

2012

Marker Reports for all Alleles

Soft Red Winter Wheat Cooperative Nurseries

**5-State Advanced & Preliminary
Mason-Dixon
Gulf Atlantic Wheat 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 Soft Red Winter Wheat Cooperative Nursery

Year	Nursery	Entry	Sample Name	Pedigree	Plant Source
2012	5-State Adv	1	MO080584		
2012	5-State Adv	2	MO081163		
2012	5-State Adv	3	MO081537		
2012	5-State Adv	4	MO100539		
2012	5-State Adv	5	Milton		
2012	5-State Adv	6	IL07-4415		
2012	5-State Adv	7	IL07-19334		
2012	5-State Adv	8	IL07-21847		
2012	5-State Adv	9	IL07-24841		
2012	5-State Adv	10	IL00-8530		
2012	5-State Adv	11	4606RA1-1-7-1-6		
2012	5-State Adv	12	0537A1-3-12		
2012	5-State Adv	13	0566A1-3-1-67		
2012	5-State Adv	14	05247A1-7-3-120		
2012	5-State Adv	15	0762A1-2-8		
2012	5-State Adv	16	OH08-133-25		
2012	5-State Adv	17	OH08-172-42		
2012	5-State Adv	18	OH08-269-58		
2012	5-State Adv	19	OH07-166-41		
2012	5-State Adv	20	Bromfield		
2012	5-State Adv	21	KY03C-1195-10-1-5		
2012	5-State Adv	22	KY03C-2309-25-17-5		
2012	5-State Adv	23	KY04C-2006-41-1-1		
2012	5-State Adv	24	KY04C-3006-14-3		
2012	5-State Adv	25	Pembroke		
2012	5-State Pre	1	MO081280		
2012	5-State Pre	2	MO100265		
2012	5-State Pre	3	MO100745		
2012	5-State Pre	4	MO090581		
2012	5-State Pre	5	Milton		
2012	5-State Pre	6	IL07-20728		
2012	5-State Pre	7	IL07-20743		
2012	5-State Pre	8	IL08-8844		
2012	5-State Pre	9	IL08-33373		
2012	5-State Pre	10	IL00-8530		
2012	5-State Pre	11	P0566A1-3-1-65		
2012	5-State Pre	12	05247A1-7-3-27		
2012	5-State Pre	13	05251A1-1-136-9-5		
2012	5-State Pre	14	P07287RA1-14		
2012	5-State Pre	15	P04606RA1-7-1		
2012	5-State Pre	16	OH09-101-35		
2012	5-State Pre	17	OH09-159-16		
2012	5-State Pre	18	OH09-159-77		

2012 Soft Red Winter Wheat Cooperative Nursery

Year	Nursery	Entry	Sample Name	Pedigree	Plant Source
2012	5-State Pre	19	OH09-221-75		
2012	5-State Pre	20	Malabar		
2012	5-State Pre	21	KY05C-1007-2-12-5		
2012	5-State Pre	22	KY05C-1105-42-20-1		
2012	5-State Pre	23	KY05C-1617-17-17-3		
2012	5-State Pre	24	KY06C1003-139-8-3		
2012	5-State Pre	25	Pembroke		
2012	Mason-Dixon	1	Pioneer 26R15		11WV-Inc
2012	Mason-Dixon	2	Branson	M00-3701	11WV-Inc
2012	Mason-Dixon	3	Shirley	VA03W-409 = VA94-52-25 / CK9835 // SISSON"S"	11WV-Inc
2012	Mason-Dixon	4	SS 8700	SS EXP8700	11WV-Inc
2012	Mason-Dixon	5	VA06W-412	TRIBUTE / AGS2000 // VAN99W-20	11WV-Inc
2012	Mason-Dixon	6	VA07W-415	VA98W-895 / GA881130LE5 // VA98W-627RS	11WV-Inc
2012	Mason-Dixon	7	VA08W-294	SS 520 (VA96W-158) / VA99W-188 // TRIBUTE	11WV-Inc
2012	Mason-Dixon	8	VA09W-69	SS 520 (VA96W-158) / VA99W-188 // TRIBUTE	11WV-Inc
2012	Mason-Dixon	9	VA09W-73	SS 520 (VA96W-158) / VA99W-188 // TRIBUTE	11WV-Inc
2012	Mason-Dixon	10	VA09W-75	SS 520 (VA96W-158) / VA99W-188 // TRIBUTE	11WV-Inc
2012	Mason-Dixon	11	VA09W-46	GF921221E16 / McCormick"S" // VA99W-200	11WV-Inc
2012	Mason-Dixon	12	VA09W-51	GF921221E16 / McCormick"S" // VA99W-200	11WV-Inc
2012	Mason-Dixon	13	VA09W-52	GF921221E16 / McCormick"S" // VA99W-200	11WV-Inc
2012	Mason-Dixon	14	VA09W-110	USG 3592 (GA931241E16) / VA01W-303	11WV-Inc
2012	Mason-Dixon	15	VA09W-112	USG 3592 (GA931241E16) / VA01W-303	11WV-Inc
2012	Mason-Dixon	16	VA09W-114	USG 3592 (GA931241E16) / VA01W-303	11WV-Inc
2012	Mason-Dixon	17	VA09W-188WS	PIONEER 25W60 // PION 25W33 / VAN98W-170WS	11WV-Inc
2012	Mason-Dixon	18	VA10W-112	KY97C-0540-04 / GF951079-2E31	11WV-Inc
2012	Mason-Dixon	19	VA10W-118	KY97C-0540-04 / GF951079-2E31	11WV-Inc
2012	Mason-Dixon	20	VA10W-123	PIONEER 26R47 / GF951079-2E31	11WV-Inc
2012	Mason-Dixon	21	VA10W-125	PIONEER 26R47 / JAMESTOWN	11WV-Inc
2012	Mason-Dixon	22	VA10W-140	VA01W-210 / SS 520 (VA96W-158) // TRIBUTE	11WV-Inc
2012	Mason-Dixon	23	VA08W-613	FREEDOM / NEUSE"S" // VA98W-688	11WV-Inc
2012	Mason-Dixon	24	VA10W-663	P97397B1-4-5 / McCORMICK // COKER 9511	11WV-Inc
2012	Mason-Dixon	25	MD05W10208-11-3	Tribute/25R42//Chesapeake	11CM-PW
2012	Mason-Dixon	26	MD05W10208-11-6	Tribute/25R42//Chesapeake	11CM-PW
2012	Mason-Dixon	27	MD05W10208-11-7	Tribute/25R42//Chesapeake	11CM-PW
2012	Mason-Dixon	28	MD05W1317-11-3	Choptank/25R42//Dominion	11CM-PW
2012	Mason-Dixon	29	MD05W1317-11-5	Choptank/25R42//Dominion	11CM-PW
2012	Mason-Dixon	30	MD05W1292-11-4	Neuse/25R42//Dominion	11CM-PW
2012	Mason-Dixon	31	MD04W1197-11-7	KY96C-0768-2/PI612546//Sx1411/McCormick	11CM-PW
2012	Mason-Dixon	32	MD05W479-B-11-3	26R61/25R42//Chesapeake	11CM-PW
2012	Mason-Dixon	33	MD04W249-11-2	MV8-29/25R42	11CM-PW
2012	Mason-Dixon	34	MD04W249-11-5	MV8-29/25R42	11CM-PW
2012	Mason-Dixon	35	MD04W249-11-7	MV8-29/25R42	11CM-PW
2012	Mason-Dixon	36	MD04W249-11-12	MV8-29/25R42	11CM-PW

2012 Soft Red Winter Wheat Cooperative Nursery

Year	Nursery	Entry	Sample Name	Pedigree	Plant Source
2012	Mason-Dixon	37	MD04W249-11-13	MV8-29/25R42	11CM-PW
2012	Mason-Dixon	38	MD04W249-11-16	MV8-29/25R42	11CM-PW
2012	Mason-Dixon	39	MD03W61-11-2	25R42/Chesapeake	11CM-PW
2012	Mason-Dixon	40	MD03W61-11-3	25R42/Chesapeake	11CM-PW
2012	Mason-Dixon	41	MD07W272-11-5	VA02W713//USG3555/25R42	11CM-PW
2012	Mason-Dixon	42	MD07W419UM5-11-11	USG3209//SS8641/25R42	11CM-PW
2012	Mason-Dixon	43	MD07W419UM5-11-12	USG3209//SS8641/25R42	11CM-PW
2012	Mason-Dixon	44	MD04W1197-11-13	KY96C-0768-2/PI612546//Sx1411/McCormick	11CM-PW
2012	Mason-Dixon	45	KY03C-2047-06	Roane/McCormick	MX1
2012	Mason-Dixon	46	KY03C-2047-02	Roane/McCormick	MX1
2012	Mason-Dixon	47	KY03C-1221-01	25R18/McCormick//KY96C-0059-21	MX1
2012	Mason-Dixon	48	KY03C-1221-06	25R18/McCormick//KY96C-0059-21	MX1
2012	Mason-Dixon	49	KY04C-2151-40	25R18/VA01W-476	MX2
2012	Mason-Dixon	50	KY04C-2151-41	25R18/VA01W-476	MX2
2012	Mason-Dixon	51	KY03C-2314-08	KY93C-1238-17-1/KY94C-0325-40-2	MX2
2012	Mason-Dixon	52	KY05C-1381-77-7-5	KY93C-1238-17-5/CG 514W//KY96C-0769-7-1	PT1
2012	Mason-Dixon	53	KY04C-2004-1-2-1	Roane/Allegiance	AT1
2012	Mason-Dixon	54	KY04C-2004-1-1-3	Roane/Allegiance	AT1
2012	Mason-Dixon	55	KY04C-1128-4-13-3	SX1411/NC98-26192//25R78	AT1
2012	Mason-Dixon	56	KY04C-2024-1-14-3	VA97W-375ws/KY93C-1238-17-1	AT1
2012	Mason-Dixon	57	KY04C-1027-6-9-1	McCormick/VA01W-476//SX 1411/25R78	AT1
2012	Mason-Dixon	58	KY03C-1195-10-2-5	KY92C-0010-17//25R18/KY92C-0017-17	AT2
2012	Mason-Dixon	59	KY03C-1224-15-20-1	25R18/VA87W-375ws//KY96C-0767-1	AT2
2012	Mason-Dixon	60	KY04C-2031-29-7-3	Truman/VA97W-375ws	AT3
2012	Mason-Dixon	61	KY04C-1047-35-9-1	NC98-26192/93C-1238-17-2//KY93C-0876-66 /KY93C-1238-17-4	AT3
2012	Mason-Dixon	62	KY03C-2309-25-17-5	KY93C-1238-17-1/25R18	AT3
2012	Mason-Dixon	63	KY04C-3006-33-14-3	KY93C-0004-22-1 / Tribute	AT3
2012	Mason-Dixon	64	KY03C-1002-02	25W33/25W60//25W33/KY90C-042-37-1	Super 20
2012	Mason-Dixon	65	ARS07-0245	FL9567/TX99D4628	MDX11
2012	Mason-Dixon	66	ARS07-1179	Trego/NC98-26143	MDX11
2012	Mason-Dixon	67	ARS07-1227	McCormick/Trego	MDX11
2012	Mason-Dixon	68	ARS08-0047	AWD99*5725/WX02ARS086	MDX11
2012	Mason-Dixon	69	ARS07-0542	GA961565-27-6/NC98-26143	SA11
2012	Mason-Dixon	70	ARS09-052	FL9547/NC00-14622	SA11
2012	Mason-Dixon	71	ARS09-155	GA951395-10-7/TX98D3447	SA11
2012	Mason-Dixon	72	ARS09-162	GA961565-27-6/LA95283CA-78-1-2	SA11
2012	Mason-Dixon	73	ARS09-458	FL9547/TX99D4628	SB11
2012	Mason-Dixon	74	ARS09-572	GA961662-1-7/NC99-13025	SB11
2012	Mason-Dixon	75	ARS09-648	LA95298BU22-1/SC981395	SB11
2012	Mason-Dixon	76	ARS09-713	VA01W-205/TX99D4628	SB11
2012	Mason-Dixon	77	ARS09-750	GA95652-16-9/WX03ARS0254	SB11
2012	Mason-Dixon	78	ARS09-768	LA9528CA78-1-2/WX03ARS0170	SB11
2012	Mason-Dixon	79	ARS09-806	VA01W-148/AGS2000	SB11

2012 Soft Red Winter Wheat Cooperative Nursery

Year	Nursery	Entry	Sample Name	Pedigree	Plant Source
2012	GAWN	1001	NC09-19946	NC00-16203 // P26R24 / NC96-13965	
2012	GAWN	1002	AR01039-4-1	AR800-1-3-1/AR839-28-1-2	
2012	GAWN	1003	NC08-140 (Bdv2)	P26R61 / TC14Spear 2289B // NC00-16203	
2012	GAWN	1004	AR01177-2-1	AR92145E8-7-7-1-0/AR9035-4-2	
2012	GAWN	1005	LA05130D-P5	LA98149BUB-3-4-B(FL931339AS/P26R61)/SS8641	
2012	GAWN	1006	LA03200E-2	NC98-24710/PIO26R61	
2012	GAWN	1007	SCLA1084C1	NC98-24710(HFL)/AGS2000	
2012	GAWN	1008	AR01044-1-1	AR800-1-3-1/AR92145E8-7-7-1-0	
2012	GAWN	1009	AR01058-1	AR839-27-1-3/ROANE	
2012	GAWN	1010	AR00179-4-1	IL94-6727 x Roane	
2012	GAWN	1011	VA09W-69	SS 520(VA96W-158) / VA99W-188 // TRIBUTE	
2012	GAWN	1012	VA09W-114	USG 3592 (GA931241E16) / VA01W-303	
2012	GAWN	1013	SCLA1084A1	NC98-24710(HFL)/AGS2000	
2012	GAWN	1014	SCLA1067A1	KS94U275/AGS2000	
2012	GAWN	1015	GA041293-11LE37	P26R61 / 2*SS 8641	
2012	GAWN	1016	GA041296-11LE39	MCCORMICK / 961591-17-1-5 // 951395-3A31	
2012	GAWN	1017	SCLA1102G1	P26R61/LA841	
2012	GAWN	1018	GA041052-11E51	931233-28-2-2 / USG3592	
2012	GAWN	1019	VA09W-112	USG 3592 (GA931241E16) / VA01W-303	
2012	GAWN	1020	GA041293-11E54	P26R61 / 96229-7-4-4 // 96229-3A41	
2012	GAWN	1021	AR01168-3-1	VA 98W-593/AR839-28-1-2	
2012	GAWN	1022	NC09-20768	NC00-16203 // P26R24 / NC96-13965	
2012	GAWN	1023	SCLA1110P1	P26R61/NC98-24710	
2012	GAWN	1024	AR01205-1-1	PI155271/ARLA85411	
2012	GAWN	1025	LA06052E-P07	SS8641/LA95135	
2012	GAWN	1026	VA07W-415	VA98W-895 / GA881130LE5 // VA98W-627RS	
2012	GAWN	1027	NC09-19966	NC00-16203 // P26R24 / NC96-13965	
2012	GAWN	1028	VA10W-663	P97397B1-4-5 / McCORMICK // COKER 9511	
2012	GAWN	1029	LA04041D-85	AGS2060/GA951079A25	
2012	GAWN	1030	FL04363E-P19	FL03155 F1(VA01W-112/FL9547)/AGS 2060	
2012	GAWN	1031	SCLA1102H1	P26R61/LA841	
2012	GAWN	1032	AR01209-2-1	AGS2000/PI531193 (JGI)	
2012	GAWN	1033	VA09W-110	USG 3592 (GA931241E16) / VA01W-303	
2012	GAWN	1034	VA10W-125	PIIONEER 25R47 / JAMESTOWN	
2012	GAWN	1035	VA10W-140	VA01W-210 / SS 520 (VA96W-158) // TRIBUTE	
2012	GAWN	1036	NC09-20932	Trego / NC99BGTAG11 // NC98-13296W	
2012	GAWN	1037	SCLA1084K1	NC98-24710(HFL)/AGS2000	
2012	GAWN	1038	LA06007E-P04	APCK B02-8443/LA95135	
2012	GAWN	1039	LA05038D-105	SS8641/P26R61	
2012	GAWN	1040	NC09-21256	NC00-16203 // P26R24 / NC96-13965	
2012	GAWN	1041	GA04500-11LE11	97531-2-11 / 011636-G1-G5-G2 (A2000*3 / 93322)	
2012	GAWN	1042	AR01040-4-1	AR800-1-3-1/AR910-12-1	
2012	GAWN	1043	NC09-20765	NC00-16203 // P26R24 / NC96-13965	

2012 Soft Red Winter Wheat Cooperative Nursery

Year	Nursery	Entry	Sample Name	Pedigree	Plant Source
2012	GAWN	1044	SCLA1084B1	NC98-24710(HFL)/AGS2000	
2012	GAWN	1045	GA041323-11E63	95652-2E56 / 961591-3E42	
2012	GAWN	1046	LA05132F-P09	LA98149BUB-3-4-B(FL931339AS/P26R61)/AGS2060	
2012	GAWN	1047	AGS2060	CHECK -	
2012	GAWN	1048	SCLA1030J1	LA94162D157-1(FR93.13/MOREY SIB)/AGS2000	
2012	GAWN	1049	VA10W-123	PIONEER 25R47 / GF951079-2E31	
2012	GAWN	1050	SS8641	CHECK -	
2012	GAWN	1051	AR00380-3-3	AR97054 x 97201	
2012	GAWN	1052	GA04444-11LE25	96229-3A41 / 951395-3E27	
2012	GAWN	1053	NC09-22206	NC00-16203 // P26R24 / NC96-13965	
2012	GAWN	1054	NC09-21953	NC99-18235 / NC00-16203 // Dominion	
2012	GAWN	1055	VA08W-613	FREEDOM / NEUSE"S" // VA98W-688	
2012	GAWN	1056	NC09-21251	NC00-16203 // P26R24 / NC96-13965	
2012	GAWN	1057	LA05038D-51	SS8641/P26R61	
2012	GAWN	1058	NC09-21230	NC00-16203 // P26R24 / NC96-13965	
2012	GAWN	1059	SCLA1102G3	P26R61/LA841	
2012	GAWN	1060	SHIRLEY	CHECK -	
2012	GAWN	1061	AR01156-2-1	UGA 901146E15/AR839-27-1-3	
2012	GAWN	1062	NC09-22402	NC99-18235 / NC00-16203 // Dominion	
2012	GAWN	1063	GA04417-11E21	961565-2E46 / AGS2485 // 96229-3A41	
2012	GAWN	1064	GA04244-11E1	96229-3A39 / AGS 2000	
2012	GAWN	1065	USG 3555	CHECK -	
2012	GAWN	1066	LA03091E-63	LA97113UC-124-3(CERUGA15//LA85411-D4,FR81-19/SALUDA)/PIO26R61	
2012	GAWN	1067	SCLA1102D1	P26R61/LA841	
2012	GAWN	1068	GA04434-11E44	961565-2E46 / AGS2485 // 96229-3A41	
2012	GAWN	1069	SCLA1110R1	P26R61/NC98-24710	
2012	GAWN	1070	VA09W-46	GF921221E16 / McCormick"S" // VA99W-200	
2012	GAWN	1071	LA04013D-111	LA95135/B990399	
2012	GAWN	1072	LA03045E-4	LA95361CA18-1/LA95176D56-2	
2012	GAWN	1073	VA09W-52	GF921221E16 / McCormick"S" // VA99W-200	
2012	GAWN	1074	GA04510-11LE24	961591-3E42 / 96229-3A41	
2012	GAWN	1075	GA04151-11E26	98302-17-1-4 / SC996284	
2012	GAWN	1076	AR00343-5-1	AR97052 x Roane	

2012 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c
2012	5-State Adv	1	MO080584	Rht-B1b	no	no
2012	5-State Adv	2	MO081163	Rht-B1b	no	no
2012	5-State Adv	3	MO081537	Rht-B1b	no	no
2012	5-State Adv	4	MO100539	Rht-B1b	no	no
2012	5-State Adv	5	Milton	no	Rht-D1b	no
2012	5-State Adv	6	IL07-4415	Rht-B1b	no	no
2012	5-State Adv	7	IL07-19334	Rht-B1b	no	no
2012	5-State Adv	8	IL07-21847	Rht-B1b	no	no
2012	5-State Adv	9	IL07-24841	Rht-B1b	no	no
2012	5-State Adv	10	IL00-8530	Rht-B1b	no	no
2012	5-State Adv	11	4606RA1-1-7-1-6	Rht-B1b	no	no
2012	5-State Adv	12	0537A1-3-12	no	Rht-D1b het	no
2012	5-State Adv	13	0566A1-3-1-67	Rht-B1b	no	no
2012	5-State Adv	14	05247A1-7-3-120	Rht-B1b	no	no
2012	5-State Adv	15	0762A1-2-8	Rht-B1b	no	no
2012	5-State Adv	16	OH08-133-25	no	no	no
2012	5-State Adv	17	OH08-172-42	Rht-B1b	no	no
2012	5-State Adv	18	OH08-269-58	Rht-B1b	no	Rht8c
2012	5-State Adv	19	OH07-166-41	Rht-B1b	no	Rht8c
2012	5-State Adv	20	Bromfield	Rht-B1b	no	no
2012	5-State Adv	21	KY03C-1195-10-1-5	no	no	no
2012	5-State Adv	22	KY03C-2309-25-17-5	no	Rht-D1b het	Rht8c het
2012	5-State Adv	23	KY04C-2006-41-1-1	Rht-B1b	no	Rht8c het
2012	5-State Adv	24	KY04C-3006-14-3	no	Rht-D1b	no
2012	5-State Adv	25	Pembroke	no	Rht-D1b	no
2012	5-State Pre	1	MO081280	Rht-B1b	no	no
2012	5-State Pre	2	MO100265	Rht-B1b	no	no
2012	5-State Pre	3	MO100745	Rht-B1b	no	no
2012	5-State Pre	4	MO090581	Rht-B1b	no	no
2012	5-State Pre	5	Milton	no	Rht-D1b	no
2012	5-State Pre	6	IL07-20728	Rht-B1b	no	no
2012	5-State Pre	7	IL07-20743	no	no	no
2012	5-State Pre	8	IL08-8844	Rht-B1b	no	no
2012	5-State Pre	9	IL08-33373	Rht-B1b	no	no
2012	5-State Pre	10	IL00-8530	Rht-B1b	no	no
2012	5-State Pre	11	P0566A1-3-1-65	Rht-B1b	no	no
2012	5-State Pre	12	05247A1-7-3-27	Rht-B1b	no	no
2012	5-State Pre	13	05251A1-1-136-9-5	Rht-B1b	no	no
2012	5-State Pre	14	P07287RA1-14	Rht-B1b	no	no
2012	5-State Pre	15	P04606RA1-7-1	Rht-B1b	no	no
2012	5-State Pre	16	OH09-101-35	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c
2012	5-State Pre	17	OH09-159-16	no	no	no
2012	5-State Pre	18	OH09-159-77	no	no	no
2012	5-State Pre	19	OH09-221-75	no	no	no
2012	5-State Pre	20	Malabar	Rht-B1b	no	no
2012	5-State Pre	21	KY05C-1007-2-12-5	Rht-B1b	no	Rht8c het
2012	5-State Pre	22	KY05C-1105-42-20-1	Rht-B1b	no	no
2012	5-State Pre	23	KY05C-1617-17-17-3	Rht-B1b	no	no
2012	5-State Pre	24	KY06C1003-139-8-3	Rht-B1b	Rht-D1b het	Rht8c
2012	5-State Pre	25	Pembroke	no	Rht-D1b	no
2012	Mason-Dixon	1	Pioneer 26R15	Rht-B1b	no	no
2012	Mason-Dixon	2	Branson	Rht-B1b	no	no
2012	Mason-Dixon	3	Shirley	Rht-B1b	no	no
2012	Mason-Dixon	4	SS 8700	no	Rht-D1b	no
2012	Mason-Dixon	5	VA06W-412	no	Rht-D1b	no
2012	Mason-Dixon	6	VA07W-415	no	Rht-D1b	no
2012	Mason-Dixon	7	VA08W-294	no	Rht-D1b	no
2012	Mason-Dixon	8	VA09W-69	no	Rht-D1b	no
2012	Mason-Dixon	9	VA09W-73	no	Rht-D1b	no
2012	Mason-Dixon	10	VA09W-75	no	Rht-D1b	no
2012	Mason-Dixon	11	VA09W-46	no	Rht-D1b	no
2012	Mason-Dixon	12	VA09W-51	no	Rht-D1b	no
2012	Mason-Dixon	13	VA09W-52	no	Rht-D1b	no
2012	Mason-Dixon	14	VA09W-110	no	Rht-D1b	no
2012	Mason-Dixon	15	VA09W-112	no	Rht-D1b	no
2012	Mason-Dixon	16	VA09W-114	no	Rht-D1b	no
2012	Mason-Dixon	17	VA09W-188WS	no	Rht-D1b	no
2012	Mason-Dixon	18	VA10W-112	no	Rht-D1b	no
2012	Mason-Dixon	19	VA10W-118	no	Rht-D1b	no
2012	Mason-Dixon	20	VA10W-123	no	Rht-D1b	no
2012	Mason-Dixon	21	VA10W-125	no	Rht-D1b	no
2012	Mason-Dixon	22	VA10W-140	no	Rht-D1b	no
2012	Mason-Dixon	23	VA08W-613	no	Rht-D1b	no
2012	Mason-Dixon	24	VA10W-663	Rht-B1b	no	no
2012	Mason-Dixon	25	MD05W10208-11-3	no	Rht-D1b	no
2012	Mason-Dixon	26	MD05W10208-11-6	no	Rht-D1b	no
2012	Mason-Dixon	27	MD05W10208-11-7	no	Rht-D1b	no
2012	Mason-Dixon	28	MD05W1317-11-3	no	Rht-D1b	no
2012	Mason-Dixon	29	MD05W1317-11-5	no	Rht-D1b	Rht8c
2012	Mason-Dixon	30	MD05W1292-11-4	no	Rht-D1b	no
2012	Mason-Dixon	31	MD04W1197-11-7	no	Rht-D1b	no
2012	Mason-Dixon	32	MD05W479-B-11-3	no	Rht-D1b	no

2012 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c
2012	Mason-Dixon	33	MD04W249-11-2	no	Rht-D1b	no
2012	Mason-Dixon	34	MD04W249-11-5	no	Rht-D1b	no
2012	Mason-Dixon	35	MD04W249-11-7	no	Rht-D1b	no
2012	Mason-Dixon	36	MD04W249-11-12	no	Rht-D1b	no
2012	Mason-Dixon	37	MD04W249-11-13	no	Rht-D1b	no
2012	Mason-Dixon	38	MD04W249-11-16	no	Rht-D1b	no
2012	Mason-Dixon	39	MD03W61-11-2	no	Rht-D1b	no
2012	Mason-Dixon	40	MD03W61-11-3	no	Rht-D1b	no
2012	Mason-Dixon	41	MD07W272-11-5	no	Rht-D1b	no
2012	Mason-Dixon	42	MD07W419UM5-11-11	no	Rht-D1b	no
2012	Mason-Dixon	43	MD07W419UM5-11-12	no	Rht-D1b	no
2012	Mason-Dixon	44	MD04W1197-11-13	nd	Rht-D1b	no
2012	Mason-Dixon	45	KY03C-2047-06	no	Rht-D1b	no
2012	Mason-Dixon	46	KY03C-2047-02	no	Rht-D1b	no
2012	Mason-Dixon	47	KY03C-1221-01	no	Rht-D1b	no
2012	Mason-Dixon	48	KY03C-1221-06	no	Rht-D1b het	no
2012	Mason-Dixon	49	KY04C-2151-40	Rht-B1b het	no	no
2012	Mason-Dixon	50	KY04C-2151-41	no	no	no
2012	Mason-Dixon	51	KY03C-2314-08	Rht-B1b	no	Rht8c
2012	Mason-Dixon	52	KY05C-1381-77-7-5	Rht-B1b	no	no
2012	Mason-Dixon	53	KY04C-2004-1-2-1	no	Rht-D1b	no
2012	Mason-Dixon	54	KY04C-2004-1-1-3	no	Rht-D1b	no
2012	Mason-Dixon	55	KY04C-1128-4-13-3	Rht-B1b	no	no
2012	Mason-Dixon	56	KY04C-2024-1-14-3	Rht-B1b	no	Rht8c het
2012	Mason-Dixon	57	KY04C-1027-6-9-1	Rht-B1b het	no	Rht8c het
2012	Mason-Dixon	58	KY03C-1195-10-2-5	no	no	no
2012	Mason-Dixon	59	KY03C-1224-15-20-1	Rht-B1b	no	no
2012	Mason-Dixon	60	KY04C-2031-29-7-3	Rht-B1b	no	no
2012	Mason-Dixon	61	KY04C-1047-35-9-1	no	Rht-D1b het	no
2012	Mason-Dixon	62	KY03C-2309-25-17-5	Rht-B1b	no	Rht8c
2012	Mason-Dixon	63	KY04C-3006-33-14-3	no	Rht-D1b	no
2012	Mason-Dixon	64	KY03C-1002-02	Rht-B1b	no	no
2012	Mason-Dixon	65	ARS07-0245	no	Rht-D1b	no
2012	Mason-Dixon	66	ARS07-1179	no	Rht-D1b	no
2012	Mason-Dixon	67	ARS07-1227	no	Rht-D1b	no
2012	Mason-Dixon	68	ARS08-0047	Rht-B1b	no	no
2012	Mason-Dixon	69	ARS07-0542	no	Rht-D1b	no
2012	Mason-Dixon	70	ARS09-052	no	Rht-D1b	no
2012	Mason-Dixon	71	ARS09-155	no	Rht-D1b	no
2012	Mason-Dixon	72	ARS09-162	no	Rht-D1b	no
2012	Mason-Dixon	73	ARS09-458	no	Rht-D1b	no

2012 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c
2012	Mason-Dixon	74	ARS09-572	no	Rht-D1b	no
2012	Mason-Dixon	75	ARS09-648	no	Rht-D1b	no
2012	Mason-Dixon	76	ARS09-713	no	Rht-D1b	no
2012	Mason-Dixon	77	ARS09-750	Rht-B1b	no	no
2012	Mason-Dixon	78	ARS09-768	no	Rht-D1b	no
2012	Mason-Dixon	79	ARS09-806	no	Rht-D1b	no
2012	GAWN	1001	NC09-19946	no	Rht-D1b	no
2012	GAWN	1002	AR01039-4-1	Rht-B1b	no	no
2012	GAWN	1003	NC08-140 (Bdv2)	no	Rht-D1b	no
2012	GAWN	1004	AR01177-2-1	no	no	no
2012	GAWN	1005	LA05130D-P5	no	Rht-D1b	no
2012	GAWN	1006	LA03200E-2	no	Rht-D1b	no
2012	GAWN	1007	SCLA1084C1	no	Rht-D1b	Rht8c
2012	GAWN	1008	AR01044-1-1	Rht-B1b	no	no
2012	GAWN	1009	AR01058-1	Rht-B1b het	Rht-D1b het	no
2012	GAWN	1010	AR00179-4-1	Rht-B1b	no	no
2012	GAWN	1011	VA09W-69	no	Rht-D1b	no
2012	GAWN	1012	VA09W-114	no	Rht-D1b	no
2012	GAWN	1013	SCLA1084A1	no	Rht-D1b	Rht8c
2012	GAWN	1014	SCLA1067A1	no	Rht-D1b	no
2012	GAWN	1015	GA041293-11LE37	no	Rht-D1b	no
2012	GAWN	1016	GA041296-11LE39	no	Rht-D1b	no
2012	GAWN	1017	SCLA1102G1	no	Rht-D1b	no
2012	GAWN	1018	GA041052-11E51	no	Rht-D1b	no
2012	GAWN	1019	VA09W-112	no	Rht-D1b	no
2012	GAWN	1020	GA041293-11E54	no	Rht-D1b	no
2012	GAWN	1021	AR01168-3-1	Rht-B1b	no	no
2012	GAWN	1022	NC09-20768	no	Rht-D1b	no
2012	GAWN	1023	SCLA1110P1	no	Rht-D1b	no
2012	GAWN	1024	AR01205-1-1	Rht-B1b	no	no
2012	GAWN	1025	LA06052E-P07	no	Rht-D1b	no
2012	GAWN	1026	VA07W-415	no	Rht-D1b	no
2012	GAWN	1027	NC09-19966	no	Rht-D1b	no
2012	GAWN	1028	VA10W-663	Rht-B1b het	no	no
2012	GAWN	1029	LA04041D-85	no	Rht-D1b	no
2012	GAWN	1030	FL04363E-P19	no	Rht-D1b	no
2012	GAWN	1031	SCLA1102H1	no	Rht-D1b	no
2012	GAWN	1032	AR01209-2-1	Rht-B1b	no	no
2012	GAWN	1033	VA09W-110	no	Rht-D1b	no
2012	GAWN	1034	VA10W-125	no	Rht-D1b	no
2012	GAWN	1035	VA10W-140	no	Rht-D1b	no

2012 Soft Red Winter Wheat Cooperative Nursery				Dwarfing alleles		
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c
2012	GAWN	1036	NC09-20932	Rht-B1b	no	no
2012	GAWN	1037	SCLA1084K1	no	Rht-D1b	no
2012	GAWN	1038	LA06007E-P04	no	Rht-D1b	no
2012	GAWN	1039	LA05038D-105	no	Rht-D1b	no
2012	GAWN	1040	NC09-21256	no	Rht-D1b	no
2012	GAWN	1041	GA04500-11LE11	no	Rht-D1b	no
2012	GAWN	1042	AR01040-4-1	Rht-B1b	no	no
2012	GAWN	1043	NC09-20765	no	Rht-D1b	no
2012	GAWN	1044	SCLA1084B1	no	Rht-D1b	Rht8c
2012	GAWN	1045	GA041323-11E63	no	Rht-D1b	no
2012	GAWN	1046	LA05132F-P09	no	no	no
2012	GAWN	1047	AGS2060	no	no	no
2012	GAWN	1048	SCLA1030J1	no	Rht-D1b	no
2012	GAWN	1049	VA10W-123	no	Rht-D1b	no
2012	GAWN	1050	SS8641	no	Rht-D1b	no
2012	GAWN	1051	AR00380-3-3	Rht-B1b	no	no
2012	GAWN	1052	GA04444-11LE25	no	Rht-D1b	no
2012	GAWN	1053	NC09-22206	no	Rht-D1b	no
2012	GAWN	1054	NC09-21953	no	Rht-D1b	no
2012	GAWN	1055	VA08W-613	no	Rht-D1b	no
2012	GAWN	1056	NC09-21251	no	Rht-D1b	no
2012	GAWN	1057	LA05038D-51	no	Rht-D1b	no
2012	GAWN	1058	NC09-21230	no	Rht-D1b	no
2012	GAWN	1059	SCLA1102G3	nd	Rht-D1b	no
2012	GAWN	1060	SHIRLEY	nd	no	no
2012	GAWN	1061	AR01156-2-1	nd	no	no
2012	GAWN	1062	NC09-22402	no	Rht-D1b	no
2012	GAWN	1063	GA04417-11E21	no	Rht-D1b	no
2012	GAWN	1064	GA04244-11E1	no	Rht-D1b	no
2012	GAWN	1065	USG 3555	no	Rht-D1b	no
2012	GAWN	1066	LA03091E-63	no	Rht-D1b	no
2012	GAWN	1067	SCLA1102D1	no	Rht-D1b	no
2012	GAWN	1068	GA04434-11E44	no	Rht-D1b	no
2012	GAWN	1069	SCLA1110R1	no	Rht-D1b	no
2012	GAWN	1070	VA09W-46	Rht-B1b	Rht-D1b	no
2012	GAWN	1071	LA04013D-111	no	no	no
2012	GAWN	1072	LA03045E-4	Rht-B1b	no	no
2012	GAWN	1073	VA09W-52	no	Rht-D1b	no
2012	GAWN	1074	GA04510-11LE24	no	Rht-D1b	no
2012	GAWN	1075	GA04151-11E26	no	Rht-D1b	no
2012	GAWN	1076	AR00343-5-1	Rht-B1b	no	Rht8c

2012 Soft Red Winter Wheat Cooperative Nursery			Photoperiod Insensitivity alleles			Vernalization alleles		
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy	vrn-A1	vrn-B1
2012	5-State Adv	1	MO080584	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	2	MO081163	no	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Adv	3	MO081537	no	no	no	vrn-A1 long	vrn-B1 het
2012	5-State Adv	4	MO100539	no	no	no	vrn-A1 long	vrn-B1 het
2012	5-State Adv	5	Milton	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	6	IL07-4415	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	7	IL07-19334	no	null	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	8	IL07-21847	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	9	IL07-24841	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	10	IL00-8530	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short
2012	5-State Adv	11	4606RA1-1-7-1-6	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short
2012	5-State Adv	12	0537A1-3-12	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Adv	13	0566A1-3-1-67	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	14	05247A1-7-3-120	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	15	0762A1-2-8	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	5-State Adv	16	OH08-133-25	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	17	OH08-172-42	no	no	no	vrn-A1 long	vrn-B1 het
2012	5-State Adv	18	OH08-269-58	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Adv	19	OH07-166-41	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	20	Bromfield	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	21	KY03C-1195-10-1-5	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	5-State Adv	22	KY03C-2309-25-17-5	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	23	KY04C-2006-41-1-1	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Adv	24	KY04C-3006-14-3	Ppd-D1a insens het	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Adv	25	Pembroke	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	1	MO081280	no	no	no	vrn-A1 long	nd
2012	5-State Pre	2	MO100265	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	3	MO100745	no	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Pre	4	MO090581	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	5	Milton	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	6	IL07-20728	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	7	IL07-20743	no	no	no	vrn-A1 long	vrn-B1 het
2012	5-State Pre	8	IL08-8844	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	9	IL08-33373	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	10	IL00-8530	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	11	P0566A1-3-1-65	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	5-State Pre	12	05247A1-7-3-27	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	13	05251A1-1-136-9-5	no	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 short
2012	5-State Pre	14	P07287RA1-14	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Pre	15	P04606RA1-7-1	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	16	OH09-101-35	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short

2012 Soft Red Winter Wheat Cooperative Nursery			Photoperiod Insensitivity alleles			Vernalization alleles		
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy	vrn-A1	vrn-B1
2012	5-State Pre	17	OH09-159-16	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	18	OH09-159-77	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	19	OH09-221-75	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	5-State Pre	20	Malabar	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	21	KY05C-1007-2-12-5	no	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Pre	22	KY05C-1105-42-20-1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	5-State Pre	23	KY05C-1617-17-17-3	no	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	24	KY06C1003-139-8-3	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	5-State Pre	25	Pembroke	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	1	Pioneer 26R15	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	2	Branson	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	Mason-Dixon	3	Shirley	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	4	SS 8700	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	5	VA06W-412	no	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	6	VA07W-415	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	7	VA08W-294	no	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	8	VA09W-69	no	no	no	vrn-A1 long	vrn-B1 het
2012	Mason-Dixon	9	VA09W-73	no	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	10	VA09W-75	no	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	11	VA09W-46	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 short
2012	Mason-Dixon	12	VA09W-51	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	Mason-Dixon	13	VA09W-52	Ppd-D1a insens	no	no	vrn-A1 het	vrn-B1 long
2012	Mason-Dixon	14	VA09W-110	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	15	VA09W-112	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 het
2012	Mason-Dixon	16	VA09W-114	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	17	VA09W-188WS	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	Mason-Dixon	18	VA10W-112	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	19	VA10W-118	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	20	VA10W-123	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 het
2012	Mason-Dixon	21	VA10W-125	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	22	VA10W-140	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	23	VA08W-613	Ppd-D1a insens	no	no	vrn-A1 het	vrn-B1 short
2012	Mason-Dixon	24	VA10W-663	Ppd-D1a insens	null	no	vrn-A1 short	vrn-B1 long
2012	Mason-Dixon	25	MD05W10208-11-3	no	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	26	MD05W10208-11-6	no	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	27	MD05W10208-11-7	no	no	no	vrn-A1 long	vrn-B1 het
2012	Mason-Dixon	28	MD05W1317-11-3	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	29	MD05W1317-11-5	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	30	MD05W1292-11-4	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	31	MD04W1197-11-7	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	32	MD05W479-B-11-3	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long

2012 Soft Red Winter Wheat Cooperative Nursery				Photoperiod Insensitivity alleles			Vernalization alleles	
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy	vrn-A1	vrn-B1
2012	Mason-Dixon	33	MD04W249-11-2	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	34	MD04W249-11-5	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	35	MD04W249-11-7	Ppd-D1a insens	Ppd-B1 CS insens het	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	36	MD04W249-11-12	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	37	MD04W249-11-13	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	38	MD04W249-11-16	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	39	MD03W61-11-2	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	40	MD03W61-11-3	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	41	MD07W272-11-5	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	Mason-Dixon	42	MD07W419UM5-11-11	no	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	43	MD07W419UM5-11-12	no	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	44	MD04W1197-11-13	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	45	KY03C-2047-06	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	46	KY03C-2047-02	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	47	KY03C-1221-01	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	48	KY03C-1221-06	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	49	KY04C-2151-40	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	50	KY04C-2151-41	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	51	KY03C-2314-08	no	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	52	KY05C-1381-77-7-5	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	53	KY04C-2004-1-2-1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	54	KY04C-2004-1-1-3	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	55	KY04C-1128-4-13-3	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	56	KY04C-2024-1-14-3	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	57	KY04C-1027-6-9-1	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	58	KY03C-1195-10-2-5	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	59	KY03C-1224-15-20-1	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 het
2012	Mason-Dixon	60	KY04C-2031-29-7-3	no	Ppd-B1 CS insens	no	vrn-A1 short	vrn-B1 long
2012	Mason-Dixon	61	KY04C-1047-35-9-1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	62	KY03C-2309-25-17-5	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	63	KY04C-3006-33-14-3	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	64	KY03C-1002-02	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	65	ARS07-0245	no	no	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	66	ARS07-1179	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	67	ARS07-1227	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	68	ARS08-0047	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	69	ARS07-0542	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	70	ARS09-052	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	71	ARS09-155	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	72	ARS09-162	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	73	ARS09-458	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long

2012 Soft Red Winter Wheat Cooperative Nursery				Photoperiod Insensitivity alleles			Vernalization alleles	
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy	vrn-A1	vrn-B1
2012	Mason-Dixon	74	ARS09-572	no	no	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	75	ARS09-648	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 short
2012	Mason-Dixon	76	ARS09-713	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	Mason-Dixon	77	ARS09-750	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	Mason-Dixon	78	ARS09-768	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	Mason-Dixon	79	ARS09-806	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1001	NC09-19946	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1002	AR01039-4-1	Ppd-D1a insens het	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	GAWN	1003	NC08-140 (Bdv2)	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1004	AR01177-2-1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1005	LA05130D-P5	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1006	LA03200E-2	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1007	SCLA1084C1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1008	AR01044-1-1	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 short	vrn-B1 short
2012	GAWN	1009	AR01058-1	no	Ppd-B1 CS insens het	Ppd-B1 S64 insens	vrn-A1 short	vrn-B1 short
2012	GAWN	1010	AR00179-4-1	no	no	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1011	VA09W-69	no	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1012	VA09W-114	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1013	SCLA1084A1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1014	SCLA1067A1	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 short
2012	GAWN	1015	GA041293-11LE37	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1016	GA041296-11LE39	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1017	SCLA1102G1	Ppd-D1a insens	no	Ppd-B1 S64 insens	nd	vrn-B1 short
2012	GAWN	1018	GA041052-11E51	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1019	VA09W-112	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1020	GA041293-11E54	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1021	AR01168-3-1	no	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1022	NC09-20768	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1023	SCLA1110P1	no	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1024	AR01205-1-1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1025	LA06052E-P07	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1026	VA07W-415	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1027	NC09-19966	Ppd-D1a insens het	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1028	VA10W-663	Ppd-D1a insens	null	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1029	LA04041D-85	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	GAWN	1030	FL04363E-P19	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1031	SCLA1102H1	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1032	AR01209-2-1	no	no	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1033	VA09W-110	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1034	VA10W-125	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	GAWN	1035	VA10W-140	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long

2012 Soft Red Winter Wheat Cooperative Nursery				Photoperiod Insensitivity alleles			Vernalization alleles	
Year	Nursery	Entry	Sample Name	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy	vrn-A1	vrn-B1
2012	GAWN	1036	NC09-20932	no	no	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1037	SCLA1084K1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1038	LA06007E-P04	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1039	LA05038D-105	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 het
2012	GAWN	1040	NC09-21256	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1041	GA04500-11LE11	no	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 short
2012	GAWN	1042	AR01040-4-1	no	no	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1043	NC09-20765	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1044	SCLA1084B1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1045	GA041323-11E63	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 het
2012	GAWN	1046	LA05132F-P09	Ppd-D1a insens	Ppd-B1 CS insens	no	vrn-A1 short	vrn-B1 short
2012	GAWN	1047	AGS2060	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1048	SCLA1030J1	no	Ppd-B1 CS insens	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1049	VA10W-123	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	GAWN	1050	SS8641	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1051	AR00380-3-3	no	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1052	GA04444-11LE25	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1053	NC09-22206	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1054	NC09-21953	Ppd-D1a insens	null	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	GAWN	1055	VA08W-613	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1056	NC09-21251	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1057	LA05038D-51	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1058	NC09-21230	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1059	SCLA1102G3	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1060	SHIRLEY	Ppd-D1a insens	null	no	vrn-A1 long	nd
2012	GAWN	1061	AR01156-2-1	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1062	NC09-22402	no	null	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1063	GA04417-11E21	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1064	GA04244-11E1	Ppd-D1a insens	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	GAWN	1065	USG 3555	Ppd-D1a insens	null	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1066	LA03091E-63	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1067	SCLA1102D1	Ppd-D1a insens	Ppd-B1 CS insens het	Ppd-B1 S64 insens	vrn-A1 short	vrn-B1 long
2012	GAWN	1068	GA04434-11E44	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1069	SCLA1110R1	no	no	no	vrn-A1 long	vrn-B1 short
2012	GAWN	1070	VA09W-46	Ppd-D1a insens	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1071	LA04013D-111	no	no	no	vrn-A1 short	vrn-B1 long
2012	GAWN	1072	LA03045E-4	no	no	Ppd-B1 S64 insens	vrn-A1 short	vrn-B1 short
2012	GAWN	1073	VA09W-52	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1074	GA04510-11LE24	Ppd-D1a insens	no	no	vrn-A1 long	vrn-B1 long
2012	GAWN	1075	GA04151-11E26	no	no	Ppd-B1 S64 insens	vrn-A1 long	vrn-B1 long
2012	GAWN	1076	AR00343-5-1	no	no	no	vrn-A1 short	vrn-B1 long

2012 Soft Red Winter Wheat Cooperative Nursery

Fusarium Head Blight alleles

Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840
2012	5-State Adv	1	MO080584	no	NT	no	no	no
2012	5-State Adv	2	MO081163	no	NT	no	no	no
2012	5-State Adv	3	MO081537	no	NT	no	no	no
2012	5-State Adv	4	MO100539	no	NT	no	no	no
2012	5-State Adv	5	Milton	no	NT	no	no	no
2012	5-State Adv	6	IL07-4415	Fhb1 het?	NT	no	Fhb 5A Ernie het	no
2012	5-State Adv	7	IL07-19334	no	NT	no	Fhb 5A Ernie	no
2012	5-State Adv	8	IL07-21847	no	NT	nd	no	no
2012	5-State Adv	9	IL07-24841	no	NT	no	no	no
2012	5-State Adv	10	IL00-8530	no	NT	no	Fhb 5A Ernie	no
2012	5-State Adv	11	4606RA1-1-7-1-6	no	NT	no	Fhb 5A Ernie het	no
2012	5-State Adv	12	0537A1-3-12	no	NT	no	no	no
2012	5-State Adv	13	0566A1-3-1-67	no	NT	no	no	no
2012	5-State Adv	14	05247A1-7-3-120	no	NT	no	Fhb 5A Ernie het	no
2012	5-State Adv	15	0762A1-2-8	no	NT	no	Fhb 5A Ernie	no
2012	5-State Adv	16	OH08-133-25	no	NT	no	no	no
2012	5-State Adv	17	OH08-172-42	no	NT	no	no	no
2012	5-State Adv	18	OH08-269-58	no	NT	no	no	no
2012	5-State Adv	19	OH07-166-41	no	NT	no	no	no
2012	5-State Adv	20	Bromfield	no	NT	no	no	no
2012	5-State Adv	21	KY03C-1195-10-1-5	no	NT	no	no	no
2012	5-State Adv	22	KY03C-2309-25-17-5	no	NT	no	Fhb 5A Ernie het?	no
2012	5-State Adv	23	KY04C-2006-41-1-1	no	NT	no	no	no
2012	5-State Adv	24	KY04C-3006-14-3	no	NT	no	no	no
2012	5-State Adv	25	Pembroke	no	NT	no	Fhb 5A Ernie het	no
2012	5-State Pre	1	MO081280	no	NT	no	no	no
2012	5-State Pre	2	MO100265	Fhb1 het	NT	no	no	no
2012	5-State Pre	3	MO100745	no	NT	no	no	no
2012	5-State Pre	4	MO090581	no	NT	no	no	no
2012	5-State Pre	5	Milton	no	NT	no	no	no
2012	5-State Pre	6	IL07-20728	no	NT	no	no	no
2012	5-State Pre	7	IL07-20743	no	NT	no	no	no
2012	5-State Pre	8	IL08-8844	no	NT	no	no	Fhb 5A Ning7840?
2012	5-State Pre	9	IL08-33373	no	NT	no	Fhb 5A Ernie	no
2012	5-State Pre	10	IL00-8530	no	NT	no	Fhb 5A Ernie	no
2012	5-State Pre	11	P0566A1-3-1-65	no	NT	no	no	no
2012	5-State Pre	12	05247A1-7-3-27	no	NT	no	Fhb 5A Ernie	no
2012	5-State Pre	13	05251A1-1-136-9-5	no	NT	no	Fhb 5A Ernie	no
2012	5-State Pre	14	P07287RA1-14	no	NT	no	no	no
2012	5-State Pre	15	P04606RA1-7-1	no	NT	no	no	no
2012	5-State Pre	16	OH09-101-35	no	NT	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery

Fusarium Head Blight alleles

Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840
2012	5-State Pre	17	OH09-159-16	no	NT	no	no	no
2012	5-State Pre	18	OH09-159-77	no	NT	no	no	no
2012	5-State Pre	19	OH09-221-75	no	NT	no	no	no
2012	5-State Pre	20	Malabar	no	NT	no	Fhb 5A Ernie	no
2012	5-State Pre	21	KY05C-1007-2-12-5	no	NT	no	no	no
2012	5-State Pre	22	KY05C-1105-42-20-1	no	NT	no	no	no
2012	5-State Pre	23	KY05C-1617-17-17-3	no	NT	nd	no	no
2012	5-State Pre	24	KY06C1003-139-8-3	no	NT	no	no	no
2012	5-State Pre	25	Pembroke	no	NT	no	no	no
2012	Mason-Dixon	1	Pioneer 26R15	no	NT	no	no	no
2012	Mason-Dixon	2	Branson	no	NT	no	no	no
2012	Mason-Dixon	3	Shirley	no	NT	no	no	no
2012	Mason-Dixon	4	SS 8700	no	NT	no	no	no
2012	Mason-Dixon	5	VA06W-412	no	NT	no	no	no
2012	Mason-Dixon	6	VA07W-415	no	NT	no	no	no
2012	Mason-Dixon	7	VA08W-294	no	NT	no	no	no
2012	Mason-Dixon	8	VA09W-69	no	NT	no	no	no
2012	Mason-Dixon	9	VA09W-73	no	NT	no	no	no
2012	Mason-Dixon	10	VA09W-75	no	NT	no	no	no
2012	Mason-Dixon	11	VA09W-46	no	NT	no	no	no
2012	Mason-Dixon	12	VA09W-51	no	NT	no	Fhb 5A Ernie	no
2012	Mason-Dixon	13	VA09W-52	no	NT	no	no	no
2012	Mason-Dixon	14	VA09W-110	no	NT	no	no	no
2012	Mason-Dixon	15	VA09W-112	no	NT	no	no	no
2012	Mason-Dixon	16	VA09W-114	no	NT	no	no	no
2012	Mason-Dixon	17	VA09W-188WS	no	NT	no	no	no
2012	Mason-Dixon	18	VA10W-112	no	NT	no	no	no
2012	Mason-Dixon	19	VA10W-118	no	NT	nd	no	no
2012	Mason-Dixon	20	VA10W-123	no	NT	no	no	no
2012	Mason-Dixon	21	VA10W-125	no	NT	no	no	no
2012	Mason-Dixon	22	VA10W-140	no	NT	no	no	no
2012	Mason-Dixon	23	VA08W-613	no	NT	no	no	no
2012	Mason-Dixon	24	VA10W-663	no	NT	no	no	no
2012	Mason-Dixon	25	MD05W10208-11-3	no	NT	no	no	no
2012	Mason-Dixon	26	MD05W10208-11-6	no	NT	no	no	no
2012	Mason-Dixon	27	MD05W10208-11-7	no	NT	no	no	no
2012	Mason-Dixon	28	MD05W1317-11-3	no	NT	no	no	no
2012	Mason-Dixon	29	MD05W1317-11-5	no	NT	no	no	no
2012	Mason-Dixon	30	MD05W1292-11-4	no	NT	no	no	no
2012	Mason-Dixon	31	MD04W1197-11-7	no	NT	no	no	no
2012	Mason-Dixon	32	MD05W479-B-11-3	no	NT	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery			Fusarium Head Blight alleles					
Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840
2012	Mason-Dixon	33	MD04W249-11-2	no	NT	no	no	no
2012	Mason-Dixon	34	MD04W249-11-5	no	NT	nd	no	no
2012	Mason-Dixon	35	MD04W249-11-7	no	NT	no	no	no
2012	Mason-Dixon	36	MD04W249-11-12	no	NT	no	no	no
2012	Mason-Dixon	37	MD04W249-11-13	no	NT	no	no	no
2012	Mason-Dixon	38	MD04W249-11-16	no	NT	no	no	no
2012	Mason-Dixon	39	MD03W61-11-2	Fhb1 het	NT	no	no	no
2012	Mason-Dixon	40	MD03W61-11-3	Fhb1	NT	no	no	no
2012	Mason-Dixon	41	MD07W272-11-5	Fhb1	NT	no	no	no
2012	Mason-Dixon	42	MD07W419UM5-11-11	no	NT	no	no	no
2012	Mason-Dixon	43	MD07W419UM5-11-12	no	NT	no	no	no
2012	Mason-Dixon	44	MD04W1197-11-13	no	NT	no	no	no
2012	Mason-Dixon	45	KY03C-2047-06	no	NT	no	no	no
2012	Mason-Dixon	46	KY03C-2047-02	no	NT	no	no	no
2012	Mason-Dixon	47	KY03C-1221-01	no	NT	no	no	no
2012	Mason-Dixon	48	KY03C-1221-06	no	NT	no	no	no
2012	Mason-Dixon	49	KY04C-2151-40	Fhb1	NT	no	no	no
2012	Mason-Dixon	50	KY04C-2151-41	Fhb1	NT	no	no	no
2012	Mason-Dixon	51	KY03C-2314-08	no	NT	no	no	no
2012	Mason-Dixon	52	KY05C-1381-77-7-5	no	NT	no	no	no
2012	Mason-Dixon	53	KY04C-2004-1-2-1	no	NT	nd	no	no
2012	Mason-Dixon	54	KY04C-2004-1-1-3	no	NT	no	no	no
2012	Mason-Dixon	55	KY04C-1128-4-13-3	no	NT	no	no	no
2012	Mason-Dixon	56	KY04C-2024-1-14-3	no	NT	no	no	no
2012	Mason-Dixon	57	KY04C-1027-6-9-1	Fhb1 het	NT	no	no	no
2012	Mason-Dixon	58	KY03C-1195-10-2-5	Fhb1	NT	no	no	no
2012	Mason-Dixon	59	KY03C-1224-15-20-1	Fhb1	NT	no	no	no
2012	Mason-Dixon	60	KY04C-2031-29-7-3	no	NT	no	no	no
2012	Mason-Dixon	61	KY04C-1047-35-9-1	no	NT	no	no	no
2012	Mason-Dixon	62	KY03C-2309-25-17-5	Fhb1 het	NT	no	no	no
2012	Mason-Dixon	63	KY04C-3006-33-14-3	no	NT	no	no	no
2012	Mason-Dixon	64	KY03C-1002-02	Fhb1	NT	no	no	no
2012	Mason-Dixon	65	ARS07-0245	no	NT	no	no	no
2012	Mason-Dixon	66	ARS07-1179	no	NT	no	no	no
2012	Mason-Dixon	67	ARS07-1227	no	NT	no	Fhb 5A Ernie	no
2012	Mason-Dixon	68	ARS08-0047	no	NT	no	Fhb 5A Ernie	no
2012	Mason-Dixon	69	ARS07-0542	no	NT	no	no	no
2012	Mason-Dixon	70	ARS09-052	no	NT	no	no	no
2012	Mason-Dixon	71	ARS09-155	no	NT	no	no	no
2012	Mason-Dixon	72	ARS09-162	no	NT	no	no	no
2012	Mason-Dixon	73	ARS09-458	no	NT	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery				Fusarium Head Blight alleles				
Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840
2012	Mason-Dixon	74	ARS09-572	no	NT	no	no	no
2012	Mason-Dixon	75	ARS09-648	no	NT	no	no	no
2012	Mason-Dixon	76	ARS09-713	no	NT	no	no	no
2012	Mason-Dixon	77	ARS09-750	no	NT	no	no	no
2012	Mason-Dixon	78	ARS09-768	no	NT	no	no	no
2012	Mason-Dixon	79	ARS09-806	no	NT	no	no	no
2012	GAWN	1001	NC09-19946	no	NT	nd	Fhb 5A Ernie het	no
2012	GAWN	1002	AR01039-4-1	no	NT	no	no	no
2012	GAWN	1003	NC08-140 (Bdv2)	no	NT	no	no	no
2012	GAWN	1004	AR01177-2-1	no	NT	no	Fhb 5A Ernie het	no
2012	GAWN	1005	LA05130D-P5	no	NT	no	Fhb 5A Ernie	no
2012	GAWN	1006	LA03200E-2	no	NT	no	no	no
2012	GAWN	1007	SCLA1084C1	no	NT	no	no	no
2012	GAWN	1008	AR01044-1-1	no	NT	no	no	no
2012	GAWN	1009	AR01058-1	no	NT	no	Fhb 5A Ernie het	no
2012	GAWN	1010	AR00179-4-1	no	NT	no	no	<i>Fhb 5A Ning7840?</i>
2012	GAWN	1011	VA09W-69	no	NT	no	no	no
2012	GAWN	1012	VA09W-114	no	NT	no	no	no
2012	GAWN	1013	SCLA1084A1	no	NT	no	no	no
2012	GAWN	1014	SCLA1067A1	no	NT	no	no	no
2012	GAWN	1015	GA041293-11LE37	no	NT	no	no	no
2012	GAWN	1016	GA041296-11LE39	no	NT	no	no	no
2012	GAWN	1017	SCLA1102G1	no	NT	no	no	no
2012	GAWN	1018	GA041052-11E51	no	NT	no	no	no
2012	GAWN	1019	VA09W-112	no	NT	no	no	no
2012	GAWN	1020	GA041293-11E54	no	NT	no	no	no
2012	GAWN	1021	AR01168-3-1	no	NT	no	no	no
2012	GAWN	1022	NC09-20768	no	NT	no	no	no
2012	GAWN	1023	SCLA1110P1	no	NT	no	no	no
2012	GAWN	1024	AR01205-1-1	no	NT	no	no	no
2012	GAWN	1025	LA06052E-P07	no	NT	no	no	no
2012	GAWN	1026	VA07W-415	no	NT	no	no	no
2012	GAWN	1027	NC09-19966	no	NT	no	no	no
2012	GAWN	1028	VA10W-663	no	NT	no	no	no
2012	GAWN	1029	LA04041D-85	no	NT	no	no	no
2012	GAWN	1030	FL04363E-P19	no	NT	no	no	no
2012	GAWN	1031	SCLA1102H1	no	NT	no	no	no
2012	GAWN	1032	AR01209-2-1	no	NT	no	no	no
2012	GAWN	1033	VA09W-110	no	NT	no	no	no
2012	GAWN	1034	VA10W-125	no	NT	no	no	no
2012	GAWN	1035	VA10W-140	no	NT	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery				Fusarium Head Blight alleles				
Year	Nursery	Entry	Sample Name	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840
2012	GAWN	1036	NC09-20932	no	NT	no	no	no
2012	GAWN	1037	SCLA1084K1	no	NT	no	no	no
2012	GAWN	1038	LA06007E-P04	no	NT	no	no	no
2012	GAWN	1039	LA05038D-105	no	NT	no	no	no
2012	GAWN	1040	NC09-21256	no	NT	no	no	no
2012	GAWN	1041	GA04500-11LE11	no	NT	no	no	no
2012	GAWN	1042	AR01040-4-1	no	NT	no	no	no
2012	GAWN	1043	NC09-20765	no	NT	no	no	no
2012	GAWN	1044	SCLA1084B1	no	NT	no	no	no
2012	GAWN	1045	GA041323-11E63	no	NT	no	no	no
2012	GAWN	1046	LA05132F-P09	no	NT	no	no	no
2012	GAWN	1047	AGS2060	no	NT	no	no	no
2012	GAWN	1048	SCLA1030J1	no	NT	no	no	no
2012	GAWN	1049	VA10W-123	no	NT	no	no	no
2012	GAWN	1050	SS8641	no	NT	no	no	no
2012	GAWN	1051	AR00380-3-3	no	NT	no	no	no
2012	GAWN	1052	GA04444-11LE25	no	NT	no	no	no
2012	GAWN	1053	NC09-22206	no	NT	no	no	no
2012	GAWN	1054	NC09-21953	no	NT	no	no	no
2012	GAWN	1055	VA08W-613	no	NT	no	no	no
2012	GAWN	1056	NC09-21251	no	NT	no	no	no
2012	GAWN	1057	LA05038D-51	no	NT	no	no	no
2012	GAWN	1058	NC09-21230	no	NT	nd	no	no
2012	GAWN	1059	SCLA1102G3	no	NT	no	no	no
2012	GAWN	1060	SHIRLEY	no	NT	no	no	no
2012	GAWN	1061	AR01156-2-1	no	NT	no	no	no
2012	GAWN	1062	NC09-22402	no	no	no	no	no
2012	GAWN	1063	GA04417-11E21	no	no	no	no	no
2012	GAWN	1064	GA04244-11E1	no	no	no	no	no
2012	GAWN	1065	USG 3555	no	Fhb Ernie 3Bc	no	no	no
2012	GAWN	1066	LA03091E-63	no	no	no	no	no
2012	GAWN	1067	SCLA1102D1	no	no	no	no	no
2012	GAWN	1068	GA04434-11E44	no	no	no	no	no
2012	GAWN	1069	SCLA1110R1	no	no	no	no	no
2012	GAWN	1070	VA09W-46	no	no	no	Fhb 5A Ernie het	no
2012	GAWN	1071	LA04013D-111	no	no	no	no	no
2012	GAWN	1072	LA03045E-4	no	no	no	no	no
2012	GAWN	1073	VA09W-52	no	no	no	no	no
2012	GAWN	1074	GA04510-11LE24	no	no	no	no	no
2012	GAWN	1075	GA04151-11E26	no	no	no	no	no
2012	GAWN	1076	AR00343-5-1	no	no	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery

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	5-State Adv	1	MO080584	no	no	no	no	no	nd	no	no	no
2012	5-State Adv	2	MO081163	no	no	no	no	no	nd	no	no	no
2012	5-State Adv	3	MO081537	no	no	no	no	no	nd	no	no	no
2012	5-State Adv	4	MO100539	no	no	no	no	no	nd	no	no	no
2012	5-State Adv	5	Milton	no	no	no	no	no	no	no	no	no
2012	5-State Adv	6	IL07-4415	no	no	Sr24/Lr24	Yr17Lr37/Sr38 het	no	no	no	no	no
2012	5-State Adv	7	IL07-19334	no	no	Sr24/Lr24	no	no	nd	no	no	no
2012	5-State Adv	8	IL07-21847	no	no	no	no	no	no	no	no	no
2012	5-State Adv	9	IL07-24841	no	no	no	no	no	no	no	no	no
2012	5-State Adv	10	IL00-8530	no	no	no	no	nd	nd	no	no	no
2012	5-State Adv	11	4606RA1-1-7-1-6	no	no	no	no	no	nd	no	no	no
2012	5-State Adv	12	0537A1-3-12	no	no	no	no	no	no	no	no	no
2012	5-State Adv	13	0566A1-3-1-67	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	5-State Adv	14	05247A1-7-3-120	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	5-State Adv	15	0762A1-2-8	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	5-State Adv	16	OH08-133-25	no	Sr36	no	no	no	no	no	no	no
2012	5-State Adv	17	OH08-172-42	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	5-State Adv	18	OH08-269-58	no	no	no	no	no	no	no	no	no
2012	5-State Adv	19	OH07-166-41	no	no	no	no	no	no	no	no	no
2012	5-State Adv	20	Bromfield	no	no	no	no	no	no	no	no	no
2012	5-State Adv	21	KY03C-1195-10-1-5	no	no	no	no	no	nd	no	no	no
2012	5-State Adv	22	KY03C-2309-25-17-5	no	no	no	no	Lr34/Yr18 het	no	no	no	APR Yr P26R61 het
2012	5-State Adv	23	KY04C-2006-41-1-1	no	no	no	no	no	no	no	no	no
2012	5-State Adv	24	KY04C-3006-14-3	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	5-State Adv	25	Pembroke	no	no	no	no	no	no	no	no	no
2012	5-State Pre	1	MO081280	no	no	no	no	no	nd	no	no	no
2012	5-State Pre	2	MO100265	no	no	no	no	no	no	no	no	no
2012	5-State Pre	3	MO100745	no	no	no	no	no	nd	no	no	no
2012	5-State Pre	4	MO090581	no	no	no	no	no	nd	no	no	no
2012	5-State Pre	5	Milton	no	no	no	no	no	no	no	no	no
2012	5-State Pre	6	IL07-20728	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	5-State Pre	7	IL07-20743	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	5-State Pre	8	IL08-8844	no	no	no	no	no	no	no	no	no
2012	5-State Pre	9	IL08-33373	no	no	no	no	no	nd	no	no	no
2012	5-State Pre	10	IL00-8530	no	no	no	no	no	nd	no	no	no
2012	5-State Pre	11	P0566A1-3-1-65	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	5-State Pre	12	05247A1-7-3-27	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	5-State Pre	13	05251A1-1-136-9-5	no	no	no	Yr17Lr37/Sr38	no	nd	no	no	no
2012	5-State Pre	14	P07287RA1-14	no	no	no	Yr17Lr37/Sr38 het	no	nd	no	no	no
2012	5-State Pre	15	P04606RA1-7-1	no	no	no	no	no	nd	no	no	no
2012	5-State Pre	16	OH09-101-35	no	Sr36	no	no	no	no	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery

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	Mason-Dixon	33	MD04W249-11-2	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	34	MD04W249-11-5	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	35	MD04W249-11-7	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	36	MD04W249-11-12	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	37	MD04W249-11-13	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	38	MD04W249-11-16	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	39	MD03W61-11-2	no	no	no	no	no	no	Lr9	no	no
2012	Mason-Dixon	40	MD03W61-11-3	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	41	MD07W272-11-5	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	42	MD07W419UM5-11-11	no	Sr36	no	no	no	no	no	no	no
2012	Mason-Dixon	43	MD07W419UM5-11-12	no	Sr36	no	no	no	no	no	no	no
2012	Mason-Dixon	44	MD04W1197-11-13	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	45	KY03C-2047-06	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	46	KY03C-2047-02	no	Sr36	no	no	no	no	no	no	APR Yr P26R61
2012	Mason-Dixon	47	KY03C-1221-01	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	Mason-Dixon	48	KY03C-1221-06	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	Mason-Dixon	49	KY04C-2151-40	no	no	no	no	Lr34/Yr18	no	no	no	no
2012	Mason-Dixon	50	KY04C-2151-41	no	no	no	no	Lr34/Yr18	no	no	no	no
2012	Mason-Dixon	51	KY03C-2314-08	no	no	no	no	no	nd	no	no	no
2012	Mason-Dixon	52	KY05C-1381-77-7-5	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	53	KY04C-2004-1-2-1	no	no	no	no	no	nd	no	no	no
2012	Mason-Dixon	54	KY04C-2004-1-1-3	no	no	no	no	no	nd	no	no	no
2012	Mason-Dixon	55	KY04C-1128-4-13-3	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	56	KY04C-2024-1-14-3	no	Sr36	no	no	no	nd	no	no	no
2012	Mason-Dixon	57	KY04C-1027-6-9-1	no	no	no	no	Lr34/Yr18 het	nd	no	no	no
2012	Mason-Dixon	58	KY03C-1195-10-2-5	no	no	no	no	Lr34/Yr18 het	no	no	no	no
2012	Mason-Dixon	59	KY03C-1224-15-20-1	no	no	no	no	Lr34/Yr18	no	no	no	no
2012	Mason-Dixon	60	KY04C-2031-29-7-3	no	Sr36	no	no	no	no	no	no	no
2012	Mason-Dixon	61	KY04C-1047-35-9-1	no	no	no	no	no	no	Lr9	no	no
2012	Mason-Dixon	62	KY03C-2309-25-17-5	no	no	no	no	Lr34/Yr18	nd	no	no	no
2012	Mason-Dixon	63	KY04C-3006-33-14-3	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	Mason-Dixon	64	KY03C-1002-02	no	no	no	nd	no	no	no	no	no
2012	Mason-Dixon	65	ARS07-0245	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	Mason-Dixon	66	ARS07-1179	no	no	no	no	no	nd	no	no	APR Yr P26R61 het
2012	Mason-Dixon	67	ARS07-1227	no	Sr36	no	no	no	no	no	no	APR Yr P26R61 het
2012	Mason-Dixon	68	ARS08-0047	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	69	ARS07-0542	no	no	no	no	no	no	no	no	no
2012	Mason-Dixon	70	ARS09-052	no	Sr36	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	Mason-Dixon	71	ARS09-155	no	Sr36	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	Mason-Dixon	72	ARS09-162	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	Mason-Dixon	73	ARS09-458	no	Sr36	no	Yr17Lr37/Sr38	no	no	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery

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	Mason-Dixon	74	ARS09-572	no	no	Sr24/Lr24	no	Lr34/Yr18 het	no	no	no	no
2012	Mason-Dixon	75	ARS09-648	no	Sr36	Sr24/Lr24	no	no	no	Lr9	no	no
2012	Mason-Dixon	76	ARS09-713	no	Sr36 het	no	no	no	no	Lr9	no	no
2012	Mason-Dixon	77	ARS09-750	no	no	no	Yr17Lr37/Sr38	nd	nd	no	no	no
2012	Mason-Dixon	78	ARS09-768	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	Mason-Dixon	79	ARS09-806	no	Sr36	no	no	no	no	no	no	no
2012	GAWN	1001	NC09-19946	no	Sr36	no	no	no	no	no	no	no
2012	GAWN	1002	AR01039-4-1	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	GAWN	1003	NC08-140 (Bdv2)	no	Sr36	no	no	no	no	no	no	no
2012	GAWN	1004	AR01177-2-1	no	no	no	no	no	no	no	no	no
2012	GAWN	1005	LA05130D-P5	no	no	no	Yr17Lr37/Sr38 het	no	no	no	no	APR Yr P26R61 het
2012	GAWN	1006	LA03200E-2	no	no	no	no	no	no	no	no	no
2012	GAWN	1007	SCLA1084C1	no	no	no	no	no	nd	no	no	no
2012	GAWN	1008	AR01044-1-1	no	no	Sr24/Lr24	Yr17Lr37/Sr38	no	nd	no	no	no
2012	GAWN	1009	AR01058-1	no	no	no	no	no	nd	Lr9	no	no
2012	GAWN	1010	AR00179-4-1	no	no	no	no	no	nd	no	no	no
2012	GAWN	1011	VA09W-69	no	no	no	no	no	no	Lr9	no	no
2012	GAWN	1012	VA09W-114	no	no	no	no	no	no	no	no	no
2012	GAWN	1013	SCLA1084A1	no	no	no	no	no	no	no	no	no
2012	GAWN	1014	SCLA1067A1	no	no	no	no	no	no	no	no	no
2012	GAWN	1015	GA041293-11LE37	no	no	no	Yr17Lr37/Sr38	no	nd	no	no	no
2012	GAWN	1016	GA041296-11LE39	no	Sr36	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	GAWN	1017	SCLA1102G1	no	no	no	no	no	no	no	no	APR Yr P26R61
2012	GAWN	1018	GA041052-11E51	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	GAWN	1019	VA09W-112	no	Sr36	Sr24/Lr24	no	no	no	no	no	no
2012	GAWN	1020	GA041293-11E54	no	no	no	Yr17Lr37/Sr38	no	nd	no	no	no
2012	GAWN	1021	AR01168-3-1	no	no	no	no	no	nd	no	no	no
2012	GAWN	1022	NC09-20768	no	Sr36	Sr24/Lr24	no	no	no	no	no	no
2012	GAWN	1023	SCLA1110P1	no	no	no	no	no	nd	no	no	no
2012	GAWN	1024	AR01205-1-1	no	no	no	no	no	no	no	no	no
2012	GAWN	1025	LA06052E-P07	no	no	no	Yr17Lr37/Sr38	no	no	Lr9	no	no
2012	GAWN	1026	VA07W-415	no	no	no	Yr17Lr37/Sr38	nd	no	no	no	no
2012	GAWN	1027	NC09-19966	no	Sr36	no	no	no	no	no	no	no
2012	GAWN	1028	VA10W-663	no	Sr36	no	no	no	no	Lr9	no	no
2012	GAWN	1029	LA04041D-85	no	no	no	no	no	nd	no	no	no
2012	GAWN	1030	FL04363E-P19	no	no	no	Yr17Lr37/Sr38	nd	nd	no	no	no
2012	GAWN	1031	SCLA1102H1	no	no	no	no	no	no	no	no	no
2012	GAWN	1032	AR01209-2-1	no	no	no	no	no	nd	no	no	no
2012	GAWN	1033	VA09W-110	no	Sr36	Sr24/Lr24	no	no	no	no	no	no
2012	GAWN	1034	VA10W-125	no	no	no	no	no	no	Lr9	no	no
2012	GAWN	1035	VA10W-140	no	no	Sr24/Lr24	no	no	no	Lr9	no	no

2012 Soft Red Winter Wheat Cooperative Nursery				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	5-State Adv	1	MO080584	non-1RS	no	no	no	Sbm1
2012	5-State Adv	2	MO081163	1RS:1AL het	no	no	no	Sbm1
2012	5-State Adv	3	MO081537	non-1RS	no	no	no	Sbm1
2012	5-State Adv	4	MO100539	non-1RS	no	no	no	Sbm1
2012	5-State Adv	5	Milton	non-1RS	no	no	no	Sbm1
2012	5-State Adv	6	IL07-4415	1RS:1AL het	no	no	no	Sbm1
2012	5-State Adv	7	IL07-19334	1RS:1AL	no	nd	no	Sbm1
2012	5-State Adv	8	IL07-21847	non-1RS	no	no	no	Sbm1
2012	5-State Adv	9	IL07-24841	non-1RS	no	no	no	Sbm1
2012	5-State Adv	10	IL00-8530	non-1RS	no	no	no	Sbm1
2012	5-State Adv	11	4606RA1-1-7-1-6	1RS:1BL	no	no	Bdv2/3	Sbm1
2012	5-State Adv	12	0537A1-3-12	non-1RS	no	no	no	Sbm1
2012	5-State Adv	13	0566A1-3-1-67	non-1RS	no	no	Bdv2/3	Sbm1
2012	5-State Adv	14	05247A1-7-3-120	1RS:1BL	no	H9 het	Bdv2/3	Sbm1
2012	5-State Adv	15	0762A1-2-8	non-1RS	no	no	Bdv2/3 het	no
2012	5-State Adv	16	OH08-133-25	non-1RS	no	no	no	no
2012	5-State Adv	17	OH08-172-42	1RS:1AL	no	nd	no	no
2012	5-State Adv	18	OH08-269-58	non-1RS	no	H9	no	Sbm1
2012	5-State Adv	19	OH07-166-41	non-1RS	no	no	no	Sbm1
2012	5-State Adv	20	Bromfield	1RS:1AL het	no	nd	no	Sbm1
2012	5-State Adv	21	KY03C-1195-10-1-5	non-1RS	no	no	no	Sbm1
2012	5-State Adv	22	KY03C-2309-25-17-5	non-1RS	no	no	no	Sbm1
2012	5-State Adv	23	KY04C-2006-41-1-1	non-1RS	no	no	no	Sbm1
2012	5-State Adv	24	KY04C-3006-14-3	1RS:1AL het	no	no	no	no
2012	5-State Adv	25	Pembroke	non-1RS	no	no	no	Sbm1
2012	5-State Pre	1	MO081280	non-1RS	no	no	no	Sbm1
2012	5-State Pre	2	MO100265	non-1RS	no	no	no	Sbm1
2012	5-State Pre	3	MO100745	non-1RS	no	no	no	Sbm1
2012	5-State Pre	4	MO090581	non-1RS	no	no	no	Sbm1
2012	5-State Pre	5	Milton	non-1RS	no	no	no	Sbm1
2012	5-State Pre	6	IL07-20728	non-1RS	no	no	no	Sbm1
2012	5-State Pre	7	IL07-20743	non-1RS	no	no	no	Sbm1
2012	5-State Pre	8	IL08-8844	non-1RS	no	no	no	Sbm1
2012	5-State Pre	9	IL08-33373	non-1RS	no	no	no	Sbm1
2012	5-State Pre	10	IL00-8530	non-1RS	no	no	no	Sbm1
2012	5-State Pre	11	P0566A1-3-1-65	non-1RS	no	no	Bdv2/3	no
2012	5-State Pre	12	05247A1-7-3-27	1RS:1BL	no	no	Bdv2/3	no
2012	5-State Pre	13	05251A1-1-136-9-5	non-1RS	no	no	Bdv2/3	no
2012	5-State Pre	14	P07287RA1-14	1RS:1BL	no	no	no	no
2012	5-State Pre	15	P04606RA1-7-1	1RS:1BL	no	no	Bdv2/3	Sbm1
2012	5-State Pre	16	OH09-101-35	non-1RS	no	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	5-State Pre	17	OH09-159-16	non-1RS	no	no	no	Sbm1
2012	5-State Pre	18	OH09-159-77	non-1RS	no	no	no	no
2012	5-State Pre	19	OH09-221-75	non-1RS	no	no	no	Sbm1
2012	5-State Pre	20	Malabar	non-1RS	no	no	no	no
2012	5-State Pre	21	KY05C-1007-2-12-5	non-1RS	no	no	no	Sbm1
2012	5-State Pre	22	KY05C-1105-42-20-1	1RS:1BL	no	no	no	Sbm1 het
2012	5-State Pre	23	KY05C-1617-17-17-3	non-1RS	no	no	no	Sbm1
2012	5-State Pre	24	KY06C1003-139-8-3	non-1RS	no	no	no	Sbm1
2012	5-State Pre	25	Pembroke	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	1	Pioneer 26R15	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	2	Branson	non-1RS?	no	no	no	Sbm1
2012	Mason-Dixon	3	Shirley	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	4	SS 8700	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	5	VA06W-412	1RS:1AL?	no	no	no	Sbm1
2012	Mason-Dixon	6	VA07W-415	non-1RS	H13 het	no	no	Sbm1
2012	Mason-Dixon	7	VA08W-294	1RS:1AL	no	nd	no	no
2012	Mason-Dixon	8	VA09W-69	1RS:1AL	no	no	no	no
2012	Mason-Dixon	9	VA09W-73	non-1RS	no	no	no	no
2012	Mason-Dixon	10	VA09W-75	1RS:1AL	no	nd	no	no
2012	Mason-Dixon	11	VA09W-46	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	12	VA09W-51	1RS:1AL	no	nd	no	Sbm1
2012	Mason-Dixon	13	VA09W-52	1RS:1AL?	no	no	no	Sbm1
2012	Mason-Dixon	14	VA09W-110	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	15	VA09W-112	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	16	VA09W-114	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	17	VA09W-188WS	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	18	VA10W-112	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	19	VA10W-118	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	20	VA10W-123	non-1RS	H13 het	no	no	Sbm1
2012	Mason-Dixon	21	VA10W-125	non-1RS?	H13 het	no	no	Sbm1
2012	Mason-Dixon	22	VA10W-140	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	23	VA08W-613	1RS:1AL?	no	no	no	Sbm1
2012	Mason-Dixon	24	VA10W-663	1RS:1AL het	no	no	no	Sbm1
2012	Mason-Dixon	25	MD05W10208-11-3	1RS:1BL 1RS:1AL?	no	no	no	Sbm1
2012	Mason-Dixon	26	MD05W10208-11-6	1RS:1AL het	no	no	no	Sbm1
2012	Mason-Dixon	27	MD05W10208-11-7	1RS:1AL het	no	no	no	Sbm1 het
2012	Mason-Dixon	28	MD05W1317-11-3	1RS:1AL	no	nd	no	Sbm1
2012	Mason-Dixon	29	MD05W1317-11-5	1RS:1AL het	no	nd	no	Sbm1
2012	Mason-Dixon	30	MD05W1292-11-4	1RS:1BL 1RS:1AL?	no	no	no	Sbm1
2012	Mason-Dixon	31	MD04W1197-11-7	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	32	MD05W479-B-11-3	1RS:1BL	no	no	no	Sbm1

2012 Soft Red Winter Wheat Cooperative Nursery				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	Mason-Dixon	33	MD04W249-11-2	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	34	MD04W249-11-5	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	35	MD04W249-11-7	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	36	MD04W249-11-12	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	37	MD04W249-11-13	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	38	MD04W249-11-16	non-1RS?	no	no	no	Sbm1
2012	Mason-Dixon	39	MD03W61-11-2	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	40	MD03W61-11-3	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	41	MD07W272-11-5	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	42	MD07W419UM5-11-11	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	43	MD07W419UM5-11-12	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	44	MD04W1197-11-13	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	45	KY03C-2047-06	1RS:1AL	no	no	no	Sbm1
2012	Mason-Dixon	46	KY03C-2047-02	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	47	KY03C-1221-01	1RS:1AL?	no	no	no	Sbm1
2012	Mason-Dixon	48	KY03C-1221-06	1RS:1AL het	no	nd	no	Sbm1
2012	Mason-Dixon	49	KY04C-2151-40	1RS:1BL	no	no	no	no
2012	Mason-Dixon	50	KY04C-2151-41	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	51	KY03C-2314-08	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	52	KY05C-1381-77-7-5	non-1RS?	no	no	no	no
2012	Mason-Dixon	53	KY04C-2004-1-2-1	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	54	KY04C-2004-1-1-3	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	55	KY04C-1128-4-13-3	non-1RS	no	no	no	no
2012	Mason-Dixon	56	KY04C-2024-1-14-3	1RS:1BL	no	no	no	no
2012	Mason-Dixon	57	KY04C-1027-6-9-1	1RS:1BL het	no	no	no	Sbm1
2012	Mason-Dixon	58	KY03C-1195-10-2-5	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	59	KY03C-1224-15-20-1	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	60	KY04C-2031-29-7-3	1RS:1BL	no	no	no	Sbm1
2012	Mason-Dixon	61	KY04C-1047-35-9-1	non-1RS	no	no	no	Sbm1 het
2012	Mason-Dixon	62	KY03C-2309-25-17-5	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	63	KY04C-3006-33-14-3	1RS:1AL het	no	no	no	no
2012	Mason-Dixon	64	KY03C-1002-02	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	65	ARS07-0245	non-1RS	no	no	no	no
2012	Mason-Dixon	66	ARS07-1179	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	67	ARS07-1227	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	68	ARS08-0047	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	69	ARS07-0542	non-1RS	H13 het	no	no	no
2012	Mason-Dixon	70	ARS09-052	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	71	ARS09-155	1RS:1BL	H13 het	no	no	no
2012	Mason-Dixon	72	ARS09-162	non-1RS	H13 het	no	no	no
2012	Mason-Dixon	73	ARS09-458	non-1RS	no	no	no	Sbm1

2012 Soft Red Winter Wheat Cooperative Nursery				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	Mason-Dixon	74	ARS09-572	1RS:1AL	no	nd	no	no
2012	Mason-Dixon	75	ARS09-648	non-1RS	no	no	no	no
2012	Mason-Dixon	76	ARS09-713	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	77	ARS09-750	1RS:1AL	no	nd	no	no
2012	Mason-Dixon	78	ARS09-768	non-1RS	no	no	no	Sbm1
2012	Mason-Dixon	79	ARS09-806	1RS:1BL	no	nd	no	Sbm1
2012	GAWN	1001	NC09-19946	non-1RS	no	no	no	Sbm1
2012	GAWN	1002	AR01039-4-1	non-1RS	no	no	no	Sbm1
2012	GAWN	1003	NC08-140 (Bdv2)	non-1RS	no	no	Bdv2/3	Sbm1
2012	GAWN	1004	AR01177-2-1	non-1RS	no	no	no	Sbm1
2012	GAWN	1005	LA05130D-P5	non-1RS	no	no	no	Sbm1
2012	GAWN	1006	LA03200E-2	1RS:1BL	H13 het	no	no	Sbm1
2012	GAWN	1007	SCLA1084C1	non-1RS?	H13 het	no	no	no
2012	GAWN	1008	AR01044-1-1	non-1RS	no	no	no	Sbm1
2012	GAWN	1009	AR01058-1	non-1RS	no	no	no	Sbm1 het
2012	GAWN	1010	AR00179-4-1	non-1RS	no	no	no	Sbm1
2012	GAWN	1011	VA09W-69	1RS:1AL	no	nd	no	no
2012	GAWN	1012	VA09W-114	non-1RS	no	no	no	Sbm1
2012	GAWN	1013	SCLA1084A1	1RS:1BL het	H13 het	no	no	no
2012	GAWN	1014	SCLA1067A1	1RS:1AL het	no	no	no	no
2012	GAWN	1015	GA041293-11LE37	non-1RS	no	no	no	Sbm1
2012	GAWN	1016	GA041296-11LE39	non-1RS	no	no	no	Sbm1
2012	GAWN	1017	SCLA1102G1	1RS:1BL	no	no	no	Sbm1
2012	GAWN	1018	GA041052-11E51	non-1RS	H13 het	no	no	Sbm1
2012	GAWN	1019	VA09W-112	non-1RS	no	no	no	Sbm1
2012	GAWN	1020	GA041293-11E54	1RS:1BL het	no	no	no	Sbm1
2012	GAWN	1021	AR01168-3-1	1RS:1AL het	no	no	no	Sbm1
2012	GAWN	1022	NC09-20768	non-1RS	no	no	no	Sbm1
2012	GAWN	1023	SCLA1110P1	1RS:1BL	no	no	no	no
2012	GAWN	1024	AR01205-1-1	non-1RS	no	no	no	Sbm1
2012	GAWN	1025	LA06052E-P07	non-1RS	no	no	no	no
2012	GAWN	1026	VA07W-415	non-1RS	H13 het	no	no	Sbm1
2012	GAWN	1027	NC09-19966	non-1RS	no	no	no	Sbm1
2012	GAWN	1028	VA10W-663	1RS:1AL het	no	no	no	Sbm1
2012	GAWN	1029	LA04041D-85	non-1RS	no	no	no	no
2012	GAWN	1030	FL04363E-P19	non-1RS	no	no	no	no
2012	GAWN	1031	SCLA1102H1	1RS:1BL	no	no	no	Sbm1
2012	GAWN	1032	AR01209-2-1	non-1RS	no	no	no	Sbm1
2012	GAWN	1033	VA09W-110	non-1RS	no	no	no	Sbm1
2012	GAWN	1034	VA10W-125	non-1RS	no	no	no	Sbm1
2012	GAWN	1035	VA10W-140	non-1RS	no	no	no	no

2012 Soft Red Winter Wheat Cooperative Nursery				Rye translocations	Hessian Fly		BYDV	SBMV
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1
2012	GAWN	1036	NC09-20932	non-1RS	no	no	no	Sbm1
2012	GAWN	1037	SCLA1084K1	1RS:1BL	no	no	no	no
2012	GAWN	1038	LA06007E-P04	non-1RS	no	no	no	no
2012	GAWN	1039	LA05038D-105	non-1RS	no	no	no	Sbm1
2012	GAWN	1040	NC09-21256	non-1RS	no	no	no	Sbm1
2012	GAWN	1041	GA04500-11LE11	non-1RS	no	no	no	Sbm1
2012	GAWN	1042	AR01040-4-1	non-1RS	no	no	no	Sbm1 het
2012	GAWN	1043	NC09-20765	non-1RS	no	no	no	Sbm1
2012	GAWN	1044	SCLA1084B1	non-1RS	H13 het	no	no	no
2012	GAWN	1045	GA041323-11E63	non-1RS	H13 het	nd	no	Sbm1
2012	GAWN	1046	LA05132F-P09	non-1RS	no	no	no	Sbm1
2012	GAWN	1047	AGS2060	non-1RS	no	no	no	no
2012	GAWN	1048	SCLA1030J1	non-1RS	no	no	no	Sbm1
2012	GAWN	1049	VA10W-123	non-1RS	no	no	no	Sbm1
2012	GAWN	1050	SS8641	non-1RS	no	no	no	Sbm1
2012	GAWN	1051	AR00380-3-3	non-1RS	no	no	no	no
2012	GAWN	1052	GA04444-11LE25	1RS:1BL	no	no	no	Sbm1
2012	GAWN	1053	NC09-22206	1RS:1AL?	no	no	no	Sbm1
2012	GAWN	1054	NC09-21953	1RS:1AL het	no	no	no	Sbm1
2012	GAWN	1055	VA08W-613	non-1RS	no	no	no	Sbm1
2012	GAWN	1056	NC09-21251	non-1RS	no	no	no	Sbm1
2012	GAWN	1057	LA05038D-51	non-1RS	no	no	no	Sbm1
2012	GAWN	1058	NC09-21230	non-1RS	no	no	no	Sbm1
2012	GAWN	1059	SCLA1102G3	non-1RS	no	no	no	Sbm1
2012	GAWN	1060	SHIRLEY	1RS:1BL	no	no	no	Sbm1
2012	GAWN	1061	AR01156-2-1	non-1RS	no	no	no	Sbm1
2012	GAWN	1062	NC09-22402	1RS:1AL het	no	no	no	Sbm1
2012	GAWN	1063	GA04417-11E21	non-1RS	no	no	no	nd
2012	GAWN	1064	GA04244-11E1	non-1RS	no	no	no	Sbm1
2012	GAWN	1065	USG 3555	1RS:1BL	nd	no	no	Sbm1
2012	GAWN	1066	LA03091E-63	1RS:1BL	no	no	no	Sbm1
2012	GAWN	1067	SCLA1102D1	1RS:1BL	no	no	no	Sbm1
2012	GAWN	1068	GA04434-11E44	non-1RS	no	no	no	Sbm1
2012	GAWN	1069	SCLA1110R1	1RS:1BL	no	no	no	no
2012	GAWN	1070	VA09W-46	non-1RS	no	no	no	Sbm1
2012	GAWN	1071	LA04013D-111	non-1RS	no	no	no	Sbm1
2012	GAWN	1072	LA03045E-4	1RS:1BL	no	no	no	no
2012	GAWN	1073	VA09W-52	1RS:1AL het	no	no	no	Sbm1
2012	GAWN	1074	GA04510-11LE24	non-1RS	no	no	no	Sbm1
2012	GAWN	1075	GA04151-11E26	non-1RS	no	H9	no	no
2012	GAWN	1076	AR00343-5-1	non-1RS	no	no	no	Sbm1

2012 Soft Red Winter Wheat Cooperative Nursery				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	5-State Adv	1	MO080584	no	2+12	Ax1 or null	no	r-A1 white	nd	R-D1
2012	5-State Adv	2	MO081163	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	5-State Adv	3	MO081537	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	5-State Adv	4	MO100539	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	5-State Adv	5	Milton	Bx7oe	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	5-State Adv	6	IL07-4415	no	5+10	Ax1 or null	TaSus2-2B het	R-A1	R-B1	r-D1 white
2012	5-State Adv	7	IL07-19334	no	5+10	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	5-State Adv	8	IL07-21847	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	5-State Adv	9	IL07-24841	no	5+10	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	5-State Adv	10	IL00-8530	no	5+10	Ax2*	nd	R-A1	R-B1	R-D1
2012	5-State Adv	11	4606RA1-1-7-1-6	Bx7oe	2+12	Ax2*	TaSus2-2B het	R-A1	r-B1 white	R-D1
2012	5-State Adv	12	0537A1-3-12	Bx7oe het	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	5-State Adv	13	0566A1-3-1-67	Bx7oe	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	r-D1 white
2012	5-State Adv	14	05247A1-7-3-120	Bx7oe	het	Ax2*	no	R-A1	R-B1	r-D1 white
2012	5-State Adv	15	0762A1-2-8	Bx7oe het	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	r-D1 white
2012	5-State Adv	16	OH08-133-25	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	5-State Adv	17	OH08-172-42	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	5-State Adv	18	OH08-269-58	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	5-State Adv	19	OH07-166-41	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	5-State Adv	20	Bromfield	no	2+12	Ax1 or null	TaSus2-2B het	R-A1	R-B1	R-D1
2012	5-State Adv	21	KY03C-1195-10-1-5	Bx7oe	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	5-State Adv	22	KY03C-2309-25-17-5	Bx7oe het	2+12	Ax1 or null	no	R-A1	r-B1 het	R-D1
2012	5-State Adv	23	KY04C-2006-41-1-1	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	5-State Adv	24	KY04C-3006-14-3	no	5+10	Ax1 or null	no	r-A1 white	R-B1	R-D1
2012	5-State Adv	25	Pembroke	Bx7oe het	het	Ax2*	no	R-A1	r-B1 het	R-D1
2012	5-State Pre	1	MO081280	no	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	5-State Pre	2	MO100265	no	5+10	Ax2*	TaSus2-2B het	R-A1	r-B1 white	R-D1
2012	5-State Pre	3	MO100745	no	2+12	het	no	r-A1 white	r-B1 white	R-D1
2012	5-State Pre	4	MO090581	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	5-State Pre	5	Milton	Bx7oe het	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	5-State Pre	6	IL07-20728	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	5-State Pre	7	IL07-20743	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	5-State Pre	8	IL08-8844	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	5-State Pre	9	IL08-33373	no	5+10	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	5-State Pre	10	IL00-8530	no	5+10	Ax2*	no	R-A1	R-B1	R-D1
2012	5-State Pre	11	P0566A1-3-1-65	no	2+12	Ax2*	TaSus2-2B het	R-A1	R-B1	r-D1 white
2012	5-State Pre	12	05247A1-7-3-27	Bx7oe	2+12	Ax2*	no	R-A1	R-B1	r-D1 white
2012	5-State Pre	13	05251A1-1-136-9-5	no	het	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	5-State Pre	14	P07287RA1-14	Bx7oe	2+12	Ax2*	TaSus2-2B het	R-A1	r-B1 white	R-D1
2012	5-State Pre	15	P04606RA1-7-1	Bx7oe	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	5-State Pre	16	OH09-101-35	Bx7oe	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white

2012 Soft Red Winter Wheat Cooperative Nursery			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	5-State Pre	17	OH09-159-16	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	5-State Pre	18	OH09-159-77	no	2+12	Ax1 or null	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	5-State Pre	19	OH09-221-75	no	het	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	5-State Pre	20	Malabar	no	het	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	5-State Pre	21	KY05C-1007-2-12-5	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	5-State Pre	22	KY05C-1105-42-20-1	no	het	Ax1 or null	TaSus2-2B het	R-A1	R-B1	R-D1
2012	5-State Pre	23	KY05C-1617-17-17-3	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	5-State Pre	24	KY06C1003-139-8-3	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	5-State Pre	25	Pembroke	Bx7oe	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	1	Pioneer 26R15	no	5+10	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	2	Branson	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	3	Shirley	no	2+12	Ax1 or null	TaSus2-2B	R-A1	R-B1	R-D1
2012	Mason-Dixon	4	SS 8700	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	5	VA06W-412	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	6	VA07W-415	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	7	VA08W-294	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	8	VA09W-69	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	9	VA09W-73	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	10	VA09W-75	no	2+12	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	11	VA09W-46	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	12	VA09W-51	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	13	VA09W-52	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	14	VA09W-110	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	15	VA09W-112	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	16	VA09W-114	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	17	VA09W-188WS	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	r-D1 white
2012	Mason-Dixon	18	VA10W-112	no	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	19	VA10W-118	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	20	VA10W-123	no	2+12	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	21	VA10W-125	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	22	VA10W-140	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	23	VA08W-613	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	24	VA10W-663	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	25	MD05W10208-11-3	no	het	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	26	MD05W10208-11-6	no	het	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	27	MD05W10208-11-7	no	het	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	28	MD05W1317-11-3	no	2+12	Ax2*	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	29	MD05W1317-11-5	no	2+12	Ax1 or null	TaSus2-2B het	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	30	MD05W1292-11-4	Bx7oe het	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	31	MD04W1197-11-7	Bx7oe het	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	32	MD05W479-B-11-3	no	2+12	Ax2*	no	R-A1	R-B1	R-D1

2012 Soft Red Winter Wheat Cooperative Nursery				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	Mason-Dixon	33	MD04W249-11-2	no	2+12	het	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	34	MD04W249-11-5	Bx7oe	2+12	het	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	35	MD04W249-11-7	no	2+12	het	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	36	MD04W249-11-12	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	37	MD04W249-11-13	Bx7oe	2+12	Ax2*	no	r-A1 het	R-B1	R-D1
2012	Mason-Dixon	38	MD04W249-11-16	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	39	MD03W61-11-2	no	2+12	Ax1 or null	TaSus2-2B het	R-A1	R-B1	R-D1
2012	Mason-Dixon	40	MD03W61-11-3	no	5+10	Ax1 or null	no	r-A1 white	R-B1	R-D1
2012	Mason-Dixon	41	MD07W272-11-5	no	het	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	42	MD07W419UM5-11-11	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	43	MD07W419UM5-11-12	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	44	MD04W1197-11-13	Bx7oe het	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	45	KY03C-2047-06	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	46	KY03C-2047-02	Bx7oe	5+10	Ax2*	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	47	KY03C-1221-01	no	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	48	KY03C-1221-06	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	49	KY04C-2151-40	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	50	KY04C-2151-41	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	51	KY03C-2314-08	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	52	KY05C-1381-77-7-5	no	het	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	53	KY04C-2004-1-2-1	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	54	KY04C-2004-1-1-3	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	55	KY04C-1128-4-13-3	no	5+10	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	56	KY04C-2024-1-14-3	no	2+12	Ax1 or null	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	57	KY04C-1027-6-9-1	no	2+12	het	no	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	58	KY03C-1195-10-2-5	Bx7oe	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	59	KY03C-1224-15-20-1	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	60	KY04C-2031-29-7-3	no	5+10	Ax2*	TaSus2-2B	r-A1 white	r-B1 white	r-D1 white
2012	Mason-Dixon	61	KY04C-1047-35-9-1	Bx7oe	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	62	KY03C-2309-25-17-5	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	63	KY04C-3006-33-14-3	no	5+10	Ax2*	no	r-A1 white	R-B1	R-D1
2012	Mason-Dixon	64	KY03C-1002-02	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	65	ARS07-0245	no	5+10	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	66	ARS07-1179	no	5+10	Ax2*	no	R-A1	R-B1	r-D1 white
2012	Mason-Dixon	67	ARS07-1227	no	5+10	Ax2*	TaSus2-2B	R-A1	R-B1	r-D1 white
2012	Mason-Dixon	68	ARS08-0047	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	69	ARS07-0542	no	2+12	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	70	ARS09-052	no	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	R-D1
2012	Mason-Dixon	71	ARS09-155	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	Mason-Dixon	72	ARS09-162	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	73	ARS09-458	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1

2012 Soft Red Winter Wheat Cooperative Nursery			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	Mason-Dixon	74	ARS09-572	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	75	ARS09-648	no	2+12	Ax2*	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	76	ARS09-713	no	2+12	Ax1 or null	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	Mason-Dixon	77	ARS09-750	no	2+12	het	no	R-A1	R-B1	R-D1
2012	Mason-Dixon	78	ARS09-768	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	Mason-Dixon	79	ARS09-806	no	5+10	Ax1 or null	TaSus2-2B	r-A1 white	R-B1	R-D1
2012	GAWN	1001	NC09-19946	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1002	AR01039-4-1	no	het	het	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1003	NC08-140 (Bdv2)	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1004	AR01177-2-1	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1005	LA05130D-P5	Bx7oe	het	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1006	LA03200E-2	Bx7oe	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	GAWN	1007	SCLA1084C1	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1008	AR01044-1-1	no	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	r-D1 white
2012	GAWN	1009	AR01058-1	no	2+12	Ax2*	no	R-A1	R-B1	r-D1 white
2012	GAWN	1010	AR00179-4-1	no	5+10	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1011	VA09W-69	no	het	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1012	VA09W-114	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1013	SCLA1084A1	no	het	het	no	R-A1	R-B1	R-D1
2012	GAWN	1014	SCLA1067A1	no	2+12	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	GAWN	1015	GA041293-11LE37	Bx7oe	5+10	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1016	GA041296-11LE39	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1017	SCLA1102G1	Bx7oe	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1018	GA041052-11E51	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1019	VA09W-112	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1020	GA041293-11E54	Bx7oe het	5+10	Ax1 or null	no	R-A1	R-B1	R-D1
2012	GAWN	1021	AR01168-3-1	no	2+12	Ax2*	no	R-A1	R-B1	r-D1 white
2012	GAWN	1022	NC09-20768	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1023	SCLA1110P1	Bx7oe	5+10	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	GAWN	1024	AR01205-1-1	Bx7oe het	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1025	LA06052E-P07	no	het	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1026	VA07W-415	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1027	NC09-19966	Bx7oe het	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1028	VA10W-663	no	5+10	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	r-D1 white
2012	GAWN	1029	LA04041D-85	no	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	GAWN	1030	FL04363E-P19	Bx7oe	2+12	Ax2*	no	r-A1 white	R-B1	R-D1
2012	GAWN	1031	SCLA1102H1	Bx7oe	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1032	AR01209-2-1	no	5+10	Ax1 or null	no	R-A1	r-B1 white	R-D1
2012	GAWN	1033	VA09W-110	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1034	VA10W-125	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	GAWN	1035	VA10W-140	no	5+10	Ax2*	no	R-A1	r-B1 white	R-D1

2012 Soft Red Winter Wheat Cooperative Nursery				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	GAWN	1036	NC09-20932	no	2+12	Ax2*	TaSus2-2B het	R-A1	R-B1	R-D1
2012	GAWN	1037	SCLA1084K1	no	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	GAWN	1038	LA06007E-P04	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1039	LA05038D-105	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1040	NC09-21256	no	2+12	Ax1 or null	TaSus2-2B	r-A1 white	R-B1	R-D1
2012	GAWN	1041	GA04500-11LE11	no	2+12	Ax2*	no	r-A1 white	r-B1 white	r-D1 white
2012	GAWN	1042	AR01040-4-1	no	het	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1043	NC09-20765	Bx7oe het	2+12	Ax1 or null	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	GAWN	1044	SCLA1084B1	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1045	GA041323-11E63	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1046	LA05132F-P09	Bx7oe	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1047	AGS2060	no	5+10	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1048	SCLA1030J1	no	2+12	Ax1 or null	TaSus2-2B	r-A1 white	r-B1 white	R-D1
2012	GAWN	1049	VA10W-123	no	2+12	Ax2*	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1050	SS8641	no	2+12	Ax1 or null	no	R-A1	R-B1	R-D1
2012	GAWN	1051	AR00380-3-3	no	2+12	het	TaSus2-2B het	R-A1	r-B1 white	r-D1 white
2012	GAWN	1052	GA04444-11LE25	no	2+12	Ax2*	TaSus2-2B	R-A1	R-B1	r-D1 white
2012	GAWN	1053	NC09-22206	no	2+12	Ax2*	TaSus2-2B het	R-A1	R-B1	R-D1
2012	GAWN	1054	NC09-21953	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1055	VA08W-613	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1056	NC09-21251	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1057	LA05038D-51	Bx7oe het	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1058	NC09-21230	no	2+12	Ax1 or null	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1059	SCLA1102G3	Bx7oe het	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1060	SHIRLEY	no	2+12	Ax1 or null	TaSus2-2B	R-A1	R-B1	R-D1
2012	GAWN	1061	AR01156-2-1	no	5+10	Ax1 or null	no	R-A1	r-B1 white	r-D1 white
2012	GAWN	1062	NC09-22402	no	2+12	Ax2*	TaSus2-2B	R-A1	r-B1 white	R-D1
2012	GAWN	1063	GA04417-11E21	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1064	GA04244-11E1	no	2+12	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	GAWN	1065	USG 3555	no	2+12	Ax2*	TaSus2-2B	r-A1 white	R-B1	r-D1 white
2012	GAWN	1066	LA03091E-63	Bx7oe	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1067	SCLA1102D1	Bx7oe	5+10	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1068	GA04434-11E44	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1069	SCLA1110R1	Bx7oe	5+10	Ax2*	no	r-A1 white	r-B1 white	R-D1
2012	GAWN	1070	VA09W-46	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1071	LA04013D-111	no	5+10	Ax1 or null	no	R-A1	R-B1	R-D1
2012	GAWN	1072	LA03045E-4	no	2+12	Ax2*	no	R-A1	r-B1 white	R-D1
2012	GAWN	1073	VA09W-52	no	2+12	Ax1 or null	no	r-A1 white	r-B1 white	R-D1
2012	GAWN	1074	GA04510-11LE24	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1075	GA04151-11E26	no	2+12	Ax2*	no	R-A1	R-B1	R-D1
2012	GAWN	1076	AR00343-5-1	no	5+10	Ax1 or null	no	R-A1	r-B1 white	r-D1 white