

# **SOUTHERN UNIFORM WINTER WHEAT SCAB NURSERY**

## **2014 NURSERY REPORT**

J. P. Murphy  
S. Petersen

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This is a progress report of cooperative investigations underway and funded by the U. S. Wheat and Barley Scab Initiative, State Agricultural Experiment Stations, private companies and the United States Department of Agriculture, Agricultural Research Service. This report contains preliminary data that have not been sufficiently confirmed to justify general release; interpretations may be modified with additional experimentation. Confirmed results will be published through established channels. The report is a tool for the use of the Cooperator and their official staff and those persons having direct interest in the development of agricultural research programs. This report is not intended for publication and should not be referred to in literature citations or quoted in publicity or advertising. Use of the data may be granted for certain purposes upon written request to the authors.

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## LOCATION NOTES

### **Highland, Illinois**

- Cooperator: Jennifer Vonderwell.
- Agripro-Syngenta Seeds Inc.

### **Fayetteville and Newport, Arkansas**

- Cooperator: Gene Milus.
- University of Arkansas

### **Urbana, Illinois**

- Cooperator: Fred Kolb.
- University of Illinois

### **Lexington, Kentucky**

- Cooperator: Dave Van Sanford.
- University of Kentucky

### **Blacksburg, Virginia**

- Cooperator: Carl A. Griffey.
- Virginia Tech

### **Kinston, North Carolina**

- Cooperators: Rene Navarro, Paul Murphy, Christina Cowger
- North Carolina State University

### **Columbia, Missouri**

- Cooperators: Anne L. McKendry and David Tague.
- University of Missouri

### **Crowley, Louisiana.**

- Cooperator: Stephen Harrison.
- Louisiana State University.

### **Griffin, Georgia**

- Cooperator: Jerry Johnson.
- University of Georgia.

### **Fundulea, Romania.**

- Cooperator: Marianna Ittu.
- National Agricultural Research Development Institute.

### **Szeged, Hungary.**

- Cooperator: Akos Mesterhazy.
- Cereal Research Institute.

### **Raleigh, North Carolina**

- Cooperator: Gina Brown-Guedira.
- USDA-ARS Eastern Regional Small Grains Genotyping Lab

### **West Lafayette, Indiana**

- Cooperator: Sue Cambron.
- USDA-ARS Crop Production and Pest Control Research Unit:

**Wooster, Ohio**

- Cooperator: Byung-Kee Baik
- USDA-ARS Soft Wheat Quality Laboratory



# Entry List and Pedigrees, 2014 Nursery

ENTRY NO	CULTIVAR/ DESIGNATION	PEDIGREE	CONTRIBUTOR	IN NURSERY SINCE
1	ERNIE	Check	CHECK(RES)	1999-00
2	COKER9835	Check	CHECK(SUS)	2000-01
3	BESS	MO11769/Madison	CHECK(RES)	2006-07
4	JAMESTOWN	Roane / Pioneer 2691	Check (RES)	2007-08
5	M10-1615	IL99-15867/M03-3002	Vonderwell	2012-13
6	AR00179-2-2	IL94-6727/Roane	Mason	2013-14
7	AR00334-5-2	AR97048(ELKHART/P88288C1-6-1-2)/AR97185(PI590277/ERNIE)	Mason	2013-14
8	AR01136-3-2	ROANE/92145E8-7-7-1-0	Mason	2013-14
9	AR04001-3	AR800-1-3-1/AR908-8-2	Mason	2013-14
10	AR04084-1-3	LA9415D-104-5-2/DIXIE 900	Mason	2013-14
11	ARGE07-1347-6-7-9	Bess//ARGE97-1060-5-5/VA-FE24-4-6	Milus	2013-14
12	ARGE07-1354-2-6-1	Bess//NC04-27617/LA841	Milus	2013-14
13	ARGE07-1355-16-6-6	Bess//NC04-27669/ARGE97-1060-5-5	Milus	2013-14
14	ARS09-228	IN9712C1-4/PI434658	Marshall	2013-14
15	ARS10-028	AR800-1-3-1/NW97S320	Marshall	2013-14
16	ARS10-038	Trego/NC98-26143	Marshall	2013-14
17	ARS10-043	McCormick/Trego	Marshall	2013-14
18	ARS10-172	NC96BGT A6//Dominador/NC98-26143	Marshall	2013-14
19	ARS10-389	IN9712C1-4//G96226/PI428516	Marshall	2013-14
20	B09-0002	B990058(8686A1-B(H18)/L880436/Coker 9511	Fogleman	2013-14
21	B09*900256	VA98W-706/K90C-292-4-1	Fogleman	2013-14
22	B08-91993	Coker9553/VA02W555	Fogleman	2013-14
23	GA04494-13ES1	AW D99*5261/96229-3A41	Johnson	2013-14
24	GA051477-13ES2	AGS 2020/Jamestown	Johnson	2013-14
25	GA051477-13ES4	AGS 2020/Jamestown	Johnson	2013-14
26	GA051207-13ES11	AGS 2000/SC996284//IN981359C1	Johnson	2013-14
27	GA061050-13ES18	AGS 2010/TRUMAN/96229-3A41	Johnson	2013-14
28	GA06586-13ES21	991371-14-4-8//AGS 2000/IN97397	Johnson	2013-14
29	GA06390-13ES24	011388-1-4-1/991109-4-1-4	Johnson	2013-14
30	GA061050-13ES17	AGS2010/TRUMAN//SS8614	Johnson	2013-14
31	KWS 013	VA96W-49 / AGS 2000 // VA98W-430	Murche	2013-14
32	KWS 026	B990081 / x Moo-3701 / M01-4377	Murche	2013-14
33	KWS 027	X00-1079 / Branson	Murche	2013-14
34	LA06149C-P7	JAMESTOWN/LA98094BUB-58-5	Harrison	2013-14
35	LA08201C-57	(JAMESTOWN/LA95135)LA07178,F1/GA991227-6A33	Harrison	2013-14
36	LANC8170-41-1	NC03-11458 / Bess // SS8641	Harrison	2013-14
37	LA07085CW-P4	LA06101,F1(LA98094BUB-58-5/AGS 2060)/VA02W-713	Harrison	2013-14
38	LANC8170-41-2	NC03-11458 / Bess // SS8641	Harrison	2013-14
39	LCS 08577-4	X00-1079/M98-2023	Obert	2013-14
40	LCS 229	M003701/BW391	Obert	2013-14
41	M09-9547	CRAWFORD/PATTON	Vonderwell	2013-14
42	M11-1027#	M04-4802//M03-3149/P 25R47	Vonderwell	2013-14
43	M11-2298	M03-3397/M03-3291	Vonderwell	2013-14
44	MD08-22-22-13-4	McCormick*3/NING7840	Costa	2013-14
45	MD26-H2-23-13-1	SS8641//McCormick*2/NING7840	Costa	2013-14
46	MD09W272-8-4-13-3	VA02W713//SS8641/25R42	Costa	2013-14
47	MDC07026-F2-19-13-4	SS8641//Ning/McCormick*2	Costa	2013-14
48	NC11-21401	VA04W-433 / SS8641	Murphy	2013-14
49	NC11-22289	NC97BGTD7 / NC-Neuse // C9511	Murphy	2013-14
50	NC11-22291	NC97BGTD7 / NC-Neuse // C9511	Murphy	2013-14
51	NC8170-45-17	NC03-11458 / Bess // SS8641	Murphy	2013-14
52	NC8170-86-2	NC03-11458 / Bess // SS8641	Murphy	2013-14
53	NC9305-7	Bess / NC-Yadkin	Murphy	2013-14
54	NC09-21916	B990981 / NC96BGT A6 // McCormick	Murphy	2013-14
55	VA10W-96	F/G 95195 / Jamestown	Griffey	2013-14
56	VA11W-108	PIONEER 25R47 / JAMESTOWN [VA02W-370= ROANE (VA93-54-429)/ PION2691]	Griffey	2013-14
57	VA11W-230	SS 520 / G/F 951208-2E35 // JAMESTOWN	Griffey	2013-14
58	VA11W-278	NC00-15389 /GF951079-2E31 // USG 3555	Griffey	2013-14
59	VA12W-102	VA03W-436 / IL99-15867	Griffey	2013-14
60	VA12W-150	IL99-15867 (IL93-2879/P881705A-1-X-60) / JAMESTOWN (VA02W-370)	Griffey	2013-14
61	VA12FHB-37	VA04W-433 [NING 7840/PION2684 //96-54-244 (CK9803/FREEDOM)] / SS8404	Griffey	2013-14
62	VA12FHB-85	IL96-24851-1 / VA03W-434 [ROANE/ CK9835// 96-54-270) // SS8404	Griffey	2013-14

## FHB Incidence (1-100)

CULTIVAR/ DESIGNATION	K'STON	B' Rouge	B'BURG	LEX'TON	GRIFFIN	COL'BIA	H'LAND	MEAN	RANK
	NC	LA	VA	KY	GA	MO	IL	ALL LOC.	
1 ERNIE	29	35	40	83	20	80	90	54	15
2 COKER9835	100	85	95	95	70	93	75	88	62
3 BESS	53	25	18	65	30	80	65	48	7
4 JAMESTOWN	40	30	23	80	20	88	85	52	12
5 M10-1615	66	15	33	53	25	98	65	51	9
6 AR00179-2-2	83	25	45	75	20	85	85	60	27
7 AR00334-5-2	69	55	43	70	50	93	80	66	44
8 AR01136-3-2	76	45	28	70	38	93	85	62	33
9 AR04001-3	51	30	25	78	35	90	70	54	15
10 AR04084-1-3	80	28	40	65	40	88	75	59	26
11 ARGE07-1347-6-7-9	30	10	18	55	15	100	70	43	2
12 ARGE07-1354-2-6-1	62	10	30	70	35	98	80	55	19
13 ARGE07-1355-16-6-6	56	20	38	60	33	80	90	54	15
14 ARS09-228	71	35	28	80	47	93	85	63	37
15 ARS10-028	100	50	45	83	53	98	90	74	57
16 ARS10-038	70	75	65	78	45	70	75	68	48
17 ARS10-043	97	85	70	75	62	95	85	81	61
18 ARS10-172	99	80	73	73	65	100	60	78	59
19 ARS10-389	45	10	23	25	30	85	65	40	1
20 B09-0002	48	10	28	63	20	93	65	46	6
21 B09*900256	70	65	40	78	55	75	70	65	42
22 B08-91993	39	65	33	73	25	85	90	58	24
23 GA04494-13ES1	83	30	45	70	35	90	75	61	29
24 GA051477-13ES2	74	40	40	68	33	95	75	61	29
25 GA051477-13ES4	44	15	30	50	26	93	60	45	5
26 GA051207-13ES11	69	40	53	70	45	90	85	64	39
27 GA061050-13ES18	83	25	43	78	38	88	80	62	33
28 GA06586-13ES21	92	65	68	85	63	75	85	76	58
29 GA06390-13ES24	79	30	40	63	36	100	85	62	33
30 GA061050-13ES17	99	25	38	75	30	85	75	61	29
31 KWS 013	78	55	30	85	28	98	80	65	42
32 KWS 026	67	55	40	38	20	93	75	55	19
33 KWS 027	80	55	33	93	50	88	80	68	48
34 LA06149C-P7	91	55	45	98	48	78	80	71	53
35 LA08201C-57	67	20	30	75	28	80	80	54	15
36 LANC8170-41-1	81	50	30	85	40	80	80	64	39
37 LA07085CW-P4	68	30	35	58	25	95	85	56	22
38 LANC8170-41-2	57	25	28	80	27	83	85	55	19
39 LCS 08577-4	94	75	43	70	53	100	75	73	55
40 LCS 229	87	55	48	60	48	100	80	68	48
41 M09-9547	70	45	35	58	35	98	80	60	27
42 M11-1027#	87	45	45	68	48	83	75	64	39
43 M11-2298	56	10	45	65	25	75	80	51	9
44 MD08-22-22-13-4	69	25	43	50	33	93	80	56	22
45 MD26-H2-23-13-1	73	50	20	95	55	80	90	66	44
46 MD09W272-8-4-13-3	57	25	45	85	20	85	90	58	24
47 MDC07026-F2-19-13-4	91	35	40	78	55	93	85	68	48
48 NC11-21401	47	25	38	68	35	75	75	52	12
49 NC11-22289	55	15	28	53	28	68	55	43	2
50 NC11-22291	22	13	25	75	18	70	85	44	4
51 NC8170-45-17	77	10	38	55	23	65	85	50	8
52 NC8170-86-2	57	20	40	85	15	73	80	53	14
53 NC9305-7	69	20	23	60	20	93	75	51	9
54 NC09-21916	73	40	30	83	25	95	85	61	29
55 VA10W-96	49	70	23	65	55	95	85	63	37
56 VA11W-108	93	55	63	73	65	75	90	73	55
57 VA11W-230	91	30	33	95	30	65	90	62	33
58 VA11W-278	59	60	45	80	43	93	80	66	44
59 VA12W-102	93	55	45	70	50	88	85	69	52
60 VA12W-150	74	50	62	70	45	73	85	66	44
61 VA12FHB-37	89	55	75	88	60	98	85	78	59
62 VA12FHB-85	87	50	65	70	50	95	80	71	53
Mean	71	39	40	71	38	87	79	61	
LSD (0.05)	43	26	.	27	.	.	.	24	
CV%	30.7	16.8	.	19.0	.	.	.	20.1	





**Head Severity Expressed as Area Under the Disease Progress Curve (AUDPC) 20 Days Post Inoculation Fundulea, Romania.**

Cultivar/ Designation	<i>F. gram.</i>	<i>F. culm.</i>	Mean	Rank
	<i>Isol 96</i> 15-ADON	<i>Isol 46</i> 3-ADON		
1 ERNIE	213	169	245	37
2 COKER9835	348	443	395	53
3 BESS	184	250	217	35
4 JAMESTOWN	144	149	147	11
5 M10-1615	101	140	121	5
6 AR00179-2-2	144	173	159	16
7 AR00334-5-2	176	235	205	32
8 AR01136-3-2	153	163	158	15
9 AR04001-3	239	453	346	49
# AR04084-1-3	185	242	214	34
# ARGE07-1347-6-7-9	123	192	158	14
# ARGE07-1354-2-6-1	156	211	184	22
# ARGE07-1355-16-6-6	255	267	261	39
# ARS09-228	206	198	202	29
# ARS10-028	118	119	118	4
# ARS10-038	555	725	640	56
# ARS10-043	177	242	209	33
# ARS10-172	261	485	373	50
# ARS10-389	126	240	183	21
# B09-0002	141	196	169	19
# B09*900256	155	173	164	18
# B08-91993	212	440	326	45
# GA04494-13ES1	354	394	374	51
# GA051477-13ES2	175	146	160	17
# GA051477-13ES4	184	216	200	28
# GA051207-13ES11	214	577	396	54
# GA061050-13ES18	234	313	273	40
# GA06586-13ES21	372	397	384	52
# GA06390-13ES24	130	252	191	27
# GA061050-13ES17	168	212	190	25
# KWS 013	.	.	.	.
# KWS 026	.	.	.	.
# KWS 027	.	.	.	.
# LA06149C-P7	204	376	290	43
# LA08201C-57	.	.	.	.
# LANC8170-41-1	286	542	414	55
# LA07085CW-P4	100	191	145	10
# LANC8170-41-2	293	367	330	48
# LCS 08577-4	.	.	.	.
# LCS 229	.	.	.	.
# M09-9547	194	308	251	38
# M11-1027#	153	217	185	23
# M11-2298	135	202	169	20
# MD08-22-22-13-4	111	96	103	3
# MD26-H2-23-13-1	124	128	126	6
# MD09W272-8-4-13-3	95	106	100	2
# MDC07026-F2-19-13-4	128	184	156	13
# NC11-21401	88	90	89	1
# NC11-22289	108	167	137	9
# NC11-22291	84	176	130	8
# NC8170-45-17	86	214	150	12
# NC8170-86-2	128	277	202	30
# NC9305-7	240	377	309	44
# NC09-21916	97	557	327	47
# VA10W-96	148	234	191	26
# VA11W-108	114	261	187	24
# VA11W-230	194	275	234	36
# VA11W-278	235	418	326	46
# VA12W-102	175	232	204	31
# VA12W-150	186	362	274	41
# VA12FHB-37	129	129	129	7
# VA12FHB-85	200	367	284	42
Mean	183	273	229	

### FHB Index (1-100)

CULTIVAR/ DESIGNATION	B'Rouge	B'BURG	LEX'TON	K'STON	COL'BIA	GRIFFIN	H'LAND	MEAN
	LA	VA	KY	NC	MO	GA	IL	ALL LOC.
	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK
1 ERNIE	7 20	5 18	32 44	3 2	13 19	3 7	36 10	14 10
2 COKER9835	43 61	82 62	58 62	78 61	35 57	40 62	56 37	56 62
3 BESS	6 17	4 12	22 20	19 33	12 15	8 32	23 2	13 8
4 JAMESTOWN	5 12	3 8	26 30	5 4	16 27	3 7	42 18	14 10
5 M10-1615	5 12	5 18	11 5	10 11	17 29	3 7	33 8	12 4
6 AR00179-2-2	7 20	7 28	25 28	16 27	15 23	6 20	55 36	19 21
7 AR00334-5-2	22 47	6 25	15 8	11 14	21 38	18 49	53 32	21 27
8 AR01136-3-2	14 37	3 8	23 23	25 38	31 52	13 45	63 52	24 37
9 AR04001-3	7 20	2 1	24 25	11 14	17 29	7 25	46 21	16 17
10 AR04084-1-3	8 26	7 28	27 31	12 20	14 21	10 38	60 42	20 25
11 ARGE07-1347-6-7-9	2 3	2 1	10 3	7 7	33 55	2 4	32 7	12 4
12 ARGE07-1354-2-6-1	2 3	4 12	22 20	11 14	37 58	8 32	48 23	19 21
13 ARGE07-1355-16-6-4	4 10	9 39	18 12	10 11	11 10	7 25	72 59	19 21
14 ARS09-228	9 29	2 1	37 51	25 38	28 49	3 7	59 41	23 34
15 ARS10-028	13 35	10 42	33 46	18 30	31 52	10 38	54 35	24 37
16 ARS10-038	42 60	48 61	45 59	58 59	10 8	25 58	57 40	41 60
17 ARS10-043	43 61	13 48	24 25	78 61	19 36	8 32	52 30	34 57
18 ARS10-172	36 58	42 60	31 41	59 60	64 62	33 61	41 17	44 61
19 ARS10-389	2 3	2 1	4 1	5 4	12 15	7 25	29 5	9 2
20 B09-0002	1 1	3 8	18 12	5 4	22 42	1 1	39 16	13 8
21 B09*900256	29 56	10 42	36 49	48 54	11 10	19 53	53 32	30 53
22 B08-91993	20 44	9 39	34 47	13 21	24 44	5 17	63 52	24 37
23 GA04494-13ES1	8 26	13 48	47 60	55 57	30 51	11 40	56 37	31 54
24 GA051477-13ES2	11 33	12 47	29 35	47 53	26 47	6 20	48 23	26 44
25 GA051477-13ES4	3 9	5 18	20 16	18 30	28 49	4 14	27 4	15 15
26 GA051207-13ES11	12 34	23 56	22 20	19 33	21 38	26 59	68 55	27 47
27 GA061050-13ES18	5 12	10 42	36 49	26 43	18 34	6 20	60 42	23 34
28 GA06586-13ES21	30 57	30 59	49 61	54 56	9 5	22 55	60 42	36 58
29 GA06390-13ES24	9 29	8 34	27 31	26 43	41 60	7 25	72 59	27 47
30 GA061050-13ES17	5 12	8 34	39 54	44 51	17 29	8 32	60 42	26 44
31 KWS 013	23 50	3 8	40 55	34 49	40 59	6 20	53 32	28 49
32 KWS 026	20 44	7 28	8 2	13 21	18 34	5 17	26 3	14 10
33 KWS 027	20 44	6 25	32 44	38 50	15 23	15 47	56 37	26 44
34 LA06149C-P7	19 43	8 34	42 57	24 37	10 8	7 25	60 42	24 37
35 LA08201C-57	7 20	11 46	30 39	13 21	11 10	8 32	48 23	18 20
36 LANC8170-41-1	18 40	18 53	37 51	27 46	12 15	18 49	36 10	24 37
37 LA07085CW-P4	8 26	7 28	23 23	13 21	17 29	4 14	68 55	20 25
38 LANC8170-41-2	5 12	2 1	30 39	11 14	16 27	2 4	47 22	16 17
39 LCS 08577-4	38 59	17 51	31 41	49 55	32 54	24 57	60 42	36 58
40 LCS 229	27 53	13 48	18 12	44 51	41 60	18 49	60 42	31 54
41 M09-9547	14 37	7 28	20 16	17 28	33 55	7 25	50 27	21 27
42 M11-1027#	13 35	9 39	24 25	30 47	13 19	12 43	45 19	21 27
43 M11-2298	1 1	8 34	19 15	10 11	11 10	1 1	36 10	12 4
44 MD08-22-22-13-4	6 17	8 34	10 3	26 43	17 29	5 17	60 42	19 21
45 MD26-H2-23-13-1	18 40	2 1	31 41	9 10	12 15	11 40	72 59	22 30
46 MD09W272-8-4-13-3	7 20	10 42	29 35	7 7	14 21	3 7	36 10	15 15
47 MDC07026-F2-19-13	10 31	4 12	25 28	25 38	19 36	14 46	60 42	22 30
48 NC11-21401	7 20	4 12	16 9	3 2	11 10	6 20	38 14	12 4
49 NC11-22289	2 3	2 1	12 6	8 9	8 3	4 14	20 1	8 1
50 NC11-22291	2 3	5 18	17 11	2 1	9 5	3 7	38 14	11 3
51 NC8170-45-17	2 3	5 18	14 7	18 30	6 1	1 1	51 28	14 10
52 NC8170-86-2	4 10	6 25	41 56	11 14	9 5	2 4	45 19	17 19
53 NC9305-7	6 17	5 18	21 18	13 21	21 38	3 7	30 6	14 10
54 NC09-21916	14 37	4 12	28 34	25 38	24 44	7 25	68 55	24 37
55 VA10W-96	28 55	5 18	21 18	13 21	24 44	12 43	64 54	24 37
56 VA11W-108	25 52	25 57	34 47	25 38	15 23	29 60	72 59	32 56
57 VA11W-230	10 31	4 12	37 51	20 35	7 2	8 32	68 55	22 30
58 VA11W-278	27 53	22 55	44 58	11 14	21 38	21 54	48 23	28 49
59 VA12W-102	22 47	7 28	27 31	56 58	15 23	18 49	60 42	29 52
60 VA12W-150	23 50	29 58	29 35	17 28	8 3	23 56	34 9	23 34
61 VA12FHB-37	22 47	18 53	29 35	33 48	27 48	15 47	51 28	28 49
62 VA12FHB-85	18 40	17 51	16 9	23 36	22 42	11 40	52 30	22 30

Mean	14	11	27	24	20	11	50	22
LSD (0.05)	8	.	19	29	.	.	.	19
CV%	34	.	36.0	59.7	.	.	.	43.4

## Percent Fusarium Damaged Kernels

Cultivar/ Designation	F'VILLE		N'PORT		K'STON		B'Rouge		LEX'TON		B'BURGFUN'LEA		MEAN			
	AR		AR		NC		LA		KY		VA		ROM			
	RANK		RANK		RANK		RANK		RANK		RANK		RANK			
1 ERNIE	14	5	35	12	4	14	13	32	24	27	15	31	48	36	22	14
2 COKER9835	45	38	91	61	24	60	48	57	32	50	36	62	84	56	51	61
3 BESS	12	3	28	4	8	33	8	15	14	3	22	50	31	16	18	6
4 JAMESTOWN	27	15	33	9	3	9	5	1	26	39	7	5	23	8	18	6
5 M10-1615	29	19	30	6	8	33	43	54	18	8	6	3	17	2	22	14
6 AR00179-2-2	8	2	33	9	4	14	23	40	19	11	8	6	19	3	16	4
7 AR00334-5-2	25	13	37	13	6	23	30	44	21	18	5	1	27	11	22	14
8 AR01136-3-2	58	49	54	30	8	33	20	37	25	35	20	43	22	6	29	30
9 AR04001-3	30	20	45	20	4	14	5	1	19	11	11	13	65	54	25	21
10 AR04084-1-3	24	11	60	37	6	23	10	23	25	35	11	13	55	44	27	24
11 ARGE07-1347-6-7-9	24	11	43	18	2	5	5	1	15	5	28	58	14	1	19	9
12 ARGE07-1354-2-6-1	15	7	48	24	2	5	5	1	21	18	24	52	29	15	21	13
13 ARGE07-1355-16-6-6	15	7	29	5	6	23	5	1	21	18	8	6	42	29	18	6
14 ARS09-228	33	27	77	51	3	9	15	34	36	54	12	18	51	41	32	39
15 ARS10-028	28	16	85	59	13	52	25	42	26	39	15	31	19	3	30	34
16 ARS10-038	90	62	97	62	31	62	60	62	40	61	27	56	43	31	55	62
17 ARS10-043	60	51	68	46	21	58	55	59	24	27	14	24	31	16	39	51
18 ARS10-172	55	48	82	55	24	60	30	44	38	59	23	51	50	40	43	56
19 ARS10-389	19	10	33	9	3	9	5	1	18	8	13	22	48	36	20	11
20 B09-0002	6	1	23	1	1	1	5	1	20	15	9	9	31	16	14	2
21 B09*900256	75	60	83	58	18	56	43	54	31	49	29	59	43	31	46	58
22 B08-91993	48	41	50	26	5	18	40	53	23	24	5	1	55	44	32	39
23 GA04494-13ES1	68	55	88	60	11	45	30	44	40	61	24	52	75	55	48	59
24 GA051477-13ES2	33	27	58	33	10	42	8	15	29	45	20	43	51	41	30	34
25 GA051477-13ES4	40	37	52	27	6	23	5	1	36	54	8	6	51	41	28	27
26 GA051207-13ES11	50	43	60	37	9	39	10	23	23	24	15	31	55	44	32	39
27 GA061050-13ES18	53	46	68	46	15	54	10	23	37	56	18	37	58	48	37	49
28 GA06586-13ES21	70	57	77	51	23	59	55	59	38	59	13	22	59	49	48	59
29 GA06390-13ES24	68	55	82	55	14	53	20	37	29	45	33	61	56	47	43	56
30 GA061050-13ES17	30	20	82	55	11	45	10	23	35	53	19	40	40	25	32	39
31 KWS 013	45	38	57	31	11	45	33	47	37	56	11	13	.	.	34	46
32 KWS 026	13	4	23	1	7	28	10	23	12	2	14	24	.	.	15	3
33 KWS 027	70	57	80	54	18	56	33	47	21	18	12	18	.	.	41	55
34 LA06149C-P7	35	31	62	40	10	42	8	15	32	50	19	40	40	25	29	30
35 LA08201C-57	31	24	47	23	7	28	8	15	22	23	12	18	.	.	23	19
36 LANC8170-41-1	38	35	58	33	8	33	23	40	26	39	11	13	62	51	32	39
37 LA07085CW-P4	38	35	67	44	3	9	5	1	24	27	21	47	49	38	29	30
38 LANC8170-41-2	18	9	48	24	5	18	8	15	25	35	14	24	43	31	23	19
39 LCS 08577-4	34	30	62	40	15	54	55	59	37	56	21	47	.	.	39	51
40 LCS 229	36	34	62	40	11	45	38	50	28	44	14	24	.	.	33	45
41 M09-9547	35	31	53	28	5	18	48	57	24	27	17	36	42	29	32	39
42 M11-1027#	32	25	53	28	11	45	13	32	25	35	26	54	38	22	28	27
43 M11-2298	30	20	40	16	4	14	5	1	21	18	16	34	39	24	22	14
44 MD08-22-22-13-4	14	5	30	6	2	5	5	1	4	1	12	18	27	11	13	1
45 MD26-H2-23-13-1	32	25	38	14	1	1	20	37	19	11	6	3	20	5	20	11
46 MD09W272-8-4-13-3	35	31	72	49	5	18	8	15	24	27	16	34	24	9	26	23
47 MDC07026-F2-19-13	50	43	67	44	7	28	10	23	20	15	20	43	36	20	30	34
48 NC11-21401	53	46	38	14	1	1	8	15	23	24	20	43	34	19	25	21
49 NC11-22289	33	27	30	6	2	5	5	1	14	3	19	40	28	13	19	9
50 NC11-22291	30	20	26	3	1	1	5	1	18	8	10	11	22	6	16	4
51 NC8170-45-17	25	13	40	16	10	42	5	1	17	6	18	37	41	28	22	14
52 NC8170-86-2	65	54	45	20	6	23	8	15	24	27	10	11	36	20	28	27
53 NC9305-7	28	16	45	20	8	33	10	23	24	27	14	24	59	49	27	24
54 NC09-21916	28	16	57	31	3	9	10	23	17	6	11	13	64	53	27	24
55 VA10W-96	50	43	43	18	9	39	38	50	19	11	14	24	45	34	31	37
56 VA11W-108	63	53	70	48	7	28	43	54	29	45	26	55	28	13	38	50
57 VA11W-230	58	49	60	37	5	18	10	23	27	43	9	9	49	38	31	37
58 VA11W-278	60	51	72	49	8	33	25	42	33	52	18	37	62	51	40	53
59 VA12W-102	45	38	58	33	12	50	38	50	26	39	21	47	40	25	34	46
60 VA12W-150	48	41	58	33	9	39	15	34	24	27	14	24	38	22	29	30
61 VA12FHB-37	78	61	78	53	12	50	33	47	30	48	29	59	24	9	40	53
62 VA12FHB-85	70	57	65	43	7	28	18	36	20	15	28	57	45	34	36	48

Mean	40	55	9	20	25	16	42	29
LSD (0.05)	23	23	8	18	.	.	.	21
CV%	29.1	25.4	46.6	53.2	.	.	.	37.2

**Incidence, Severity, Kernel Rating (ISK) Index**  
**(0.3 \* Incidence + 0.3 \* Severity + 0.4 \* Fusarium Damaged Kernels)**

CULTIVAR/ DESIGNATION	K'STON NC		B'Rouge LA		LEX'TON KY		B'BURG VA		MEAN ALL LOC.	
	RANK		RANK		RANK		RANK		RANK	
1 ERNIE	14	3	22	25	46	41	22	26	26	16
2 COKER9835	63	62	60	59	60	62	69	62	63	62
3 BESS	13	2	17	13	35	8	19	16	21	6
4 JAMESTOWN	17	5	16	12	44	36	13	2	22	7
5 M10-1615	28	24	31	37	29	6	16	6	26	16
6 AR00179-2-2	32	31	24	29	40	22	21	24	29	24
7 AR00334-5-2	27	21	41	46	36	9	19	16	31	29
8 AR01136-3-2	35	37	31	37	41	25	20	19	31	29
9 AR04001-3	24	13	19	23	40	22	15	4	24	12
10 AR04084-1-3	31	29	21	24	43	32	22	26	29	24
11 ARGE07-1347-6-7-9	16	4	10	3	28	4	20	19	18	2
12 ARGE07-1354-2-6-1	25	16	11	8	39	20	22	26	24	12
13 ARGE07-1355-16-6-6	24	13	14	10	36	9	20	19	23	8
14 ARS09-228	33	33	24	29	52	53	16	6	31	29
15 ARS10-028	40	45	33	40	46	41	26	39	36	43
16 ARS10-038	55	59	63	61	57	59	52	61	57	61
17 ARS10-043	62	61	63	61	42	30	32	50	49	58
18 ARS10-172	57	60	50	56	50	50	48	60	51	59
19 ARS10-389	18	7	10	3	19	1	14	3	15	1
20 B09-0002	18	7	8	1	36	9	15	4	19	4
21 B09*900256	47	53	50	56	50	50	32	50	45	56
22 B08-91993	23	9	45	52	45	37	18	13	33	35
23 GA04494-13ES1	49	55	29	35	57	59	31	48	41	52
24 GA051477-13ES2	46	52	23	28	45	37	27	42	35	40
25 GA051477-13ES4	26	19	11	8	41	25	17	9	24	12
26 GA051207-13ES11	33	33	25	31	40	22	35	54	33	35
27 GA061050-13ES18	40	45	18	17	52	53	26	41	34	38
28 GA06586-13ES21	54	58	55	58	57	59	39	57	51	59
29 GA06390-13ES24	38	40	26	32	41	25	31	48	34	38
30 GA061050-13ES17	47	53	18	17	52	53	25	37	35	40
31 KWS 013	42	48	42	47	54	56	16	6	38	46
32 KWS 026	29	25	31	37	23	3	24	34	27	20
33 KWS 027	45	50	40	45	47	44	20	19	38	46
34 LA06149C-P7	39	43	30	36	55	58	26	39	38	46
35 LA08201C-57	29	25	18	17	43	32	24	34	29	24
36 LANC8170-41-1	38	40	35	43	49	47	30	46	38	46
37 LA07085CW-P4	27	21	17	13	39	20	25	37	27	20
38 LANC8170-41-2	25	16	17	13	45	37	17	9	26	16
39 LCS 08577-4	50	56	60	59	49	47	32	50	48	57
40 LCS 229	45	50	47	53	38	18	28	45	39	50
41 M09-9547	31	29	42	47	37	16	23	31	33	35
42 M11-1027#	40	45	28	34	41	25	30	46	35	40
43 M11-2298	23	9	8	1	36	9	24	34	23	8
44 MD08-22-22-13-4	30	28	17	13	22	2	23	31	23	8
45 MD26-H2-23-13-1	26	19	34	42	46	41	11	1	29	24
46 MD09W272-8-4-13-3	23	9	18	17	45	37	27	42	28	23
47 MDC07026-F2-19-13-4	38	40	22	25	41	25	23	31	31	29
48 NC11-21401	17	5	18	17	36	9	22	26	23	8
49 NC11-22289	23	9	10	3	28	4	18	13	20	5
50 NC11-22291	10	1	10	3	36	9	17	9	18	2
51 NC8170-45-17	34	35	10	3	31	7	22	26	24	12
52 NC8170-86-2	25	16	14	10	49	47	21	24	27	20
53 NC9305-7	29	25	18	17	38	18	20	19	26	16
54 NC09-21916	34	35	27	33	42	30	18	13	30	28
55 VA10W-96	24	13	48	55	37	16	19	16	32	33
56 VA11W-108	39	43	47	53	47	44	41	58	44	54
57 VA11W-230	36	38	22	25	51	52	17	9	32	33
58 VA11W-278	27	21	42	47	54	56	34	53	39	50
59 VA12W-102	51	57	44	51	43	32	27	42	41	52
60 VA12W-150	32	31	35	43	43	32	38	55	37	45
61 VA12FHB-37	43	49	42	47	48	46	41	58	44	54
62 VA12FHB-85	37	39	33	40	36	9	38	55	36	43
Mean	34		30		42		25		32	
LSD (0.05)	17		.		.		.		15	
CV%	25.7		.		.		.		23.7	

## SEED CHARACTERISTICS and GRAIN YIELD

Cultivar/ Designation	Grain Yield (gr)	Grain Yield (gr)	Grain Yield (gr)	RANK	Seed Quality (1-4)	Seed Quality (1-4)	Seed Quality (1-4)
	F'VILLE AR	NEWPORT AR	MEAN ALL LOC.		F'VILLE AR	N'PORT AR	MEAN ALL LOC.
1 ERNIE	384	401	393	27	2	2	1.9
2 COKER9835	321	170	245	62	2	1	1.3
3 BESS	513	387	450	8	3	2	2.3
4 JAMESTOWN	417	363	390	29	3	2	2.1
5 M10-1615	418	384	401	24	2	2	2.0
6 AR00179-2-2	548	375	461	6	3	2	2.7
7 AR00334-5-2	450	348	399	26	2	2	1.8
8 AR01136-3-2	333	347	340	45	1	1	1.2
9 AR04001-3	516	427	471	5	2	1	1.5
10 AR04084-1-3	561	413	487	2	2	1	1.7
11 ARGE07-1347-6-7-9	511	435	473	3	2	1	1.7
12 ARGE07-1354-2-6-1	484	294	389	30	3	2	2.1
13 ARGE07-1355-16-6-6	432	410	421	20	2	2	1.8
14 ARS09-228	379	266	322	54	2	1	1.3
15 ARS10-028	527	329	428	15	2	1	1.5
16 ARS10-038	337	201	269	61	1	1	1.0
17 ARS10-043	284	268	276	59	2	1	1.3
18 ARS10-172	382	285	333	49	2	1	1.3
19 ARS10-389	428	431	429	14	3	2	2.5
20 B09-0002	511	436	473	3	4	2	2.8
21 B09*900256	394	302	348	43	1	1	1.0
22 B08-91993	575	488	531	1	3	2	2.1
23 GA04494-13ES1	439	303	371	36	1	1	1.0
24 GA051477-13ES2	439	299	369	37	2	1	1.5
25 GA051477-13ES4	396	235	315	55	2	1	1.3
26 GA051207-13ES11	482	403	442	9	2	1	1.3
27 GA061050-13ES18	364	288	326	53	2	1	1.3
28 GA06586-13ES21	360	191	276	60	1	1	1.0
29 GA06390-13ES24	423	256	340	45	1	1	1.0
30 GA061050-13ES17	418	314	366	38	2	1	1.5
31 KWS 013	513	390	451	7	2	1	1.4
32 KWS 026	460	402	431	12	3	2	2.5
33 KWS 027	389	234	311	56	1	1	1.0
34 LA06149C-P7	451	260	355	40	2	1	1.5
35 LA08201C-57	485	384	434	10	2	1	1.5
36 LANC8170-41-1	345	223	284	57	2	1	1.3
37 LA07085CW-P4	448	413	431	12	2	1	1.3
38 LANC8170-41-2	418	342	380	31	2	1	1.7
39 LCS 08577-4	475	375	425	18	2	1	1.4
40 LCS 229	375	291	333	49	2	1	1.3
41 M09-9547	463	338	400	25	3	1	1.9
42 M11-1027#	474	283	379	32	2	1	1.5
43 M11-2298	435	378	406	22	2	1	1.7
44 MD08-22-22-13-4	387	368	378	33	4	2	2.6
45 MD26-H2-23-13-1	399	352	376	34	2	1	1.7
46 MD09W272-8-4-13-3	414	402	408	21	2	1	1.3
47 MDC07026-F2-19-13-	393	285	339	47	2	1	1.3
48 NC11-21401	317	338	328	52	2	2	1.6
49 NC11-22289	442	424	433	11	3	1	1.9
50 NC11-22291	444	408	426	17	3	2	2.4
51 NC8170-45-17	448	334	391	28	2	1	1.7
52 NC8170-86-2	347	335	341	44	1	1	1.0
53 NC9305-7	457	397	427	16	2	1	1.7
54 NC09-21916	406	338	372	35	2	1	1.5
55 VA10W-96	421	390	405	23	2	1	1.3
56 VA11W-108	508	341	425	18	1	1	1.0
57 VA11W-230	416	294	355	40	1	1	1.0
58 VA11W-278	362	313	338	48	1	1	1.0
59 VA12W-102	428	276	352	42	2	1	1.3
60 VA12W-150	439	228	333	49	2	1	1.3
61 VA12FHB-37	380	189	284	57	1	1	1.0
62 VA12FHB-85	383	328	356	39	1	1	1.0
Mean	428	334	381		2	1	1.5
LSD (0.05)	93	98	86		1	1	0.7
CV%	10.8	18.2	11.2		34.8	36.7	21.7

**DON**  
(ppm)

Cultivar/ Designation	B'BURG	LEX'TON	KINSTON	F'VILLE	NEWPORT	MEAN
	VA	KY	NC	AR	AR	ALL LOC.
	RANK	RANK	RANK	RANK	RANK	RANK
1 ERNIE	2	12	4	9	12	8 17
2 COKER9835	7	10	36	12	37	20 59
3 BESS	5	10	8	7	17	9 23
4 JAMESTOWN	1	17	3	3	16	8 17
5 M10-1615	1	9	9	6	19	9 23
6 AR00179-2-2	7	12	7	2	17	9 23
7 AR00334-5-2	1	11	5	7	19	9 23
8 AR01136-3-2	2	11	8	3	14	8 17
9 AR04001-3	1	13	3	7	14	7 10
10 AR04084-1-3	2	22	10	7	19	12 42
11 ARGE07-1347-6-7-9	13	10	3	5	11	8 17
12 ARGE07-1354-2-6-1	4	14	3	4	20	9 23
13 ARGE07-1355-16-6-6	1	16	7	6	16	9 23
14 ARS09-228	1	9	5	7	30	10 32
15 ARS10-028	2	23	22	6	36	18 55
16 ARS10-038	12	14	89	18	32	33 62
17 ARS10-043	2	14	55	9	26	21 60
18 ARS10-172	5	12	31	9	27	17 51
19 ARS10-389	0	6	3	4	11	5 2
20 B09-0002	0	12	3	2	11	6 6
21 B09*900256	7	13	18	11	24	14 48
22 B08-91993	1	13	7	11	17	10 32
23 GA04494-13ES1	3	24	19	13	24	17 51
24 GA051477-13ES2	1	16	13	8	22	12 42
25 GA051477-13ES4	1	15	5	6	21	10 32
26 GA051207-13ES11	1	16	14	7	22	12 42
27 GA061050-13ES18	4	20	21	15	30	18 55
28 GA06586-13ES21	4	26	31	24	34	24 61
29 GA06390-13ES24	2	24	17	10	30	17 51
30 GA061050-13ES17	2	18	22	12	33	17 51
31 KWS 013	1	15	9	7	15	9 23
32 KWS 026	1	7	7	3	10	6 6
33 KWS 027	2	15	25	18	38	19 58
34 LA06149C-P7	1	24	12	4	29	14 48
35 LA08201C-57	1	19	11	8	10	10 32
36 LANC8170-41-1	2	12	7	5	8	7 10
37 LA07085CW-P4	1	13	2	6	13	7 10
38 LANC8170-41-2	1	9	5	3	6	5 2
39 LCS 08577-4	2	10	23	8	14	11 39
40 LCS 229	1	11	22	9	21	13 46
41 M09-9547	2	17	18	8	24	14 48
42 M11-1027#	2	8	15	7	19	10 32
43 M11-2298	2	12	6	7	16	9 23
44 MD08-22-22-13-4	2	5	3	2	7	4 1
45 MD26-H2-23-13-1	0	13	3	5	13	7 10
46 MD09W272-8-4-13-3	2	12	7	4	17	8 17
47 MDC07026-F2-19-13-4	1	9	8	7	10	7 10
48 NC11-21401	2	14	3	3	10	6 6
49 NC11-22289	3	9	2	3	10	5 2
50 NC11-22291	0	9	1	4	10	5 2
51 NC8170-45-17	3	12	6	3	9	6 6
52 NC8170-86-2	0	11	9	6	13	8 17
53 NC9305-7	1	15	8	7	16	9 23
54 NC09-21916	0	9	5	3	19	7 10
55 VA10W-96	0	11	18	5	14	10 32
56 VA11W-108†	5	16	11	7	18	11 39
57 VA11W-230	1	7	6	5	17	7 10
58 VA11W-278	3	15	7	8	16	10 32
59 VA12W-102	4	7	19	8	21	12 42
60 VA12W-150	4	10	6	8	26	11 39
61 VA12FHB-37	2	17	27	9	37	18 55
62 VA12FHB-85	2	14	14	11	27	13 46
Mean	2	13	13	7	19	6
LSD (0.05)	.	.	11	.	.	13
CV%	.	.	42.5	.	.	58.3

## Greenhouse Severity

	Cultivar/ Designation	Colombia MO	RANK
1	ERNIE	24	23
2	COKER9835	49	55
3	BESS	20	13
4	JAMESTOWN	36	46
5	M10-1615	14	3
6	AR00179-2-2	16	8
7	AR00334-5-2	23	20
8	AR01136-3-2	15	5
9	AR04001-3	22	18
10	AR04084-1-3	45	53
11	ARGE07-1347-6-7-9	20	15
12	ARGE07-1354-2-6-1	20	12
13	ARGE07-1355-16-6-6	13	2
14	ARS09-228	16	6
15	ARS10-028	32	38
16	ARS10-038	56	60
17	ARS10-043	37	48
18	ARS10-172	35	43
19	ARS10-389	23	21
20	B09-0002	24	22
21	B09*900256	27	28
22	B08-91993	31	37
23	GA04494-13ES1	52	58
24	GA051477-13ES2	26	25
25	GA051477-13ES4	32	41
26	GA051207-13ES11	19	11
27	GA061050-13ES18	35	45
28	GA06586-13ES21	54	59
29	GA06390-13ES24	21	17
30	GA061050-13ES17	16	7
31	KWS 013	48	54
32	KWS 026	26	24
33	KWS 027	38	51
34	LA06149C-P7	35	44
35	LA08201C-57	27	27
36	LANC8170-41-1	50	57
37	LA07085CW-P4	29	30
38	LANC8170-41-2	33	42
39	LCS 08577-4	29	29
40	LCS 229	30	33
41	M09-9547	21	16
42	M11-1027#	20	14
43	M11-2298	31	34
44	MD08-22-22-13-4	38	50
45	MD26-H2-23-13-1	23	19
46	MD09W272-8-4-13-3	18	10
47	MDC07026-F2-19-13-4	36	47
48	NC11-21401	32	39
49	NC11-22289	14	4
50	NC11-22291	29	31
51	NC8170-45-17	31	36
52	NC8170-86-2	45	52
53	NC9305-7	59	61
54	NC09-21916	31	35
55	VA10W-96	60	62
56	VA11W-108†	49	56
57	VA11W-230	37	49
58	VA11W-278	30	32
59	VA12W-102	17	9
60	VA12W-150	32	40
61	VA12FHB-37	12	1
62	VA12FHB-85	27	26

Mean	30
LSD (0.05)	.
CV%	.

## Genotypic Analyses of Regions Associated with FHB Resistance and Other Pertinent Loci

DESIGNATION	Rht-B1	Rht-D1	Rht8c	Fhb1	Fhb Massey 3BL	Fhb 2DL- Wuhan1/W14	Fhb 5A	Sr36	Sr24/Lr24	Lr37/N17/Sr38	Lr9	1RS	H13	H9	Sbm1	Tsn1	Sucrose Synthase	kernel color genotype (R-A1_R- B1_R-D1)
1 ERNIE	Rht-B1b	Rht-D1b het	no	no	Het	no	5A Ernie	Sr36	Sr24/Lr24	no	no	1RS:1AL het	no	no	Sbm1?	no	TaSus2-2B	RR_rr_rr
2 COKER9835	Rht-B1b het	Rht-D1b	no	no	no	no	.	Sr36	no	no	Lr9	1RS:1BL	no	no	Sbm1	no	TaSus2-2B	rr_Rr_RR
3 BESS	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	Tsn1	no	rr_rr_RR
4 JAMESTOWN	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
5 M10-1615	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	no	no	1RS:1BL	no	no	Sbm1	no	no	RR_rr_rr
6 AR00179-2-2	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
7 AR00334-5-2	Rht-B1b het	Rht-D1b	no	no	Het	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
8 AR01136-3-2	Rht-B1a	Rht-D1b het	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_?_rr
9 AR04001-3	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_rr_rr
10 AR04084-1-3	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_rr_rr
11 ARGE07-1347-6-7-9	Rht-B1b het	Rht-D1a	no	Het	Het	Het	no	no	no	no	no	non-1RS	no	no	Sbm1	Tsn1	TaSus2-2B het	RR_rr_RR
12 ARGE07-1354-2-6-1	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	Yes	Lr9	non-1RS	no	no	Sbm1	no	no	rr_rr_RR
13 ARGE07-1355-16-6-6	Rht-B1a	Rht-D1a	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	rr_rr_RR
14 ARS09-228	Rht-B1a	Rht-D1a	Rht8c	no	no	no	no	Sr36	no	no	no	non-1RS	H13	no	Sbm1	no	TaSus2-2B	RR_rr_rr
15 ARS10-028	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	Yes	no	1RS:1BL	no	no	no	no	no	RR_Rr_RR
16 ARS10-038	Rht-B1a	Rht-D1b	no	no	no	no	5A Ernie	no	no	no	no	non-1RS	no	no	Sbm1	Tsn1	TaSus2-2B	RR?_rr_RR
17 ARS10-043	Rht-B1a	Rht-D1b	no	no	no	no	5A Ernie	Sr36	no	no	no	non-1RS	no	no	Sbm1	Tsn1	TaSus2-2B	RR_RR_rr
18 ARS10-172	Rht-B1a	Rht-D1b	no	no	no	no	no	Sr36	no	no	no	non-1RS	no	no	Sbm1	no	TaSus2-2B	rr_RR_RR
19 ARS10-389	Rht-B1a	Rht-D1a	no	no	no	no	no	Sr36	no	no	no	non-1RS	no	no	no	no	TaSus2-2B	RR_rr_rr
20 B09-0002	Rht-B1a	Rht-D1a	no	no	no	no	no	Sr36	no	no	Lr9	non-1RS	no	no	Sbm1	no	TaSus2-2B	RR_RR_RR
21 B09*900256	Rht-B1a	Rht-D1b	no	no	no	no	5A Ernie	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_rr_RR
22 B08-91993	Rht-B1a	Rht-D1b	no	no	Yes	no	no	no	no	no	no	1RS:1BL	no	no	Sbm1	no	no	RR_RR_rr
23 GA04494-13ES1	Rht-B1a	Rht-D1b	no	no	no	no	5A Ernie	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_RR_rr
24 GA051477-13ES2	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
25 GA051477-13ES4	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_rr_RR
26 GA051207-13ES11	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	Yes	no	non-1RS	no	H9	Sbm1	no	no	RR_?_rr
27 GA061050-13ES18	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	Tsn1	no	RR_rr_RR
28 GA06586-13ES21	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_rr_rr
29 GA06390-13ES24	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
30 GA061050-13ES17	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	Tsn1	no	RR_rr_RR
31 KWS 013	Rht-B1a	Rht-D1b	no	no	no	no	5A Ernie	no	no	no	no	non-1RS	no	no	no	no	no	RR_rr_RR
32 KWS 026	Rht-B1b	Rht-D1a	no	no	Het	no	no	Sr36	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
33 KWS 027	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_rr_rr
34 LA06149C-P7	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	no	Lr9	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
35 LA08201C-57	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	no	no	non-1RS	no	no	no	no	no	RR_RR_RR
36 LANC8170-41-1	Rht-B1a	Rht-D1b	no	Fhb1	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
37 LA07085CW-P4	Rht-B1a	Rht-D1b het	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	no	no	TaSus2-2B het	rr_RR_RR
38 LANC8170-41-2	Rht-B1a	Rht-D1b	no	Fhb1	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
39 LCS 08577-4	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_rr_RR
40 LCS 229	Rht-B1b	Rht-D1a	no	no	Yes	no	no	no	no	no	no	1RS:1BL?	no	no	Sbm1	no	no or het	RR_rr_RR
41 M09-9547	Rht-B1b	Rht-D1a	no	no	no	no	no	no	no	no	no	1RS:1BL	no	no	Sbm1	no	no or het	RR_Rr_rr
42 M11-1027#	Rht-B1b het	Rht-D1b het	no	no	Het	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_rr_RR
43 M11-2298	Rht-B1b	Rht-D1a	no	no	Het	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_rr_RR
44 MD08-22-22-13-4	Rht-B1a	Rht-D1b	Rht8c	Fhb1	no	Yes	5A Ning	no	Sr24/Lr24	no	no	1RS:1AL	no	no	Sbm1	no	no	RR_rr_RR
45 MD26-H2-23-13-1	Rht-B1a	Rht-D1b	no	Fhb1	no	Yes	5A Ning	no	Sr24/Lr24	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
46 MD09W272-8-4-13-3	Rht-B1a	Rht-D1b	no	Fhb1	no	no	no	no	no	Yes	no	1RS:1BL	no	no	Sbm1	no	no	RR_RR_RR
47 MDC07026-F2-19-13-4	Rht-B1a	Rht-D1b	no	Fhb1	no	no	no	no	Sr24/Lr24	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
48 NC11-21401	Rht-B1b	Rht-D1a	no	Fhb1	no	Yes	no	Sr36	no	no	Lr9	1RS:1BL het	no	no	no	no	TaSus2-2B	RR_rr_rr
49 NC11-22289	Rht-B1a	Rht-D1a	no	no	no	no	no	Sr36	no	no	Lr9	non-1RS	no	no	Sbm1	no	TaSus2-2B	RR_RR_RR
50 NC11-22291	Rht-B1a	Rht-D1a	no	no	no	no	no	Sr36	no	no	Lr9	non-1RS	no	no	Sbm1	no	TaSus2-2B	RR_RR_RR
51 NC8170-45-17	Rht-B1a	Rht-D1b	no	Fhb1	no	no	5A Ning	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_RR_RR
52 NC8170-86-2	Rht-B1a	Rht-D1b	no	Fhb1	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	Tsn1	no	RR_RR_RR
53 NC9305-7	Rht-B1b	Rht-D1a	no	no	no	no	no	Sr36	no	no	no	non-1RS	no	no	Sbm1	no	TaSus2-2B	rr_rr_RR
54 NC09-21916	Rht-B1b het	Rht-D1b	no	no	no	no	no	no	no	no	no	non-1RS	no	no	Sbm1	no	no	RR_Rr_RR
55 VA10W-96	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_?_rr
56 VA11W-108	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	Yes	no	non-1RS	no	no	Sbm1	no	no	RR_?_RR
57 VA11W-230	Rht-B1a	Rht-D1b	no	no	no	no	no	no	no	Yes	no	non-1RS	H13	no	no	no	no	RR_rr_RR
58 VA11W-278	Rht-B1a	Rht-D1b	no	no	Yes	no	no	het	no	Yes	no	non-1RS	H13	no	Sbm1	no	TaSus2-2B	RR_rr_rr
59 VA12W-102	Rht-B1b	Rht-D1a	no	no	no	no	no	Sr36	no	no	no	non-1RS	no	no	Sbm1	no	TaSus2-2B	RR_rr_RR
60 VA12W-150	Rht-B1a	Rht-D1b	no	no	no	no	no	Sr36	no	no	no	non-1RS	no	no	Sbm1	no	TaSus2-2B	RR_rr_RR
61 VA12FHB-37	Rht-B1b	Rht-D1a	no	no	no	no	no	Sr36	no	no	no	1RS:1BL	no	no	Sbm1	no	TaSus2-2B	RR_rr_RR
62 VA12FHB-85	Rht-B1a	Rht-D1a	no	no	Het	no	no	Sr36	no	no	no	1RS:1BL	no	no	Sbm1	no	TaSus2-2B	RR_RR_RR



### Heading Date (Julian Days\*)

	K'STON	WARSAW	LEX'TON	COL'BIA	FUN'LEA	MEAN	RANK
	NC	VA	KY	MO	ROM	ALL LOC.	
1 ERNIE	109	131	136	141	137	131	7
2 COKER9835	114	134	140	147	141	135	51
3 BESS	115	134	137	144	141	134	39
4 JAMESTOWN	106	130	135	143	137	130	2
5 M10-1615	111	133	133	141	137	131	7
6 AR00179-2-2	115	134	136	143	139	133	26
7 AR00334-5-2	115	133	136	142	139	133	26
8 AR01136-3-2	116	134	138	144	139	134	39
9 AR04001-3	107	133	137	144	139	132	15
10 AR04084-1-3	113	133	142	147	139	135	51
11 ARGE07-1347-6-7-9	109	131	137	149	139	133	26
12 ARGE07-1354-2-6-1	111	132	142	151	139	135	51
13 ARGE07-1355-16-6-6	112	133	136	147	139	133	26
14 ARS09-228	113	133	139	148	137	134	39
15 ARS10-028	116	136	137	142	141	134	39
16 ARS10-038	117	134	137	147	141	135	51
17 ARS10-043	118	134	138	147	141	136	58
18 ARS10-172	114	134	139	149	141	135	51
19 ARS10-389	109	130	134	141	137	130	2
20 B09-0002	108	131	138	143	141	132	15
21 B09*900256	112	134	135	147	139	133	26
22 B08-91993	109	132	134	143	139	131	7
23 GA04494-13ES1	108	131	135	144	139	131	7
24 GA051477-13ES2	108	132	136	143	137	131	7
25 GA051477-13ES4	107	132	136	143	137	131	7
26 GA051207-13ES11	109	132	136	144	141	132	15
27 GA061050-13ES18	109	130	136	147	137	132	15
28 GA06586-13ES21	108	131	138	147	139	132	15
29 GA06390-13ES24	108	130	136	149	137	132	15
30 GA061050-13ES17	110	132	137	147	137	132	15
31 KWS 013	107	130	133	141	.	129	1
32 KWS 026	113	132	134	142	.	132	15
33 KWS 027	117	135	141	147	.	137	61
34 LA06149C-P7	115	133	141	147	139	135	51
35 LA08201C-57	113	133	138	147	.	134	39
36 LANC8170-41-1	113	133	138	147	139	134	39
37 LA07085CW-P4	104	131	135	147	137	131	7
38 LANC8170-41-2	110	132	137	148	139	133	26
39 LCS 08577-4	115	133	135	144	.	133	26
40 LCS 229	109	133	135	144	.	132	15
41 M09-9547	112	133	136	147	141	134	39
42 M11-1027#	116	133	136	144	139	134	39
43 M11-2298	114	132	135	143	139	132	15
44 MD08-22-22-13-4	117	134	136	143	139	134	39
45 MD26-H2-23-13-1	114	133	141	144	146	136	58
46 MD09W272-8-4-13-3	111	133	137	144	139	133	26
47 MDC07026-F2-19-13	116	134	135	142	139	133	26
48 NC11-21401	110	133	137	147	139	133	26
49 NC11-22289	108	130	133	142	137	130	2
50 NC11-22291	108	130	132	143	137	130	2
51 NC8170-45-17	113	133	137	147	139	134	39
52 NC8170-86-2	110	133	138	147	137	133	26
53 NC9305-7	112	134	139	148	137	134	39
54 NC09-21916	114	133	137	143	139	133	26
55 VA10W-96	108	131	133	143	137	130	2
56 VA11W-108†	111	134	136	145	139	133	26
57 VA11W-230	109	130	135	147	139	132	15
58 VA11W-278	108	131	135	143	137	131	7
59 VA12W-102	117	134	137	147	141	135	51
60 VA12W-150	110	134	137	147	141	134	39
61 VA12FHB-37	115	134	141	151	143	137	61
62 VA12FHB-85	115	134	139	150	141	136	58

Mean	111	132	136	145	139	133
LSD (0.05)	3	.	3	.	.	4
CV%	1.3	.	0.9	.	.	1.4

\*Days after December 31, 2013

### Plant Height (in)

	CULTIVAR/ DESIGNATION	K'STON NC	LEX'TON KY	FUN'LEA ROM	MEAN ALL LOC.	RANK
1	ERNIE	34	32	33	33	12
2	COKER9835	30	29	34	31	3
3	BESS	38	36	41	38	57
4	JAMESTOWN	33	32	38	34	25
5	M10-1615	36	35	35	35	38
6	AR00179-2-2	40	36	41	39	59
7	AR00334-5-2	38	35	43	39	58
8	AR01136-3-2	37	34	41	37	51
9	AR04001-3	38	38	45	40	62
10	AR04084-1-3	37	33	39	36	46
11	ARGE07-1347-6-7-9	36	35	41	37	53
12	ARGE07-1354-2-6-1	37	33	41	37	48
13	ARGE07-1355-16-6-6	42	37	41	40	61
14	ARS09-228	36	33	35	35	30
15	ARS10-028	34	33	33	34	18
16	ARS10-038	37	34	37	36	44
17	ARS10-043	33	31	35	33	13
18	ARS10-172	32	30	35	32	7
19	ARS10-389	34	30	39	34	23
20	B09-0002	36	33	39	36	45
21	B09*900256	35	32	35	34	20
22	B08-91993	39	33	43	38	56
23	GA04494-13ES1	33	28	33	31	4
24	GA051477-13ES2	37	33	37	36	41
25	GA051477-13ES4	34	32	39	35	31
26	GA051207-13ES11	35	34	37	36	39
27	GA061050-13ES18	30	31	35	32	6
28	GA06586-13ES21	36	33	39	36	42
29	GA06390-13ES24	31	30	31	31	2
30	GA061050-13ES17	32	32	39	35	26
31	KWS 013	35	34	.	35	36
32	KWS 026	36	33	.	36	40
33	KWS 027	37	37	.	38	54
34	LA06149C-P7	37	35	39	37	50
35	LA08201C-57	38	39	.	39	60
36	LANC8170-41-1	36	33	35	35	27
37	LA07085CW-P4	34	32	35	34	19
38	LANC8170-41-2	34	32	31	32	8
39	LCS 08577-4	34	35	.	35	33
40	LCS 229	37	32	.	35	35
41	M09-9547	38	35	37	37	47
42	M11-1027#	36	34	33	34	24
43	M11-2298	39	36	37	37	52
44	MD08-22-22-13-4	33	34	31	33	9
45	MD26-H2-23-13-1	33	32	35	34	17
46	MD09W272-8-4-13-3	32	32	35	33	14
47	MDC07026-F2-19-13-4	35	31	35	34	16
48	NC11-21401	33	31	31	32	5
49	NC11-22289	35	32	35	34	21
50	NC11-22291	35	32	37	35	29
51	NC8170-45-17	37	35	35	36	43
52	NC8170-86-2	34	34	37	35	32
53	NC9305-7	37	36	41	38	55
54	NC09-21916	35	35	35	35	34
55	VA10W-96	38	33	35	35	37
56	VA11W-108†	37	34	33	35	28
57	VA11W-230	34	33	31	33	10
58	VA11W-278	34	31	35	33	15
59	VA12W-102	31	28	33	31	1
60	VA12W-150	37	32	33	34	22
61	VA12FHB-37	32	32	.	33	11
62	VA12FHB-85	37	36	.	37	49

Mean	35	33	37	35
LSD (0.05)	2.7	4	.	3
CV%	3.8	6.1	.	5.0

## Leaf Disease Ratings

CULTIVAR/ DESIGNATION	Powdery	Leaf	Stripe	Stripe	Glume	Bacterial	Bacterial
	Mildew	Rust	Rust	Rust	Blotch	Streak	Streak
	0-9	0-9	0-9	0-9	0-9	%	%
	Warsaw	Warsaw	Warsaw	L. Springs	L. Springs	NEWPORT	F'VILLE
	VA	VA	VA	NC	NC	AR	AR
1 ERNIE	1	7	8	8	8	75	58
2 COKER9835	3	1	9	8	7	75	82
3 BESS	4	8	0	7	5	63	68
4 JAMESTOWN	2	2	0	1	6	75	96
5 M10-1615	2	1	0	9	7	75	96
6 AR00179-2-2	4	6	0	7	7	78	93
7 AR00334-5-2	3	6	0	8	5	57	78
8 AR01136-3-2	5	1	0	3	6	76	98
9 AR04001-3	6	4	0	1	8	62	78
10 AR04084-1-3	1	1	0	1	8	57	60
11 ARGE07-1347-6-7-9	3	3	0	6	6	75	96
12 ARGE07-1354-2-6-1	3	7	0	4	6	63	82
13 ARGE07-1355-16-6-6	4	4	0	5	6	62	98
14 ARS09-228	1	1	2	4	8	50	78
15 ARS10-028	1	1	0	0	2	55	40
16 ARS10-038	1	2	2	8	7	68	96
17 ARS10-043	1	1	5	6	6	63	89
18 ARS10-172	2	2	0	0	7	63	85
19 ARS10-389	1	2	8	7	7	50	78
20 B09-0002	2	1	9	7	5	50	60
21 B09*900256	1	3	2	6	5	83	98
22 B08-91993	2	3	0	1	6	43	23
23 GA04494-13ES1	2	2	0	1	3	57	78
24 GA051477-13ES2	1	1	0	2	4	63	89
25 GA051477-13ES4	1	2	0	2	5	63	92
26 GA051207-13ES11	4	1	0	0	4	57	68
27 GA061050-13ES18	2	1	0	0	3	57	78
28 GA06586-13ES21	1	1	0	0	1	37	60
29 GA06390-13ES24	3	2	0	2	6	48	78
30 GA061050-13ES17	5	1	0	0	6	43	82
31 KWS 013	1	3	9	7	8	78	72
32 KWS 026	2	3	8	7	6	75	54
33 KWS 027	3	5	0	4	4	75	72
34 LA06149C-P7	2	2	0	1	4	68	62
35 LA08201C-57	1	2	0	2	5	63	58
36 LANC8170-41-1	2	1	0	0	4	50	50
37 LA07085CW-P4	1	1	0	0	6	63	50
38 LANC8170-41-2	4	1	0	1	6	76	84
39 LCS 08577-4	3	6	6	8	7	83	84
40 LCS 229	1	5	0	3	6	73	50
41 M09-9547	1	2	6	7	5	57	50
42 M11-1027#	2	2	0	4	5	57	40
43 M11-2298	4	1	0	5	7	68	78
44 MD08-22-22-13-4	7	1	8	7	6	57	93
45 MD26-H2-23-13-1	1	2	0	4	4	57	85
46 MD09W272-8-4-13-3	2	1	0	1	3	63	82
47 MDC07026-F2-19-13-4	1	1	0	0	4	57	96
48 NC11-21401	1	2	8	7	6	90	98
49 NC11-22289	1	1	3	7	7	76	82
50 NC11-22291	1	1	3	7	8	76	78
51 NC8170-45-17	1	6	5	7	6	63	70
52 NC8170-86-2	1	1	0	0	7	70	98
53 NC9305-7	1	6	5	6	4	57	70
54 NC09-21916	1	1	3	7	4	57	96
55 VA10W-96	1	1	0	0	6	80	98
56 VA11W-108	2	1	0	0	5	63	70
57 VA11W-230	1	1	0	0	6	75	93
58 VA11W-278	1	1	0	0	5	75	96
59 VA12W-102	1	1	0	4	6	63	70
60 VA12W-150	2	2	0	3	6	71	82
61 VA12FHB-37	1	1	5	7	5	57	92
62 VA12FHB-85	1	3	9	8	4	62	96
Mean	2	2	2	4	6	64	77

## Hessian Fly Screening (Resistant - Susceptible Plants)<sup>1</sup>

CULTIVAR/ DESIGNATION	Biotype B	Biotype C	Biotype D	Biotype O	Biotype L
1 ERNIE	0-15	0-13	0-15	0-14	0-14
2 COKER9835	0-17	0-15	0-17	0-17	0-15
3 BESS	0-11	0-11	0-15	0-14	0-15
4 JAMESTOWN	14-0	10-2	14-0	0-16	0-20
5 M10-1615	16-0	0-14	0-14	0-15	0-16
6 AR00179-2-2	0-15	0-15	0-15	0-13	0-15
7 AR00334-5-2	0-14	0-16	0-13	0-10	0-20
8 AR01136-3-2	0-13	0-9	0-18	0-9	0-16
9 AR04001-3	11-0	0-13	0-15	0-13	0-14
10 AR04084-1-3	17-0	0-13	0-14	0-14	0-11
11 ARGE07-1347-6-7-9	14-0	12-1	14-0	0-14	0-11
12 ARGE07-1354-2-6-1	0-13	0-14	0-15	0-17	0-12
13 ARGE07-1355-16-6-6	0-12	0-14	0-15	0-16	0-11
14 ARS09-228	12-0	13-0	13-0	15-0	0-13
15 ARS10-028	0-13	0-13	0-15	0-16	0-12
16 ARS10-038	0-12	0-8	0-15	0-12	0-15
17 ARS10-043	9-0	0-12	0-10	0-10	0-9
18 ARS10-172	0-8	0-14	0-15	0-17	0-12
19 ARS10-389	16-0	0-13	0-16	0-15	0-13
20 B09-0002	12-0	14-3	15-3	16-3	0-10
21 B09*900256	0-17	0-16	0-14	0-16	0-14
22 B08-91993	0-15	0-17	0-15	0-17	0-15
23 GA04494-13ES1	0-14	0-14	0-16	0-14	0-16
24 GA051477-13ES2	0-11	0-16	0-15	0-17	0-14
25 GA051477-13ES4	0-17	0-14	0-18	0-14	0-14
26 GA051207-13ES11	17-0	17-0	8-5	0-15	0-14
27 GA061050-13ES18	0-7	0-9	0-10	0-12	0-15
28 GA06586-13ES21	9-0	0-10	0-15	0-12	0-7
29 GA06390-13ES24	0-16	0-15	0-14	0-14	0-12
30 GA061050-13ES17	0-14	0-10	0-12	0-12	0-15
31 KWS 013	0-15	0-16	0-13	0-14	0-16
32 KWS 026	14-0	0-16	0-17	0-14	0-15
33 KWS 027	16-0	0-12	0-12	0-14	0-18
34 LA06149C-P7	16-0	0-10	10-2	0-18	0-19
35 LA08201C-57	17-0	0-14	1-17	0-14	0-17
36 LANC8170-41-1	18-0	9-3	18-0	0--14	0-13
37 LA07085CW-P4	15-0	0-17	0-16	0-16	0-15
38 LANC8170-41-2	12-0	0-18	0-13	0-19	0-13
39 LCS 08577-4	12-0	0-13	0-16	0-17	0-15
40 LCS 229	14-0	0-14	0-14	0-10	0-15
41 M09-9547	14-0	0-14	0-13	4-8	0-15
42 M11-1027#	0-12	0-11	0-17	0-14	0-14
43 M11-2298	0-10	0-15	0-15	0-16	0-12
44 MD08-22-22-13-4	12-0	0-13	0-14	0-15	0-14
45 MD26-H2-23-13-1	17-0	0-15	0-18	1-9	0-13
46 MD09W272-8-4-13-3	16-0	0-11	17-0	0-15	0-14
47 MDC07026-F2-19-13-4	16-0	16-0	20-1	0-15	0-19
48 NC11-21401	14-0	15-0	0-17	0-15	0-15
49 NC11-22289	13-0	0-16	0-13	0-16	0-16
50 NC11-22291	14-0	0-15	0-14	0-16	0-13
51 NC8170-45-17	0-14	0-14	0-13	0-14	0-14
52 NC8170-86-2	0-16	0-13	13-0	0-16	0-17
53 NC9305-7	13-0	0-14	0-15	0-16	0-12
54 NC09-21916	0-10	0-13	0-12	12-5	0-17
55 VA10W-96	14-0	0-14	0-15	0-15	0-15
56 VA11W-108†	0-12	14-1	0-15	0-13	0-12
57 VA11W-230	0-13	15-0	0-16	14-0	0-12
58 VA11W-278	0-14	14-2	0-13	15-0	0-14
59 VA12W-102	16-0	0-12	0-14	0-15	0-15
60 VA12W-150	14-0	14-0	13-3	0-16	0-10
61 VA12FHB-37	16-0	0-14	0-17	0-16	0-15
62 VA12FHB-85	16-0	0-10	0-13	0-13	0-15

<sup>1</sup> Sue Cambron, USDA-ARS, Dept Entomology, Purdue Univ.

# Milling and Baking Quality Scores<sup>1</sup>

Cultivar/ Designation	FLOUR	SOFT.	GRAIN	GRAIN.	FLOUR	LACTIC	Na <sub>2</sub> CO <sub>3</sub>	SKCS	SKCS
	YIELD	EQUIV.	HARD.	PROT.	PROT.	ACID	SRC	Ker. Dia.	Ker. Wt
	%	%	minus 20	%	%	SRC(%)	%	mm	mg
			to 120						
1 ERNIE	66	55	-6	12	8.4	128	70	3.0	43.5
2 COKER9835	65	63	0	10	7.1	106	74	2.4	37.6
3 BESS	67	63	2	9	7.1	117	74	2.2	35.0
4 JAMESTOWN	68	60	4	11	7.9	142	75	2.6	36.6
5 M10-1615	69	57	4	10	8.0	116	71	2.5	40.6
6 AR00179-2-2	67	61	7	10	7.5	120	71	2.4	33.7
7 AR00334-5-2	67	58	12	11	8.0	125	72	2.6	37.4
8 AR01136-3-2	67	58	20	10	7.9	122	73	2.6	34.1
9 AR04001-3	69	58	8	11	8.5	97	64	2.6	37.7
10 AR04084-1-3	70	59	2	10	7.7	120	66	2.8	42.6
11 ARGE07-1347-6-7-9	66	55	7	11	8.7	126	70	2.7	40.3
12 ARGE07-1354-2-6-1	66	61	8	10	7.4	132	74	2.3	35.6
13 ARGE07-1355-16-6-6	67	59	0	12	8.4	124	70	2.3	36.3
14 ARS09-228	72	35	55	13	11.3	111	79	2.9	38.5
15 ARS10-028	73	44	53	11	8.8	103	81	2.8	37.0
16 ARS10-038	72	43	50	10	8.0	131	86	2.8	40.6
17 ARS10-043	73	39	60	12	10.1	117	77	2.6	34.5
18 ARS10-172	70	51	59	11	8.6	149	84	2.2	29.4
19 ARS10-389	74	41	46	11	9.2	105	71	2.7	36.0
20 B09-0002	68	53	6	13	9.5	134	71	2.7	39.3
21 B09*900256	65	60	18	10	7.6	136	77	2.4	36.2
22 B08-91993	66	60	2	10	7.6	117	79	2.5	41.9
23 GA04494-13ES1	69	52	26	11	8.5	121	68	2.6	39.5
24 GA051477-13ES2	68	62	1	11	8.2	148	73	2.6	40.1
25 GA051477-13ES4	67	63	-1	11	8.2	154	76	2.5	36.1
26 GA051207-13ES11	70	58	8	10	8.1	136	70	2.6	42.4
27 GA061050-13ES18	66	58	4	12	8.8	150	69	2.5	36.6
28 GA06586-13ES21	69	50	22	12	9.7	136	68	2.8	42.9
29 GA06390-13ES24	68	55	16	11	7.9	145	76	2.7	38.3
30 GA061050-13ES17	66	59	3	11	8.5	151	68	2.4	35.3
31 KWS 013	67	57	-2	10	8.2	136	71	2.6	38.8
32 KWS 026	68	57	11	11	8.2	123	68	2.4	37.8
33 KWS 027	70	53	17	12	8.9	124	68	2.4	38.6
34 LA06149C-P7	66	61	12	11	8.2	132	76	2.5	36.1
35 LA08201C-57	68	56	8	11	8.6	145	69	2.6	41.7
36 LANC8170-41-1	67	49	22	12	9.5	140	65	2.4	33.4
37 LA07085CW-P4	68	60	2	11	8.1	120	73	2.7	43.6
38 LANC8170-41-2	68	51	10	12	9.2	137	64	2.6	38.6
39 LCS 08577-4	69	63	1	10	7.6	95	68	2.4	37.5
40 LCS 229	67	63	-1	11	7.9	133	70	2.4	38.1
41 M09-9547	68	54	19	11	8.4	107	69	2.5	40.6
42 M11-1027#	66	61	8	10	7.9	133	75	2.2	34.1
43 M11-2298	67	55	9	11	8.2	125	66	2.5	35.5
44 MD08-22-22-13-4	66	54	28	11	8.6	106	74	2.2	28.4
45 MD26-H2-23-13-1	67	51	39	12	9.2	127	70	2.3	29.7
46 MD09W272-8-4-13-3	66	56	13	12	9.1	118	72	2.5	37.8
47 MDC07026-F2-19-13-	69	55	21	11	8.1	126	67	2.5	34.7
48 NC11-21401	65	56	13	12	8.8	105	68	2.5	35.7
49 NC11-22289	66	50	6	13	10.2	147	70	2.9	43.3
50 NC11-22291	67	52	5	13	9.5	147	68	2.9	43.5
51 NC8170-45-17	67	52	20	12	9.3	131	71	2.6	37.6
52 NC8170-86-2	65	55	11	13	9.4	115	73	2.6	36.4
53 NC9305-7	66	55	11	12	9.0	126	72	2.3	36.4
54 NC09-21916	68	61	-1	11	8.3	148	73	2.4	35.9
55 VA10W-96	68	53	12	12	8.8	146	74	2.5	38.7
56 VA11W-108†	67	61	6	11	7.9	135	75	2.4	38.7
57 VA11W-230	68	57	14	11	8.8	149	74	2.5	37.1
58 VA11W-278	67	57	12	11	8.7	137	70	2.5	37.1
59 VA12W-102	69	59	3	11	8.3	129	66	2.2	33.3
60 VA12W-150	66	57	10	12	8.6	129	75	2.4	32.6
61 VA12FHB-37	68	57	14	12	9.2	123	72	2.5	40.2
62 VA12FHB-85	69	49	22	12	9.2	108	69	2.7	41.6
Mean	68	55	14	11	9	128	72	2.5	37.6
St. Deviation	2.0	5.9	15.6	0.9	0.8	14.6	4.4	0.2	3.4

<sup>1</sup> Seed kindly supplied to USDA-ARS Wooster Quality Lab by Carl Griffey, Va Tech.

## Means Across Locations 2013-14

	Cultivar/ Designation	FHB Incidence		FHB Severity		FHB Index		FDK		ISK		DON	
		RANK		RANK		RANK		RANK		RANK		RANK	
1	ERNIE	54	15	23	10	14	10	22	14	26	16	8	17
2	COKER9835	88	62	62	62	56	62	51	61	63	62	20	59
3	BESS	48	7	23	10	13	8	18	6	21	6	9	23
4	JAMESTOWN	52	12	22	8	14	10	18	6	22	7	8	17
5	M10-1615	51	9	21	6	12	4	22	14	26	16	9	23
6	AR00179-2-2	60	27	26	16	19	21	16	4	29	24	9	23
7	AR00334-5-2	66	44	27	18	21	27	22	14	31	29	9	23
8	AR01136-3-2	62	33	32	29	24	37	29	30	31	29	8	17
9	AR04001-3	54	15	29	23	16	17	25	21	24	12	7	10
10	AR04084-1-3	59	26	34	34	20	25	27	24	29	24	12	42
11	ARGE07-1347-6-7-9	43	2	20	2	12	4	19	9	18	2	8	17
12	ARGE07-1354-2-6-1	55	19	27	18	19	21	21	13	24	12	9	23
13	ARGE07-1355-16-6-6	54	15	28	22	19	21	18	6	23	8	9	23
14	ARS09-228	63	37	33	32	23	34	32	39	31	29	10	32
15	ARS10-028	74	57	29	23	24	37	30	34	36	43	18	55
16	ARS10-038	68	48	59	61	41	60	55	62	57	61	33	62
17	ARS10-043	81	61	40	48	34	57	39	51	49	58	21	60
18	ARS10-172	78	59	52	59	44	61	43	56	51	59	17	51
19	ARS10-389	40	1	20	2	9	2	20	11	15	1	5	2
20	B09-0002	46	6	20	2	13	8	14	2	19	4	6	6
21	B09*900256	65	42	43	53	30	53	46	58	45	56	14	48
22	B08-91993	58	24	36	39	24	37	32	39	33	35	10	32
23	GA04494-13ES1	61	29	49	57	31	54	48	59	41	52	17	51
24	GA051477-13ES2	61	29	40	48	26	44	30	34	35	40	12	42
25	GA051477-13ES4	45	5	32	31	15	15	28	27	24	12	10	32
26	GA051207-13ES11	64	39	41	52	27	47	32	39	33	35	12	42
27	GA061050-13ES18	62	33	40	48	23	34	37	49	34	38	18	55
28	GA06586-13ES21	76	58	51	58	36	58	48	59	51	59	24	61
29	GA06390-13ES24	62	33	38	43	27	47	43	56	34	38	17	51
30	GA061050-13ES17	61	29	39	46	26	44	32	39	35	40	17	51
31	KWS 013	65	42	39	46	28	49	34	46	38	46	9	23
32	KWS 026	55	19	26	16	14	10	15	3	27	20	6	6
33	KWS 027	68	48	36	39	26	44	41	55	38	46	19	58
34	LA06149C-P7	71	53	34	34	24	37	29	30	38	46	14	48
35	LA08201C-57	54	15	34	34	18	20	23	19	29	24	10	32
36	LANC8170-41-1	64	39	43	53	24	37	32	39	38	46	7	10
37	LA07085CW-P4	56	22	30	25	20	25	29	30	27	20	7	10
38	LANC8170-41-2	55	19	31	27	16	17	23	19	26	16	5	2
39	LCS 08577-4	73	55	52	59	36	58	39	51	48	57	11	39
40	LCS 229	68	48	44	56	31	54	33	45	39	50	13	46
41	M09-9547	60	27	34	34	21	27	32	39	33	35	14	48
42	M11-1027#	64	39	31	27	21	27	28	27	35	40	10	32
43	M11-2298	51	9	24	12	12	4	22	14	23	8	9	23
44	MD08-22-22-13-4	56	22	25	14	19	21	13	1	23	8	4	1
45	MD26-H2-23-13-1	66	44	25	14	22	30	20	11	29	24	7	10
46	MD09W272-8-4-13-3	58	24	24	12	15	15	26	23	28	23	8	17
47	MDC07026-F2-19-13-4	68	48	30	25	22	30	30	34	31	29	7	10
48	NC11-21401	52	12	22	8	12	4	25	21	23	8	6	6
49	NC11-22289	43	2	19	1	8	1	19	9	20	5	5	2
50	NC11-22291	44	4	20	2	11	3	16	4	18	2	5	2
51	NC8170-45-17	50	8	21	6	14	10	22	14	24	12	6	6
52	NC8170-86-2	53	14	27	18	17	19	28	27	27	20	8	17
53	NC9305-7	51	9	27	18	14	10	27	24	26	16	9	23
54	NC09-21916	61	29	36	39	24	37	27	24	30	28	7	10
55	VA10W-96	63	37	36	39	24	37	31	37	32	33	10	32
56	VA11W-108	73	55	40	48	32	56	38	50	44	54	11	39
57	VA11W-230	62	33	32	29	22	30	31	37	32	33	7	10
58	VA11W-278	66	44	43	53	28	49	40	53	39	50	10	32
59	VA12W-102	69	52	38	43	29	52	34	46	41	52	12	42
60	VA12W-150	66	44	38	43	23	34	29	30	37	45	11	39
61	VA12FHB-37	78	59	34	34	28	49	40	53	44	54	18	55
62	VA12FHB-85	71	53	33	32	22	30	36	48	36	43	13	46
	Mean	61		33		22		29		32		6	
	LSD (0.05)	24		20		19		21		15		13	
	CV%	20.1		31.4		43.4		37.2		23.7		58.3	

## Means Across Locations 2013 - 2014

Cultivar/ Designation	Heading Date		Plant Height		Flour Yield %		Softness Equivalent %		Hessian Fly Biotype L	Fhb1	Fhb Massey 3BL	Fhb 5A	Fhb 2DL- Wuhan1W1 4
	RANK		RANK		RANK		RANK						
1 ERNIE	131	7	33	12	66	46	55	36	0-14	-	Het	Ernie	-
2 COKER9835	135	51	31	3	65	59	63	1	0-15	-	-	no data	-
3 BESS	134	39	38	57	67	31	63	1	0-15	-	-	-	-
4 JAMESTOWN	130	2	34	25	68	18	60	13	0-20	-	-	-	-
5 M10-1615	131	7	35	38	69	10	57	26	0-16	-	-	-	-
6 AR00179-2-2	133	26	39	59	67	31	61	7	0-15	-	-	-	-
7 AR00334-5-2	133	26	39	58	67	31	58	21	0-20	-	Het	-	-
8 AR01136-3-2	134	39	37	51	67	31	58	21	0-16	-	-	-	-
9 AR04001-3	132	15	40	62	69	10	58	21	0-14	-	-	-	-
# AR04084-1-3	135	51	36	46	70	6	59	17	0-11	-	-	-	-
# ARGE07-1347-6-7-9	133	26	37	53	66	46	55	36	0-11	Het	Het	-	Het
# ARGE07-1354-2-6-1	135	51	37	48	66	46	61	7	0-12	-	-	-	-
# ARGE07-1355-16-6-6	133	26	40	61	67	31	59	17	0-11	-	-	-	-
# ARS09-228	134	39	35	30	72	4	35	62	0-13	-	-	-	-
# ARS10-028	134	39	34	18	73	2	44	58	0-12	-	-	-	-
# ARS10-038	135	51	36	44	72	4	43	59	0-15	-	-	Ernie	-
# ARS10-043	136	58	33	13	73	2	39	61	0-9	-	-	Ernie	-
# ARS10-172	135	51	32	7	70	6	51	51	0-12	-	-	-	-
# ARS10-389	130	2	34	23	74	1	41	60	0-13	-	-	-	-
# B09-0002	132	15	36	45	68	18	53	45	0-10	-	-	-	-
# B09*900256	133	26	34	20	65	59	60	13	0-14	-	-	Ernie	-
# B08-91993	131	7	38	56	66	46	60	13	0-15	-	Yes	-	-
# GA04494-13ES1	131	7	31	4	69	10	52	48	0-16	-	-	Ernie	-
# GA051477-13ES2	131	7	36	41	68	18	62	6	0-14	-	-	-	-
# GA051477-13ES4	131	7	35	31	67	31	63	1	0-14	-	-	-	-
# GA051207-13ES11	132	15	36	39	70	6	58	21	0-14	-	-	-	-
# GA061050-13ES18	132	15	32	6	66	46	58	21	0-15	-	-	-	-
# GA06586-13ES21	132	15	36	42	69	10	50	54	0-7	-	-	-	-
# GA06390-13ES24	132	15	31	2	68	18	55	36	0-12	-	-	-	-
# GA061050-13ES17	132	15	35	26	66	46	59	17	0-15	-	-	-	-
# KWS 013	129	1	35	36	67	31	57	26	0-16	-	-	Ernie	-
# KWS 026	132	15	36	40	68	18	57	26	0-15	-	Het	-	-
# KWS 027	137	61	38	54	70	6	53	45	0-18	-	-	-	-
# LA06149C-P7	135	51	37	50	66	46	61	7	0-19	-	-	-	-
# LA08201C-57	134	39	39	60	68	18	56	33	0-17	-	-	-	-
# LANC8170-41-1	134	39	35	27	67	31	49	56	0-13	Yes	-	-	-
# LA07085CW-P4	131	7	34	19	68	18	60	13	0-15	-	-	-	-
# LANC8170-41-2	133	26	32	8	68	18	51	51	0-13	Yes	-	-	-
# LCS 08577-4	133	26	35	33	69	10	63	1	0-15	-	-	-	-
# LCS 229	132	15	35	35	67	31	63	1	0-15	-	Yes	-	-
# M09-9547	134	39	37	47	68	18	54	43	0-15	-	-	-	-
# M11-1027#	134	39	34	24	66	46	61	7	0-14	-	Het	-	-
# M11-2298	132	15	37	52	67	31	55	36	0-12	-	Het	-	-
# MD08-22-22-13-4	134	39	33	9	66	46	54	43	0-14	Yes	-	Ning	Yes
# MD26-H2-23-13-1	136	58	34	17	67	31	51	51	0-13	Yes	-	Ning	Yes
# MD09W272-8-4-13-3	133	26	33	14	66	46	56	33	0-14	Yes	-	-	-
# MDC07026-F2-19-13-4	133	26	34	16	69	10	55	36	0-19	Yes	-	-	-
# NC11-21401	133	26	32	5	65	59	56	33	0-15	Yes	-	-	Yes
# NC11-22289	130	2	34	21	66	46	50	54	0-16	-	-	-	-
# NC11-22291	130	2	35	29	67	31	52	48	0-13	-	-	-	-
# NC8170-45-17	134	39	36	43	67	31	52	48	0-14	Yes	-	Ning	-
# NC8170-86-2	133	26	35	32	65	59	55	36	0-17	Yes	-	-	-
# NC9305-7	134	39	38	55	66	46	55	36	0-12	-	-	-	-
# NC09-21916	133	26	35	34	68	18	61	7	0-17	-	-	-	-
# VA10W-96	130	2	35	37	68	18	53	45	0-15	-	-	-	-
# VA11W-108†	133	26	35	28	67	31	61	7	0-12	-	-	-	-
# VA11W-230	132	15	33	10	68	18	57	26	0-12	-	-	-	-
# VA11W-278	131	7	33	15	67	31	57	26	0-14	-	Yes	-	-
# VA12W-102	135	51	31	1	69	10	59	17	0-15	-	-	-	-
# VA12W-150	134	39	34	22	66	46	57	26	0-10	-	-	-	-
# VA12FHB-37	137	61	33	11	68	18	57	26	0-15	-	-	-	-
# VA12FHB-85	136	58	37	49	69	10	49	56	0-15	-	Het	-	-

Mean	133	35	68	55
LSD (0.05)	4	3	.	.
CV%	1.4	5.0	.	.