no
2013	Mason Dixon	61	KY05C-1140-9-8-5	no	no	no	no	no	no
2013	Mason Dixon	62	KY05C-1142-10-1-1	no	no	no	no	no	no
2013	Mason Dixon	63	KY05C-1369-14-6-3	no	no	no	no	no	no
2013	Mason Dixon	64	KY05C-1105-42-20-1	no	no	no	no	no	no
2013	Mason Dixon	65	KY05C-1105-43-6-1	no	no	no	no	no	no
2013	Mason Dixon	66	KY05C-1118-48-20-1	no	no	no	no	no	Lr9
2013	Mason Dixon	67	KY05C-1126-50-12-1	no	no	no	no	no	no
2013	Mason Dixon	68	KY05C-1381-77-7-5	no	no	no	no	no	no
2013	Mason Dixon	69	KY05C-1381-77-17-1	no	Sr36_het?	no	no	no	no
2013	Mason Dixon	70	KY05C-1519-89-1-3	no	no	no	no	no	no
2013	Mason Dixon	71	KY05C-1713-104-7-3	no	no	no	no	no	no
2013	Mason Dixon	72	KY05C-1713-107-13-1	no	no	no	no	no	no
2013	Mason Dixon	73	KY05C-1717-115-3-1	no	no	no	no	no	no
2013	Mason Dixon	74	KY05C-1719-119-12-1	no	Sr36	no	no	no	no
2013	Mason Dixon	75	KY05C-1719-121-8-3	no	Sr36_het?	no	no	no	no
2013	Mason Dixon	76	KY05C-1112-127-18-5	no	no	no	no	no	no
2013	Mason Dixon	77	KY05C-1121-130-4-5	no	no	no	no	no	no
2013	Mason Dixon	78	KY05C-1121-130-5-1	no	no	Sr24/Lr24	no	no	no
2013	Mason Dixon	79	KY05C-1121-131-3-3	no	no	no	no	no	no
2013	GAWN	1	NC09-21916 (A6)	no	no	no	no	no	no
2013	GAWN	2	NC09-20036	no	Sr36	no	no	no	no
2013	GAWN	3	NC09-20986 (Fhb1)	no	no	Sr24/Lr24	no	no	Lr9
2013	GAWN	4	NC10-23407	no	Sr36_het	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	5	NC10-23730	no	no	no	no	no	no
2013	GAWN	6	NC10-23663 (Bdv2)	no	Sr36	no	no	no	no
2013	GAWN	7	NC10-23720	no	Sr36	no	no	no	no
2013	GAWN	8	NC10-22592	no	Sr36	Sr24/Lr24	no	no	no
2013	GAWN	9	NC10-25196	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	10	NC8170-4-3 (Fhb1)	no	no	no	no	no	no
2013	GAWN	11	NC10-22614	no	Sr36	no	no	no	no
2013	GAWN	12	NC10-22642	no	Sr36	Sr24/Lr24	no	no	no
2013	GAWN	13	AGS2060	no	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	no	Lr9
2013	GAWN	14	SS8641	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	15	GA 03564-12E6	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	16	GA 05304-12E35	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	17	GA 041272-12E42	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	18	GA 04268-12E4	no	no	nd	Yr17/Lr37/Sr38	no	no
2013	GAWN	19	GA 07270-12E15	no	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	no	no
2013	GAWN	20	GA 051304-12E28	no	Sr36	no	no	no	no
2013	GAWN	21	GA 04417-12E33	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	22	GA 071630-12LE9	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	23	GA 03185-12LE29	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	24	GA 04434-12LE28	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	25	GA 04244-12LE16	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	26	GA 051754-12LE13	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	27	USG 3555	no	Sr36	no	no	no	no
2013	GAWN	28	Shirley	no	Sr36	no	no	no	no
2013	GAWN	29	VA10W-96	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	30	VA10W-112	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	31	VA10W-118	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	32	VA11W-31	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	33	VA11W-106	no	no	no	no	no	no
2013	GAWN	34	VA11W-108	no	no	no	no	no	no

2013 Soft Red Winter Wheat Cooperative Nursery				Leaf, Stem and Stripe Rusts & Powdery Mildew alleles					
Year	Nursery	Entry	Sample_Name	Sr2	Sr36	Sr24/Lr24	Yr17/Lr37/Sr38	Lr34/Yr18	Lr9
2013	GAWN	35	VA11W-165	no	Sr36	no	no	no	no
2013	GAWN	36	VA11W-195	no	Sr36	no	no	no	no
2013	GAWN	37	VA11W-196	no	Sr36	no	no	no	no
2013	GAWN	38	VA11W-230	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	39	VA11W-278	no	Sr36_het	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	40	VA11W-301	no	Sr36	no	no	no	no
2013	GAWN	41	AR04001-3	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	42	AR04002-3	no	no	Sr24/Lr24	no	no	no
2013	GAWN	43	AR04006-1	no	no	no	no	no	no
2013	GAWN	44	AR04008-5	no	no	no	no	no	Lr9
2013	GAWN	45	AR04015-5	no	no	no	no	no	no
2013	GAWN	46	AR04016-4	no	no	no	no	no	no
2013	GAWN	47	AR04025-3	no	no	no	no	no	no
2013	GAWN	48	AR04029-4	no	no	no	no	no	no
2013	GAWN	49	AR04029-4-5	no	no	no	no	no	no
2013	GAWN	50	AR04032-2	no	no	no	no	no	Lr9
2013	GAWN	51	AR04084-1-3	no	no	no	no	no	no
2013	GAWN	52	AR04119-3	no	Sr36	Sr24/Lr24	no	no	Lr9
2013	GAWN	53	FL04363E-P23	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	54	LA03200E-23	no	no	no	no	no	no
2013	GAWN	55	LA05027D-26	no	Sr36	no	no	no	no
2013	GAWN	56	LA05032D-136	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	57	LA05079F-P01	no	no	no	no	no	Lr9
2013	GAWN	58	LA05079F-P05	no	no	no	no	no	no
2013	GAWN	59	LA05120F-P12	no	no	no	Yr17/Lr37/Sr38	no	no
2013	GAWN	60	LA06020E-P16	no	no	no	no	no	no
2013	GAWN	61	LA06036E-P04	no	Sr36	no	Yr17/Lr37/Sr38	no	Lr9
2013	GAWN	62	LA06069E-P01	no	no	no	no	no	no
2013	GAWN	63	LA06146E-P04	no	no	Sr24/Lr24	Yr17/Lr37/Sr38	no	Lr9
2013	GAWN	64	LA07040D-P01	no	no	no	no	no	no

2013 Soft Red Winter Wheat Cooperative Nursery				Rye Translocations	Hessian Fly		BYDV	SBMV	SnToxA
Year	Nursery	Entry	Sample_Name	IRS	H13	H9	Bdv2/3	Sbm1	Tsn1
2013	Mason Dixon	1	Pioneer 26R15	non-IRS	no	nd	nd	Sbm1	no
2013	Mason Dixon	2	Branson	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	3	Shirley	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	4	SS 8700	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	5	VA10W-119	non-IRS	H13	no	no	Sbm1	Tsn1
2013	Mason Dixon	6	VA10W-28	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	7	VA10W-123	non-IRS	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	8	VA10W-140	IRS:1AL	no	no	no	Sbm1	no
2013	Mason Dixon	9	VA10W-42	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	10	VA10W-96	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	11	VA10W-112	non-IRS	H13	no	no	Sbm1	Tsn1
2013	Mason Dixon	12	VA10W-118	non-IRS	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	13	VA10W-126	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	14	VA08W-672	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	15	VA10W-669	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	16	VA11W-31	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	17	VA11W-106	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	18	VA11W-108	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	19	VA11W-165	non-IRS	no	no	no	no	no
2013	Mason Dixon	20	VA11W-195	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	21	VA11W-196	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	22	VA11W-230	non-IRS	H13	no	no	no	no
2013	Mason Dixon	23	VA11W-278	non-IRS	H13	no	no	Sbm1	no
2013	Mason Dixon	24	VA11W-301	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	25	MD05W10208-12-6	IRS:1AL	no	no	no	Sbm1	no
2013	Mason Dixon	26	MD05W10208-12-7	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	27	MD05W10208-12-12	IRS:1BL	no	no	no	no	no
2013	Mason Dixon	28	MD05W10208-12-14	IRS:1BL	no	no	no	no	no
2013	Mason Dixon	29	MD05W10208-12-16	non-IRS	no	no	no	no	no
2013	Mason Dixon	30	MD05W56-12-5	IRS:1AL	no	nd	no	Sbm1	no
2013	Mason Dixon	31	MD06W165-12-1	IRS:1AL	no	nd	no	Sbm1	no
2013	Mason Dixon	32	MD06W165-12-3	IRS:1AL	no	nd	no	Sbm1	no
2013	Mason Dixon	33	MDC07026-12-10	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	34	MDC07026-12-30	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	35	MDC07026-H2-7-12-9	non-IRS	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	36	MDC07026-H2-7-12-21	non-IRS	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	37	MDC07026-12-42	IRS:1AL	no	nd	no	Sbm1	Tsn1
2013	Mason Dixon	38	MD06W146A-12-1	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	39	MD06W404A-12-1	IRS:1AL	no	nd	no	Sbm1	Tsn1
2013	Mason Dixon	40	MD07W280-12-3	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	41	MD07W280-12-4	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	42	MD04W8-12-1	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	43	MD04W8-12-3	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	44	MD03W129-12-6	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	45	ARS07-0525	IRS:1BL	H13	no	no	no	Tsn1
2013	Mason Dixon	46	ARS08-0047	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	47	ARS09-061	IRS:1BL	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	48	ARS09-155	non-IRS	H13	no	no	no	Tsn1
2013	Mason Dixon	49	ARS09-162	non-IRS	H13	no	no	no	Tsn1
2013	Mason Dixon	50	ARS09-437	non-IRS	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	51	ARS09-692	non-IRS	no	no	no	no	Tsn1
2013	Mason Dixon	52	ARS09-744	IRS:1AL	H13	no	no	Sbm1	Tsn1
2013	Mason Dixon	53	ARS09-750	non-IRS	no	no	no	no	no
2013	Mason Dixon	54	ARS10-085	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	55	ARS10-094	non-IRS	no	no	nd	Sbm1	no
2013	Mason Dixon	56	ARS10-096	non-IRS	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	57	ARS10-211	non-IRS	no	no	no	Sbm1	Tsn1
2013	Mason Dixon	58	ARS10-235	non-IRS	no	no	no	Sbm1	no

2013 Soft Red Winter Wheat Cooperative Nursery				Rye Translocations	Hessian Fly		BYDV	SBMV	SnToxA
Year	Nursery	Entry	Sample_Name	IRS	H13	H9	Bdv2/3	Sbm1	Tsn1
2013	Mason Dixon	59	ARS10-470	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	60	KY05C-1140-8-4-1	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	61	KY05C-1140-9-8-5	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	62	KY05C-1142-10-1-1	non-IRS	no	no	no	no	no
2013	Mason Dixon	63	KY05C-1369-14-6-3	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	64	KY05C-1105-42-20-1	non-IRS	no	no	no	no	no
2013	Mason Dixon	65	KY05C-1105-43-6-1	non-IRS	no	no	no	no	no
2013	Mason Dixon	66	KY05C-1118-48-20-1	IRS:1AL	no	nd	no	Sbm1	no
2013	Mason Dixon	67	KY05C-1126-50-12-1	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	68	KY05C-1381-77-7-5	IRS:1BL	no	no	no	Sbm1 het	no
2013	Mason Dixon	69	KY05C-1381-77-17-1	non-IRS	no	no	no	no	no
2013	Mason Dixon	70	KY05C-1519-89-1-3	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	71	KY05C-1713-104-7-3	IRS:1BL	no	no	no	Sbm1	no
2013	Mason Dixon	72	KY05C-1713-107-13-1	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	73	KY05C-1717-115-3-1	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	74	KY05C-1719-119-12-1	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	75	KY05C-1719-121-8-3	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	76	KY05C-1112-127-18-5	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	77	KY05C-1121-130-4-5	non-IRS	no	no	no	Sbm1	no
2013	Mason Dixon	78	KY05C-1121-130-5-1	IRS:1BL	no	no	no	no	no
2013	Mason Dixon	79	KY05C-1121-131-3-3	IRS:1BL	no	no	no	no	no
2013	GAWN	1	NC09-21916 (A6)	non-IRS	no	no	no	Sbm1	no
2013	GAWN	2	NC09-20036	non-IRS	no	no	no	Sbm1	no
2013	GAWN	3	NC09-20986 (Fhb1)	IRS:1AL	H13_het	no	no	Sbm1	no
2013	GAWN	4	NC10-23407	IRS:1BL	no	no	no	Sbm1	Tsn1
2013	GAWN	5	NC10-23730	non-IRS	no	no	no	Sbm1	no
2013	GAWN	6	NC10-23663 (Bdv2)	non-IRS	no	no	Bdv2/3	Sbm1	no
2013	GAWN	7	NC10-23720	IRS:1BL	no	H9	no	Sbm1	no
2013	GAWN	8	NC10-22592	IRS:1AL	no	no	no	Sbm1	no
2013	GAWN	9	NC10-25196	non-IRS	no	no	no	Sbm1	no
2013	GAWN	10	NC8170-4-3 (Fhb1)	non-IRS	no	no	no	Sbm1	no
2013	GAWN	11	NC10-22614	IRS:1AL	no	no	no	Sbm1	no
2013	GAWN	12	NC10-22642	non-IRS	no	nd	no	Sbm1	no
2013	GAWN	13	AGS2060	non-IRS	no	no	no	no	no
2013	GAWN	14	SS8641	non-IRS	no	no	no	Sbm1	Tsn1
2013	GAWN	15	GA 03564-12E6	IRS:1AL	no	nd	no	Sbm1	no
2013	GAWN	16	GA 05304-12E35	non-IRS	H13	no	no	Sbm1	Tsn1
2013	GAWN	17	GA 041272-12E42	non-IRS	no	no	no	Sbm1	no
2013	GAWN	18	GA 04268-12E4	non-IRS	no	nd	no	no	no
2013	GAWN	19	GA 07270-12E15	non-IRS	H13	no	no	Sbm1	no
2013	GAWN	20	GA 051304-12E28	IRS:1BL	no	no	no	Sbm1	no
2013	GAWN	21	GA 04417-12E33	non-IRS	H13	no	no	Sbm1	Tsn1
2013	GAWN	22	GA 071630-12LE9	non-IRS	no	no	no	no	no
2013	GAWN	23	GA 03185-12LE29	IRS:1BL	no	no	no	Sbm1	no
2013	GAWN	24	GA 04434-12LE28	non-IRS	no	no	no	Sbm1	no
2013	GAWN	25	GA 04244-12LE16	non-IRS	no	no	no	Sbm1	Tsn1
2013	GAWN	26	GA 051754-12LE13	IRS:1BL	H13	no	no	Sbm1	no
2013	GAWN	27	USG 3555	IRS:1BL	no	no	no	Sbm1	no
2013	GAWN	28	Shirley	IRS:1BL	no	no	no	Sbm1	no
2013	GAWN	29	VA10W-96	non-IRS	no	no	no	Sbm1	no
2013	GAWN	30	VA10W-112	non-IRS	H13_het	no	no	Sbm1	Tsn1
2013	GAWN	31	VA10W-118	non-IRS	no	no	no	Sbm1	Tsn1
2013	GAWN	32	VA11W-31	non-IRS	no	no	no	Sbm1	no
2013	GAWN	33	VA11W-106	non-IRS	no	no	no	Sbm1	no
2013	GAWN	34	VA11W-108	non-IRS	no	no	no	Sbm1	no

2013 Soft Red Winter Wheat Cooperative Nursery				Rye Translocations	Hessian Fly		BYDV	SBMV	SnToxA
Year	Nursery	Entry	Sample_Name	IRS	H13	H9	Bdv2/3	Sbm1	Tsn1
2013	GAWN	35	VA11W-165	non-IRS	no	no	no	no	no
2013	GAWN	36	VA11W-195	non-IRS	no	no	no	Sbm1	no
2013	GAWN	37	VA11W-196	IRS:1BL	no	no	no	Sbm1	no
2013	GAWN	38	VA11W-230	non-IRS	H13	nd	no	no	no
2013	GAWN	39	VA11W-278	non-IRS	H13	no	no	Sbm1	no
2013	GAWN	40	VA11W-301	IRS:1BL	no	no	no	Sbm1	no
2013	GAWN	41	AR04001-3	non-IRS	no	no	no	Sbm1	no
2013	GAWN	42	AR04002-3	non-IRS	no	no	no	no	no
2013	GAWN	43	AR04006-1	non-IRS	no	no	no	Sbm1	no
2013	GAWN	44	AR04008-5	non-IRS	no	no	no	Sbm1	no
2013	GAWN	45	AR04015-5	non-IRS	no	no	no	Sbm1	no
2013	GAWN	46	AR04016-4	non-IRS	no	no	no	Sbm1	no
2013	GAWN	47	AR04025-3	non-IRS	no	no	no	no	no
2013	GAWN	48	AR04029-4	non-IRS	no	no	no	no	Tsn1
2013	GAWN	49	AR04029-4-5	non-IRS	no	no	no	no	Tsn1
2013	GAWN	50	AR04032-2	non-IRS	no	no	no	no	no
2013	GAWN	51	AR04084-1-3	non-IRS	no	no	no	Sbm1	no
2013	GAWN	52	AR04119-3	non-IRS	no	no	no	Sbm1	no
2013	GAWN	53	FL04363E-P23	non-IRS	no	no	no	no	no
2013	GAWN	54	LA03200E-23	non-IRS	H13	no	no	Sbm1	no
2013	GAWN	55	LA05027D-26	IRS:1BL	no	no	no	Sbm1	no
2013	GAWN	56	LA05032D-136	non-IRS	no	no	no	no	no
2013	GAWN	57	LA05079F-P01	non-IRS	no	no	no	Sbm1	no
2013	GAWN	58	LA05079F-P05	non-IRS	no	no	no	Sbm1	no
2013	GAWN	59	LA05120F-P12	non-IRS	no	no	no	no	no
2013	GAWN	60	LA06020E-P16	non-IRS	no	no	no	Sbm1	no
2013	GAWN	61	LA06036E-P04	non-IRS	no	no	no	Sbm1	no
2013	GAWN	62	LA06069E-P01	non-IRS	no	no	nd	Sbm1	no
2013	GAWN	63	LA06146E-P04	non-IRS	no	no	no	Sbm1	no
2013	GAWN	64	LA07040D-P01	non-IRS	no	no	no	Sbm1	no

2013 Soft Red Winter Wheat Cooperative Nursery				Glutenin alleles			Mill Quality
Year	Nursery	Entry	Sample_Name	Glu-B1	Glu-D1	Glu-A1	Sucrose_Synthase
2013	Mason Dixon	1	Pioneer 26R15	no	5+10	Ax2*	no
2013	Mason Dixon	2	Branson	no	2+12	Ax2*	no
2013	Mason Dixon	3	Shirley	no	2+12	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	4	SS 8700	no	5+10	Ax2*	no
2013	Mason Dixon	5	VA10W-119	no	2+12	Ax2*	no
2013	Mason Dixon	6	VA10W-28	no	5+10	Ax1_or_null	no
2013	Mason Dixon	7	VA10W-123	no	2+12	Ax2*	no
2013	Mason Dixon	8	VA10W-140	no	het	Ax2*	no
2013	Mason Dixon	9	VA10W-42	no	2+12	Ax2*	no
2013	Mason Dixon	10	VA10W-96	no	2+12	Ax2*	no
2013	Mason Dixon	11	VA10W-112	no	2+12	Ax2*	no
2013	Mason Dixon	12	VA10W-118	no	2+12	Ax2*	no
2013	Mason Dixon	13	VA10W-126	no	2+12	Ax2*	no
2013	Mason Dixon	14	VA08W-672	no	5+10	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	15	VA10W-669	no	het	Ax1_or_null	no
2013	Mason Dixon	16	VA11W-31	no	2+12	Ax2*	no
2013	Mason Dixon	17	VA11W-106	no	2+12	Ax2*	no
2013	Mason Dixon	18	VA11W-108	no	2+12	Ax2*	no
2013	Mason Dixon	19	VA11W-165	no	2+12	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	20	VA11W-195	no	2+12	Ax2*	TaSus2-2B
2013	Mason Dixon	21	VA11W-196	no	2+12	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	22	VA11W-230	no	5+10	Ax2*	no
2013	Mason Dixon	23	VA11W-278	no	2+12	Ax2*	TaSus2-2B_het
2013	Mason Dixon	24	VA11W-301	no	2+12	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	25	MD05W10208-12-6	no	2+12	Ax2*	no
2013	Mason Dixon	26	MD05W10208-12-7	no	2+12	Ax2*	no
2013	Mason Dixon	27	MD05W10208-12-12	no	5+10	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	28	MD05W10208-12-14	no	5+10	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	29	MD05W10208-12-16	no	5+10	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	30	MD05W56-12-5	no	5+10	Ax1_or_null	no
2013	Mason Dixon	31	MD06W165-12-1	no	2+12	Ax2*	no
2013	Mason Dixon	32	MD06W165-12-3	no	2+12	Ax2*	no
2013	Mason Dixon	33	MDC07026-12-10	no	2+12	Ax2*	no
2013	Mason Dixon	34	MDC07026-12-30	no	2+12	Ax2*	no
2013	Mason Dixon	35	MDC07026-H2-7-12-9	no	2+12	Ax2*	no
2013	Mason Dixon	36	MDC07026-H2-7-12-21	no	2+12	Ax2*	no
2013	Mason Dixon	37	MDC07026-12-42	no	2+12	Ax2*	no
2013	Mason Dixon	38	MD06W146A-12-1	no	2+12	Ax2*	no
2013	Mason Dixon	39	MD06W404A-12-1	no	2+12	Ax2*	no
2013	Mason Dixon	40	MD07W280-12-3	no	2+12	Ax1_or_null	no
2013	Mason Dixon	41	MD07W280-12-4	Bx7oe	2+12	het	no
2013	Mason Dixon	42	MD04W8-12-1	no	5+10	Ax1_or_null	no
2013	Mason Dixon	43	MD04W8-12-3	no	2+12	Ax1_or_null	no
2013	Mason Dixon	44	MD03W129-12-6	no	5+10	Ax1_or_null	no
2013	Mason Dixon	45	ARS07-0525	no	2+12	Ax2*	TaSus2-2B
2013	Mason Dixon	46	ARS08-0047	no	het	Ax2*	TaSus2-2B_het
2013	Mason Dixon	47	ARS09-061	no	het	het	TaSus2-2B
2013	Mason Dixon	48	ARS09-155	no	2+12	Ax2*	TaSus2-2B
2013	Mason Dixon	49	ARS09-162	no	2+12	Ax2*	no
2013	Mason Dixon	50	ARS09-437	no	het	het	TaSus2-2B_het
2013	Mason Dixon	51	ARS09-692	no	5+10	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	52	ARS09-744	no	2+12	Ax2*	no
2013	Mason Dixon	53	ARS09-750	no	2+12	Ax2*	no
2013	Mason Dixon	54	ARS10-085	no	2+12	Ax2*	TaSus2-2B
2013	Mason Dixon	55	ARS10-094	no	5+10	Ax2*	TaSus2-2B
2013	Mason Dixon	56	ARS10-096	no	5+10	Ax2*	TaSus2-2B
2013	Mason Dixon	57	ARS10-211	no	2+12	Ax2*	no
2013	Mason Dixon	58	ARS10-235	no	2+12	Ax2*	TaSus2-2B

2013 Soft Red Winter Wheat Cooperative Nursery				Glutenin alleles			Mill Quality
Year	Nursery	Entry	Sample_Name	Glu-B1	Glu-D1	Glu-A1	Sucrose_Synthase
2013	Mason Dixon	59	ARS10-470	no	2+12	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	60	KY05C-1140-8-4-1	no	het	het	TaSus2-2B
2013	Mason Dixon	61	KY05C-1140-9-8-5	no	2+12	Ax2*	TaSus2-2B
2013	Mason Dixon	62	KY05C-1142-10-1-1	Bx7oe	2+12	Ax2*	no
2013	Mason Dixon	63	KY05C-1369-14-6-3	Bx7oe	2+12	Ax2*	no
2013	Mason Dixon	64	KY05C-1105-42-20-1	no	5+10	het	no
2013	Mason Dixon	65	KY05C-1105-43-6-1	no	5+10	Ax2*	no
2013	Mason Dixon	66	KY05C-1118-48-20-1	Bx7oe	5+10	Ax2*	no
2013	Mason Dixon	67	KY05C-1126-50-12-1	no	2+12	het	no
2013	Mason Dixon	68	KY05C-1381-77-7-5	no	het	Ax2*	no
2013	Mason Dixon	69	KY05C-1381-77-17-1	Bx7oe_het	het	Ax2*	TaSus2-2B_het
2013	Mason Dixon	70	KY05C-1519-89-1-3	Bx7oe	5+10	Ax2*	no
2013	Mason Dixon	71	KY05C-1713-104-7-3	no	het	Ax2*	no
2013	Mason Dixon	72	KY05C-1713-107-13-1	no	5+10	Ax2*	no
2013	Mason Dixon	73	KY05C-1717-115-3-1	no	2+12	Ax1_or_null	no
2013	Mason Dixon	74	KY05C-1719-119-12-1	no	2+12	Ax1_or_null	TaSus2-2B
2013	Mason Dixon	75	KY05C-1719-121-8-3	no	2+12	Ax2*	TaSus2-2B_het
2013	Mason Dixon	76	KY05C-1112-127-18-5	no	2+12	Ax1_or_null	no
2013	Mason Dixon	77	KY05C-1121-130-4-5	Bx7oe_het	2+12	Ax2*	no
2013	Mason Dixon	78	KY05C-1121-130-5-1	Bx7oe_het	het	Ax2*	no
2013	Mason Dixon	79	KY05C-1121-131-3-3	no	5+10	Ax2*	no
2013	GAWN	1	NC09-21916 (A6)	no	5+10	Ax2*	no
2013	GAWN	2	NC09-20036	no	het	Ax1_or_null	TaSus2-2B
2013	GAWN	3	NC09-20986 (Fhb1)	no	2+12	Ax2*	no
2013	GAWN	4	NC10-23407	Bx7oe_het	het	Ax1_or_null	TaSus2-2B
2013	GAWN	5	NC10-23730	no	5+10	Ax2*	no
2013	GAWN	6	NC10-23663 (Bdv2)	no	5+10	Ax2*	TaSus2-2B
2013	GAWN	7	NC10-23720	no	2+12	Ax2*	TaSus2-2B
2013	GAWN	8	NC10-22592	no	2+12	Ax2*	TaSus2-2B
2013	GAWN	9	NC10-25196	no	2+12	Ax2*	no
2013	GAWN	10	NC8170-4-3 (Fhb1)	no	5+10	Ax2*	no
2013	GAWN	11	NC10-22614	no	2+12	Ax2*	TaSus2-2B
2013	GAWN	12	NC10-22642	no	2+12	Ax1_or_null	TaSus2-2B
2013	GAWN	13	AGS2060	no	5+10	Ax2*	TaSus2-2B
2013	GAWN	14	SS8641	no	2+12	Ax2*	no
2013	GAWN	15	GA 03564-12E6	no	5+10	Ax2*	no
2013	GAWN	16	GA 05304-12E35	no	2+12	Ax2*	no
2013	GAWN	17	GA 041272-12E42	no	2+12	Ax2*	no
2013	GAWN	18	GA 04268-12E4	no	2+12	Ax1_or_null	no
2013	GAWN	19	GA 07270-12E15	Bx7oe	5+10	Ax1_or_null	TaSus2-2B
2013	GAWN	20	GA 051304-12E28	no	2+12	het	TaSus2-2B
2013	GAWN	21	GA 04417-12E33	no	2+12	Ax2*	no
2013	GAWN	22	GA 071630-12LE9	no	5+10	Ax2*	no
2013	GAWN	23	GA 03185-12LE29	no	5+10	Ax1_or_null	no
2013	GAWN	24	GA 04434-12LE28	no	2+12	Ax2*	no
2013	GAWN	25	GA 04244-12LE16	no	5+10	Ax2*	no
2013	GAWN	26	GA 051754-12LE13	no	5+10	Ax2*	no
2013	GAWN	27	USG 3555	no	2+12	Ax2*	TaSus2-2B
2013	GAWN	28	Shirley	no	2+12	Ax1_or_null	TaSus2-2B
2013	GAWN	29	VA10W-96	no	2+12	Ax2*	no
2013	GAWN	30	VA10W-112	no	2+12	Ax2*	no
2013	GAWN	31	VA10W-118	no	2+12	Ax2*	no
2013	GAWN	32	VA11W-31	no	2+12	Ax2*	no
2013	GAWN	33	VA11W-106	no	nd	Ax2*	no
2013	GAWN	34	VA11W-108	no	2+12	Ax2*	no

2013 Soft Red Winter Wheat Cooperative Nursery				Glutenin alleles			Mill Quality
Year	Nursery	Entry	Sample_Name	Glu-B1	Glu-D1	Glu-A1	Sucrose_Synthase
2013	GAWN	35	VA11W-165	no	2+12	Ax1_or_null	TaSus2-2B
2013	GAWN	36	VA11W-195	no	2+12	Ax2*	TaSus2-2B
2013	GAWN	37	VA11W-196	no	2+12	Ax1_or_null	TaSus2-2B
2013	GAWN	38	VA11W-230	no	5+10	Ax2*	no
2013	GAWN	39	VA11W-278	no	2+12	Ax2*	TaSus2-2B_het
2013	GAWN	40	VA11W-301	no	2+12	Ax1_or_null	TaSus2-2B
2013	GAWN	41	AR04001-3	no	2+12	Ax1_or_null	no
2013	GAWN	42	AR04002-3	no	2+12	Ax1_or_null	no
2013	GAWN	43	AR04006-1	no	2+12	Ax2*	no
2013	GAWN	44	AR04008-5	no	2+12	Ax1_or_null	no
2013	GAWN	45	AR04015-5	no	5+10	Ax2*	no
2013	GAWN	46	AR04016-4	no	5+10	Ax2*	no
2013	GAWN	47	AR04025-3	no	2+12	Ax2*	no
2013	GAWN	48	AR04029-4	no	2+12	Ax2*	no
2013	GAWN	49	AR04029-4-5	no	2+12	Ax2*	no
2013	GAWN	50	AR04032-2	no	2+12	Ax2*	no
2013	GAWN	51	AR04084-1-3	no	2+12	Ax2*	no
2013	GAWN	52	AR04119-3	no	5+10	Ax2*	TaSus2-2B
2013	GAWN	53	FL04363E-P23	Bx7oe	2+12	nd	no
2013	GAWN	54	LA03200E-23	Bx7oe	2+12	Ax2*	no
2013	GAWN	55	LA05027D-26	no	5+10	Ax2*	TaSus2-2B
2013	GAWN	56	LA05032D-136	no	2+12	Ax2*	no
2013	GAWN	57	LA05079F-P01	no	2+12	Ax1_or_null	no
2013	GAWN	58	LA05079F-P05	no	2+12	Ax1_or_null	no
2013	GAWN	59	LA05120F-P12	no	2+12	Ax2*	no
2013	GAWN	60	LA06020E-P16	no	2+12	Ax2*	no
2013	GAWN	61	LA06036E-P04	no	5+10	Ax2*	TaSus2-2B
2013	GAWN	62	LA06069E-P01	no	2+12	Ax1_or_null	no
2013	GAWN	63	LA06146E-P04	no	5+10	Ax2*	no
2013	GAWN	64	LA07040D-P01	no	2+12	Ax2*	no

2013 Soft Red Winter Wheat Cooperative Nursery

Kernel Color genes

Year	Nursery	Entry	Sample_Name	Tamby10-A1	Tamby10_Nor17	Tamby10-B1	Tamby10-D1	Combined_Color
2013	Mason Dixon	1	Pioneer 26R15	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	2	Branson	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	3	Shirley	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	4	SS 8700	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	5	VA10W-119	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	6	VA10W-28	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	7	VA10W-123	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	8	VA10W-140	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	9	VA10W-42	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	10	VA10W-96	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	11	VA10W-112	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	12	VA10W-118	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	13	VA10W-126	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	14	VA08W-672	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	15	VA10W-669	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	16	VA11W-31	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	17	VA11W-106	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	18	VA11W-108	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	19	VA11W-165	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	20	VA11W-195	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	21	VA11W-196	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	22	VA11W-230	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	23	VA11W-278	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	24	VA11W-301	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	25	MD05W10208-12-6	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	26	MD05W10208-12-7	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	27	MD05W10208-12-12	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	28	MD05W10208-12-14	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	29	MD05W10208-12-16	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	30	MD05W56-12-5	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	31	MD06W165-12-1	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	32	MD06W165-12-3	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	33	MDC07026-12-10	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	34	MDC07026-12-30	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	35	MDC07026-H2-7-12-9	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	36	MDC07026-H2-7-12-21	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	37	MDC07026-12-42	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	38	MD06W146A-12-1	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	39	MD06W404A-12-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	40	MD07W280-12-3	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	41	MD07W280-12-4	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	42	MD04W8-12-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	43	MD04W8-12-3	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	Mason Dixon	44	MD03W129-12-6	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	45	ARS07-0525	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	46	ARS08-0047	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	47	ARS09-061	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	48	ARS09-155	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	49	ARS09-162	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	50	ARS09-437	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	51	ARS09-692	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	52	ARS09-744	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	53	ARS09-750	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	54	ARS10-085	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	Mason Dixon	55	ARS10-094	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	Mason Dixon	56	ARS10-096	r-A1_het	R-A1	R-B1	R-D1	Rr RR RR
2013	Mason Dixon	57	ARS10-211	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	58	ARS10-235	r-A1_white	R-A1	R-B1	R-D1	rr RR RR

2013 Soft Red Winter Wheat Cooperative Nursery

Kernel Color genes

Year	Nursery	Entry	Sample_Name	Tamby10-A1	Tamby10_Nor17	Tamby10-B1	Tamby10-D1	Combined_Color
2013	Mason Dixon	59	ARS10-470	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	60	KY05C-1140-8-4-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	61	KY05C-1140-9-8-5	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	62	KY05C-1142-10-1-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	63	KY05C-1369-14-6-3	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	64	KY05C-1105-42-20-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	65	KY05C-1105-43-6-1	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	66	KY05C-1118-48-20-1	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	67	KY05C-1126-50-12-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	68	KY05C-1131-77-7-5	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	69	KY05C-1381-77-17-1	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	Mason Dixon	70	KY05C-1519-89-1-3	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	71	KY05C-1713-104-7-3	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	Mason Dixon	72	KY05C-1713-107-13-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	73	KY05C-1717-115-3-1	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	Mason Dixon	74	KY05C-1719-119-12-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	75	KY05C-1719-121-8-3	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	76	KY05C-1112-127-18-5	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	Mason Dixon	77	KY05C-1121-130-4-5	R-A1	R-A1	R-B1	r-D1_white	RR RR rr
2013	Mason Dixon	78	KY05C-1121-130-5-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	Mason Dixon	79	KY05C-1121-131-3-3	R-A1	R-A1	R-B1	r-D1_white	RR RR rr
2013	GAWN	1	NC09-21916 (A6)	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	2	NC09-20036	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	3	NC09-20986 (Fhb1)	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	4	NC10-23407	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	5	NC10-23730	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	6	NC10-23663 (Bdv2)	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	7	NC10-23720	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	8	NC10-22592	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	GAWN	9	NC10-25196	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	10	NC8170-4-3 (Fhb1)	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	11	NC10-22614	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	12	NC10-22642	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	13	AGS2060	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	14	SS8641	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	15	GA 03564-12E6	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	16	GA 05304-12E35	R-A1	R-A1	R-B1	r-D1_white	RR RR rr
2013	GAWN	17	GA 041272-12E42	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	18	GA 04268-12E4	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	19	GA 07270-12E15	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	20	GA 051304-12E28	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	21	GA 04417-12E33	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	22	GA 071630-12LE9	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	23	GA 03185-12LE29	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	GAWN	24	GA 04434-12LE28	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	25	GA 04244-12LE16	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	26	GA 051754-12LE13	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	GAWN	27	USG 3555	R-A1	R-A1	R-B1	r-D1_white	RR RR rr
2013	GAWN	28	Shirley	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	29	VA10W-96	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	30	VA10W-112	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	GAWN	31	VA10W-118	r-A1_white	R-A1	r-B1_white	R-D1	rr rr RR
2013	GAWN	32	VA11W-31	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	33	VA11W-106	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	34	VA11W-108	R-A1	R-A1	R-B1	R-D1	RR RR RR

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Kernel Color genes

Year	Nursery	Entry	Sample_Name	Tamby10-A1	Tamby10_Nor17	Tamby10-B1	Tamby10-D1	Combined_Color
2013	GAWN	35	VA11W-165	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	36	VA11W-195	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	37	VA11W-196	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	38	VA11W-230	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	39	VA11W-278	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	40	VA11W-301	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	41	AR04001-3	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	42	AR04002-3	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	43	AR04006-1	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	44	AR04008-5	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	45	AR04015-5	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	GAWN	46	AR04016-4	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	GAWN	47	AR04025-3	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	48	AR04029-4	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	GAWN	49	AR04029-4-5	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	GAWN	50	AR04032-2	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	51	AR04084-1-3	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	52	AR04119-3	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	53	FL04363E-P23	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	GAWN	54	LA03200E-23	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	55	LA05027D-26	R-A1	R-A1	r-B1_white	r-D1_white	RR rr rr
2013	GAWN	56	LA05032D-136	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	GAWN	57	LA05079F-P01	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	58	LA05079F-P05	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	59	LA05120F-P12	r-A1_white	R-A1	R-B1	R-D1	rr RR RR
2013	GAWN	60	LA06020E-P16	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	61	LA06036E-P04	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	62	LA06069E-P01	R-A1	R-A1	R-B1	R-D1	RR RR RR
2013	GAWN	63	LA06146E-P04	R-A1	R-A1	r-B1_white	R-D1	RR rr RR
2013	GAWN	64	LA07040D-P01	R-A1	R-A1	R-B1	r-D1_white	RR RR rr