

2009

Cooperative Scab Nurseries

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

Marker Reports

Eastern Regional Small Grains Genotyping Lab

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USDA-ARS

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Some details of notations in the Marker tables

"nd" = not determined or lack of amplification

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

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

All numbers are size in base pairs of amplified fragments
Target alleles are in **bold** or *italics*

RhtW = wild type; RhtM = dwarfing = yes

Ppd-D1a = photoperiod insensitive = yes

2009 Northern Uniform Winter Wheat Scab Nursery**Entry List**

Nursery	Entry	Sample Name	Pedigree
NUWWSN	1	Ernie	
NUWWSN	2	Truman	
NUWWSN	3	Freedom	
NUWWSN	4	Pioneer2545	
NUWWSN	5	P03615A1-4-4	
NUWWSN	6	P04704A1-2-1-1	
NUWWSN	7	P053A1-6-7	
NUWWSN	8	P0537A1-7-12	
NUWWSN	9	P0128A1-22-22	
NUWWSN	10	Mocha	
NUWWSN	11	Shaver	
NUWWSN	12	Rubin	
NUWWSN	13	Arena	
NUWWSN	14	Canon	
NUWWSN	15	NE06469	
NUWWSN	16	NI04420	
NUWWSN	17	NI04427	
NUWWSN	18	NE05459	
NUWWSN	19	NE06471	
NUWWSN	20	NY03179FHB-10	
NUWWSN	21	NY03180FHB-10	
NUWWSN	22	NY03179FHB-12	
NUWWSN	23	NYW103-21-9183	
NUWWSN	24	NYW103-102-9103	
NUWWSN	25	IL02-18228	
NUWWSN	26	IL04-7874	
NUWWSN	27	IL04-7942	
NUWWSN	28	IL04-10721	
NUWWSN	29	IL04-10741	
NUWWSN	30	MD02W81-08-2	
NUWWSN	31	MD02W81-08-4	
NUWWSN	32	ACF213003B	
NUWWSN	33	ACF126103	
NUWWSN	34	ACF12004	
NUWWSN	35	RCUOGTr34	
NUWWSN	36	RCUOGTr35	
NUWWSN	37	M05-1531	
NUWWSN	38	B0390207	
NUWWSN	39	03M1539-031	
NUWWSN	40	03M1599-0007	
NUWWSN	41	MO050101	
NUWWSN	42	MO050921	
NUWWSN	43	MO041020	
NUWWSN	44	MO050219	
NUWWSN	45	MO050144	
NUWWSN	46	KY00C-2059-19	
NUWWSN	47	KY00C-2515-02	
NUWWSN	48	KY00C-2059-24	
NUWWSN	49	KY00C-2567-01	
NUWWSN	50	KY00C-2143-08	
NUWWSN	51	MSULineE6003	
NUWWSN	52	MSULineE7035R	
NUWWSN	53	OH04-264-58	
NUWWSN	54	OH04-268-39	
NUWWSN	55	OH05-248-38	
NUWWSN	56	VA07W-580	
NUWWSN	57	VA07W-600	
NUWWSN	58	VA07W-672	
NUWWSN	59	VA06W-558	
NUWWSN	60	VA06W-615	

2009 Northern Uniform Winter Wheat Scab Nursery

Summary of all Markers

Nursery	Entry	Sample Name	Rht1-	Rht2-	Rht8	Ppd-D1a	Fhb Ernie		Fhb 2DL-	Fhb 5A	Fhb 5A	Fhb Ernie	Fhb Ernie
			B1b	D1b			Fhb1	3Bc	Wuhan1/W14	Ernie	Ning7840	4B	2B
NUWWSN	1	Ernie	yes	no	nd	het	no	yes	no	yes	no	yes	yes
NUWWSN	2	Truman	yes	no	no	no	no	no	no	no	no	no	no
NUWWSN	3	Freedom	yes	no	no	no	no	yes	no	no	no	no	yes
NUWWSN	4	Pioneer2545	no	yes	no	yes	no	no	no	no	no	no	no
NUWWSN	5	P03615A1-4-4	yes	no	no	no	yes	no	no	no	no	no	yes
NUWWSN	6	P04704A1-2-1-1	yes	no	no	no	no	no	no	no	no	no	yes
NUWWSN	7	P053A1-6-7	yes	no	no	het	no	no	no	no	no	no	no
NUWWSN	8	P0537A1-7-12	yes	no	no	yes	het?	no	no	no	no	no	yes
NUWWSN	9	P0128A1-22-22	yes	no	no	no	yes	no	no	yes?	no	no	no
NUWWSN	10	Mocha	yes	no	no	yes	no	no	no	no	no	no	no
NUWWSN	11	Shaver	no	yes	no	yes	no	no	no	no	no	het	no
NUWWSN	12	Rubin	yes	no	yes	no	no	no	no	no	no	no	no
NUWWSN	13	Arena	no	yes	no	yes	no	no	no	no	no	no	het
NUWWSN	14	Canon	nd	no	nd	yes	no	?	no	no	no	no	no
NUWWSN	15	NE06469	yes	no	no	yes	no	no	no	no	no	no	no
NUWWSN	16	NI04420	yes	no	no	het	no	?	no	no	no	no	no
NUWWSN	17	NI04427	yes	no	no	no	no	no	no	no	no	no	no
NUWWSN	18	NE05459	yes	no	no	yes	no	no	no	no	no	no	no
NUWWSN	19	NE06471	yes	no	no	yes	no	no	no	no	no	no	no
NUWWSN	20	NY03179FHB-10	no	yes	no	no	het?	no	no	no	no	no	no
NUWWSN	21	NY03180FHB-10	no	yes	no	no	yes	no	no	no	no	no	no
NUWWSN	22	NY03179FHB-12	no	yes	no	no	yes	no	no	no	no	no	no
NUWWSN	23	NYW103-21-9183	no	no	no	no	no	no	no	no	no	no	no
NUWWSN	24	NYW103-102-9103	no	no	no	no	no	no	no	no	no	no	?
NUWWSN	25	IL02-18228	yes	no	no	no	no	?	no	no	no	no	no
NUWWSN	26	IL04-7874	yes	no	no	no	no	?	no	no	no	no	no
NUWWSN	27	IL04-7942	yes	no	no	no	no	?	no	no	no	no	no
NUWWSN	28	IL04-10721	yes	no	no	no	no	?	no	no	no	no	no
NUWWSN	29	IL04-10741	yes	no	no	no	no	no	no	no	no	no	no
NUWWSN	30	MD02W81-08-2	yes	no	no	no	yes	yes	no	no	yes	no	yes
NUWWSN	31	MD02W81-08-4	no	no	no	no	yes	yes	no	no	yes	no	yes
NUWWSN	32	ACF213003B	yes	no	het	no	no	no	no	no	no	no	yes
NUWWSN	33	ACF126103	yes	no	yes	het	no	no	no	no	no	no	no
NUWWSN	34	ACF12004	no	no	yes	yes	no	no	no	no	no	no	no
NUWWSN	35	RCUOGTr34	yes	no	no	no	no	no	no	no	no	no	no
NUWWSN	36	RCUOGTr35	no	no	no	no	no	het	no	no	no	no	no
NUWWSN	37	M05-1531	yes	no	no	no	no	yes	no	yes	no	no	no
NUWWSN	38	B0390207	no	yes	no	yes	no	no	no	no	no	no	no
NUWWSN	39	03M1539-031	yes	no	no	yes	no	yes	no	no	no	no	no
NUWWSN	40	03M1599-0007	yes	no	no	yes	no	no	no	no	no	no	no
NUWWSN	41	MO050101	yes	no	no	no	no	no	no	no	no	no	no
NUWWSN	42	MO050921	yes	no	no	no	no	yes	no	no	no	no	yes
NUWWSN	43	MO041020	yes	no	no	no	no	no	no	no	no	no	no
NUWWSN	44	MO050219	no	yes	no	no	no	no	no	no	no	no	no
NUWWSN	45	MO050144	no	yes	no	no	no	no	no	no	no	no	no
NUWWSN	46	KY00C-2059-19	no	yes	no	yes	no	no	no	no	no	no	no
NUWWSN	47	KY00C-2515-02	no	yes	no	no	no	no	no	no	no	no	yes
NUWWSN	48	KY00C-2059-24	no	yes	no	yes	no	no	no	het	no	no	no
NUWWSN	49	KY00C-2567-01	no	yes	no	yes	no	no	no	het	no	no	no
NUWWSN	50	KY00C-2143-08	yes	no	no	het	no	no	no	no	no	no	yes
NUWWSN	51	MSULineE6003	no	yes	no	no	yes	no	no	no	?	no	no
NUWWSN	52	MSULineE7035R	no	yes	no	yes	het?	no	no	no	no	no	no
NUWWSN	53	OH04-264-58	no	yes	no	het	no	?	no	het	no	no	no
NUWWSN	54	OH04-268-39	yes	no	no	no	no	no	no	no	no	no	no
NUWWSN	55	OH05-248-38	yes	no	no	yes	no	no	no	no	no	no	no
NUWWSN	56	VA07W-580	no	yes	no	no	no	no	no	no	no	no	no
NUWWSN	57	VA07W-600	no	yes	no	no	no	yes	no	het	no	no	yes
NUWWSN	58	VA07W-672	no	yes	no	yes	no	no	no	het	no	no	yes
NUWWSN	59	VA06W-558	yes	no	no	no	no	no	no	yes?	no	no	no
NUWWSN	60	VA06W-615	no	yes	no	yes	no	no	no	het	no	no	yes

2009 Northern Uniform Winter Wheat Scab Nursery

Summary of all Markers

Nursery	Entry	Sample Name	Lr24/		Lr37/Yr17/		Lr34/Yr18/		1RS	H13	H9	Bdv2/3	Bx7 over-expressing	Glu-D1
			Sr36	Sr24	Sr28	Pm38								
NUWWSN	1	Ernie	yes	no	no	no	non-1RS	no	no	no	no	no	het	
NUWWSN	2	Truman	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	3	Freedom	yes	no	no	no	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	4	Pioneer2545	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	5	P03615A1-4-4	yes	no	yes	no	1RS:1BL	no	no	no	yes	yes	2+12	
NUWWSN	6	P04704A1-2-1-1	yes	no	no	no	1RS:1BL	no	no	yes	yes	yes	5+10	
NUWWSN	7	P053A1-6-7	no	no	yes	no	non-1RS	no	no	het	no	no	2+12	
NUWWSN	8	P0537A1-7-12	yes	no	yes	no	non-1RS	no	no	het	no	no	5+10	
NUWWSN	9	P0128A1-22-22	no	no	no	no	non-1RS	nd	no	no	no	no	2+12	
NUWWSN	10	Mocha	no	no	no	no	non-1RS	no	no	no	no	no	het	
NUWWSN	11	Shaver	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	12	Rubin	no	no	no	no	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	13	Arena	no	no	no	no	non-1RS	no	no	no	no	no	het	
NUWWSN	14	Canon	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	15	NE06469	no	yes	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	16	NI04420	no	no	no	no	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	17	NI04427	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	18	NE05459	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	19	NE06471	no	yes	no	no	non-1RS	no	no	no	no	no	het	
NUWWSN	20	NY03179FHB-10	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	21	NY03180FHB-10	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	22	NY03179FHB-12	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	23	NYW103-21-9183	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	24	NYW103-102-9103	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	25	IL02-18228	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	26	IL04-7874	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	27	IL04-7942	no	no	no	no	non-1RS	no	no	no	no	no	het	
NUWWSN	28	IL04-10721	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	29	IL04-10741	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	30	MD02W81-08-2	yes	no	no	no	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	31	MD02W81-08-4	yes	no	no	het?	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	32	ACF213003B	het	no	no	no	1RS:1BL	no	no	no	no	no	5+10	
NUWWSN	33	ACF126103	no	no	no	no	1RS:1BL	no	no	no	no	no	5+10	
NUWWSN	34	ACF12004	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	35	RCUOGTr34	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	36	RCUOGTr35	no	no	no	no	1RS:1AL	no	no	no	no	no	2+12	
NUWWSN	37	M05-1531	no	no	no	no	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	38	B0390207	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	39	03M1539-031	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	40	03M1599-0007	no	no	yes	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	41	MO050101	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	42	MO050921	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	43	MO041020	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	44	MO050219	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	45	MO050144	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	46	KY00C-2059-19	no	no	no	yes	non-1RS	no	no	no	no	no	2+12	
NUWWSN	47	KY00C-2515-02	no	no	no	no	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	48	KY00C-2059-24	no	no	no	no	non-1RS	no	no	no	no	yes	het	
NUWWSN	49	KY00C-2567-01	no	no	no	no	non-1RS	no	no	no	no	no	5+10	
NUWWSN	50	KY00C-2143-08	het	no	no	no	1RS:1BL	no	no	no	no	no	het	
NUWWSN	51	MSULineE6003	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	52	MSULineE7035R	no	no	no	no	1RS:1BL	no	no	no	no	no	2+12	
NUWWSN	53	OH04-264-58	no	no	no	no	non-1RS	no	no	no	het	het	het	
NUWWSN	54	OH04-268-39	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	55	OH05-248-38	no	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	56	VA07W-580	no	no	no	no	1RS:1AL	no	no	no	no	no	5+10	
NUWWSN	57	VA07W-600	yes	no	no	no	non-1RS	no	no	no	no	no	2+12	
NUWWSN	58	VA07W-672	het	no	no	no	non-1RS	no	no	no	no	no	het	
NUWWSN	59	VA06W-558	no	yes	no	no	1RS:1AL	no	no	no	no	no	2+12	
NUWWSN	60	VA06W-615	no	no	no	no	non-1RS	no	no	no	no	no	2+12	

Dwarfing genes & Photoperiod insensitivity

2009

Nursery	Entry	Sample Name	Rht1W	Rht1M	Rht2W	Rht2M	Rht1-	Rht2-	gwm	gwm	Rht8	Ppd	Ppd	Ppd-D1a
							B1b	D1b						
NUWWSN	1	Ernie		367	251		yes	no	nd		nd	283	413	het
NUWWSN	2	Truman		367	251		yes	no	175		no		413	no
NUWWSN	3	Freedom		367	251		yes	no	165		no		413	no
NUWWSN	4	Pioneer2545	362			253	no	yes	203		no	283		yes
NUWWSN	5	P03615A1-4-4		367	251		yes	no	175		no		413	no
NUWWSN	6	P04704A1-2-1-1		367	251		yes	no	175		no		413	no
NUWWSN	7	P053A1-6-7		367	251		yes	no	175	203	no	283	413	het
NUWWSN	8	P0537A1-7-12		367	251		yes	no	175	203	no	283		yes
NUWWSN	9	P0128A1-22-22		367	251		yes	no	175		no		413	no
NUWWSN	10	Mocha		367	251		yes	no	165	175	no	283		yes
NUWWSN	11	Shaver	362			253	no	yes	165		no	283		yes
NUWWSN	12	Rubin		367	251		yes	no	193		yes		413	no
NUWWSN	13	Arena	362			253	no	yes	175	203	no	283		yes
NUWWSN	14	Canon	nd	nd	251		nd	no	nd		nd	283		yes
NUWWSN	15	NE06469		367	251		yes	no	165		no	283		yes
NUWWSN	16	NI04420		367	251		yes	no	197	211	no	283	413	het
NUWWSN	17	NI04427		367	251		yes	no	207	211	no		413	no
NUWWSN	18	NE05459		367	251		yes	no	165		no	283		yes
NUWWSN	19	NE06471		367	251		yes	no	165		no	283		yes
NUWWSN	20	NY03179FHB-10	362			253	no	yes	175		no		413	no
NUWWSN	21	NY03180FHB-10	362			253	no	yes	175		no		413	no
NUWWSN	22	NY03179FHB-12	362			253	no	yes	175		no		413	no
NUWWSN	23	NYW103-21-9183	362		251		no	no	175		no		413	no
NUWWSN	24	NYW103-102-9103	362		251		no	no	175		no		413	no
NUWWSN	25	IL02-18228		367	251		yes	no	175		no		413	no
NUWWSN	26	IL04-7874		367	251		yes	no	175		no		413	no
NUWWSN	27	IL04-7942		367	251		yes	no	175		no		413	no
NUWWSN	28	IL04-10721		367	251		yes	no	175		no		413	no
NUWWSN	29	IL04-10741		367	251		yes	no	175		no		413	no
NUWWSN	30	MD02W81-08-2		367	251		yes	no	165		no		413	no
NUWWSN	31	MD02W81-08-4	362		251		no	no	165		no		413	no
NUWWSN	32	ACF213003B		367	251		yes	no	175	193	het		413	no
NUWWSN	33	ACF126103		367	251		yes	no	193		yes	283	413	het
NUWWSN	34	ACF12004	362		251		no	no	193		yes	283		yes
NUWWSN	35	RCUOGTr34	362	367	251		yes	no	165		no		413	no
NUWWSN	36	RCUOGTr35	362		251		no	no	165		no		413	no
NUWWSN	37	M05-1531		367	251		yes	no	175		no		413	no
NUWWSN	38	B0390207	362			253	no	yes	165		no	283		yes
NUWWSN	39	03M1539-031		367	251		yes	no	203		no	283		yes
NUWWSN	40	03M1599-0007		367	251		yes	no	175		no	283		yes
NUWWSN	41	MO050101		367	251		yes	no	175		no		413	no
NUWWSN	42	MO050921		367	251		yes	no	175		no		413	no
NUWWSN	43	MO041020		367	251		yes	no	175		no		413	no
NUWWSN	44	MO050219	362			253	no	yes	175		no		413	no
NUWWSN	45	MO050144	362			253	no	yes	175		no		413	no
NUWWSN	46	KY00C-2059-19	362			253	no	yes	165		no	283		yes
NUWWSN	47	KY00C-2515-02	362			253	no	yes	177	203	no		413	no
NUWWSN	48	KY00C-2059-24	362			253	no	yes	165	177	no	283		yes
NUWWSN	49	KY00C-2567-01	362			253	no	yes	165	203	no	283		yes
NUWWSN	50	KY00C-2143-08		367	251		yes	no	177		no	283	413	het
NUWWSN	51	MSULineE6003	362			253	no	yes	165		no		413	no
NUWWSN	52	MSULineE7035R	362			253	no	yes	165	175	no	283		yes
NUWWSN	53	OH04-264-58	362			253	no	yes	165	175	no	283	413	het
NUWWSN	54	OH04-268-39		367	251		yes	no	175		no		413	no
NUWWSN	55	OH05-248-38		367	251		yes	no	175		no	283		yes
NUWWSN	56	VA07W-580	362			253	no	yes	203		no		413	no
NUWWSN	57	VA07W-600	362			253	no	yes	165		no		413	no
NUWWSN	58	VA07W-672	362			253	no	yes	175	203	no	283		yes
NUWWSN	59	VA06W-558		367	251		yes	no	175		no		413	no
NUWWSN	60	VA06W-615	362			253	no	yes	175	203	no	283		yes

FHB QTLs

2009

Nursery	Entry	Sample Name	umn10	umn10	gwm533	gwm533	gwm533	Fhb1
NUWWSN	1	Ernie	236		119			no
NUWWSN	2	Truman	236		119			no
NUWWSN	3	Freedom	236		129			no
NUWWSN	4	Pioneer2545	236		129			no
NUWWSN	5	P03615A1-4-4	239		145			yes
NUWWSN	6	P04704A1-2-1-1	236		119			no
NUWWSN	7	P053A1-6-7	236		119			no
NUWWSN	8	P0537A1-7-12	229	239	147	157		het?
NUWWSN	9	P0128A1-22-22	239		145			yes
NUWWSN	10	Mocha	229	236	129	147	157	no
NUWWSN	11	Shaver	236		119			no
NUWWSN	12	Rubin	229		147	157		no
NUWWSN	13	Arena	236		119			no
NUWWSN	14	Canon	236		nd			no
NUWWSN	15	NE06469	236		nd			no
NUWWSN	16	NI04420	236		nd			no
NUWWSN	17	NI04427	236		nd			no
NUWWSN	18	NE05459	236		nd			no
NUWWSN	19	NE06471	236		119			no
NUWWSN	20	NY03179FHB-10	236	239	145			het?
NUWWSN	21	NY03180FHB-10	239		145			yes
NUWWSN	22	NY03179FHB-12	239		145			yes
NUWWSN	23	NYW103-21-9183	236		119			no
NUWWSN	24	NYW103-102-9103	236		119			no
NUWWSN	25	IL02-18228	236		119			no
NUWWSN	26	IL04-7874	229		147	157		no
NUWWSN	27	IL04-7942	229		147	157		no
NUWWSN	28	IL04-10721	229		147	157		no
NUWWSN	29	IL04-10741	236		119			no
NUWWSN	30	MD02W81-08-2	239		145			yes
NUWWSN	31	MD02W81-08-4	239		145			yes
NUWWSN	32	ACF213003B	236		119			no
NUWWSN	33	ACF126103	236		119			no
NUWWSN	34	ACF12004	236		119			no
NUWWSN	35	RCUOGTr34	236		119			no
NUWWSN	36	RCUOGTr35	236		129			no
NUWWSN	37	M05-1531	236		nd			no
NUWWSN	38	B0390207	236		119			no
NUWWSN	39	03M1539-031	236		119			no
NUWWSN	40	03M1599-0007	236		119			no
NUWWSN	41	MO050101	236		119			no
NUWWSN	42	MO050921	236		119			no
NUWWSN	43	MO041020	236		119			no
NUWWSN	44	MO050219	229		157			no
NUWWSN	45	MO050144	229		157			no
NUWWSN	46	KY00C-2059-19	236		119			no
NUWWSN	47	KY00C-2515-02	236		119	129		no
NUWWSN	48	KY00C-2059-24	236		119			no
NUWWSN	49	KY00C-2567-01	236		119			no
NUWWSN	50	KY00C-2143-08	229	236	119	147	157	no
NUWWSN	51	MSULineE6003	239		143			yes
NUWWSN	52	MSULineE7035R	239		119	143		het?
NUWWSN	53	OH04-264-58	229		147	157		no
NUWWSN	54	OH04-268-39	236		119			no
NUWWSN	55	OH05-248-38	236		119			no
NUWWSN	56	VA07W-580	236		143			no
NUWWSN	57	VA07W-600	236		129			no
NUWWSN	58	VA07W-672	229	236	119	147	157	no
NUWWSN	59	VA06W-558	229		147	157		no
NUWWSN	60	VA06W-615	229	236	129	147		no

FHB QTLs

2009

Nursery	Entry	Sample Name	gwm	gwm	gwm	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	Fhb Ernie	
			285	285	285	612	612	307	307	1	1	418	418	471	471	471	3Bc
NUWWSN	1	Ernie	226	245		287	291	142	144	153		262	269	179	181	217	yes
NUWWSN	2	Truman	249			291		140		151		271		179	217		no
NUWWSN	3	Freedom	245			287		142		149		263		179			yes
NUWWSN	4	Pioneer2545	222			282		144		149		260		179	221		no
NUWWSN	5	P03615A1-4-4	218			289		142		156		nd		177	179	215	no
NUWWSN	6	P04704A1-2-1-1	218			289		142		156		nd		177	179	215	no
NUWWSN	7	P053A1-6-7	222			282		144		160		260	262	179	217		no
NUWWSN	8	P0537A1-7-12	222	245		268	287	142	144	160		262		179			no
NUWWSN	9	P0128A1-22-22	218			280		142		156		nd		179	215		no
NUWWSN	10	Mocha	218			276	282	144		153		271		179	217		no
NUWWSN	11	Shaver	226	248		282	291	140	144	151		269	271	179	215	217	no
NUWWSN	12	Rubin	220			274		144		158		271		181	215		no
NUWWSN	13	Arena	218	226		282		144		149		269		179	215		no
NUWWSN	14	Canon	222			262		142		153		262		177	179	217	?
NUWWSN	15	NE06469	220			254	278	140	144	151	160	263	271	179	217		no
NUWWSN	16	NI04420	218	236		279	287	142	144	153	156	262		177	179	217	?
NUWWSN	17	NI04427	226			280		142		160		265		177	179	217	no
NUWWSN	18	NE05459	236			276		142		156		262		177	179	217	no
NUWWSN	19	NE06471	226	236		280	287	142		160		265		177	179	217	no
NUWWSN	20	NY03179FHB-10	216	243		264		142		153	160	271		179	217		no
NUWWSN	21	NY03180FHB-10	216			264		142		160		271		179	215	217	no
NUWWSN	22	NY03179FHB-12	216			264	268	142		160		271		179	215		no
NUWWSN	23	NYW103-21-9183	216			268		142		160		271		179	215		no
NUWWSN	24	NYW103-102-9103	216			270		142		160		271		179	215		no
NUWWSN	25	IL02-18228	220	245		282	287	144		163		271		179	217		?
NUWWSN	26	IL04-7874	245			287		142		158		269		177	179		?
NUWWSN	27	IL04-7942	nd			287		142		158		269		177	179	217	?
NUWWSN	28	IL04-10721	245			287		142		153		271		179	217		?
NUWWSN	29	IL04-10741	220			282		144		163		271		179	217		no
NUWWSN	30	MD02W81-08-2	245			287		142		149		262		179			yes
NUWWSN	31	MD02W81-08-4	245			287		142		149		262		179			yes
NUWWSN	32	ACF213003B	226			284		144		149		260	271	179	221		no
NUWWSN	33	ACF126103	226			282		144		149		260		179	221		no
NUWWSN	34	ACF12004	220			282		144		151		271		179	217		no
NUWWSN	35	RCUOGTr34	220			274		144		151		271		179	217		no
NUWWSN	36	RCUOGTr35	222	245		268	287	142	144	149		262		179			het
NUWWSN	37	M05-1531	245			287		142		153		262		179	217		yes
NUWWSN	38	B0390207	216			276		142		149		269		179	221		no
NUWWSN	39	03M1539-031	245			287		142		153		262		179			yes
NUWWSN	40	03M1599-0007	220			274		144		151		271		177	181	217	no
NUWWSN	41	MO050101	249			291		140		151		271		179	217		no
NUWWSN	42	MO050921	245			287		142		153		271		179	217		yes
NUWWSN	43	MO041020	nd			291		140		151		271		179	217		no
NUWWSN	44	MO050219	218			282		144		153		260		179	221		no
NUWWSN	45	MO050144	218			282		144		153		260		179	221		no
NUWWSN	46	KY00C-2059-19	226			291		144		149		269		179	217		no
NUWWSN	47	KY00C-2515-02	218	243		289		142	144	151	158	262	271	179	217		no
NUWWSN	48	KY00C-2059-24	220	226		252	282	142	144	149	161	269	271	179	217		no
NUWWSN	49	KY00C-2567-01	226			291		144		149		269		169	219		no
NUWWSN	50	KY00C-2143-08	218			282		142	144	156		262	271	179	215		no
NUWWSN	51	MSULineE6003	220			280		142		151		262		179	217		no
NUWWSN	52	MSULineE7035R	220			274	284	144		151		271		179	217		no
NUWWSN	53	OH04-264-58	218			276	278	144		153		262	271	177	179	217	?
NUWWSN	54	OH04-268-39	226			282		144		149		260		179	221		no
NUWWSN	55	OH05-248-38	218			276		144		153		263		179	221		no
NUWWSN	56	VA07W-580	218			289		142		156		271		179	217		no
NUWWSN	57	VA07W-600	245			284		142		153		262		179	217		yes
NUWWSN	58	VA07W-672	220			280		142	147	163		262	271	179	221		no
NUWWSN	59	VA06W-558	220			280		142		156		271		177	179	217	no
NUWWSN	60	VA06W-615	226	245	271	282	291	144		149	153	262	269	179	215	219	no

FHB QTLs

2009

Nursery	Entry	Sample Name	cf	cf	g	g	g	g	g	w	w	g	g	Fhb 2DL- Wuhan1/W14
			233	233	539	539	608	608	608	144	144	349	349	
NUWWSN	1	Ernie	273	284	131	137	150	156		139		232	247	no
NUWWSN	2	Truman	290		137		162			137		215	240	no
NUWWSN	3	Freedom	290		137		162			137		232		no
NUWWSN	4	Pioneer2545	271		139		156			141		247		no
NUWWSN	5	P03615A1-4-4	284		141		150			141		232		no
NUWWSN	6	P04704A1-2-1-1	278		139		150			137		240		no
NUWWSN	7	P053A1-6-7	278	290	139	161	152			139		232	240	no
NUWWSN	8	P0537A1-7-12	278	290	139		152			139		232		no
NUWWSN	9	P0128A1-22-22	271		124		150			139		240		no
NUWWSN	10	Mocha	271		126	154	150	156		139		215	238	no
NUWWSN	11	Shaver	271		133		156			139		247		no
NUWWSN	12	Rubin	288		137		156			137		230		no
NUWWSN	13	Arena	271	284	133	137	150	156		139		228	247	no
NUWWSN	14	Canon	278		146		150			141		236	240	no
NUWWSN	15	NE06469	275		124	157	154	158		139	144	230	254	no
NUWWSN	16	NI04420	278		124	148	154	158		139		230		no
NUWWSN	17	NI04427	286		127		156			139		230		no
NUWWSN	18	NE05459	274		124		154			141		230		no
NUWWSN	19	NE06471	271	288	126		154			139	141	232	242	no
NUWWSN	20	NY03179FHB-10	274	282	139		154			141		230	244	no
NUWWSN	21	NY03180FHB-10	274		139		154			141		244		no
NUWWSN	22	NY03179FHB-12	274		139		154			141		244		no
NUWWSN	23	NYW103-21-9183	288		141		152			141		244		no
NUWWSN	24	NYW103-102-9103	288		141		152			141		245		no
NUWWSN	25	IL02-18228	280		131		150			139		232		no
NUWWSN	26	IL04-7874	278		137		154			141		230		no
NUWWSN	27	IL04-7942	278		137		150	154		137		230		no
NUWWSN	28	IL04-10721	280		131		150			137		240		no
NUWWSN	29	IL04-10741	280		131		150			139		240		no
NUWWSN	30	MD02W81-08-2	290		137		162			137		238		no
NUWWSN	31	MD02W81-08-4	290		137		162			137		232		no
NUWWSN	32	ACF213003B	271	278	137		150	156		137	141	232	238	no
NUWWSN	33	ACF126103	271		137		156			137	141	238		no
NUWWSN	34	ACF12004	288		137		152			141		238		no
NUWWSN	35	RCUOGTr34	278		131	133	150			137	141	230		no
NUWWSN	36	RCUOGTr35	288		133	141	156			141		232	240	no
NUWWSN	37	M05-1531	290		139		154			139		240		no
NUWWSN	38	B0390207	280		131	133	150	158		141		240		no
NUWWSN	39	03M1539-031	273		131		156			137		240		no
NUWWSN	40	03M1599-0007	273		124		156			141		230		no
NUWWSN	41	MO050101	290		137		162			139		240		no
NUWWSN	42	MO050921	284	290	137		150	162		137		215		no
NUWWSN	43	MO041020	290		131	137	163			139		215		no
NUWWSN	44	MO050219	280		133		150			139		247		no
NUWWSN	45	MO050144	280		133		150			139		247		no
NUWWSN	46	KY00C-2059-19	271		133		156			141		238		no
NUWWSN	47	KY00C-2515-02	273	284	137	143	150	154	163	137		232		no
NUWWSN	48	KY00C-2059-24	271	273	133		156	158		137	141	238		no
NUWWSN	49	KY00C-2567-01	273		133	137	156	163		141		229	249	no
NUWWSN	50	KY00C-2143-08	273	284	137	143	150			137	139	230	244	no
NUWWSN	51	MSULineE6003	276		126		152			139		247		no
NUWWSN	52	MSULineE7035R	274		141		154			137		244		no
NUWWSN	53	OH04-264-58	271		133		150	156		139		238		no
NUWWSN	54	OH04-268-39	271		131		150			139		238		no
NUWWSN	55	OH05-248-38	273		137		158			139		247		no
NUWWSN	56	VA07W-580	276	280	131		150			139		232		no
NUWWSN	57	VA07W-600	278		135		150			139		238		no
NUWWSN	58	VA07W-672	273	278	135		150	158		137	141	244	247	no
NUWWSN	59	VA06W-558	280		139		150			139		240		no
NUWWSN	60	VA06W-615	273	278	124	135	150	154		139	141	230	245	no

FHB QTLs

2009

Nursery	Entry	Sample Name	gwm	gwm	wmc	wmc	barc	barc	barc	barc	gwm	gwm	gwm	gwm	barc	barc	Fhb 5A	Fhb 5A
			304	304	705	705	117	117	186	186	156	156	156	156	56	56	Ernie	Ning7840
NUWWSN	1	Ernie	199	221	135	164	217	221	203		283	313			104	115	yes	no
NUWWSN	2	Truman	199		164		217		203		313			104			no	no
NUWWSN	3	Freedom	217		160		221		213		283			115			no	no
NUWWSN	4	Pioneer2545	201		133		217		203		293			100			no	no
NUWWSN	5	P03615A1-4-4	203		139		217		203		313			104	115		no	no
NUWWSN	6	P04704A1-2-1-1	203		139		217		203		313			100			no	no
NUWWSN	7	P053A1-6-7	199		164		217		203		318			104			no	no
NUWWSN	8	P0537A1-7-12	199	217	164		217	221	203	213	313			115			no	no
NUWWSN	9	P0128A1-22-22	221		135		221		203		302			115			yes?	no
NUWWSN	10	Mocha	197	215	139		217	221	213	215	313			115			no	no
NUWWSN	11	Shaver	215	223	133	139	221	225	203	213	281	313		115			no	no
NUWWSN	12	Rubin	215		133		225		213		285			115			no	no
NUWWSN	13	Arena	199	215	133	162	217	225	203	213	281	313		115			no	no
NUWWSN	14	Canon	203		139		217		215		313			104			no	no
NUWWSN	15	NE06469	201	221	133	139	217	221	203	213	281	285		115			no	no
NUWWSN	16	NI04420	201	213	133	162	217	221	203	213	318			115			no	no
NUWWSN	17	NI04427	199		158		217		203		318			95			no	no
NUWWSN	18	NE05459	201		133		217		203		281			104			no	no
NUWWSN	19	NE06471	201	215	133		217	225	203	213	283	318		115			no	no
NUWWSN	20	NY03179FHB-10	201		133	135	217		203		281			104			no	no
NUWWSN	21	NY03180FHB-10	201		135		217		203		281			104			no	no
NUWWSN	22	NY03179FHB-12	201		135		217		203		281			104			no	no
NUWWSN	23	NYW103-21-9183	201		133		217		203		281			104			no	no
NUWWSN	24	NYW103-102-9103	201		135		217		203		281			104			no	no
NUWWSN	25	IL02-18228	213		137		221		213		313			115			no	no
NUWWSN	26	IL04-7874	199		164		217		203		283	313		104			no	no
NUWWSN	27	IL04-7942	199		164		217		203		283	313		104			no	no
NUWWSN	28	IL04-10721	213		137		221		213		313			115			no	no
NUWWSN	29	IL04-10741	213		137		221		213		313			115			no	no
NUWWSN	30	MD02W81-08-2	217		168		221		213		283	322		115			no	yes
NUWWSN	31	MD02W81-08-4	217		168		221		213		281	298		115			no	yes
NUWWSN	32	ACF213003B	215		133		225		213		285			115			no	no
NUWWSN	33	ACF126103	215		133		225		213		285			115			no	no
NUWWSN	34	ACF12004	207		158		225		213		285			115			no	no
NUWWSN	35	RCUOGTr34	201	215	133		217	225	203	213	285			115			no	no
NUWWSN	36	RCUOGTr35	201		133		217		203		281	283		104			no	no
NUWWSN	37	M05-1531	221	223	135		221		203		313			115			yes	no
NUWWSN	38	B0390207	199		166		217		203		315			104			no	no
NUWWSN	39	03M1539-031	199		164		217		203		283			104	115		no	no
NUWWSN	40	03M1599-0007	199		162		217		203		293			104			no	no
NUWWSN	41	MO050101	199		164		217		203		313			104			no	no
NUWWSN	42	MO050921	199		164		217		203		313			104			no	no
NUWWSN	43	MO041020	199		164		217		203		313			104			no	no
NUWWSN	44	MO050219	199		164		217		203		283			104			no	no
NUWWSN	45	MO050144	199		164		217		203		283			104			no	no
NUWWSN	46	KY00C-2059-19	199		164		217		203		281			104			no	no
NUWWSN	47	KY00C-2515-02	199		162		217		203		283	293		104			no	no
NUWWSN	48	KY00C-2059-24	199	221	135	164	217	221	203		283			115			het	no
NUWWSN	49	KY00C-2567-01	201	221	133	135	217	221	203		286	313		115			het	no
NUWWSN	50	KY00C-2143-08	199	215	133	162	217	225	203	213	285	313	311	115			no	no
NUWWSN	51	MSULineE6003	217		172		221		213		287			115			no	?
NUWWSN	52	MSULineE7035R	201		133		217		203		281			104			no	no
NUWWSN	53	OH04-264-58	199	221	135	162	217	221	203		293	313		115			het	no
NUWWSN	54	OH04-268-39	197		139		217		213		311	313		115			no	no
NUWWSN	55	OH05-248-38	199		164		217		203		313			104			no	no
NUWWSN	56	VA07W-580	213		137		221		213		313			115			no	no
NUWWSN	57	VA07W-600	199	221	135	166	217	221	203		313			115			het	no
NUWWSN	58	VA07W-672	199	223	135	162	217	221	203		293	313		115			het	no
NUWWSN	59	VA06W-558	221		135		221		203		283			115			yes?	no
NUWWSN	60	VA06W-615	199	221	135	164	217	221	203		283	293	311	313	115		het	no

FHB QTLs

2009

Nursery	Entry	Sample Name	wmc	wmc	gwm	gwm	gwm	gwm	gwm	gwm	gwm	barc	barc	Fhb Ernie 4B
			657	657	495	495	165	165	165	165	165	165	163	
NUWWSN	1	Ernie	117		156	175	192	194	252	255		156	171	yes
NUWWSN	2	Truman	132		156		190	192	252			159		no
NUWWSN	3	Freedom	132		156		192	198	252			159		no
NUWWSN	4	Pioneer2545	113		175		190	194	255			159		no
NUWWSN	5	P03615A1-4-4	126		175		192	194	244			156		no
NUWWSN	6	P04704A1-2-1-1	126		175		192	194	244			156		no
NUWWSN	7	P053A1-6-7	113		175		nd					159	165	no
NUWWSN	8	P0537A1-7-12	113		175		190	194	255			159		no
NUWWSN	9	P0128A1-22-22	113		175		190	194	255			159		no
NUWWSN	10	Mocha	128		164	175	190	192	244	255		159		no
NUWWSN	11	Shaver	113	117	156	175	190	194	252	255		159		het
NUWWSN	12	Rubin	113		175		192	194	255			159		no
NUWWSN	13	Arena	113	120	166	175	190	194	255	261		159		no
NUWWSN	14	Canon	126		160		192	194	252			159		no
NUWWSN	15	NE06469	122	132	156	164	190	194	248	250		159	171	no
NUWWSN	16	NI04420	134		156		190	194	252			165		no
NUWWSN	17	NI04427	132		156		190	198	252			165		no
NUWWSN	18	NE05459	126		164		190	192	244			165		no
NUWWSN	19	NE06471	115	132	156	175	190	192	252	255		159		no
NUWWSN	20	NY03179FHB-10	113	126	175		190	194	255			159		no
NUWWSN	21	NY03180FHB-10	126		175		190	194	255			159		no
NUWWSN	22	NY03179FHB-12	126		175		190	194	255			159		no
NUWWSN	23	NYW103-21-9183	128		175		190	194	257			177		no
NUWWSN	24	NYW103-102-9103	128		175		190	194	257			177		no
NUWWSN	25	IL02-18228	113		175		nd					159		no
NUWWSN	26	IL04-7874	113		175		190	194	255			165		no
NUWWSN	27	IL04-7942	113		175		190	194	255			165		no
NUWWSN	28	IL04-10721	132		156		190	194	252			159		no
NUWWSN	29	IL04-10741	124		175		192	194	253			159		no
NUWWSN	30	MD02W81-08-2	132		156		190	192	252			159		no
NUWWSN	31	MD02W81-08-4	144		175		192	255				165		no
NUWWSN	32	ACF213003B	113	126	175		190	192	194	255		159		no
NUWWSN	33	ACF126103	113	124	175		192	194	255			159		no
NUWWSN	34	ACF12004	124		175		190	198	253			159		no
NUWWSN	35	RCUOGTr34	115	132	156	175	190	192	194	255		159	171	no
NUWWSN	36	RCUOGTr35	126		156		190	192	255			159		no
NUWWSN	37	M05-1531	113		175	177	192	194	255			159		no
NUWWSN	38	B0390207	113		175		192	255				159		no
NUWWSN	39	03M1539-031	126		164		190	194	244			156		no
NUWWSN	40	03M1599-0007	126		164		190	194	244			165		no
NUWWSN	41	MO050101	132		156		190	192	252			159		no
NUWWSN	42	MO050921	132		156		190	192	252			159		no
NUWWSN	43	MO041020	113		177		190	192	255			159		no
NUWWSN	44	MO050219	113		175		192	194	255			159		no
NUWWSN	45	MO050144	113		175		192	194	255			159		no
NUWWSN	46	KY00C-2059-19	122		175		190	194	250			159		no
NUWWSN	47	KY00C-2515-02	113	124	175		190	192	194	250	255	159	165	no
NUWWSN	48	KY00C-2059-24	113	122	175		190	194	250	255		159		no
NUWWSN	49	KY00C-2567-01	113		175		190	192	255			165		no
NUWWSN	50	KY00C-2143-08	113	124	175		190	194	253			156		no
NUWWSN	51	MSULineE6003	nd		162		190	200	255			159		no
NUWWSN	52	MSULineE7035R	126		175		190	194	255			159		no
NUWWSN	53	OH04-264-58	126		164	175	190	194	244	255		159	165	no
NUWWSN	54	OH04-268-39	130		175		190	194	255			159		no
NUWWSN	55	OH05-248-38	113		160		192	194	252			159		no
NUWWSN	56	VA07W-580	113		175		192	194	255			159		no
NUWWSN	57	VA07W-600	122		175		190	200	250			165		no
NUWWSN	58	VA07W-672	113	122	175		192	198	250	255		159	165	no
NUWWSN	59	VA06W-558	113		175		190	200	255			156	165	no
NUWWSN	60	VA06W-615	113		175		190	194	255			156		no

FHB QTLs

2009

Nursery	Entry	Sample Name	gwm 319	gwm 319	gwm 47	gwm 47	gwm 47	gwm 47	gwm 47	Fhb Ernie 2B
NUWWSN	1	Ernie	167	180	nd					yes
NUWWSN	2	Truman	176		146	164	177			no
NUWWSN	3	Freedom	167		133	137	146			yes
NUWWSN	4	Pioneer2545	176		164					no
NUWWSN	5	P03615A1-4-4	167		133	137	146			yes
NUWWSN	6	P04704A1-2-1-1	167		137	142	146			yes
NUWWSN	7	P053A1-6-7	176		164					no
NUWWSN	8	P0537A1-7-12	167		133	137	146			yes
NUWWSN	9	P0128A1-22-22	176		170					no
NUWWSN	10	Mocha	176	180	170					no
NUWWSN	11	Shaver	176	180	164					no
NUWWSN	12	Rubin	176		164					no
NUWWSN	13	Arena	167	176	137	142	146	164	182	het
NUWWSN	14	Canon	176		155	162				no
NUWWSN	15	NE06469	176		164					no
NUWWSN	16	NI04420	176		164					no
NUWWSN	17	NI04427	176		164					no
NUWWSN	18	NE05459	176		177					no
NUWWSN	19	NE06471	176		164	172				no
NUWWSN	20	NY03179FHB-10	176	180	164					no
NUWWSN	21	NY03180FHB-10	180		164					no
NUWWSN	22	NY03179FHB-12	176		164					no
NUWWSN	23	NYW103-21-9183	176		164					no
NUWWSN	24	NYW103-102-9103	176		137	146	164	170		?
NUWWSN	25	IL02-18228	174		nd					no
NUWWSN	26	IL04-7874	176		164					no
NUWWSN	27	IL04-7942	176		164					no
NUWWSN	28	IL04-10721	174		164					no
NUWWSN	29	IL04-10741	176		nd					no
NUWWSN	30	MD02W81-08-2	167		133	137	146			yes
NUWWSN	31	MD02W81-08-4	167		133	137	146			yes
NUWWSN	32	ACF213003B	167	176	137	142	146			yes
NUWWSN	33	ACF126103	176		nd					no
NUWWSN	34	ACF12004	176		177					no
NUWWSN	35	RCUOGTr34	176		164					no
NUWWSN	36	RCUOGTr35	180		164					no
NUWWSN	37	M05-1531	176		164					no
NUWWSN	38	B0390207	176		146	164				no
NUWWSN	39	03M1539-031	176	180	164					no
NUWWSN	40	03M1599-0007	176		146	164				no
NUWWSN	41	MO050101	176		177					no
NUWWSN	42	MO050921	167		133	137	146			yes
NUWWSN	43	MO041020	176		133	146				no
NUWWSN	44	MO050219	176		164					no
NUWWSN	45	MO050144	176		164					no
NUWWSN	46	KY00C-2059-19	176		164					no
NUWWSN	47	KY00C-2515-02	167	176	133	137	146	164		yes
NUWWSN	48	KY00C-2059-24	176		146	164				no
NUWWSN	49	KY00C-2567-01	176		146					no
NUWWSN	50	KY00C-2143-08	167	180	137	142	146	182		yes
NUWWSN	51	MSULineE6003	174		146	164				no
NUWWSN	52	MSULineE7035R	176		164					no
NUWWSN	53	OH04-264-58	176	180	146	164				no
NUWWSN	54	OH04-268-39	176		164					no
NUWWSN	55	OH05-248-38	176		164					no
NUWWSN	56	VA07W-580	176		164					no
NUWWSN	57	VA07W-600	167		133	137	146			yes
NUWWSN	58	VA07W-672	167	176	133	137	146	164	170	yes
NUWWSN	59	VA06W-558	176		170					no
NUWWSN	60	VA06W-615	167		133	137	146	170		yes

Leaf, Stripe & Stem Rusts

2009

Nursery	Entry	Sample Name	wmc	wmc	Sr36	barc	barc	Lr24/	ventriup	Lr37/Yr17/	cslv34	Lr34	Lr34	Lr34/Yr18/
			477	477		71	71	Sr24		Sr28				Pm38
NUWWSN	1	Ernie	162	187	yes	105	112	no		no	235	515		no
NUWWSN	2	Truman	169		no	112		no		no	235	515		no
NUWWSN	3	Freedom	187		yes	105		no		no	235	515		no
NUWWSN	4	Pioneer2545	169		no	105		no		no	235	515		no
NUWWSN	5	P03615A1-4-4	187		yes	105		no	256	yes	nd	513		no
NUWWSN	6	P04704A1-2-1-1	187		yes	105		no		no	235	515		no
NUWWSN	7	P053A1-6-7	167		no	105		no	256	yes	235	515		no
NUWWSN	8	P0537A1-7-12	187		yes	105		no	256	yes	235	515		no
NUWWSN	9	P0128A1-22-22	169		no	116		no		no	235	515		no
NUWWSN	10	Mocha	162	167	no	105		no		no	235	515		no
NUWWSN	11	Shaver	162	169	no	105		no		no	235	515		no
NUWWSN	12	Rubin	167		no	112		no		no	235	515		no
NUWWSN	13	Arena	169		no	105		no		no	235	515		no
NUWWSN	14	Canon	165	169	no	112		no		no	235	515		no
NUWWSN	15	NE06469	167	169	no	87		yes		no	235	515		no
NUWWSN	16	NI04420	169		no	105		no		no	235	515		no
NUWWSN	17	NI04427	169		no	93		no		no	235	515		no
NUWWSN	18	NE05459	169		no	93	105	no		no	235	515		no
NUWWSN	19	NE06471	167	169	no	87	105	yes		no	235	515		no
NUWWSN	20	NY03179FHB-10	162	169	no	105		no		no	235	515		no
NUWWSN	21	NY03180FHB-10	162		no	105		no		no	235	515		no
NUWWSN	22	NY03179FHB-12	169		no	105		no		no	235	515		no
NUWWSN	23	NYW103-21-9183	169		no	105		no		no	235	515		no
NUWWSN	24	NYW103-102-9103	169		no	105		no		no	235	515		no
NUWWSN	25	IL02-18228	165		no	105		no		no	235	515		no
NUWWSN	26	IL04-7874	165		no	105		no		no	235	515		no
NUWWSN	27	IL04-7942	165		no	105		no		no	235	515		no
NUWWSN	28	IL04-10721	165		no	105		no		no	235	515		no
NUWWSN	29	IL04-10741	169		no	105		no		no	235	515		no
NUWWSN	30	MD02W81-08-2	187		yes	105		no		no	235	515		no
NUWWSN	31	MD02W81-08-4	187		yes	105		no		no	235	510	515	het?
NUWWSN	32	ACF213003B	169	187	het	105		no		no	235	515		no
NUWWSN	33	ACF126103	167	169	no	105		no		no	235	515		no
NUWWSN	34	ACF12004	167		no	112		no		no	235	515		no
NUWWSN	35	RCUOGTr34	169		no	105	112	no		no	235	515		no
NUWWSN	36	RCUOGTr35	162		no	112		no		no	235	515		no
NUWWSN	37	M05-1531	165		no	105		no		no	235	515		no
NUWWSN	38	B0390207	169		no	105		no		no	235	515		no
NUWWSN	39	03M1539-031	162		no	105		no		no	235	515		no
NUWWSN	40	03M1599-0007	162		no	105		no	256	yes	235	515		no
NUWWSN	41	MO050101	169		no	112		no		no	235	515		no
NUWWSN	42	MO050921	187		no	112		no		no	235	515		no
NUWWSN	43	MO041020	169		no	112		no		no	235	515		no
NUWWSN	44	MO050219	167		no	105		no		no	235	515		no
NUWWSN	45	MO050144	167		no	105		no		no	235	515		no
NUWWSN	46	KY00C-2059-19	169		no	105		no		no	235	510		yes
NUWWSN	47	KY00C-2515-02	167	169	no	105		no		no	235	515		no
NUWWSN	48	KY00C-2059-24	169		no	105		no		no	235	515		no
NUWWSN	49	KY00C-2567-01	169		no	105		no		no	235	515		no
NUWWSN	50	KY00C-2143-08	162	187	het	105	112	no		no	235	515		no
NUWWSN	51	MSULineE6003	165		no	116		no		no	235	515		no
NUWWSN	52	MSULineE7035R	169		no	116		no		no	235	515		no
NUWWSN	53	OH04-264-58	162	167	no	93	105	no		no	235	515		no
NUWWSN	54	OH04-268-39	167		no	105		no		no	235	515		no
NUWWSN	55	OH05-248-38	167		no	105		no		no	235	515		no
NUWWSN	56	VA07W-580	167		no	105		no		no	235	515		no
NUWWSN	57	VA07W-600	187		yes	105		no		no	235	515		no
NUWWSN	58	VA07W-672	167	187	het	112		no		no	235	515		no
NUWWSN	59	VA06W-558	167		no	87	105	yes		no	235	515		no
NUWWSN	60	VA06W-615	165		no	105	112	no		no	235	515		no

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

2009

Nursery	Entry	Sample Name	scm9	IRS	cfid132	H13	cfa2153	cfa2153	H9	Bdv3	Bdv3	Bdv2/3
NUWWSN	1	Ernie		non-IRS	115	no	193	203	no	185		no
NUWWSN	2	Truman		non-IRS	115	no	220		no	185		no
NUWWSN	3	Freedom	208	IRS:1BL	115	no	195		no	185		no
NUWWSN	4	Pioneer2545		non-IRS	115	no	195		no	185		no
NUWWSN	5	P03615A1-4-4	208	IRS:1BL	115	no	203		no	185		no
NUWWSN	6	P04704A1-2-1-1	208	IRS:1BL	115	no	203		no	200		yes
NUWWSN	7	P053A1-6-7		non-IRS	115	no	181	203	no	185	200	het
NUWWSN	8	P0537A1-7-12		non-IRS	115	no	195		no	185	200	het
NUWWSN	9	P0128A1-22-22		non-IRS	nd	nd	195		no	185		no
NUWWSN	10	Mocha		non-IRS	115	no	195	203	no	185		no
NUWWSN	11	Shaver		non-IRS	115	no	174	195	no	185		no
NUWWSN	12	Rubin	208	IRS:1BL	115	no	193		no	185		no
NUWWSN	13	Arena		non-IRS	115	no	193	195	no	185		no
NUWWSN	14	Canon		non-IRS	115	no	169	213	no	185		no
NUWWSN	15	NE06469		non-IRS	115	no	220		no	185		no
NUWWSN	16	NI04420	208	IRS:1BL	115	no	213		no	183	187	no
NUWWSN	17	NI04427		non-IRS	115	no	195		no	183	188	no
NUWWSN	18	NE05459		non-IRS	115	no	195		no	183	188	no
NUWWSN	19	NE06471		non-IRS	115	no	213		no	183	188	no
NUWWSN	20	NY03179FHB-10		non-IRS	115	no	195		no	185		no
NUWWSN	21	NY03180FHB-10		non-IRS	115	no	203		no	185		no
NUWWSN	22	NY03179FHB-12		non-IRS	115	no	195	203	no	185		no
NUWWSN	23	NYW103-21-9183		non-IRS	115	no	195		no	185		no
NUWWSN	24	NYW103-102-9103		non-IRS	115	no	195		no	185		no
NUWWSN	25	IL02-18228		non-IRS	115	no	203		no	185		no
NUWWSN	26	IL04-7874		non-IRS	115	no	203		no	185		no
NUWWSN	27	IL04-7942		non-IRS	115	no	203		no	185		no
NUWWSN	28	IL04-10721		non-IRS	115	no	199		no	185		no
NUWWSN	29	IL04-10741		non-IRS	115	no	199		no	185		no
NUWWSN	30	MD02W81-08-2	208	IRS:1BL	115	no	195		no	185		no
NUWWSN	31	MD02W81-08-4	208	IRS:1BL	115	no	199		no	185		no
NUWWSN	32	ACF213003B	208	IRS:1BL	115	no	193		no	185		no
NUWWSN	33	ACF126103	208	IRS:1BL	115	no	193		no	185		no
NUWWSN	34	ACF12004		non-IRS	115	no	197		no	185		no
NUWWSN	35	RCUOGTr34		non-IRS	115	no	193		no	185		no
NUWWSN	36	RCUOGTr35	224	IRS:1AL	115	no	195		no	185		no
NUWWSN	37	M05-1531	208	IRS:1BL	115	no	169		no	185		no
NUWWSN	38	B0390207		non-IRS	115	no	205		no	185		no
NUWWSN	39	03M1539-031		non-IRS	115	no	181		no	185		no
NUWWSN	40	03M1599-0007		non-IRS	115	no	203		no	185		no
NUWWSN	41	MO050101		non-IRS	115	no	220		no	185		no
NUWWSN	42	MO050921		non-IRS	115	no	193	220	no	185		no
NUWWSN	43	MO041020		non-IRS	115	no	220		no	185		no
NUWWSN	44	MO050219		non-IRS	115	no	195		no	185		no
NUWWSN	45	MO050144		non-IRS	115	no	195		no	185		no
NUWWSN	46	KY00C-2059-19		non-IRS	115	no	203		no	185		no
NUWWSN	47	KY00C-2515-02	208	IRS:1BL	115	no	195	201	no	185		no
NUWWSN	48	KY00C-2059-24		non-IRS	115	no	203		no	185		no
NUWWSN	49	KY00C-2567-01		non-IRS	115	no	203		no	185	187	no
NUWWSN	50	KY00C-2143-08	208	IRS:1BL	115	no	207		no	185		no
NUWWSN	51	MSULineE6003		non-IRS	115	no	169		no	181		no
NUWWSN	52	MSULineE7035R	208	IRS:1BL	115	no	169		no	185		no
NUWWSN	53	OH04-264-58		non-IRS	115	no	195	203	no	185		no
NUWWSN	54	OH04-268-39		non-IRS	115	no	195	203	no	185		no
NUWWSN	55	OH05-248-38		non-IRS	115	no	203		no	185		no
NUWWSN	56	VA07W-580	224	IRS:1AL	115	no	nd		no	185		no
NUWWSN	57	VA07W-600		non-IRS	115	no	207		no	185		no
NUWWSN	58	VA07W-672		non-IRS	115	no	203	213	no	185		no
NUWWSN	59	VA06W-558	224	IRS:1AL	115	no	213		no	185		no
NUWWSN	60	VA06W-615		non-IRS	115	no	195	203	no	185		no

Quality Traits

2009

Nursery	Entry	Sample Name	bx7oe	bx7oe	Bx7 over-expressing	umn25	umn25	umn26	umn26	Glu-D1
NUWWSN	1	Ernie	403		no	275	293	390	407	het
NUWWSN	2	Truman	403		no		293		407	2+12
NUWWSN	3	Freedom	403		no		293		407	2+12
NUWWSN	4	Pioneer2545	403		no		293		407	2+12
NUWWSN	5	P03615A1-4-4		448	yes		293		407	2+12
NUWWSN	6	P04704A1-2-1-1		448	yes	275		390		5+10
NUWWSN	7	P053A1-6-7	403		no		293		407	2+12
NUWWSN	8	P0537A1-7-12	403		no	275		390		5+10
NUWWSN	9	P0128A1-22-22	403		no		293		407	2+12
NUWWSN	10	Mocha	403		no	275	293	390	407	het
NUWWSN	11	Shaver	403		no		293		407	2+12
NUWWSN	12	Rubin	403		no		293		407	2+12
NUWWSN	13	Arena	403		no	275	293	390	407	het
NUWWSN	14	Canon	403		no		293		407	2+12
NUWWSN	15	NE06469	403		no	275		390		5+10
NUWWSN	16	NI04420	403		no		293		407	2+12
NUWWSN	17	NI04427	403		no	275		390		5+10
NUWWSN	18	NE05459	403		no	275		390		5+10
NUWWSN	19	NE06471	403		no	275	293	390	407	het
NUWWSN	20	NY03179FHB-10	403		no		293		407	2+12
NUWWSN	21	NY03180FHB-10	403		no		293		407	2+12
NUWWSN	22	NY03179FHB-12	403		no		293		407	2+12
NUWWSN	23	NYW103-21-9183	403		no		293		407	2+12
NUWWSN	24	NYW103-102-9103	403		no		293		407	2+12
NUWWSN	25	IL02-18228	403		no	275		390		5+10
NUWWSN	26	IL04-7874	403		no	275		390		5+10
NUWWSN	27	IL04-7942	403		no	275	293	390	407	het
NUWWSN	28	IL04-10721	403		no	275		390		5+10
NUWWSN	29	IL04-10741	403		no	275		390		5+10
NUWWSN	30	MD02W81-08-2	403		no		293		407	2+12
NUWWSN	31	MD02W81-08-4	403		no		293		407	2+12
NUWWSN	32	ACF213003B	403		no	275		390		5+10
NUWWSN	33	ACF126103	403		no	275		390		5+10
NUWWSN	34	ACF12004	403		no	275		390		5+10
NUWWSN	35	RCUOGTr34	403		no	275		390		5+10
NUWWSN	36	RCUOGTr35	403		no		293		407	2+12
NUWWSN	37	M05-1531	403		no		293		407	2+12
NUWWSN	38	B0390207	403		no		293		407	2+12
NUWWSN	39	03M1539-031	403		no		293		407	2+12
NUWWSN	40	03M1599-0007	403		no		293		407	2+12
NUWWSN	41	MO050101	403		no		293		407	2+12
NUWWSN	42	MO050921	403		no		293		407	2+12
NUWWSN	43	MO041020	403		no		293		407	2+12
NUWWSN	44	MO050219	403		no		293		407	2+12
NUWWSN	45	MO050144	403		no		293		407	2+12
NUWWSN	46	KY00C-2059-19	403		no		293		407	2+12
NUWWSN	47	KY00C-2515-02	403		no		293		407	2+12
NUWWSN	48	KY00C-2059-24		448	yes	275	293	390	407	het
NUWWSN	49	KY00C-2567-01	403		no	275		390		5+10
NUWWSN	50	KY00C-2143-08	403		no	275	293	390	407	het
NUWWSN	51	MSULineE6003	403		no		293		407	2+12
NUWWSN	52	MSULineE7035R	403		no		293		407	2+12
NUWWSN	53	OH04-264-58	403	448	het	275	293	390	407	het
NUWWSN	54	OH04-268-39	403		no		293		407	2+12
NUWWSN	55	OH05-248-38	403		no		293		407	2+12
NUWWSN	56	VA07W-580	403		no	275		390		5+10
NUWWSN	57	VA07W-600	403		no		293		407	2+12
NUWWSN	58	VA07W-672	403		no	275	293	390	407	het
NUWWSN	59	VA06W-558	403		no		293		407	2+12
NUWWSN	60	VA06W-615	403		no		293		407	2+12

2009 Preliminary Northern Uniform Winter Wheat Scab Nursery
Entry List

Nursery	Entry	Sample Name	Pedigree
PNUWWSN	1	Ernie	
PNUWWSN	2	Truman	
PNUWWSN	3	Freedom	
PNUWWSN	4	Pioneer2545	
PNUWWSN	5	P0513A1-2-3	
PNUWWSN	6	P0527A1-9-15	
PNUWWSN	7	P0558A1-5-5	
PNUWWSN	8	P0570A1-7-6	
PNUWWSN	9	P05218A1-6-31	
PNUWWSN	10	OH02-12686	
PNUWWSN	11	Silas	
PNUWWSN	12	Linus	
PNUWWSN	13	Okie	
PNUWWSN	14	Penzo	
PNUWWSN	15	Ajax	
PNUWWSN	16	IL04-11003	
PNUWWSN	17	IL04-17762	
PNUWWSN	18	IL05-15079	
PNUWWSN	19	IL05-27333	
PNUWWSN	20	IL05-27522	
PNUWWSN	21	MH06-2370	
PNUWWSN	22	MH06-2410	
PNUWWSN	23	ML07-7571	
PNUWWSN	24	ML07-7758	
PNUWWSN	25	MO050771	
PNUWWSN	26	MO041687	
PNUWWSN	27	MO071411	
PNUWWSN	28	MO071722	
PNUWWSN	29	MO071522	
PNUWWSN	30	KY02C-3007-41	
PNUWWSN	31	KY02C-3005-25	
PNUWWSN	32	KY03C-2170-24	
PNUWWSN	33	KY03C-2170-06	
PNUWWSN	34	KY02C-3007-45	
PNUWWSN	35	MSULineE5024	
PNUWWSN	36	VA07W-643	
PNUWWSN	37	VA06W-580	
PNUWWSN	38	VA07W-591	
PNUWWSN	39	VA06W-578	
PNUWWSN	40	VA04W-90	
PNUWWSN	41	OH05-101-1	
PNUWWSN	42	OH05-72-6	
PNUWWSN	43	OH05-249-32	
PNUWWSN	44	OH05-152-68	
PNUWWSN	45	OH05-164-76	
PNUWWSN	46	OH05-200-74	

2009 Preliminary Northern Uniform Winter Wheat Scab Nursery
Summary of all Markers

Nursery	Entry	Sample Name	Lr24/ Lr37/Yr17/ Lr34/Yr18/				1RS	H13	H9	Bdv2/3	Bx7 over-expressing	Glu-D1
			Sr36	Sr24	Sr28	Pm38						
PNUWWSN	1	Ernie	yes	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	2	Truman	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	3	Freedom	yes	no	no	no	1RS:1BL	no	no	no	no	2+12
PNUWWSN	4	Pioneer2545	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	5	P0513A1-2-3	no	no	yes	no	non-1RS	no	no	het	no	het
PNUWWSN	6	P0527A1-9-15	no	no	yes	no	1RS:1BL	no	no	no	no	2+12
PNUWWSN	7	P0558A1-5-5	yes	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	8	P0570A1-7-6	yes	no	no	no	non-1RS	no	no	het	no	5+10
PNUWWSN	9	P05218A1-6-31	het	no	no	no	non-1RS	no	no	het	no	2+12
PNUWWSN	10	OH02-12686	no	no	no	no	1RS:1AL	no	no	no	no	2+12
PNUWWSN	11	Silas	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	12	Linus	no	no	no	no	non-1RS	no	no	no	het	2+12
PNUWWSN	13	Okie	no	no	no	no	1RS:1BL	no	no	no	no	het
PNUWWSN	14	Penzo	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	15	Ajax	het	no	no	no	non-1RS	no	no	no	het	2+12
PNUWWSN	16	IL04-11003	no	no	no	no	non-1RS	no	no	no	no	5+10
PNUWWSN	17	IL04-17762	no	no	no	no	non-1RS	no	no	no	no	5+10
PNUWWSN	18	IL05-15079	no	no	no	no	1RS:1BL	no	no	no	no	2+12
PNUWWSN	19	IL05-27333	no	no	no	no	non-1RS	no	no	no	no	5+10
PNUWWSN	20	IL05-27522	no	no	no	no	non-1RS	no	no	no	no	5+10
PNUWWSN	21	MH06-2370	no	no	no	no	1RS:1BL	no	no	no	no	2+12
PNUWWSN	22	MH06-2410	no	no	no	no	1RS:1BL	no	no	no	no	2+12
PNUWWSN	23	ML07-7571	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	24	ML07-7758	no	no	no	no	non-1RS	no	no	no	no	5+10
PNUWWSN	25	MO050771	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	26	MO041687	no	no	no	no	non-1RS	no	no	no	no	het
PNUWWSN	27	MO071411	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	28	MO071722	yes	no	yes	no	non-1RS	no	no	no	no	het
PNUWWSN	29	MO071522	no	no	no	no	non-1RS	no	no	no	no	5+10
PNUWWSN	30	KY02C-3007-41	no	no	no	?	non-1RS	no	no	no	no	5+10
PNUWWSN	31	KY02C-3005-25	no	yes	no	het?	1RS:1AL	no	no	no	no	5+10
PNUWWSN	32	KY03C-2170-24	het	no	no	no	1RS:1BL	no	no	no	no	het
PNUWWSN	33	KY03C-2170-06	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	34	KY02C-3007-45	no	no	no	no?	1RS:1BL	no	no	no	nd	5+10
PNUWWSN	35	MSULineE5024	no	no	no	no	1RS:1BL	no	no	no	no	5+10
PNUWWSN	36	VA07W-643	no	no	no	no	1RS:1AL	no	no	no	no	5+10
PNUWWSN	37	VA06W-580	yes	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	38	VA07W-591	yes	no	no	no	1RS:1BL	no	no	no	no	5+10
PNUWWSN	39	VA06W-578	yes	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	40	VA04W-90	no	no	no	no	non-1RS	no	no	no	no	het
PNUWWSN	41	OH05-101-1	no	no	no	no	non-1RS	no	no	no	no	5+10
PNUWWSN	42	OH05-72-6	yes	no	no	het	1RS:1BL	no	no	no	no	2+12
PNUWWSN	43	OH05-249-32	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	44	OH05-152-68	no	no	no	no	non-1RS	no	no	no	no	2+12
PNUWWSN	45	OH05-164-76	no	no	no	het	1RS:1BL	no	no	no	no	5+10
PNUWWSN	46	OH05-200-74	no	no	no	no	1RS:1AL	no	no	no	no	2+12

Dwarfing genes & Photoperiod insensitivity

2009

Nursery	Entry	Sample Name	Rht1W	Rht1M	Rht2W	Rht2M	Rht1-	Rht2-	gwm	gwm	Rht8	Ppd	Ppd	Ppd-D1a
							B1b	D1b	261	261				
PNUWWSN	1	Ernie		367	251		yes	no	175		no		413	no
PNUWWSN	2	Truman		367	251		yes	no	175		no		413	no
PNUWWSN	3	Freedom		367	251		yes	no	165		no		413	no
PNUWWSN	4	Pioneer2545	362			253	no	yes	165	203	no	283		yes
PNUWWSN	5	P0513A1-2-3		367	251		yes	no	175	203	no	283	413	het
PNUWWSN	6	P0527A1-9-15		367	251		yes	no	175	203	no	283		yes
PNUWWSN	7	P0558A1-5-5		367	251		yes	no	203		no	283		yes
PNUWWSN	8	P0570A1-7-6		367	251		yes	no	203		no	283		yes
PNUWWSN	9	P05218A1-6-31		367	251		yes	no	175		no	283		yes
PNUWWSN	10	OH02-12686		367	251		yes	no	165		no		413	no
PNUWWSN	11	Silas	362			253	no	yes	165	175	no		413	no
PNUWWSN	12	Linus	362	367	251	253	het	het	165	175	no	283	413	het
PNUWWSN	13	Okie		367	251		yes	no	175	193	het	283	413	het
PNUWWSN	14	Penzo	362			253	no	yes	203		no	283		yes
PNUWWSN	15	Ajax	362			253	no	yes	175	203	no	283		yes
PNUWWSN	16	IL04-11003		367	251		yes	no	175		no		413	no
PNUWWSN	17	IL04-17762		367	251		yes	no	175		no		413	no
PNUWWSN	18	IL05-15079		367	251		yes	no	175		no		413	no
PNUWWSN	19	IL05-27333		367	251		yes	no	165		no		413	no
PNUWWSN	20	IL05-27522		367	251		yes	no	193		yes		413	no
PNUWWSN	21	MH06-2370		367	251		yes	no	175		no	283		yes
PNUWWSN	22	MH06-2410	362			253	no	yes	175		no	283		yes
PNUWWSN	23	ML07-7571	362	367	251	253	het	het	165	175	no		413	no
PNUWWSN	24	ML07-7758		367	251		yes	no	175		no		413	no
PNUWWSN	25	MO050771		367	251		yes	no	175		no		413	no
PNUWWSN	26	MO041687		367	251		yes	no	175		no		413	no
PNUWWSN	27	MO071411		367	251		yes	no	175		no	283	413	het
PNUWWSN	28	MO071722		367	251		yes	no	175		no		413	no
PNUWWSN	29	MO071522		367	251		yes	no	175		no		413	no
PNUWWSN	30	KY02C-3007-41	362			253	no	yes	175		no		413	no
PNUWWSN	31	KY02C-3005-25		367	251		yes	no	175		no		413	no
PNUWWSN	32	KY03C-2170-24		367	251		yes	no	193	203	het	283	413	het
PNUWWSN	33	KY03C-2170-06	362			253	no	yes	193	203	het	283		yes
PNUWWSN	34	KY02C-3007-45		367	251		yes	no	165	175	no	283	413	het
PNUWWSN	35	MSULineE5024	362			253	no	yes	165		no	283		yes
PNUWWSN	36	VA07W-643	362			253	no	yes	175		no		413	no
PNUWWSN	37	VA06W-580	362			253	no	yes	203		no	283		yes
PNUWWSN	38	VA07W-591	362			253	no	yes	175		no		413	no
PNUWWSN	39	VA06W-578	362			253	no	yes	203		no	283		yes
PNUWWSN	40	VA04W-90	362			253	no	yes	175	203	no	283		yes
PNUWWSN	41	OH05-101-1		367	251		yes	no	165		no	283		yes
PNUWWSN	42	OH05-72-6		367	251		yes	no	165		no	283		yes
PNUWWSN	43	OH05-249-32		367	251		yes	no	175	203	no	283		yes
PNUWWSN	44	OH05-152-68		367	251		yes	no	165		no		413	no
PNUWWSN	45	OH05-164-76		367	251		yes	no	165		no	283		yes
PNUWWSN	46	OH05-200-74		367	251		yes	no	165	175	no		413	no

FHB QTLs
2009

Nursery	Entry	Sample Name	umn10	umn10	gwm533	gwm533	gwm533	Fhb1
PNUWWSN	1	Ernie	236		nd			no
PNUWWSN	2	Truman	236		119			no
PNUWWSN	3	Freedom	236		119	129		no
PNUWWSN	4	Pioneer2545	236		129			no
PNUWWSN	5	P0513A1-2-3	229	236	119	147	157	no
PNUWWSN	6	P0527A1-9-15	236		119			no
PNUWWSN	7	P0558A1-5-5	236		119			no
PNUWWSN	8	P0570A1-7-6	236		119			no
PNUWWSN	9	P05218A1-6-31	236	239	119	129		het?
PNUWWSN	10	OH02-12686	229		147	157		
PNUWWSN	11	Silas	236		119			no
PNUWWSN	12	Linus	236		nd			no
PNUWWSN	13	Okie	229	236	147	157		no
PNUWWSN	14	Penzo	236		119			no
PNUWWSN	15	Ajax	236		119	129		no
PNUWWSN	16	IL04-11003	229		147	157		no
PNUWWSN	17	IL04-17762	229		147	157		no
PNUWWSN	18	IL05-15079	236		119			no
PNUWWSN	19	IL05-27333	236		143			no
PNUWWSN	20	IL05-27522	229		147	157		no
PNUWWSN	21	MH06-2370	236		119			no
PNUWWSN	22	MH06-2410	229		157			no
PNUWWSN	23	ML07-7571	236		129			no
PNUWWSN	24	ML07-7758	236	239	119	145		het
PNUWWSN	25	MO050771	236		129			no
PNUWWSN	26	MO041687	236		162			no
PNUWWSN	27	MO071411	236		nd			no
PNUWWSN	28	MO071722	236		119			no
PNUWWSN	29	MO071522	236		119			no
PNUWWSN	30	KY02C-3007-41	239		145			yes
PNUWWSN	31	KY02C-3005-25	239		145			yes
PNUWWSN	32	KY03C-2170-24	229	236	147	157		no
PNUWWSN	33	KY03C-2170-06	239		143			yes
PNUWWSN	34	KY02C-3007-45	239		145			yes
PNUWWSN	35	MSULineE5024	236		119			no
PNUWWSN	36	VA07W-643	229		147	157		no
PNUWWSN	37	VA06W-580	236		129	162		no
PNUWWSN	38	VA07W-591	236		119	129		no
PNUWWSN	39	VA06W-578	229		157	162		no
PNUWWSN	40	VA04W-90	229	236	157			no
PNUWWSN	41	OH05-101-1	236		nd			no
PNUWWSN	42	OH05-72-6	236		119			no
PNUWWSN	43	OH05-249-32	236		119			no
PNUWWSN	44	OH05-152-68	236		129			no
PNUWWSN	45	OH05-164-76	236	239	119	145		het
PNUWWSN	46	OH05-200-74	236		119			no

FHB QTLs
2009

Nursery	Entry	Sample Name	gwm	gwm	gwm	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	Fhb Ernie	
			285	285	285	612	612	307	307	1	1	418	418	471	471	471	471	3Bc
PNUWWSN	1	Ernie	245			287		142		153		262		179			yes	
PNUWWSN	2	Truman	249			291		140		151		271		179	217		no	
PNUWWSN	3	Freedom	245			287		142		149		262		179			yes	
PNUWWSN	4	Pioneer2545	222	245		282		144		149	153	260	263	179	181	221	no	
PNUWWSN	5	P0513A1-2-3	220	222	271	274	282	144		151	160	260	262	179	181	215	217	no
PNUWWSN	6	P0527A1-9-15	220			274		142	144	149	160	271		179	215		no	
PNUWWSN	7	P0558A1-5-5	218			270	283	142	144	160		262	271	179	217		no	
PNUWWSN	8	P0570A1-7-6	222			268	282	144		156	160	260	262	177	179	215	217	no
PNUWWSN	9	P05218A1-6-31	245			nd		142		149		262		177	179	215	no	
PNUWWSN	10	OH02-12686	218			274		142		156		262		179	217		?	
PNUWWSN	11	Silas	249			282		140		151		271		179	217		no	
PNUWWSN	12	Linus	218			278		144		153	160	262		169	217		no	
PNUWWSN	13	Okie	220	226		274	282	144		149	158	260	271	181	215	221	no	
PNUWWSN	14	Penzo	226			252	282	144		149		269		179	215		no	
PNUWWSN	15	Ajax	220	226		282		144		149	163	260	271	181	217	221	no	
PNUWWSN	16	IL04-11003	220			282		144		nd		271		179	217		no	
PNUWWSN	17	IL04-17762	220			282		144		163		271		181	217		no	
PNUWWSN	18	IL05-15079	nd			287		147		153		262		179			?	
PNUWWSN	19	IL05-27333	249			291		140		151		271		177	179	217	no	
PNUWWSN	20	IL05-27522	245			291		142		153		271		179	215		no	
PNUWWSN	21	MH06-2370	243			289		142		149		262		181			no	
PNUWWSN	22	MH06-2410	220			274		144		151		262		181	217		no	
PNUWWSN	23	ML07-7571	243	245		282	289	142		149	163	262	271	181	217		no	
PNUWWSN	24	ML07-7758	220			274		144		151		271		181	215		no	
PNUWWSN	25	MO050771	249			291		140		151		271		179	217		no	
PNUWWSN	26	MO041687	220			280		142		149		262		179	217		no	
PNUWWSN	27	MO071411	245			287		142		153		260	271	179	217		yes	
PNUWWSN	28	MO071722	218			282		142		163		271		179	217		no	
PNUWWSN	29	MO071522	249			291		140		151		265		179	217		no	
PNUWWSN	30	KY02C-3007-41	226			291		144		149		269		169	215		no	
PNUWWSN	31	KY02C-3005-25	218			282		142		163		271		181	217		no	
PNUWWSN	32	KY03C-2170-24	218	220		274	278	142	144	156		273	271	181	217		no	
PNUWWSN	33	KY03C-2170-06	220	245		278	282	142		151	153	262		181	217		?	
PNUWWSN	34	KY02C-3007-45	220			274		144		151		271		181	215		no	
PNUWWSN	35	MSULineE5024	220			274		144		151		271		221			no	
PNUWWSN	36	VA07W-643	218			282		142		156		271		217			no	
PNUWWSN	37	VA06W-580	226			291		144		149		269		221			no	
PNUWWSN	38	VA07W-591	245			287		142		149		262		221			no	
PNUWWSN	39	VA06W-578	226			291		144		149		269		221			no	
PNUWWSN	40	VA04W-90	218	245		282		142		153	163	262		217			?	
PNUWWSN	41	OH05-101-1	218			276		144		153		262	271	217			no	
PNUWWSN	42	OH05-72-6	220			274		144		151		271		215			no	
PNUWWSN	43	OH05-249-32	245			287		142		153		262		221			yes	
PNUWWSN	44	OH05-152-68	218	245		287		142		153		262		217	260		yes	
PNUWWSN	45	OH05-164-76	245			287		142		153		262		217	221		yes	
PNUWWSN	46	OH05-200-74	222	249		291		142		151		271		217			no	

FHB QTLs
2009

Nursery	Entry	Sample Name	cf	cf	cf	g	g	g	g	g	w	w	g	g	Fhb 2DL- Wuhan1/W14
			233	233	233	539	539	539	608	608	144	144	349	349	
PNUWWSN	1	Ernie	284			124	133	137	150		137		232		no
PNUWWSN	2	Truman	290			137			162		137		215	240	no
PNUWWSN	3	Freedom	290			137			162		139		232		no
PNUWWSN	4	Pioneer2545	270	278		139	163		156		141		nd		no
PNUWWSN	5	P0513A1-2-3	271	278	290	124	139	143	150	156	139		215	232	no
PNUWWSN	6	P0527A1-9-15	278	288		139			150		141		229		no
PNUWWSN	7	P0558A1-5-5	278			139			156		139		232	238	no
PNUWWSN	8	P0570A1-7-6	270	290		124	161		156		139		215	238	no
PNUWWSN	9	P05218A1-6-31	278			139			150	156	139		232	240	no
PNUWWSN	10	OH02-12686	271			131			150		139		238		no
PNUWWSN	11	Silas	271			131			150		139		238		no
PNUWWSN	12	Linus	269	276		135	143		152	154	137	139	238		no
PNUWWSN	13	Okie	271	288		137			150	156	137	141	230		no
PNUWWSN	14	Penzo	271			133			156		139		247		no
PNUWWSN	15	Ajax	273	282		133			152	156	137	141	226	232	no
PNUWWSN	16	IL04-11003	290			124			162		139		232		no
PNUWWSN	17	IL04-17762	288			152			154		139		244		no
PNUWWSN	18	IL05-15079	278			137			150		141		230		no
PNUWWSN	19	IL05-27333	278			139			150		139		232	238	no
PNUWWSN	20	IL05-27522	290			131			150		139		247		no
PNUWWSN	21	MH06-2370	273			131			156		137		232		no
PNUWWSN	22	MH06-2410	280			131			150		139		240		no
PNUWWSN	23	ML07-7571	273	288		137	141		150	154	139		249		no
PNUWWSN	24	ML07-7758	280			131			150		137	141	232		no
PNUWWSN	25	MO050771	290			137			162		137		240		no
PNUWWSN	26	MO041687	290			131			154		137		240		no
PNUWWSN	27	MO071411	278	284		137			150		137		232	240	no
PNUWWSN	28	MO071722	284			137			150		144		240		no
PNUWWSN	29	MO071522	290			137			162		137		215		no
PNUWWSN	30	KY02C-3007-41	273	288		126	137		156		141		247		?
PNUWWSN	31	KY02C-3005-25	288			126			156		141		230		?
PNUWWSN	32	KY03C-2170-24	273	276		126	131		152	156	139	141	215	238	het
PNUWWSN	33	KY03C-2170-06	276	280		131			152		139		240		no
PNUWWSN	34	KY02C-3007-45	273	288		126	137		158		141		230		?
PNUWWSN	35	MSULineE5024	273			133			154	156	139		247		no
PNUWWSN	36	VA07W-643	280			124	135		150		139		240		no
PNUWWSN	37	VA06W-580	280			131			150		139		240		no
PNUWWSN	38	VA07W-591	290			137			162		137		228		no
PNUWWSN	39	VA06W-578	280			131			150		139		240		no
PNUWWSN	40	VA04W-90	280			131			150		139		240		no
PNUWWSN	41	OH05-101-1	271			133			156		139		238		no
PNUWWSN	42	OH05-72-6	290			126			156	162	141		232		no
PNUWWSN	43	OH05-249-32	273	278		139			150	158	139		240	247	no
PNUWWSN	44	OH05-152-68	273	290		137			154		139		240	249	no
PNUWWSN	45	OH05-164-76	278			139			150		139		240		no
PNUWWSN	46	OH05-200-74	270	290		131	137		150	162	137	139	232	240	no

FHB QTLs
2009

Nursery	Entry	Sample Name	gwm	gwm	gwm	wmc	wmc	wmc	barc	barc	barc	barc	gwm	gwm	barc	barc	Fhb 5A	Fhb 5A
			304	304	304	705	705	705	117	117	186	186	156	156	56	56	Ernie	Ning7840
PNUWWSN	1	Ernie	221			135			221		203		313		115		yes	no
PNUWWSN	2	Truman	199			164			217		203		315		104		no	no
PNUWWSN	3	Freedom	215	217		133			221	225	213		283		115		no	no
PNUWWSN	4	Pioneer2545	201	217		133			217	221	203	213	283	293	104	115	no	no
PNUWWSN	5	P0513A1-2-3	199	203	215	137	139	164	217	221	203	213	283	313	115		no	no
PNUWWSN	6	P0527A1-9-15	217			nd			221		213		313		115		no	no
PNUWWSN	7	P0558A1-5-5	199	221		135	164		217	221	203	213	283		115		no	no
PNUWWSN	8	P0570A1-7-6	221			135			221		203		283	285	115		yes?	no
PNUWWSN	9	P05218A1-6-31	213	217	221	135	139		221		203	213	313		115		het	no
PNUWWSN	10	OH02-12686	217			nd			221		213		283		115		no	no
PNUWWSN	11	Silas	197			139			217		213		313		115		no	no
PNUWWSN	12	Linus	199			162			217		203		313		104		no	no
PNUWWSN	13	Okie	199	215		133	164		217	225	203	213	285	313	115		no	no
PNUWWSN	14	Penzo	215			133			225		213		281		115		no	no
PNUWWSN	15	Ajax	201			133			217		203		281	313	104		no	no
PNUWWSN	16	IL04-11003	199			164			217		203		313		104		no	no
PNUWWSN	17	IL04-17762	199			164			217		203		313		104		no	no
PNUWWSN	18	IL05-15079	213			137			221		213		313		115		no	no
PNUWWSN	19	IL05-27333	199			164			217		203		313		104		no	no
PNUWWSN	20	IL05-27522	221			135			221		203		283		104		yes?	no
PNUWWSN	21	MH06-2370	199			162			217		203		285		104		no	no
PNUWWSN	22	MH06-2410	215			137			221		213		283		115		no	no
PNUWWSN	23	ML07-7571	199	221		135	162		217		203		283	293	104		no	no
PNUWWSN	24	ML07-7758	213			137			221		213		313		104	115	no	no
PNUWWSN	25	MO050771	199			164			217		203		313		104		no	no
PNUWWSN	26	MO041687	199			164			217		203		318		104		no	no
PNUWWSN	27	MO071411	221			135			221		203		nd		115		yes	no
PNUWWSN	28	MO071722	213			139			221		213		313		115		no	no
PNUWWSN	29	MO071522	199			164			217		203		313		104		no	no
PNUWWSN	30	KY02C-3007-41	215			133			225		213		285	293	115		no	no
PNUWWSN	31	KY02C-3005-25	215			133			225		213		285		115		no	no
PNUWWSN	32	KY03C-2170-24	199	215		133	162		217	225	203	213	285		115		no	no
PNUWWSN	33	KY03C-2170-06	199	217		164			217	221	203	213	283	297	115		no	no
PNUWWSN	34	KY02C-3007-45	215			133			225		213		288		115		no	no
PNUWWSN	35	MSULineE5024	221			135			221		203		311		115		yes	no
PNUWWSN	36	VA07W-643	221			135			221		203		313		115		yes	no
PNUWWSN	37	VA06W-580	199			166			217		203		283		104		no	no
PNUWWSN	38	VA07W-591	201			133			217		203		313		104		no	no
PNUWWSN	39	VA06W-578	199			166			217		203		283		104		no	no
PNUWWSN	40	VA04W-90	199			139	164		217		203	213	283	313	104	115	no	no
PNUWWSN	41	OH05-101-1	199			139	162		217		203	213	293	313	115		no	no
PNUWWSN	42	OH05-72-6	215			133			225		213		285		115		no	no
PNUWWSN	43	OH05-249-32	197			139			217		213		313		115		no	no
PNUWWSN	44	OH05-152-68	197			139			217		213		313		115		no	no
PNUWWSN	45	OH05-164-76	199			164			217		203		313		104		no	no
PNUWWSN	46	OH05-200-74	197	199		139			217		203	213	283		115		no	no

FHB QTLs
2009

Nursery	Entry	Sample Name	wmc 657	wmc 657	gwm 495	gwm 495	gwm 495	gwm 165	gwm 165	gwm 165	gwm 165	gwm 165	gwm 165	gwm 165	barc 163	barc 163	Fhb Ernie 4B
PNUWWSN	1	Ernie	117	132	156			192	194	252				159	171	no	
PNUWWSN	2	Truman	132		156			190	192	252				159		no	
PNUWWSN	3	Freedom	132		156			192	198	252				159		no	
PNUWWSN	4	Pioneer2545	113		175			190	194	255				159		no	
PNUWWSN	5	P0513A1-2-3	113	132	156	164	175	190	192	194	252	255	159			no	
PNUWWSN	6	P0527A1-9-15	126		175			190	192	253				159		no	
PNUWWSN	7	P0558A1-5-5	113	126	175			192	194	244	255		159			no	
PNUWWSN	8	P0570A1-7-6	122		177			192	194	239				156		no	
PNUWWSN	9	P05218A1-6-31	113	126	175			190	194	244	255		156	159		no	
PNUWWSN	10	OH02-12686	117		156			192	194	252				177		yes?	
PNUWWSN	11	Silas	113		175			190	194	255				159		no	
PNUWWSN	12	Linus	nd		175			190	194	250	255		159	165		no	
PNUWWSN	13	Okie	113	132	156	175		192	194	255				159		no	
PNUWWSN	14	Penzo	113		175			190	194	255				159		no	
PNUWWSN	15	Ajax	113	132	156	175		190	194	255				159		no	
PNUWWSN	16	IL04-11003	132		156			192	194	252				159		no	
PNUWWSN	17	IL04-17762	132		156			190	194	252				159		no	
PNUWWSN	18	IL05-15079	111		175			192	194	255				159		no	
PNUWWSN	19	IL05-27333	126		164			190	194	244				165		no	
PNUWWSN	20	IL05-27522	113	124	175			190	194	255				177		no	
PNUWWSN	21	MH06-2370	113		175			192	194	255				159		no	
PNUWWSN	22	MH06-2410	113		175			192	194	255				156		no	
PNUWWSN	23	ML07-7571	113	117	156	175		190	200	252	255		156	159		het	
PNUWWSN	24	ML07-7758	113	124	175			192	255					165		no	
PNUWWSN	25	MO050771	132		156			190	192	252				159		no	
PNUWWSN	26	MO041687	132		156			190	192	252				159		no	
PNUWWSN	27	MO071411	120	126	156	164	175	190	192	244	255		165			no	
PNUWWSN	28	MO071722	113		175			190	192	255				159	171	no	
PNUWWSN	29	MO071522	132		156			190	192	252				159		no	
PNUWWSN	30	KY02C-3007-41	113		175			192	194	255				159		no	
PNUWWSN	31	KY02C-3005-25	113		175			192	255					165		no	
PNUWWSN	32	KY03C-2170-24	113		175			190	194	255				156	159	no	
PNUWWSN	33	KY03C-2170-06	113		175			190	194	255				156		no	
PNUWWSN	34	KY02C-3007-45	113		175			192	194	255				165		no	
PNUWWSN	35	MSULineE5024	nd		175			190	255					159		no	
PNUWWSN	36	VA07W-643	nd		175			192	255					156		no	
PNUWWSN	37	VA06W-580	nd		175			192	255					156		no	
PNUWWSN	38	VA07W-591	nd		164			190	194	244				165		no	
PNUWWSN	39	VA06W-578	nd		175			192	255					156		no	
PNUWWSN	40	VA04W-90	nd		175			190	194	250	255		159			no	
PNUWWSN	41	OH05-101-1	nd		159	164	175	190	194	244	255		159	165		no	
PNUWWSN	42	OH05-72-6	nd		175			192	198	255				165		no	
PNUWWSN	43	OH05-249-32	nd		160			192	252					159		no	
PNUWWSN	44	OH05-152-68	nd		160	175		192	255					159		no	
PNUWWSN	45	OH05-164-76	nd		175			192	255					159	165	no	
PNUWWSN	46	OH05-200-74	nd		156	175		190	192	255				159		no	

FHB QTLs
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Nursery	Entry	Sample Name	gwm 319	gwm 319	gwm 47	gwm 47	gwm 47	gwm 47	gwm 47	gwm 47	Fhb Ernie 2B
PNUWWSN	1	Ernie	167		133	137	146				yes
PNUWWSN	2	Truman	176		137	146					yes
PNUWWSN	3	Freedom	167		133	137	146				yes
PNUWWSN	4	Pioneer2545	176		164						no
PNUWWSN	5	P0513A1-2-3	167	176	137	142	146	182			yes
PNUWWSN	6	P0527A1-9-15	176		164						no
PNUWWSN	7	P0558A1-5-5	167		133	137	142	146	170	182	yes
PNUWWSN	8	P0570A1-7-6	167		137	142	146	182			yes
PNUWWSN	9	P05218A1-6-31	167	174	137	142	146	182			yes
PNUWWSN	10	OH02-12686	176		164						no
PNUWWSN	11	Silas	176		164						no
PNUWWSN	12	Linus	176	180	164						no
PNUWWSN	13	Okie	176	180	146	164					no
PNUWWSN	14	Penzo	176		164						no
PNUWWSN	15	Ajax	167		137	142	146	170	182		yes
PNUWWSN	16	IL04-11003	176		164						no
PNUWWSN	17	IL04-17762	174	176	164						no
PNUWWSN	18	IL05-15079	176		164	170					no
PNUWWSN	19	IL05-27333	176	180	137	146	164				no
PNUWWSN	20	IL05-27522	174		164	170					no
PNUWWSN	21	MH06-2370	180		146	164					no
PNUWWSN	22	MH06-2410	176		164						no
PNUWWSN	23	ML07-7571	176	180	146	164					no
PNUWWSN	24	ML07-7758	176		nd						no
PNUWWSN	25	MO050771	176		182						no
PNUWWSN	26	MO041687	176		164						no
PNUWWSN	27	MO071411	176		164						no
PNUWWSN	28	MO071722	167		133	137	146	170			yes
PNUWWSN	29	MO071522	176		nd						no
PNUWWSN	30	KY02C-3007-41	176		170						no
PNUWWSN	31	KY02C-3005-25	176		164						no
PNUWWSN	32	KY03C-2170-24	167		133	137	146	170			yes
PNUWWSN	33	KY03C-2170-06	174	176	164						no
PNUWWSN	34	KY02C-3007-45	176		164						no
PNUWWSN	35	MSULineE5024	176		146	164					no
PNUWWSN	36	VA07W-643	176		164						no
PNUWWSN	37	VA06W-580	167		133	137	146				yes
PNUWWSN	38	VA07W-591	167		133	137	146				yes
PNUWWSN	39	VA06W-578	167		133	137	146				yes
PNUWWSN	40	VA04W-90	174		164						no
PNUWWSN	41	OH05-101-1	176		164						no
PNUWWSN	42	OH05-72-6	167		133	137	146				yes
PNUWWSN	43	OH05-249-32	174		164						no
PNUWWSN	44	OH05-152-68	176		164						no
PNUWWSN	45	OH05-164-76	174		164						no
PNUWWSN	46	OH05-200-74	176		164						no

Leaf, Stripe & Stem Rusts

2009

Nursery	Entry	Sample Name	wmc	wmc	wmc	Sr36	barc	barc	Lr24/	ventriup	Lr37/Yr17/	cslv34	cslv34	Lr34	Lr34	Lr34/Yr18/
			477	477	477		71	71	Sr24		Sr28					Pm38
PNUWWSN	1	Ernie	187			yes	112		no		no	235		515		no
PNUWWSN	2	Truman	169			no	112		no		no	235		515		no
PNUWWSN	3	Freedom	187			yes	105		no		no	235		515		no
PNUWWSN	4	Pioneer2545	169			no	105		no		no	235		515		no
PNUWWSN	5	P0513A1-2-3	169			no	105	112	no	256	yes	235		515		no
PNUWWSN	6	P0527A1-9-15	167			no	112		no	256	yes	235		515		no
PNUWWSN	7	P0558A1-5-5	187			yes	105		no		no	235		515		no
PNUWWSN	8	P0570A1-7-6	187			yes	105		no		no	235		515		no
PNUWWSN	9	P05218A1-6-31	165	187		het	105		no		no	235		515		no
PNUWWSN	10	OH02-12686	162			no	105		no		no	235		515		no
PNUWWSN	11	Silas	167			no	105		no		no	235		515		no
PNUWWSN	12	Linus	162	167		no	112		no		no	235		515		no
PNUWWSN	13	Okie	162	167		no	105	112	no		no	235		515		no
PNUWWSN	14	Penzo	169			no	105		no		no	235		515		no
PNUWWSN	15	Ajax	169	187		het	105		no		no	235		515		no
PNUWWSN	16	IL04-11003	169			no	105		no		no	235		515		no
PNUWWSN	17	IL04-17762	165			no	105		no		no	235		515		no
PNUWWSN	18	IL05-15079	167			no	105		no		no	235		515		no
PNUWWSN	19	IL05-27333	162	165		no	112		no		no	235		515		no
PNUWWSN	20	IL05-27522	165			no	105		no		no	235		515		no
PNUWWSN	21	MH06-2370	169			no	105		no		no	235		515		no
PNUWWSN	22	MH06-2410	169			no	105		no		no	235		515		no
PNUWWSN	23	ML07-7571	162	167	169	no	105		no		no	235		515		no
PNUWWSN	24	ML07-7758	169			no	105		no		no	235		515		no
PNUWWSN	25	MO050771	169			no	112		no		no	235		515		no
PNUWWSN	26	MO041687	169			no	93		no		no	235		515		no
PNUWWSN	27	MO071411	165			no	105	112	no		no	235		515		no
PNUWWSN	28	MO071722	187			yes	105		no	256	yes	235		515		no
PNUWWSN	29	MO071522	169			no	112		no		no	235		515		no
PNUWWSN	30	KY02C-3007-41	169			no	112		no		no	155		513		?
PNUWWSN	31	KY02C-3005-25	167			no	87	105	yes		no	155	235	510	513	het?
PNUWWSN	32	KY03C-2170-24	162	187		het	105	116	no		no	235		515		no
PNUWWSN	33	KY03C-2170-06	165			no	116		no		no	235		515		no
PNUWWSN	34	KY02C-3007-45	169			no	105	112	no		no	155	235	515		no?
PNUWWSN	35	MSULineE5024	169			no	105		no		no	235		515		no
PNUWWSN	36	VA07W-643	167			no	105		no		no	235		515		no
PNUWWSN	37	VA06W-580	187			yes	105		no		no	235		515		no
PNUWWSN	38	VA07W-591	187			yes	105		no		no	235		515		no
PNUWWSN	39	VA06W-578	187			yes	105		no		no	235		515		no
PNUWWSN	40	VA04W-90	165			no	105		no		no	235		515		no
PNUWWSN	41	OH05-101-1	167			no	105		no		no	235		515		no
PNUWWSN	42	OH05-72-6	187			yes	105		no		no	155	235	510	515	het
PNUWWSN	43	OH05-249-32	165			no	112		no		no	235		515		no
PNUWWSN	44	OH05-152-68	167			no	105		no		no	235		515		no
PNUWWSN	45	OH05-164-76	165			no	112		no		no	155	235	510	515	het
PNUWWSN	46	OH05-200-74	169			no	105	112	no		no	235		515		no

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

2009

Nursery	Entry	Sample Name	scm9	1RS	cf132	H13	cfa2153	cfa2153	H9	Bdv3	Bdv3	Bdv2/3
PNUWWSN	1	Ernie		non-1RS	115	no	193		no	185		no
PNUWWSN	2	Truman		non-1RS	115	no	220		no	185		no
PNUWWSN	3	Freedom	208	1RS:1BL	115	no	195		no	185		no
PNUWWSN	4	Pioneer2545		non-1RS	115	no	195		no	185		no
PNUWWSN	5	P0513A1-2-3		non-1RS	115	no	193	203	no	185	200	het
PNUWWSN	6	P0527A1-9-15	208	1RS:1BL	115	no	213		no	185		no
PNUWWSN	7	P0558A1-5-5		non-1RS	115	no	203		no	185		no
PNUWWSN	8	P0570A1-7-6		non-1RS	115	no	203		no	185	200	het
PNUWWSN	9	P05218A1-6-31		non-1RS	115	no	195		no	185	200	het
PNUWWSN	10	OH02-12686	224	1RS:1AL	115	no	nd		no	185		no
PNUWWSN	11	Silas		non-1RS	115	no	220		no	185		no
PNUWWSN	12	Linus		non-1RS	115	no	220		no	185		no
PNUWWSN	13	Okie	208	1RS:1BL	115	no	193		no	185		no
PNUWWSN	14	Penzo		non-1RS	115	no	195		no	185		no
PNUWWSN	15	Ajax		non-1RS	115	no	195		no	185		no
PNUWWSN	16	IL04-11003		non-1RS	115	no	195		no	185		no
PNUWWSN	17	IL04-17762		non-1RS	115	no	195		no	185		no
PNUWWSN	18	IL05-15079	208	1RS:1BL	115	no	201		no	185		no
PNUWWSN	19	IL05-27333		non-1RS	115	no	211		no	185		no
PNUWWSN	20	IL05-27522		non-1RS	115	no	195		no	185		no
PNUWWSN	21	MH06-2370	208	1RS:1BL	115	no	213		no	185		no
PNUWWSN	22	MH06-2410	208	1RS:1BL	115	no	195		no	185		no
PNUWWSN	23	ML07-7571		non-1RS	115	no	199	203	no	185		no
PNUWWSN	24	ML07-7758		non-1RS	115	no	193		no	185		no
PNUWWSN	25	MO050771		non-1RS	115	no	195	220	no	185		no
PNUWWSN	26	MO041687		non-1RS	115	no	169		no	185		no
PNUWWSN	27	MO071411		non-1RS	115	no	195	203	no	185		no
PNUWWSN	28	MO071722		non-1RS	153	no	195	199	no	185		no
PNUWWSN	29	MO071522		non-1RS	115	no	195	220	no	185		no
PNUWWSN	30	KY02C-3007-41		non-1RS	115	no	193		no	185		no
PNUWWSN	31	KY02C-3005-25	224	1RS:1AL	115	no	nd		no	185		no
PNUWWSN	32	KY03C-2170-24	208	1RS:1BL	115	no	195	203	no	185		no
PNUWWSN	33	KY03C-2170-06		non-1RS	115	no	195		no	185		no
PNUWWSN	34	KY02C-3007-45	208	1RS:1BL	115	no	193	207	no	185		no
PNUWWSN	35	MSULineE5024	208	1RS:1BL	115	no	203		no	185		no
PNUWWSN	36	VA07W-643	224	1RS:1AL	115	no	nd		no	185		no
PNUWWSN	37	VA06W-580		non-1RS	115	no	195		no	185		no
PNUWWSN	38	VA07W-591	208	1RS:1BL	115	no	195		no	185		no
PNUWWSN	39	VA06W-578		non-1RS	115	no	195		no	185		no
PNUWWSN	40	VA04W-90		non-1RS	115	no	195	213	no	185		no
PNUWWSN	41	OH05-101-1		non-1RS	115	no	195	203	no	185		no
PNUWWSN	42	OH05-72-6	208	1RS:1BL	115	no	207		no	185		no
PNUWWSN	43	OH05-249-32		non-1RS	115	no	203		no	185		no
PNUWWSN	44	OH05-152-68		non-1RS	115	no	169		no	185		no
PNUWWSN	45	OH05-164-76	208	1RS:1BL	115	no	205		no	185		no
PNUWWSN	46	OH05-200-74	224	1RS:1AL	115	no	220		no	185		no

Quality Traits
2009

Nursery	Entry	Sample Name	bx7oe	bx7oe	Bx7 over-expressing	umn25	umn25	umn26	umn26	Glu-D1
PNUWWSN	1	Ernie	403		no		293		407	2+12
PNUWWSN	2	Truman	403		no		293		407	2+12
PNUWWSN	3	Freedom	403		no		293		407	2+12
PNUWWSN	4	Pioneer2545	403		no		293		407	2+12
PNUWWSN	5	P0513A1-2-3	403		no	275	293	390	407	het
PNUWWSN	6	P0527A1-9-15	403		no		293		407	2+12
PNUWWSN	7	P0558A1-5-5	403		no		293		407	2+12
PNUWWSN	8	P0570A1-7-6	403		no	275		390		5+10
PNUWWSN	9	P05218A1-6-31	403		no		293		407	2+12
PNUWWSN	10	OH02-12686	403		no		293		407	2+12
PNUWWSN	11	Silas	403		no		293		407	2+12
PNUWWSN	12	Linus	403	448	het		293		407	2+12
PNUWWSN	13	Okie	403		no	275	293	390	407	het
PNUWWSN	14	Penzo	403		no		293		407	2+12
PNUWWSN	15	Ajax	403	448	het		293		407	2+12
PNUWWSN	16	IL04-11003	403		no	275		390		5+10
PNUWWSN	17	IL04-17762	403		no	275		390		5+10
PNUWWSN	18	IL05-15079	403		no		293		407	2+12
PNUWWSN	19	IL05-27333	403		no	275		390		5+10
PNUWWSN	20	IL05-27522	403		no	275		390		5+10
PNUWWSN	21	MH06-2370	403		no		293		407	2+12
PNUWWSN	22	MH06-2410	403		no		293		407	2+12
PNUWWSN	23	ML07-7571	403		no		293		407	2+12
PNUWWSN	24	ML07-7758	403		no	275		390		5+10
PNUWWSN	25	MO050771	403		no		293		407	2+12
PNUWWSN	26	MO041687	403		no	275	293	390	407	het
PNUWWSN	27	MO071411	403		no		293		407	2+12
PNUWWSN	28	MO071722	403		no	275	293	390	407	het
PNUWWSN	29	MO071522	403		no	275		390		5+10
PNUWWSN	30	KY02C-3007-41	403		no	275		390		5+10
PNUWWSN	31	KY02C-3005-25	403		no	275		390		5+10
PNUWWSN	32	KY03C-2170-24	403		no	275	293	390	407	het
PNUWWSN	33	KY03C-2170-06	403		no		293		407	2+12
PNUWWSN	34	KY02C-3007-45	nd		nd	275		390		5+10
PNUWWSN	35	MSULineE5024	403		no	275		390		5+10
PNUWWSN	36	VA07W-643	403		no	275		390		5+10
PNUWWSN	37	VA06W-580	403		no		293		407	2+12
PNUWWSN	38	VA07W-591	403		no	275		390		5+10
PNUWWSN	39	VA06W-578	403		no		293		407	2+12
PNUWWSN	40	VA04W-90	403		no	275	293	390	407	het
PNUWWSN	41	OH05-101-1	403		no	275		390		5+10
PNUWWSN	42	OH05-72-6	403		no		293		407	2+12
PNUWWSN	43	OH05-249-32	403		no		293		407	2+12
PNUWWSN	44	OH05-152-68	403		no		293		407	2+12
PNUWWSN	45	OH05-164-76	403		no	275		390		5+10
PNUWWSN	46	OH05-200-74	403		no		293		407	2+12

2009 Uniform Southern FHB Nursery

Entry List

Nursery	Entry	Sample Name	Pedigree
USFHBN	1	Ernie	
USFHBN	2	Coker9835	
USFHBN	3	Bess	
USFHBN	4	Jamestown	
USFHBN	5	AR97002-2-1	
USFHBN	6	AR99039-5-2	
USFHBN	7	AR99263-7-1	
USFHBN	8	VA05W-510	
USFHBN	9	B030543	
USFHBN	10	LA01164D-94-2	
USFHBN	11	LA01162D-131-8	
USFHBN	12	LA01162D-136-8	
USFHBN	13	GA031454-DH7	
USFHBN	14	GA031307-DH14	
USFHBN	15	NC05-21090	
USFHBN	16	AR99254-7-1	
USFHBN	17	AR99054-4-1	
USFHBN	18	AR99071-7-2	
USFHBN	19	MD02W81-08-6	
USFHBN	20	MD01W255-08-1	
USFHBN	21	M05-1531	
USFHBN	22	B0390207	
USFHBN	23	03M1599-031	
USFHBN	24	03M1599-0007	
USFHBN	25	MH06-2370	
USFHBN	26	ML07-7571	
USFHBN	27	ML07-7758	
USFHBN	28	VA04W-90	
USFHBN	29	VA05W-534	
USFHBN	30	VA06-575	
USFHBN	31	VA06W-587	
USFHBN	32	VA07W-568	
USFHBN	33	VA07W-607	
USFHBN	34	VA05W-640	
USFHBN	35	LA01141D-98-6-2	
USFHBN	36	LA03187C-2	
USFHBN	37	LA01164D-43-7-B	
USFHBN	38	ARGE97-1048-6	
USFHBN	39	GA991209-6E33	
USFHBN	40	GA031454-DH38-7	
USFHBN	41	GA031454-DH38-8	
USFHBN	42	GA991109-1-G1	
USFHBN	43	GA991109-1-G2	
USFHBN	44	ARS03-5358	
USFHBN	45	ARS03-3806	
USFHBN	46	ARS03-4736	
USFHBN	47	ARS04-1249	
USFHBN	48	ARS05-0443	
USFHBN	49	ARS05-0242	
USFHBN	50	ARS05-1044	
USFHBN	51	ARS05-1234	
USFHBN	52	NC05-23015	
USFHBN	53	NC05-20671	
USFHBN	54	NC05-21937	
USFHBN	55	NC06-20288	
USFHBN	56	NC07-23170	
USFHBN	57	NC07-22927	

2009 Uniform Southern FHB Nursery

Summary of all Markers

Nursery	Entry	Sample Name	Rht1-	Rht2-	Rht8	Ppd-	Fhb Ernie		Fhb 2DL-	Fhb 5A	Fhb 5A	Fhb Ernie	Fhb Ernie
			B1b	D1b		D1a	Fhb1	3Bc	Wuhan1/W14	Ernie	Ning7840	4B	2B
USFHBN	1	Ernie	yes	no	nd	no	no	yes	no	yes	no	no	?
USFHBN	2	Coker9835	no	yes	no	yes	no	no	no	no	no	no	yes
USFHBN	3	Bess	yes	no	no	no	no	?	no	no	no	no	no
USFHBN	4	Jamestown	no	yes	no	yes	no	het	no	no	no	no	het
USFHBN	5	AR97002-2-1	yes	no	no	no	no	no	no	?	no	no	yes
USFHBN	6	AR99039-5-2	no	yes	no	no	no	yes?	no	no	no	no	no
USFHBN	7	AR99263-7-1	yes	no	no	het	no	no	no	no	no	no	no
USFHBN	8	VA05W-510	no	yes	no	yes	no	no	no	no	no	no	yes
USFHBN	9	B030543	no	yes	no	yes	no	no	no	no	no	no	yes
USFHBN	10	LA01164D-94-2	no	yes	no	no	yes	no	no	no	yes	no	yes
USFHBN	11	LA01162D-131-8	no	yes	no	yes	yes	no	no	no	no	no	no
USFHBN	12	LA01162D-136-8	no	yes	no	no	yes	no	no	no	yes	no	yes
USFHBN	13	GA031454-DH7	no	no	no	yes	no	no	no	no	no	no	no
USFHBN	14	GA031307-DH14	no	yes	no	yes	no	?	no	no	no	no	yes
USFHBN	15	NC05-21090	no	yes	no	yes	no	yes?	no	no	no	no	yes
USFHBN	16	AR99254-7-1	no	no	no	no	no	no	no	yes?	no	no	no
USFHBN	17	AR99054-4-1	no	no	no	no	no	no	no	no	no	no	?
USFHBN	18	AR99071-7-2	no	yes	no	yes	no	no	no	no	no	no	no
USFHBN	19	MD02W81-08-6	yes	no	no	no	no	?	no	no	no	no	yes
USFHBN	20	MD01W255-08-1	no	yes	no	no	no	no	no	no	no	no	no
USFHBN	21	M05-1531	het	no	no	no	no	yes	no	yes?	no	no	no
USFHBN	22	B0390207	no	yes	no	yes	no	no	no	no	no	no	no
USFHBN	23	03M1599-031	yes	no	no	yes	no	yes?	no	no	no	no	no
USFHBN	24	03M1599-0007	yes	no	no	het	no	het	no	het?	no	no	no
USFHBN	25	MH06-2370	yes	no	no	yes	no	no	no	no	no	no	no
USFHBN	26	ML07-7571	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	27	ML07-7758	yes	no	no	no	het	no	no	no	no	no	no
USFHBN	28	VA04W-90	no	yes	no	yes	no	yes?	no	no	no	no	no
USFHBN	29	VA05W-534	yes	no	no	no	no	yes?	no	no	no	no	no
USFHBN	30	VA06-575	no	yes	no	het	no	no	no	no	no	no	yes
USFHBN	31	VA06W-587	no	yes	no	yes	no	no	no	no	no	no	no
USFHBN	32	VA07W-568	no	yes	no	no	no	no	no	yes	no	no	no
USFHBN	33	VA07W-607	no	yes	no	no	no	no	no	no	no	no	yes
USFHBN	34	VA05W-640	no	yes	het	yes	no	no	no	no	no	no	yes
USFHBN	35	LA01141D-98-6-2	no	yes	no	yes	yes	no	no	no	no	no	no
USFHBN	36	LA03187C-2	no	yes	no	yes	no	no	yes	no	no	no	no
USFHBN	37	LA01164D-43-7-B	no	yes	no	yes	no	no	no	no	yes	no	no
USFHBN	38	ARGE97-1048-6	no	yes	no	no	no	no	no	no	no	no	?
USFHBN	39	GA991209-6E33	no	yes	yes	no	no	no	no	no	no	no	no
USFHBN	40	GA031454-DH38-7	no	yes	no	yes	no	no	no	no	no	no	?
USFHBN	41	GA031454-DH38-8	no	yes	no	yes	no	no	no	no	no	no	?
USFHBN	42	GA991109-1-G1	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	43	GA991109-1-G2	yes	no	yes	no	no	no	no	no	no	no	no
USFHBN	44	ARS03-5358	no	no	no	no	no	no	no	no	no	no	yes
USFHBN	45	ARS03-3806	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	46	ARS03-4736	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	47	ARS04-1249	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	48	ARS05-0443	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	49	ARS05-0242	no	yes	no	no	no	no	no	no	no	no	yes
USFHBN	50	ARS05-1044	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	51	ARS05-1234	yes	no	no	no	no	no	no	no	no	no	no
USFHBN	52	NC05-23015	no	yes	no	yes	no	yes?	no	yes?	no	no	no
USFHBN	53	NC05-20671	no	yes	no	yes	no	no	no	het	no	no	yes
USFHBN	54	NC05-21937	no	yes	no	no	yes	no	no	no	no	no	yes
USFHBN	55	NC06-20288	no	yes	no	no	no	no	no	no	no	no	yes
USFHBN	56	NC07-23170	no	yes	no	no	no	no	no	yes?	no	no	yes
USFHBN	57	NC07-22927	no	yes	no	no	het	no	no	het	?	no	yes

2009 Uniform Southern FHB Nursery

Summary of all Markers

Nursery	Entry	Sample Name	Lr24/ Lr37/Yr17/ Lr34/Yr18/				1RS	H13	H9	Bdv2/3	Bx7 over-expressing	Glu-D1
			Sr36	Sr24	Sr28	Pm38						
USFHBN	1	Ernie	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	2	Coker9835	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	3	Bess	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	4	Jamestown	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	5	AR97002-2-1	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	6	AR99039-5-2	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	7	AR99263-7-1	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	8	VA05W-510	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	9	B030543	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	10	LA01164D-94-2	yes	no	no	no	non-1RS	no	no	no	yes	2+12
USFHBN	11	LA01162D-131-8	no	no	yes	no	non-1RS	no	no	no	yes	2+12
USFHBN	12	LA01162D-136-8	yes	no	yes	no	non-1RS	no	no	no	yes	2+12
USFHBN	13	GA031454-DH7	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	14	GA031307-DH14	no	no	no	no	1RS:1BL	no	no	no	het	het
USFHBN	15	NC05-21090	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	16	AR99254-7-1	yes	no	no	no	non-1RS	no	no	no	no	5+10
USFHBN	17	AR99054-4-1	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	18	AR99071-7-2	no	yes	no	no	non-1RS	no	no	no	no	2+12
USFHBN	19	MD02W81-08-6	yes	no	no	no	1RS:1BL	no	no	no	no	2+12
USFHBN	20	MD01W255-08-1	no	no	no	no	1RS:1AL	no	no	no	no	2+12
USFHBN	21	M05-1531	no	no	no	no	1RS:1BL	no	no	no	no	het
USFHBN	22	B0390207	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	23	03M1599-031	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	24	03M1599-0007	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	25	MH06-2370	no	no	no	no	1RS:1BL	no	no	no	no	2+12
USFHBN	26	ML07-7571	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	27	ML07-7758	no	no	no	no	1RS:1BL	no	no	no	no	5+10
USFHBN	28	VA04W-90	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	29	VA05W-534	no	no	no	no	1RS:1AL	no	no	no	no	2+12
USFHBN	30	VA06-575	yes	no	no	no	non-1RS	no	no	no	no	het
USFHBN	31	VA06W-587	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	32	VA07W-568	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	33	VA07W-607	no	yes	no	no	non-1RS	no	no	no	no	het
USFHBN	34	VA05W-640	het	no	no	no	non-1RS	no	no	no	no	het
USFHBN	35	LA01141D-98-6-2	no	no	yes	yes	non-1RS	no	no	no	yes	2+12
USFHBN	36	LA03187C-2	no	no	yes	no	non-1RS	no	no	no	yes	2+12
USFHBN	37	LA01164D-43-7-B	no	no	no	no	1RS:1BL	no	no	no	yes	2+12
USFHBN	38	ARGE97-1048-6	no	no	no	no	1RS:1BL	no	no	no	no	5+10
USFHBN	39	GA991209-6E33	no	no	no	no	1RS:1BL	no	no	no	no	5+10
USFHBN	40	GA031454-DH38-7	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	41	GA031454-DH38-8	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	42	GA991109-1-G1	no	no	no	no	non-1RS	no	no	no	no	het
USFHBN	43	GA991109-1-G2	no	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	44	ARS03-5358	yes	no	no	no	non-1RS	no	no	no	no	5+10
USFHBN	45	ARS03-3806	no	no	no	no	1RS:1AL	no	no	no	no	2+12
USFHBN	46	ARS03-4736	no	no	no	no	1RS:1AL	no	no	no	no	2+12
USFHBN	47	ARS04-1249	no	no	no	no	1RS:1AL	no	no	no	no	5+10
USFHBN	48	ARS05-0443	no	no	yes	no	1RS:1BL	no	no	no	no	5+10
USFHBN	49	ARS05-0242	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	50	ARS05-1044	no	no	no	het	1RS:1AL	no	no	no	no	2+12
USFHBN	51	ARS05-1234	no	no	yes	no	non-1RS	no	no	no	no	2+12
USFHBN	52	NC05-23015	yes	no	yes	no	non-1RS	no	no	no	no	2+12
USFHBN	53	NC05-20671	yes	yes	no	no	non-1RS	no	no	no	no	het
USFHBN	54	NC05-21937	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	55	NC06-20288	yes	no	yes	no	non-1RS	no	no	no	no	2+12
USFHBN	56	NC07-23170	yes	no	no	no	non-1RS	no	no	no	no	2+12
USFHBN	57	NC07-22927	yes	no	no	het	non-1RS	no	no	no	no	het

Dwarfing genes & Photoperiod insensitivity

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Nursery	Entry	Sample Name	Rht1W	Rht1M	Rht2W	Rht2M	Rht1-	Rht2-	gwm 261	gwm 261	gwm 261	Rht8	Ppd	Ppd	Ppd-D1a
							B1b	D1b							
USFHBN	1	Ernie		367	251		yes	no	nd			nd		413	no
USFHBN	2	Coker9835	362			253	no	yes	203			no	283		yes
USFHBN	3	Bess		367	251		yes	no	175			no		413	no
USFHBN	4	Jamestown	362			253	no	yes	175	201		no	283		yes
USFHBN	5	AR97002-2-1		367	251		yes	no	175			no		413	no
USFHBN	6	AR99039-5-2	362			253	no	yes	175			no		413	no
USFHBN	7	AR99263-7-1		367	251		yes	no	175	203		no	283	413	het
USFHBN	8	VA05W-510	362			253	no	yes	203			no	283		yes
USFHBN	9	B030543	362			253	no	yes	203			no	283		yes
USFHBN	10	LA01164D-94-2	362			253	no	yes	203			no		413	no
USFHBN	11	LA01162D-131-8	362			253	no	yes	203			no	283		yes
USFHBN	12	LA01162D-136-8	362			253	no	yes	203			no		413	no
USFHBN	13	GA031454-DH7	362		251		no	no	203			no	283		yes
USFHBN	14	GA031307-DH14	362			253	no	yes	203			no	283		yes
USFHBN	15	NC05-21090	362			253	no	yes	203			no	283		yes
USFHBN	16	AR99254-7-1	362		251		no	no	203			no		413	no
USFHBN	17	AR99054-4-1	362		251		no	no	175	203		no		413	no
USFHBN	18	AR99071-7-2	362			253	no	yes	175			no	283		yes
USFHBN	19	MD02W81-08-6		367	251		yes	no	165			no		413	no
USFHBN	20	MD01W255-08-1	362			253	no	yes	165			no		413	no
USFHBN	21	M05-1531	362	367	251		het	no	175			no		413	no
USFHBN	22	B0390207	362			253	no	yes	165			no	283		yes
USFHBN	23	03M1599-031		367	251		yes	no	203			no	283		yes
USFHBN	24	03M1599-0007		367	251		yes	no	175			no	283	413	het
USFHBN	25	MH06-2370		367	251		yes	no	175			no	283		yes
USFHBN	26	ML07-7571		367	251		yes	no	175			no		413	no
USFHBN	27	ML07-7758		367	251		yes	no	175			no		413	no
USFHBN	28	VA04W-90	362			253	no	yes	203			no	283		yes
USFHBN	29	VA05W-534		367	251		yes	no	175	203		no		413	no
USFHBN	30	VA06-575	362			253	no	yes	175	203		no	283	413	het
USFHBN	31	VA06W-587	362			253	no	yes	203			no	283		yes
USFHBN	32	VA07W-568	362			253	no	yes	175			no		413	no
USFHBN	33	VA07W-607	362			253	no	yes	175			no		413	no
USFHBN	34	VA05W-640	362			253	no	yes	175	193	203	het	283		yes
USFHBN	35	LA01141D-98-6-2	362			253	no	yes	203			no	283		yes
USFHBN	36	LA03187C-2	362			253	no	yes	201			no	283		yes
USFHBN	37	LA01164D-43-7-B	362			253	no	yes	203			no	283		yes
USFHBN	38	ARGE97-1048-6	362			253	no	yes	201			no		413	no
USFHBN	39	GA991209-6E33	362			253	no	yes	193			yes		413	no
USFHBN	40	GA031454-DH38-7	362			253	no	yes	201			no	283		yes
USFHBN	41	GA031454-DH38-8	362			253	no	yes	197			no	283		yes
USFHBN	42	GA991109-1-G1		367	251		yes	no	175			no		413	no
USFHBN	43	GA991109-1-G2		367	251		yes	no	193			yes		413	no
USFHBN	44	ARS03-5358	362		251		no	no	175			no		413	no
USFHBN	45	ARS03-3806		367	251		yes	no	175			no		413	no
USFHBN	46	ARS03-4736		367	251		yes	no	165			no		454	no
USFHBN	47	ARS04-1249		367	251		yes	no	211			no		454	no
USFHBN	48	ARS05-0443		367	251		yes	no	211			no		413	no
USFHBN	49	ARS05-0242	362			253	no	yes	165			no		454	no
USFHBN	50	ARS05-1044		367	251		yes	no	165	211		no		454	no
USFHBN	51	ARS05-1234		367	251		yes	no	165	211		no		413	no
USFHBN	52	NC05-23015	362			253	no	yes	203			no	283		yes
USFHBN	53	NC05-20671	362			253	no	yes	175			no	283		yes
USFHBN	54	NC05-21937	362			253	no	yes	165			no		413	no
USFHBN	55	NC06-20288	362			253	no	yes	165			no		413	no
USFHBN	56	NC07-23170	362			253	no	yes	165			no		413	no
USFHBN	57	NC07-22927	362			253	no	yes	165			no		413	no

FHB QTLs

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Nursery	Entry	Sample Name	umn10	umn10	gwm533	gwm533	gwm533	Fhb1
USFHBN	1	Ernie	236		nd			no
USFHBN	2	Coker9835	236		129			no
USFHBN	3	Bess	236		119			no
USFHBN	4	Jamestown	236		nd			no
USFHBN	5	AR97002-2-1	236		119			no
USFHBN	6	AR99039-5-2	236		119			no
USFHBN	7	AR99263-7-1	236		119			no
USFHBN	8	VA05W-510	236		129	162		no
USFHBN	9	B030543	236		119			no
USFHBN	10	LA01164D-94-2	239		145			yes
USFHBN	11	LA01162D-131-8	239		145			yes
USFHBN	12	LA01162D-136-8	239		145			yes
USFHBN	13	GA031454-DH7	236		119			no
USFHBN	14	GA031307-DH14	236		119			no
USFHBN	15	NC05-21090	236		129			no
USFHBN	16	AR99254-7-1	229		147	157		no
USFHBN	17	AR99054-4-1	236		144			no
USFHBN	18	AR99071-7-2	229	236	119	147	157	no
USFHBN	19	MD02W81-08-6	236		129			no
USFHBN	20	MD01W255-08-1	236		119			no
USFHBN	21	M05-1531	236		119			no
USFHBN	22	B0390207	236		119			no
USFHBN	23	03M1599-031	236		119			no
USFHBN	24	03M1599-0007	236		119			no
USFHBN	25	MH06-2370	236		119			no
USFHBN	26	ML07-7571	236		nd			no
USFHBN	27	ML07-7758	236	239	119	145		het
USFHBN	28	VA04W-90	229		157			no
USFHBN	29	VA05W-534	236		119			no
USFHBN	30	VA06-575	229		157	162		no
USFHBN	31	VA06W-587	229		157			no
USFHBN	32	VA07W-568	229		147	157		no
USFHBN	33	VA07W-607	229	236	119	147	157	no
USFHBN	34	VA05W-640	236		119			no
USFHBN	35	LA01141D-98-6-2	239		nd			yes
USFHBN	36	LA03187C-2	236		119			no
USFHBN	37	LA01164D-43-7-B	236		119			no
USFHBN	38	ARGE97-1048-6	236		119			no
USFHBN	39	GA991209-6E33	236		119			no
USFHBN	40	GA031454-DH38-7	236		119			no
USFHBN	41	GA031454-DH38-8	236		119			no
USFHBN	42	GA991109-1-G1	236		119			no
USFHBN	43	GA991109-1-G2	236		119			no
USFHBN	44	ARS03-5358	236		119			no
USFHBN	45	ARS03-3806	236		119			no
USFHBN	46	ARS03-4736	236		nd			no
USFHBN	47	ARS04-1249	236		nd			no
USFHBN	48	ARS05-0443	236		nd			no
USFHBN	49	ARS05-0242	236		119			no
USFHBN	50	ARS05-1044	236		129			no
USFHBN	51	ARS05-1234	236		119			no
USFHBN	52	NC05-23015	236		129			no
USFHBN	53	NC05-20671	229	236	119	157		no
USFHBN	54	NC05-21937	239		145			yes
USFHBN	55	NC06-20288	236		119			no
USFHBN	56	NC07-23170	236		119			no
USFHBN	57	NC07-22927	236	239	119	145		het

FHB QTLs

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Nursery	Entry	Sample Name	gwm	gwm	gwm	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	wmc	Fhb Ernie	
			285	285	285	612	612	307	307	1	1	418	418	471	471	3Bc
USFHBN	1	Ernie	245			287		142		153		262		nd	yes	
USFHBN	2	Coker9835	222			282		142	147	149	158	267	271	215	no	
USFHBN	3	Bess	245	249		291		140	142	151	156	262	271	217	?	
USFHBN	4	Jamestown	226	245		284	291	142	144	153		262	271	215	217	het
USFHBN	5	AR97002-2-1	218			284		144		151		271		217		no
USFHBN	6	AR99039-5-2	245			282		142		153		262		217		yes?
USFHBN	7	AR99263-7-1	218			282	291	144		156		271		217		no
USFHBN	8	VA05W-510	226			291		144		149		269		221		no
USFHBN	9	B030543	220			280		144		163		262		217		no
USFHBN	10	LA01164D-94-2	220	226		291		144		163		271		217		no
USFHBN	11	LA01162D-131-8	220	226		280	291	144		149	163	271		217		no
USFHBN	12	LA01162D-136-8	220	226		280	291	144		163		271		217		no
USFHBN	13	GA031454-DH7	226			291		144		149		271		217		no
USFHBN	14	GA031307-DH14	220	245		274		142	144	151		262	269	217		?
USFHBN	15	NC05-21090	245			282		142		153		262		217		yes?
USFHBN	16	AR99254-7-1	218			282		142		163		271		215		no
USFHBN	17	AR99054-4-1	218			276		144		160		271	277	217		no
USFHBN	18	AR99071-7-2	220	245		282	289	142	147	153	158	260	271	215	221	no
USFHBN	19	MD02W81-08-6	245			287		142		149		262		260		?
USFHBN	20	MD01W255-08-1	226			291		144		163		271		217		no
USFHBN	21	M05-1531	245			287		142		153		262	271	217		yes
USFHBN	22	B0390207	216			276		142		149		269		221		no
USFHBN	23	03M1599-031	245			287		142		153		262		260		yes?
USFHBN	24	03M1599-0007	220	245		274	287	142	144	151		262	271	217		het
USFHBN	25	MH06-2370	243			289		142		149		262		260		no
USFHBN	26	ML07-7571	245			282		142		163		271		217		no
USFHBN	27	ML07-7758	220			274		144		151		271		215		no
USFHBN	28	VA04W-90	245			282		142		153		262	269	217	219	yes?
USFHBN	29	VA05W-534	245			287		142		153	163	262		260		yes?
USFHBN	30	VA06-575	226			291		144		149		269		221		no
USFHBN	31	VA06W-587	220			282		144		163		271		215		no
USFHBN	32	VA07W-568	218			282		142		163		271		217		no
USFHBN	33	VA07W-607	218	226		291		142		149	163	271	277	215		no
USFHBN	34	VA05W-640	220	243		268	282	142		151		262	271	215	217	no
USFHBN	35	LA01141D-98-6-2	226			291		144		149		269		217		no
USFHBN	36	LA03187C-2	nd			280	305	142		151		271		215		no
USFHBN	37	LA01164D-43-7-B	220			274		144		151		271		215		no
USFHBN	38	ARGE97-1048-6	226			291		142		149		271		215		no
USFHBN	39	GA991209-6E33	226			287	291	142		149		271		215		no
USFHBN	40	GA031454-DH38-7	226			291		144		149		269		217		no
USFHBN	41	GA031454-DH38-8	226			291		144		149		271		217		no
USFHBN	42	GA991109-1-G1	226			291		142		149		271		217		no
USFHBN	43	GA991109-1-G2	226			291		142		149		271		217		no
USFHBN	44	ARS03-5358	216			287		142		149		269		219		no
USFHBN	45	ARS03-3806	226			287		142		163		271		217		no
USFHBN	46	ARS03-4736	226			280		142		160		262		217		no
USFHBN	47	ARS04-1249	220			274		144		156		269		217		no
USFHBN	48	ARS05-0443	245			291		142		153		271		215		no
USFHBN	49	ARS05-0242	226			280		142		160		265		217		no
USFHBN	50	ARS05-1044	220	226		280		140	142	160		265		217		no
USFHBN	51	ARS05-1234	218			280		142		163		269		217		no
USFHBN	52	NC05-23015	245			282		142		153		262		217		yes?
USFHBN	53	NC05-20671	218			289		142		163		262	271	215		no
USFHBN	54	NC05-21937	220			291		144		160		271		219		no
USFHBN	55	NC06-20288	226			291		144		163		271		219		no
USFHBN	56	NC07-23170	220			291		144		163		271		219		no
USFHBN	57	NC07-22927	220			291		144		163		271		219		no

FHB QTLs

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Nursery	Entry	Sample Name	cf	cf	cf	gwm	gwm	gwm	gwm	gwm	wmc	wmc	gwm	gwm	Fhb 2DL- Wuhan1/W14
			233	233	233	539	539	539	608	608	144	144	349	349	
USFHBN	1	Ernie	284			137			150		137		232		no
USFHBN	2	Coker9835	273	278		131	139		150	158	137	141	232	247	no
USFHBN	3	Bess	290			137			162		137		230	240	no
USFHBN	4	Jamestown	272			133			154		139		247		no
USFHBN	5	AR97002-2-1	278			139			150		139		234		no
USFHBN	6	AR99039-5-2	273			131			156		137		247		no
USFHBN	7	AR99263-7-1	280			131			150		137		234	247	no
USFHBN	8	VA05W-510	280			131			150		139		240		no
USFHBN	9	B030543	280			131			150		139		240		no
USFHBN	10	LA01164D-94-2	278			137			158		141		240		no
USFHBN	11	LA01162D-131-8	273	278		137			156		139	141	240		no
USFHBN	12	LA01162D-136-8	278			137			158		141		240		no
USFHBN	13	GA031454-DH7	280			137			150		137		247		no
USFHBN	14	GA031307-DH14	273	278	282	131	135	152	156	160	139	141	232	247	no
USFHBN	15	NC05-21090	282			152			160		139		244		no
USFHBN	16	AR99254-7-1	278			124			156		139		228		no
USFHBN	17	AR99054-4-1	290			131			162		139		247		no
USFHBN	18	AR99071-7-2	271	273		133	139		158	164	137	141	247		no
USFHBN	19	MD02W81-08-6	290			137			162		137		232		no
USFHBN	20	MD01W255-08-1	274			135			160		141		244		no
USFHBN	21	M05-1531	290			139			154		139		240		no
USFHBN	22	B0390207	273	280		131	133		150	158	141		240		no
USFHBN	23	03M1599-031	273			131			156		137		240		no
USFHBN	24	03M1599-0007	273			124			156		141		230	240	no
USFHBN	25	MH06-2370	273			131			156		137		232		no
USFHBN	26	ML07-7571	288			137			150		139		249		no
USFHBN	27	ML07-7758	280			131			150		137	141	232		no
USFHBN	28	VA04W-90	280			131			150	162	139		240		no
USFHBN	29	VA05W-534	278			139			150		137	141	240		no
USFHBN	30	VA06-575	280	290		124	131		150	162	139		232	240	no
USFHBN	31	VA06W-587	280			124	131		150		139		228	240	no
USFHBN	32	VA07W-568	280			131			150		139		240		no
USFHBN	33	VA07W-607	278	284		135			150		139	141	232	238	no
USFHBN	34	VA05W-640	278			135			150	162	139	141	232	244	no
USFHBN	35	LA01141D-98-6-2	273			133			156		139		240		no
USFHBN	36	LA03187C-2	276			126			152		137	141	242		yes
USFHBN	37	LA01164D-43-7-B	288			137			156		141		247		no
USFHBN	38	ARGE97-1048-6	278			135			158		139		228		no
USFHBN	39	GA991209-6E33	273			135			156		139		228		no
USFHBN	40	GA031454-DH38-7	271			148			150		139		240		no
USFHBN	41	GA031454-DH38-8	271			146			150		139		240		no
USFHBN	42	GA991109-1-G1	284			137			150		137		229		no
USFHBN	43	GA991109-1-G2	271			137			158		139		228		no
USFHBN	44	ARS03-5358	273			131			156		141		230		no
USFHBN	45	ARS03-3806	278			126			150		141		232		no
USFHBN	46	ARS03-4736	241			178			150		133		230		no
USFHBN	47	ARS04-1249	271			157			158		139		240		no
USFHBN	48	ARS05-0443	274			135			152		139		240		no
USFHBN	49	ARS05-0242	273			131			156		141		247		no
USFHBN	50	ARS05-1044	274			126	159		156		139		215	232	no
USFHBN	51	ARS05-1234	276			126			158		139		215		no
USFHBN	52	NC05-23015	282			131			160		137		244		no
USFHBN	53	NC05-20671	280			124	139		150		139		232		no
USFHBN	54	NC05-21937	276			155			nd		137		238		no
USFHBN	55	NC06-20288	280			152			150		137		244		no
USFHBN	56	NC07-23170	280			152			150		137		232		no
USFHBN	57	NC07-22927	273			133	165		150		137	141	232		no

FHB QTLs

2009

Nursery	Entry	Sample Name	gwm	gwm	gwm	wmc	wmc	wmc	barc	barc	barc	barc	barc	gwm	gwm	gwm	barc	Fhb 5A	Fhb 5A
			304	304	304	705	705	705	117	117	117	186	186	156	156	156	56	Ernie	Ning7840
USFHBN	1	Ernie	221			135			221			203	313	320		115	yes	no	
USFHBN	2	Coker9835	199			162			217			203	293			104	no	no	
USFHBN	3	Bess	199			164			217	217		203	313			104	no	no	
USFHBN	4	Jamestown	201			133	162		217			203	293			104	no	no	
USFHBN	5	AR97002-2-1	217			170			221			213	293			115	no	?	
USFHBN	6	AR99039-5-2	199			164			217			203	311			103	no	no	
USFHBN	7	AR99263-7-1	217			162			221			213	293			115	no	no	
USFHBN	8	VA05W-510	199			166			217			203	283			104	no	no	
USFHBN	9	B030543	199			164			217			203	283			104	no	no	
USFHBN	10	LA01164D-94-2	217			168			221			213	322			115	no	yes	
USFHBN	11	LA01162D-131-8	199			162			217			203	293			104	no	no	
USFHBN	12	LA01162D-136-8	217			168			221			213	322			115	no	yes	
USFHBN	13	GA031454-DH7	199			164			217			203	283			104	no	no	
USFHBN	14	GA031307-DH14	199	203		139	162	164	217			203	283	293	313	104	no	no	
USFHBN	15	NC05-21090	199			164			217			203	283			104	no	no	
USFHBN	16	AR99254-7-1	221			135			221			203	283			115	yes?	no	
USFHBN	17	AR99054-4-1	201			133			217			203	281			104	no	no	
USFHBN	18	AR99071-7-2	199			162			217			203	277	293	313	104	no	no	
USFHBN	19	MD02W81-08-6	215			133			221			213	283			115	no	no	
USFHBN	20	MD01W255-08-1	199			162			217			203	293			104	no	no	
USFHBN	21	M05-1531	221			135			nd			nd	313			115	yes?	no	
USFHBN	22	B0390207	199			166			217			203	315			104	no	no	
USFHBN	23	03M1599-031	199			164			217			203	283			104	no	no	
USFHBN	24	03M1599-0007	199			135	162		217	221		203	293	313		115	het?	no	
USFHBN	25	MH06-2370	199			162			217			203	285			104	no	no	
USFHBN	26	ML07-7571	221			135			217			203	283			104	no	no	
USFHBN	27	ML07-7758	213			137			221			213	313			115	no	no	
USFHBN	28	VA04W-90	199			164			nd			nd	283	313		104	no	no	
USFHBN	29	VA05W-534	199			164			217			203	283			104	no	no	
USFHBN	30	VA06-575	199			166			217	221		203	213	283		115	no	no	
USFHBN	31	VA06W-587	199			162	164		217			203	283	313		104	no	no	
USFHBN	32	VA07W-568	221			135			221			203	313			115	yes	no	
USFHBN	33	VA07W-607	199			162			217			203	293			104	no	no	
USFHBN	34	VA05W-640	199	213	215	133	162		217	221	225	203	213	285	293	306	115	no	no
USFHBN	35	LA01141D-98-6-2	199			162			217			203	293			104	no	no	
USFHBN	36	LA03187C-2	199			162			217			203	313			104	no	no	
USFHBN	37	LA01164D-43-7-B	217			168			221			213	322			115	no	yes	
USFHBN	38	ARGE97-1048-6	199			162			217			203	313			104	no	no	
USFHBN	39	GA991209-6E33	199			162			217			203	313			104	no	no	
USFHBN	40	GA031454-DH38-7	199			164			217			203	283			104	no	no	
USFHBN	41	GA031454-DH38-8	199			164			217			203	283			104	no	no	
USFHBN	42	GA991109-1-G1	217			137			221			213	313			115	no	no	
USFHBN	43	GA991109-1-G2	217			137			221			213	313			115	no	no	
USFHBN	44	ARS03-5358	199			164			217			203	313			104	no	no	
USFHBN	45	ARS03-3806	201			135			217			203	281			104	no	no	
USFHBN	46	ARS03-4736	201			133			217			203	315			104	no	no	
USFHBN	47	ARS04-1249	201	213		133	162		217	221		203	213	283		115	no	no	
USFHBN	48	ARS05-0443	199			164			217			203	293			104	no	no	
USFHBN	49	ARS05-0242	199			164			217			203	313			104	no	no	
USFHBN	50	ARS05-1044	201			135			217			203	318			104	no	no	
USFHBN	51	ARS05-1234	201	221		137	168		221			203	215	318		115	no	no	
USFHBN	52	NC05-23015	221			135			221			203	283			115	yes?	no	
USFHBN	53	NC05-20671	199	221		135	162		221			203	293			115	het	no	
USFHBN	54	NC05-21937	201			133			217			203	313			104	no	no	
USFHBN	55	NC06-20288	201			133			217			203	293			104	no	no	
USFHBN	56	NC07-23170	221			135			221			203	285			115	yes?	no	
USFHBN	57	NC07-22927	217	221		135	176		221			203	213	283	315	324	115	het	?

FHB QTLs

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Nursery	Entry	Sample Name	wmc	gwm	gwm	gwm	gwm	gwm	gwm	gwm	gwm	barc	barc	barc	Fhb Ernie
			657	495	495	165	165	165	165	165	163	163	163	4B	
USFHBN	1	Ernie	nd	156		192	252					159	171		no
USFHBN	2	Coker9835	nd	175		190	194	250				165			no
USFHBN	3	Bess	nd	156	175	190	252	255				159	165		no
USFHBN	4	Jamestown	nd	175		192	194	255				156			no
USFHBN	5	AR97002-2-1	nd	156		190	194	252				159			no
USFHBN	6	AR99039-5-2	nd	175		192	194	255				156			no
USFHBN	7	AR99263-7-1	nd	156	175	192	194	252				165	177		no
USFHBN	8	VA05W-510	nd	175		192	194	255				156			no
USFHBN	9	B030543	nd	166		192	194	261				156			no
USFHBN	10	LA01164D-94-2	nd	160		190	194	255				168			no
USFHBN	11	LA01162D-131-8	nd	160		190	194	252				168			no
USFHBN	12	LA01162D-136-8	nd	160		190	194	252				168			no
USFHBN	13	GA031454-DH7	nd	175		190	194	250				165			no
USFHBN	14	GA031307-DH14	nd	175		190	254	255				156	159	165	no
USFHBN	15	NC05-21090	nd	175		192	194	250				165			no
USFHBN	16	AR99254-7-1	nd	166		192	194	261				168			no
USFHBN	17	AR99054-4-1	nd	175		190	194	255				159			no
USFHBN	18	AR99071-7-2	nd	156	175	190	194	255				156	159		no
USFHBN	19	MD02W81-08-6	nd	156		190	198	252				159			no
USFHBN	20	MD01W255-08-1	nd	175		190	200	250				165			no
USFHBN	21	M05-1531	nd	164	175	192	194	244	255			159			no
USFHBN	22	B0390207	nd	175		192	255					159			no
USFHBN	23	03M1599-031	nd	164		190	194	244				156			no
USFHBN	24	03M1599-0007	nd	164		190	194	244				165			no
USFHBN	25	MH06-2370	nd	175		192	194	255				159			no
USFHBN	26	ML07-7571	nd	156		190	200	252				156			no
USFHBN	27	ML07-7758	nd	175		192	253	255				165			no
USFHBN	28	VA04W-90	nd	175		190	194	250	255			156	159		no
USFHBN	29	VA05W-534	nd	164		192	194	244				159			no
USFHBN	30	VA06-575	nd	175		192	194	255				156			no
USFHBN	31	VA06W-587	nd	175		190	194	255				156	159		no
USFHBN	32	VA07W-568	nd	175		190	200	255				171			no
USFHBN	33	VA07W-607	nd	156	175	192	255					156	171		no
USFHBN	34	VA05W-640	nd	175		192	194	250				156	159	165	no
USFHBN	35	LA01141D-98-6-2	nd	175		190	194	255				156			no
USFHBN	36	LA03187C-2	nd	175		190	194	250				165			no
USFHBN	37	LA01164D-43-7-B	nd	175		190	194	253				159			no
USFHBN	38	ARGE97-1048-6	nd	166		192	194	261				168			no
USFHBN	39	GA991209-6E33	nd	166		192	194	261				168			no
USFHBN	40	GA031454-DH38-7	nd	175		190	194	250				165			no
USFHBN	41	GA031454-DH38-8	nd	175		190	194	250				165			no
USFHBN	42	GA991109-1-G1	nd	175		192	255					162			no
USFHBN	43	GA991109-1-G2	nd	175		192	255					162			no
USFHBN	44	ARS03-5358	nd	166		190	198	261				159			no
USFHBN	45	ARS03-3806	nd	156		190	192	252				165			no
USFHBN	46	ARS03-4736	nd	156		190	192	252				165			no
USFHBN	47	ARS04-1249	nd	156		190	194	252				159			no
USFHBN	48	ARS05-0443	nd	175		190	198	253				159			no
USFHBN	49	ARS05-0242	nd	166		190	194	261				159			no
USFHBN	50	ARS05-1044	nd	156		190	194	252				165			no
USFHBN	51	ARS05-1234	nd	156		192	252					159			no
USFHBN	52	NC05-23015	nd	175		192	194	250	255			165			no
USFHBN	53	NC05-20671	nd	175		192	194	250	255			156	165		no
USFHBN	54	NC05-21937	nd	175		192	194	255				165			no
USFHBN	55	NC06-20288	nd	175		192	194	250				165			no
USFHBN	56	NC07-23170	nd	175		192	194	250				165			no
USFHBN	57	NC07-22927	nd	175		192	194	255				159			no

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Nursery	Entry	Sample Name	gwm 319	gwm 319	gwm 319	gwm 47	gwm 47	gwm 47	gwm 47	gwm 47	gwm 47	Fhb Ernie 2B
USFHBN	1	Ernie	176			133	137	146				?
USFHBN	2	Coker9835	167			133	137	146				yes
USFHBN	3	Bess	176			164						no
USFHBN	4	Jamestown	167	174		133	137	146	164			het
USFHBN	5	AR97002-2-1	167			137	142	144	146	170	182	yes
USFHBN	6	AR99039-5-2	174			146	164					no
USFHBN	7	AR99263-7-1	176			164						no
USFHBN	8	VA05W-510	167			133	137	146				yes
USFHBN	9	B030543	167			137	142	144	146			yes
USFHBN	10	LA01164D-94-2	167			137	142	144	146	182		yes
USFHBN	11	LA01162D-131-8	180			nd						no
USFHBN	12	LA01162D-136-8	167			137	142	144	146	182		yes
USFHBN	13	GA031454-DH7	180			146	164					no
USFHBN	14	GA031307-DH14	167	174	176	133	137	146	162	170		yes
USFHBN	15	NC05-21090	167			133	137	146				yes
USFHBN	16	AR99254-7-1	167			142	146	182				no
USFHBN	17	AR99054-4-1	167			142	146	182				?
USFHBN	18	AR99071-7-2	176			146						no
USFHBN	19	MD02W81-08-6	167			133	137	146				yes
USFHBN	20	MD01W255-08-1	176			142	164					no
USFHBN	21	M05-1531	176			164						no
USFHBN	22	B0390207	176			146	164					no
USFHBN	23	03M1599-031	180			164						no
USFHBN	24	03M1599-0007	176			146	164					no
USFHBN	25	MH06-2370	180			146	164					no
USFHBN	26	ML07-7571	176	180		146	164					no
USFHBN	27	ML07-7758	176			146						no
USFHBN	28	VA04W-90	174	180		164						no
USFHBN	29	VA05W-534	176			170						no
USFHBN	30	VA06-575	167			133	137	146				yes
USFHBN	31	VA06W-587	174			164						no
USFHBN	32	VA07W-568	176			164						no
USFHBN	33	VA07W-607	167	174		133	137	146	164			yes
USFHBN	34	VA05W-640	167			133	137	146	170			yes
USFHBN	35	LA01141D-98-6-2	176			162						no
USFHBN	36	LA03187C-2	174			177						no
USFHBN	37	LA01164D-43-7-B	176			160						no
USFHBN	38	ARGE97-1048-6	174			137						?
USFHBN	39	GA991209-6E33	174			144	151	164	182			no
USFHBN	40	GA031454-DH38-7	176			137	142	146	182			?
USFHBN	41	GA031454-DH38-8	176			137	142	146	182			?
USFHBN	42	GA991109-1-G1	174			nd						no
USFHBN	43	GA991109-1-G2	176			177						no
USFHBN	44	ARS03-5358	167			133	137	146				yes
USFHBN	45	ARS03-3806	176			146	182					no
USFHBN	46	ARS03-4736	176			172						no
USFHBN	47	ARS04-1249	176			164						no
USFHBN	48	ARS05-0443	176			164						no
USFHBN	49	ARS05-0242	167			133	137	146				yes
USFHBN	50	ARS05-1044	176			164						no
USFHBN	51	ARS05-1234	176			164						no
USFHBN	52	NC05-23015	167			133	137	146				no
USFHBN	53	NC05-20671	167			133	137	146	182			yes
USFHBN	54	NC05-21937	167			133	137	146				yes
USFHBN	55	NC06-20288	167			133	137	146				yes
USFHBN	56	NC07-23170	167			133	137	146				yes
USFHBN	57	NC07-22927	167			133	137	146				yes

Leaf, Stripe & Stem Rusts

2009

Nursery	Entry	Sample Name	wmc	wmc	wmc	Sr36	barc	barc	Lr24/	ventriup	Lr37/Yr17/		Lr34		Lr34/Yr18/	
			477	477	477		71	71	Sr24		Sr28	cslv34	cslv34	Lr34	Lr34	Pm38
USFHBN	1	Ernie	187			yes	112		no		no	235		515		no
USFHBN	2	Coker9835	187			yes	105	112	no		no	235		515		no
USFHBN	3	Bess	169			no	105	112	no		no	235		515		no
USFHBN	4	Jamestown	165			no	93		no		no	235		515		no
USFHBN	5	AR97002-2-1	187			yes	112		no		no	235		515		no
USFHBN	6	AR99039-5-2	169			no	112		no		no	235		515		no
USFHBN	7	AR99263-7-1	162			no	105		no		no	235		515		no
USFHBN	8	VA05W-510	187			yes	105		no		no	235		515		no
USFHBN	9	B030543	187			yes	105		no		no	235		515		no
USFHBN	10	LA01164D-94-2	187			yes	116		no		no	235		515		no
USFHBN	11	LA01162D-131-8	162			no	112		no	256	yes	235		515		no
USFHBN	12	LA01162D-136-8	187			yes	116		no	256	yes	235		515		no
USFHBN	13	GA031454-DH7	162			no	105		no		no	235		515		no
USFHBN	14	GA031307-DH14	165	169		no	105	112	no		no	235		515		no
USFHBN	15	NC05-21090	187			yes	105		no		no	235		515		no
USFHBN	16	AR99254-7-1	187			yes	105		no		no	235		515		no
USFHBN	17	AR99054-4-1	167			no	105		no		no	235		515		no
USFHBN	18	AR99071-7-2	162	169		no	87	105	yes		no	235		515		no
USFHBN	19	MD02W81-08-6	187			yes	105		no		no	235		515		no
USFHBN	20	MD01W255-08-1	167			no	105		no		no	235		515		no
USFHBN	21	M05-1531	165			no	105		no		no	235		515		no
USFHBN	22	B0390207	169			no	105		no		no	235		515		no
USFHBN	23	03M1599-031	162			no	105		no		no	235		515		no
USFHBN	24	03M1599-0007	162			no	105		no		no	235		515		no
USFHBN	25	MH06-2370	169			no	105		no		no	235		515		no
USFHBN	26	ML07-7571	162	167		no	105		no		no	235		515		no
USFHBN	27	ML07-7758	169			no	105		no		no	235		515		no
USFHBN	28	VA04W-90	165			no	105	112	no		no	235		515		no
USFHBN	29	VA05W-534	165			no	105		no		no	235		515		no
USFHBN	30	VA06-575	187			yes	105		no		no	235		515		no
USFHBN	31	VA06W-587	165			no	105	112	no		no	235		515		no
USFHBN	32	VA07W-568	167			no	112		no		no	235		515		no
USFHBN	33	VA07W-607	165			no	87	105	yes		no	235		515		no
USFHBN	34	VA05W-640	162	187		het	105	112	no		no	235		515		no
USFHBN	35	LA01141D-98-6-2	167			no	112		no	256	yes	155		510		yes
USFHBN	36	LA03187C-2	167			no	105		no	256	yes	235		515		no
USFHBN	37	LA01164D-43-7-B	169			no	116		no		no	235		515		no
USFHBN	38	ARGE97-1048-6	165			no	112		no		no	235		515		no
USFHBN	39	GA991209-6E33	165			no	112		no		no	235		515		no
USFHBN	40	GA031454-DH38-7	167			no	105		no		no	235		515		no
USFHBN	41	GA031454-DH38-8	167			no	105		no		no	235		515		no
USFHBN	42	GA991109-1-G1	165			no	105		no		no	235		515		no
USFHBN	43	GA991109-1-G2	167			no	105		no		no	235		515		no
USFHBN	44	ARS03-5358	187			yes	112		no		no	235		515		no
USFHBN	45	ARS03-3806	169			no	105		no		no	235		515		no
USFHBN	46	ARS03-4736	169			no	105		no		no	235		515		no
USFHBN	47	ARS04-1249	167			no	93		no		no	235		515		no
USFHBN	48	ARS05-0443	169			no	105		no	256	yes	235		515		no
USFHBN	49	ARS05-0242	187			yes	93		no		no	235		515		no
USFHBN	50	ARS05-1044	169			no	105		no		no	155	235	510	515	het
USFHBN	51	ARS05-1234	169			no	112		no	256	yes	235		515		no
USFHBN	52	NC05-23015	187			yes	105		no	256	yes	235		515		no
USFHBN	53	NC05-20671	187			yes	87	105	yes		no	235		515		no
USFHBN	54	NC05-21937	187			yes	105		no		no	235		515		no
USFHBN	55	NC06-20288	187			yes	105		no	256	yes	235		515		no
USFHBN	56	NC07-23170	187			yes	105		no		no	235		515		no
USFHBN	57	NC07-22927	187			yes	105		no		no	155	235	510	515	het

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

2009

Nursery	Entry	Sample Name	scm9	1RS	cf132	H13	cfa2153	cfa2153	H9	Bdv3	Bdv3	Bdv2/3
USFHBN	1	Ernie		non-1RS	115	no	193		no	185		no
USFHBN	2	Coker9835		non-1RS	115	no	195		no	185		no
USFHBN	3	Bess		non-1RS	115	no	203	220	no	185		no
USFHBN	4	Jamestown		non-1RS	115	no	195		no	185		no
USFHBN	5	AR97002-2-1		non-1RS	115	no	195		no	185		no
USFHBN	6	AR99039-5-2		non-1RS	115	no	203		no	185		no
USFHBN	7	AR99263-7-1		non-1RS	115	no	220		no	185		no
USFHBN	8	VA05W-510		non-1RS	115	no	195		no	185		no
USFHBN	9	B030543		non-1RS	115	no	203		no	185		no
USFHBN	10	LA01164D-94-2		non-1RS	115	no	203		no	185	187	no
USFHBN	11	LA01162D-131-8		non-1RS	115	no	203		no	185		no
USFHBN	12	LA01162D-136-8		non-1RS	115	no	203		no	185	187	no
USFHBN	13	GA031454-DH7		non-1RS	115	no	199		no	185		no
USFHBN	14	GA031307-DH14	208	1RS:1BL	115	no	195	201	no	185	187	no
USFHBN	15	NC05-21090		non-1RS	115	no	195	207	no	185		no
USFHBN	16	AR99254-7-1		non-1RS	115	no	203		no	185		no
USFHBN	17	AR99054-4-1		non-1RS	115	no	195	203	no	185	187	no
USFHBN	18	AR99071-7-2		non-1RS	115	no	195	205	no	185		no
USFHBN	19	MD02W81-08-6	208	1RS:1BL	115	no	195		no	185		no
USFHBN	20	MD01W255-08-1	224	1RS:1AL	115	no	nd		no	185		no
USFHBN	21	M05-1531	208	1RS:1BL	115	no	169		no	185		no
USFHBN	22	B0390207		non-1RS	115	no	205		no	185		no
USFHBN	23	03M1599-031		non-1RS	115	no	182		no	185		no
USFHBN	24	03M1599-0007		non-1RS	115	no	169	203	no	185		no
USFHBN	25	MH06-2370	208	1RS:1BL	115	no	213		no	185		no
USFHBN	26	ML07-7571		non-1RS	115	no	199		no	185		no
USFHBN	27	ML07-7758	208	1RS:1BL	115	no	193		no	185		no
USFHBN	28	VA04W-90		non-1RS	115	no	195	213	no	185		no
USFHBN	29	VA05W-534	224	1RS:1AL	115	no	203		no	185		no
USFHBN	30	VA06-575		non-1RS	115	no	195	203	no	185		no
USFHBN	31	VA06W-587		non-1RS	115	no	203		no	185		no
USFHBN	32	VA07W-568		non-1RS	115	no	nd		no	185		no
USFHBN	33	VA07W-607		non-1RS	115	no	203		no	185		no
USFHBN	34	VA05W-640		non-1RS	115	no	203	213	no	185		no
USFHBN	35	LA01141D-98-6-2		non-1RS	115	no	199		no	185	187	no
USFHBN	36	LA03187C-2		non-1RS	115	no	203		no	185		no
USFHBN	37	LA01164D-43-7-B	208	1RS:1BL	115	no	193		no	185		no
USFHBN	38	ARGE97-1048-6	208	1RS:1BL	115	no	203		no	185		no
USFHBN	39	GA991209-6E33	208	1RS:1BL	115	no	203		no	185		no
USFHBN	40	GA031454-DH38-7		non-1RS	115	no	203		no	185		no
USFHBN	41	GA031454-DH38-8		non-1RS	115	no	203		no	185		no
USFHBN	42	GA991109-1-G1		non-1RS	115	no	203		no	185		no
USFHBN	43	GA991109-1-G2		non-1RS	115	no	203		no	185		no
USFHBN	44	ARS03-5358		non-1RS	115	no	207		no	185		no
USFHBN	45	ARS03-3806	224	1RS:1AL	163	no	nd		no	185		no
USFHBN	46	ARS03-4736	224	1RS:1AL	115	no	195		no	185		no
USFHBN	47	ARS04-1249	224	1RS:1AL	163	no	nd		no	185		no
USFHBN	48	ARS05-0443	208	1RS:1BL	115	no	199		no	185		no
USFHBN	49	ARS05-0242		non-1RS	115	no	207		no	185		no
USFHBN	50	ARS05-1044	224	1RS:1AL	115	no	nd		no	183	185	no
USFHBN	51	ARS05-1234		non-1RS	115	no	197		no	183	188	no
USFHBN	52	NC05-23015		non-1RS	115	no	195	207	no	185		no
USFHBN	53	NC05-20671		non-1RS	115	no	195		no	185		no
USFHBN	54	NC05-21937		non-1RS	115	no	199	207	no	185		no
USFHBN	55	NC06-20288		non-1RS	115	no	222		no	185		no
USFHBN	56	NC07-23170		non-1RS	115	no	207		no	185		no
USFHBN	57	NC07-22927		non-1RS	115	no	169	207	no	185		no

Quality Traits

2009

Nursery	Entry	Sample Name	bx7oe	bx7oe	Bx7 over-expressing	umn25	umn25	umn26	umn26	Glu-D1
USFHBN	1	Ernie	403		no		293		407	2+12
USFHBN	2	Coker9835	403		no		293		407	2+12
USFHBN	3	Bess	403		no		293		407	2+12
USFHBN	4	Jamestown	403		no		293		407	2+12
USFHBN	5	AR97002-2-1	403		no		293		407	2+12
USFHBN	6	AR99039-5-2	403		no		293		407	2+12
USFHBN	7	AR99263-7-1	403		no		293		407	2+12
USFHBN	8	VA05W-510	403		no		293		407	2+12
USFHBN	9	B030543	403		no		293		407	2+12
USFHBN	10	LA01164D-94-2		448	yes		293		407	2+12
USFHBN	11	LA01162D-131-8		448	yes		293		407	2+12
USFHBN	12	LA01162D-136-8		448	yes		293		407	2+12
USFHBN	13	GA031454-DH7	403		no		293		407	2+12
USFHBN	14	GA031307-DH14	403	448	het	275	293	390	407	het
USFHBN	15	NC05-21090	403		no		293		407	2+12
USFHBN	16	AR99254-7-1	403		no	275		390		5+10
USFHBN	17	AR99054-4-1	403		no		293		407	2+12
USFHBN	18	AR99071-7-2	403		no		293		407	2+12
USFHBN	19	MD02W81-08-6	403		no		293		407	2+12
USFHBN	20	MD01W255-08-1	403		no		293		407	2+12
USFHBN	21	M05-1531	403		no	275	293	390	407	het
USFHBN	22	B0390207	403		no		293		407	2+12
USFHBN	23	03M1599-031	403		no		293		407	2+12
USFHBN	24	03M1599-0007	403		no		293		407	2+12
USFHBN	25	MH06-2370	403		no		293		407	2+12
USFHBN	26	ML07-7571	403		no		293		407	2+12
USFHBN	27	ML07-7758	403		no	275		390		5+10
USFHBN	28	VA04W-90	403		no		293		407	2+12
USFHBN	29	VA05W-534	403		no		293		407	2+12
USFHBN	30	VA06-575	403		no	275	293	390	407	het
USFHBN	31	VA06W-587	403		no		293		407	2+12
USFHBN	32	VA07W-568	403		no		293		407	2+12
USFHBN	33	VA07W-607	403		no	275	293	390	407	het
USFHBN	34	VA05W-640	403		no	275	293	390	407	het
USFHBN	35	LA01141D-98-6-2		448	yes		293		407	2+12
USFHBN	36	LA03187C-2		448	yes		293		407	2+12
USFHBN	37	LA01164D-43-7-B		448	yes		293		407	2+12
USFHBN	38	ARGE97-1048-6	403		no	275		390		5+10
USFHBN	39	GA991209-6E33	403		no	275		390		5+10
USFHBN	40	GA031454-DH38-7	403		no		293		407	2+12
USFHBN	41	GA031454-DH38-8	403		no		293		407	2+12
USFHBN	42	GA991109-1-G1	403		no	275	293	390	407	het
USFHBN	43	GA991109-1-G2	403		no		293		407	2+12
USFHBN	44	ARS03-5358	403		no	275		390		5+10
USFHBN	45	ARS03-3806	403		no		293		407	2+12
USFHBN	46	ARS03-4736	403		no		293		407	2+12
USFHBN	47	ARS04-1249	403		no	275		390		5+10
USFHBN	48	ARS05-0443	403		no	275		390		5+10
USFHBN	49	ARS05-0242	403		no		293		407	2+12
USFHBN	50	ARS05-1044	403		no		293		407	2+12
USFHBN	51	ARS05-1234	403		no		293		407	2+12
USFHBN	52	NC05-23015	403		no		293		407	2+12
USFHBN	53	NC05-20671	403		no	275	293	390	407	het
USFHBN	54	NC05-21937	403		no		293		407	2+12
USFHBN	55	NC06-20288	403		no		293		407	2+12
USFHBN	56	NC07-23170	403		no		293		407	2+12
USFHBN	57	NC07-22927	403		no	275	293	390	407	het