SOUTHERN UNIFORM WINTER WHEAT SCAB NURSERY

2015 NURSERY REPORT

J.P. Murphy, J.H. Lyerly, S. Petersen and B. Poole

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.

Champaign, Illinois
- Cooperator: Jana Murche
- KWS Cereals USA.

Urbana, Illinois
- Cooperator: Fred Kolb.
- University of Illinois.

Fayetteville and Newport, Arkansas
- Cooperator: Esten Mason.
- University of Arkansas.

Lexington, Kentucky
- Cooperator: Dave Van Sanford.
- University of Kentucky.

Blacksburg, Virginia
- Cooperator: Carl A. Griffey.
- Virginia Tech.

Kinston, North Carolina
- Cooperators: Paul Murphy and Brandon Poole
- North Carolina State University.

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

Winnsboro and Baton Rouge, Louisiana.
- Cooperator: Stephen Harrison.
- Louisiana State University.

Griffin, Georgia
- Cooperator: Jerry Johnson.
- University of Georgia.

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

Lake Wheeler, NC, 2015

Entry List and Pedigrees, 2015 Nursery

ENTRY NO	CULTIVAR/ DESIGNATION	*PEDIGREE*	CONTRIBUTOR	N 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	LA07085CW-P4	*LA06101,F1(LA98094BUB-58-5/AGS 2060)/VA02W-713*	Harrison	2013-14
6	LANC8170-41-2	*NC03-11458 / Bess // SS8641*	Harrison	2013-14
7	NC11-22289	*NC97BGTD7 / NC-Neuse // C9511*	Murphy	2013-14
8	AR06024-7-2	*AR800-1-3-1/VA01W-476*	Mason	2014-15
9	AR06037-17-2	*AR96077-7-2/VA00W526*	Mason	2014-15
10	AR06045-2-4	*BESS/AR97124-4-1*	Mason	2014-15
11	AR06045-16-4	*BESS/AR97124-4-1*	Mason	2014-15
12	AR06046-10-3	*BESS/PAT*	Mason	2014-15
13	AR06061-11-1	*P961341A3-1-2/VA01W-476*	Mason	2014-15
14	LW08190C-57-3	*(NC04-27617/LA841)LA07151,F1/VA04W-33*	Mason	2014-15
15	ARGE08-1398	*P25R18-4/Roane-5*	Mason	2014-15
16	B12*1792	*D01-7017//McCormick/Natchez*	Fogleman	2014-15
17	B12-2180NC#	*MD01W233-06-1/SS8641*	Fogleman	2014-15
18	GA 071171-14ES8	*Jamestown /GA 991371-6E12*	Johnson	2014-15
19	GA 071092-14ES11	*USG 3120*2 / Jamestown*	Johnson	2014-15
20	GA071092-14ES13	*USG 3120*2 / Jamestown*	Johnson	2014-15
21	GA 081129-14ES16	*Baldwin/ Neuse//GA 991336-6E9*	Johnson	2014-15
22	GA 08250-14ES7	*Jamestown / GA 991336-6E9*	Johnson	2014-15
23	GA 08250-14ES5	*Jamestown / GA 991336-6E9*	Johnson	2014-15
24	GA 071171-14ES19	*Jamestown /GA 991371-6E12*	Johnson	2014-15
25	GA 081562-14ES14	*GA 991371*2/Neuse/Langdon*	Johnson	2014-15
26	KWS 054	*IL04-8445 / MO5-1526*	Murche	2014-15
27	LA06146E-P4	*JAMESTOWN/AGS2060*	Harrison	2014-15
28	LA08265C-50	*P26R61/LA07175,F1(JAMESTOWN/SS8641)*	Harrison	2014-15
29	LA09144C-6	*M03-3616C / LA01164D-94-2-B*	Harrison	2014-15
30	LANC8248-1	*Bess / NC-Neuse*	Harrison	2014-16
31	ES13-1591	*Patton/INW9811"L"*	Obert	2014-15
32	ES13-3423	*Patton//T814/Coker 9663*	Obert	2014-15
33	ES12-3030	*Va.99W-200/BW239*	Obert	2014-15
34	M11-2024#	*M00-3904-9/P 25R78//W1104*	Vonderwell	2014-15
35	M12-3301	*D01-7017/TRIBUTE*	Vonderwell	2014-15
36	M12-2036#	*CK9511//P 25R62/M05-1172*	Vonderwell	2014-15
37	NC11-23084	*CO25-17 (FHB Ae. tauschii) / VA04W-478 / / NC-Neuse*	Murphy	2014-15
38	NC12-23576	*BESS / SS8641*	Murphy	2014-15
39	NC12-23219	*NC-Neuse / IL96-6472 // SS 8641*	Murphy	2014-15
40	NC12-20662	*ARGE97-1022-51 / McCormick // NC-Cape Fear*	Murphy	2014-15
41	NC9305-7	*Bess / NC-Yadkin*	Murphy	2013-14
42	VA11W-106	*PIONEER 25R47 / JAMESTOWN*	Griffey	2014-15
43	VA11W-313	*PIONEER 25R47 / G/F951079-2E31 // USG3555*	Griffey	2014-15
44	VA12W-72	*PIONEER 25R47 / G/F951079-2E31 // USG3555*	Griffey	2014-15
45	VA12W-54	*NC00-15389 / GF951079-2E31 // USG 3555*	Griffey	2014-15
46	VA12FHB-53	*VA04W-433 // VA96-54-244 / BRANSON*	Griffey	2014-15
47	VA12FHB-4	*IL99-15867 / VA04W-433 //VA96-54-244*	Griffey	2014-15
48	VA13W-177	*Shirley / Branson // Jamestown*	Griffey	2014-15
49	VA08MAS5-39-6-4	*GA981621-1-3-5 / Shirley // VA04W-360*	Griffey	2014-15

FHB Incidence (1-100)

	CULTIVAR/ DESIGNATION	LEX'TON KY	COL'BIA MO	B'ROUGE LA	B'BURG VA	U'BANA IL	K'STON NC	H'LAND IL	GRIFFIN GA	KWS IL	MEAN ALL LOC.	RANK
1	ERNIE	78	80	95	10	87	13	60	18	85	58	*11*
2	COKER9835	98	100	95	63	88	70	85	80	100	86	*49*
3	BESS	75	43	95	35	77	28	45	13	80	55	*8*
4	JAMESTOWN	83	80	80	5	77	20	50	22	70	54	*5*
5	LA07085CW-P4	63	58	95	45	65	30	70	40	95	62	*20*
6	LANC8170-41-2	85	78	100	25	88	38	70	34	100	69	*36*
7	NC11-22289	15	65	95	23	75	13	60	12	90	50	*1*
8	AR06024-7-2	50	80	100	55	75	10	50	22	75	57	*10*
9	AR06037-17-2	93	98	95	65	68	53	80	55	100	78	*47*
10	AR06045-2-4	70	58	75	40	70	23	45	23	85	54	*5*
11	AR06045-16-4	68	58	95	28	70	42	65	25	85	59	*12*
12	AR06046-10-3	60	93	100	18	88	45	50	35	70	62	*18*
13	AR06061-11-1	80	75	80	33	80	18	65	35	85	61	*15*
14	LW08190C-57-3	83	73	100	28	58	23	60	55	95	64	*22*
15	ARGE08-1398	50	55	95	25	68	12	60	10	80	51	*2*
16	B12*1792	88	85	80	45	95	20	65	32	85	66	*29*
17	B12-2180NC#	93	75	90	75	68	55	75	67	100	78	*47*
18	GA 071171-14ES8	68	83	100	60	58	40	55	48	65	64	*22*
19	GA 071092-14ES11	65	73	100	68	52	18	75	53	95	67	*32*
20	GA071092-14ES13	78	85	95	30	33	38	85	52	95	66	*29*
21	GA 081129-14ES16	45	88	90	.	83	17	85	38	95	64	*22*
22	GA 08250-14ES7	70	98	100	55	52	17	60	33	75	62	*18*
23	GA 08250-14ES5	70	58	100	43	50	45	60	42	95	62	*20*
24	GA 071171-14ES19	75	85	100	45	67	23	70	55	85	67	*32*
25	GA 081562-14ES14	100	100	100	68	40	52	55	70	85	74	*43*
26	KWS 054	50	93	100	28	90	18	85	37	95	66	*29*
27	LA06146E-P4	75	80	75	15	60	32	70	27	100	59	*12*
28	LA08265C-50	73	70	95	50	93	45	70	40	100	71	*39*
29	LA09144C-6	90	95	95	45	65	47	75	55	100	74	*43*
30	LANC8248-1	90	80	100	53	92	38	85	42	100	76	*45*
31	ES13-1591	25	85	85	8	67	23	70	28	100	55	*8*
32	ES13-3423	65	75	35	23	67	22	55	37	90	52	*3*
33	ES12-3030	55	70	95	28	80	27	80	47	100	65	*27*
34	M11-2024#	85	80	90	38	85	25	70	18	95	65	*27*
35	M12-3301	68	70	75	38	68	45	45	47	90	61	*15*
36	M12-2036#	68	55	95	20	70	40	40	30	70	54	*5*
37	NC11-23084	85	65	55	45	77	45	80	55	100	67	*32*
38	NC12-23576	85	83	90	35	80	47	65	38	100	69	*36*
39	NC12-23219	75	88	85	18	90	20	80	18	100	64	*22*
40	NC12-20662	53	53	100	55	75	20	80	33	70	60	*14*
41	NC9305-7	70	68	100	40	80	48	60	38	70	64	*22*
42	VA11W-106	85	70	85	40	80	60	45	75	85	69	*36*
43	VA11W-313	75	95	95	50	88	25	70	43	100	71	*39*
44	VA12W-72	88	88	100	38	85	22	90	42	100	72	*41*
45	VA12W-54	93	88	100	50	85	23	80	32	100	72	*41*
46	VA12FHB-53	85	75	50	20	78	45	60	52	85	61	*15*
47	VA12FHB-4	78	80	85	38	63	37	85	47	100	68	*35*
48	VA13W-177	30	75	90	25	75	10	75	27	70	53	*4*
49	VA08MAS5-39-6-4	63	100	95	85	88	25	90	38	100	76	*45*
	Mean	71	77	90	39	74	32	67	39	90	64	
	LSD (0.05)	.	.	.	.	.	24	.	.	12	26	
	CV%	.	.	.	.	.	37.8	.	.	6.4	20.7	

FHB Incidence (1-100)

FHB Severity (1-100)

	CULTIVAR/ DESIGNATION	F'VILLE AR	RANK	N'PORT AR	RANK	LEX'TON KY	RANK	COL'BIA MO	RANK	B'ROUGE LA	RANK	B'BURG VA	RANK	U'BANA IL	RANK	K'STON NC	RANK	H'LAND IL	RANK	GRIFFIN GA	RANK	KWS IL	RANK	MEAN ALL LOC.	RANK
1	ERNIE	95	25	63	21	32	17	17	25	30	19	7	1	69	42	7	1	30	13	25	8	25	20	36	28
2	COKER9835	100	27	90	29	52	44	52	48	70	49	31	43	75	44	54	49	65	43	80	49	80	48	68	49
3	BESS	35	8	23	4	42	31	3	1	25	12	13	15	48	29	18	25	25	10	26	12	23	17	25	7
4	JAMESTOWN	33	7	60	20	45	37	18	26	35	27	7	1	46	25	7	1	40	23	22	3	13	2	30	12
5	LA07085CW-P4	42	12	75	27	29	11	8	4	45	37	24	37	55	32	14	13	55	35	33	20	35	30	38	35
6	LANC8170-41-2	38	10	67	22	46	40	31	42	40	31	20	31	66	38	18	25	45	30	28	13	38	36	40	38
7	NC11-22289	33	7	32	8	16	1	13	14	45	37	9	4	22	5	7	1	35	16	18	2	20	10	23	5
8	AR06024-7-2	25	3	22	3	30	12	14	18	25	12	14	19	22	5	7	1	45	30	13	1	18	8	21	4
9	AR06037-17-2	50	16	28	7	46	40	36	46	30	19	19	30	43	21	33	46	25	10	40	33	20	10	34	22
10	AR06045-2-4	42	12	22	3	25	7	5	2	10	1	30	42	25	7	14	13	10	1	22	3	13	2	20	2
11	AR06045-16-4	42	12	23	4	30	12	11	12	20	7	22	34	33	12	21	33	20	6	30	16	15	4	24	6
12	AR06046-10-3	43	13	28	7	33	18	29	41	25	12	15	21	67	39	31	44	15	3	35	25	15	4	31	16
13	AR06061-11-1	38	10	25	5	44	35	24	33	40	31	9	4	34	16	14	13	10	1	25	8	23	17	26	8
14	LW08190C-57-3	35	8	47	15	34	20	14	18	45	37	15	21	27	9	11	9	40	23	30	16	30	26	30	12
15	ARGE08-1398	13	1	7	1	17	2	6	3	25	12	10	7	14	1	11	9	15	3	22	3	15	4	14	1
16	B12*1792	53	18	55	18	54	47	33	43	25	12	13	15	77	46	14	13	70	46	35	25	25	20	41	39
17	B12-2180NC#	45	14	33	9	52	44	10	9	20	7	20	31	53	30	27	36	35	16	33	20	35	30	33	20
18	GA 071171-14ES8	42	12	50	16	47	42	33	43	35	27	18	28	67	39	29	42	65	43	35	25	35	30	41	39
19	GA 071092-14ES11	52	17	67	22	31	15	15	22	55	44	18	28	30	10	21	33	35	16	40	33	33	27	36	28
20	GA071092-14ES13	53	18	68	23	34	20	27	39	55	44	11	9	26	8	29	42	40	23	45	43	45	41	39	37
21	GA 081129-14ES16	37	9	70	24	17	2	23	30	30	19	.	.	60	34	14	13	55	35	35	25	35	30	36	35
22	GA 08250-14ES7	35	8	43	13	35	23	33	43	50	41	12	13	42	20	14	13	20	6	33	20	20	10	31	16
23	GA 08250-14ES5	47	15	45	14	43	32	9	7	40	31	12	13	44	22	31	44	40	23	40	33	45	41	36	28
24	GA 071171-14ES19	40	11	53	17	28	8	26	37	50	41	24	37	45	24	14	13	35	16	40	33	35	30	35	26
25	GA 081562-14ES14	38	10	32	8	45	37	38	47	60	48	21	33	14	1	18	25	55	35	28	13	25	20	34	22
26	KWS 054	40	11	33	9	22	6	25	36	30	19	10	7	47	28	7	1	55	35	30	16	33	27	30	12
27	LA06146E-P4	32	6	45	14	43	32	9	7	40	31	23	36	39	19	7	1	55	35	28	13	28	25	32	18
28	LA08265C-50	28	5	38	11	43	32	13	14	45	37	22	34	89	49	18	25	55	35	35	25	80	49	42	42
29	LA09144C-6	78	21	73	26	40	29	63	49	55	44	32	45	68	41	18	25	45	30	40	33	50	43	51	48
30	LANC8248-1	45	14	73	26	69	49	13	14	55	44	25	39	76	45	18	25	65	43	33	20	70	47	49	47
31	ES13-1591	43	13	47	15	28	8	16	24	15	4	11	9	31	11	14	13	40	23	35	25	35	30	29	10
32	ES13-3423	100	27	73	26	38	27	14	18	10	1	11	9	33	12	11	9	35	16	50	47	20	10	36	28
33	ES12-3030	55	19	50	16	36	24	14	18	20	7	13	15	78	47	14	13	40	23	40	33	40	37	36	28
34	M11-2024#	27	4	37	10	53	46	23	30	15	4	15	21	73	43	14	13	45	30	45	43	55	45	37	34
35	M12-3301	90	23	57	19	36	24	23	30	20	7	13	15	37	17	18	25	20	6	40	33	20	10	34	22
36	M12-2036#	25	3	15	2	36	24	8	4	15	4	16	24	38	18	28	41	50	34	35	25	18	8	26	8
37	NC11-23084	92	24	72	25	44	35	10	9	20	7	38	48	46	25	27	36	15	3	55	48	40	37	42	42
38	NC12-23576	50	16	63	21	39	28	20	28	35	27	35	46	64	36	33	46	30	13	45	43	40	37	41	39
39	NC12-23219	27	4	42	12	30	12	24	33	30	19	8	3	63	35	14	13	55	35	25	8	50	43	33	20
40	NC12-20662	97	26	80	28	19	5	8	4	30	19	27	41	18	3	11	9	40	23	40	33	15	4	35	26
41	NC9305-7	35	8	32	8	28	8	27	39	35	27	16	24	59	33	27	36	20	6	30	16	20	10	30	12
42	VA11W-106	55	19	28	7	45	37	10	9	25	12	14	19	65	37	21	33	25	10	40	33	23	17	32	18
43	VA11W-313	57	20	68	23	34	20	24	33	50	41	16	24	79	48	7	1	75	48	25	8	25	20	42	42
44	VA12W-72	40	11	55	18	40	29	16	23	40	31	17	27	46	27	16	24	60	42	22	3	20	10	34	22
45	VA12W-54	55	19	75	27	57	48	26	37	30	19	25	39	54	31	27	36	70	46	33	20	33	27	44	45
46	VA12FHB-53	43	13	27	6	49	43	18	26	10	1	11	9	33	12	33	46	35	16	35	25	25	20	29	10
47	VA12FHB-4	90	23	33	9	31	15	13	14	25	12	31	43	20	4	27	36	35	16	45	43	40	37	36	28
48	VA13W-177	18	2	25	5	17	2	11	12	40	31	9	4	33	12	7	1	30	13	22	3	10	1	20	2
49	VA08MAS5-39-6-4	88	22	80	28	33	18	22	29	30	19	37	47	44	22	18	25	75	48	40	33	55	45	47	46
	Mean	49		48		37		20		34		18		48		18		41		34		32		34	
	LSD (0.05)	13		19		.		.		.		.		.		16		.		.		16		26	
	CV%	16.6		24.5		.		.		.		.		.		44.2		.		.		25.0		38.3	

FHB Index (1-100)

	CULTIVAR/ DESIGNATION	LEX'TON KY	RANK	COL'BIA MO	RANK	B'ROUGE LA	RANK	B'BURG VA	RANK	U'BANA IL	RANK	K'STON NC	RANK	H'LAND IL	RANK	GRIFFIN GA	RANK	KWS IL	RANK	MEAN ALL LOC.	RANK
1	ERNIE	26	24	14	23	29	22	1	2	61	42	1	1	18	13	5	5	21	20	19	16
2	COKER9835	51	47	52	48	67	49	20	47	66	45	37	49	55	46	64	49	80	48	55	49
3	BESS	32	31	1	1	24	15	5	18	36	26	5	26	11	6	3	3	18	12	15	10
4	JAMESTOWN	37	37	15	27	28	21	0	1	35	25	1	1	22	19	5	5	9	2	17	13
5	LA07085CW-P4	19	10	4	4	44	39	12	34	34	24	4	20	40	39	13	25	33	31	22	23
6	LANC8170-41-2	39	40	24	40	40	34	5	18	58	40	7	29	31	30	10	15	38	36	28	41
7	NC11-22289	2	1	9	14	42	37	2	4	16	6	1	1	21	18	2	1	18	12	13	4
8	AR06024-7-2	17	8	12	22	25	17	8	29	17	7	1	1	18	13	3	3	13	8	12	3
9	AR06037-17-2	43	42	35	46	29	22	13	38	31	22	18	48	20	15	22	42	20	17	26	37
10	AR06045-2-4	17	8	3	2	8	3	12	34	18	8	3	15	5	1	5	5	11	4	9	2
11	AR06045-16-4	21	14	6	8	19	10	6	21	25	16	9	33	14	11	8	11	13	8	13	4
12	AR06046-10-3	25	22	27	42	25	17	3	9	60	41	15	44	8	3	12	24	10	3	20	18
13	AR06061-11-1	35	34	18	30	30	25	3	9	27	19	3	15	7	2	9	13	20	17	17	13
14	LW08190C-57-3	28	26	10	16	45	40	4	16	22	11	2	8	24	23	17	31	29	27	20	18
15	ARGE08-1398	8	5	3	2	24	15	2	4	10	3	1	1	9	4	2	1	12	6	8	1
16	B12*1792	47	45	28	44	21	12	7	26	73	48	3	15	46	41	11	18	22	22	28	41
17	B12-2180NC#	48	46	8	12	18	9	14	41	37	28	16	47	26	26	22	42	35	34	25	31
18	GA 071171-14ES8	31	30	27	42	35	31	11	31	39	29	11	37	36	37	17	31	22	22	25	31
19	GA 071092-14ES11	20	11	11	19	55	46	12	34	20	9	4	20	26	26	21	40	31	29	22	23
20	GA071092-14ES13	28	26	23	37	52	44	3	9	9	2	13	39	34	34	23	46	43	41	25	31
21	GA 081129-14ES16	7	3	20	33	27	20	.	.	51	36	2	8	47	42	13	25	33	31	23	31
22	GA 08250-14ES7	27	25	32	45	50	42	7	26	28	21	2	8	12	8	11	18	15	11	20	18
23	GA 08250-14ES5	30	29	5	7	40	34	5	18	23	13	13	39	24	23	17	31	43	41	22	23
24	GA 071171-14ES19	21	14	22	35	50	43	11	31	33	23	4	20	25	25	22	42	30	28	24	30
25	GA 081562-14ES14	45	43	38	47	60	48	14	41	6	1	9	33	22	19	20	39	22	22	26	37
26	KWS 054	12	7	24	40	30	25	3	9	43	33	1	1	47	42	11	18	31	29	22	23
27	LA06146E-P4	33	32	7	10	30	25	3	9	24	14	2	8	34	34	7	10	28	26	19	16
28	LA08265C-50	29	28	9	14	43	38	11	31	83	49	8	31	39	38	14	28	80	48	35	46
29	LA09144C-6	36	36	60	49	53	45	14	41	42	32	9	33	35	36	22	42	50	43	36	47
30	LANC8248-1	62	49	10	16	55	46	13	38	69	46	7	29	56	47	14	28	70	47	40	48
31	ES13-1591	7	3	14	23	13	5	1	2	21	10	3	15	28	28	10	15	35	34	15	10
32	ES13-3423	24	18	11	19	4	1	2	4	22	11	2	8	20	15	19	36	18	12	14	7
33	ES12-3030	20	11	10	16	19	10	4	16	62	43	4	20	32	31	19	36	40	37	23	29
34	M11-2024#	46	44	19	32	14	6	6	21	62	43	4	20	32	31	8	11	53	45	27	39
35	M12-3301	25	22	16	28	16	8	6	21	24	14	8	31	9	4	19	36	18	12	16	12
36	M12-2036#	24	18	4	4	15	7	3	9	27	19	13	39	17	12	11	18	12	6	14	7
37	NC11-23084	37	37	6	8	12	4	17	46	36	26	12	38	12	8	30	47	40	37	22	23
38	NC12-23576	33	32	17	29	32	30	14	41	52	37	15	44	20	15	17	31	40	37	27	39
39	NC12-23219	22	16	21	34	26	19	2	4	57	39	3	15	44	40	5	5	50	43	25	31
40	NC12-20662	10	6	4	4	30	25	14	41	13	4	2	8	32	31	13	25	11	4	14	7
#	NC9305-7	20	11	18	30	35	31	7	26	47	35	14	43	12	8	11	18	14	10	20	18
#	VA11W-106	38	39	7	10	21	12	6	21	53	38	13	39	11	6	30	47	19	16	22	23
#	VA11W-313	24	18	23	37	48	41	8	29	70	47	2	8	53	44	11	18	25	25	29	43
#	VA12W-72	35	34	14	23	40	34	6	21	39	29	5	26	54	45	9	13	20	17	25	31
#	VA12W-54	53	48	23	37	30	25	13	38	46	34	6	28	56	47	10	15	33	31	30	44
#	VA12FHB-53	42	41	14	23	5	2	3	9	26	17	15	44	22	19	18	35	21	20	18	15
#	VA12FHB-4	24	18	11	19	22	14	12	34	15	5	10	33	30	29	21	40	40	37	21	22
#	VA13W-177	5	2	8	12	36	33	2	4	26	17	1	1	23	22	6	9	7	1	13	4
#	VA08MAS5-39-6-4	22	16	22	35	29	22	32	48	39	29	4	20	67	49	15	30	55	45	32	45
	Mean	28		17		31		8		37		7		28		14		29		22	
	LSD (0.05)	.		.		.		.		10		.		.		15		.		22	
	CV%	.		.		.		.		69.9		.		.		25.2		.		50.4	

Percent Fusarium Damaged Kernels

	CULTIVAR/ DESIGNATION	F'VILLE AR	RANK	N'PORT AR	RANK	U'BANA IL	RANK	K'STON NC	RANK	H'LAND IL	RANK	LEX'TON KY	RANK	COL'BIA MO	RANK	MEAN ALL LOC.	RANK
1	ERNIE	90	24	38	15	30	24	4	10	25	24	19	35	35	8	34	18
2	COKER9835	95	27	75	26	55	46	25	49	60	43	31	48	80	41	60	49
3	BESS	47	4	20	4	15	4	3	3	60	43	17	27	18	1	26	9
4	JAMESTOWN	45	3	32	11	23	13	4	10	10	5	26	45	40	14	26	9
5	LA07085CW-P4	72	16	55	24	50	40	6	30	60	43	14	13	63	31	46	42
6	LANC8170-41-2	53	7	47	20	40	33	4	10	20	12	17	27	88	45	38	27
7	NC11-22289	57	9	18	3	25	16	3	3	50	37	5	1	20	4	25	7
8	AR06024-7-2	45	3	15	2	28	21	3	3	13	8	5	1	18	1	18	2
9	AR06037-17-2	73	17	30	10	32	25	12	48	20	12	20	39	85	43	39	32
10	AR06045-2-4	75	18	25	7	13	2	3	3	23	15	12	7	38	11	27	12
11	AR06045-16-4	62	11	28	9	27	18	7	38	6	3	12	7	35	8	25	7
12	AR06046-10-3	75	18	50	22	23	13	6	30	20	12	16	23	73	37	38	27
13	AR06061-11-1	48	5	18	3	10	1	4	10	23	15	15	19	43	16	23	4
14	LW08190C-57-3	77	19	38	15	52	42	5	23	10	5	19	35	63	31	38	27
15	ARGE08-1398	27	1	4	1	25	16	1	1	4	2	6	3	45	17	16	1
16	B12*1792	82	21	48	21	20	8	4	10	23	15	16	23	55	21	35	19
17	B12-2180NC#	48	5	33	12	27	18	6	30	13	8	21	42	38	11	26	9
18	GA 071171-14ES8	55	5	48	21	33	26	5	23	23	15	14	13	50	18	33	17
19	GA 071092-14ES11	63	12	48	21	38	31	6	30	30	25	18	31	68	35	39	32
20	GA071092-14ES13	67	14	50	22	42	35	6	30	30	25	16	23	55	21	38	27
21	GA 081129-14ES16	48	5	45	19	52	42	4	10	55	39	12	7	65	34	40	34
22	GA 08250-14ES7	52	6	50	22	23	13	4	10	48	35	14	13	63	31	36	23
23	GA 08250-14ES5	68	15	40	16	50	40	8	40	15	10	20	39	40	14	35	19
24	GA 071171-14ES19	48	5	40	16	28	21	8	40	50	37	12	7	55	21	35	19
25	GA 081562-14ES14	65	13	38	15	73	49	7	38	43	32	26	45	60	27	45	40
26	KWS 054	77	19	53	23	53	44	4	10	65	46	17	27	58	24	47	43
27	LA06146E-P4	57	9	43	18	53	44	6	30	75	48	20	39	80	41	48	44
28	LA08265C-50	48	5	33	12	47	38	6	30	45	33	17	27	60	27	37	26
29	LA09144C-6	75	18	50	22	33	26	8	40	58	41	34	49	90	48	50	45
30	LANC8248-1	47	4	23	6	20	8	8	40	23	15	28	47	50	18	28	14
31	ES13-1591	82	21	38	15	22	12	3	3	48	35	15	19	58	24	38	27
32	ES13-3423	95	27	47	20	42	35	4	10	40	31	13	12	78	40	45	40
33	ES12-3030	68	15	42	17	27	18	3	3	45	33	12	7	58	24	36	23
34	M11-2024#	53	7	28	9	20	8	6	30	23	15	14	13	25	5	24	6
35	M12-3301	88	23	48	21	15	4	9	45	23	15	16	23	50	18	36	23
36	M12-2036#	57	9	37	14	15	4	4	10	70	47	14	13	88	45	41	35
37	NC11-23084	93	26	50	22	33	26	8	40	7	4	19	35	33	6	35	19
38	NC12-23576	83	22	47	20	38	31	10	46	23	15	23	44	85	43	44	38
39	NC12-23219	58	10	22	5	28	21	5	23	15	10	15	19	60	27	29	15
40	NC12-20662	82	21	35	13	33	26	4	10	30	25	8	5	33	6	32	16
41	NC9305-7	53	7	22	5	17	7	4	10	12	7	14	13	18	1	20	3
42	VA11W-106	83	22	47	20	40	33	11	47	35	29	19	35	73	37	44	38
43	VA11W-313	92	25	78	27	57	47	5	23	32	28	18	31	90	48	53	47
44	VA12W-72	92	25	75	26	70	48	4	10	75	48	15	19	75	39	58	48
45	VA12W-54	80	20	60	25	43	37	5	23	58	41	21	42	88	45	51	46
46	VA12FHB-53	90	24	47	20	47	38	5	23	23	15	18	31	68	35	42	36
47	VA12FHB-4	88	23	33	12	13	2	3	3	3	1	11	6	38	11	27	12
48	VA13W-177	38	2	27	8	20	8	1	1	35	29	6	3	35	8	23	4
49	VA08MAS5-39-6-4	88	23	33	12	33	26	5	23	57	40	18	31	60	27	42	36
	Mean	67		40		34		6		34		16		56		36	
	LSD (0.05)	15		14.7		.		6		.		.		.		25	
	CV%	14.1		22.8		.		51.7		.		.		.		36.1	

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

	CULTIVAR/ DESIGNATION	LEX'TON KY	RANK	U'BANA IL	RANK	K'STON NC	RANK	H'LAND IL	RANK	COL'BIA MO	RANK	MEAN ALL LOC.	RANK
1	ERNIE	40	24	59	38	8	5	37	14	45	17	38	16
2	COKER9835	57	48	71	47	47	49	69	47	63	40	61	49
3	BESS	42	29	43	16	15	25	45	24	20	1	33	7
4	JAMESTOWN	49	41	46	18	10	7	31	7	45	17	36	13
5	LA07085CW-P4	33	10	56	33	15	25	62	42	45	17	42	26
6	LANC8170-41-2	46	35	62	43	18	29	43	20	61	33	46	36
7	NC11-22289	11	1	39	10	7	3	49	30	34	5	28	2
8	AR06024-7-2	26	7	41	12	6	1	34	10	33	4	28	2
9	AR06037-17-2	50	43	46	18	31	48	40	19	75	48	48	41
10	AR06045-2-4	33	10	34	3	12	14	26	2	34	5	28	2
11	AR06045-16-4	34	12	41	12	22	33	28	3	38	10	33	7
12	AR06046-10-3	34	12	56	33	25	41	28	3	66	44	42	26
13	AR06061-11-1	43	32	38	5	11	8	32	8	41	13	33	7
14	LW08190C-57-3	42	29	46	18	12	14	34	10	51	23	37	15
15	ARGE08-1398	22	3	33	2	7	3	24	1	36	8	25	1
16	B12*1792	49	41	60	42	12	14	50	31	62	37	46	36
17	B12-2180NC#	52	44	47	22	27	45	38	16	41	13	41	23
18	GA 071171-14ES8	40	24	51	28	23	36	45	24	61	33	44	32
19	GA 071092-14ES11	36	15	40	11	14	21	45	24	53	24	38	16
20	GA071092-14ES13	40	24	35	4	23	36	50	31	62	37	42	26
21	GA 081129-14ES16	23	5	64	45	11	8	64	43	63	40	45	33
22	GA 08250-14ES7	37	19	38	5	11	8	43	20	65	43	39	20
23	GA 08250-14ES5	42	29	48	24	26	44	36	13	36	8	38	16
24	GA 071171-14ES19	36	15	45	17	14	21	52	34	61	33	42	26
25	GA 081562-14ES14	54	47	46	18	24	39	50	31	70	46	49	44
26	KWS 054	28	8	63	44	9	6	68	44	57	31	45	33
27	LA06146E-P4	44	33	51	28	14	21	68	44	59	32	47	38
28	LA08265C-50	41	28	73	48	21	32	56	39	49	21	48	41
29	LA09144C-6	53	45	53	30	23	36	59	41	86	49	55	48
30	LANC8248-1	59	49	58	36	20	30	54	36	48	20	48	41
31	ES13-1591	22	3	38	5	12	14	52	34	54	28	36	13
32	ES13-3423	36	15	47	22	11	8	43	20	56	29	39	20
33	ES12-3030	32	9	58	36	13	19	54	36	50	22	41	23
34	M11-2024#	47	38	55	32	14	21	44	23	38	10	40	22
35	M12-3301	37	19	38	5	22	33	29	5	43	16	34	12
36	M12-2036#	37	19	38	5	22	33	55	38	53	24	41	23
37	NC11-23084	46	35	50	26	25	41	32	8	35	5	38	16
38	NC12-23576	47	38	59	38	28	46	38	16	63	40	47	38
39	NC12-23219	37	19	57	35	12	14	47	28	56	29	42	26
40	NC12-20662	24	6	41	12	11	8	48	29	31	3	31	6
41	NC9305-7	35	14	50	26	24	39	29	5	28	2	33	7
42	VA11W-106	46	37	59	38	29	47	35	12	53	24	45	33
43	VA11W-313	40	24	73	48	11	8	56	39	73	47	51	45
44	VA12W-72	44	33	67	46	13	19	75	49	62	37	52	46
45	VA12W-54	53	45	59	38	17	28	68	44	68	45	53	47
46	VA12FHB-53	47	38	48	24	25	41	38	16	53	24	42	26
47	VA12FHB-4	37	19	30	1	20	31	37	14	42	15	33	7
48	VA13W-177	17	2	41	12	6	1	46	27	38	10	29	5
49	VA08MAS5-39-6-4	36	15	53	30	15	25	72	48	61	33	47	38
	Mean	39		50		17		46		51		41	
	LSD (0.05)	.		.		11		.		18		19	
	CV%	.		.		30.3		.		24.0		23.1	

SEED CHARACTERISTICS and GRAIN YIELD

	CULTIVAR/ DESIGNATION	F'VILLE AR	N'PORT AR	B'BURG VA	
		Seed Quality		bu / ac	
					RANK
1	ERNIE	1	2	97	*41*
2	COKER9835	1	1	105	*28*
3	BESS	1	2	106	*24*
4	JAMESTOWN	1	2	106	*24*
5	LA07085CW-P4	1	1	114	*13*
6	LANC8170-41-2	1	1	98	*40*
7	NC11-22289	1	2	82	*49*
8	AR06024-7-2	1	3	95	*42*
9	AR06037-17-2	1	2	103	*32*
10	AR06045-2-4	1	2	92	*45*
11	AR06045-16-4	1	2	91	*47*
12	AR06046-10-3	1	1	107	*22*
13	AR06061-11-1	1	2	104	*30*
14	LW08190C-57-3	1	2	94	*43*
15	ARGE08-1398	3	4	92	*45*
16	B12*1792	1	2	119	*8*
17	B12-2180NC#	1	2	109	*19*
18	GA 071171-14ES8	1	1	104	*30*
19	GA 071092-14ES11	1	1	103	*32*
20	GA071092-14ES13	1	1	107	*22*
21	GA 081129-14ES16	2	1	86	*48*
22	GA 08250-14ES7	1	1	105	*28*
23	GA 08250-14ES5	1	1	112	*16*
24	GA 071171-14ES19	1	1	115	*11*
25	GA 081562-14ES14	1	1	99	*37*
26	KWS 054	1	1	109	*19*
27	LA06146E-P4	1	1	99	*37*
28	LA08265C-50	1	1	110	*17*
29	LA09144C-6	1	1	120	*7*
30	LANC8248-1	2	2	101	*36*
31	ES13-1591	1	1	103	*32*
32	ES13-3423	1	2	113	*14*
33	ES12-3030	1	1	106	*24*
34	M11-2024#	1	2	110	*17*
35	M12-3301	1	1	99	*37*
36	M12-2036#	1	2	115	*11*
37	NC11-23084	1	1	103	*32*
38	NC12-23576	1	1	106	*24*
39	NC12-23219	1	3	94	*43*
40	NC12-20662	1	1	113	*14*
41	NC9305-7	2	3	109	*19*
42	VA11W-106	1	1	116	*9*
43	VA11W-313	1	1	132	*1*
44	VA12W-72	1	1	128	*3*
45	VA12W-54	1	1	131	*2*
46	VA12FHB-53	1	1	123	*5*
47	VA12FHB-4	1	2	125	*4*
48	VA13W-177	2	3	116	*9*
49	VA08MAS5-39-6-4	1	1	121	*6*
	Mean	1	2	107	
	LSD (0.05)	0.5	0.8	.	
	CV%	27.9	30.0	.	

DON
(ppm)

	CULTIVAR/ DESIGNATION	F'VILLE AR	RANK	N'PORT AR	RANK	B'BURG VA	RANK	K'STON NC	RANK	LEX'TON KY	RANK	GRIFFIN GA	RANK	COL'BIA MO	RANK	MEAN ALL LOC.	RANK
1	ERNIE	17	41	13	17	0.1	2	4	14	12	42	3	15	6	20	8	23
2	COKER9835	14	29	22	39	1.0	45	17	47	11	40	7	42	7	26	11	43
3	BESS	10	8	9	4	0.2	16	6	31	6	14	2	8	4	6	5	4
4	JAMESTOWN	11	11	12	14	0.1	2	2	4	6	14	1	3	6	20	5	4
5	LA07085CW-P4	17	41	16	21	0.5	33	3	12	9	30	7	42	7	26	8	23
6	LANC8170-41-2	7	2	11	8	0.4	26	2	4	6	14	1	3	4	6	5	4
7	NC11-22289	12	15	7	2	0.2	16	1	1	3	1	1	3	2	2	4	3
8	AR06024-7-2	8	4	7	2	0.1	2	2	4	3	1	0.5	2	3	3	3	2
9	AR06037-17-2	13	22	19	33	0.8	42	7	35	9	30	4	28	11	43	9	31
10	AR06045-2-4	14	29	16	21	0.1	2	3	12	7	20	2	8	3	3	7	18
11	AR06045-16-4	13	22	17	25	0.1	2	4	14	7	20	3	15	4	6	7	18
12	AR06046-10-3	14	29	28	47	0.1	2	9	40	5	11	5	35	9	39	10	38
13	AR06061-11-1	11	11	10	6	0.2	16	2	4	4	5	5	35	9	39	6	10
14	LW08190C-57-3	8	4	9	4	0.1	2	2	4	4	5	5	35	5	12	5	4
15	ARGE08-1398	2	1	4	1	0.0	1	1	1	3	1	0.1	1	1	1	1	1
16	B12*1792	22	46	26	45	0.6	36	5	22	16	46	3	15	8	34	11	43
17	B12-2180NC#	9	6	20	35	0.9	44	6	31	10	38	4	28	6	20	8	23
18	GA 071171-14ES8	12	15	20	35	0.7	41	5	22	8	25	4	28	5	12	8	23
19	GA 071092-14ES11	13	22	25	43	0.3	24	5	22	8	25	8	45	5	12	9	31
20	GA071092-14ES13	12	15	25	43	0.3	24	6	31	9	30	4	28	4	6	9	31
21	GA 081129-14ES16	14	29	18	30	.	.	2	4	9	30	2	8	6	20	7	18
22	GA 08250-14ES7	16	37	18	30	0.4	26	4	14	9	30	6	40	8	34	9	31
23	GA 08250-14ES5	11	11	22	39	0.4	26	5	22	13	43	4	28	5	12	9	31
24	GA 071171-14ES19	12	15	22	39	0.4	26	9	40	10	38	7	42	8	34	10	38
25	GA 081562-14ES14	19	45	27	46	0.8	42	9	40	16	46	9	47	11	43	13	46
26	KWS 054	14	29	19	33	0.6	36	5	22	9	30	4	28	9	39	9	31
27	LA06146E-P4	16	37	20	35	1.0	45	7	35	15	45	2	8	7	26	10	38
28	LA08265C-50	7	2	11	8	1.0	45	8	39	8	25	2	8	5	12	6	10
29	LA09144C-6	22	46	23	42	1.3	48	19	49	20	49	5	35	8	34	14	49
30	LANC8248-1	12	15	10	6	0.4	26	11	45	11	40	6	40	7	26	8	23
31	ES13-1591	10	8	11	8	0.1	2	4	14	3	1	3	15	5	12	5	4
32	ES13-3423	13	22	17	25	0.2	16	5	22	4	5	3	15	10	42	8	23
33	ES12-3030	13	22	12	14	0.1	2	4	14	6	14	3	15	8	34	6	10
34	M11-2024#	14	29	16	21	0.5	33	9	40	7	20	3	15	7	26	8	23
35	M12-3301	11	11	16	21	0.2	16	4	14	6	14	3	15	4	6	6	10
36	M12-2036#	18	44	17	25	0.4	26	7	35	8	25	3	15	17	49	10	38
37	NC11-23084	14	29	15	18	0.1	2	10	44	7	20	10	48	3	3	8	23
38	NC12-23576	23	48	20	35	0.6	36	12	46	14	44	3	15	7	26	11	43
39	NC12-23219	14	29	11	8	0.1	2	2	4	5	11	1	3	12	45	6	10
40	NC12-20662	13	22	15	18	0.1	2	2	4	6	14	2	8	5	12	6	10
41	NC9305-7	12	15	12	14	0.2	16	6	31	4	5	4	28	6	20	6	10
42	VA11W-106	17	41	28	47	0.5	33	17	47	9	30	10	48	7	26	13	46
43	VA11W-313	16	37	17	25	0.6	36	5	22	8	25	3	15	12	45	9	31
44	VA12W-72	26	49	31	49	0.6	36	4	14	9	30	8	45	13	47	13	46
45	VA12W-54	13	22	18	30	0.4	26	5	22	16	46	5	35	16	48	10	38
46	VA12FHB-53	16	37	17	25	0.2	16	5	22	4	5	2	8	4	6	7	18
47	VA12FHB-4	12	15	11	8	0.1	2	4	14	5	11	3	15	5	12	6	10
48	VA13W-177	10	8	11	8	0.1	2	1	1	4	5	1	3	6	20	5	4
49	VA08MAS5-39-6-4	9	6	15	18	0.2	16	7	35	7	20	3	15	7	26	7	18
	Mean	13		17		0.4		6		8		4		7		8	
	LSD (0.05)	.		.		.		.		.		.		.		6	
	CV%	.		.		.		.		.		.		.		38.8	

Greenhouse Severity

	CULTIVAR/ DESIGNATION	COL'BIA MO	*RANK*
1	ERNIE	21	*19*
2	COKER9835	47	*48*
3	BESS	6	*1*
4	JAMESTOWN	32	*34*
5	LA07085CW-P4	38	*40*
6	LANC8170-41-2	44	*47*
7	NC11-22289	26	*28*
8	AR06024-7-2	10	*4*
9	AR06037-17-2	19	*15*
10	AR06045-2-4	23	*21*
11	AR06045-16-4	24	*22*
12	AR06046-10-3	25	*25*
13	AR06061-11-1	10	*4*
14	LW08190C-57-3	14	*12*
15	ARGE08-1398	11	*8*
16	B12*1792	30	*32*
17	B12-2180NC#	8	*2*
18	GA 071171-14ES8	22	*20*
19	GA 071092-14ES11	31	*33*
20	GA071092-14ES13	24	*22*
21	GA 081129-14ES16	19	*15*
22	GA 08250-14ES7	19	*15*
23	GA 08250-14ES5	43	*46*
24	GA 071171-14ES19	12	*9*
25	GA 081562-14ES14	25	*25*
26	KWS 054	25	*25*
27	LA06146E-P4	16	*14*
28	LA08265C-50	37	*39*
29	LA09144C-6	39	*42*
30	LANC8248-1	47	*48*
31	ES13-1591	34	*38*
32	ES13-3423	24	*22*
33	ES12-3030	41	*44*
34	M11-2024#	26	*28*
35	M12-3301	20	*18*
36	M12-2036#	10	*4*
37	NC11-23084	13	*10*
38	NC12-23576	14	*12*
39	NC12-23219	38	*40*
40	NC12-20662	13	*10*
41	NC9305-7	41	*44*
42	VA11W-106	27	*30*
43	VA11W-313	33	*36*
44	VA12W-72	10	*4*
45	VA12W-54	40	*43*
46	VA12FHB-53	8	*2*
47	VA12FHB-4	29	*31*
48	VA13W-177	33	*36*
49	VA08MAS5-39-6-4	32	*34*

Mean	25
LSD (0.05)	.
CV%	.

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

	DESIGNATION	*Rht-B1*	*Rht-D1*	*Fhb1*	*Fhb Massey 3BL*	*Fhb 2DL-Wuhan1/W14*	*Fhb 5A*	*Sr36*	*Sr24/Lr24*	*Lr37/Yr17/Sr38*	*Lr9*	*1RS*	*H13*	*Sbm1*	*Tsn1*	*Sucrose Synthase*
1	ERNIE	*Rht-B1b*	*het*	*no*	*3BL?*	*no*	*het*	*Sr36*	*no*	*no*	*no*	*no*	*no*	*het*	*1*	*TaSus-2B*
2	COKER9835	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*Lr9*	*no*	*no*	*Sbm1*	*no*	*TaSus-2B*
3	BESS	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*het*	*Tsn1*	*no*
4	JAMESTOWN	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
5	LA07085CW-P4	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*het*	*no*	*yes*	*no*	*no*	*no*	*no*	*no*	*het*
6	LANC8170-41-2	*Rht-B1a*	*Rht-D1b*	*Fhb1*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
7	NC11-22289	*Rht-B1a*	*Rht-D1a*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*Lr9*	*no*	*no*	*Sbm1*	*no*	*TaSus-2B*
8	AR06024-7-2	*Rht-B1a*	*Rht-D1a*	*het*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
9	AR06037-17-2	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*no*	*1RS:1AL*	*no*	*Sbm1*	*no*	*TaSus-2B*
10	AR06045-2-4	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*Tsn1*	*no*
11	AR06045-16-4	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*Tsn1*	*no*
12	AR06046-10-3	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
13	AR06061-11-1	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*Tsn1*	*no*
14	LW08190C-57-3	*Rht-B1b*	*Rht-D1a*	*Fhb1*	*no*	*no*	*no*	*Sr36*	*no*	*yes*	*no*	*1RS:1BL*	*no*	*no*	*no*	*TaSus-2B*
15	ARGE08-1398	*Rht-B1b*	*Rht-D1a*	*Fhb1?*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*		*Sbm1*	*no*	*no*
16	B12*1792	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
17	B12-2180NC#	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*1RS:1AL*	*no*	*Sbm1*	*no*	*no*
18	GA 071171-14ES8	*het*	*het*	*no*	*no*	*no*	*het*	*no*	*no*	*no*	*no*	*no*	*no*	*hrt*	*Tsn1*	*no*
19	GA 071092-14ES11	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*
20	GA071092-14ES13	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*het*	*no*	*no*	*no*	*no*	*no*	*no*
21	GA 081129-14ES16	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*hrt*	*no*	*no*
22	GA 08250-14ES7	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*no*	*no*	*no*
23	GA 08250-14ES5	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
24	GA 071171-14ES19	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*no*	*Sbm1*	*Tsn1*	*no*
25	GA 081562-14ES14	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*yes*	*Sr36*	*no*	*yes*	*no*	*no*	*no*	*no*	*no*	*TaSus-2B*
26	KWS 054	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no cal*	*no*	*no*	*no*	*no*	*no*	*no*
27	LA06146E-P4	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*Lr9*	*no*	*no*	*Sbm1*	*no*	*no*
28	LA08265C-50	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
29	LA09144C-6	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
30	LANC8248-1	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*yes*	*Sr36*	*no*	*yes*	*no*	*no*	*no*	*Sbm1*	*no*	*TaSus-2B*
31	ES13-1591	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*1RS:1BL*	*no*	*Sbm1*	*no*	*no*
32	ES13-3423	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*no*	*1RS:1BL*		*Sbm1*	*no*	*no*
33	ES12-3030	*Rht-B1a*	*Rht-D1a*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*TaSus-2B*
34	M11-2024#	*Rht-B1a*	*Rht-D1b*	*no*	*3BL*	*no*	*no*	*no*	*no*	*no*	*no*	*1RS:1BL*	*no*	*Sbm1*	*no*	*no*
35	M12-3301	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
36	M12-2036#	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
37	NC11-23084	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*yes*	*Sr36*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*TaSus-2B*
38	NC12-23576	*no call*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*no*	*Sbm1*	*Tsn1*	*no*
39	NC12-23219	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*yes*	*no*	*no*	*yes*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
40	NC12-20662	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*Lr9*	*no*	*no*	*Sbm1*	*no*	*TaSus-2B*
41	NC9305-7	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*TaSus-2B*
42	VA11W-106	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*no*
43	VA11W-313	*Rht-B1a*	*Rht-D1b*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*het*	*no*	*no*	*het*	*Sbm1*	*no*	*TaSus-2B*
44	VA12W-72	*Rht-B1a*	*Rht-D1b*	*no*	*3BL*	*no*	*no*	*no*	*no*	*yes*	*no*	*no*	*H13*	*Sbm1*	*no*	*no*
45	VA12W-54	*Rht-B1a*	*Rht-D1b*	*no*	*3BL*	*no*	*no*	*Sr36*	*no*	*yes*	*no*	*no*	*H13*	*Sbm1*	*no*	*TaSus-2B*
46	VA12FHB-53	*Rht-B1b*	*Rht-D1a*	*het*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*no*	*no*	*no*	*het*	*no*	*TaSus-2B*
47	VA12FHB-4	*Rht-B1b*	*Rht-D1a*	*het*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*no*	*1RS:1BL*	*no*	*no*	*no*	*TaSus-2B*
48	VA13W-177	*Rht-B1a*	*Rht-D1a*	*no*	*no*	*no*	*no*	*Sr36*	*no*	*no*	*no*	*no*	*no*	*Sbm1*	*no*	*TaSus-2B*
49	VA08MAS5-39-6-4	*Rht-B1b*	*Rht-D1a*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*1RS:1BL*	*no*	*Sbm1*	*no*	*no*

Efficacy of Selected FHB Resistance QTL

Mean Incidence, Severity, Fusarium Damaged Kernels (FDK), and DON for entries in the 2013-2015 Uniform Southern Winter

QTL	Allele‡	n§	INC		SEV		FDK		DON	
Qfhb.nc-2B.1 (Bess)	S	119	62.4	p=0.0014	35.1	p=0.006	32.6	p=0.0001	9.1	p<0.0001
	R	31	58.5		32.6		28.5		7.3	
Qfhb.nc-3B.2 (Bess)	S	143	62.2	p=0.0034	35.0	p<0.0001	32.2	p=0.0006	8.7	p=0.1000
	R	10	56.9		28.6		26.5		9.8	
Ning_5A	S	150	62.0	p=0.0723	34.9	p=0.0044	32.2	p<0.0001	9.0	p<0.0001
	R	6	57.7		30.1		22.2		4.7	
Ernie_5A	S	143	61.4	p=0.0098	33.9	p<0.0001	31.1	p<0.0001	8.5	p<0.0001
	R	12	65.5		41.8		39.6		12.5	
Wuhan-1_2DL	S	151	61.9	p=0.64	34.9	p=0.0002	32.2	p<0.0001	9.0	p<0.0001
	R	6	60.8		28.6		21.3		4.3	
Sumai 3_Fhb1	S	132	62.0	p=0.7352	35.6	p<0.0001	32.7	p<0.0001	9.3	p<0.0001
	R	21	62.4		31.0		28.2		6.3	
QTL_3BL (Massey)	S	149	61.6	p=0.8879	34.4	p=0.1012	31.5	p=0.0492	8.7	p=0.1870
	R	8	61.8		36.7		34.8		9.6	
QTL_1A (Neuse)	S	58	63.2	p=0.0278	36.8	p<0.0001	33.8	p<0.0001	9.7	p<0.0001
	R	70	61.0		33.3		30.1		8.2	
QTL_6A (Neuse)	S	128	62.5	p=0.5406	34.6	p=0.9816	32.7	p=0.4448	9.4	p=0.0807
	R	18	61.4		34.6		31.5		8.3	
QTL_1B (Jamestown)	S	25	67.2	p<0.0001	37.5	p<0.0001	39.4	p<0.0001	8.6	p<0.0001
	R	24	61.5		31.3		32.7		7.1	
QTL_6A (Jamestown)	S	43	64.6	p=0.4126	34.2	p=0.2359	35.8	p=0.2256	7.8	p=0.6362
	R	6	62.0		36.3		38.3		8.1	

‡ **Indicates presence of resistance allele (R) or susceptibility allele (S) at the respective QTL.**

§ **n indicates the number of lines in the allele group.**

Heading Date (Julian Days*)

	CULTIVAR/ DESIGNATION	COL'BIA MO	WARSAW VA	B'BURG VA	K'STON NC	U'BANA IL	LEX'TON KY	KWS IL	MEAN ALL LOC.	RANK
1	ERNIE	137	127	137	107	134	131	138	129	12
2	COKER9835	140	128	136	110	135	132	142	131	40
3	BESS	138	127	139	111	134	132	141	130	24
4	JAMESTOWN	135	125	137	105	133	129	139	128	5
5	LA07085CW-P4	134	124	137	104	136	129	140	128	5
6	LANC8170-41-2	140	127	138	108	134	131	139	130	24
7	NC11-22289	137	125	135	108	131	128	137	128	5
8	AR06024-7-2	140	126	138	108	134	130	140	130	24
9	AR06037-17-2	144	129	137	110	135	134	143	132	48
10	AR06045-2-4	138	127	137	110	134	130	141	130	24
11	AR06045-16-4	140	127	138	111	134	131	140	130	24
12	AR06046-10-3	141	127	137	110	133	130	140	130	24
13	AR06061-11-1	140	127	138	111	134	131	142	131	40
14	LW08190C-57-3	137	127	139	106	137	129	141	129	12
15	ARGE08-1398	138	128	137	109	135	131	141	130	24
16	B12*1792	138	127	134	106	133	129	139	129	12
17	B12-2180NC#	138	127	135	109	135	131	141	130	24
18	GA 071171-14ES8	140	127	137	105	135	131	141	130	24
19	GA 071092-14ES11	138	127	136	107	137	132	142	130	24
20	GA071092-14ES13	140	127	137	108	137	131	141	130	24
21	GA 081129-14ES16	140	124	140	105	134	129	143	129	12
22	GA 08250-14ES7	141	127	137	107	137	131	141	131	40
23	GA 08250-14ES5	138	127	136	109	136	131	145	131	40
24	GA 071171-14ES19	140	126	139	106	135	131	144	130	24
25	GA 081562-14ES14	144	130	138	110	138	135	145	134	49
26	KWS 054	134	127	134	107	134	128	138	128	5
27	LA06146E-P4	138	124	137	105	135	130	145	130	24
28	LA08265C-50	138	126	137	108	134	131	140	129	12
29	LA09144C-6	141	125	137	108	136	131	145	131	40
30	LANC8248-1	138	127	134	109	134	130	142	130	24
31	ES13-1591	135	125	136	106	131	128	138	127	2
32	ES13-3423	137	127	136	110	132	130	140	129	12
33	ES12-3030	137	127	134	109	134	130	138	129	12
34	M11-2024#	140	127	137	109	133	129	138	129	12
35	M12-3301	140	129	134	109	134	131	140	130	24
36	M12-2036#	137	127	137	111	133	129	138	129	12
37	NC11-23084	138	129	139	110	135	131	141	131	40
38	NC12-23576	140	128	135	109	134	131	140	130	24
39	NC12-23219	135	127	137	109	133	130	139	129	12
40	NC12-20662	133	124	134	105	131	126	138	126	1
41	NC9305-7	140	127	135	111	134	131	141	131	40
42	VA11W-106	138	128	137	112	134	131	141	131	40
43	VA11W-313	135	124	134	107	133	128	140	128	5
44	VA12W-72	135	125	137	108	133	129	141	128	5
45	VA12W-54	135	125	134	105	133	129	143	128	5
46	VA12FHB-53	137	127	134	109	134	129	140	129	12
47	VA12FHB-4	137	127	136	109	134	129	139	129	12
48	VA13W-177	137	124	135	103	133	128	138	127	2
49	VA08MAS5-39-6-4	133	125	137	106	130	128	138	127	2
	Mean	138	127	136	108	134	130	140	129	
	LSD (0.05)	.	.	.	2	.	.	2	3	
	CV%	.	.	.	0.9	.	.	0.7	1.1	

*Days after December 31, 2014

Plant Height (in)

	CULTIVAR/ DESIGNATION	WARSAW VA	COL'BIA MO	LEX'TON KY	MEAN ALL LOC.	RANK
1	ERNIE	33	28	35	32	*16*
2	COKER9835	33	28	33	31	*11*
3	BESS	35	34	37	35	*42*
4	JAMESTOWN	34	29	34	32	*18*
5	LA07085CW-P4	34	32	34	33	*28*
6	LANC8170-41-2	34	29	32	31	*12*
7	NC11-22289	37	33	36	35	*43*
8	AR06024-7-2	40	31	38	36	*49*
9	AR06037-17-2	30	29	31	30	*2*
10	AR06045-2-4	37	33	37	36	*47*
11	AR06045-16-4	36	32	39	35	*45*
12	AR06046-10-3	35	30	35	33	*26*
13	AR06061-11-1	36	34	36	35	*44*
14	LW08190C-57-3	35	30	33	32	*19*
15	ARGE08-1398	38	33	37	36	*48*
16	B12*1792	35	29	36	33	*29*
17	B12-2180NC#	31	28	32	30	*3*
18	GA 071171-14ES8	36	33	35	35	*40*
19	GA 071092-14ES11	34	28	34	32	*17*
20	GA071092-14ES13	34	31	34	33	*25*
21	GA 081129-14ES16	32	29	33	31	*5*
22	GA 08250-14ES7	32	30	33	32	*13*
23	GA 08250-14ES5	36	33	35	34	*39*
24	GA 071171-14ES19	34	33	36	34	*36*
25	GA 081562-14ES14	32	31	34	32	*20*
26	KWS 054	31	29	34	31	*6*
27	LA06146E-P4	35	32	34	34	*31*
28	LA08265C-50	34	33	37	35	*41*
29	LA09144C-6	37	31	35	34	*38*
30	LANC8248-1	31	26	31	29	*1*
31	ES13-1591	36	31	35	34	*33*
32	ES13-3423	33	30	36	33	*22*
33	ES12-3030	36	29	37	34	*34*
34	M11-2024#	31	29	34	31	*7*
35	M12-3301	34	32	36	34	*35*
36	M12-2036#	34	32	37	34	*37*
37	NC11-23084	34	30	34	33	*23*
38	NC12-23576	33	32	34	33	*27*
39	NC12-23219	34	31	35	33	*30*
40	NC12-20662	32	28	34	31	*8*
41	NC9305-7	35	31	35	34	*32*
42	VA11W-106	31	31	34	32	*15*
43	VA11W-313	33	29	32	31	*9*
44	VA12W-72	34	30	34	33	*24*
45	VA12W-54	30	29	33	31	*4*
46	VA12FHB-53	32	30	34	32	*14*
47	VA12FHB-4	35	29	34	33	*21*
48	VA13W-177	37	31	38	35	*46*
49	VA08MAS5-39-6-4	31	28	35	31	*10*
	Mean	34	30	35	33	
	LSD (0.05)	.	.	.	2	
	CV%	.	.	.	3.6	

Leaf Disease Ratings

	CULTIVAR/ DESIGNATION	Leaf Rust 0-9 B'ROUGE LA	Stripe Rust 0-9 B'ROUGE LA	Leaf Blotch 0-9 B'ROUGE LA	Leaf Rust 0-9 W'RSAW VA	Powdery Mildew 0-9 W'RSAW VA	Stripe Rust 0-100 F'VILLE AR	Stripe Rust 0-100 N'PORT AR	Leaf Blotch 0-100 N'PORT AR
1	ERNIE	1	3	8	1	1	43	64	1
2	COKER9835	1	3	8	1	0	37	64	1
3	BESS	1	2	6	3	1	15	46	1
4	JAMESTOWN	2	1	5	0	1	2	1	13
5	LA07085CW-P4	1	1	6	0	1	0	0	1
6	LANC8170-41-2	1	1	4	1	0	1	0	11
7	NC11-22289	1	1	5	0	0	10	10	11
8	AR06024-7-2	1	2	5	1	0	1	0	3
9	AR06037-17-2	1	1	4	1	0	4	1	1
10	AR06045-2-4	2	1	5	7	1	2	0	10
11	AR06045-16-4	5	2	5	6	1	3	5	15
12	AR06046-10-3	3	1	5	3	1	0	0	1
13	AR06061-11-1	3	1	4	4	1	20	40	2
14	LW08190C-57-3	1	1	3	0	0	3	1	12
15	ARGE08-1398	1	2	4	1	0	17	47	2
16	B12*1792	3	1	5	2	1	1	1	8
17	B12-2180NC#	1	1	3	0	0	1	0	1
18	GA 071171-14ES8	1	1	5	1	0	2	0	4
19	GA 071092-14ES11	1	2	5	0	0	5	15	7
20	GA071092-14ES13	1	2	5	0	0	7	15	5
21	GA 081129-14ES16	2	2	5	0	0	0	0	11
22	GA 08250-14ES7	1	1	4	0	1	0	0	12
23	GA 08250-14ES5	1	0	4	0	1	1	0	3
24	GA 071171-14ES19	1	1	5	0	0	4	5	4
25	GA 081562-14ES14	1	1	4	0	0	1	0	2
26	KWS 054	1	2	5	1	0	12	62	2
27	LA06146E-P4	1	1	5	0	0	0	0	0
28	LA08265C-50	1	1	4	0	0	0	1	4
29	LA09144C-6	1	2	5	0	1	1	0	2
30	LANC8248-1	0	0	3	1	1	1	0	13
31	ES13-1591	2	2	6	1	1	25	63	0
32	ES13-3423	1	1	4	1	1	50	90	0
33	ES12-3030	1	1	5	2	1	37	52	6
34	M11-2024#	1	1	4	3	1	2	0	1
35	M12-3301	1	2	6	3	3	50	71	2
36	M12-2036#	3	2	7	3	1	8	7	1
37	NC11-23084	1	1	6	1	0	50	90	1
38	NC12-23576	1	1	4	0	0	0	0	1
39	NC12-23219	1	1	5	0	0	0	0	0
40	NC12-20662	1	2	6	1	1	43	76	4
41	NC9305-7	1	1	4	0	0	25	47	2
42	VA11W-106	1	1	4	0	1	2	0	1
43	VA11W-313	1	1	4	1	2	1	0	10
44	VA12W-72	1	1	3	1	0	0	0	5
45	VA12W-54	1	1	3	1	0	0	0	3
46	VA12FHB-53	0	0	2	1	0	15	5	20
47	VA12FHB-4	1	2	4	0	0	57	54	8
48	VA13W-177	1	1	3	1	0	0	0	1
49	VA08MAS5-39-6-4	1	1	5	0	1	43	69	0
	Mean	1	1	4	1	1	12	20	5
	LSD (0.05)	.	.	.	.	.	8	26	10
	CV%	.	.	.	.	.	40.4	79.7	133.7

Hessian Fly Screening

(Resistant - Susceptible Plants)[1]

	CULTIVAR/ DESIGNATION	Biotype B	Biotype C	Biotype O	Biotype L
1	ERNIE	0-17	1-16	0-12	0-15
2	COKER9835	0-17	0-19	6-8	0-15
3	BESS	0-21	0-17	0-14	0-15
4	JAMESTOWN	16-1	20-0	0-14	0-14
5	LA07085CW-P4	0-15	0-16	0-11	0-17
6	LANC8170-41-2	11-0	16-0	10-1	11-0
7	NC11-22289	0-19	0-16	0-12	0-17
8	AR06024-7-2	0-14	0-17	0-15	0-15
9	AR06037-17-2	0-15	0-20	0-14	0-18
10	AR06045-2-4	0-13	0-13	0-10	0-12
11	AR06045-16-4	0-15	0-15	0-13	0-13
12	AR06046-10-3	0-19	0-19	0-13	0-14
13	AR06061-11-1	0-17	0-18	0-10	0-14
14	LW08190C-57-3	0-15	0-15	0-12	0-11
15	ARGE08-1398	15-2	3-15	0-13	0-14
16	B12*1792	17-0	17-0	14-0	16-1
17	B12-2180NC#	17-0	18-0	12-0	16-0
18	GA 071171-14ES8	17-1	17-1	15-0	9-8
19	GA 071092-14ES11	0-15	0-19	0-15	0-17
20	GA071092-14ES13	0-16	0-19	0-14	0-16
21	GA 081129-14ES16	0-18	0-17	0-17	0-16
22	GA 08250-14ES7	17-0	18-0	10-4	0-16
23	GA 08250-14ES5	22-0	19-0	13-4	0-16
24	GA 071171-14ES19	17-3	13-4	15-1	0-18
25	GA 081562-14ES14	0-18	0-20	0-16	0-14
26	KWS 054	11-0	0-18	0-14	0-14
27	LA06146E-P4	0-12	16-1	0-14	0-14
28	LA08265C-50	0-17	0-18	10-2	0-16
29	LA09144C-6	0-17	0-17	0-15	0-14
30	LANC8248-1	18-0	19-0	0-16	0-12
31	ES13-1591	0-16	13-6	0-15	0-16
32	ES13-3423	0-15	15-4	0-14	0-21
33	ES12-3030	0-15	0-18	0-14	0-15
34	M11-2024#	0-17	0-20	5-10	0-17
35	M12-3301	0-16	0-17	0-13	0-19
36	M12-2036#	0-15	0-20	0-16	0-18
37	NC11-23084	0-16	0-18	0-17	0-18
38	NC12-23576	0-18	16-1	0-13	0-20
39	NC12-23219	7-7	19-0	0-17	0-18
40	NC12-20662	0-18	0-16	0-16	0-16
41	NC9305-7	0-17	0-16	0-14	0-17
42	VA11W-106	0-17	0-18	0-15	0-20
43	VA11W-313	0-16	6-12	0-15	0-16
44	VA12W-72	15-1	18-0	13-2	17-1
45	VA12W-54	19-0	16-1	16-0	21-0
46	VA12FHB-53	0-18	0-15	15-1	0-17
47	VA12FHB-4	15-2	0-17	0-11	0-16
48	VA13W-177	0-18	0-18	10-5	0-17
49	VA08MAS5-39-6-4	0-20	0-18	0-16	0-16

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

Milling and Baking Quality Scores[1]

	Cultivar/ Designation	FLOUR YIELD %	SOFT. EQUIV. %	TEST WEIGHT lb / bu	KERNEL PROT. (at 12%)	FLOUR PROT. (at 14%)	LACTIC ACID SRC(%)	Na_2CO_3 SRC %	SKCS Ker. Hardness	SKCS Ker. Dia. mm	SKCS Ker. Wt mg
1	ERNIE	67	55	58.3	11.6	9.2	130	67	0	2.9	38.2
2	COKER9835	68	65	57.4	10.4	8.3	113	72	1	2.6	33.5
3	BESS	67	61	58.5	10.4	8.5	120	69	6	2.5	31.9
4	JAMESTOWN	68	59	60.2	11.6	9.5	134	70	11	2.8	31.1
5	LA07085CW-P4	69	63	59.1	10.5	8.4	118	72	3	2.8	37.9
6	LANC8170-41-2	66	50	59.6	11.0	9.7	128	63	21	2.8	34.4
7	NC11-22289	66	52	59.7	12.1	9.8	137	64	13	2.9	36.1
8	AR06024-7-2	66	56	61.9	11.3	9.1	114	65	14	2.8	31.4
9	AR06037-17-2	68	59	57.0	10.0	8.4	130	71	9	2.4	28.7
10	AR06045-2-4	68	62	58.7	10.4	8.5	134	70	2	2.6	32.2
11	AR06045-16-4	68	62	58.8	10.6	8.6	136	69	1	2.6	32.5
12	AR06046-10-3	68	58	57.6	11.3	9.0	115	68	3	2.6	34.9
13	AR06061-11-1	67	63	58.3	10.1	8.3	121	69	3	2.5	30.8
14	LW08190C-57-3	67	58	57.8	10.9	9.1	105	71	20	2.6	33.6
15	ARGE08-1398	67	58	57.2	10.9	8.8	106	71	20	2.6	33.4
16	B12*1792	68	59	58.9	10.3	8.7	135	65	10	2.8	37.2
17	B12-2180NC#	67	60	57.1	10.7	8.8	126	68	17	2.4	28.0
18	GA 071171-14ES8	70	57	62.1	10.4	8.7	139	65	2	2.9	37.2
19	GA 071092-14ES11	71	61	59.2	9.6	8.1	131	65	6	2.8	37.6
20	GA071092-14ES13	71	64	59.0	9.4	8.0	130	67	1	2.8	37.7
21	GA 081129-14ES16	70	53	61.2	11.2	9.5	141	65	13	3.0	40.7
22	GA 08250-14ES7	70	63	59.0	10.8	8.9	132	68	-2	2.8	36.1
23	GA 08250-14ES5	69	61	60.6	10.2	8.7	152	67	-4	2.8	33.7
24	GA 071171-14ES19	70	56	62.1	10.8	9.1	135	66	9	2.9	37.9
25	GA 081562-14ES14	71	56	59.4	10.5	9.0	127	64	6	2.7	33.3
26	KWS 054	69	64	58.9	10.0	8.4	129	67	-5	2.7	33.7
27	LA06146E-P4	68	50	60.6	11.3	9.1	139	69	25	3.0	38.9
28	LA08265C-50	68	58	60.8	10.0	8.4	144	64	11	2.8	35.6
29	LA09144C-6	70	57	60.2	11.2	9.2	138	66	-2	2.7	34.9
30	LANC8248-1	71	52	58.8	11.1	9.3	130	65	21	2.6	31.8
31	ES13-1591	69	61	58.1	11.6	9.5	102	69	1	2.8	38.4
32	ES13-3423	65	58	58.6	11.5	9.3	126	73	7	2.6	33.8
33	ES12-3030	66	53	59.8	11.2	9.4	140	66	16	2.7	35.2
34	M11-2024#	68	52	60.1	12.1	10.0	91	65	12	2.8	36.5
35	M12-3301	69	64	57.2	10.6	8.8	115	65	3	2.5	30.1
36	M12-2036#	70	64	56.9	10.4	8.5	152	65	1	2.6	32.0
37	NC11-23084	70	55	60.5	11.6	9.7	121	63	12	2.9	38.1
38	NC12-23576	67	53	58.5	11.6	9.8	150	67	16	2.6	32.9
39	NC12-23219	65	55	60.6	12.0	10.0	148	69	13	2.7	31.9
40	NC12-20662	66	53	61.1	11.8	9.6	161	70	1	2.9	41.4
41	NC9305-7	67	58	59.1	11.4	9.2	125	70	4	2.6	32.7
42	VA11W-106	67	64	57.9	10.5	8.7	128	74	2	2.6	31.9
43	VA11W-313	67	54	56.9	11.4	9.8	138	67	18	2.9	39.2
44	VA12W-72	65	57	57.5	12.3	10.3	123	66	4	2.9	43.6
45	VA12W-54	68	58	59.5	10.9	9.0	137	68	7	2.7	33.4
46	VA12FHB-53	66	59	58.8	11.9	9.5	120	67	10	2.7	33.2
47	VA12FHB-4	67	59	58.0	12.2	9.7	108	67	-1	2.7	34.8
48	VA13W-177	68	54	60.9	12.1	9.8	125	64	12	2.7	32.5
49	VA08MAS5-39-6-4	70	59	59.2	11.3	9.1	120	69	3	2.6	36.0
	USG 3120	70	58	60.2	10.7	8.9	118	68	4	2.8	40.8
	Branson	69	65	56.8	11.1	9.0	137	67	2	2.6	33.3
	Mean	68	58	59.1	11.0	9.1	129	68	8	2.7	34.8
	St. Deviation	1.5	4.2	1.4	0.7	0.6	13.8	2.6	7.3	0.1	3.3

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

Means Across Locations 2014-15

	Cultivar/ Designation	FHB Incidence	RANK	FHB Severity	RANK	FHB Index	RANK	FDK	RANK	ISK	RANK	DON	RANK
1	ERNIE	58	11	36	28	19	16	34	18	38	16	8	23
2	COKER9835	86	49	68	49	55	49	60	49	61	49	11	43
3	BESS	55	8	25	7	15	10	26	9	33	7	5	4
4	JAMESTOWN	54	5	30	12	17	13	26	9	36	13	5	4
5	LA07085CW-P4	62	20	38	35	22	23	46	42	42	26	8	23
6	LANC8170-41-2	69	36	40	38	28	41	38	27	46	36	5	4
7	NC11-22289	50	1	23	5	13	4	25	7	28	2	4	3
8	AR06024-7-2	57	10	21	4	12	3	18	2	28	2	3	2
9	AR06037-17-2	78	47	34	22	26	37	39	32	48	41	9	31
10	AR06045-2-4	54	5	20	2	9	2	27	12	28	2	7	18
11	AR06045-16-4	59	12	24	6	13	4	25	7	33	7	7	18
12	AR06046-10-3	62	18	31	16	20	18	38	27	42	26	10	38
13	AR06061-11-1	61	15	26	8	17	13	23	4	33	7	6	10
14	LW08190C-57-3	64	22	30	12	20	18	38	27	37	15	5	4
15	ARGE08-1398	51	2	14	1	8	1	16	1	25	1	1	1
16	B12*1792	66	29	41	39	28	41	35	19	46	36	11	43
17	B12-2180NC#	78	47	33	20	25	31	26	9	41	23	8	23
18	GA 071171-14ES8	64	22	41	39	25	31	33	17	44	32	8	23
19	GA 071092-14ES11	67	32	36	28	22	23	39	32	38	16	9	31
20	GA071092-14ES13	66	29	39	37	25	31	38	27	42	26	9	31
21	GA 081129-14ES16	64	22	36	35	23	31	40	34	45	33	7	18
22	GA 08250-14ES7	62	18	31	16	20	18	36	23	39	20	9	31
23	GA 08250-14ES5	62	20	36	28	22	23	35	19	38	16	9	31
24	GA 071171-14ES19	67	32	35	26	24	30	35	19	42	26	10	38
25	GA 081562-14ES14	74	43	34	22	26	37	45	40	49	44	13	46
26	KWS 054	66	29	30	12	22	23	47	43	45	33	9	31
27	LA06146E-P4	59	12	32	18	19	16	48	44	47	38	10	38
28	LA08265C-50	71	39	42	42	35	46	37	26	48	41	6	10
29	LA09144C-6	74	43	51	48	36	47	50	45	55	48	14	49
30	LANC8248-1	76	45	49	47	40	48	28	14	48	41	8	23
31	ES13-1591	55	8	29	10	15	10	38	27	36	13	5	4
32	ES13-3423	52	3	36	28	14	7	45	40	39	20	8	23
33	ES12-3030	65	27	36	28	23	29	36	23	41	23	6	10
34	M11-2024#	65	27	37	34	27	39	24	6	40	22	8	23
35	M12-3301	61	15	34	22	16	12	36	23	34	12	6	10
36	M12-2036#	54	5	26	8	14	7	41	35	41	23	10	38
37	NC11-23084	67	32	42	42	22	23	35	19	38	16	8	23
38	NC12-23576	69	36	41	39	27	39	44	38	47	38	11	43
39	NC12-23219	64	22	33	20	25	31	29	15	42	26	6	10
40	NC12-20662	60	14	35	26	14	7	32	16	31	6	6	10
41	NC9305-7	64	22	30	12	20	18	20	3	33	7	6	10
42	VA11W-106	69	36	32	18	22	23	44	38	45	33	13	46
43	VA11W-313	71	39	42	42	29	43	53	47	51	45	9	31
44	VA12W-72	72	41	34	22	25	31	58	48	52	46	13	46
45	VA12W-54	72	41	44	45	30	44	51	46	53	47	10	38
46	VA12FHB-53	61	15	29	10	18	15	42	36	42	26	7	18
47	VA12FHB-4	68	35	36	28	21	22	27	12	33	7	6	10
48	VA13W-177	53	4	20	2	13	4	23	4	29	5	5	4
49	VA08MAS5-39-6-4	76	45	47	46	32	45	42	36	47	38	7	18
	Mean	64		34		22		33		41		8	
	LSD (0.05)	26		26		22		24		19		7	
	CV%	20.7		38.3		50.4		36.8		23.1		37.7	

Means Across Locations 2014 - 2015

	Cultivar/ Designation	Heading Date	RANK	Plant Height	RANK	Flour Yield %	RANK	Softness Equivalent %	RANK	Hessian Fly Biotype L	*Fhb1*	*Fhb Massey 3BL*	*Fhb 5A*	*Fhb 2DL-Wuhan1/W14*	*Bess 2B*	*Bess 3B*	*Jamestown 1t*	*Jamestown 6A*	*NC-Neuse 1A*	*NC-Neuse 6A*
1	ERNIE	129	12	32	16	67	30	55	36	0-15	no	3BL?	het	no	no	no	no	no	yes	yes
2	COKER9835	131	40	31	11	68	18	65	1	0-15	no	no	no	no	no	no	no	no	.	no
3	BESS	130	24	35	42	67	30	61	12	0-15	no	no	no	no	yes	yes	yes	no	.	no
4	JAMESTOWN	128	5	32	18	68	18	59	17	0-14	no	no	no	no	no	no	yes	yes	yes	no
5	LA07085CW-P4	128	5	33	28	69	13	63	7	0-17	no	no	no	no	no	no	no	no	.	no
6	LANC8170-41-2	130	24	31	12	66	41	50	48	11-0	Fhb1	no	no	no	no	no	yes	yes	yes	no
7	NC11-22289	128	5	35	43	66	41	52	45	0-17	no	no	no	no	no	no	yes	no	.	yes
8	AR06024-7-2	130	24	36	49	66	41	56	33	0-15	het	no	no	no	no	no	yes	no	yes	no
9	AR06037-17-2	132	48	30	2	68	18	59	17	0-18	no	no	no	no	no	no	no	no	.	no
10	AR06045-2-4	130	24	36	47	68	18	62	10	0-12	no	no	no	no	yes	yes	yes	no	no	no
11	AR06045-16-4	130	24	35	45	68	18	62	10	0-13	no	no	no	no	.	yes	yes	no	no	no
12	AR06046-10-3	130	24	33	26	68	18	58	23	0-14	no	no	no	no	no	yes	yes	no	no	no
13	AR06061-11-1	131	40	35	44	67	30	63	7	0-14	no	no	no	no	yes	yes	yes	no	yes	no
14	LW08190C-57-3	129	12	32	19	67	30	58	23	0-11	Fhb1	no	no	no	no	no	no	no	yes	no
15	ARGE08-1398	130	24	36	48	67	30	58	23	0-14	Fhb1?	no	no	no	no	no	yes	no	yes	no
16	B12*1792	129	12	33	29	68	18	59	17	16-1	no	no	no	no	no	no	no	no	yes	no
17	B12-2180NC#	130	24	30	3	67	30	60	16	16-0	no	no	no	no	no	no	no	no	no	no
18	GA 071171-14ES8	130	24	35	40	70	5	57	30	9-8	no	no	het	no	no	no	yes	no	.	no
19	GA 071092-14ES11	130	24	32	17	71	1	61	12	0-17	no	no	no	no	no	no	yes	no	no	no
20	GA071092-14ES13	130	24	33	25	71	1	64	2	0-16	no	no	no	no	no	no	yes	no	no	no
21	GA 081129-14ES16	129	12	31	5	70	5	53	41	0-16	no	no	no	no	no	no	yes	no	no	no
22	GA 08250-14ES7	131	40	32	13	70	5	63	7	0-16	no	no	no	no	no	no	yes	yes	no	no
23	GA 08250-14ES5	131	40	34	39	69	13	61	12	0-16	no	no	no	no	no	no	no	no	.	no
24	GA 071171-14ES19	130	24	34	36	70	5	56	33	0-18	no	no	no	no	no	no	yes	no	.	no
25	GA 081562-14ES14	134	49	32	20	71	1	56	33	0-14	no	no	yes	no	no	no	no	no	yes	yes
26	KWS 054	128	5	31	6	69	13	64	2	0-14	no	no	no	no	no	no	no	no	yes	no
27	LA06146E-P4	130	24	34	31	68	18	50	48	0-14	no	no	no	no	no	no	yes	yes	yes	no
28	LA08265C-50	129	12	35	41	68	18	58	23	0-16	no	no	no	no	no	no	yes	no	yes	no
29	LA09144C-6	131	40	34	38	70	5	57	30	0-14	no	no	no	no	no	no	no	yes	no	no
30	LANC8248-1	130	24	29	1	71	1	52	45	0-12	no	no	yes	no	no	no	no	no	yes	no
31	ES13-1591	127	2	34	33	69	13	61	12	0-16	no	no	no	no	no	no	no	no	yes	no
32	ES13-3423	129	12	33	22	65	47	58	23	0-21	no	no	yes	no	no	no	no	no	yes	yes
33	ES12-3030	129	12	34	34	66	41	53	41	0-15	no	no	no	no	no	no	yes	no	yes	no
34	M11-2024#	129	12	31	7	68	18	52	45	0-17	no	3BL	no	no	no	no	no	no	yes	no
35	M12-3301	130	24	34	35	69	13	64	2	0-19	no	no	no	no	no	no	yes	no	no	no
36	M12-2036#	129	12	34	37	70	5	64	2	0-18	no	no	no	no	no	no	no	no	yes	no
37	NC11-23084	131	40	33	23	70	5	55	36	0-18	no	no	yes	no	no	no	yes	no	yes	yes
38	NC12-23576	130	24	33	27	67	30	53	41	0-20	no	no	no	no	no	yes	yes	no	.	no
39	NC12-23219	129	12	33	30	65	47	55	36	0-18	no	no	yes	no	no	no	no	no	.	no
40	NC12-20662	126	1	31	8	66	41	53	41	0-16	no	no	no	no	no	no	no	yes	.	no
41	NC9305-7	131	40	34	32	67	30	58	23	0-17	no	no	no	no	no	yes	no	no	yes	no
42	VA11W-106	131	40	32	15	67	30	64	2	0-20	no	no	no	no	no	no	yes	no	.	no
43	VA11W-313	128	5	31	9	67	30	54	39	0-16	no	no	no	no	no	no	no	no	no	no
44	VA12W-72	128	5	33	24	65	47	57	30	17-1	no	3BL	no	no	no	no	no	no	no	no
45	VA12W-54	128	5	31	4	68	18	58	23	21-0	no	3BL	no	no	no	no	no	no	.	no
46	VA12FHB-53	129	12	32	14	66	41	59	17	0-17	het	no	no	no	no	no	no	no	yes	yes
47	VA12FHB-4	129	12	33	21	67	30	59	17	0-16	het	no	no	no	no	no	no	no	.	no
48	VA13W-177	127	2	35	46	68	18	54	39	0-17	no	no	no	no	no	no	yes	no	.	no
49	VA08MAS5-39-6-4	127	2	31	10	70	5	59	17	0-16	no	no	no	no	no	no	no	no	yes	no
	Mean	129		33		68		58												
	LSD (0.05)	3		2		.		.												
	CV%	1.1		3.6		.		.												

Means Over the 2014 and 2015 Seasons

	Cultivar/ Designation	FHB Incidence %	FHB Severity %	FHB Index	FDK %	ISK	DON ppm	Heading Date Julian	Plant Height in	Flour Yield %	Softness Equivalent %
1	ERNIE	56	30	17	28	32	8	130	33	66.4	55.3
2	COKER9835	87	65	55	56	62	16	133	31	66.7	64.2
3	BESS	51	24	14	22	27	7	132	37	67.0	62.2
4	JAMESTOWN	53	26	15	22	29	7	129	33	67.7	59.2
5	LA07085CW-P4	59	34	21	37	35	8	129	34	68.3	61.3
6	LANC8170-41-2	62	35	22	31	36	5	131	32	67.2	50.4
7	NC11-22289	46	21	10	22	24	4	129	35	66.1	51.1
	Mean	59	33	22	31	35	8	130	33	67.1	57.7
	LSD (0.05)	8	6	7	7	12	6	1	2	2.2	3.4
	CV%	5.5	7.5	13.1	9.2	13.5	32.1	0.4	2.9	1.3	2.4