

# **SOUTHERN UNIFORM WINTER WHEAT SCAB NURSERY**

## **2013 NURSERY REPORT**

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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

### **Salisbury, Maryland.**

- Cooperator: Jose Costa.
- University of Maryland.

### **Crowley, Louisiana.**

- Cooperator: Stephen Harrison.
- 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:

**Wooster, Ohio**

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



The plots in the misted area on right were inoculated with corn kernels infected with *F. graminearum* isolates. However, the impact of that inoculation on the surrounding susceptible variety is clearly evident on left. The relatively resistant variety in the border rows of the experimental area is NC-Neuse.

**Stine Petersen distributes Fusarium infected corn kernels about three weeks prior to heading**



**Three person crew -- counting Incidence, rating Severity and recording data, 21 days post flowering**

View original, color versions of photographs at:  
[http://www.scabusa.org/research\\_vdhr.html#vdhr-updates](http://www.scabusa.org/research_vdhr.html#vdhr-updates)

# Entry List and Pedigrees, 2013 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	MD03W61-11-3	25R42/Chesapeake	Costa	2011-12
6	ARS07-1214	McCormick/Dominator	Marshall	2011-12
7	ARS09-367	McCormick/Dominator	Marshall	2011-12
8	ARS09-446	FL89250/WX02ARS130	Marshall	2011-12
9	ARS09-643	LA95283CA78-1-2-B/TAM303	Marshall	2011-12
10	LA05102C-1-2	LA96140BUA70-2/JAMESTOWN	Milus - Harrison	2011-12
11	LA05102C-8-8	LA96140BUA70-2/JAMESTOWN	Milus - Harrison	2011-12
12	NC09-20986	NC00-15332 / VA01-476 // Dominion	Murphy	2011-12
13	AR00260-2-2	Roane / AR97030	Mason	2012-13
14	AR01044-1-1	AR800-1-3-1 / AR92145E8-7-7-1-0	Mason	2012-13
15	AR01110-3-1	G65201 / AR800-1-3-1	Mason	2012-13
16	AR01178-1-1	AR92145E8-7-7-1-0 / AR9035-4-2	Mason	2012-13
17	ARGE05-1229-2-1	Pat /5/ GOV / AZ // MUS /3/ DODO /4/ BOW	Milus	2012-13
18	ARGE07-1339-10-5-8	Bess /5/ LA841 /4/ Sgv / Nb // MM / Sum3	Milus	2012-13
19	ARGE07-1374-17-5-4	VA01W-205 // AGS 2060 / VA05W-500	Milus	2012-13
20	ARGE07-1374-17-8-5	VA01W-205 // AGS 2060 / VA05W-500	Milus	2012-13
21	ARS07-1073	TX99D4441/TAM303	Marshall	2012-13
22	ARS09-082	FL95A331/TX99D4628	Marshall	2012-13
23	ARS09-228	IN9712C1-4/PI434658	Marshall	2012-13
24	ARS09-745	GA951079-3-5/WX03ARS0256	Marshall	2012-13
25	GA04494-12ES33	AWD99* 5261 / SS 8641	Johnson	2012-13
26	GA051477-12ES27	AGS 2020 / Jamestown	Johnson	2012-13
27	GA051477-12ES28	AGS 2020 / Jamestown	Johnson	2012-13
28	GA051477-12ES29	AGS 2020 / Jamestown	Johnson	2012-13
29	GA051477-12ES32	AGS 2020 / Jamestown	Johnson	2012-13
30	GANC8170-12DH7	NC-11458 / Bess// SS 8641	Johnson	2012-13
31	GANC8248-12DH1	Bess / Neuse	Johnson	2012-13
32	GANCZ4-12DH21	MD01W-233-06 / SS 8641	Johnson	2012-13
33	LA05079F-P05	(LA04153)GA971127-14-6-6/LA841,F1//ARLA97-1033-3-5(Freedom/Catbird)	Harrison	2012-13
34	LA06069E-P01	LA95135/VA02W-713	Harrison	2012-13
35	LA06149C-P7	JAMESTOWN/LA98094BUB-58-5	Harrison	2012-13
36	LA07085CW-P4	LA06101,F1(LA98094BUB-58-5/AGS 2060)/VA02W-713	Harrison	2012-13
37	LA07178C-44	JAMESTOWN/LA95135	Harrison	2012-13
38	LCS19227	T814/L900819//VA 98W-591	Obert	2012-13
39	LCS15963	LA9397D5-2-2/F90524E	Obert	2012-13
40	M10-1615	IL99-15867/M03-3002	Vonderwell	2012-13
41	M10-1659	CK9511/B980006	Vonderwell	2012-13
42	MD04W249-11-12	MV8-29/25R42	Costa	2012-13
43	MD04W249-11-7	MV8-29/25R42	Costa	2012-13
44	MD07W272-11-5	VA02W713/USG3555/25R42	Costa	2012-13
45	MD08-26-H2-7-12-21	SS8641//McCormick*2/Ning7840	Costa	2012-13
46	MD08-26-H2-7-12-9	SS8641//McCormick*2/Ning7840	Costa	2012-13
47	MDNC8248-64	Bess/NC Neuse	Costa	2012-13
48	MH07-7474	M97-1048/ELKHART	Vonderwell	2012-13
49	NC09-20768	NC00-16203 // P26R24 / NC96-13965	Murphy	2012-13
50	NC09-22352	TA4083.10 / NC96-14439	Murphy	2012-13
51	NC10-25212	McCormick / C 9511	Murphy	2012-13
52	NC8170-4-3	NC03-11458 / Bess // SS8641 (Fhb1)	Murphy	2012-13
53	NC8170-45-2	NC03-11458 / Bess // SS8641 (Fhb1)	Murphy	2012-13
54	NC8840-19	NC05-21937 / NC-Yadkin (Fhb1)	Murphy	2012-13
55	VA10W-112	KY97C-0540-04 / GF951079-2E31	Griffey	2012-13
56	VA10W-118	KY97C-0540-04 / GF951079-2E31	Griffey	2012-13
57	VA10W-119	KY97C-0540-04 / GF951079-2E31	Griffey	2012-13
58	VA11W-FHB110	VA02W-713 / Tribute // VA07W-120	Griffey	2012-13
59	VA11WFHB57	VA03W-646 / Coker 9511	Griffey	2012-13
60	VA11W-FHB60	VA97W-375RS / FG95195 // VA04W-547	Griffey	2012-13
61	VA11W-FHB61	VA97W-375RS / FG95195 // VA04W-547	Griffey	2012-13
62	VA11W-FHB75	VA04W-513 / P97397E1-11-2-4-1-1 // VA04W-433	Griffey	2012-13

## FHB Incidence (1-100)

CULTIVAR/ DESIGNATION	KINSTON NC	S'BURY MD	B'BURG VA	LEX'TON KY	GRIFFIN GA	COL'BIA MO	H'LAND IL	MEAN ALL LOC.	RANK
1 ERNIE	16	95	35	75	6	60	30	45	4
2 COKER 9835	74	100	93	90	82	95	68	86	62
3 BESS	37	90	30	60	6	95	38	51	12
4 JAMESTOWN	15	100	70	88	33	70	50	61	24
5 MD03W61-11-3	34	95	45	78	7	90	65	59	21
6 ARS07-1214	86	90	83	93	45	100	90	84	61
7 ARS09-367	36	90	98	93	62	100	65	78	55
8 ARS09-446	64	85	88	80	30	100	55	72	52
9 ARS09-643	23	100	68	93	61	100	55	71	51
10 LA05102C-1-2	4	90	23	55	15	55	25	38	1
11 LA05102C-8-8	10	85	38	25	52	65	30	43	3
12 NC09-20986	38	95	65	83	16	95	60	65	35
13 AR00260-2-2	51	95	15	58	4	75	70	53	13
14 AR01044-1-1	24	95	75	65	50	75	65	64	33
15 AR01110-3-1	53	95	58	53	5	85	75	60	22
16 AR01178-1-1	43	100	60	58	15	80	65	60	22
17 ARGE05-1229-2-1	15	75	18	48	77	90	20	49	7
18 ARGE07-1339-10-5-8	12	80	28	50	6	90	28	42	2
19 ARGE07-1374-17-5-4	42	95	43	88	4	70	40	54	15
20 ARGE07-1374-17-8-5	28	100	45	88	89	85	40	68	45
21 ARS07-1073	55	100	60	98	63	100	60	77	54
22 ARS09-082	64	90	88	85	63	100	65	79	58
23 ARS09-228	12	95	48	73	15	95	60	57	18
24 ARS09-745	49	100	60	95	92	100	70	81	59
25 GA04494-12ES33	35	100	65	95	76	100	75	78	55
26 GA051477-12ES27	26	100	58	100	23	90	70	67	43
27 GA051477-12ES28	27	100	55	98	50	95	35	66	37
28 GA051477-12ES29	21	100	45	98	63	95	40	66	37
29 GA051477-12ES32	33	95	75	85	37	95	55	68	45
30 GANC8170-12DH7	6	95	30	83	38	65	30	49	7
31 GANC8248-12DH1	31	100	68	95	53	95	45	69	48
32 GANCZ4-12DH21	52	95	70	83	53	95	55	72	52
33 LA05079F-P05	29	95	73	95	24	65	50	62	27
34 LA06069E-P01	17	100	45	95	12	70	35	53	13
35 LA06149C-P7	35	100	70	93	52	80	55	69	48
36 LA07085CW-P4	16	100	70	95	45	70	50	64	33
37 LA07178C-44	21	95	70	83	39	90	40	63	31
38 LCS19227	46	95	55	85	8	75	65	61	24
39 LCS15963	46	85	45	63	8	95	55	57	18
40 M10-1615	22	95	25	73	9	65	35	46	5
41 M10-1659	4	90	18	88	36	80	30	49	7
42 MD04W249-11-12	19	100	23	93	8	75	35	50	11
43 MD04W249-11-7	11	100	45	95	7	50	25	48	6
44 MD07W272-11-5	21	100	55	98	15	90	45	61	24
45 MD08-26-H2-7-12-21	20	100	33	83	97	70	35	62	27
46 MD08-26-H2-7-12-9	18	100	23	85	84	80	45	62	27
47 MDNC8248-64	27	100	58	85	9	80	50	58	20
48 MH07-7474	44	85	33	73	12	90	50	55	16
49 NC09-20768	31	95	70	100	13	100	60	67	43
50 NC09-22352	41	90	85	83	10	100	55	66	37
51 NC10-25212	24	90	18	48	9	80	75	49	7
52 NC8170-4-3	43	100	68	95	12	75	45	63	31
53 NC8170-45-2	34	95	65	98	8	85	50	62	27
54 NC8840-19	12	90	65	75	14	100	35	56	17
55 VA10W-112	17	100	78	98	63	80	50	69	48
56 VA10W-118	23	100	43	98	43	95	60	66	37
57 VA10W-119	40	100	70	83	26	95	65	68	45
58 VA11W-FHB110	14	100	48	98	90	75	35	66	37
59 VA11WFHB57	16	100	43	90	68	90	55	66	37
60 VA11W-FHB60	35	100	85	95	87	90	55	78	55
61 VA11W-FHB61	57	100	95	95	54	100	75	82	60
62 VA11W-FHB75	13	100	58	88	57	85	55	65	35
Mean	31	95	55	83	37	85	51	62	
LSD (0.05)	22	5	22	32	.	.	23	31	
CV%	35.2	10.0	23.9	19.9	.	.	22.9	25.0	

### FHB Severity ( 1-100)

CULTIVAR/ DESIGNATION	F'VILLE	N'PORT	S'BURY	B'BURG	COL'BIA	K'STON	LEX'TON	GRIFFIN	H'LAND	FUN'LEA <sup>1</sup>	SZEGED <sup>1</sup>	MEAN
	AR	AR	MD	VA	MO	NC	KY	GA	IL	ROM	HUN	ALL LOC.
	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK
1 ERNIE	5 11	40 22	30 6	10 17	9 4	16 24	36 13	2 2	43 21	87 36	20 18	27 15
2 COKER9835	33 62	88 61	70 50	56 61	45 53	58 61	64 52	70 61	75 49	84 35	24 33	61 62
3 BESS	3 4	18 1	30 6	8 13	12 10	9 3	32 7	3 6	60 27	34 11	22 27	21 7
4 JAMESTOWN	8 22	40 22	45 29	12 23	16 19	14 17	42 23	40 50	20 3	35 14	28 42	27 15
5 MD03W61-11-3	1 1	25 4	30 6	9 15	11 7	11 12	37 14	2 2	28 9	31 9	26 36	19 4
6 ARS07-1214	23 53	87 60	85 60	54 60	61 60	73 62	63 50	20 27	60 27	95 41	20 18	58 60
7 ARS09-367	28 61	95 62	85 60	71 62	54 59	41 58	72 59	40 50	75 49	55 28	29 43	59 61
8 ARS09-446	18 45	62 46	70 50	39 58	33 45	33 55	54 44	35 44	85 61	96 45	37 57	51 51
9 ARS09-643	23 53	72 51	85 60	19 39	28 41	14 17	64 52	50 56	75 49	97 46	36 53	51 51
10 LA05102C-1-2	6 15	25 4	45 29	3 3	8 1	14 17	40 18	58 57	60 27	75 33	22 27	32 27
11 LA05102C-8-8	7 19	25 4	20 1	3 3	15 17	17 33	22 1	33 41	55 26	61 31	12 5	24 9
12 NC09-20986	2 2	37 17	25 5	11 20	26 37	10 8	41 20	10 18	18 2	27 7	15 9	20 5
13 AR00260-2-2	8 22	25 4	35 14	3 3	16 19	17 33	29 3	6 13	60 27	83 34	24 33	28 19
14 AR01044-1-1	4 8	47 30	55 35	12 23	9 4	14 17	48 31	38 47	90 62	100 51	21 24	40 41
15 AR01110-3-1	3 4	25 4	45 29	12 23	25 35	23 41	29 3	6 13	65 37	100 51	14 8	32 27
16 AR01178-1-1	5 11	32 10	35 14	12 23	15 17	16 24	32 7	11 21	75 49	40 18	27 39	27 15
17 ARGE05-1229-2-1	3 4	33 14	20 1	1 1	19 27	16 24	37 14	40 50	25 6	34 11	17 12	22 8
18 ARGE07-1339-10-5-8	2 2	22 2	20 1	3 3	10 6	7 1	24 2	5 10	25 6	23 2	16 11	14 1
19 ARGE07-1374-17-5-4	3 4	40 22	30 6	12 23	21 33	12 14	46 28	6 13	30 12	47 25	23 30	25 13
20 ARGE07-1374-17-8-5	13 40	57 41	35 14	10 17	18 26	12 14	49 34	35 44	45 22	48 26	32 48	32 27
21 ARS07-1073	20 49	67 50	60 40	22 45	32 44	16 24	66 55	28 37	65 37	39 16	27 39	40 41
22 ARS09-082	20 49	85 58	65 46	37 56	33 45	21 39	56 47	38 47	60 27	42 20	35 52	45 46
23 ARS09-228	10 27	55 38	60 40	7 10	40 52	9 3	63 50	8 17	70 46	92 39	19 14	39 40
24 ARS09-745	17 43	72 51	70 50	29 52	33 45	43 60	84 62	65 59	70 46	100 51	32 48	56 58
25 GA04494-12ES33	27 58	82 56	80 58	37 56	46 54	42 59	70 57	32 40	60 27	100 51	41 61	56 58
26 GA051477-12ES27	18 45	77 53	70 50	19 39	49 57	28 48	78 61	25 30	60 27	100 51	34 50	51 51
27 GA051477-12ES28	25 56	78 54	65 46	16 35	48 56	31 52	67 56	33 41	75 49	100 51	36 53	52 54
28 GA051477-12ES29	27 58	83 57	65 46	18 38	61 60	31 52	70 57	23 29	80 60	97 46	39 59	54 56
29 GA051477-12ES32	25 56	85 58	80 58	27 51	38 49	30 51	54 44	35 44	65 37	95 41	34 50	52 54
30 GANC8170-12DH7	10 27	35 15	30 6	7 10	17 22	10 8	35 12	30 38	75 49	95 41	9 3	32 27
31 GANC8248-12DH1	17 43	78 54	70 50	33 55	39 51	32 54	73 60	40 50	40 17	100 51	29 43	50 50
32 GANC24-12DH21	15 42	53 36	60 40	30 53	33 45	29 50	52 41	27 36	65 37	99 48	21 24	44 45
33 LA05079F-P05	13 40	57 41	70 50	26 48	25 35	27 45	42 23	25 30	65 37	92 39	25 35	43 43
34 LA06069E-P01	12 34	43 27	35 14	11 20	22 34	12 14	46 28	3 6	60 27	34 11	19 14	27 15
35 LA06149C-P7	9 24	52 35	40 21	14 33	20 31	17 33	48 31	13 23	28 9	44 22	23 30	28 19
36 LA07085CW-P4	12 34	53 36	40 21	26 48	12 10	16 24	49 34	25 30	70 46	50 27	18 13	34 34
37 LA07178C-44	9 24	65 49	55 35	19 39	27 39	17 33	42 23	20 27	30 12	41 19	19 14	31 25
38 LCS19227	10 27	37 17	55 35	24 47	19 27	25 44	40 18	3 6	65 37	45 23	12 5	30 22
39 LCS15963	12 34	37 17	40 21	12 23	26 37	21 39	41 20	2 2	75 49	58 29	15 9	31 25
40 M10-1615	4 8	32 10	30 6	5 9	8 1	10 8	33 9	5 10	28 9	21 1	12 5	17 3
41 M10-1659	10 27	35 15	30 6	3 3	13 12	7 1	34 11	14 25	20 3	42 20	10 4	20 5
42 MD04W249-11-12	5 11	47 30	35 14	4 8	11 7	16 24	41 20	12 22	45 22	29 8	20 18	24 9
43 MD04W249-11-7	7 19	47 30	40 21	12 23	8 1	9 3	51 37	6 13	25 6	39 16	20 18	24 9
44 MD07W272-11-5	6 15	47 30	50 34	16 35	27 39	10 8	50 36	43 55	20 3	31 9	23 30	29 21
45 MD08-26-H2-7-12-21	6 15	38 21	35 14	10 17	14 13	27 45	56 47	70 61	50 25	58 29	20 18	35 35
46 MD08-26-H2-7-12-9	6 15	30 9	35 14	7 10	14 13	16 24	48 31	60 58	45 22	46 24	26 36	30 22
47 MDNC8248-64	10 27	32 10	55 35	13 30	11 7	14 17	42 23	4 9	60 27	70 32	19 14	30 22
48 MH07-7474	10 27	37 17	40 21	11 20	19 27	15 23	38 16	1 1	75 49	88 37	22 27	32 27
49 NC09-20768	27 58	58 43	60 40	26 48	51 58	28 48	51 37	14 25	65 37	95 41	31 46	46 48
50 NC09-22352	12 34	55 38	55 35	23 46	30 43	16 24	57 49	10 18	75 49	26 5	7 2	33 32
51 NC10-25212	5 11	23 3	20 1	2 2	14 13	16 24	29 3	5 10	35 16	25 3	6 1	16 2
52 NC8170-4-3	10 27	43 27	45 29	16 35	20 31	17 33	51 37	13 23	40 17	99 48	27 39	35 35
53 NC8170-45-2	12 34	40 22	65 46	19 39	17 22	23 41	46 28	2 2	75 49	99 48	21 24	38 39
54 NC8840-19	9 24	45 29	40 21	14 33	38 49	9 3	39 17	10 18	40 17	26 5	20 18	26 14
55 VA10W-112	18 45	58 43	75 57	20 43	17 22	23 41	51 37	38 47	60 27	100 51	37 57	45 46
56 VA10W-118	22 52	58 43	60 40	13 30	29 42	27 45	53 42	25 30	40 17	100 51	41 61	43 44
57 VA10W-119	23 53	63 47	60 40	21 44	46 54	40 56	55 46	25 30	65 37	100 51	36 53	48 49
58 VA11W-FHB110	7 19	48 34	30 6	13 30	14 13	11 12	33 9	65 59	13 1	100 51	30 45	33 32
59 VA11WFHB57	20 49	55 38	40 21	8 13	19 27	14 17	45 27	40 50	33 15	100 51	26 36	36 38
60 VA11W-FHB60	12 34	40 22	45 29	32 54	16 19	20 38	53 42	30 38	65 37	38 14	36 53	35 35
61 VA11W-FHB61	18 45	63 47	70 50	40 59	71 62	40 56	64 52	25 30	75 49	88 37	40 60	54 57
62 VA11W-FHB75	4 8	32 10	40 21	9 15	17 22	9 3	29 3	33 41	30 12	25 4	31 46	24 9
Mean	12	50	49	18	26	21	48	25	54	66	24	36
LSD (0.05)	7	14	17	28	.	10	18	.	29	.	.	25
CV%	.	.	16.7	16.7	.	23.5	18.6	.	26.8	.	.	36.0

<sup>1</sup>DATA BY INDIVIDUAL ISOLATES ON FOLLOWING PAGES



**FHB Severity following inoculation with four isolates of  
*F. graminearum* and *F. culmorum*,  
Szeged, Hungary**

Cultivar/ Designation	Isolates				Mean	Rank
	1a	2a	3a	4a		
1 ERNIE	6	1	43	29	20	18
2 COKER9835	9	6	48	32	24	33
3 BESS	8	1	50	28	22	27
4 JAMESTOWN	8	1	70	35	28	42
5 MD03W61-11-3	13	4	53	34	26	37
6 ARS07-1214	10	6	35	31	20	21
7 ARS09-367	17	5	62	31	29	43
8 ARS09-446	14	4	79	52	37	58
9 ARS09-643	11	3	69	60	36	53
10 LA05102C-1-2	5	0	56	29	22	29
11 LA05102C-8-8	3	1	35	8	12	6
12 NC09-20986	5	0	50	6	15	9
13 AR00260-2-2	3	0	66	26	24	34
14 AR01044-1-1	3	1	67	15	21	26
15 AR01110-3-1	4	3	41	8	14	8
16 AR01178-1-1	6	0	54	48	27	39
17 ARGE05-1229-2-1	2	1	49	14	17	12
18 ARGE07-1339-10-5-8	1	0	50	15	16	11
19 ARGE07-1374-17-5-4	5	0	57	29	23	32
20 ARGE07-1374-17-8-5	10	2	69	46	32	48
21 ARS07-1073	14	5	73	18	27	41
22 ARS09-082	17	7	78	38	35	52
23 ARS09-228	5	3	50	19	19	14
24 ARS09-745	4	1	64	61	32	49
25 GA04494-12ES33	15	1	82	65	41	61
26 GA051477-12ES27	9	2	76	51	34	51
27 GA051477-12ES28	14	2	76	51	36	55
28 GA051477-12ES29	22	2	78	54	39	59
29 GA051477-12ES32	16	4	63	51	34	50
30 GANC8170-12DH7	2	0	30	4	9	3
31 GANC8248-12DH1	14	2	73	26	29	44
32 GANCZ4-12DH21	9	1	61	15	21	25
33 LA05079F-P05	15	1	66	17	25	35
34 LA06069E-P01	1	1	64	10	19	16
35 LA06149C-P7	13	3	67	9	23	30
36 LA07085CW-P4	5	1	59	7	18	13
37 LA07178C-44	6	1	63	5	19	15
38 LCS19227	10	0	31	7	12	7
39 LCS15963	8	7	37	10	15	10
40 M10-1615	4	0	41	1	12	5
41 M10-1659	1	0	38	1	10	4
42 MD04W249-11-12	6	1	64	11	20	23
43 MD04W249-11-7	5	1	64	10	20	20
44 MD07W272-11-5	14	1	67	8	23	31
45 MD08-26-H2-7-12-21	14	2	55	11	20	22
46 MD08-26-H2-7-12-9	12	1	53	38	26	38
47 MDNC8248-64	6	1	54	17	19	17
48 MH07-7474	10	1	56	20	22	28
49 NC09-20768	10	9	54	52	31	47
50 NC09-22352	0	12	12	4	7	2
51 NC10-25212	1	0	24	1	6	1
52 NC8170-4-3	11	2	65	30	27	40
53 NC8170-45-2	9	2	61	12	21	24
54 NC8840-19	7	3	57	13	20	19
55 VA10W-112	11	1	81	55	37	57
56 VA10W-118	12	2	77	75	41	62
57 VA10W-119	10	1	70	62	36	54
58 VA11W-FHB110	4	1	57	57	30	45
59 VA11WFHB57	5	1	56	41	26	36
60 VA11W-FHB60	10	1	80	52	36	56
61 VA11W-FHB61	15	3	83	61	40	60
62 VA11W-FHB75	10	0	65	48	31	46
Mean	9	2	58	29	24	

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	
	<i>Isol 96</i> 15-ADON	<i>Isol 46</i> 3-ADON		Rank
1 ERNIE	672	652	662	37
2 COKER9835	736	661	698	40
3 BESS	230	307	268	9
4 JAMESTOWN	318	311	315	13
5 MD03W61-11-3	291	271	281	11
6 ARS07-1214	579	530	554	33
7 ARS09-367	335	343	339	18
8 ARS09-446	734	826	780	59
9 ARS09-643	764	707	735	50
10 LA05102C-1-2	592	623	607	34
11 LA05102C-8-8	435	444	439	30
12 NC09-20986	277	233	255	5
13 AR00260-2-2	709	633	671	38
14 AR01044-1-1	809	763	786	62
15 AR01110-3-1	720	761	741	52
16 AR01178-1-1	347	368	358	20
17 ARGE05-1229-2-1	304	227	266	8
18 ARGE07-1339-10-5-8	240	226	233	4
19 ARGE07-1374-17-5-4	418	407	412	27
20 ARGE07-1374-17-8-5	477	460	469	31
21 ARS07-1073	341	346	343	19
22 ARS09-082	400	324	362	22
23 ARS09-228	750	676	713	43
24 ARS09-745	750	798	774	57
25 GA04494-12ES33	760	809	784	61
26 GA051477-12ES27	715	720	717	45
27 GA051477-12ES28	722	733	728	46
28 GA051477-12ES29	744	672	708	42
29 GA051477-12ES32	692	676	684	39
30 GANC8170-12DH7	763	714	738	51
31 GANC8248-12DH1	806	750	778	58
32 GANCZ4-12DH21	745	774	759	54
33 LA05079F-P05	750	786	768	56
34 LA06069E-P01	275	299	287	12
35 LA06149C-P7	418	343	381	23
36 LA07085CW-P4	361	449	405	26
37 LA07178C-44	337	309	323	16
38 LCS19227	375	401	388	24
39 LCS15963	441	429	435	28
40 M10-1615	206	215	210	1
41 M10-1659	349	450	400	25
42 MD04W249-11-12	279	245	262	6
43 MD04W249-11-7	341	294	318	14
44 MD07W272-11-5	328	310	319	15
45 MD08-26-H2-7-12-21	556	320	438	29
46 MD08-26-H2-7-12-9	358	364	361	21
47 MDNC8248-64	522	582	552	32
48 MH07-7474	706	752	729	48
49 NC09-20768	713	823	768	55
50 NC09-22352	219	234	227	2
51 NC10-25212	278	281	279	10
52 NC8170-4-3	779	784	782	60
53 NC8170-45-2	716	750	733	49
54 NC8840-19	198	332	265	7
55 VA10W-112	717	683	700	41
56 VA10W-118	747	750	748	53
57 VA10W-119	719	710	714	44
58 VA11W-FHB110	724	732	728	47
59 VA11W-FHB57	629	646	637	36
60 VA11W-FHB60	279	386	332	17
61 VA11W-FHB61	630	594	612	35
62 VA11W-FHB75	236	222	229	3.0
Mean	522	520	521	

### FHB Index (1-100)

CULTIVAR/ DESIGNATION	S'BURY	B'BURG	LEX'TON	K'STON	COL'BIA	GRIFFIN	H'LAND	MEAN
	MD	VA	KY	NC	MO	GA	IL	ALL LOC.
	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK
1 ERNIE	28 8	3 13	26 11	2 10	6 4	0 1	13 11	11 4
2 COKER9835	70 52	53 61	57 51	42 61	43 53	58 59	50 57	53 61
3 BESS	27 6	2 10	19 7	3 19	11 14	0 1	22 27	12 7
4 JAMESTOWN	45 31	9 31	37 25	2 10	11 14	13 38	10 7	18 19
5 MD03W61-11-3	29 9	4 16	29 15	4 24	10 9	0 1	18 20	13 8
6 ARS07-1214	77 59	47 60	58 52	62 62	61 61	9 32	54 60	53 61
7 ARS09-367	77 59	69 62	67 58	14 53	54 59	25 51	47 54	50 60
8 ARS09-446	60 44	34 58	43 30	21 59	33 46	10 34	47 54	35 51
9 ARS09-643	85 62	13 41	59 53	4 24	28 41	30 55	41 46	37 55
10 LA05102C-1-2	41 29	1 3	22 9	0 1	4 1	9 32	15 15	13 8
11 LA05102C-8-8	17 3	1 3	7 1	1 3	10 9	17 44	14 13	10 2
12 NC09-20986	24 5	7 26	33 21	4 24	24 37	2 21	10 7	15 11
13 AR00260-2-2	33 14	1 3	20 8	9 46	13 21	0 1	44 52	17 16
14 AR01044-1-1	52 36	9 31	31 19	3 19	7 5	19 46	59 62	26 36
15 AR01110-3-1	43 30	7 26	16 3	12 52	23 36	0 1	51 59	22 32
16 AR01178-1-1	35 15	7 26	19 6	6 32	12 20	2 21	50 57	19 22
17 ARGE05-1229-2-1	15 1	0 1	18 5	2 10	18 34	32 57	5 2	13 8
18 ARGE07-1339-10-5-8	16 2	1 3	16 3	1 3	10 9	0 1	7 5	7 1
19 ARGE07-1374-17-5-4	29 9	7 26	40 27	5 31	17 32	0 1	12 10	16 15
20 ARGE07-1374-17-8-5	35 15	5 19	43 30	3 19	16 27	31 56	17 19	21 27
21 ARS07-1073	60 44	13 41	64 55	9 46	32 45	17 44	39 42	34 48
22 ARS09-082	59 43	32 57	47 39	14 53	33 46	24 49	39 42	35 51
23 ARS09-228	57 40	3 13	47 39	1 3	39 52	1 16	40 45	27 38
24 ARS09-745	70 52	18 47	80 62	20 58	33 46	60 61	49 56	47 58
25 GA04494-12ES33	80 61	25 55	66 57	15 55	46 55	25 51	44 52	43 57
26 GA051477-12ES27	70 52	12 39	78 61	7 38	46 55	6 26	43 51	37 55
27 GA051477-12ES28	65 49	9 31	65 56	8 42	46 55	16 43	27 31	34 48
28 GA051477-12ES29	65 49	9 31	68 59	6 32	58 60	14 41	33 34	36 53
29 GA051477-12ES32	76 58	21 52	46 38	10 48	37 49	13 38	37 39	34 48
30 GANC8170-12DH7	29 9	2 10	29 15	1 3	11 14	11 35	22 27	15 11
31 GANC8248-12DH1	70 52	23 54	69 60	10 48	37 49	21 48	19 22	36 53
32 GANCZ4-12DH21	57 40	22 53	43 30	15 55	31 44	14 41	36 38	31 45
33 LA05079F-P05	66 51	20 50	40 27	8 42	18 34	6 26	33 34	27 38
34 LA06069E-P01	35 15	5 19	44 33	2 10	16 27	0 1	20 24	17 16
35 LA06149C-P7	40 24	10 36	44 33	6 32	16 27	7 30	15 15	20 23
36 LA07085CW-P4	40 24	19 49	47 39	2 10	8 6	11 35	35 36	23 33
37 LA07178C-44	53 37	13 41	35 23	4 24	24 37	8 31	13 11	21 27
38 LCS19227	53 37	13 41	34 22	11 51	14 22	0 1	42 49	24 34
39 LCS15963	35 15	5 19	26 11	10 48	24 37	0 1	41 46	20 23
40 M10-1615	29 9	1 3	25 10	2 10	5 2	0 1	10 7	10 2
41 M10-1659	27 6	1 3	29 15	0 1	10 9	5 25	5 2	11 4
42 MD04W249-11-12	35 15	1 3	38 26	3 19	8 6	1 16	16 17	15 11
43 MD04W249-11-7	40 24	6 24	48 44	1 3	5 2	0 1	6 4	15 11
44 MD07W272-11-5	50 34	10 36	49 45	2 10	25 40	6 26	9 6	21 27
45 MD08-26-H2-7-12-21	35 15	3 13	47 39	6 32	11 14	68 62	18 20	27 38
46 MD08-26-H2-7-12-9	35 15	2 10	44 33	3 19	11 14	51 58	21 26	24 34
47 MDNC8248-64	55 39	8 30	35 23	4 24	8 6	0 1	29 32	20 23
48 MH07-7474	35 15	4 16	27 14	7 38	17 32	0 1	39 42	18 19
49 NC09-20768	57 40	18 47	51 49	8 42	51 58	2 21	38 40	32 46
50 NC09-22352	50 34	20 50	47 39	6 32	30 43	1 16	41 46	28 42
51 NC10-25212	18 4	0 1	14 2	4 24	11 14	1 16	26 30	11 4
52 NC8170-4-3	45 31	11 38	49 45	7 38	16 27	2 21	20 24	21 27
53 NC8170-45-2	62 48	12 39	45 36	8 42	14 22	0 1	38 40	26 36
54 NC8840-19	36 23	9 31	29 15	1 3	38 51	1 16	14 13	18 19
55 VA10W-112	75 57	16 46	50 47	4 24	14 22	24 49	30 33	30 44
56 VA10W-118	60 44	5 19	52 50	7 38	28 41	11 35	24 29	27 38
57 VA10W-119	60 44	15 45	45 36	16 57	43 53	6 26	42 49	32 46
58 VA11W-FHB110	30 13	6 24	32 20	2 10	10 9	59 60	4 1	20 23
59 VA11W-FHB57	40 24	4 16	41 29	2 10	16 27	27 54	19 22	21 27
60 VA11W-FHB60	45 31	27 56	50 47	6 32	15 25	26 53	35 36	29 43
61 VA11W-FHB61	70 52	37 59	61 54	23 60	71 62	13 38	56 61	47 58
62 VA11W-FHB75	40 24	5 19	26 11	1 3	15 25	19 46	16 17	17 16

Mean	47	13	41	8	23	13	28	25
LSD (0.05)	18	34	22	7	.	.	20	22
CV%	17.0	12.3	26.3	46.3	.	.	35.5	44.9

## Percent Fusarium Damaged Kernels

Cultivar/ Designation	F'VILLE		N'PORT		K'STON		H'LAND		S'BURY		LEX'TON		B'BURG		CR'WLEY		FUN'LEASZEGED		MEAN			
	AR	AR	AR	AR	NC	NC	IL	IL	MD	MD	KY	KY	VA	VA	LA	LA	ROM	ROM	HUN	HUN	All LOCS	
	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	
1 ERNIE	1	1	8	5	4	10	5	1	50	1	85	38	23	24	5	25	12	17	28	34	22	7
2 COKER9835	45	61	77	59	78	59	87	52	100	43	90	47	37	59	35	59	18	43	21	15	59	59
3 BESS	1	1	5	2	6	20	45	35	70	7	50	8	16	9	1	6	10	9	23	16	23	10
4 JAMESTOWN	5	19	25	15	5	13	25	18	80	15	85	38	18	17	15	45	12	17	25	23	29	19
5 MD03W61-11-3	3	12	22	13	12	39	53	39	90	23	80	32	26	36	1	6	5	1	15	5	31	23
6 ARS07-1214	43	60	82	60	99	62	93	56	100	43	97	60	34	53	10	35	8	4	38	52	60	61
7 ARS09-367	50	62	88	62	85	60	95	58	100	43	98	61	25	29	15	45	18	43	41	56	61	62
8 ARS09-446	25	54	65	55	28	54	88	53	100	43	88	43	32	50	35	59	18	43	35	46	51	57
9 ARS09-643	8	33	35	24	5	13	78	47	100	43	88	43	25	29	25	54	13	20	31	42	41	42
10 LA05102C-1-2	2	4	5	2	2	2	9	4	80	15	30	2	15	4	2	17	17	38	17	7	18	3
11 LA05102C-8-8	2	4	2	1	2	2	7	2	60	4	20	1	17	12	0	1	9	6	13	2	13	1
12 NC09-20986	4	17	17	7	8	28	13	6	90	23	65	19	30	47	1	6	7	2	17	7	25	14
13 AR00260-2-2	2	4	12	6	18	47	33	24	70	7	40	4	17	12	1	6	15	29	24	18	23	10
14 AR01044-1-1	5	19	42	32	3	7	95	58	95	35	45	6	16	9	1	6	22	58	27	28	35	31
15 AR01110-3-1	2	4	17	7	25	51	63	41	95	35	50	8	25	29	1	6	26	62	14	3	32	27
16 AR01178-1-1	10	39	32	21	30	56	95	58	90	23	65	19	28	40	15	45	11	14	19	11	39	38
17 ARGE05-1229-2-1	8	33	20	11	5	13	20	12	70	7	53	12	14	2	1	6	9	6	27	28	23	10
18 ARGE07-1339-10-5-8	2	4	17	7	3	7	8	3	80	15	55	13	17	12	3	20	10	9	17	7	21	5
19 ARGE07-1374-17-5-4	2	4	27	17	7	25	14	9	65	6	60	16	17	12	0	1	16	33	25	23	23	10
20 ARGE07-1374-17-8-5	7	28	32	21	6	20	18	11	80	15	75	27	33	52	10	35	15	29	27	28	30	21
21 ARS07-1073	25	54	53	42	33	57	88	53	100	43	93	55	25	29	25	54	15	29	27	28	48	56
22 ARS09-082	35	59	85	61	90	61	95	58	100	43	85	38	39	60	25	54	10	9	25	23	59	60
23 ARS09-228	6	26	55	47	12	39	45	35	100	43	90	47	15	4	15	45	17	38	19	11	37	35
24 ARS09-745	18	48	72	57	15	43	50	38	100	43	100	62	47	62	15	45	18	43	37	49	47	53
25 GA04494-12ES33	23	52	72	57	28	54	99	62	100	43	93	55	32	50	10	35	22	58	48	60	52	58
26 GA051477-12ES27	9	37	45	34	15	43	93	56	100	43	75	27	26	36	3	20	18	43	40	54	42	48
27 GA051477-12ES28	11	41	48	36	6	20	38	30	95	35	88	43	20	20	10	35	14	24	28	34	36	33
28 GA051477-12ES29	17	46	53	42	5	13	33	24	85	20	90	47	23	24	15	45	21	53	49	61	39	38
29 GA051477-12ES32	13	43	57	49	8	28	58	40	100	43	85	38	28	40	10	35	20	50	37	49	41	42
30 GANC8170-12DH7	7	28	42	32	8	28	20	12	90	23	80	32	24	27	3	20	13	20	26	27	31	23
31 GANC8248-12DH1	10	39	55	47	19	49	35	29	90	23	90	47	21	21	30	57	21	53	40	54	41	42
32 GANCZ4-12DH21	5	19	38	27	13	41	25	18	95	35	60	16	25	29	3	20	16	33	28	34	31	23
33 LA05079F-P05	11	41	47	35	11	38	33	24	100	43	90	47	27	38	5	25	22	58	36	47	38	36
34 LA06069E-P01	6	26	33	23	4	10	23	15	90	23	80	32	28	40	5	25	15	29	27	28	31	23
35 LA06149C-P7	8	33	57	49	10	36	20	12	85	20	90	47	19	19	10	35	13	20	28	34	34	29
36 LA07085CW-P4	15	45	60	53	9	33	40	32	95	35	93	55	35	55	5	25	18	43	29	40	40	40
37 LA07178C-44	8	33	60	53	3	7	25	18	100	43	75	27	31	48	20	53	14	24	23	16	36	33
38 LCS19227	5	19	53	42	35	58	68	44	100	43	70	23	29	46	5	25	16	33	27	28	41	42
39 LCS15963	9	37	38	27	14	42	70	46	85	20	65	19	25	29	0	1	11	14	24	18	34	29
40 M10-1615	2	4	18	10	2	2	13	6	80	15	50	8	22	24	0	1	14	24	16	6	22	7
41 M10-1659	7	28	25	15	2	2	13	6	70	7	50	8	12	1	1	6	14	24	17	7	21	5
42 MD04W249-11-12	5	19	35	24	7	25	38	30	70	7	75	27	16	9	5	25	14	24	33	44	30	21
43 MD04W249-11-7	5	19	42	31	2	2	23	15	70	7	65	19	17	12	2	17	19	49	30	41	27	17
44 MD07W272-11-5	3	12	58	51	5	13	23	15	90	23	80	32	31	48	.	.	13	20	24	18	37	28
45 MD08-26-H2-7-12-21	3	12	30	19	6	20	25	18	75	14	55	13	18	17	5	25	11	14	24	18	25	14
46 MD08-26-H2-7-12-9	1	1	21	12	6	20	33	24	70	7	55	13	27	38	1	6	10	9	28	34	25	14
47 MDNC8248-64	7	28	28	18	10	36	43	34	90	23	60	16	15	4	0	1	16	33	25	23	29	19
48 MH07-7474	13	43	52	39	23	50	45	35	90	23	70	23	15	4	3	20	17	38	20	13	35	31
49 NC09-20768	28	56	53	42	25	51	68	44	100	43	85	38	36	58	5	25	20	50	38	52	46	52
50 NC09-22352	18	48	67	56	27	53	88	53	95	35	90	47	34	53	5	25	7	2	20	13	45	51
51 NC10-25212	2	4	6	4	5	13	30	22	50	1	35	3	24	27	1	6	12	17	10	1	17	2
52 NC8170-4-3	5	19	52	39	17	46	65	43	100	43	75	27	35	55	5	25	21	53	34	45	41	42
53 NC8170-45-2	7	28	52	39	9	33	83	49	90	23	80	32	28	40	.	.	23	61	36	47	42	48
54 NC8840-19	4	17	30	19	1	1	30	22	90	23	80	32	14	2	2	17	9	6	14	3	27	17
55 VA10W-112	18	48	48	36	9	33	40	32	100	43	90	47	21	21	15	45	10	9	49	61	40	40
56 VA10W-118	23	52	53	42	7	25	83	49	100	43	93	55	35	55	15	45	21	53	44	58	47	53
57 VA10W-119	28	56	48	36	8	28	85	51	100	43	70	23	39	61	30	57	21	53	37	49	47	53
58 VA11W-FHB110	3	12	36	26	5	13	10	5	50	1	45	6	28	40	1	6	17	38	28	34	22	7
59 VA11WFHB57	30	58	58	51	8	28	33	24	95	35	70	23	21	21	10	35	20	50	32	43	38	36
60 VA11W-FHB60	17	46	38	27	15	43	63	41	95	35	88	43	28	40	10	35	17	38	42	57	41	42
61 VA11W-FHB61	18	48	40	30	18	47	78	47	90	23	93	55	25	29	10	35	16	33	45	59	43	50
62 VA11W-FHB75	3	12	23	14	4	10	17	10	60	4	40	4	15	4	10	35	8	4	24	18	20	4

Mean	12	41	16	47	87	73	25	9	15	28	35
LSD (0.05)	10	20	16	26	.	17	12	.	.	.	25
CV%	.	.	49.8	27.9	.	24.4	23.5	.	.	.	35.6

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

CULTIVAR/ DESIGNATION	K'STON NC		H'LAND IL		S'BURY MD		LEX'TON KY		B'BURG VA		MEAN ALL LOC.	
	RANK		RANK		RANK		RANK		RANK		RANK	
1 ERNIE	11	13	24	5	38	8	67	26	23	16	33	10
2 COKER9835	70	61	78	57	51	52	82	50	59	61	68	61
3 BESS	16	26	47	28	36	5	48	8	18	9	33	10
4 JAMESTOWN	11	13	31	13	44	31	73	34	32	32	38	22
5 MD03W61-11-3	18	32	49	31	38	8	66	24	27	21	40	27
6 ARS07-1214	87	62	82	61	53	57	85	55	55	60	72	62
7 ARS09-367	51	59	80	58	53	57	88	61	60	62	66	60
8 ARS09-446	40	58	77	56	47	39	75	37	51	57	58	56
9 ARS09-643	13	21	70	48	56	62	82	50	36	41	51	48
10 LA05102C-1-2	6	2	29	10	41	18	41	3	14	4	26	5
11 LA05102C-8-8	9	8	29	10	32	3	22	1	19	10	22	1
12 NC09-20986	17	30	28	9	36	5	63	19	35	38	36	20
13 AR00260-2-2	28	48	52	35	39	15	42	4	12	3	35	14
14 AR01044-1-1	12	17	85	62	45	35	52	10	33	33	45	34
15 AR01110-3-1	33	52	67	46	42	25	45	6	31	30	43	31
16 AR01178-1-1	30	51	80	58	41	18	53	12	33	33	47	39
17 ARGE05-1229-2-1	11	13	22	4	29	1	46	7	11	1	24	3
18 ARGE07-1339-10-5-8	7	3	19	2	30	2	44	5	16	7	23	2
19 ARGE07-1374-17-5-4	19	34	27	8	38	8	64	21	23	16	34	13
20 ARGE07-1374-17-8-5	14	24	33	16	41	18	71	33	30	29	38	22
21 ARS07-1073	35	55	73	50	48	45	86	57	35	38	55	54
22 ARS09-082	62	60	76	53	47	39	76	39	53	59	63	59
23 ARS09-228	10	10	57	39	47	39	77	42	22	15	43	31
24 ARS09-745	33	52	62	42	51	52	94	62	45	54	57	55
25 GA04494-12ES33	34	54	80	58	54	61	86	57	43	50	60	57
26 GA051477-12ES27	22	39	76	53	51	52	83	53	34	36	53	52
27 GA051477-12ES28	20	36	48	29	50	49	84	54	29	26	46	36
28 GA051477-12ES29	17	30	49	31	50	49	86	57	28	24	46	36
29 GA051477-12ES32	22	39	59	40	53	57	76	39	42	49	50	46
30 GANC8170-12DH7	8	6	40	23	38	8	67	26	21	14	35	14
31 GANC8248-12DH1	26	44	40	23	51	52	86	57	39	44	48	43
32 GANCZ4-12DH21	29	50	46	27	47	39	64	21	40	47	45	34
33 LA05079F-P05	21	37	48	29	50	49	77	42	40	47	47	39
34 LA06069E-P01	10	10	38	20	41	18	74	35	28	24	38	22
35 LA06149C-P7	19	34	33	16	42	25	78	44	33	33	41	30
36 LA07085CW-P4	13	21	52	35	42	25	80	48	43	50	46	36
37 LA07178C-44	12	17	31	13	45	35	67	26	39	44	39	25
38 LCS19227	35	55	66	45	45	35	65	23	35	38	49	45
39 LCS15963	25	42	67	46	38	8	57	13	27	21	43	31
40 M10-1615	10	10	24	5	38	8	52	10	17	8	28	6
41 M10-1659	4	1	20	3	36	5	57	13	11	1	25	4
42 MD04W249-11-12	13	21	39	21	41	18	70	31	15	5	35	14
43 MD04W249-11-7	7	3	24	5	42	25	70	31	24	18	33	10
44 MD07W272-11-5	11	13	29	10	45	35	76	39	34	36	39	25
45 MD08-26-H2-7-12-21	16	26	36	19	41	18	63	19	20	12	35	14
46 MD08-26-H2-7-12-9	12	17	40	23	41	18	62	17	20	12	35	14
47 MDNC8248-64	16	26	50	34	47	39	62	17	27	21	40	27
48 MH07-7474	27	45	56	38	38	8	61	16	19	10	40	27
49 NC09-20768	27	45	65	44	47	39	79	46	43	50	52	50
50 NC09-22352	28	48	74	52	44	31	78	44	46	55	54	53
51 NC10-25212	14	24	45	26	33	4	37	2	15	5	29	7
52 NC8170-4-3	25	42	52	35	44	31	74	35	39	44	47	39
53 NC8170-45-2	21	37	71	49	48	45	75	37	36	41	50	46
54 NC8840-19	7	3	35	18	39	15	66	24	29	26	35	14
55 VA10W-112	16	26	49	31	53	57	81	49	38	43	47	39
56 VA10W-118	18	32	63	43	48	45	82	50	31	30	48	43
57 VA10W-119	27	45	73	50	48	45	69	30	43	50	52	50
58 VA11W-FHB110	9	8	18	1	39	15	57	13	29	26	31	8
59 VA11WFHB57	12	17	39	21	42	25	68	29	24	18	37	21
60 VA11W-FHB60	22	39	61	41	44	31	79	46	46	55	51	48
61 VA11W-FHB61	36	57	76	53	51	52	85	55	51	57	60	57
62 VA11W-FHB75	8	6	32	15	42	25	51	9	26	20	32	9

Mean	22	50	44	68	32	43
LSD (0.05)	11	.	.	.	.	19
CV%	26	.	.	.	.	22.7

## 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	535	344	440	19	4	3	3
2 COKER9835	327	174	250	61	1	1	1
3 BESS	531	409	470	9	4	3	4
4 JAMESTOWN	524	494	509	2	3	2	2
5 MD03W61-11-3	554	419	486	5	4	3	3
6 ARS07-1214	399	106	253	60	1	1	1
7 ARS09-367	353	112	233	62	1	1	1
8 ARS09-446	369	285	327	57	2	1	2
9 ARS09-643	434	288	361	51	3	1	2
10 LA05102C-1-2	506	419	463	11	4	3	4
11 LA05102C-8-8	467	399	433	27	4	4	4
12 NC09-20986 (Fhb1)	509	443	476	8	4	2	3
13 AR00260-2-2	549	359	454	14	4	2	3
14 AR01044-1-1	542	356	449	17	3	2	3
15 AR01110-3-1	562	315	438	21	4	2	3
16 AR01178-1-1	556	357	457	13	2	2	2
17 ARGE05-1229-2-1	448	324	386	44	3	3	3
18 ARGE07-1339-10-5-8	472	406	439	20	4	3	4
19 ARGE07-1374-17-5-4	511	365	438	21	4	2	3
20 ARGE07-1374-17-8-5	517	514	516	1	3	2	3
21 ARS07-1073	375	343	359	52	2	1	2
22 ARS09-082	357	183	270	59	1	1	1
23 ARS09-228	466	320	393	41	4	1	3
24 ARS09-745	428	253	341	56	2	1	2
25 GA04494-12ES33	482	389	436	26	2	1	2
26 GA051477-12ES27	444	324	384	45	2	1	2
27 GA051477-12ES28	477	310	394	39	3	1	2
28 GA051477-12ES29	463	287	375	49	2	1	1
29 GA051477-12ES32	495	340	417	34	2	1	2
30 GANC8170-12DH7	440	411	426	30	3	2	2
31 GANC8248-12DH1	416	352	384	45	3	1	2
32 GANCZ4-12DH21	534	372	453	15	3	2	2
33 LA05079F-P05	551	415	483	6	2	1	2
34 LA06069E-P01	500	402	451	16	4	2	3
35 LA06149C-P7	430	321	376	47	3	1	2
36 LA07085CW-P4	421	402	411	36	2	1	2
37 LA07178C-44	485	402	444	18	2	1	2
38 LCS19227	600	244	422	31	3	1	2
39 LCS15963	502	311	407	37	3	2	2
40 M10-1615	500	306	403	38	4	2	3
41 M10-1659	534	401	467	10	3	2	3
42 MD04W249-11-12	515	465	490	3	3	2	3
43 MD04W249-11-7	560	366	463	11	3	2	3
44 MD07W272-11-5	428	312	370	50	3	1	2
45 MD08-26-H2-7-12-21	471	371	421	32	4	2	3
46 MD08-26-H2-7-12-9	494	380	437	24	4	3	3
47 MDNC8248-64	515	343	429	29	4	2	3
48 MH07-7474	496	368	432	28	2	1	2
49 NC09-20768	399	308	354	53	2	1	1
50 NC09-22352	468	235	351	55	2	1	2
51 NC10-25212	532	443	487	4	4	4	4
52 NC8170-4-3	469	305	387	43	4	1	3
53 NC8170-45-2	367	240	304	58	4	1	2
54 NC8840-19	553	401	477	7	3	2	3
55 VA10W-112	485	341	413	35	2	1	2
56 VA10W-118	464	375	420	33	2	2	2
57 VA10W-119	493	382	437	24	2	1	2
58 VA11W-FHB110	481	298	390	42	4	2	3
59 VA11WFHB57	417	372	394	39	2	1	2
60 VA11W-FHB60	412	340	376	47	2	1	2
61 VA11W-FHB61	426	277	352	54	2	1	2
62 VA11W-FHB75	445	430	438	21	3	2	3
Mean	475	344	410		3	2	2
LSD (0.05)	.	.	96		1	1	.
CV%	.	.	11.7		.	.	.

## DON (ppm)

Cultivar/ Designation	B'BURG	LEX'TON	KINSTON	F'VILLE	NEWPORT	MEAN	NEWPORT	3ADON
	VA	KY	NC	AR	AR	ALL LOC.	AR	
	RANK	RANK	RANK	RANK	RANK	RANK	RANK	
1 ERNIE	6 57	23 51	4 19	1 2	5 16	8 37		0.32
2 COKER9835	6 57	26 58	14 59	5 55	11 57	13 60		0.68
3 BESS	3 19	17 22	4 19	1 2	4 7	6 10		0.15
4 JAMESTOWN	2 5	22 48	3 12	2 23	6 25	7 21		0.23
5 MD03W61-11-3	2 5	23 51	9 45	1 2	6 25	8 37		0.27
6 ARS07-1214	4 40	21 45	70 62	15 61	19 62	16 62		1.13
7 ARS09-367	5 52	21 45	15 60	18 62	15 61	15 61		0.78
8 ARS09-446	6 57	23 51	13 56	7 59	10 52	12 59		0.36
9 ARS09-643	3 19	16 18	2 7	4 48	5 16	6 10		0.28
10 LA05102C-1-2	2 5	11 3	0 1	1 2	1 1	3 1		0.07
11 LA05102C-8-8	2 5	11 3	1 2	0 1	1 1	3 1		0.08
12 NC09-20986	1 1	20 41	5 27	1 2	5 16	6 10		0.23
13 AR00260-2-2	3 19	25 56	7 39	1 2	4 7	8 37		0.10
14 AR01044-1-1	2 5	13 8	2 7	2 23	5 16	5 7		0.31
15 AR01110-3-1	3 19	15 14	10 48	2 23	5 16	7 21		0.20
16 AR01178-1-1	3 19	15 14	5 27	2 23	4 7	6 10		0.15
17 ARGE05-1229-2-1	1 1	14 11	3 12	1 2	3 3	5 7		0.13
18 ARGE07-1339-10-5-8	3 19	26 58	2 7	1 2	3 3	7 21		0.15
19 ARGE07-1374-17-5-4	3 19	20 41	5 27	1 2	7 33	7 21		0.25
20 ARGE07-1374-17-8-5	4 40	28 61	4 19	2 23	7 33	9 48		0.29
21 ARS07-1073	2 5	15 14	6 36	7 59	8 45	8 37		0.37
22 ARS09-082	4 40	19 32	15 60	5 55	10 52	11 56		0.47
23 ARS09-228	5 52	18 26	6 36	1 2	6 25	7 21		0.29
24 ARS09-745	4 40	17 22	10 48	4 48	9 49	8 37		0.40
25 GA04494-12ES33	6 57	20 41	8 42	4 48	11 57	10 54		0.52
26 GA051477-12ES27	4 40	17 22	5 27	2 23	7 33	7 21		0.33
27 GA051477-12ES28	3 19	17 22	6 36	2 23	7 33	7 21		0.30
28 GA051477-12ES29	3 19	19 32	4 19	4 48	8 45	8 37		0.43
29 GA051477-12ES32	5 52	19 32	5 27	2 23	7 33	8 37		0.35
30 GANC8170-12DH7	4 40	19 32	1 2	1 2	4 7	6 10		0.18
31 GANC8248-12DH1	3 19	20 41	8 42	3 40	11 57	9 48		0.49
32 GANCZ4-12DH21	3 19	14 11	11 52	1 2	4 7	7 21		0.17
33 LA05079F-P05	3 19	15 14	7 39	3 40	7 33	7 21		0.33
34 LA06069E-P01	3 19	19 32	4 19	2 23	6 25	7 21		0.25
35 LA06149C-P7	5 52	22 48	11 52	3 40	7 33	9 48		0.29
36 LA07085CW-P4	5 52	18 26	4 19	2 23	6 25	7 21		0.35
37 LA07178C-44	3 19	14 11	5 27	2 23	7 33	6 10		0.35
38 LCS19227	4 40	11 3	11 52	1 2	7 33	7 21		0.18
39 LCS15963	4 40	19 32	10 48	3 40	6 25	8 37		0.22
40 M10-1615	3 19	19 32	5 27	1 2	4 7	6 10		0.17
41 M10-1659	2 5	13 8	1 2	1 2	3 3	4 4		0.11
42 MD04W249-11-12	2 5	21 45	4 19	2 23	10 52	8 37		0.53
43 MD04W249-11-7	2 5	18 26	1 2	2 23	11 57	7 21		0.52
44 MD07W272-11-5	2 5	26 58	4 19	2 23	10 52	9 48		0.42
45 MD08-26-H2-7-12-21	1 1	9 1	2 7	1 2	4 7	3 1		0.24
46 MD08-26-H2-7-12-9	3 19	11 3	3 12	1 2	3 3	4 4		0.16
47 MDNC8248-64	2 5	18 26	3 12	2 23	5 16	6 10		0.24
48 MH07-7474	4 40	19 32	13 56	4 48	10 52	10 54		0.40
49 NC09-20768	6 57	25 56	9 45	5 55	9 49	11 56		0.35
50 NC09-22352	3 19	29 62	13 56	4 48	8 45	11 56		0.36
51 NC10-25212	6 57	10 2	3 12	1 2	4 7	5 7		0.16
52 NC8170-4-3	3 19	13 8	7 39	2 23	7 33	6 10		0.26
53 NC8170-45-2	4 40	23 51	9 45	2 23	7 33	9 48		0.33
54 NC8840-19	2 5	22 48	2 7	1 2	5 16	6 10		0.23
55 VA10W-112	3 19	16 18	5 27	3 40	7 33	7 21		0.27
56 VA10W-118	4 40	18 26	3 12	4 48	6 25	7 21		0.26
57 VA10W-119	3 19	16 18	8 42	5 55	9 49	8 37		0.42
58 VA11W-FHB110	4 40	19 32	1 2	1 2	8 45	7 21		0.43
59 VA11W-FHB57	3 19	16 18	5 27	3 40	5 16	6 10		0.24
60 VA11W-FHB60	2 5	18 26	11 52	3 40	5 16	8 37		0.31
61 VA11W-FHB61	2 5	24 55	10 48	3 40	6 25	9 48		0.36
62 VA11W-FHB75	1 1	12 7	3 12	1 2	4 7	4 4		0.24

Mean	3	18	6	3	7	7	0.31
LSD (0.05)	2	11	7	2	3	5	.
CV%	28.5	29.5	29.3	.	.	36.5	.





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

DESIGNATION	Rht-B1	Rht-D1	Rht8	Ppd-D1a insens	vrn-A1 short	vrn-B1 short	Lr34/Yr18	Lr37/Yr17/Sr38	Sr2	Sr36	Sr24/Lr24	Lr9	Fhb1	Fhb Massey 3BL	Fhb 5A ERNIE	Fhb 5A Ning7840	Fhb 2DL- Wuhan1/W14
1 ERNIE	b	a	no	no	yes	no	no	no	no	yes	no	no	no	yes	yes	no	no
2 COKER9835	a	b	no	yes	no	yes	no	no	no	yes	no	yes	no	no	no	no	no
3 BESS	het	het	no	het	no	no	no	no	no	no	no	no	no	no	no	no	no
4 JAMESTOWN	a	b	no	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no
5 MD03W61-11-3	a	b	no	yes	no	no	no	no	no	no	no	no	yes	no	no	no	no
6 ARS07-1214	b	a	no	no	no	no	no	no	no	no	yes	no	no	no	no	no	no
7 ARS09-367	b	a	no	no	no	no	no	no	no	no	yes	no	no	no	no	no	no
8 ARS09-446	a	a	no	no	no	yes	no	no	no	yes	no	no	no	no	no	no	no
9 ARS09-643	a	b	no	yes	no	yes	no	no	no	no	no	no	no	no	no	no	no
10 LA05102C-1-2	b het	a	no	yes	het	no	no	no	no	yes?	no	no	no	no	no	no	het
11 LA05102C-8-8	a	a	no	yes	no	yes	no	no	no	yes	no	no	no	no	no	no	no
12 NC09-20986	b	a	no	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no
13 AR00260-2-2	a	b	no	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
14 AR01044-1-1	b	a	no	yes	yes	yes	no	yes	no	no	yes	no	no	no	no	no	no
15 AR01110-3-1	b	a	no	yes	no	no	no	no	no	no	no	no	no	yes	no	no	no
16 AR01178-1-1	b	a	no	yes	het	no	no	no	no	no	no	no	no	no	no	no	no
17 ARGE05-1229-2-1	b	a	no	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no
18 ARGE07-1339-10-5-8	b het	a	no	no	no	no	no	no	no	het	no	no	no	no	no	no	het
19 ARGE07-1374-17-5-4	a	b	no	yes	no	no	no	no	no	yes	no	no	no	no	no	no	no
20 ARGE07-1374-17-8-5	a	b	no	yes	no	no	no	no	no	yes	no	yes	no	no	no	no	no
21 ARS07-1073	a	b	no	no	no	yes	no	no	no	no	no	no	no	no	no	no	no
22 ARS09-082	a	b	no	yes	no	yes	no	no	no	yes	no	yes	no	no	no	no	no
23 ARS09-228	a	a	Rht8c?	yes	no	no	no	no	no	yes	no	no	no	no	no	no	no
24 ARS09-745	a	b	no	yes	no	no	no	yes	no	no	no	no	no	no	no	no	no
25 GA04494-12ES33	a	b	no	yes	no	no	no	yes	no	no	no	no	no	no	yes	no	no
26 GA051477-12ES27	a	b	no	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no
27 GA051477-12ES28	a	b	no	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no
28 GA051477-12ES29	a	b	no	yes	yes	no	no	no	no	no	no	no	no	no	no	no	no
29 GA051477-12ES32	a	b	no	yes	yes	het	no	no	no	no	no	no	no	no	yes	no	no
30 GANC8170-12DH7	a	b	no	yes	no	no	no	yes	no	no	no	no	no	no	no	yes	no
31 GANC8248-12DH1	a	b	no	yes	no	no	no	no	no	yes	no	no	no	no	no	no	no
32 GANCZ4-12DH21	a	b	no	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
33 LA05079F-P05	b	a	no	no	no	het	no	no	no	no	no	no	no	no	no	no	no
34 LA06069E-P01	a	b	no	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
35 LA06149C-P7	a	b	no	no	yes	yes	no	no	no	no	no	no	no	no	no	no	no
36 LA07085CW-P4	a	b	no	yes	?	no	no	yes	no	het	no	no	no	no	no	no	no
37 LA07178C-44	a	b	no	no	yes	no	no	no	no	no	no	yes	no	no	no	no	no
38 LCS19227	a	b	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
39 LCS15963	b	a	no	no	no	no	no	no	no	no	no	yes	no	no	no	no	no
40 M10-1615	b	a	nd	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
41 M10-1659	a	a	no	no	yes	no	no	no	no	yes	no	yes	no	no	no	no	no
42 MD04W249-11-12	a	b	no	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
43 MD04W249-11-7	a	b	no	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
44 MD07W272-11-5	a	b	no	yes	yes	no	no	no	no	no	no	no	yes	no	no	no	no
45 MD08-26-H2-7-12-21	a	b	no	yes	no	no	no	yes	no	no	yes	no	yes	no	no	yes	yes
46 MD08-26-H2-7-12-9	a	b	no	yes	no	no	no	yes	no	no	yes	no	yes	no	no	yes	yes
47 MDNC8248-64	a	b	no	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
48 MH07-7474	b	a	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
49 NC09-20768	a	b	no	yes	no	no	no	no	no	yes	no	no	no	no	no	no	no
50 NC09-22352	b	a	Rht8c?	no	no	no	no	no	no	yes	no	no	no	no	no	no	no
51 NC10-25212	a	a	no	no	no	no	no	no	no	yes	no	yes	no	no	no	no	no
52 NC8170-4-3	a	b	no	yes	no	no	no	no	no	no	no	no	yes	no	no	no	no
53 NC8170-45-2	a	b	no	yes	no	no	no	no	no	no	no	no	yes	no	no	no	no
54 NC8840-19	a	a	no	yes	no	no	no	no	no	yes	no	no	yes	no	no	no	no
55 VA10W-112	a	b	no	yes	no	no	no	yes	no	no	no	no	no	no	no	no	no
56 VA10W-118	a	b	no	yes	no	no	no	yes	no	no	no	no	no	no	no	no	no
57 VA10W-119	a	b	no	yes	no	no	no	no	no	no	no	no	no	no	no	no	no
58 VA11W-FHB110	b	a	no	yes	yes	no	no	no	no	yes	no	yes	no	het	no	no	no
59 VA11WFHB57	het	a	no	no	yes	no	no	no	no	yes	no	yes	no	no	no	no	no
60 VA11W-FHB60	a	b	no	yes	no	yes	no	no	no	no	no	no	yes	no	no	no	no
61 VA11W-FHB61	a	b	no	yes	yes	no	no	no	no	no	no	no	yes	no	no	no	no
62 VA11W-FHB75	b	a	no	yes	yes	no	no	no	no	yes	no	no	yes	no	no	yes?	yes

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

DESIGNATION	1RS	H9	H13	Sbm1	Tsn1	Glu-B1	Glu-D1	Glu-A1	Sucrose Synthase	Combined Colour
1 ERNIE	non-1RS	no		no	no	no	2+12	Ax1_or_null	yes	RR rr rr
2 COKER9835	non-1RS	no	no	yes	no	no	2+12	Ax2*	yes	rr RR RR
3 BESS	non-1RS	no	no	yes	yes	no	het	Ax1_or_null	no	RR rr RR
4 JAMESTOWN	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	RR RR RR
5 MD03W61-11-3	1RS:1BL	no	no	yes	no	no	5+10	Ax1_or_null	no	rr RR RR
6 ARS07-1214	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	no	RR rr rr
7 ARS09-367	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	no	RR rr rr
8 ARS09-446	non-1RS	no	no	no	no	no	5+10	Ax2*	yes	RR rr RR
9 ARS09-643	1RS:1AL	no	no	yes	no	Bx7oe_het	2+12	Ax2*	no	RR rr RR
10 LA05102C-1-2	1RS:1BL	no	no	yes	no	no	het	Ax2*	yes	RR RR RR
11 LA05102C-8-8	non-1RS	no	no	yes	no	no	2+12	Ax2*	yes	RR RR rr
12 NC09-20986	non-1RS	no	yes	yes	no	no	2+12	Ax2*	no	RR rr RR
13 AR00260-2-2	non-1RS	no	no	yes	no	no	5+10	Ax2*	no	RR RR RR
14 AR01044-1-1	non-1RS	no	no	yes	no	no	2+12	Ax1_or_null	yes	RR RR rr
15 AR01110-3-1	non-1RS	no	no	yes	no	no	5+10	Ax2*	no	RR rr rr
16 AR01178-1-1	non-1RS	no	no	no	no	Bx7oe	5+10	Ax1_or_null	no	RR rr RR
17 ARGE05-1229-2-1	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	no	RR Rr rr
18 ARGE07-1339-10-5-8	1RS:1AL	no	no	yes	yes	no	2+12	het	het	rr rr RR
19 ARGE07-1374-17-5-4	non-1RS	no	no	yes	no	no	2+12	Ax2*	yes	Rr rr RR
20 ARGE07-1374-17-8-5	non-1RS	no	no	yes	no	no	2+12	Ax1_or_null	yes	Rr rr RR
21 ARS07-1073	1RS:1AL	no	no	yes	no	no	2+12	Ax2*	no	RR RR RR
22 ARS09-082	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	yes	RR RR RR
23 ARS09-228	non-1RS	no		yes	no	no	5+10	Ax1_or_null	yes	RR rr rr
24 ARS09-745	non-1RS	no	no	yes	yes	no	2+12	Ax2*	no	RR rr rr
25 GA04494-12ES33	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	RR RR rr
26 GA051477-12ES27	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	RR rr RR
27 GA051477-12ES28	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	RR RR RR
28 GA051477-12ES29	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	RR rr RR
29 GA051477-12ES32	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	rr rr RR
30 GANC8170-12DH7	1RS:1BL	no	no	yes	no	no	5+10	Ax2*	no	RR RR RR
31 GANC8248-12DH1	non-1RS	no	no	yes	no	no	2+12	Ax1_or_null	yes	RR rr RR
32 GANCZ4-12DH21	1RS:1AL	no	no	yes	no	no	2+12	Ax1_or_null	no	RR RR RR
33 LA05079F-P05	non-1RS	no	no	yes	no	no	2+12	Ax1_or_null	no	RR RR RR
34 LA06069E-P01	non-1RS	no	no	yes	no	no	2+12	Ax1_or_null	no	RR rr RR
35 LA06149C-P7	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	RR RR RR
36 LA07085CW-P4	non-1RS	no	no	het	no	no	2+12	Ax2*	het	Rr RR RR
37 LA07178C-44	non-1RS	no	no	yes	no	no	2+12	het	no	RR rr RR
38 LCS19227	non-1RS	no	no	yes	no	no	het	Ax1_or_null	no	RR rr RR
39 LCS15963	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	no	RR RR rr
40 M10-1615	non-1RS	no		yes	no	no	2+12	Ax2*	no	RR rr rr
41 M10-1659	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	yes	RR RR rr
42 MD04W249-11-12	1RS:1BL	no	no	yes	no	no	2+12	Ax1_or_null	no	RR rr RR
43 MD04W249-11-7	1RS:1BL	no	no	yes	no	no	2+12	Ax1_or_null	no	RR rr RR
44 MD07W272-11-5	1RS:1BL	no	no	yes	no	no	het	Ax2*	no	RR rr RR
45 MD08-26-H2-7-12-21	non-1RS	no	no	yes	yes	no	2+12	Ax2*	no	RR RR RR
46 MD08-26-H2-7-12-9	non-1RS	no	no	yes	yes	no	2+12	Ax2*	no	RR RR RR
47 MDNC8248-64	1RS:1AL	no	no	yes	no	no	2+12	Ax2*	no	RR rr RR
48 MH07-7474	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	no	RR rr RR
49 NC09-20768	non-1RS	no	no	yes	no	no	2+12	Ax2*	yes	rr rr RR
50 NC09-22352	1RS:1BL	no	no	yes	yes	no	5+10	Ax1_or_null	yes	RR RR RR
51 NC10-25212	non-1RS	no	no	yes	no	no	5+10	Ax1_or_null	yes	RR rr rr
52 NC8170-4-3	non-1RS	no	no	yes	no	no	5+10	Ax2*	no	RR RR RR
53 NC8170-45-2	non-1RS	no	no	yes	no	no	5+10	Ax2*	no	RR RR RR
54 NC8840-19	non-1RS	no	no	yes	no	no	2+12	Ax1_or_null	yes	RR rr rr
55 VA10W-112	non-1RS	no	het	yes	yes	no	2+12	Ax2*	no	rr rr RR
56 VA10W-118	non-1RS	no	no	yes	yes	no	2+12	Ax2*	no	rr rr RR
57 VA10W-119	non-1RS	no	yes	yes	yes	no	2+12	Ax2*	no	RR rr rr
58 VA11W-FHB110	non-1RS	no	no	yes	no	no	2+12	het	yes	RR rr RR
59 VA11WFHB57	1RS:1BL	no	no	yes	no	no	5+10	Ax1_or_null	yes	RR rr RR
60 VA11W-FHB60	1RS:1BL	no	no	yes	no	no	2+12	Ax1_or_null	no	rr RR RR
61 VA11W-FHB61	non-1RS	no	no	yes	no	no	2+12	Ax2*	no	rr rr RR
62 VA11W-FHB75	1RS:1BL	no	no	yes	no	no	2+12	Ax1_or_null	yes	RR rr RR

### Heading Date (Julian Days\*)

	K'STON NC	WARSAW VA	S'BURY MD	LEX'TON KY	COL'BIA MO	FUN'LEA ROM	MEAN ALL LOC.	RANK
1	ERNIE	105	119	130	133	146	129	22
2	COKER9835	107	123	133	137	152	134	58
3	BESS	112	120	132	133	149	132	50
4	JAMESTOWN	102	116	130	131	148	139	30
5	MD03W61-11-3	115	123	135	136	148	132	58
6	ARS07-1214	114	123	134	137	154	133	62
7	ARS09-367	111	121	133	136	149	133	50
8	ARS09-446	103	119	130	132	149	132	22
9	ARS09-643	101	114	128	132	149	129	3
10	LA05102C-1-2	95	114	129	132	148	132	3
11	LA05102C-8-8	102	116	130	133	148	129	7
12	NC09-20986	108	118	130	133	146	129	22
13	AR00260-2-2	109	119	131	133	148	130	30
14	AR01044-1-1	103	120	131	134	149	131	30
15	AR01110-3-1	114	121	133	136	151	132	58
16	AR01178-1-1	108	120	131	133	148	132	40
17	ARGE05-1229-2-1	105	119	131	134	152	132	40
18	ARGE07-1339-10-5-8	108	120	131	134	152	130	40
19	ARGE07-1374-17-5-4	108	120	131	133	148	130	30
20	ARGE07-1374-17-8-5	103	116	128	132	146	130	7
21	ARS07-1073	105	118	131	135	154	132	40
22	ARS09-082	107	121	132	135	154	132	50
23	ARS09-228	109	120	133	135	152	133	50
24	ARS09-745	104	116	128	130	148	128	7
25	GA04494-12ES33	103	120	131	132	148	129	22
26	GA051477-12ES27	103	116	129	131	148	129	7
27	GA051477-12ES28	103	116	128	131	148	129	7
28	GA051477-12ES29	104	116	128	131	148	129	7
29	GA051477-12ES32	102	116	130	132	149	129	7
30	GANC8170-12DH7	104	116	130	131	148	130	7
31	GANC8248-12DH1	104	116	128	131	146	129	7
32	GANCZ4-12DH21	105	120	130	134	148	122	22
33	LA05079F-P05	105	120	131	133	149	122	7
34	LA06069E-P01	104	116	129	131	148	129	7
35	LA06149C-P7	106	120	131	136	149	130	40
36	LA07085CW-P4	98	114	128	130	146	129	2
37	LA07178C-44	104	122	131	134	149	130	30
38	LCS19227	112	121	131	135	148	122	30
39	LCS15963	111	120	133	136	154	129	50
40	M10-1615	108	118	131	131	148	130	30
41	M10-1659	105	116	131	131	149	130	22
42	MD04W249-11-12	108	120	131	133	149	130	30
43	MD04W249-11-7	107	122	131	133	148	133	40
44	MD07W272-11-5	105	119	131	133	148	130	30
45	MD08-26-H2-7-12-21	103	118	130	132	149	130	22
46	MD08-26-H2-7-12-9	101	116	128	130	149	130	7
47	MDNC8248-64	109	120	132	134	149	130	40
48	MH07-7474	108	122	133	136	149	132	50
49	NC09-20768	110	122	132	134	149	132	50
50	NC09-22352	108	121	133	136	154	132	58
51	NC10-25212	111	119	132	133	149	133	40
52	NC8170-4-3	111	120	131	134	149	130	40
53	NC8170-45-2	111	120	131	134	149	130	40
54	NC8840-19	104	121	131	137	154	134	50
55	VA10W-112	101	116	128	130	146	129	3
56	VA10W-118	102	116	128	132	144	129	3
57	VA10W-119	105	120	130	133	148	131	30
58	VA11W-FHB110	103	116	130	131	146	129	7
59	VA11W-FHB57	97	112	129	129	144	129	1
60	VA11W-FHB60	103	116	128	132	148	129	7
61	VA11W-FHB61	105	119	130	132	148	130	22
62	VA11W-FHB75	105	116	131	131	146	130	7

Mean	106	119	130	133	149	130	128
LSD (0.05)	1	.	1	2	.	.	4
CV%	2.7	.	0.5	0.6	.	.	1.5

\*Days after December 31, 2012

Plant Height (in)

CULTIVAR/ DESIGNATION	K'STON NC	S'BURY MD	LEX'TON KY	FUN'LEA ROM	MEAN ALL LOC.	RANK
1 ERNIE	32	34	37	31	34	31
2 COKER9835	32	33	36	29	32	6
3 BESS	36	37	39	33	36	48
4 JAMESTOWN	33	33	33	29	32	6
5 MD03W61-11-3	39	36	42	31	37	52
6 ARS07-1214	34	33	38	29	33	18
7 ARS09-367	31	31	36	27	31	2
8 ARS09-446	35	37	41	29	35	38
9 ARS09-643	33	34	38	27	33	18
10 LA05102C-1-2	36	40	44	33	38	58
11 LA05102C-8-8	36	44	44	44	42	62
12 NC09-20986	33	34	37	35	35	38
13 AR00260-2-2	40	37	40	33	37	52
14 AR01044-1-1	32	32	36	27	32	6
15 AR01110-3-1	42	36	39	33	37	52
16 AR01178-1-1	35	35	38	33	35	38
17 ARGE05-1229-2-1	37	38	42	31	37	52
18 ARGE07-1339-10-5-8	35	36	40	31	35	38
19 ARGE07-1374-17-5-4	31	31	34	31	32	6
20 ARGE07-1374-17-8-5	31	34	36	29	32	6
21 ARS07-1073	30	30	37	31	32	6
22 ARS09-082	34	34	37	27	33	18
23 ARS09-228	33	34	39	25	33	18
24 ARS09-745	31	30	35	29	31	2
25 GA04494-12ES33	33	34	34	29	32	6
26 GA051477-12ES27	35	35	37	29	34	31
27 GA051477-12ES28	36	34	36	29	34	31
28 GA051477-12ES29	35	33	35	29	33	18
29 GA051477-12ES32	34	33	35	29	33	18
30 GANC8170-12DH7	34	35	38	33	35	38
31 GANC8248-12DH1	32	32	36	27	31	2
32 GANCZ4-12DH21	37	33	40	29	34	31
33 LA05079F-P05	33	34	36	25	32	6
34 LA06069E-P01	34	33	37	27	33	18
35 LA06149C-P7	32	36	40	33	35	38
36 LA07085CW-P4	32	35	37	27	32	6
37 LA07178C-44	33	34	36	27	33	18
38 LCS19227	37	33	40	33	36	48
39 LCS15963	39	37	42	27	36	48
40 M10-1615	37	36	36	31	35	38
41 M10-1659	34	37	41	33	36	48
42 MD04W249-11-12	37	34	39	27	34	31
43 MD04W249-11-7	39	34	40	29	35	38
44 MD07W272-11-5	34	34	37	29	33	18
45 MD08-26-H2-7-12-21	32	33	42	25	33	18
46 MD08-26-H2-7-12-9	28	33	38	25	31	2
47 MDNC8248-64	39	35	38	27	35	38
48 MH07-7474	41	35	41	31	37	52
49 NC09-20768	33	33	37	29	33	18
50 NC09-22352	32	32	35	29	32	6
51 NC10-25212	40	41	43	33	39	61
52 NC8170-4-3	39	39	41	33	38	58
53 NC8170-45-2	38	40	42	29	37	52
54 NC8840-19	41	41	46	25	38	58
55 VA10W-112	33	33	36	29	33	18
56 VA10W-118	33	35	38	31	34	31
57 VA10W-119	34	36	37	31	34	31
58 VA11W-FHB110	27	31	34	3	24	1
59 VA11WFHB57	29	32	38	31	32	6
60 VA11W-FHB60	31	33	35	27	32	6
61 VA11W-FHB61	35	35	39	29	35	38
62 VA11W-FHB75	32	34	37	29	33	18

Mean	34	34.4	38	29	34
LSD (0.05)	5	2	3	.	5
CV%	3.2	3.2	3.82	.	7.3

## Leaf Disease Ratings

CULTIVAR/ DESIGNATION	Leaf Spots %	Stripe Rust %	Leaf Rust Type + %	Stripe Rust 0-9	Leaf Rust 0-10	Stripe Rust %	Powdery Mildew %
	SZEGED HUN	SZEGED HUN	SZEGED HUN	CROWLEY LA	WARSAW VA	F'VILLE AR	F'VILLE AR
	HUN	HUN	HUN	LA	VA	AR	AR
1 ERNIE	15	15	R5	7	4	30	6
2 COKER9835	15	15	R5	7	1	70	0
3 BESS	40	0	R5	4	4	30	6
4 JAMESTOWN	25	0	MR10	0	3	0	0
5 MD03W61-11-3	25	0	R5	3	4	70	0
6 ARS07-1214	30	0	MR5	8	0	93	0
7 ARS09-367	15	0	MR1	7	0	98	0
8 ARS09-446	15	0	MS3	4	0	30	0
9 ARS09-643	20	0	MS3	0	0	0	1
10 LA05102C-1-2	40	0	R3	0	0	2	0
11 LA05102C-8-8	20	0	R5	0	1	0	0
12 NC09-20986	25	0	R10	2	0	0	0
13 AR00260-2-2	40	0	R8	0	5	0	0
14 AR01044-1-1	50	0	R3	1	2	0	10
15 AR01110-3-1	60	0	MS5	6	1	30	12
16 AR01178-1-1	60	0	MR15	0	1	7	1
17 ARGE05-1229-2-1	75	0	MS5	0	1	0	12
18 ARGE07-1339-10-5-8	40	0	R5	0	4	15	0
19 ARGE07-1374-17-5-4	30	3	S5	2	0	7	0
20 ARGE07-1374-17-8-5	25	0	R10	0	1	2	1
21 ARS07-1073	60	0	R10	3	0	70	0
22 ARS09-082	55	0	R20	6	0	93	0
23 ARS09-228	15	0	R15	0	1	0	0
24 ARS09-745	30	0	MS10	0	0	0	0
25 GA04494-12ES33	25	0	MR25	0	0	0	1
26 GA051477-12ES27	50	0	R15	0	0	0	0
27 GA051477-12ES28	40	0	R5	0	0	0	0
28 GA051477-12ES29	40	0	MR10	0	0	0	5
29 GA051477-12ES32	40	0	MR15	0	0	15	0
30 GANC8170-12DH7	50	0	MR10	0	0	0	0
31 GANC8248-12DH1	30	0	MR5	0	0	30	0
32 GANCZ4-12DH21	20	0	MR10	2	7	0	0
33 LA05079F-P05	15	0	R5	0	3	2	1
34 LA06069E-P01	30	0	R10	4	3	7	0
35 LA06149C-P7	20	0	R10	1	3	0	0
36 LA07085CW-P4	15	0	MR10	0	1	0	0
37 LA07178C-44	40	0	MR30	0	1	0	0
38 LCS19227	30	0	MS8	4	4	15	0
39 LCS15963	50	15	MS3	4	0	30	0
40 M10-1615	50	20	MS5	6	0	70	7
41 M10-1659	25	5	MS10	3	0	50	7
42 MD04W249-11-12	20	0	MR10	0	3	0	0
43 MD04W249-11-7	25	0	MR10	3	1	70	0
44 MD07W272-11-5	50	0	MR15	1	2	30	0
45 MD08-26-H2-7-12-21	40	5	MS10	1	0	30	0
46 MD08-26-H2-7-12-9	15	3	MS15	2	0	30	0
47 MDNC8248-64	45	0	MR5	3	0	2	1
48 MH07-7474	25	0	MS5	4	3	7	0
49 NC09-20768	5	0	MS3	1	0	7	0
50 NC09-22352	20	0	MS3	0	2	0	0
51 NC10-25212	40	0	MS15	6	0	70	10
52 NC8170-4-3	40	2	MS5	5	1	15	0
53 NC8170-45-2	35	20	MS3	7	2	15	0
54 NC8840-19	20	5	S8	8	1	30	0
55 VA10W-112	40	0	R5	0	0	2	0
56 VA10W-118	45	0	MR20	0	0	0	0
57 VA10W-119	45	0	MR5	6	1	7	0
58 VA11W-FHB110	40	2	MS5	1	0	7	1
59 VA11WFHB57	45	3	MR3	7	0	85	1
60 VA11W-FHB60	45	0	MS5	1	0	2	0
61 VA11W-FHB61	35	3	MR8	3	0	30	0
62 VA11W-FHB75	20	0	MS15	0	0.0	2	0
<b>Mean</b>	<b>34</b>	<b>2</b>	<b>.</b>	<b>2</b>	<b>1</b>	<b>21</b>	<b>1</b>

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

CULTIVAR/ DESIGNATION	Biotype B	Biotype C	Biotype D	Biotype O	Biotype L
1 ERNIE	0-17	0-23	0-14	0-21	0-24
2 COKER9835	0-19	16-0	0-14	21-2	0-17
3 BESS	0-22	23-0	0-20	0-21	0-20
4 JAMESTOWN	22-0	20-0	17-0	0-15	0-20
5 MD03W61-11-3	0-20	0-16	0-22	0-19	0-16
6 ARS07-1214	0-23	20-0	0-21	0-16	0-17
7 ARS09-367	0-13	13-0	0-12	0-13	0-14
8 ARS09-446	0-11	0-14	0-16	0-11	0-9
9 ARS09-643	0-15	0-13	0-16	0-17	0-17
10 LA05102C-1-2	18-0	18-0	20-0	20-2	0-21
11 LA05102C-8-8	14-3	16-0	15-0	23-0	0-19
12 NC09-20986	10-1	15-0	14-0	11-2	15-0
13 AR00260-2-2	0-18	0-19	0-20	0-19	0-18
14 AR01044-1-1	0-21	0-16	0-15	0-17	0-21
15 AR01110-3-1	3-17	17-0	0-19	15-3	0-17
16 AR01178-1-1	0-23	19-0	0-19	22-0	0-16
17 ARGE05-1229-2-1	0-15	0-16	0-15	0-18	0-17
18 ARGE07-1339-10-5-8	0-18	0-15	0-12	0-16	0-18
19 ARGE07-1374-17-5-4	0-14	14-0	5-7	0-19	0-16
20 ARGE07-1374-17-8-5	0-18	17-0	11-0	0-13	0-18
21 ARS07-1073	0-19	0-18	0-19	0-18	0-17
22 ARS09-082	0-15	16-1	0-13	18-2	0-11
23 ARS09-228	16-0	12-0	10-0	9-0	18-0
24 ARS09-745	0-18	0-16	0-20	0-20	0-16
25 GA04494-12ES33	0-18	0-17	0-20	19-0	0-17
26 GA051477-12ES27	0-16	0-18	0-17	0-16	0-17
27 GA051477-12ES28	0-20	0-19	0-16	0-18	0-13
28 GA051477-12ES29	0-17	0-21	0-20	0-18	0-18
29 GA051477-12ES32	12-3	18-0	0-17	0-18	0-14
30 GANC8170-12DH7	5-15	20-0	21-0	0-17	0-18
31 GANC8248-12DH1	9-5	15-2	0-19	0-14	0-17
32 GANCZ4-12DH21	0-15	0-16	0-17	0-17	0-18
33 LA05079F-P05	0-17	16-0	0-18	0-17	0-19
34 LA06069E-P01	0-19	19-0	19-0	0-17	0-21
35 LA06149C-P7	12-7	19-0	12-7	0-15	0-21
36 LA07085CW-P4	0-18	0-16	0-21	0-17	0-22
37 LA07178C-44	2-13	19-0	0-17	0-17	0-18
38 LCS19227	0-16	0-16	0-17	0-18	0-18
39 LCS15963	8-9	0-23	0-17	0-18	0-20
40 M10-1615	0-20	0-19	0-20	0-21	0-23
41 M10-1659	0-20	0-18	0-20	0-16	0-20
42 MD04W249-11-12	5-12	0-14	0-19	0-15	0-19
43 MD04W249-11-7	2-14	0-16	0-17	0-14	0-18
44 MD07W272-11-5	2-14	21-0	17-0	0-16	0-23
45 MD08-26-H2-7-12-21	16-4	16-0	13-0	0-18	0-14
46 MD08-26-H2-7-12-9	0-17	0-15	0-17	0-16	0-17
47 MDNC8248-64	0-19	0-20	0-17	0-18	0-17
48 MH07-7474	11-4	10-7	0-20	0-19	0-21
49 NC09-20768	0-16	0-15	0-16	0-19	0-20
50 NC09-22352	0-19	18-0	0-19	0-21	0-18
51 NC10-25212	0-17	0-17	0-19	0-18	0-17
52 NC8170-4-3	16-1	16-0	15-0	11-6	0-17
53 NC8170-45-2	0-19	0-12	0-18	0-15	0-15
54 NC8840-19	0-16	8-7	2-12	0-19	0-15
55 VA10W-112	13-10	15-0	15-0	11-7	9-9
56 VA10W-118	0-19	0-15	0-15	0-17	0-17
57 VA10W-119	17-0	15-0	15-0	19-0	19-0
58 VA11W-FHB110	12-8	16-0	21-0	0-18	0-16
59 VA11WFHB57	0-18	0-17	0-18	0-19	0-23
60 VA11W-FHB60	0-18	0-17	0-17	0-19	0-19
61 VA11W-FHB61	0-19	0-18	0-20	0-17	0-23
62 VA11W-FHB75	0-17	16-2	0-17	0-20	0-19

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

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

Cultivar/ Designation	FLOUR YIELD %	SOFT. EQUIV. %	GRAIN HARD. (0-100)	GRAIN. PROT. %	FLOUR PROT. %	LACTIC ACID SRC(%)	SUCRE. SRC %
1 ERNIE	67	58	26	10	7.5	120	70
2 COKER9835	70	66	30	9	6.7	103	75
3 BESS	68	57	28	9	7.0	103	71
4 JAMESTOWN	68	60	35	10	7.6	128	75
5 MD03W61-11-3	66	53	37	13	10.5	135	75
6 ARS07-1214	66	40	32	11	9.3	137	87
7 ARS09-367	67	40	33	11	9.2	138	83
8 ARS09-446	71	40	34	11	10.4	136	84
9 ARS09-643	68	37	23	11	9.7	169	106
10 LA05102C-1-2	67	55	28	12	9.4	125	66
11 LA05102C-8-8	67	49	31	12	10.0	121	70
12 NC09-20986	67	58	31	12	9.6	155	71
13 AR00260-2-2	68	54	28	11	9.4	161	71
14 AR01044-1-1	70	56	28	11	8.6	98	65
15 AR01110-3-1	70	59	29	10	7.8	109	69
16 AR01178-1-1	69	55	29	10	8.3	117	69
17 ARGE05-1229-2-1	68	51	28	12	10.0	142	70
18 ARGE07-1339-10-5	64	53	30	12	9.4	126	71
19 ARGE07-1374-17-5	66	54	32	12	9.1	135	68
20 ARGE07-1374-17-8	68	59	25	11	8.6	139	71
21 ARS07-1073	67	44	29	11	10.0	165	103
22 ARS09-082	69	42	34	11	9.2	143	87
23 ARS09-228	71	36	36	13	11.9	119	85
24 ARS09-745	70	42	27	11	9.3	137	83
25 GA04494-12ES33	69	49	33	11	9.6	123	69
26 GA051477-12ES27	70	60	30	11	8.7	142	70
27 GA051477-12ES28	70	58	30	11	8.6	135	68
28 GA051477-12ES29	69	60	31	11	8.7	136	68
29 GA051477-12ES32	69	56	31	10	8.4	124	67
30 GANC8170-12DH7	65	53	25	11	9.2	149	71
31 GANC8248-12DH1	68	55	31	11	9.1	131	65
32 GANCZ4-12DH21	66	49	28	12	9.6	140	73
33 LA05079F-P05	68	60	32	10	8.1	125	73
34 LA06069E-P01	68	61	32	10	7.9	134	75
35 LA06149C-P7	69	60	34	10	8.0	126	72
36 LA07085CW-P4	69	63	26	10	8.1	124	74
37 LA07178C-44	68	60	34	9	7.3	103	73
38 LCS19227	72	63	30	9	6.7	110	68
39 LCS15963	68	59	28	9	7.1	117	68
40 M10-1615	70	57	28	9	7.5	103	67
41 M10-1659	69	55	33	10	8.2	118	64
42 MD04W249-11-12	68	58	32	10	7.7	106	72
43 MD04W249-11-7	68	59	35	9	7.3	100	72
44 MD07W272-11-5	69	61	34	10	7.6	97	71
45 MD08-26-H2-7-12-2	68	56	30	11	8.5	124	67
46 MD08-26-H2-7-12-5	69	57	28	10	7.9	119	68
47 MDNC8248-64	68	55	38	10	8.0	119	73
48 MH07-7474	70	59	35	9	7.0	121	66
49 NC09-20768	68	58	36	10	7.5	110	69
50 NC09-22352	68	56	38	11	9.1	125	68
51 NC10-25212	70	57	36	10	7.7	116	66
52 NC8170-4-3	71	56	28	9	7.3	126	65
53 NC8170-45-2	70	56	28	10	8.1	139	65
54 NC8840-19	70	43	33	10	8.0	100	79
55 VA10W-112	68	58	32	11	8.4	134	73
56 VA10W-118	69	59	29	11	8.8	136	74
57 VA10W-119	69	52	31	11	9.1	127	67
58 VA11W-FHB110	67	54	28	11	8.7	128	66
59 VA11W-FHB57	68	57	24	11	8.8	144	65
60 VA11W-FHB60	70	52	27	10	8.3	112	69
61 VA11W-FHB61	69	53	32	10	8.0	120	68
62 VA11W-FHB75	66	58	30	11	8.7	113	71

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

## Means Across Locations 2012-13

Cultivar/ Designation	FHB Incidence		FHB Severity		FHB Index		FDK		ISK		DON	
		RANK		RANK		RANK		RANK		RANK		RANK
1 ERNIE	45	4	27	15	11	4	24	7	33	10	8	37
2 COKER9835	86	62	61	62	53	61	61	59	68	61	13	60
3 BESS	51	12	21	7	12	7	25	9	33	10	6	10
4 JAMESTOWN	61	24	27	15	18	19	31	19	38	22	7	21
5 MD03W61-11-3	59	21	19	4	13	8	34	23	40	27	8	37
6 ARS07-1214	84	61	58	60	53	61	66	61	72	62	16	62
7 ARS09-367	78	55	59	61	50	60	67	62	66	60	15	61
8 ARS09-446	72	52	51	51	35	51	53	57	58	56	12	59
9 ARS09-643	71	51	51	51	37	55	42	37	51	48	6	10
10 LA05102C-1-2	38	1	32	27	13	8	20	3	26	5	3	1
11 LA05102C-8-8	43	3	24	9	10	2	15	1	22	1	3	1
12 NC09-20986	65	35	20	5	15	11	28	15	36	20	6	10
13 AR00260-2-2	53	13	28	19	17	16	26	12	35	14	8	37
14 AR01044-1-1	64	33	40	41	26	36	39	33	45	34	5	7
15 AR01110-3-1	60	22	32	27	22	32	35	27	43	31	7	21
16 AR01178-1-1	60	22	27	15	19	22	42	37	47	39	6	10
17 ARGE05-1229-2-1	49	7	22	8	13	8	25	9	24	3	5	7
18 ARGE07-1339-10-5-8	42	2	14	1	7	1	23	5	23	2	7	21
19 ARGE07-1374-17-5-4	54	15	25	13	16	15	26	12	34	13	7	21
20 ARGE07-1374-17-8-5	68	45	32	27	21	27	32	20	38	22	9	48
21 ARS07-1073	77	54	40	41	34	48	51	54	55	54	8	37
22 ARS09-082	79	58	45	46	35	51	63	60	63	59	11	56
23 ARS09-228	57	18	39	40	27	38	40	35	43	31	7	21
24 ARS09-745	81	59	56	58	47	58	51	54	57	55	8	37
25 GA04494-12ES33	78	55	56	58	43	57	57	58	60	57	10	54
26 GA051477-12ES27	67	43	51	51	37	55	47	49	53	52	7	21
27 GA051477-12ES28	66	37	52	54	34	48	39	33	46	36	7	21
28 GA051477-12ES29	66	37	54	56	36	53	42	37	46	36	8	37
29 GA051477-12ES32	68	45	52	54	34	48	45	44	50	46	8	37
30 GANC8170-12DH7	49	7	32	27	15	11	34	23	35	14	6	10
31 GANC8248-12DH1	69	48	50	50	36	53	42	37	48	43	9	48
32 GANCZ4-12DH21	72	52	44	45	31	45	34	23	45	34	7	21
33 LA05079F-P05	62	27	43	43	27	38	42	37	47	39	7	21
34 LA06069E-P01	53	13	27	15	17	16	34	23	38	22	7	21
35 LA06149C-P7	69	48	28	19	20	23	37	29	41	30	9	48
36 LA07085CW-P4	64	33	34	34	23	33	44	43	46	36	7	21
37 LA07178C-44	63	31	31	25	21	27	38	30	39	25	6	10
38 LCS19227	61	24	30	22	24	34	45	44	49	45	7	21
39 LCS15963	57	18	31	25	20	23	38	30	43	31	8	37
40 M10-1615	46	5	17	3	10	2	24	7	28	6	6	10
41 M10-1659	49	7	20	5	11	4	23	5	25	4	4	4
42 MD04W249-11-12	50	11	24	9	15	11	32	20	35	14	8	37
43 MD04W249-11-7	48	6	24	9	15	11	30	17	33	10	7	21
44 MD07W272-11-5	61	24	29	21	21	27	36	28	39	25	9	48
45 MD08-26-H2-7-12-21	62	27	35	35	27	38	27	14	35	14	3	1
46 MD08-26-H2-7-12-9	62	27	30	22	24	34	28	15	35	14	4	4
47 MDNC8248-64	58	20	30	22	20	23	33	22	40	27	6	10
48 MH07-7474	55	16	32	27	18	19	38	30	40	27	10	54
49 NC09-20768	67	43	46	48	32	46	50	53	52	50	11	56
50 NC09-22352	66	37	33	32	28	42	49	52	54	53	11	56
51 NC10-25212	49	7	16	2	11	4	19	2	29	7	5	7
52 NC8170-4-3	63	31	35	35	21	27	45	44	47	39	6	10
53 NC8170-45-2	62	27	38	39	26	36	45	44	50	46	9	48
54 NC8840-19	56	17	26	14	18	19	30	17	35	14	6	10
55 VA10W-112	69	48	45	46	30	44	43	42	47	39	7	21
56 VA10W-118	66	37	43	44	27	38	51	54	48	43	7	21
57 VA10W-119	68	45	48	49	32	46	48	51	52	50	8	37
58 VA11W-FHB110	66	37	33	32	20	23	25	9	31	8	7	21
59 VA11WFHB57	66	37	36	38	21	27	41	36	37	21	6	10
60 VA11W-FHB60	78	55	35	35	29	43	45	44	51	48	8	37
61 VA11W-FHB61	82	60	54	57	47	58	47	49	60	57	9	48
62 VA11W-FHB75	65	35	24	9	17	16	22	4	32	9	4	4

Mean	62	36	25	38	43	7
LSD (0.05)	31	25	22	25	19	5
CV%	25.0	36.0	44.9	33.9	22.7	36.5



## Means Across Locations 2012 - 2013

Cultivar/ Designation	Heading Date		Plant Height		Flour Yield %		Softness Equivalent %		Hessian Fly	Biotype L	Fhb1	Fhb Massey 3BL	Fhb 5A ERNIE	Fhb 5A Ning7840	Fhb 2DL- Wuhant/W14
	RANK		RANK		RANK		RANK								
1 ERNIE	127	22	34	31	67	49	58	18	0-24	no	yes	yes	no	no	
2 COKER9835	131	58	32	6	70	5	66	1	0-17	no	no	no	no	no	
3 BESS	130	50	36	48	68	30	57	25	0-20	no	no	no	no	no	
4 JAMESTOWN	128	30	32	6	68	30	60	6	0-20	no	no	no	no	no	
5 MD03W61-11-3	131	58	37	52	66	56	53	44	0-16	yes	no	no	no	no	
6 ARS07-1214	132	62	33	18	66	56	40	58	0-17	no	no	no	no	no	
7 ARS09-367	130	50	31	2	67	49	40	58	0-14	no	no	no	no	no	
8 ARS09-446	127	22	35	38	71	2	40	58	0-9	no	no	no	no	no	
9 ARS09-643	125	3	33	18	68	30	37	61	0-17	no	no	no	no	no	
10 LA05102C-1-2	125	3	38	58	67	49	55	36	0-21	no	no	no	no	het	
11 LA05102C-8-8	126	7	42	62	67	49	49	51	0-19	no	no	no	no	no	
12 NC09-20986	127	22	35	38	67	49	58	18	15-0	yes	no	no	no	no	
13 AR00260-2-2	128	30	37	52	68	30	54	41	0-18	no	no	no	no	no	
14 AR01044-1-1	128	30	32	6	70	5	56	30	0-21	no	no	no	no	no	
15 AR01110-3-1	131	58	37	52	70	5	59	12	0-17	no	yes	no	no	no	
16 AR01178-1-1	129	40	35	38	69	17	55	36	0-16	no	no	no	no	no	
17 ARGE05-1229-2-1	129	40	37	52	68	30	51	50	0-17	no	no	no	no	no	
18 ARGE07-1339-10-5-8	129	40	35	38	64	62	53	44	0-18	no	no	no	no	het	
19 ARGE07-1374-17-5-4	128	30	32	6	66	56	54	41	0-16	no	no	no	no	no	
20 ARGE07-1374-17-8-5	126	7	32	6	68	30	59	12	0-18	no	no	no	no	no	
21 ARS07-1073	129	40	32	6	67	49	44	54	0-17	no	no	no	no	no	
22 ARS09-082	130	50	33	18	69	17	42	56	0-11	no	no	no	no	no	
23 ARS09-228	130	50	33	18	71	2	36	62	18-0	no	no	no	no	no	
24 ARS09-745	126	7	31	2	70	5	42	56	0-16	no	no	no	no	no	
25 GA04494-12ES33	127	22	32	6	69	17	49	51	0-17	no	no	yes	no	no	
26 GA051477-12ES27	126	7	34	31	70	5	60	6	0-17	no	no	no	no	no	
27 GA051477-12ES28	126	7	34	31	70	5	58	18	0-13	no	no	no	no	no	
28 GA051477-12ES29	126	7	33	18	69	17	60	6	0-18	no	no	no	no	no	
29 GA051477-12ES32	126	7	33	18	69	17	56	30	0-14	no	no	yes	no	no	
30 GANC8170-12DH7	126	7	35	38	65	61	53	44	0-18	no	no	no	yes	no	
31 GANC8248-12DH1	126	7	31	2	68	30	55	36	0-17	no	no	no	no	no	
32 GANCZ4-12DH21	127	22	34	31	66	56	49	51	0-18	no	no	no	no	no	
33 LA05079F-P05	126	7	32	6	68	30	60	6	0-19	no	no	no	no	no	
34 LA06069E-P01	126	7	33	18	68	30	61	4	0-21	no	no	no	no	no	
35 LA06149C-P7	129	40	35	38	69	17	60	6	0-21	no	no	no	no	no	
36 LA07085CW-P4	124	2	32	6	69	17	63	2	0-22	no	no	no	no	no	
37 LA07178C-44	128	30	33	18	68	30	60	6	0-18	no	no	no	no	no	
38 LCS19227	128	30	36	48	72	1	63	2	0-18	no	no	no	no	no	
39 LCS15963	130	50	36	48	68	30	59	12	0-20	no	no	no	no	no	
40 M10-1615	128	30	35	38	70	5	57	25	0-23	no	no	no	no	no	
41 M10-1659	127	22	36	48	69	17	55	36	0-20	no	no	no	no	no	
42 MD04W249-11-12	128	30	34	31	68	30	58	18	0-19	no	no	no	no	no	
43 MD04W249-11-7	129	40	35	38	68	30	59	12	0-18	no	no	no	no	no	
44 MD07W272-11-5	128	30	33	18	69	17	61	4	0-23	yes	no	no	no	no	
45 MD08-26-H2-7-12-21	127	22	33	18	68	30	56	30	0-14	yes	no	no	yes	yes	
46 MD08-26-H2-7-12-9	126	7	31	2	69	17	57	25	0-17	yes	no	no	yes	yes	
47 MDNC8248-64	129	40	35	38	68	30	55	36	0-17	no	no	no	no	no	
48 MH07-7474	130	50	37	52	70	5	59	12	0-21	no	no	no	no	no	
49 NC09-20768	130	50	33	18	68	30	58	18	0-20	no	no	no	no	no	
50 NC09-22352	131	58	32	6	68	30	56	30	0-18	no	no	no	no	no	
51 NC10-25212	129	40	39	61	70	5	57	25	0-17	no	no	no	no	no	
52 NC8170-4-3	129	40	38	58	71	2	56	30	0-17	yes	no	no	no	no	
53 NC8170-45-2	129	40	37	52	70	5	56	30	0-15	yes	no	no	no	no	
54 NC8840-19	130	50	38	58	70	5	43	55	0-15	yes	no	no	no	no	
55 VA10W-112	125	3	33	18	68	30	58	18	9-9	no	no	no	no	no	
56 VA10W-118	125	3	34	31	69	17	59	12	0-17	no	no	no	no	no	
57 VA10W-119	128	30	34	31	69	17	52	48	19-0	no	no	no	no	no	
58 VA11W-FHB110	126	7	24	1	67	49	54	41	0-16	no	het	no	no	no	
59 VA11WFHB57	123	1	32	6	68	30	57	25	0-23	no	no	no	no	no	
60 VA11W-FHB60	126	7	32	6	70	5	52	48	0-19	yes	no	no	no	no	
61 VA11W-FHB61	127	22	35	38	69	17	53	44	0-23	yes	no	no	no	no	
62 VA11W-FHB75	126	7	33	18	66	56	58	18	0-19	yes	no	no	yes?	yes	

Mean	128	34	68	54
LSD (0.05)	4	5	.	.
CV%	1.5	7.3	.	.

## Means Across 2012 and 2013

	Cultivar/ Designation	FHB Incidence		FHB Severity		FHB Index		FDK		ISK		DON		Heading Date	Plant Height	Milling Yield	Soft Equiv.
			RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	RANK	days	in	%	%		
1	ERNIE	36	4	18	5	8	3	15	4	24	4	6	6	118	32	65.8	56.8
2	COKER9835	81	12	52	11	44	10	49	10	59	10	16	10	120	31	66.9	63.6
3	BESS	35	2	14	2	7	2	15	3	22	2	5	4	121	36	66.8	55.3
4	JAMESTOWN	49	6	19	6	13	7	19	6	30	6	5	5	117	31	66.3	58.1
5	MD03W61-11-3	51	7	17	4	12	6	21	7	33	7	8	7	122	35	65.7	53.7
6	ARS07-1214	76	11	51	10	49	12	52	11	64	12	22	12	124	33	66.7	40.1
7	ARS09-367	70	10	54	12	48	11	56	12	63	11	21	11	122	31	66.6	40.6
8	ARS09-446	62	9	39	9	29	9	37	9	50	9	12	9	118	35	71.1	39.2
9	ARS09-643	55	8	38	8	26	8	29	8	43	8	9	8	115	28	68.3	36.5
10	LA05102C-1-2	33	1	22	7	10	5	12	2	23	3	3	1	115	37	66.4	54.7
11	LA05102C-8-8	36	3	16	3	7	1	9	1	21	1	3	2	117	40	67.3	50.1
12	NC09-20986	45	5	13	1	9	4	17	5	26	5	5	3	119	33	64.4	56.5
	Mean	52		29		22		28		38		10		119	34	66.9	50.4
	LSD (0.05)	14		9		9		9		9		9		2	4	3.9	3.8
	CV%	12.3		14.2		19.5		15.7		11		43.2		0.9	5.2	2.7	3.4