

SOUTHERN UNIFORM WINTER WHEAT SCAB NURSERY

2012 NURSERY REPORT

J. P. Murphy
R. A. Navarro

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 cooperators 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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North Carolina State University
Department of Crop Science
Box 7629
Raleigh, NC 27695-7629

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LOCATION NOTES

Brookston, Indiana

- Cooperator: Barton Fogleman, Jennifer Vonderwell.
- Agripro-Syngenta Seeds Inc.

Fayetteville and Newport, Arkansas

- Cooperator: Gene Milus
- University of Arkansas

Urbana, Illinois

- Cooperators: Fred Kolb and Eric Brucker.
- University of Illinois

Lexington, Kentucky

- Cooperators: Nicki Mundell and Dave Van Sanford
- University of Kentucky

Blacksburg, Virginia

- Cooperators: 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

Salisbury, Maryland.

- Cooperators: Jose Costa, and Aaron Cooper.
- University of Maryland.

Crowley, Louisiana.

- Cooperators: Harrison, and Arceneaux,.
- Louisiana State University.

Griffin, Georgia

- Cooperator: Jerry Johnson.
- University of Georgia.

Fundulea, Romania.

- Cooperator: Marianna Iltu.
- 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:

- Hessian Fly resistance evaluations.

Wooster, Ohio

USDA-ARS Soft Wheat Quality Laboratory

- Milling and Baking Quality evaluations.

"Look! There is UMN10. It's almost diagnostic for *Fhb1*, you know.



Plots were inoculated with three applications of four grams of autoclaved corn seed infected with *F. graminearum* isolates collected from the previous year's crop. Corn was applied three, two, and one week prior to anthesis.

Evaluation began 21 days following spray inoculation.



**View original, color versions of photographs at:
http://www.scabusa.org/research_vdhr.html#vdhr-updates**

Entry List and Pedigrees, 2012 Nursery

ENTRY NO	CULTIVAR/ DESIGNATION	PEDIGREE	CONTRIBUTOR	IN NURSERY SINCE
1	ERNIE	Check	CHECK(RES)	1999-00
2	COKER 9835	Check	CHECK(SUS)	2000-01
3	BESS	MO11769/Madison	CHECK(RES)	2006-07
4	JAMESTOWN	Roane / Pioneer 2691	Check (RES)	2007-08
5	NC09-21916	B990081 / NC96BGTA6 // McCormick	Murphy	2111-12
6	VA08W-613	FREEDOM / NEUSE"S" // VA98W-688	Griffey	2010-11
7	M08-8036#	COKER 9511/BRANSON	Fogleman	2010-11
8	IL02-18228	Pio25R26/ IL9634-24437 (IL90-4813/IL85-3132//Ning 7840) // IL95-4162	Kolb	2010-11
9	ARS07-1214	McCormick/Dominator	Marshall	2011-12
10	ARS09-173	GA961565-27-6/TAM303	Marshall	2011-12
11	ARS09-367	McCormick/Dominator	Marshall	2011-12
12	ARS09-446	FL89250/WX02ARS130	Marshall	2011-12
13	ARS09-513	GA931233-1-5/PI434658	Marshall	2011-12
14	ARS09-595	KS2055/NC96BGTD3	Marshall	2011-12
15	ARS09-643	LA95283CA78-1-2-B/TAM303	Marshall	2011-12
16	ARS09-724	AR800-1-3-1/WX03ARS0011	Marshall	2011-12
17	GA 051173W-S11	Truman /AGS 2010	Johnson	2011-12
18	GA 051207-S19	AGS 2000/SC996284//IN 981359C1	Johnson	2011-12
19	GA 051207-S21	AGS 2000/SC996284//IN 981359C1	Johnson	2011-12
20	GA 051173-S25	Truman /AGS 2010	Johnson	2011-12
21	GA 051173-S18	Truman /AGS 2010	Johnson	2011-12
22	GAMD08-27-E9-S13	SS 8641//McCormick 82/Ning 7840	Johnson	2011-12
23	GAMD08-27-E9-S14	SS 8641//McCormick 82/Ning 7840	Johnson	2011-12
24	GAMD08-27-E9-S15	SS 8641//McCormick 82/Ning 7840	Johnson	2011-12
25	LA'04039C-14-8	AGS 2060/ARLA97-1047-4-2	Milus/Harrison	2011-12
26	LA'04039C-10-6	AGS 2060/ARLA97-1047-4-2	Milus/Harrison	2011-12
27	LA05102C-1-2	LA96140BUA70-2/JAMESTOWN	Milus/Harrison	2011-12
28	LA05102C-8-8	LA96140BUA70-2/JAMESTOWN	Milus/Harrison	2011-12
29	LA05079D-55	(LA04153)GA971127-14-6-6/LA841,F1//ARLA97-1033-3-5(Freedom/Catbird)	Harrison	2011-12
30	LA05079F-P01	(LA04153)GA971127-14-6-6/LA841,F1//ARLA97-1033-3-5(Freedom/Catbird)	Harrison	2011-12
31	LA05079F-P03	(LA04153)GA971127-14-6-6/LA841,F1//ARLA97-1033-3-5(Freedom/Catbird)	Harrison	2011-12
32	LA05145D-12	JAMESTOWN/LA97113UC-124 - USED IN MAP STUDY	Harrison	2011-12
33	LA05145D-24	JAMESTOWN/LA97113UC-124 - USED IN MAP STUDY	Harrison	2011-12
34	MD03W61-11-2(11PW#108)	25R42/Chesapeake	Costa	2011-12
35	MD03W61-11-3(11PW#109)	25R42/Chesapeake	Costa	2011-12
36	UX0066-4-79(11PW#183)	Neuse*2/VA01W-476//SS8641	Costa	2011-12
37	MD08-22-1-6-4(11PW#189)	Ning7840*3/McCormick	Costa	2011-12
38	MD08-26-H2-23(11CVM-3)	Ning7840*3/McCormick//SS8641	Costa	2011-12
39	MH07-7483	M95-2994-1/P 25R57	Fogleman	2011-12
40	M09-9826#	COKER 9511/M03-3002	Fogleman	2011-12
41	NC08-23323	B960164 / NC94-7197 // McCormick	Murphy	2011-12
42	NC08-23324	B960164 / NC94-7197 // McCormick	Murphy	2011-12
43	NC09-22422 (Fhb1)	NC00-15332 / VA01-476 // Dominion	Murphy	2011-12
44	NC09-20986 (Fhb1)	NC00-15332 / VA01-476 // Dominion	Murphy	2011-12
45	NC8355-4 (Fhb1)	Oglethorpe / NC03-11465	Murphy	2011-12
46	NC8452-2	VA05W-500 / NC-Neuse	Murphy	2011-12
47	VA09W-52	GF921221E16 / McCormick"S" // VA99W-200	Griffey	2011-12
48	VA09W-73	SS 520 (VA96W-158) / VA99W-188 // TRIBUTE	Griffey	2011-12
49	VA09W-75	SS 520 (VA96W-158) / VA99W-188 // TRIBUTE	Griffey	2011-12
50	VA10W-42	JAMESTOWN / M99*3098 (TX85-264/VA88-52-69)	Griffey	2011-12
51	VA10W-140	VA01W-210 / SS 520 (VA96W-158) // TRIBUTE	Griffey	2011-12

FHB Incidence (1-100)

CULTIVAR/ DESIGNATION	KINSTON	S'BURY	B'BURG	LEX'TON	GRIFFIN	COL'BIA	MEAN	RANK
	NC	MD	VA	KY	GA	MO	ALL LOC.	
1 ERNIE	29	15	0	30	13	78	27	6
2 COKER 9835	88	85	53	70	72	85	75	51
3 BESS	17	25	13	25	4	28	18	1
4 JAMESTOWN	40	20	28	40	6	93	38	19
5 NC09-21916	29	18	10	45	4	70	29	9
6 VA08W-613	45	35	15	40	24	88	41	28
7 M08-8036#	14	60	25	45	.	80	39	20
8 IL02-18228	5	25	15	25	.	55	19	2
9 ARS07-1214	52	80	93	90	2	97	69	50
10 ARS09-173	67	25	25	30	19	80	41	28
11 ARS09-367	.	70	68	75	2	99	62	49
12 ARS09-446	.	55	30	55	27	99	52	46
13 ARS09-513	60	40	13	70	37	92	52	46
14 ARS09-595	53	45	25	60	13	97	49	42
15 ARS09-643	.	35	18	50	5	95	39	20
16 ARS09-724	43	35	25	45	3	83	39	20
17 GA 051173W-S11	30	40	13	35	4	78	33	13
18 GA 051207-S19	33	35	38	50	3	90	41	28
19 GA 051207-S21	28	30	30	55	6	88	39	20
20 GA 051173-S25	52	50	13	65	20	95	49	42
21 GA 051173-S18	20	20	15	50	10	78	32	11
22 GAMD08-27-E9-S13	45	15	35	65	,	75	41	28
23 GAMD08-27-E9-S14	30	40	40	50	,	73	41	28
24 GAMD08-27-E9-S15	34	20	25	65	,	83	39	20
25 LA'04039C-14-8	.	15	8	60	4	97	36	16
26 LA'04039C-10-6	.	20	43	30	2	85	35	14
27 LA05102C-1-2	.	10	8	50	4	70	27	6
28 LA05102C-8-8	.	13	15	40	4	75	28	8
29 LA05079D-55	.	75	18	55	8	92	48	41
30 LA05079F-P01	60	65	18	40	8	85	46	39
31 LA05079F-P03	33	25	43	55	8	88	42	36
32 LA05145D-12	43	75	23	60	6	90	49	42
33 LA05145D-24	56	40	65	65	22	88	56	48
34 MD03W61-11-2	35	15	23	60	9	93	39	20
35 MD03W61-11-3	29	45	18	60	27	78	43	37
36 UX0066-4-79	20	20	53	50	20	63	37	17
37 MD08-22-1-6-4	7	10	28	35	,	60	22	3
38 MD08-26-H2-23	23	25	18	35	8	76	31	10
39 MH07-7483	22	75	48	70	2	88	51	45
40 M09-9826#	48	15	30	40	2	78	35	14
41 NC08-23323	47	30	28	35	7	85	39	20
42 NC08-23324	42	40	50	60	2	80	46	39
43 NC09-22422 (Fhb1)	40	13	8	40	2	88	32	11
44 NC09-20986 (Fhb1)	14	25	5	35	12	63	26	4
45 NC8355-4 (Fhb1)	18	8	15	40	2	73	26	4
46 NC8452-2	18	40	50	55	.	73	41	28
47 VA09W-52	48	40	25	40	21	90	44	38
48 VA09W-73	20	35	40	40	.	97	40	27
49 VA09W-75	30	15	23	60	6	90	37	17
50 VA10W-42	9	45	47	50	.	85	41	28
51 VA10W-140	19	65	20	30	26	88	41	28
Mean	35	36	28	49	12	82	41	
LSD (0.05)	24	27	22	33	.	.	26	
CV%	34.0	37.2	39.6	33.0	.	.	32.2	

FHB Severity (1-100)

CULTIVAR/ DESIGNATION	F'VILLE	N'PORT	S'BURY	B'BURG	COL'BIA	K'STON	LEX'TON	SZEGED ¹	FUN'LEA ¹	MEAN
	AR	AR	MD	VA	MO	NC	KY	HUN	ROM	ALL LOC.
	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK
1 ERNIE	2 11	7 18	8 3	0 1	16 19	14 14	9 2	12 18	51 25	8 6
2 COKER 9835	63 46	57 48	50 47	10 48	38 43	63 42	50 49	25 51	64 29	44 49
3 BESS	3 13	0 1	10 13	1 2	3 1	14 14	8 1	17 43	53 26	7 2
4 JAMESTOWN	0 1	6 17	8 3	3 26	20 27	15 20	19 17	16 37	92 34	11 14
5 NC09-21916	7 21	7 18	20 25	1 2	13 15	24 28	23 27	14 28	100 39	14 24
6 VA08W-613	11 29	10 23	10 13	1 2	10 9	9 6	10 3	14 28	45 21	9 7
7 M08-8036#	7 21	4 11	25 28	3 26	12 10	11 10	20 21	14 28	100 39	12 17
8 IL02-18228	6 18	1 3	8 3	1 2	6 2	7 1	13 6	15 33	100 39	7 2
9 ARS07-1214	75 48	3 8	65 51	22 51	79 51	33 34	64 50	16 37	69 31	45 50
10 ARS09-173	37 43	23 40	15 20	4 35	27 37	45 40	10 4	12 18	100 39	22 40
11 ARS09-367	73 47	22 39	60 50	15 49	76 50	. .	68 51	21 50	46 23	49 51
12 ARS09-446	32 41	27 42	35 37	4 35	53 49	. .	25 31	13 22	91 33	28 44
13 ARS09-513	43 45	28 44	35 37	1 2	23 30	65 43	18 13	19 47	95 37	29 48
14 ARS09-595	37 43	30 45	50 47	3 26	47 46	14 14	21 25	19 47	100 39	28 44
15 ARS09-643	23 40	23 40	40 42	2 14	30 38	. .	29 36	19 47	100 39	24 42
16 ARS09-724	9 26	7 18	20 25	3 26	26 36	30 33	25 29	15 33	100 39	17 28
17 GA 051173W-S11	22 37	10 23	30 34	1 2	17 21	28 31	19 16	15 33	96 38	18 29
18 GA 051207-S19	13 32	18 36	15 20	5 38	35 40	19 25	25 30	13 22	93 36	18 29
19 GA 051207-S21	10 27	17 34	28 33	2 14	30 38	28 31	19 14	12 18	100 39	18 29
20 GA 051173-S25	22 37	20 38	35 37	1 2	52 48	35 35	41 47	18 46	100 39	28 44
21 GA 051173-S18	3 13	12 28	25 28	1 2	12 10	7 1	15 12	16 37	100 39	11 14
22 GAMD08-27-E9-S13	. .	. .	15 20	5 38	9 8	12 11	38 45	9 6	92 34	13 22
23 GAMD08-27-E9-S14	. .	. .	8 3	4 35	8 6	10 8	30 38	6 2	39 18	9 7
24 GAMD08-27-E9-S15	. .	. .	5 1	3 26	12 10	13 13	36 44	10 11	19 1	12 17
25 LA'04039C-14-8	1 7	5 15	8 3	1 2	19 26	. .	25 32	10 11	45 21	10 10
26 LA'04039C-10-6	1 7	4 11	15 20	5 38	16 19	. .	15 11	9 6	61 28	10 10
27 LA05102C-1-2	0 1	3 8	8 3	1 2	15 17	. .	40 46	7 3	44 20	11 14
28 LA05102C-8-8	0 1	1 3	8 3	2 14	12 10	. .	19 15	3 1	25 4	7 2
29 LA05079D-55	3 13	10 23	50 47	2 14	51 47	. .	31 41	13 22	26 6	24 42
30 LA05079F-P01	7 21	8 22	40 42	2 14	41 44	25 30	27 34	12 18	68 30	20 35
31 LA05079F-P03	11 29	15 30	25 28	5 38	25 33	12 11	24 28	9 6	32 15	16 27
32 LA05145D-12	12 31	27 42	40 42	2 14	25 33	24 28	29 37	7 3	82 32	21 38
33 LA05145D-24	32 41	4 11	35 37	18 50	45 45	35 35	48 48	9 6	28 8	28 44
34 MD03W61-11-2	5 17	10 23	15 20	3 26	24 31	60 41	31 40	8 5	21 2	20 35
35 MD03W61-11-3	6 18	5 15	25 28	2 14	20 27	17 23	29 35	11 15	30 12	14 24
36 UX0066-4-79	0 1	12 28	13 17	6 44	8 6	9 6	31 42	14 28	30 12	12 17
37 MD08-22-1-6-4	0 1	0 1	5 1	2 14	6 2	7 1	19 19	9 6	24 3	6 1
38 MD08-26-H2-23	0 1	3 8	10 13	2 14	14 16	16 22	21 22	13 22	34 17	10 10
39 MH07-7483	17 34	1 3	45 46	6 44	35 40	18 24	35 43	17 43	32 15	21 38
40 M09-9826#	8 25	17 34	13 17	3 26	17 21	14 14	14 9	11 15	28 8	12 17
41 NC08-23323	6 18	35 47	30 34	3 26	15 17	35 35	21 24	16 37	100 39	20 35
42 NC08-23324	10 27	30 45	10 13	7 47	17 21	40 38	12 5	16 37	100 39	18 29
43 NC09-22422 (Fhb1)	1 7	1 3	13 17	1 2	12 10	23 27	13 7	15 33	46 23	10 10
44 NC09-20986 (Fhb1)	1 7	2 7	8 3	1 2	7 4	7 1	15 10	13 22	27 7	7 2
45 NC8355-4 (Fhb1)	2 11	10 23	8 3	2 14	18 24	8 5	19 18	10 11	28 8	9 7
46 NC8452-2	7 21	4 11	20 25	6 44	7 4	14 14	25 33	11 15	29 11	12 17
47 VA09W-52	20 36	18 36	35 37	2 14	21 29	15 20	23 26	13 22	25 4	18 29
48 VA09W-73	18 35	15 30	25 28	5 38	35 40	40 38	30 39	14 28	54 27	23 41
49 VA09W-75	15 33	15 30	8 3	2 14	25 33	10 8	21 23	16 37	31 14	14 24
50 VA10W-42	3 13	7 18	30 34	5 38	18 24	14 14	19 20	10 11	39 18	13 22
51 VA10W-140	22 37	15 30	40 42	3 26	24 31	22 26	14 8	17 43	100 39	19 34

Mean	15	13	23	4	24	22	25	13	61	17
LSD (0.05)	10	8	17	3	.	19	18	5	.	19
CV%	.	.	36.0	41.2	.	44.0	36.0	.	.	56.5

¹DATA BY INDIVIDUAL ISOLATES ON FOLLOWING PAGES

**Severity by Individual Isolates,
Szeged, Hungary**

Cultivar/ Designation	<i>F. culm.</i>	<i>F. gram.</i>	<i>F. gram.</i>	<i>F. gram.</i>	Mean Rank
	Isol Fc 12375	Isol 12377/ 1	Isol 13.05	Isol Fg12377/2	
1 ERNIE	10	17	8	14	12 18
2 COKER 9835	40	25	19	15	25 51
3 BESS	26	18	12	13	17 43
4 JAMESTOWN	21	19	11	15	16 37
5 NC09-21916	18	14	11	14	14 28
6 VA08W-613	20	18	9	9	14 28
7 M08-8036#	14	16	15	11	14 28
8 IL02-18228	17	17	14	12	15 33
9 ARS07-1214	25	16	10	14	16 37
10 ARS09-173	7	13	15	13	12 18
11 ARS09-367	33	23	12	17	21 50
12 ARS09-446	27	12	5	8	13 22
13 ARS09-513	23	22	13	17	19 47
14 ARS09-595	28	19	15	14	19 47
15 ARS09-643	30	21	14	11	19 47
16 ARS09-724	21	16	13	11	15 33
17 GA 051173W-S11	23	18	9	10	15 33
18 GA 051207-S19	25	13	5	9	13 22
19 GA 051207-S21	22	11	6	8	12 18
20 GA 051173-S25	28	16	18	10	18 46
21 GA 051173-S18	26	15	12	12	16 37
22 GAMD08-27-E9-S13	13	9	5	8	9 6
23 GAMD08-27-E9-S14	7	7	5	5	6 2
24 GAMD08-27-E9-S15	13	9	8	8	10 11
25 LA'04039C-14-8	13	13	6	6	10 11
26 LA'04039C-10-6	14	9	5	8	9 6
27 LA05102C-1-2	11	7	4	6	7 3
28 LA05102C-8-8	5	3	3	3	3 1
29 LA05079D-55	24	13	7	10	13 22
30 LA05079F-P01	25	10	7	6	12 18
31 LA05079F-P03	16	9	4	8	9 6
32 LA05145D-12	5	14	4	6	7 3
33 LA05145D-24	19	10	4	2	9 6
34 MD03W61-11-2	12	8	8	6	8 5
35 MD03W61-11-3	18	11	9	6	11 15
36 UX0066-4-79	17	15	13	11	14 28
37 MD08-22-1-6-4	10	13	8	6	9 6
38 MD08-26-H2-23	16	17	9	10	13 22
39 MH07-7483	26	18	11	12	17 43
40 M09-9826#	18	13	7	7	11 15
41 NC08-23323	25	17	10	13	16 37
42 NC08-23324	21	21	12	12	16 37
43 NC09-22422 (Fhb1)	21	15	15	8	15 33
44 NC09-20986 (Fhb1)	14	16	10	12	13 22
45 NC8355-4 (Fhb1)	5	12	12	9	10 11
46 NC8452-2	21	8	6	8	11 15
47 VA09W-52	23	12	10	8	13 22
48 VA09W-73	26	11	8	9	14 28
49 VA09W-75	21	16	12	16	16 37
50 VA10W-42	13	11	7	7	10 11
51 VA10W-140	19	15	16	17	17 43
Mean	19	14	10	10	13
LSD(0.05)	.	.	.	.	5

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	420	394	407	24
2 COKER 9835	630	633	631	32
3 BESS	415	426	420	26
4 JAMESTOWN	719	659	689	37
5 NC09-21916	767	806	787	49
6 VA08W-613	317	445	381	23
7 M08-8036#	718	730	724	40
8 IL02-18228	705	714	709	39
9 ARS07-1214	480	614	547	29
10 ARS09-173	728	821	775	47
11 ARS09-367	407	420	413	25
12 ARS09-446	741	756	749	44
13 ARS09-513	635	695	665	34
14 ARS09-595	758	837	798	51
15 ARS09-643	714	867	790	50
16 ARS09-724	792	706	749	44
17 GA 051173W-S11	622	744	683	35
18 GA 051207-S19	727	787	757	46
19 GA 051207-S21	789	776	783	48
20 GA 051173-S25	744	727	736	42
21 GA 051173-S18	695	671	683	35
22 GAMD08-27-E9-S13	537	600	569	31
23 GAMD08-27-E9-S14	304	346	325	17
24 GAMD08-27-E9-S15	199	150	174	1
25 LA'04039C-14-8	243	464	354	19
26 LA'04039C-10-6	273	700	487	28
27 LA05102C-1-2	354	404	379	22
28 LA05102C-8-8	261	347	304	15
29 LA05079D-55	306	239	273	6
30 LA05079F-P01	572	549	561	30
31 LA05079F-P03	354	357	355	20
32 LA05145D-12	732	563	647	33
33 LA05145D-24	278	307	293	12
34 MD03W61-11-2(11PW#108)	200	298	249	4
35 MD03W61-11-3(11PW#109)	330	268	299	13
36 UX0066-4-79(11PW#183)	290	264	277	9
37 MD08-22-1-6-4(11PW#189)	253	174	214	2
38 MD08-26-H2-23(11CVM-3)	282	277	279	10
39 MH07-7483	255	365	310	16
40 M09-9826#	235	312	273	6
41 NC08-23323	718	738	728	41
42 NC08-23324	703	700	701	38
43 NC09-22422 (Fhb1)	381	359	370	21
44 NC09-20986 (Fhb1)	205	241	223	3
45 NC8355-4 (Fhb1)	267	236	252	5
46 NC8452-2	289	308	299	13
47 VA09W-52	243	305	274	8
48 VA09W-73	506	358	432	27
49 VA09W-75	267	309	288	11
50 VA10W-42	426	230	328	18
51 VA10W-140	714	759	737	43

Mean	480	505	493
LSD (0.05)	.	.	52

FHB Index (1-100)

CULTIVAR/ DESIGNATION	S'BURY		B'BURG		LEX'TON		K'STON		COL'BIA		MEAN	
	MD	VA	VA	VA	KY	KY	NC	NC	MO	MO	ALL LOC.	ALL LOC.
	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK
1 ERNIE	1	1	0	1	3	2	5	18	12	18	4	5
2 COKER 9835	43	49	5	48	35	49	54	43	36	44	35	49
3 BESS	3	14	0	1	2	1	2	8	1	1	2	1
4 JAMESTOWN	2	9	1	21	8	17	6	23	19	28	7	17
5 NC09-21916	4	19	0	1	10	22	4	13	9	9	5	8
6 VA08W-613	4	19	0	1	4	5	4	13	9	9	4	5
7 M08-8036#	16	40	1	21	9	20	1	3	9	9	7	17
8 IL02-18228	2	9	0	1	3	2	0	1	4	2	2	1
9 ARS07-1214	52	51	20	51	58	51	17	35	77	51	45	50
10 ARS09-173	5	24	1	21	3	2	31	41	21	31	12	35
11 ARS09-367	46	50	10	49	51	50	.	.	76	50	45	50
12 ARS09-446	20	42	1	21	14	33	.	.	53	49	22	45
13 ARS09-513	14	35	0	1	13	30	39	42	22	32	18	41
14 ARS09-595	22	43	1	21	13	30	7	24	47	46	18	41
15 ARS09-643	14	35	0	1	14	33	.	.	28	39	14	39
16 ARS09-724	9	30	1	21	11	25	13	33	22	32	11	33
17 GA 051173W-S11	13	34	0	1	7	11	10	31	13	19	9	25
18 GA 051207-S19	6	26	2	37	12	27	8	28	32	41	12	35
19 GA 051207-S21	7	28	1	21	10	22	7	24	27	38	10	28
20 GA 051173-S25	17	41	0	1	27	47	18	38	50	48	22	45
21 GA 051173-S18	5	24	0	1	8	17	1	3	9	9	5	8
22 GAMD08-27-E9-S13	3	14	2	37	25	45	5	18	7	8	8	21
23 GAMD08-27-E9-S14	4	19	2	37	15	36	3	10	6	6	6	13
24 GAMD08-27-E9-S15	1	1	1	21	23	44	5	18	10	14	8	21
25 LA'04039C-14-8	1	1	0	1	15	36	.	.	18	27	8	21
26 LA'04039C-10-6	4	19	3	43	5	7	.	.	13	19	6	13
27 LA05102C-1-2	1	1	0	1	20	43	.	.	11	16	7	17
28 LA05102C-8-8	1	1	0	1	7	11	.	.	9	9	4	5
29 LA05079D-55	38	48	0	1	17	39	.	.	48	47	25	48
30 LA05079F-P01	28	45	0	1	11	25	15	34	34	43	18	41
31 LA05079F-P03	6	26	2	37	13	30	4	13	22	32	10	28
32 LA05145D-12	30	46	1	21	17	39	11	32	22	32	16	40
33 LA05145D-24	14	35	12	50	31	48	20	39	39	45	23	47
34 MD03W61-11-2	3	14	1	21	19	42	21	40	23	37	13	37
35 MD03W61-11-3	12	33	0	1	17	39	5	18	16	25	10	28
36 UX0066-4-79	3	14	3	43	16	38	2	8	6	6	6	13
37 MD08-22-1-6-4	1	1	1	21	7	11	0	1	4	2	2	1
38 MD08-26-H2-23	3	14	0	1	7	11	4	13	11	16	5	8
39 MH07-7483	34	47	3	43	25	45	4	13	30	40	19	44
40 M09-9826#	2	9	1	21	6	10	7	24	13	19	6	13
41 NC08-23323	9	30	1	21	7	11	17	35	13	19	10	28
42 NC08-23324	4	19	4	47	7	11	17	35	14	24	9	25
43 NC09-22422 (Fhb1)	2	9	0	1	5	7	9	30	10	14	5	8
44 NC09-20986 (Fhb1)	2	9	0	1	5	7	1	3	5	4	3	4
45 NC8355-4 (Fhb1)	1	1	0	1	8	17	1	3	13	19	5	8
46 NC8452-2	8	29	3	43	14	33	3	10	5	4	7	17
47 VA09W-52	14	35	1	21	9	20	7	24	19	28	10	28
48 VA09W-73	9	30	2	37	12	27	8	28	34	42	13	37
49 VA09W-75	1	1	1	21	12	27	3	10	22	32	8	21
50 VA10W-42	14	35	2	37	10	22	1	3	16	25	9	25
51 VA10W-140	26	44	1	21	4	5	5	18	20	30	11	33

Mean	11	2	25	9	21	12
LSD (0.05)	14	2	18	11	.	16
CV%	63.1	57.0	34.9	61.0	.	71.4

Percent Fusarium Damaged Kernels

Cultivar/ Designation	F'VILLE		N'PORT		K'STON		COL'BIA		S'BURY		SZEGED		LEX'TON		MEAN	
	AR	RANK	AR	RANK	NC	RANK	MO	RANK	MD	RANK	HUN	RANK	KY	RANK	All	LOCS
1 ERNIE	1	2	11	23	2	4	14	8	11	31	0	1	6	22	7	12
2 COKER 9835	32	45	67	48	23	43	59	48	23	47	27	49	21	50	36	49
3 BESS	2	6	4	7	3	10	9	3	8	20	0	1	4	9	4	2
4 JAMESTOWN	2	6	8	14	5	23	16	11	5	6	0	1	5	16	6	9
5 NC09-21916	3	12	5	8	4	17	12	4	5	6	0	1	4	9	5	5
6 VA08W-613	9	32	9	18	2	4	16	11	6	11	0	1	3	3	6	9
7 M08-8036#	3	12	2	5	1	1	6	2	16	43	0	1	8	32	5	5
8 IL02-18228	3	12	1	1	1	1	4	1	4	4	0	1	3	3	2	1
9 ARS07-1214	50	48	50	46	32	44	51	44	35	50	35	50	17	47	38	50
10 ARS09-173	7	30	17	34	11	36	34	35	5	6	0	1	5	16	11	29
11 ARS09-367	45	46	60	47	39	45	59	48	50	51	42	51	19	49	45	51
12 ARS09-446	14	39	20	40	.	.	68	50	10	27	7	42	12	42	21	45
13 ARS09-513	29	44	28	44	14	39	72	51	16	43	0	1	10	40	24	47
14 ARS09-595	28	43	27	43	3	10	56	47	4	4	2	30	10	40	18	43
15 ARS09-643	4	21	18	3	.	.	48	43	10	27	5	37	7	30	15	40
16 ARS09-724	4	21	10	20	4	17	16	11	10	27	0	1	8	32	7	12
17 GA 051173W-S11	9	32	6	10	18	40	24	22	13	34	7	42	5	16	12	33
18 GA 051207-S19	2	6	12	26	8	30	52	46	7	17	4	34	6	22	13	35
19 GA 051207-S21	3	12	12	26	8	30	15	9	6	11	4	34	4	9	7	12
20 GA 051173-S25	22	41	22	42	5	23	47	41	20	46	24	48	22	51	23	46
21 GA 051173-S18	2	6	5	8	3	10	41	38	10	27	2	30	5	16	10	25
22 GAMD08-27-E9-S13	.	.	.	.	3	10	32	32	8	20	0	1	6	22	10	25
23 GAMD08-27-E9-S14	.	.	.	.	8	30	16	11	14	38	0	1	4	9	8	18
24 GAMD08-27-E9-S15	.	.	.	.	6	26	29	27	9	24	0	1	3	3	9	21
25 LA'04039C-14-8	1	4	6	10	.	.	15	9	6	11	0	1	7	30	5	5
26 LA'04039C-10-6	1	3	8	14	.	.	28	26	5	6	0	1	6	22	7	12
27 LA05102C-1-2	1	1	1	1	.	.	24	22	3	2	0	1	3	3	4	2
28 LA05102C-8-8	1	4	1	1	.	.	23	21	2	1	0	1	4	9	4	2
29 LA05079D-55	3	12	16	31	3	10	51	44	13	34	11	44	12	42	16	42
30 LA05079F-P01	2	6	12	26	13	38	47	41	23	47	4	34	8	32	15	40
31 LA05079F-P03	9	32	17	34	12	37	29	27	11	31	6	41	13	44	14	38
32 LA05145D-12	7	30	18	37	6	26	41	38	15	40	3	32	9	37	14	38
33 LA05145D-24	47	47	40	45	19	42	32	32	13	34	5	37	17	47	25	48
34 MD03W61-11-2	6	28	11	23	9	33	38	36	8	20	0	1	14	45	12	33
35 MD03W61-11-3	2	6	8	14	5	23	21	19	8	20	0	1	8	32	8	18
36 UX0066-4-79	5	26	10	20	2	4	26	24	15	40	0	1	6	22	9	21
37 MD08-22-1-6-4	3	12	1	1	1	1	39	37	6	11	0	1	1	1	7	12
38 MD08-26-H2-23	5	26	3	6	7	29	19	18	7	17	1	27	2	2	6	9
39 MH07-7483	22	41	19	39	4	17	29	27	29	49	18	46	16	46	20	44
40 M09-9826#	4	21	20	40	10	35	45	40	6	11	0	1	6	22	13	35
41 NC08-23323	3	12	12	26	3	10	17	15	7	17	3	32	9	37	8	18
42 NC08-23324	3	12	16	31	9	33	27	25	13	34	5	37	5	16	11	29
43 NC09-22422 (Fhb1)	12	37	8	14	4	17	32	32	6	11	0	1	3	3	9	21
44 NC09-20986 (Fhb1)	4	21	9	18	2	4	21	19	9	24	0	1	4	9	7	12
45 NC8355-4 (Fhb1)	11	35	13	30	2	4	31	31	9	24	0	1	5	16	10	25
46 NC8452-2	21	40	6	10	3	10	13	7	18	45	5	37	8	32	11	29
47 VA09W-52	12	37	17	34	18	40	18	16	5	6	17	45	6	22	13	35
48 VA09W-73	11	35	11	23	4	17	12	4	14	38	20	47	6	22	11	29
49 VA09W-75	3	12	6	10	4	17	12	4	3	2	1	27	3	3	5	5
50 VA10W-42	4	21	10	20	6	26	18	16	12	33	0	1	9	37	9	21
51 VA10W-140	6	28	16	31	2	4	30	30	15	40	1	27	4	9	10	25
Mean	10		15		8		30		11		5		8		12	
LSD (0.05)	8		9		8		.		14		.		8		15	
CV%	.		.		52.8		.		59.4		.		49.2		59.9	

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

CULTIVAR/ DESIGNATION	K'STON NC		COL'BIA MO		S'BURY MD		LEX'TON KY		MEAN ALL LOC.	
	RANK		RANK		RANK		RANK		RANK	
1 ERNIE	14	14	33	9	11	10	14	3	15	3
2 COKER 9835	54	43	48	36	50	49	44	49	49	49
3 BESS	10	9	12	1	14	19	11	1	12	1
4 JAMESTOWN	18	21	39	18	10	7	20	15	22	14
5 NC09-21916	17	18	31	8	13	15	22	20	21	10
6 VA08W-613	17	18	35	12	16	21	16	6	21	10
7 M08-8036#	8	4	25	3	32	42	23	21	22	14
8 IL02-18228	4	1	18	2	11	10	13	2	12	1
9 ARS07-1214	38	40	70	48	57	50	53	51	55	50
10 ARS09-173	38	40	45	33	14	19	14	3	28	35
11 ARS09-367	.	.	75	50	59	51	50	50	59	51
12 ARS09-446	.	.	76	51	31	41	29	37	43	46
13 ARS09-513	43	42	69	46	29	39	30	39	43	46
14 ARS09-595	21	28	71	49	30	40	28	34	37	41
15 ARS09-643	.	.	60	45	27	36	27	31	35	39
16 ARS09-724	23	31	39	18	21	29	24	24	27	27
17 GA 051173W-S11	25	32	37	14	26	35	18	11	27	27
18 GA 051207-S19	19	24	54	42	18	23	25	27	29	36
19 GA 051207-S21	20	25	44	30	19	25	24	24	27	27
20 GA 051173-S25	28	35	57	43	34	43	41	47	40	45
21 GA 051173-S18	9	6	44	30	18	23	21	17	23	18
22 GAMD08-27-E9-S13	18	21	40	24	12	13	33	44	26	26
23 GAMD08-27-E9-S14	15	16	28	6	20	26	26	29	22	14
24 GAMD08-27-E9-S15	17	18	37	14	11	10	31	42	24	22
25 LA'04039C-14-8	.	.	39	18	9	6	28	34	23	18
26 LA'04039C-10-6	.	.	43	29	13	15	16	6	21	10
27 LA05102C-1-2	.	.	35	12	6	1	28	34	21	10
28 LA05102C-8-8	.	.	38	17	7	2	19	14	19	6
29 LA05079D-55	.	.	69	46	43	47	31	42	45	48
30 LA05079F-P01	30	37	58	44	41	46	23	21	38	43
31 LA05079F-P03	18	21	42	28	20	26	29	37	27	27
32 LA05145D-12	22	29	52	41	40	45	30	39	36	40
33 LA05145D-24	35	39	49	38	28	38	41	47	38	43
34 MD03W61-11-2	32	38	49	38	12	13	33	44	32	38
35 MD03W61-11-3	16	17	39	18	24	31	30	39	27	27
36 UX0066-4-79	9	6	25	3	16	21	27	31	19	6
37 MD08-22-1-6-4	4	1	39	18	7	2	17	8	17	5
38 MD08-26-H2-23	14	14	34	10	13	15	18	11	20	9
39 MH07-7483	13	11	48	36	48	48	38	46	37	41
40 M09-9826#	22	29	49	38	10	7	18	11	25	23
41 NC08-23323	26	33	34	10	21	29	21	17	25	23
42 NC08-23324	28	35	37	14	20	26	24	24	27	27
43 NC09-22422 (Fhb1)	20	25	44	30	10	7	17	8	23	18
44 NC09-20986 (Fhb1)	7	3	26	5	13	15	17	8	16	4
45 NC8355-4 (Fhb1)	8	4	40	24	8	4	20	15	19	6
46 NC8452-2	11	10	30	7	25	34	27	31	23	18
47 VA09W-52	26	33	46	35	24	31	21	17	29	36
48 VA09W-73	20	25	40	24	24	31	23	21	27	27
49 VA09W-75	13	11	41	27	8	4	26	29	22	14
50 VA10W-42	9	6	39	18	27	36	25	27	25	23
51 VA10W-140	13	11	45	33	37	44	14	3	27	27

Mean	20	43	22	25	28
LSD (0.05)	.	.	14	.	15
CV%	.	.	32.1	.	27.6

SEED CHARACTERISTICS and GRAIN YIELD

Cultivar/ Designation	Grain Yield (gr)	Grain Yield (gr)	Grain Yield (gr)	RANK	Seed Weight Inocul / Control %	RANK	Grain Weight gr. S'BURY MD
	F'VILLE AR	NEWPORT AR	MEAN ALL LOC.		FUND"LEA ROM		
1 ERNIE	487	299	393	34	36	41	4.7
2 COKER 9835	230	87	158	48	14	51	3.0
3 BESS	591	379	485	21	78	16	3.4
4 JAMESTOWN	612	491	552	10	54	31	4.0
5 NC09-21916	431	428	430	31	42	39	3.2
6 VA08W-613	569	442	505	19	68	22	3.9
7 M08-8036#	613	370	492	20	57	28	3.0
8 IL02-18228	414	459	437	30	50	33	3.5
9 ARS07-1214	315	114	214	47	57	28	2.5
10 ARS09-173	458	476	467	24	33	45	3.7
11 ARS09-367	322	114	218	46	75	18	2.9
12 ARS09-446	507	320	414	33	31	49	4.5
13 ARS09-513	284	213	248	45	32	47	3.4
14 ARS09-595	353	336	345	40	33	45	3.6
15 ARS09-643	631	493	562	8	52	32	4.1
16 ARS09-724	657	532	595	3	42	39	3.1
17 GA 051173W-S11	358	417	388	35	32	47	2.8
18 GA 051207-S19	518	421	470	23	46	36	4.3
19 GA 051207-S21	538	431	485	22	26	50	4.1
20 GA 051173-S25	489	445	467	25	36	41	3.4
21 GA 051173-S18	411	517	464	26	60	25	3.4
22 GAMD08-27-E9-S13	.	.	.	.	92	10	2.5
23 GAMD08-27-E9-S14	.	.	.	.	59	26	2.5
24 GAMD08-27-E9-S15	.	.	.	.	98	7	2.5
25 LA'04039C-14-8	582	335	459	28	86	12	3.9
26 LA'04039C-10-6	665	418	541	11	43	38	4.2
27 LA05102C-1-2	638	526	582	4	100	1	3.3
28 LA05102C-8-8	645	688	667	1	75	18	3.9
29 LA05079D-55	586	522	554	9	58	27	3.2
30 LA05079F-P01	629	517	573	7	63	24	3.4
31 LA05079F-P03	499	548	523	15	67	23	3.8
32 LA05145D-12	549	494	522	17	36	41	3.3
33 LA05145D-24	401	209	305	42	100	1	3.8
34 MD03W61-11-2	647	501	574	6	71	21	3.4
35 MD03W61-11-3	666	527	597	2	83	14	3.5
36 UX0066-4-79	417	290	354	37	49	34	3.3
37 MD08-22-1-6-4	473	152	313	41	96	9	2.6
38 MD08-26-H2-23	422	453	438	29	47	35	2.8
39 MH07-7483	580	482	531	13	83	14	3.0
40 M09-9826#	616	241	429	32	100	1	3.8
41 NC08-23323	557	137	347	39	46	36	3.6
42 NC08-23324	509	78	294	43	78	16	3.4
43 NC09-22422 (Fhb1)	584	465	524	14	92	10	3.9
44 NC09-20986 (Fhb1)	594	451	523	16	100	1	4.0
45 NC8355-4 (Fhb1)	467	307	387	36	72	20	3.7
46 NC8452-2	394	303	349	38	97	8	2.9
47 VA09W-52	504	422	463	27	100	1	4.3
48 VA09W-73	584	483	534	12	56	30	3.7
49 VA09W-75	593	447	520	18	100	1	3.9
50 VA10W-42	668	484	576	5	84	13	3.4
51 VA10W-140	359	155	257	44	34	44	3.4
Mean	513	384	455		63		3.5
LSD (0.05)	92	58	47		.		0.7
CV%	.	.	18.4		.		9.8

DON
(ppm)

Cultivar/ Designation	B'BURG		LEX'TON		KINSTON		F'VILLE		NEWPORT		MEAN ALL LOC.	
	VA		KY		NC		AR		AR			
	RANK		RANK		RANK		RANK		RANK		RANK	
1 ERNIE	2	25	8	19	7	17	1	4	7	24	5	17
2 COKER 9835	3	42	17	44	39	42	9	46	33	46	20	48
3 BESS	2	25	5	4	5	11	2	21	3	7	3	3
4 JAMESTOWN	1	4	8	19	3	4	1	4	4	10	3	3
5 NC09-21916	1	4	6	10	3	4	1	4	2	4	3	3
6 VA08W-613	1	4	5	4	4	8	2	21	6	21	4	10
7 M08-8036#	1	4	6	10	17	32	1	4	2	4	6	23
8 IL02-18228	1	4	3	1	6	14	1	4	1	1	2	1
9 ARS07-1214	13	51	31	50	37	40	24	48	38	48	29	51
10 ARS09-173	1	4	14	41	10	23	3	34	20	45	10	40
11 ARS09-367	9	50	38	51	31	39	21	47	36	47	27	50
12 ARS09-446	2	25	20	48	.	.	7	43	14	42	12	43
13 ARS09-513	2	25	12	37	13	28	4	37	14	42	9	36
14 ARS09-595	1	4	8	19	4	8	6	41	9	33	6	23
15 ARS09-643	1	4	20	48	.	.	5	39	13	38	12	43
16 ARS09-724	2	25	9	27	38	41	2	21	5	14	11	42
17 GA 051173W-S11	3	42	11	33	96	44	7	43	13	38	26	49
18 GA 051207-S19	2	25	9	27	16	30	2	21	8	29	7	29
19 GA 051207-S21	2	25	7	16	24	36	2	21	8	29	9	36
20 GA 051173-S25	2	25	13	40	8	19	6	41	13	38	9	36
21 GA 051173-S18	1	4	9	27	3	4	2	21	3	7	4	10
22 GAMD08-27-E9-S13	2	25	6	10	7	17	.	.	.	.	4	10
23 GAMD08-27-E9-S14	3	42	6	10	10	23	.	.	.	.	5	17
24 GAMD08-27-E9-S15	2	25	6	10	8	19	.	.	.	.	4	10
25 LA'04039C-14-8	1	4	7	16	.	.	0	1	3	7	5	17
26 LA'04039C-10-6	1	4	11	33	.	.	1	4	5	14	6	23
27 LA05102C-1-2	0	1	4	2	.	.	0	1	1	1	3	3
28 LA05102C-8-8	1	4	5	4	.	.	0	1	1	1	4	10
29 LA05079D-55	1	4	16	42	.	.	1	4	9	33	9	36
30 LA05079F-P01	2	25	10	30	8	19	1	4	6	21	5	17
31 LA05079F-P03	5	48	17	44	8	19	2	21	8	29	8	34
32 LA05145D-12	1	4	12	37	4	8	2	21	12	36	6	23
33 LA05145D-24	4	46	19	47	18	33	8	45	14	42	13	46
34 MD03W61-11-2(11PW#108)	1	4	16	42	6	14	2	21	7	24	7	29
35 MD03W61-11-3(11PW#109)	2	25	10	30	24	36	1	4	6	21	8	34
36 UX0066-4-79(11PW#183)	2	25	8	19	3	4	1	4	7	24	4	10
37 MD08-22-1-6-4(11PW#189)	1	4	5	4	2	1	1	4	2	4	2	1
38 MD08-26-H2-23(11CVM-3)	1	4	5	4	5	11	1	4	4	10	3	3
39 MH07-7483	5	48	18	46	24	36	5	39	11	35	12	43
40 M09-9826#	1	4	8	19	16	30	1	4	5	14	6	23
41 NC08-23323	2	25	11	33	21	35	2	21	12	36	10	40
42 NC08-23324	4	46	8	19	61	43	2	21	13	38	17	47
43 NC09-22422 (Fhb1)	1	4	4	2	10	23	1	4	4	10	4	10
44 NC09-20986 (Fhb1)	0	1	5	4	2	1	1	4	5	14	3	3
45 NC8355-4 (Fhb1)	0	1	8	19	2	1	1	4	7	24	3	3
46 NC8452-2	2	25	12	37	5	11	4	37	5	14	6	23
47 VA09W-52	1	4	7	16	6	14	3	34	8	29	5	17
48 VA09W-73	2	25	10	30	14	29	3	34	7	24	7	29
49 VA09W-75	1	4	8	19	20	34	1	4	4	10	7	29
50 VA10W-42	3	42	11	33	11	27	2	21	5	14	7	29
51 VA10W-140	2	25	6	10	10	23	2	21	5	14	5	17

Mean	2	9	15	3	9	8
LSD (0.05)	.	8	20	8	2	15
CV%	.	41.0	67.8	54.0	36.0	96.1

Greenhouse Screening

	Cultivar/ Designation	MO SEVERITY	RANK
1	ERNIE	23	14
2	COKER 9835	63	51
3	BESS	20	6
4	JAMESTOWN	33	33
5	NC09-21916	29	26
6	VA08W-613	28	22
7	M08-8036#	39	44
8	IL02-18228	24	15
9	ARS07-1214	42	46
10	ARS09-173	47	50
11	ARS09-367	47	49
12	ARS09-446	33	31
13	ARS09-513	32	30
14	ARS09-595	28	23
15	ARS09-643	33	34
16	ARS09-724	27	20
17	GA 051173W-S11	23	13
18	GA 051207-S19	34	37
19	GA 051207-S21	26	18
20	GA 051173-S25	29	25
21	GA 051173-S18	21	10
22	GAMD08-27-E9-S13	18	4
23	GAMD08-27-E9-S14	10	2
24	GAMD08-27-E9-S15	9	1
25	LA'04039C-14-8	23	12
26	LA'04039C-10-6	19	5
27	LA05102C-1-2	29	24
28	LA05102C-8-8	45	48
29	LA05079D-55	26	19
30	LA05079F-P01	30	29
31	LA05079F-P03	29	27
32	LA05145D-12	44	47
33	LA05145D-24	41	45
34	MD03W61-11-2	26	17
35	MD03W61-11-3	20	9
36	UX0066-4-79	38	41
37	MD08-22-1-6-4	33	35
38	MD08-26-H2-23	38	40
39	MH07-7483	20	8
40	M09-9826#	20	7
41	NC08-23323	25	16
42	NC08-23324	22	11
43	NC09-22422 (Fhb1)	35	38
44	NC09-20986 (Fhb1)	30	28
45	NC8355-4 (Fhb1)	34	36
46	NC8452-2	16	3
47	VA09W-52	33	32
48	VA09W-73	36	39
49	VA09W-75	39	43
50	VA10W-42	27	21
51	VA10W-140	39	42

Mean

30

SSR Analyses of Regions Associated with FHB Resistance and Other Pertinent Loci

DESIGNATION	<i>Rht-B1b</i>	<i>Rht-D1b</i>	<i>Rht8</i>	<i>Ppd-D1a</i>	<i>vrn-A1</i>	<i>Lr34/Yr18</i>	<i>Lr37/Yr17</i>	<i>Sr36</i>	<i>St24/Lr24</i>	<i>St2</i>	<i>Lr9</i>	<i>Qyr.uga-2AS</i>	<i>Fhb1</i>	<i>Fhb 5A ERNIE</i>
1 ERNIE	het	no	no	het	het	no	no	yes	no	no	no	no	no	yes
2 COKER 9835	no	yes	no	yes	<i>vrn-A1b</i>	no	no	yes	no	no	yes	no	no	no
3 BESS	yes	no	no	no	<i>vrn-A1b</i>	no	no	no	no	no	no	no	no	no
4 JAMESTOWN	no	yes	no	yes	<i>vrn-A1a</i>	no	no	no	no	no	no	no	no	no
5 NC09-21916	no	yes	no	yes	<i>vrn-A1b</i>	no	no	no	no	no	no	no	no	no
6 VA08W-613	no	yes	no	yes	<i>vrn-A1a</i>	no	no	no	no	no	yes	no	no	no
7 M08-8036#	no	no	no	yes	<i>vrn-A1b</i>	no	no	yes	no	no	yes	no	no	no
8 IL02-18228	yes	het	no	no	<i>vrn-A1b</i>	no	no	no	no	no	no	no	no	no
9 ARS07-1214	yes	no	no	no	<i>vrn-A1b</i>	no	no	no	yes	no	no	no	no	no
10 ARS09-173	yes	no	no	yes	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	no	no
11 ARS09-367	yes	no	no	no	<i>vrn-A1b</i>	no	no	no	yes	no	no	no	no	no
12 ARS09-446	no	no	no	no	<i>vrn-A1b</i>	no	no	yes	no	no	no	no	no	no
13 ARS09-513	no	no	het	yes	<i>vrn-A1b</i>	no	no	het	no	no	no	no	no	no
14 ARS09-595	no	no	no	yes	<i>vrn-A1a</i>	no	no	yes	no	no	no	no	no	no
15 ARS09-643	no	yes	no	yes	<i>vrn-A1b</i>	no	het	no	no	no	no	no	no	no
16 ARS09-724	yes	no	no	yes	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	no	no
17 GA 051173W-S11	no	yes	no	het	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	no	no
18 GA 051207-S19	no	yes	no	yes	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	no	no
19 GA 051207-S21	no	yes	no	yes	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	no	no
20 GA 051173-S25	yes	no	no	yes	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	no	no
21 GA 051173-S18	no	yes	no	yes	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	no	no
22 GAMD08-27-E9-S13	no	yes	no	no	<i>vrn-A1b</i>	no	het	no	no	no	no	no	yes	no
23 GAMD08-27-E9-S14	no	yes	no	no	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	yes	no
24 GAMD08-27-E9-S15	no	yes	no	no	<i>vrn-A1b</i>	no	het	no	no	no	no	no	yes	no
25 LA'04039C-14-8	no	no	no	het	<i>vrn-A1b</i>	no	no	yes	no	no	yes	no	no	no
26 LA'04039C-10-6	no	no	no	het	<i>vrn-A1b</i>	no	no	yes	yes	no	no	yes	no	no
27 LA05102C-1-2	no	no	no	yes	het	no	no	yes	no	no	no	yes	no	no
28 LA05102C-8-8	no	no	no	yes	<i>vrn-A1b</i>	no	no	yes	no	no	no	no	no	no
29 LA05079D-55	yes	no	no	no	<i>vrn-A1b</i>	no	no	no	no	no	no	no	no	no
30 LA05079F-P01	yes	no	no	no	<i>vrn-A1b</i>	no	no	no	no	no	yes	no	no	no
31 LA05079F-P03	yes	no	no	het	<i>vrn-A1b</i>	no	no	yes	no	no	yes	no	no	no
32 LA05145D-12	no	yes	no	yes	<i>vrn-A1a</i>	no	no	yes	no	no	no	no	no	no
33 LA05145D-24	no	yes	no	yes	<i>vrn-A1a</i>	no	no	no	no	no	yes	no	no	no
34 MD03W61-11-2	no	yes		yes	<i>vrn-A1b</i>	no	no	no	no	no	no	no	no	
35 MD03W61-11-3	no	yes	no	yes	<i>vrn-A1b</i>	no	no	yes	no	no	no	no	no	no
36 UX0066-4-79	no	yes	no	yes	<i>vrn-A1b</i>	no	no	yes	no	no	no	yes		het
37 MD08-22-1-6-4	no	yes	no	no	<i>vrn-A1b</i>	no	no	no	yes	no	no	no	yes	no
38 MD08-26-H2-23	no	yes	no	yes	<i>vrn-A1b</i>	no	yes	no	yes	no	no	no	yes	no
39 MH07-7483	yes	no	no	yes	<i>vrn-A1b</i>	no	no	no	no	no	no	no	no	no
40 M09-9826#	yes	no	no	het	<i>vrn-A1b</i>	no	no	yes	no	no	yes	no	no	no
41 NC08-23323	no	yes	no	yes	<i>vrn-A1b</i>	no	no	no	no	no	yes	no	no	no
42 NC08-23324	no	yes	no	het	<i>vrn-A1b</i>	no	no	no	no	no	yes	no	no	no
43 NC09-22422 (Fhb1)	het	no	no	het	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	yes	no
44 NC09-20986 (Fhb1)	yes	no	no	het	<i>vrn-A1b</i>	no	yes	no	no	no	no	no	yes	no
45 NC8355-4 (Fhb1)	no	yes	no	yes	<i>vrn-A1a</i>	no	no	yes	no	no	no	no	yes	no
46 NC8452-2	no	yes	no	yes	<i>vrn-A1b</i>	no	no	het	yes	no	yes	het	no	het
47 VA09W-52	no	yes	no	yes	<i>vrn-A1a</i>	no	no	no	no	no	no	no	no	no
48 VA09W-73	no	het	no	no	<i>vrn-A1b</i>	no	no	no	no	no	yes	no	no	no
49 VA09W-75	no	yes	no	het	<i>vrn-A1b</i>	no	no	no	no	no	yes	no	no	no
50 VA10W-42	yes	no	no	yes	<i>vrn-A1b</i>	no	no	no	no	no	no	no	no	no
51 VA10W-140	no	yes	no	yes	<i>vrn-A1b</i>	no	no	no	no	no	yes	no	no	no

SSR Analyses of Regions Associated with FHB Resistance and Other Pertinent Loci

DESIGNATION	Fhb Ernie 3Bc	Fhb 5A Ning7840	Fhb 2DL-Wuhan1/W14	1RS:1AL	1RS:1BL	H13	H9	Bdv2/3	Sbm1	Bx7 over-expressing	Glu-A1	Glu-D1	TaSus2-2B
1 ERNIE		no	no	no	no	no	no	no	no	no	Ax1 or null	het	yes
2 COKER 9835	yes	no	no	no	no	no	no	no	no	yes	Ax2*	2+12	yes
3 BESS	no	no	no	no	no	no	no	no	no	yes	Ax1 or null	2+12	no
4 JAMESTOWN	no	no	no	no	no	no	no	no	yes	no	Ax2*	2+12	no
5 NC09-21916	no	no	no	no	no	no	no	no	yes	no	Ax2*	5+10	no
6 VA08W-613	no	no	no	no	no	no	no	no	yes	no	Ax2*	2+12	no
7 M08-8036#	no	no	no	no	no	no	no	no	yes	no	Ax2*	2+12	yes
8 IL02-18228	no	no	no	no	no	no	no	no	yes	no	Ax1 or null	5+10	no
9 ARS07-1214	no	no	no	no	no	no	no	no	yes	no	Ax1 or null	2+12	no
10 ARS09-173	no	no	no	no	no	het	no	no	yes	no	Ax2*	2+12	no
11 ARS09-367	no	no	no	no	no	no	no	no	yes	no	Ax1 or null	2+12	no
12 ARS09-446	no	no	no	no	no	no	no	no	no	no	Ax2*	5+10	yes
13 ARS09-513	no	no	no	no	no	no	no	no	no	no	Ax1 or null	2+12	het
14 ARS09-595	no	no	no	no	no	no	no	no	yes	no	Ax2*	5+10	yes
15 ARS09-643	no	no	no	yes	no	no	no	no	yes	het	Ax2*	2+12	no
16 ARS09-724	no	no	no	no	no	no	no	no	no	no	Ax1 or null	2+12	no
17 GA 051173W-S11	no	no	no	no	no	yes	no	no	yes	no	het	2+12	no
18 GA 051207-S19	no	no	no	no	no	no	yes	no	yes	no	Ax2*	5+10	no
19 GA 051207-S21	no	no	no	het	no	no	yes	no	yes	no	Ax2*	5+10	no
20 GA 051173-S25	no	no	no	no	no	yes	no	no	yes	no	Ax1 or null	2+12	no
21 GA 051173-S18	no	no	no	no	no	yes	no	no	yes	no	Ax1 or null	2+12	no
22 GAMD08-27-E9-S13	no	yes	no	yes	no	no	no	no	yes	no	Ax2*	2+12	no
23 GAMD08-27-E9-S14	no	yes	no	yes	no	no	no	no	yes	no	Ax2*	2+12	no
24 GAMD08-27-E9-S15	no	yes	no	yes	no	no	no	no	yes	no	Ax2*	2+12	no
25 LA'04039C-14-8	no	no	no	no	yes	no	no	no	no	no	Ax2*	5+10	yes
26 LA'04039C-10-6	no	no	no	no	yes	no	no	no	no	no	Ax2*	5+10	yes
27 LA05102C-1-2	no	no	no	no	no	no	no	no	yes	no	Ax2*	2+12	yes
28 LA05102C-8-8	no	no	no	no	no	no	no	no	yes	no	Ax2*	2+12	yes
29 LA05079D-55	no	no	no	no	no	no	no	no	yes	no	Ax1 or null	2+12	no
30 LA05079F-P01	no	no	no	no	no	no	no	no	yes	no	Ax1 or null	2+12	no
31 LA05079F-P03	no	no	no	no	no	no	no	no	het	yes	Ax2*	5+10	yes
32 LA05145D-12	no	no	no	no	yes	no	no	no	yes	het	Ax2*	5+10	yes
33 LA05145D-24	no	no	no	no	no	no	no	no	yes	no	Ax2*	2+12	no
34 MD03W61-11-2	no		no	no	no	no	no		yes	no	Ax2*	2+12	het
35 MD03W61-11-3		no	no	no	no	no	no	no	yes	no	Ax2*	2+12	yes
36 UX0066-4-79	no	no	no	no	no	no	no	no	yes	no	Ax2*	2+12	yes
37 MD08-22-1-6-4	no	yes	no	yes	no	no	no	no	yes	no	Ax2*	2+12	no
38 MD08-26-H2-23	no	het	no	no	no	no	no	no	yes	no	Ax2*	2+12	no
39 MH07-7483	no	no	no	no	yes	no	no	no	yes	no	Ax1 or null	het	no
40 M09-9826#	no	no	no	no	no	no	no	no	yes	no	Ax2*	het	yes
41 NC08-23323	het?	no	no	het	no	no	no	no	yes	no	Ax1 or null	2+12	no
42 NC08-23324	no	no	no	yes	no	no	no	no	yes	no	Ax1 or null	2+12	no
43 NC09-22422 (Fhb1)	no	no	no	no	no	yes	no	no	yes	no	Ax2*	nknow	no
44 NC09-20986 (Fhb1)	no	no	no	no	no	het	no	no	yes	no	Ax2*	het	no
45 NC8355-4 (Fhb1)	no	no	no	no	no	no	no	no	yes	no	Ax1 or null	5+10	yes
46 NC8452-2	no	no	no	het	no	no	no	no	yes	no	Ax2*	2+12	het
47 VA09W-52	no	no	no	het	no	no	no	no	yes	no	Ax1 or null	2+12	no
48 VA09W-73	no	no	no	no	no	no	no	no	no	no	Ax2*	2+12	no
49 VA09W-75	no	no	no	yes	no	no	no	no	no	no	Ax2*	2+12	no
50 VA10W-42	no	no	no		no	no	no	no	yes	no	Ax2*	2+12	no
51 VA10W-140	no	no	no	no	no	no	no	no	no	no	Ax2*	5+10	no

Heading Date (Julian Days*)

	K'STON NC	WARSAW VA	S'BURY MD	LEX'TON KY	COL'BIA MO	MEAN ALL LOC.	RANK
1 ERNIE	85	123	109	108	117	108	9
2 COKER 9835	80	123	111	112	123	110	19
3 BESS	96	123	113	110	123	113	38
4 JAMESTOWN	82	121	106	106	118	106	3
5 NC09-21916	94	123	112	114	121	113	38
6 VA08W-613	84	121	110	108	118	108	9
7 M08-8036#	92	123	110	110	121	111	26
8 IL02-18228	102	129	112	113	123	116	43
9 ARS07-1214	100	129	112	116	123	116	43
10 ARS09-173	85	118	105	106	117	106	3
11 ARS09-367	97	126	110	109	123	113	38
12 ARS09-446	.	123	102	107	121	108	9
13 ARS09-513	91	123	107	109	121	110	19
14 ARS09-595	83	121	102	105	123	107	6
15 ARS09-643	.	118	102	107	117	106	3
16 ARS09-724	92	123	108	108	121	110	19
17 GA 051173W-S11	96	123	111	110	123	112	33
18 GA 051207-S19	90	123	109	110	123	111	26
19 GA 051207-S21	89	123	108	112	121	110	19
20 GA 051173-S25	88	126	109	116	123	112	33
21 GA 051173-S18	86	118	102	102	117	105	1
22 GAMD08-27-E9-S13	106	129	117	121	131	121	49
23 GAMD08-27-E9-S14	107	129	118	122	131	121	49
24 GAMD08-27-E9-S15	105	129	118	120	131	121	49
25 LA'04039C-14-8	.	123	102	104	121	107	6
26 LA'04039C-10-6	.	121	107	110	123	110	19
27 LA05102C-1-2	.	121	101	103	118	105	1
28 LA05102C-8-8	.	123	104	107	121	108	9
29 LA05079D-55	.	123	105	107	123	109	17
30 LA05079F-P01	82	123	107	108	123	108	9
31 LA05079F-P03	81	126	107	111	123	110	19
32 LA05145D-12	81	123	105	106	118	107	6
33 LA05145D-24	96	129	113	117	123	116	43
34 MD03W61-11-2	90	121	107	113	123	111	26
35 MD03W61-11-3	92	123	110	113	121	112	33
36 UX0066-4-79	85	126	109	112	123	111	26
37 MD08-22-1-6-4	105	129	115	117	123	118	48
38 MD08-26-H2-23	90	123	111	107	123	111	26
39 MH07-7483	100	129	114	115	123	116	43
40 M09-9826#	82	123	108	106	123	108	9
41 NC08-23323	90	123	109	109	123	111	26
42 NC08-23324	93	123	111	108	123	112	33
43 NC09-22422 (Fhb1)	91	123	109	110	121	111	26
44 NC09-20986 (Fhb1)	88	123	108	109	121	110	19
45 NC8355-4 (Fhb1)	82	123	103	107	123	108	9
46 NC8452-2	99	129	115	115	123	116	43
47 VA09W-52	84	123	108	109	123	109	17
48 VA09W-73	96	123	113	111	123	113	38
49 VA09W-75	83	121	108	108	121	108	9
50 VA10W-42	90	129	111	108	123	112	33
51 VA10W-140	97	123	113	109	123	113	38

Mean	91	124	109	110	122	112
LSD (0.05)	4	5	3	5	.	6
CV%	2.0	4.0	1.4	12.2	.	2.5

*Days after December 31, 2011

Plant Height (in)

CULTIVAR/ DESIGNATION	K'STON NC	S'BURY MD	LEX'TON KY	FUN'LEA ROM	SZEGED HUN	MEAN ALL LOC.	RANK
1 ERNIE	38	31	30	23	31	31	10
2 COKER 9835	34	32	32	25	29	30	3
3 BESS	42	34	34	29	35	35	39
4 JAMESTOWN	35	30	30	25	33	31	10
5 NC09-21916	40	36	34	27	35	35	39
6 VA08W-613	37	31	34	25	33	32	18
7 M08-8036#	41	33	32	25	33	33	22
8 IL02-18228	44	36	33	33	38	37	47
9 ARS07-1214	41	33	31	27	33	33	22
10 ARS09-173	34	31	28	25	33	30	3
11 ARS09-367	38	31	32	22	33	31	10
12 ARS09-446	.	32	32	31	38	34	30
13 ARS09-513	38	33	31	27	35	33	22
14 ARS09-595	34	33	31	31	40	34	30
15 ARS09-643	.	31	30	25	33	24	1
16 ARS09-724	40	33	37	33	40	37	47
17 GA 051173W-S11	46	38	39	38	40	40	51
18 GA 051207-S19	37	34	36	29	35	34	30
19 GA 051207-S21	37	35	36	31	35	35	39
20 GA 051173-S25	39	36	30	31	33	34	30
21 GA 051173-S18	37	29	27	27	31	30	3
22 GAMD08-27-E9-S13	40	36	36	29	35	35	39
23 GAMD08-27-E9-S14	40	34	33	27	35	34	30
24 GAMD08-27-E9-S15	41	36	33	21	38	34	30
25 LA'04039C-14-8	.	30	30	25	38	31	10
26 LA'04039C-10-6	.	32	34	35	40	36	44
27 LA05102C-1-2	.	32	33	31	44	36	44
28 LA05102C-8-8	.	34	34	31	46	37	47
29 LA05079D-55	.	30	31	27	38	32	18
30 LA05079F-P01	35	34	31	29	38	33	22
31 LA05079F-P03	33	30	28	21	35	29	2
32 LA05145D-12	34	32	30	23	33	30	3
33 LA05145D-24	44	40	38	33	42	39	50
34 MD03W61-11-2(11PW	36	32	29	25	31	30	3
35 MD03W61-11-3(11PW	39	34	33	25	31	32	18
36 UX0066-4-79(11PW#1	39	35	31	23	29	31	10
37 MD08-22-1-6-4(11PW#	40	34	33	29	31	34	30
38 MD08-26-H2-23(11CVI	39	37	36	27	35	35	39
39 MH07-7483	42	36	36	31	38	36	44
40 M09-9826#	34	30	32	22	35	30	3
41 NC08-23323	37	32	31	28	33	32	18
42 NC08-23324	36	34	33	28	33	33	22
43 NC09-22422 (Fhb1)	36	30	32	23	33	31	10
44 NC09-20986 (Fhb1)	38	32	33	21	33	31	10
45 NC8355-4 (Fhb1)	30	33	31	21	33	30	3
46 NC8452-2	40	31	32	28	33	33	22
47 VA09W-52	33	34	33	21	35	31	10
48 VA09W-73	37	35	35	25	33	33	22
49 VA09W-75	38	33	37	27	33	34	30
50 VA10W-42	42	35	38	21	35	34	30
51 VA10W-140	40	34	32	25	35	33	22

Mean	37	33	32	27	35	33
LSD (0.05)	4	4	.	.	.	6
CV%	5.0	6.0	.	.	.	10.0

Leaf Disease Ratings

CULTIVAR/ DESIGNATION	Stripe Rust %	Stripe Rust %	Stagon. nodorum %
	F'VILLE	N'PORT	F'VILLE
	AR	AR	AR
1 ERNIE	30	68	7
2 COKER 9835	50	78	15
3 BESS	0	17	30
4 JAMESTOWN	0	0	15
5 NC09-21916	0	12	2
6 VA08W-613	0	37	2
7 M08-8036#	0	37	2
8 IL02-18228	0	7	15
9 ARS07-1214	30	43	15
10 ARS09-173	2	1	15
11 ARS09-367	50	48	30
12 ARS09-446	2	25	30
13 ARS09-513	0	68	15
14 ARS09-595	0	57	7
15 ARS09-643	0	0	15
16 ARS09-724	15	1	7
17 GA 051173W-S11	30	2	15
18 GA 051207-S19	30	15	15
19 GA 051207-S21	30	12	15
20 GA 051173-S25	0	0	15
21 GA 051173-S18	0	1	7
22 GAMD08-27-E9-S13	7	20	2
23 GAMD08-27-E9-S14	15	1	2
24 GAMD08-27-E9-S15	15	15	7
25 LA'04039C-14-8	0	57	2
26 LA'04039C-10-6	0	25	2
27 LA05102C-1-2	0	1	7
28 LA05102C-8-8	0	1	30
29 LA05079D-55	0	0	15
30 LA05079F-P01	0	0	15
31 LA05079F-P03	0	0	15
32 LA05145D-12	0	2	15
33 LA05145D-24	15	70	7
34 MD03W61-11-2	2	0	7
35 MD03W61-11-3	0	0	2
36 UX0066-4-79	7	57	15
37 MD08-22-1-6-4	7	80	2
38 MD08-26-H2-23	30	12	15
39 MH07-7483	0	0	30
40 M09-9826#	0	78	7
41 NC08-23323	0	89	7
42 NC08-23324	0	94	7
43 NC09-22422 (Fhb1)	0	20	7
44 NC09-20986 (Fhb1)	2	10	7
45 NC8355-4 (Fhb1)	0	6	7
46 NC8452-2	30	11	7
47 VA09W-52	0	7	30
48 VA09W-73	0	0	7
49 VA09W-75	0	3	2
50 VA10W-42	0	0	2
51 VA10W-140	70	71	15

Mean

9

25

11

Hessian Fly Screening (Resistant - Susceptible Plants)¹

CULTIVAR/ DESIGNATION	Biotype B	Biotype C	Biotype D	Biotype O	Biotype L
1 ERNIE	0-21	all S	0-16	0-15	0-15
2 COKER 9835	0-19	all S	0-18	0-18	0-13
3 BESS	6-15	all S	0-17	0-21	0-14
4 JAMESTOWN	18-0	16-0	17-0	0-15	0-16
5 NC09-21916	10-7	all S	0-8	0-6	0-3
6 VA08W-613	0-23	all S	0-16	0-20	0-18
7 M08-8036#	17-3	all S	0-15	0-16	0-20
8 IL02-18228	17-4	all S	0-15	0-17	0-16
9 ARS07-1214	0-19	all S	0-16	0-18	0-16
10 ARS09-173	21-0	19-0	20-0	18-0	21-0
11 ARS09-367	0-19	12-6	0-17	0-16	0-17
12 ARS09-446	0-20	all S	0-20	0-17	0-14
13 ARS09-513	0-20	all S	0-17	16-3	0-14
14 ARS09-595	0-16	all S	0-17	0-17	0-17
15 ARS09-643	0-16	all S	0-12	0-14	0-15
16 ARS09-724	0-23	all S	0-14	0-19	0-14
17 GA 051173W-S11	19-0	16-0	16-0	17-0	15-3
18 GA 051207-S19	18-0	all S	15-0	17-0	14-0
19 GA 051207-S21	18-0	all S	16-1	16-2	17-0
20 GA 051173-S25	17-0	20-0	16-0	16-0	13-2
21 GA 051173-S18	15-0	20-0	17-0	18-0	22-0
22 GAMD08-27-E9-S13	0-16	all S	0-19	0-17	0-13
23 GAMD08-27-E9-S14	0-20	all S	0-15	0-17	0-18
24 GAMD08-27-E9-S15	0-23	all S	0-16	0-18	0-16
25 LA'04039C-14-8	18-0	18-0	18-0	0-17	0-16
26 LA'04039C-10-6	21-0	17-0	17-0	0-19	0-17
27 LA05102C-1-2	21-0	17-0	21-0	20-0	0-15
28 LA05102C-8-8	19-1	18-1	23-0	0-18	0-16
29 LA05079D-55	0-20	all S	0-16	0-14	0-18
30 LA05079F-P01	0-21	all S	0-16	0-15	0-16
31 LA05079F-P03	0-20	all S	0-15	0-16	0-16
32 LA05145D-12	20-0	17-1	18-0	17-0	0-17
33 LA05145D-24	0-19	all S	0-16	0-19	0-17
34 MD03W61-11-2	17-3	13-5	15-2	0-17	0-15
35 MD03W61-11-3	18-0	19-1	18-0	0-18	0-17
36 UX0066-4-79	7-10	2-12	14-4	0-19	0-18
37 MD08-22-1-6-4	0-16	all S	0-18	4-12	0-19
38 MD08-26-H2-23	15-5	9-8	18-0	11-4	0-17
39 MH07-7483	0-20	all S	0-20	0-18	0-16
40 M09-9826#	18-2	19-1	18-2	0-18	0-20
41 NC08-23323	0-17	all S	0-15	0-18	0-13
42 NC08-23324	0-17	all S	0-19	0-16	0-20
43 NC09-22422 (Fhb1)	25-0	17-0	18-0	19-0	20-0
44 NC09-20986 (Fhb1)	21-0	20-0	22-0	20-0	16-0
45 NC8355-4 (Fhb1)	12-5	all S	10-5	0-20	0-20
46 NC8452-2	0-19	all S	0-14	0-15	0-16
47 VA09W-52	0-22	all S	0-18	17-2	0-23
48 VA09W-73	0-19	all S	0-21	0-17	0-14
49 VA09W-75	0-17	all S	0-20	0-18	0-17
50 VA10W-42	19-2	14-3	16-1	0-19	0-18
51 VA10W-140	0-22	all S	0-21	0-19	0-18

¹ Sue Cambron, USDA-ARS, Dept Entomology, Purdue Univ.

Milling and Baking Quality Scores¹

Cultivar/ Designation	MILLING QUALITY SCORE	BAKING QUALITY SCORE	SOFT. EQUIV. SCORE	TEST WT. LB/BU	FLOUR YIELD %	SOFT. EQUIV. %	GRAIN HARD. (0-100)	GRAIN PROT. %	FLOUR PROT. %	LACTIC ACID SRC(%)	SUCRE. SRC %	COOK. DIA. CM								
1 ERNIE	54	D	47	E	62	C	54.5	64.2	55.3	18.6	13.6	10.3	138.0	s	108.1	17.3				
2 COKER 9835	51	D	49	E	79	B	32.6	63.8	61.4	+	30.1	13.1	9.9	136.5	114.1	q	17.5			
3 BESS	63	C	69	C	56	D	58.1	66.1	+	53.2	q	22.1	11.9	9.0	118.8	w	98.1	+	17.9	
4 JAMESTOWN	54	D	51	D	64	C	57.5	64.4	56.0	35.3	12.7	9.6	147.1	s	108.1	17.5				
5 NC09-21916	71	B	57	D	77	B	57.8	67.8	+	60.7	+	26.7	12.3	9.6	165.1	s	108.4	17.6		
6 VA08W-613	68	C	47	E	63	C	59.0	67.1	+	55.7	21.8	13.3	10.3	138.2	s	108.4	17.3			
7 M08-8036#	62	C	47	E	54	D	58.3	65.8	+	52.5	q	30.5	14.4	10.7	145.4	s	104.3	+	17.2	q
8 IL02-18228	50	D	58	D	52	D	57.5	63.6	q	51.7	q	35.5	12.4	9.7	139.5	s	100.3	+	17.5	
9 ARS07-1214	71	B	6	F	21	F	55.8	67.7	+	40.6	q	30.2	13.3	11.9	140.3	s	112.3	q	15.9	q
10 ARS09-173	80	A	17	F	14	F	59.4	69.6	+	38.1	q	28.2	11.5	11.0	129.2	w	106.4	16.2	q	
11 ARS09-367	65	C	9	F	23	F	56.6	66.4	+	41.6	q	30.4	12.5	10.9	145.4	s	113.8	q	16.1	q
12 ARS09-446	87	A	16	F	15	F	57.4	71.0	+	38.7	q	30.7	12.3	12.4	148.4	s	103.8	+	16.0	q
13 ARS09-513	92	A	24	F	25	F	56.2	72.0	+	42.3	q	22.6	12.6	12.4	116.4	w	104.5	16.4	q	
14 ARS09-595	70	B	5	F	25	F	56.2	67.6	+	42.1	q	33.8	13.1	13.4	153.5	s	110.6	q	15.7	q
15 ARS09-643	75	B	-20	F	8	F	57.1	68.6	+	36.4	q	32.2	12.1	11.9	147.1	s	122.2	q	15.2	q
16 ARS09-724	74	B	33	F	32	F	57.8	68.4	+	44.5	q	30.1	12.6	11.3	122.2	w	103.9	+	16.7	q
17 GA 051173W-S11	59	D	45	E	47	E	58.0	65.3	49.9	q	19.5	13.1	9.7	129.8	w	105.5	17.2			
18 GA 051207-S19	64	C	50	E	66	C	55.4	66.3	+	56.8	34.4	12.5	10.0	155.9	s	108.1	17.4			
19 GA 051207-S21	66	C	60	D	64	C	57.1	66.7	+	56.1	33.8	12.1	9.7	147.4	s	103.0	+	17.6		
20 GA 051173-S25	38	F	41	E	51	D	55.9	61.2	q	51.2	q	34.7	12.6	10.1	136.1	108.3	17.1	q		
21 GA 051173-S18	57	D	44	E	56	D	56.9	65.0	53.2	q	19.6	14.2	10.6	156.6	s	106.5	17.1	q		
22 GAMD08-27-E9-S13	58	D	44	E	51	D	57.4	65.0	51.4	q	36.6	12.7	9.9	142.8	s	106.8	17.2	q		
23 GAMD08-27-E9-S14	59	D	44	E	50	E	57.5	65.3	50.9	q	34.3	12.7	10.0	144.3	s	105.8	17.1	q		
24 GAMD08-27-E9-S15	66	C	49	E	51	D	57.3	66.6	+	51.5	q	34.9	12.6	9.8	145.9	s	104.3	+	17.3	
25 LA'04039C-14-8	62	C	32	F	58	D	57.3	65.9	+	54.0	q	25.2	13.6	10.3	144.7	s	114.7	q	16.9	q
26 LA'04039C-10-6	66	C	42	E	55	D	57.0	66.7	+	52.8	q	25.6	13.5	9.9	144.8	s	109.0	17.2	q	
27 LA05102C-1-2	61	C	58	D	60	D	57.5	65.7	+	54.4	28.8	12.8	9.7	128.9	w	102.9	+	17.6		
28 LA05102C-8-8	69	C	53	D	49	E	58.2	67.3	+	50.7	q	27.4	13.0	10.2	124.0	w	101.3	+	17.4	
29 LA05079D-55	58	D	53	D	72	B	55.2	65.1	59.0	+	22.6	11.5	9.0	136.3	111.6	q	17.7			
30 LA05079F-P01	59	D	64	C	73	B	54.3	65.4	59.4	+	23.7	11.5	8.9	115.9	w	107.3	18.0	+		
31 LA05079F-P03	69	C	67	C	69	C	53.8	67.4	+	57.9	26.8	11.7	9.0	124.1	w	103.7	+	18.0	+	
32 LA05145D-12	62	C	54	D	64	C	57.9	65.9	+	56.2	36.2	13.1	10.2	138.2	s	105.3	17.5			
33 LA05145D-24	61	C	74	B	71	B	55.2	65.6	+	58.6	+	25.7	12.2	9.0	122.6	w	100.4	+	18.2	+
34 MD03W61-11-2	61	C	54	D	64	C	57.6	65.7	+	56.2	33.0	12.6	9.9	152.5	s	105.4	17.5			
35 MD03W61-11-3	60	C	57	D	59	D	57.2	65.6	+	54.3	q	30.7	13.0	10.3	147.2	s	101.7	+	17.5	
36 UX0066-4-79	64	C	56	D	47	E	31.1	66.3	+	49.8	q	27.9	13.0	10.5	130.0	w	97.8	+	17.4	
37 MD08-22-1-6-4	68	C	72	B	59	D	59.5	67.1	+	54.4	q	29.1	12.1	9.4	128.2	w	96.1	+	18.0	+
38 MD08-26-H2-23	58	D	60	D	54	D	58.1	65.1	52.5	q	33.1	12.6	9.5	141.4	s	100.2	+	17.6		
39 MH07-7483	64	C	72	B	71	B	56.1	66.4	+	58.3	30.2	12.1	9.1	120.6	w	100.9	+	18.1	+	
40 M09-9826#	64	C	49	E	48	E	56.3	66.4	+	50.3	q	22.9	13.5	10.2	159.6	s	101.4	+	17.2	q
41 NC08-23323	60	C	34	F	57	D	56.4	65.5	53.5	q	30.9	12.8	10.3	149.7	s	112.8	q	17.0	q	
42 NC08-23324	68	C	42	E	58	D	56.9	67.0	+	54.0	q	28.4	12.6	9.9	141.1	s	110.6	q	17.2	
43 NC09-22422 (Fhb1)	44	E	38	F	61	C	58.2	62.3	q	54.8	30.8	13.7	11.1	168.5	s	109.8	16.9	q		
44 NC09-20986 (Fhb1)	41	E	24	F	60	C	57.5	61.7	q	54.7	30.1	14.0	11.2	166.6	s	117.1	q	16.6	q	
45 NC8355-4 (Fhb1)	66	C	63	C	68	C	56.7	66.8	+	57.3	25.7	13.0	9.8	153.8	s	102.2	+	17.7		
46 NC8452-2	61	C	61	C	62	C	33.0	65.7	+	55.2	29.3	11.8	9.4	137.8	s	102.6	+	17.7		
47 VA09W-52	64	C	50	D	64	C	57.7	66.2	+	56.1	24.6	13.3	9.5	136.9	109.0	17.5				
48 VA09W-73	67	C	81	A	68	C	57.2	67.0	+	57.3	31.7	11.5	8.8	124.5	w	95.9	+	18.3	+	
49 VA09W-75	68	C	74	B	71	B	58.5	67.1	+	58.5	23.4	11.0	8.2	132.5	w	101.6	+	18.2	+	
50 VA10W-42	75	B	61	C	55	D	58.6	68.6	+	52.9	q	23.9	12.7	9.6	127.5	w	100.3	+	17.7	
51 VA10W-140	77	B	67	C	55	D	60.2	68.9	+	52.8	q	23.4	12.1	9.3	143.5	s	96.9	+	17.7	

Mean 64 47 54 55.7 66.3 52.5 28.6 12.7 10.1 139.8 105.8 17.3

Footnotes:

- 'q' - questionable quality. Marked on lines greater than a standard deviation from the mean of the checks in a unpreferred level.
- '+' - Above average quality marked on lines with greater than a standard deviation away from mean of the checks in a preferred level.
- 's' - strong gluten. Greater than one standard deviation more than the mean of checks.

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

Means Across Locations 2011-12

Cultivar/ Designation	FHB Incidence		FHB Severity		FHB Index		FDK		ISK		DON	
	RANK		RANK		RANK		RANK		RANK		RANK	
1 ERNIE	27	6	8	6	4	5	7	12	15	3	5	17
2 COKER 9835	75	51	44	49	35	49	36	49	49	49	20	48
3 BESS	18	1	7	2	2	1	4	2	12	1	3	3
4 JAMESTOWN	38	19	11	14	7	17	6	9	22	14	3	3
5 NC09-21916	29	9	14	24	5	8	5	5	21	10	3	3
6 VA08W-613	41	28	9	7	4	5	6	9	21	10	4	10
7 M08-8036#	39	20	12	17	7	17	5	5	22	14	6	23
8 IL02-18228	19	2	7	2	2	1	2	1	12	1	2	1
9 ARS07-1214	69	50	45	50	45	50	38	50	55	50	29	51
10 ARS09-173	41	28	22	40	12	35	11	29	28	35	10	40
11 ARS09-367	62	49	49	51	45	50	45	51	59	51	27	50
12 ARS09-446	52	46	28	44	22	45	21	45	43	46	12	43
13 ARS09-513	52	46	29	48	18	41	24	47	43	46	9	36
14 ARS09-595	49	42	28	44	18	41	18	43	37	41	6	23
15 ARS09-643	39	20	24	42	14	39	15	40	35	39	12	43
16 ARS09-724	39	20	17	28	11	33	7	12	27	27	11	42
17 GA 051173W-S11	33	13	18	29	9	25	12	33	27	27	26	49
18 GA 051207-S19	41	28	18	29	12	35	13	35	29	36	7	29
19 GA 051207-S21	39	20	18	29	10	28	7	12	27	27	9	36
20 GA 051173-S25	49	42	28	44	22	45	23	46	40	45	9	36
21 GA 051173-S18	32	11	11	14	5	8	10	25	23	18	4	10
22 GAMD08-27-E9-S13	41	28	13	22	8	21	10	25	26	26	4	10
23 GAMD08-27-E9-S14	41	28	9	7	6	13	8	18	22	14	5	17
24 GAMD08-27-E9-S15	39	20	12	17	8	21	9	21	24	22	4	10
25 LA'04039C-14-8	36	16	10	10	8	21	5	5	23	18	5	17
26 LA'04039C-10-6	35	14	10	10	6	13	7	12	21	10	6	23
27 LA05102C-1-2	27	6	11	14	7	17	4	2	21	10	3	3
28 LA05102C-8-8	28	8	7	2	4	5	4	2	19	6	4	10
29 LA05079D-55	48	41	24	42	25	48	16	42	45	48	9	36
30 LA05079F-P01	46	39	20	35	18	41	15	40	38	43	5	17
31 LA05079F-P03	42	36	16	27	10	28	14	38	27	27	8	34
32 LA05145D-12	49	42	21	38	16	40	14	38	36	40	6	23
33 LA05145D-24	56	48	28	44	23	47	25	48	38	43	13	46
34 MD03W61-11-2	39	20	20	35	13	37	12	33	32	38	7	29
35 MD03W61-11-3	43	37	14	24	10	28	8	18	27	27	8	34
36 UX0066-4-79	37	17	12	17	6	13	9	21	19	6	4	10
37 MD08-22-1-6-4	22	3	6	1	2	1	7	12	17	5	2	1
38 MD08-26-H2-23	31	10	10	10	5	8	6	9	20	9	3	3
39 MH07-7483	51	45	21	38	19	44	20	44	37	41	12	43
40 M09-9826#	35	14	12	17	6	13	13	35	25	23	6	23
41 NC08-23323	39	20	20	35	10	28	8	18	25	23	10	40
42 NC08-23324	46	39	18	29	9	25	11	29	27	27	17	47
43 NC09-22422 (Fhb1)	32	11	10	10	5	8	9	21	23	18	4	10
44 NC09-20986 (Fhb1)	26	4	7	2	3	4	7	12	16	4	3	3
45 NC8355-4 (Fhb1)	26	4	9	7	5	8	10	25	19	6	3	3
46 NC8452-2	41	28	12	17	7	17	11	29	23	18	6	23
47 VA09W-52	44	38	18	29	10	28	13	35	29	36	5	17
48 VA09W-73	40	27	23	41	13	37	11	29	27	27	7	29
49 VA09W-75	37	17	14	24	8	21	5	5	22	14	7	29
50 VA10W-42	41	28	13	22	9	25	9	21	25	23	7	29
51 VA10W-140	41	28	19	34	11	33	10	25	27	27	5	17

Mean	41	17	12	12	28	8
LSD (0.05)	26	19	16	15	15	15
CV%	32.2	56.5	71.4	59.9	27.6	96.1

Means Across Locations 2011 - 2012

Cultivar/ Designation	Heading		Plant		Hessian Fly Biotype L	MILLING QUALITY SCORE	BAKING QUALITY SCORE		SOFT. EQUIV. SCORE	Stagon. nodorum %	Stripe Rust %		
	Date		Height				F'VILLE AR	N'PORT AR					
	RANK		RANK										
1 ERNIE	108	9	31	13	0-15	54	D	47	E	62	C	7	68
2 COKER 9835	110	19	30	15	0-13	51	D	49	E	79	B	15	78
3 BESS	113	38	35	43	0-14	63	C	69	C	56	D	30	17
4 JAMESTOWN	106	3	31	8	0-16	54	D	51	D	64	C	15	0
5 NC09-21916	113	38	35	40	0-3	71	B	57	D	77	B	2	12
6 VA08W-613	108	9	32	18	0-18	68	C	47	E	63	C	2	37
7 M08-8036#	111	26	33	28	0-20	62	C	47	E	54	D	2	37
8 IL02-18228	116	43	37	49	0-16	50	D	58	D	52	D	15	7
9 ARS07-1214	116	43	33	30	0-16	71	B	6	F	21	F	15	43
10 ARS09-173	106	3	30	5	21-0	80	A	17	F	14	F	15	1
11 ARS09-367	113	38	31	14	0-17	65	C	9	F	23	F	30	48
12 ARS09-446	108	9	34	32	0-14	87	A	16	F	15	F	30	25
13 ARS09-513	110	19	33	21	0-14	92	A	24	F	25	F	15	68
14 ARS09-595	107	6	34	22	0-17	70	B	5	F	25	F	7	57
15 ARS09-643	106	3	24	1	0-15	75	B	-20	F	8	F	15	0
16 ARS09-724	110	19	37	47	0-14	74	B	33	F	32	F	7	1
17 GA 051173W-S11	112	33	40	51	15-3	59	D	45	E	47	E	15	2
18 GA 051207-S19	111	26	34	38	14-0	64	C	50	E	66	C	15	15
19 GA 051207-S21	110	19	35	44	17-0	66	C	60	D	64	C	15	12
20 GA 051173-S25	112	33	34	37	13-2	38	F	41	E	51	D	15	0
21 GA 051173-S18	105	1	30	9	22-0	57	D	44	E	56	D	7	1
22 GAMD08-27-E9-S13	121	49	35	46	0-13	58	D	44	E	51	D	2	20
23 GAMD08-27-E9-S14	121	49	34	35	0-18	59	D	44	E	50	E	2	1
24 GAMD08-27-E9-S15	121	49	34	25	0-16	66	C	49	E	51	D	7	15
25 LA'04039C-14-8	107	6	31	6	0-16	62	C	32	F	58	D	2	57
26 LA'04039C-10-6	110	19	36	45	0-17	66	C	42	E	55	D	2	25
27 LA05102C-1-2	105	1	36	33	0-15	61	C	58	D	60	D	7	1
28 LA05102C-8-8	108	9	37	42	0-16	69	C	53	D	49	E	30	1
29 LA05079D-55	109	17	32	17	0-18	58	D	53	D	72	B	15	0
30 LA05079F-P01	108	9	33	23	0-16	59	D	64	C	73	B	15	0
31 LA05079F-P03	110	19	29	2	0-16	69	C	67	C	69	C	15	0
32 LA05145D-12	107	6	30	7	0-17	62	C	54	D	64	C	15	2
33 LA05145D-24	116	43	39	50	0-17	61	C	74	B	71	B	7	70
34 MD03W61-11-2	111	26	30	10	0-15	61	C	54	D	64	C	7	0
35 MD03W61-11-3	112	33	32	26	0-17	60	C	57	D	59	D	2	0
36 UX0066-4-79	111	26	31	19	0-18	64	C	56	D	47	E	15	57
37 MD08-22-1-6-4	118	48	34	39	0-19	68	C	72	B	59	D	2	80
38 MD08-26-H2-23	111	26	35	41	0-17	58	D	60	D	54	D	15	12
39 MH07-7483	116	43	36	48	0-16	64	C	72	B	71	B	30	0
40 M09-9826#	108	9	30	4	0-20	64	C	49	E	48	E	7	78
41 NC08-23323	111	26	32	20	0-13	60	C	34	F	57	D	7	89
42 NC08-23324	112	33	33	31	0-20	68	C	42	E	58	D	7	94
43 NC09-22422 (Fhb1)	111	26	31	11	20-0	44	E	38	F	61	C	7	20
44 NC09-20986 (Fhb1)	110	19	31	16	16-0	41	E	24	F	60	C	7	10
45 NC8355-4 (Fhb1)	108	9	30	3	0-20	66	C	63	C	68	C	7	6
46 NC8452-2	116	43	33	27	0-16	61	C	61	C	62	C	7	11
47 VA09W-52	109	17	31	12	0-23	64	C	50	D	64	C	30	7
48 VA09W-73	113	38	33	29	0-14	67	C	81	A	68	C	7	0
49 VA09W-75	108	9	34	34	0-17	68	C	74	B	71	B	2	3
50 VA10W-42	112	33	34	36	0-18	75	B	61	C	55	D	2	0
51 VA10W-140	113	38	33	24	0-18	77	B	67	C	55	D	15	71

Mean	112	33	.	64	47	54	11	25
LSD (0.05)	6	6	.	.	.	.	.	.
CV%	2.5	10.0	.	.	.	.	.	.

Means Across 2011 and 2012

	Cultivar/ Designation	FHB Incidence		FHB Severity		FHB Index		FDK		ISK		DON		Heading Date	Plant Height	Milling Quality	Baking Quality	Soft Equiv.
			RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	days	in	Score	Score	Score
1	ERNIE	37	3	16	4	9	4	12	4	25	3	7	6	116	31	57	59	64
2	COKER 9835	75	7	50	7	39	7	37	7	53	7	21	7	119	30	57	51	81
3	BESS	30	2	13	2	7	2	6	2	21	2	5	2	119	35	64	58	56
4	JAMESTOWN	43	5	19	6	11	6	11	5	29	6	5	2	115	30	57	49	65
5	IL02-18228	26	1	12	1	4	1	4	1	17	1	3	1	120	36	65	58	45
6	M08-8036#	40	4	15	3	8	3	10	3	25	3	5	2	118	33	68	58	56
7	VA08W-613	45	6	19	5	10	5	11	5	27	5	6	5	117	32	54	52	63
	Mean	42		21		12		13		28		7		117	33	60	55	61
	LSD (0.05)	15		8		6		6		8		3		ns	1	ns	ns	10
	CV%	14.6		14.9		21.2		19.4		11.9		16.8		2.2	103.0	20.5	19.8	6.6