

2012

Marker Reports for all Alleles

Uniform Bread Wheat Trial

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 Uniform Bread Wheat Trial

Year	Nursery	Entry	Sample Name	Pedigree	Class	Plant Source
2012	UBWT	1	NC-Neuse	Coker 86-29//Stella/CHD756-80/3/Coker 9907 (=PI633037; NC96-13156)	SRW	NC
2012	UBWT	2	Shirley	VA94-52-25//Coker 9835//VA96-54-234 (=PI656753; VA03W-409)	SRW	VA
2012	UBWT	3	USG 3120	GA901146/GA96004//AGS2000	SRW	GA
2012	UBWT	4	Appalachian White	KS2016-U2/Lakin (=ARS05-1234; WX03ARS1080-19)	HWW	ARS
2012	UBWT	5	Endurance	HBY756A/Siouxland//2180 (=PI639233; OK94P549-11)	HRW	OK
2012	UBWT	6	Jagger	KS82W418/Stephens (=PI593688; KS84063-9-39-3)	HRW	KS
2012	UBWT	7	NuEast	KS00U755/TAM 303 (=ARS03-4736; WX02ARS113-9)	HRW	ARS
2012	UBWT	8	TAM 303	TX89D1253*2/TTCC404 (=WX93D208-9-1-2) (=TX98D1170)	HRW	TX
2012	UBWT	9	Vision 30	92PAN1 #33/ RENWOOD 3260"S" (VA97W-414),F11 (=VA06HRW-49)	HRW	VA
2012	UBWT	10	Vision 40	92PIN#109 / 92PAN1 #33,F11 (=VA06HRW-66)	HRW	VA
2012	UBWT	11	ARS05-1044	KS2132-U138/Trego (=WX03ARS1069-26)	HWW	ARS
2012	UBWT	12	ARS07-0785	IN9712C1-4/PI434658	HRW	ARS
2012	UBWT	13	ARS07-1214	McCormick/Dominator	HRW	ARS
2012	UBWT	14	ARS07-1243	NC00-14622/2137	HRW	ARS
2012	UBWT	15	ARS08-0161	TX99D4628/TX98D1519	HRW	ARS
2012	UBWT	16	ARS08-1059	WX02ARS081/FL95A331	HRW	ARS
2012	UBWT	17	ARS07-0117	AR93035-4-2/PI564341	HRW	ARS
2012	UBWT	18	ARS07-1125	TX99D4612/Lockett	HRW	ARS
2012	UBWT	19	ARS09-173	GA961565-27-6/TAM303	HRW	ARS
2012	UBWT	20	ARS09-181	GA961565-27-6/WX02ARS079	HRW	ARS
2012	UBWT	21	ARS09-228	IN9712C1-4/PI434658	HRW	ARS
2012	UBWT	22	ARS09-367	McCormick/Dominator	HRW	ARS
2012	UBWT	23	ARS09-411	AWD99-5261/TX99D4151	HRW	ARS
2012	UBWT	24	ARS09-446	FL89250/WX02ARS130	HRW	ARS
2012	UBWT	25	ARS09-466	FL95A331/Sturdy 2K	HRW	ARS
2012	UBWT	26	ARS09-571	GA961565-27-6/PI434658	HWW	ARS
2012	UBWT	27	ARS09-595	KS2055/NC96BGTD3	HRW	ARS
2012	UBWT	28	ARS09-643	LA95283CA78-1-2-B/TAM303	HRW	ARS
2012	UBWT	29	ARS09-724	AR800-1-3-1/WX03ARS0011	HRW	ARS
2012	UBWT	30	KWS 004	Raven/Atlas	HRW	KWS
2012	UBWT	31	KWS 005	Harvard/Dingo	HRW	KWS
2012	UBWT	32	T153	T136 / T151	HRW	Limagrain
2012	UBWT	33	T154	T88 / 2180 // T811	HRW	Limagrain
2012	UBWT	34	T158	TAM107*3/TA2460 // T81	HRW	Limagrain
2012	UBWT	35	T163	KS93WGRC27 / T81sib	HRW	Limagrain
2012	UBWT	36	VA07HRW-45	PROVINCIALE/ VISION 10	HRW	VA
2012	UBWT	37	VA07HRW-97	92PAN1 #33 / 2137 // VISION 10	HRW	VA
2012	UBWT	38	VA08HWW-100	KS01HW54(94HW123-5/BTY SIB) / PROVINCIALE	HWW	VA
2012	UBWT	39	VA08HRW-103	KS01HW54(94HW123-5/BTY SIB) / PROVINCIALE	HRW	VA
2012	UBWT	40	VA09HRW-6	PROVINCIALE/ VISION 10	HRW	VA
2012	UBWT	41	VA09HRW-43	KS01HW54(94HW123-5/BTY SIB) / PROVINCIALE	HRW	VA
2012	UBWT	42	VA09HRW-64	JAGALENE / PROVINCIALE	HRW	VA
2012	UBWT	43	VA09HRW-66	JAGALENE / PROVINCIALE	HRW	VA
2012	UBWT	44	VA10HRW-42	SX1411 / PIONEER 25R78 // KS00F5--22-1	HRW	VA
2012	UBWT	45	VA10HRW-48	SX1411 / PIONEER 25R78 // KS00F5--22-1	HRW	VA
2012	UBWT	46	KS020832~2	KS950412-F-1 / KS940748-2-2 // OVERLEY	HRW	VA

2012 Uniform Bread Wheat Trial				Dwarfing alleles			Photoperiod Insensitivity alleles		
Year	Nursery	Entry	Sample Name	Rht-B1b	Rht-D1b	Rht8c	Ppd-D1a	Ppd-B1 CS truncated copy	Ppd-B1 Sonora64/Timstein intercopy
2012	UBWT	1	NC-Neuse	no	Rht-D1b	no	no	null	no
2012	UBWT	2	Shirley	Rht-B1b	no	no	Ppd-D1a insens	null	no
2012	UBWT	3	USG 3120	no	Rht-D1b	Rht8c	no	no	Ppd-B1 S64 insens
2012	UBWT	4	Appalachian White	Rht-B1b	no	no	no	no	no
2012	UBWT	5	Endurance	no	Rht-D1b	no	Ppd-D1a insens	no	no
2012	UBWT	6	Jagger	Rht-B1b	no	no	no	no	Ppd-B1 S64 insens
2012	UBWT	7	NuEast	Rht-B1b	no	no	Ppd-D1tauschii	no	Ppd-B1 S64 insens
2012	UBWT	8	TAM 303	Rht-B1b	no	no	Ppd-D1tauschii	no	Ppd-B1 S64 insens
2012	UBWT	9	Vision 30	no	Rht-D1b	no	Ppd-D1a insens	Ppd-B1 CS insens	no
2012	UBWT	10	Vision 40	no	Rht-D1b	nd	Ppd-D1a insens	no	no
2012	UBWT	11	ARS05-1044	Rht-B1b	no	no	Ppd-D1tauschii	no	Ppd-B1 S64 insens
2012	UBWT	12	ARS07-0785	no	no	no	no	Ppd-B1 CS insens	no
2012	UBWT	13	ARS07-1214	Rht-B1b	no	no	no	no	no
2012	UBWT	14	ARS07-1243	Rht-B1b	no	no	Ppd-D1tauschii	no	no
2012	UBWT	15	ARS08-0161	no	Rht-D1b	no	Ppd-D1a insens	null	no
2012	UBWT	16	ARS08-1059	Rht-B1b	no	no	no	no	Ppd-B1 S64 insens
2012	UBWT	17	ARS07-0117	Rht-B1b	no	no	Ppd-D1a insens	Ppd-B1 CS insens	no
2012	UBWT	18	ARS07-1125	no	Rht-D1b	no	Ppd-D1a insens	no	no
2012	UBWT	19	ARS09-173	Rht-B1b	no	no	Ppd-D1a insens	no	no
2012	UBWT	20	ARS09-181	no	Rht-D1b	no	no	no	Ppd-B1 S64 insens
2012	UBWT	21	ARS09-228	no	no	Rht8c	Ppd-D1a insens	Ppd-B1 CS insens	no
2012	UBWT	22	ARS09-367	Rht-B1b	no	no	no	no	no
2012	UBWT	23	ARS09-411	Rht-B1b	no	no	Ppd-D1a insens	no	no
2012	UBWT	24	ARS09-446	no	no	no	no	Ppd-B1 CS insens	no
2012	UBWT	25	ARS09-466	no	no	Rht8c	Ppd-D1a insens	no	no
2012	UBWT	26	ARS09-571	no	no	Rht8c	Ppd-D1a insens	no	no
2012	UBWT	27	ARS09-595	no	no	no	Ppd-D1a insens	null	no
2012	UBWT	28	ARS09-643	no	Rht-D1b	no	Ppd-D1a insens	no	no
2012	UBWT	29	ARS09-724	Rht-B1b	no	no	Ppd-D1a insens	no	no
2012	UBWT	30	KWS 004	no	no	no	Ppd-D1a insens	no	no
2012	UBWT	31	KWS 005	no	no	Rht8c het	Ppd-D1a insens	no	no
2012	UBWT	32	T153	Rht-B1b	no	no	Ppd-D1a insens	no	no
2012	UBWT	33	T154	Rht-B1b	no	no	Ppd-D1a insens het	no	Ppd-B1 S64 insens
2012	UBWT	34	T158	Rht-B1b	no	no	Ppd-D1tauschii	no	Ppd-B1 S64 insens
2012	UBWT	35	T163	Rht-B1b	no	no	no	no	no
2012	UBWT	36	VA07HRW-45	no	no	no	Ppd-D1a insens	no	no
2012	UBWT	37	VA07HRW-97	no	Rht-D1b	Rht8c	Ppd-D1a insens	no	no
2012	UBWT	38	VA08HRW-100	no	no	no	Ppd-D1a insens	no	no
2012	UBWT	39	VA08HRW-103	no	no	no	Ppd-D1a insens	no	no
2012	UBWT	40	VA09HRW-6	no	no	no	Ppd-D1a insens	no	no
2012	UBWT	41	VA09HRW-43	no	no	no	Ppd-D1a insens	no	no
2012	UBWT	42	VA09HRW-64	no	no	no	Ppd-D1a insens	no	Ppd-B1 S64 insens
2012	UBWT	43	VA09HRW-66	no	no	no	Ppd-D1a insens	no	Ppd-B1 S64 insens
2012	UBWT	44	VA10HRW-42	Rht-B1b	no	no	Ppd-D1a insens	no	no
2012	UBWT	45	VA10HRW-48	Rht-B1b	no	no	Ppd-D1a insens	no	no
2012	UBWT	46	KS020832~2	Rht-B1b	no	no	Ppd-D1a insens	no	no

2012 Uniform Bread Wheat Trial				Vernalization alleles		Fusarium Head Blight alleles				
Year	Nursery	Entry	Sample Name	vrn-A1	vrn-B1	Fhb1	Fhb Ernie 3Bc	Fhb 2DL-Wuhan1/W14	Fhb 5A Ernie	Fhb 5A Ning7840
2012	UBWT	1	NC-Neuse	vrn-A1 long	vrn-B1 long	no	no	no	Fhb 5A Ernie	<i>no</i>
2012	UBWT	2	Shirley	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	3	USG 3120	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	4	Appalachian White	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	5	Endurance	vrn-A1 long	vrn-B1 long	no	no	no	Fhb 5A Ernie het	<i>no</i>
2012	UBWT	6	Jagger	vrn-A1 short	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	7	NuEast	vrn-A1 long	vrn-B1 long	nd	no	no	no	<i>no</i>
2012	UBWT	8	TAM 303	vrn-A1 long	vrn-B1 long?	no	no	no	no	<i>no</i>
2012	UBWT	9	Vision 30	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	10	Vision 40	vrn-A1 long	nd	nd	no	no	nd	<i>nd</i>
2012	UBWT	11	ARS05-1044	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	12	ARS07-0785	vrn-A1 long	vrn-B1 het	no	no	no	no	<i>no</i>
2012	UBWT	13	ARS07-1214	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	14	ARS07-1243	vrn-A1 short	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	15	ARS08-0161	vrn-A1 short	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	16	ARS08-1059	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	17	ARS07-0117	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	18	ARS07-1125	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	19	ARS09-173	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	20	ARS09-181	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	21	ARS09-228	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	22	ARS09-367	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	23	ARS09-411	vrn-A1 short	vrn-B1 long	Fhb1?	no	no	no	<i>no</i>
2012	UBWT	24	ARS09-446	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	25	ARS09-466	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	26	ARS09-571	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	27	ARS09-595	vrn-A1 short	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	28	ARS09-643	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	29	ARS09-724	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	30	KWS 004	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	31	KWS 005	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	32	T153	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	33	T154	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	34	T158	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	35	T163	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	36	VA07HRW-45	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	37	VA07HRW-97	vrn-A1 long	vrn-B1 short	no	no	no	no	<i>no</i>
2012	UBWT	38	VA08HWW-100	vrn-A1 short	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	39	VA08HRW-103	vrn-A1 short	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	40	VA09HRW-6	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	41	VA09HRW-43	vrn-A1 short	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	42	VA09HRW-64	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	43	VA09HRW-66	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	44	VA10HRW-42	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	45	VA10HRW-48	vrn-A1 long	vrn-B1 long	no	no	no	no	<i>no</i>
2012	UBWT	46	KS020832~2	vrn-A1 short	vrn-B1 long	no	no	no	no	<i>no</i>

2012 Uniform Bread Wheat Trial				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	UBWT	1	NC-Neuse	no	Sr36	no	no	no	no	no	no	APR Yr P26R61
2012	UBWT	2	Shirley	no	Sr36	no	no	no	no	no	no	no
2012	UBWT	3	USG 3120	no	no	no	no	no	nd	no	no	no
2012	UBWT	4	Appalachian White	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	UBWT	5	Endurance	no	no	no	no	no	nd	no	no	no
2012	UBWT	6	Jagger	no	no	no	Yr17Lr37/Sr38	nonfunctional-Lr34/Yr18	no	no	no	no
2012	UBWT	7	NuEast	no	no	no	no	no	no	no	no	no
2012	UBWT	8	TAM 303	no	no	no	no	no	no	no	no	no
2012	UBWT	9	Vision 30	no	Sr36	no	no	no	no	Lr9	no	no
2012	UBWT	10	Vision 40	no	no	Sr24/Lr24	no	no	nd	no	no	no
2012	UBWT	11	ARS05-1044	no	no	no	no	Lr34/Yr18	nd	no	no	no
2012	UBWT	12	ARS07-0785	no	Sr36	no	no	no	no	no	no	no
2012	UBWT	13	ARS07-1214	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	UBWT	14	ARS07-1243	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	UBWT	15	ARS08-0161	no	Sr36	no	no	no	no	no	no	no
2012	UBWT	16	ARS08-1059	no	no	Sr24/Lr24	Yr17Lr37/Sr38	no	nd	no	no	no
2012	UBWT	17	ARS07-0117	no	Sr36	no	no	Lr34/Yr18	no	no	no	no
2012	UBWT	18	ARS07-1125	no	no	no	no	Lr34/Yr18	no	no	no	no
2012	UBWT	19	ARS09-173	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	UBWT	20	ARS09-181	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	UBWT	21	ARS09-228	no	Sr36	no	no	no	no	no	no	no
2012	UBWT	22	ARS09-367	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	UBWT	23	ARS09-411	no	no	no	no	no	nd	no	no	no
2012	UBWT	24	ARS09-446	no	Sr36	no	no	no	no	no	no	no
2012	UBWT	25	ARS09-466	no	no	Sr24/Lr24	Yr17Lr37/Sr38	no	nd	no	no	no
2012	UBWT	26	ARS09-571	no	no	no	Yr17Lr37/Sr38	no	nd	no	no	no
2012	UBWT	27	ARS09-595	no	Sr36	no	no	no	no	no	Lr19/Sr25	no
2012	UBWT	28	ARS09-643	no	no	no	no	no	no	no	no	no
2012	UBWT	29	ARS09-724	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	UBWT	30	KWS 004	no	no	no	no	no	no	no	no	no
2012	UBWT	31	KWS 005	no	no	no	no	no	no	no	no	no
2012	UBWT	32	T153	no	no	no	no	Lr34/Yr18 het	nd	no	no	no
2012	UBWT	33	T154	no	no	no	no	no	no	no	no	no
2012	UBWT	34	T158	no	no	no	no	no	no	no	no	no
2012	UBWT	35	T163	no	no	no	no	no	no	no	no	no
2012	UBWT	36	VA07HRW-45	no	no	no	no	no	no	no	no	no
2012	UBWT	37	VA07HRW-97	no	no	no	no	no	nd	no	no	no
2012	UBWT	38	VA08HRW-100	no	no	Sr24/Lr24	no	no	no	no	no	no
2012	UBWT	39	VA08HRW-103	no	no	Sr24/Lr24	no	no	nd	no	no	no
2012	UBWT	40	VA09HRW-6	no	no	no	no	no	no	no	no	no
2012	UBWT	41	VA09HRW-43	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no
2012	UBWT	42	VA09HRW-64	no	no	Sr24/Lr24	Yr17Lr37/Sr38	nonfunctional-Lr34/Yr18 het	no	no	no	no
2012	UBWT	43	VA09HRW-66	no	no	no	Yr17Lr37/Sr38	nonfunctional-Lr34/Yr18	no	no	no	no
2012	UBWT	44	VA10HRW-42	no	no	no	no	no	Sr9	no	no	no
2012	UBWT	45	VA10HRW-48	no	no	no	no	no	no	no	no	no
2012	UBWT	46	KS020832~2	no	no	no	Yr17Lr37/Sr38	no	no	no	no	no

2012 Uniform Bread Wheat Trial				Rye translocations		Asian Fly al		BYDV	SBMV	Glutenin alleles			Hardness Quality	Mill Quality
Year	Nursery	Entry	Sample Name	1RS	H13	H9	Bdv2/3	Sbm1	Glu-B1	Glu-D1	Glu-A1	Texture	sucrose synthase	
2012	UBWT	1	NC-Neuse	non-1RS	no	no	no	Sbm1	no	2+12	Ax1 or null	soft	TaSus2-2B	
2012	UBWT	2	Shirley	1RS:1BL	no	no	no	Sbm1	no	2+12	Ax1 or null	soft	TaSus2-2B	
2012	UBWT	3	USG 3120	1RS:1BL	no	no	no	no	no	5+10	Ax2*	soft	no	
2012	UBWT	4	Appalachian White	non-1RS	no	no	no	Sbm1	no	2+12	Ax1 or null	hard	no	
2012	UBWT	5	Endurance	1RS:1BL het	no	no	no	Sbm1	no	5+10	het	hard	no	
2012	UBWT	6	Jagger	non-1RS	no	no	no	Sbm1	no	5+10	Ax1 or null	hard	no	
2012	UBWT	7	NuEast	1RS:1AL?	no	no	no	no	no	2+12	Ax2*	hard	no	
2012	UBWT	8	TAM 303	1RS:1AL	no	nd	no	Sbm1	no	2+12	Ax2*	hard	no	
2012	UBWT	9	Vision 30	non-1RS	no	no	no	Sbm1	no	5+10	Ax2*	hard	TaSus2-2B	
2012	UBWT	10	Vision 40	non-1RS	no	no	nd	Sbm1	no	2+12	Ax2*	hard	no	
2012	UBWT	11	ARS05-1044	1RS:1AL	no	nd	no	no	no	2+12	Ax2*	hard	no	
2012	UBWT	12	ARS07-0785	non-1RS	H13	no	no	Sbm1	no	5+10	Ax1 or null	hard	TaSus2-2B	
2012	UBWT	13	ARS07-1214	non-1RS	no	no	no	Sbm1	no	5+10	Ax1 or null	hard	no	
2012	UBWT	14	ARS07-1243	1RS:1AL	no	nd	no	Sbm1	no	2+12	Ax2*	hard	no	
2012	UBWT	15	ARS08-0161	non-1RS	no	no	no	no	no	5+10	Ax2*	hard/soft?	TaSus2-2B	
2012	UBWT	16	ARS08-1059	1RS:1BL het	no	no	no	Sbm1	no	2+12	Ax1 or null	hard	no	
2012	UBWT	17	ARS07-0117	non-1RS	no	no	no	no	no	2+12	Ax1 or null	hard	TaSus2-2B	
2012	UBWT	18	ARS07-1125	1RS:1BL	no	no	no	no	no	het	Ax2*	het?	no	
2012	UBWT	19	ARS09-173	non-1RS	H13	no	no	Sbm1 het	no	2+12	Ax2*	hard	no	
2012	UBWT	20	ARS09-181	1RS:1BL	H13	no	no	no	no	5+10	Ax2*	hard	no	
2012	UBWT	21	ARS09-228	non-1RS	H13	no	no	Sbm1	no	5+10	Ax1 or null	hard	TaSus2-2B	
2012	UBWT	22	ARS09-367	non-1RS	no	no	no	Sbm1	no	5+10	Ax1 or null	hard	no	
2012	UBWT	23	ARS09-411	non-1RS	no	no	no	Sbm1	no	5+10	Ax2*	hard	no	
2012	UBWT	24	ARS09-446	non-1RS	no	no	no	no	no	5+10	Ax2*	hard	TaSus2-2B	
2012	UBWT	25	ARS09-466	non-1RS	no	no	no	Sbm1	no	2+12	Ax1 or null	hard	no	
2012	UBWT	26	ARS09-571	non-1RS	H13	no	no	no	no	5+10	Ax2*	hard	no	
2012	UBWT	27	ARS09-595	non-1RS	no	no	no	Sbm1	no	5+10	Ax2*	hard	TaSus2-2B	
2012	UBWT	28	ARS09-643	1RS:1AL	no	no	no	Sbm1	Bx7oe het	2+12	Ax2*	hard	no	
2012	UBWT	29	ARS09-724	non-1RS	no	no	no	no	no	2+12	Ax1 or null	hard	no	
2012	UBWT	30	KWS 004	non-1RS	no	no	no	Sbm1 het	no	5+10	Ax1 or null	hard/soft?	no	
2012	UBWT	31	KWS 005	non-1RS	no	no	no	Sbm1 het	no	5+10	Ax2*	hard	no	
2012	UBWT	32	T153	1RS:1AL	no	nd	no	Sbm1	no	2+12	Ax2*	hard	no	
2012	UBWT	33	T154	1RS:1AL?	no	no	no	no	no	2+12	Ax2*	hard	no	
2012	UBWT	34	T158	1RS:1AL?	no	no	no	no	no	2+12	Ax2*	hard	no	
2012	UBWT	35	T163	non-1RS	no	no	no	Sbm1	no	5+10	Ax2*	hard	no	
2012	UBWT	36	VA07HRW-45	non-1RS	no	no	no	Sbm1	no	2+12	Ax2*	hard	no	
2012	UBWT	37	VA07HRW-97	non-1RS	no	no	no	Sbm1	no	2+12	Ax2*	hard	no	
2012	UBWT	38	VA08HWW-100	non-1RS	no	nd	no	Sbm1	no	2+12	Ax1 or null	hard	no	
2012	UBWT	39	VA08HRW-103	non-1RS	no	no	no	Sbm1 het	no	2+12	Ax1 or null	hard/soft?	no	
2012	UBWT	40	VA09HRW-6	non-1RS	no	no	no	no	no	2+12	Ax2*	hard	no	
2012	UBWT	41	VA09HRW-43	non-1RS	no	no	no	no	no	2+12	Ax1 or null	hard	no	
2012	UBWT	42	VA09HRW-64	non-1RS	no	no	no	Sbm1	no	5+10	Ax1 or null	hard	no	
2012	UBWT	43	VA09HRW-66	non-1RS	no	no	no	no	no	2+12	Ax1 or null	hard	no	
2012	UBWT	44	VA10HRW-42	non-1RS	no	no	nd	no	no	5+10	Ax2*	hard	no	
2012	UBWT	45	VA10HRW-48	non-1RS	no	no	no	Sbm1	no	5+10	Ax1 or null	hard	no	
2012	UBWT	46	KS020832~2	non-1RS	no	no	no	Sbm1	no	5+10	Ax2*	hard	no	

2012 Uniform Bread Wheat Trial				Kernel Color Genes			
Year	Nursery	Entry	Sample Name	r-A1 white	r-A1 N17 white	r-B1 white	r-D1 white
2012	UBWT	1	NC-Neuse	r-A1 white	R-A1	r-B1 white	R-D1
2012	UBWT	2	Shirley	R-A1	R-A1	R-B1	R-D1
2012	UBWT	3	USG 3120	r-A1 white	R-A1	r-B1 white	R-D1
2012	UBWT	4	Appalachian White	R-A1	r-A1_N17_het	r-B1 white	r-D1 white
2012	UBWT	5	Endurance	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	6	Jagger	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	7	NuEast	R-A1	R-A1	R-B1	R-D1
2012	UBWT	8	TAM 303	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	9	Vision 30	R-A1	R-A1	R-B1	R-D1
2012	UBWT	10	Vision 40	r-A1 white	R-A1	R-B1	R-D1
2012	UBWT	11	ARS05-1044	r-A1 white	R-A1	r-B1 white	r-D1 white
2012	UBWT	12	ARS07-0785	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	13	ARS07-1214	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	14	ARS07-1243	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	15	ARS08-0161	r-A1 white	R-A1	r-B1 het	R-D1
2012	UBWT	16	ARS08-1059	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	17	ARS07-0117	r-A1 white	R-A1	r-B1 white	R-D1
2012	UBWT	18	ARS07-1125	R-A1	R-A1	r-B1 het	R-D1
2012	UBWT	19	ARS09-173	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	20	ARS09-181	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	21	ARS09-228	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	22	ARS09-367	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	23	ARS09-411	r-A1 white	R-A1	r-B1 white	R-D1
2012	UBWT	24	ARS09-446	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	25	ARS09-466	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	26	ARS09-571	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	27	ARS09-595	r-A1 white	R-A1	r-B1 white	R-D1
2012	UBWT	28	ARS09-643	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	29	ARS09-724	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	30	KWS 004	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	31	KWS 005	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	32	T153	r-A1 white	R-A1	R-B1	R-D1
2012	UBWT	33	T154	r-A1 white	R-A1	R-B1	R-D1
2012	UBWT	34	T158	r-A1 white	R-A1	R-B1	R-D1
2012	UBWT	35	T163	r-A1 white	R-A1	R-B1	R-D1
2012	UBWT	36	VA07HRW-45	R-A1	R-A1	R-B1	R-D1
2012	UBWT	37	VA07HRW-97	r-A1 white	R-A1	R-B1	r-D1 white
2012	UBWT	38	VA08HWW-100	r-A1 white	R-A1	r-B1 white	r-D1 white
2012	UBWT	39	VA08HRW-103	R-A1	R-A1	r-B1 white	r-D1 white
2012	UBWT	40	VA09HRW-6	r-A1 white	R-A1	R-B1	R-D1
2012	UBWT	41	VA09HRW-43	r-A1 white	R-A1	r-B1 white	R-D1
2012	UBWT	42	VA09HRW-64	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	43	VA09HRW-66	r-A1 white	R-A1	r-B1 white	R-D1
2012	UBWT	44	VA10HRW-42	R-A1	R-A1	r-B1 white	R-D1
2012	UBWT	45	VA10HRW-48	R-A1	R-A1	R-B1	R-D1
2012	UBWT	46	KS020832~2	R-A1	R-A1	r-B1 white	R-D1