SOUTHERN UNIFORM WINTER WHEAT SCAB NURSERY

2006 NURSERY REPORT

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This Report is available on the Web at:
http://www.scabusa.org/research_vdun.html#vdun-updates

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LOCATION NOTES

Bay, Arkansas

- Cooperators: Hancock, Hill, Grey, Lazoanaya, and Riddick
  Syngenta Seeds Inc.
- Reps: 3 Plot size: 2 rows 4 ft long.
  Seed date: 11/3/05.
  Field inoculation method: Infected corn kernels.

Fayetteville, Arkansas

- Cooperators: Gene Milus and Jody Hedge.
- University of Arkansas

Urbana, Illinois

Cooperators: Fred Kolb and Eric Brucker.

- University of Illinois
- Reps: 3 RCB. Plot size: 1 row x 3'. Seed date: 10/05/05. Harvest date: 6/30/06
- Fertilizer: 40 lb N/ac. preplant. P and K okay; no spring topdress.
- Field inoculation method: 335 lbs / ac corn spawn split applied on 4/10, 4/21, and 5/2.
- Precipitation during grain fill: Misted three times per day during flowering.
- Greenhouse inoculation method: point inoculation (1,000 conidiaspores injected into one floret per head. 50,000 spores/ml).

Lexington, Kentucky

- Cooperators: Nicki Mundell and Dave Van Sanford
  University of Kentucky
- Reps: 2 RCB. Plot size: Two 4' rows. Seed date: 10/14/05. Harvest date: 6/26/06
- Fertilizer: P, K, according to soil tests, 110 lb N split application
- Field inoculation method: scabby corn
- Precipitation during grain fill: 5.52 in.
- Avg temperature during grain fill: 67^{o}F.
- Greenhouse Inoculation method; point inoculation.

Blacksburg, Virginia

- Cooperators: Carl A. Griffey, Jianli Chen and Jody Fanelli.
  Virginia Tech
- Reps: 3. Plot size: 4 x 5 ft (20 ft^2). Seed date: 10/15/05. Harvest date: 7/04/06
- Field inoculation method: conidial suspension (5 x 10^4 spores / ml) sprayed at anthesis.
- Greenhouse inoculation method: point inoculation (5 x 10^4 spores / ml).

Kinston, North Carolina

- Cooperators: Rene Navarro, Paul Murphy, Christina Cowger, Jeannete Lyerly.
  North Carolina State University
- Reps: 2 RCB. Plot size: 4 rows x 3.5' long. Seed date 10/20/2005. Harvest date: 6/10/2006.
- Fertilizer: 130 lbs N split application. P and K as per soil test.
- Field Inoculation method: Conidial suspension (3 x 10^4 spores/ml) sprayed on plots at anthesis. Scabby corn distributed three weeks prior to anthesis.
- Precipitation during grain fill: Misted three times per day for 3 weeks beginning at anthesis.
- Greenhouse: point inoculation with 10 μL at 50,000 spores per ml.
- Avg temp. during grain fill: 65F

Columbia, Missouri

- Cooperator: Anne L. McKendry.
  University of Missouri
  Fertilizer: 80 lbs N applied 02/09/06.
- Reps: 3 RCB. Plot size: 30in x 28in. Seed date: 10/05/05. Harvest date: 6/28/06
- Field inoculation method: Sprayed at 75% heading with a suspension of *Fusarium graminearum* macroconidia concentrated to 50,000 spores/mL
- Precipitation during grain fill: Overhead mist irrigation
- Greenhouse inoculations result from point inoculations of a basal central floret with 10 μL of a 50,000 spores/mL suspension of *Fusarium graminearum* macrodonidia

Salisbury,Maryland.

- Cooperator: Costa, Cooper, and Grybauskas.
  University of Maryland.
- Reps: 2 RCB. Plot size: 1 rows x 4' long. Seed date: 10/25/05. Harvest date: 6/21/06.
- Fertilizer: 120 lbs N. P and K as per soil test.
- Field inoculation method: Scabby corn grain infected with Fusarium scattered before anthesis.
- Precipitation during grain fill: Misted for two hours morning and evening.

Winnsboro, Louisiana.

- Cooperator: Harrison and Padgett.
  Louisiana State University.
- Reps: 3 RCB. Plot size: 3 rows x 4' long.
- Field inoculation method: scabby corn mix of AR and LA isolates.

Griffin, Georgia

- Cooperator: Jerry Johnson.
- University of Georgia.

Szeged, Hungary.
Cooperator: Akos Mesterhazy.
Cereal Research Institute.

- Fertilizer: NPK
- Field inoculation method: Four separate isolates sprayed on each plot and inoculated heads enclosed in plastic bags.

Fundulea, Romania.
Cooperator: Marianna Ittu.
National Agricultural Research Development Institute.

- Seed date: 10/24/05. Harvest date: 7/10/06.
- Fertilizer: 110 kg N
- Three replications. Plot size: 0.5 sq.m.
- Field inoculation method: Syringe (point) inoculation at anthesis with six *F. graminearum* and *F. culmorum* isolates. Twenty heads inoculated per replication per isolate.
- Field scoring: Percent of damaged spikelets at 10 and 20 days post inoculation.
- Precipitation during grain fill: 88.6 mm.
- Post harvest scores: Relative weight (%) of heads as a percent of control. Relative weight of scabby kernels(%)

Above: Uniform Southern Nursery Szeged, Hungary.
Four different *Fusarium* isolates were inoculated separately in each plot.

Right: FHB Nursery Salisbury, Maryland. Four rows in foreground are C9835, Choptank, Freedom and 25R42

Right: FHB Nursery Kinston, North Carolina. Susceptible control, AGS 2000, fourth row from left foreground.

Entry List and Pedigrees, 2006 Nursery

	CULTIVAR/ DESIGNATION	PEDIGREE	CONTRIBUTOR	IN NURSERY SINCE
1	Ernie	*Pike /3/ Stoddard / Blueboy // Stoddard D1707*	CHECK(RES)	1999-00
2	Coker 9835	*CK68-19 // CK61-19*3 / IN4946A4-18-2-10-2 /4/ Bb /3/ CK65-20*5 / W17-TRANS // TIFT /5/ P 2550*	CHECK(SUS)	2000-01
3	AR 97002-10-2	*AR 369-4-2 / Ning 8026*	Bacon	2005-06
4	AR 97002-2-1	*AR 369-4-2 / Ning 8026*	Bacon	2004-05
5	AR 97007-4-1	*AR 482A-11-2 / Super Zlatna*	Bacon	2005-06
6	AR 97124-4-1	*P88288C1-6-1-2 / Terra SR204*	Bacon	2004-05
7	AR 97124-4-2	*P88288C1-6-1-2 / Terra SR204*	Bacon	2005-06
8	AR 97124-4-3	*P88288C1-6-1-2 / Terra SR204*	Bacon	2005-06
9	ARGE97-1060-5-5	*Mason // Freedom / Super Zlatna*	Milus	2005-06
10	ARGE97-1064-11-5	*Mason /3/ Freedom // Clark*4 / Ning 7840*	Milus	2005-06
11	B010973	*L880085/XW502*	Hancock	2005-06
12	B011260	*COKER 9877/VA85-52-24*	Hancock	2005-06
13	D02-8443	*CLEMENS/MASON//SHILOH*	Hancock	2005-06
14	D02-8483	*COKER 9134/3/NEPAL 133/91D-2085//PIONEER 2580*	Hancock	2005-06
15	D02-8486	*NEPAL 133/91D-2085//PIONEER2580/3/SAVANNAH*	Hancock	2005-06
16	LA95135D54-2-3	*LA90239/LA8644*	Harrison	2005-06
17	LA98090D34-4	*PIONEER2548/COKER9766//MASON*	Harrison	2005-06
18	LA99042E-64-B	*DUCULA1/,ASON//PIONEER 26R61*	Harrison	2005-06
19	MV6-82-10	*PIO2643/MSY*3/BALKAN//SAL*	Costa	2005-06
20	MV6-82-8	*PIO2643/MSY*3/BALKAN//SAL*	Costa	2005-06
21	NC03-11465	*Ning 7840 / P2643 // NC95-22426*	Murphy	2004-05
22	NC04-27617	*Ning 7840 / P2684 // NC94-8620*	Murphy	2005-06
23	NC04-27618	*Ning 7840 / P2684 // NC94-8620*	Murphy	2005-06
24	NC04-27669	*Ning 7840 / P2684 // NC94-8620*	Murphy	2005-06
25	VA00W-38	*91-54-343(IN71761A4-31-5-48 //71-54-147/MCN1813)/91-54-222(71-54-147/CK68-15// IN65309C7-18-2-3-2),F15*	Griffey	2005-06
26	VA05W-448	*IL 94-1909(SCAB-RES)/SISSON"S"(VA97W-375WS*=CK9803/FREEDOM: WHITE SEED,F8*	Griffey	2005-06
27	VA05W-491	*ERNIE / VA96W-372//SS 520 (VA96W-158=FFR555W/GORE),F8*	Griffey	2005-06
28	VA05W-498	*Roane / Pion 2684//OH 552(P71761A4-31-5-33/MD55-286-21: FHB-RES),F8*	Griffey	2005-06
29	VA05W-500	*Roane / Pion 2684//OH 552(P71761A4-31-5-33/MD55-286-21: FHB-RES),F8*	Griffey	2005-06
30	VA05W-633	*RENWOOD 3260*2//W14/RENWOOD 3260/3/RENWOOD 3260,BC3F6*	Griffey	2005-06
31	GA96693-4E16	*88151 / Hickory // AGS 2000*	Johnson	2005-06
32	GA961171-4E21	*881130 *2 / Gore*	Johnson	2005-06
33	GA951231-4E26	*881130 / C 9134*	Johnson	2005-06
34	GA961567-4A35	*Jackson / 2* 881130*	Johnson	2005-06
35	GA98401-5E23	*AGS 2000 / 91215*	Johnson	2005-06
36	GA981621-5E34	*AGS 2485 / PIO 26R61*	Johnson	2005-06

FHB Incidence (1-100)

	CULTIVAR/ DESIGNATION	BAY AR	RANK	W'BORO LA	RANK	S'BURY MD	RANK	B'BURG VA	RANK	URBANA IL	RANK	KINSTON NC	RANK	COL'BIA MO	RANK	LEX'TON KY	RANK	MEAN ALL LOC.	RANK
1	Ernie	97	18	0	1	85	24	43	6	48	3	18	6	65	1	18	6	47	7
2	Coker 9835	100	19	52	36	85	24	77	29	98	31	87	35	98	35	42	33	80	36
3	AR 97002-10-2	85	5	0	1	65	9	33	1	87	24	48	26	85	21	32	25	54	13
4	AR 97002-2-1	85	5	0	1	70	13	60	20	82	22	40	18	90	28	27	18	57	19
5	AR 97007-4-1	95	14	17	31	90	29	87	34	97	30	48	26	90	28	23	13	68	31
6	AR 97124-4-1	100	19	0	1	55	3	53	13	55	6	59	33	88	24	24	14	54	13
7	AR 97124-4-2	100	19	0	1	60	6	57	16	57	8	62	34	90	28	14	3	55	17
8	AR 97124-4-3	65	1	0	1	75	16	57	16	58	10	48	26	92	31	21	9	52	11
9	ARGE97-1060-5-5	100	19	0	1	50	2	37	2	55	6	19	7	73	4	21	9	44	1
10	ARGE97-1064-11-5	95	14	0	1	65	9	50	11	60	12	41	19	93	33	27	18	54	13
11	B010973	70	2	0	1	55	3	43	6	58	10	23	10	83	18	24	14	45	3
12	B011260	85	5	40	34	90	29	80	32	92	26	42	20	85	21	28	20	68	31
13	D02-8443	100	19	0	1	75	16	53	13	85	23	56	32	77	7	22	12	58	23
14	D02-8483	100	19	0	1	85	24	70	24	80	18	42	20	82	13	25	16	60	25
15	D02-8486	85	5	0	1	100	35	73	26	98	31	43	22	88	24	30	21	65	28
16	LA95135D54-2-3	100	19	42	35	90	29	83	33	100	34	62	34	87	23	42	33	76	35
17	LA98090D34-4	95	14	0	1	75	16	43	6	52	4	34	15	82	13	52	36	54	13
18	LA99042E-64-B	100	19	8	29	85	24	57	16	80	18	47	25	80	10	30	21	61	26
19	MV6-82-10	100	19	0	1	85	24	77	29	88	25	21	9	65	1	20	8	57	19
20	MV6-82-8	100	19	0	1	80	22	57	16	77	16	20	8	75	5	32	25	55	17
21	NC03-11465	100	19	0	1	60	6	37	2	57	8	36	16	92	31	12	1	49	8
22	NC04-27617	100	19	0	1	60	6	40	5	62	14	11	3	80	10	12	2	46	5
23	NC04-27618	90	11	0	1	55	3	37	2	40	2	31	14	67	2	33	27	44	1
24	NC04-27669	85	5	0	1	80	22	50	11	37	1	10	2	82	13	26	17	46	5
25	VA00W-38	100	19	0	1	70	13	73	26	80	18	46	23	88	24	17	4	59	24
26	VA05W-448	75	3	1	26	75	16	63	21	92	26	52	29	97	34	36	28	61	26
27	VA05W-491	100	19	0	1	65	9	43	6	77	16	27	11	78	9	30	21	53	12
28	VA05W-498	95	14	0	1	70	13	67	23	60	12	16	5	70	3	19	7	50	9
29	VA05W-500	75	3	10	30	35	1	53	13	53	5	11	3	82	13	38	31	45	3
30	VA05W-633	100	19	1	26	75	16	47	10	75	15	7	1	75	5	17	4	50	9
31	GA96693-4E16	100	19	5	28	95	32	73	26	100	34	28	12	83	18	42	33	66	29
32	GA961171-4E21	90	11	20	33	100	35	90	35	100	34	52	29	83	18	36	28	71	33
33	GA951231-4E26	100	19	17	31	95	32	77	29	95	29	28	12	80	10	36	28	66	29
34	GA961567-4A35	100	19	0	1	95	32	90	35	98	31	55	31	88	24	39	32	71	33
35	GA98401-5E23	90	11	0	1	75	16	63	21	80	18	37	17	77	7	30	21	57	19
36	GA981621-5E34	80	5	0	1	65	9	70	24	92	26	46	23	82	13	21	9	57	19
	Mean	93		6		75		60		73		37		83		28		57	
	L.S.D.(0.05)	.		17		31		14		21		21		17		27		11	
	CV%	14		210		20		15		18		28		.		46		20	

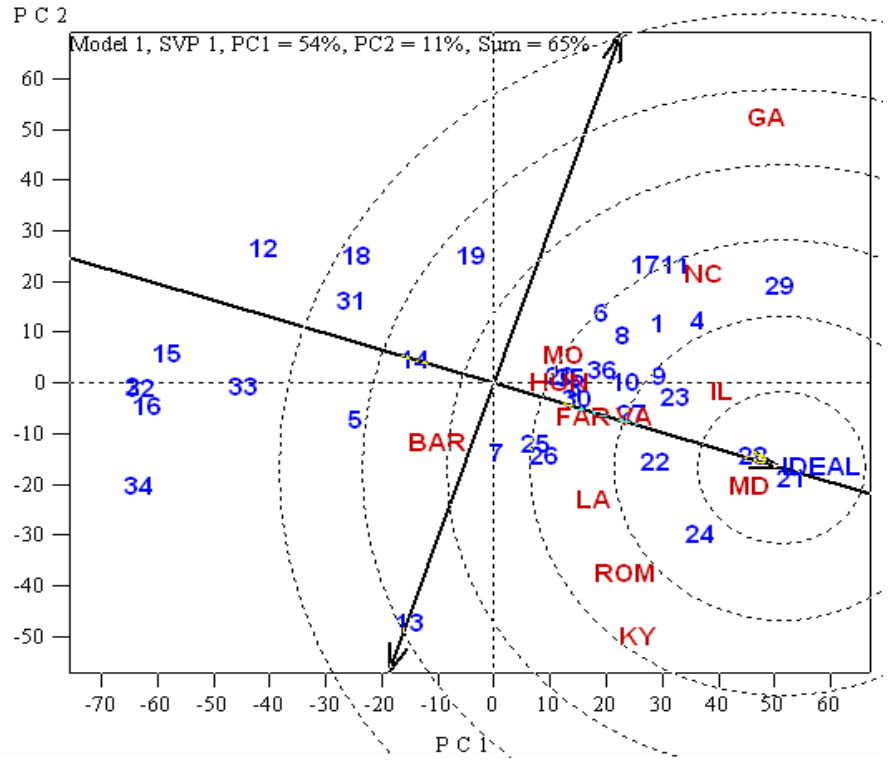
FHB Severity (1-100)

CULTIVAR/ DESIGNATION	BAY AR	RANK	F'VILLE AR	RANK	W'BORO LA	RANK	S'BURY MD	RANK	B'BURG VA	RANK	GRIFFIN GA	RANK	KINSTON NC	RANK	URBANA IL	RANK	COL'BIA MO	RANK	LEX'TON KY	RANK	SZEGED HUN	RANK	FUN'LEA ROM	RANK	MEAN ALL LOC.	RANK
1 Ernie	36	28	4	2	0	1	55	19	25	12	11	7	7	3	37	5	10	4	59	25	9	16	32	7	24	9
2 Coker 9835	49	34	23	28	18	32	80	31	44	33	64	33	65	34	62	23	34	34	72	34	21	30	65	27	50	34
3 AR 97002-10-2	24	16	8	10	0	1	40	10	19	4	26	18	28	23	55	17	17	16	55	18	8	13	44	14	27	16
4 AR 97002-2-1	18	8	8	10	0	1	35	4	21	7	5	2	18	13	43	10	24	32	66	31	6	2	28	4	23	5
5 AR 97007-4-1	27	19	13	20	3	24	75	28	41	29	43	26	36	27	67	26	34	34	55	18	16	27	33	8	37	27
6 AR 97124-4-1	26	17	10	15	0	1	40	10	32	22	14	10	21	17	47	13	22	28	65	30	9	16	45	18	28	19
7 AR 97124-4-2	23	13	15	23	2	23	45	15	35	25	34	23	40	31	59	20	21	27	39	11	8	13	44	14	30	22
8 AR 97124-4-3	8	1	13	20	0	1	55	19	31	20	7	3	28	23	45	12	23	31	44	13	7	7	42	13	25	11
9 ARGE97-1060-5	19	9	6	7	0	1	30	2	20	5	33	22	14	8	33	2	9	2	59	25	5	1	50	22	23	5
10 ARGE97-1064-1	14	4	10	15	0	1	45	15	32	22	18	14	18	13	54	15	22	28	38	8	10	19	44	14	25	11
11 B010973	17	6	18	25	17	29	35	4	25	12	10	6	7	3	44	11	9	2	61	27	10	19	47	21	25	11
12 B011260	15	5	30	30	62	36	60	22	44	33	59	31	18	13	78	31	19	21	70	32	8	13	69	28	44	30
13 D02-8443	36	29	17	24	0	1	40	10	27	17	75	35	39	30	67	26	13	9	26	5	7	7	44	14	33	25
14 D02-8483	29	24	12	18	0	1	60	22	31	20	40	24	28	23	69	28	14	12	58	24	11	22	59	24	34	26
15 D02-8486	27	18	22	26	0	1	85	33	41	29	61	32	47	33	87	35	14	12	74	36	19	28	61	25	45	31
16 LA95135D54-2-3	44	31	22	26	20	33	85	33	37	26	65	34	60	34	73	29	19	21	73	35	20	29	46	20	47	33
17 LA98090D34-4	20	10	8	10	0	1	60	22	20	5	13	9	8	5	35	4	13	9	70	32	6	2	41	11	24	9
18 LA99042E-64-B	51	35	28	29	12	27	70	27	40	28	25	17	21	17	76	30	18	20	55	18	7	7	78	29	40	28
19 MV6-82-10	27	21	6	7	0	1	75	28	26	16	26	18	11	7	61	22	8	1	49	15	11	22	84	30	32	24
20 MV6-82-8	18	7	5	3	0	1	60	22	27	17	26	18	14	8	59	20	17	16	29	6	10	19	62	26	27	16
21 NC03-11465	29	23	5	3	0	1	35	4	15	2	7	3	16	11	37	5	19	21	15	1	6	2	27	1	18	1
22 NC04-27617	27	20	10	15	0	1	45	15	22	9	31	21	6	1	48	14	15	15	35	7	7	7	27	1	23	5
23 NC04-27618	35	26	13	20	0	1	45	15	14	1	16	11	16	11	42	9	13	9	49	15	9	16	27	1	23	5
24 NC04-27669	21	11	7	9	0	1	38	9	22	9	44	27	6	1	31	1	17	16	25	3	7	7	28	4	21	4
25 VA00W-38	35	27	9	14	17	29	30	2	29	19	44	27	22	20	55	17	22	28	57	22	11	22	33	8	30	22
26 VA05W-448	23	14	8	10	10	26	35	4	21	7	40	24	27	22	65	25	17	16	46	14	11	22	37	10	28	19
27 VA05W-491	37	30	5	3	0	1	35	4	18	3	21	15	21	17	54	15	19	21	42	12	11	22	45	18	26	15
28 VA05W-498	22	12	5	3	0	1	40	10	25	12	11	7	14	8	39	7	11	5	18	2	6	2	31	6	18	1
29 VA05W-500	11	2	3	1	20	33	25	1	25	12	1	1	8	5	34	3	14	12	53	17	6	2	41	11	20	3
30 VA05W-633	29	22	12	18	14	28	55	19	24	11	24	16	18	13	56	19	12	8	25	3	7	7	52	23	27	16
31 GA96693-4E16	47	32	.	.	17	29	75	28	43	31	16	11	38	27	85	34	19	21	57	22	.	.	.	.	42	29
32 GA961171-4E21	24	15	.	.	37	35	90	36	49	35	54	29	60	34	89	36	36	36	55	18	.	.	.	.	53	36
33 GA951231-4E26	34	25	.	.	8	25	85	33	43	31	55	30	36	27	81	32	20	26	63	28	.	.	.	.	45	31
34 GA961567-4A35	52	36	.	.	0	1	83	32	53	36	78	36	45	32	82	33	24	32	64	29	.	.	.	.	51	35
35 GA98401-5E23	48	33	.	.	0	1	65	26	33	24	16	11	24	21	40	8	11	5	38	8	.	.	.	.	28	19
36 GA981621-5E34	14	3	.	.	0	1	40	10	39	27	9	5	33	26	63	24	11	5	38	8	.	.	.	.	25	11
Mean	28		12		7		54		30		.		25		55		18		50		30		46		32	
L.S.D.(0.05)	29		12		18		17		17		.		15		17.1		10		14		2		.		9	
CV%	62		.		188		16		33		.		28		19		.		43		.		.		35	

Head Severity Expressd as Area Under the Disease Progress Curve (AUDPC)
Fundulea, Romania

	Cultivar/ Designation	AUDPC *F. gram.* Isol 96	*F. gram.* Isol 92	*F. gram.* Isol 54	*F. gram.* Isol 8713	*F. gram.* Isol 111	*F. culm.* Isol 46	Mean All Isolates	*Rank*
1	Ernie	236	129	337	231	514	246	282	*5*
2	Coker 9835	773	613	699	405	948	617	676	*28*
3	AR 97002-10-2	496	126	454	259	775	688	466	*20*
4	AR 97002-2-1	593	132	287	124	400	339	312	*7*
5	AR 97007-4-1	209	190	534	113	453	174	279	*4*
6	AR 97124-4-1	641	357	523	192	500	644	476	*21*
7	AR 97124-4-2	368	463	491	265	503	447	423	*13*
8	AR 97124-4-3	599	437	476	157	474	786	488	*22*
9	ARGE97-1060-5-5	484	446	497	203	732	299	443	*15*
10	ARGE97-1064-11-5	413	504	454	154	637	531	449	*16*
11	B010973	312	569	417	164	628	355	407	*12*
12	B011260	805	622	542	270	825	753	633	*27*
13	D02-8443	360	488	499	155	648	465	436	*14*
14	D02-8483	617	429	502	280	777	578	531	*24*
15	D02-8486	657	770	532	388	643	694	614	*26*
16	LA95135D54-2-3	557	442	418	429	607	282	456	*18*
17	LA98090D34-4	377	312	560	188	496	502	406	*11*
18	LA99042E-64-B	872	325	710	855	845	766	729	*30*
19	MV6-82-10	786	702	728	648	828	651	724	*29*
20	MV6-82-8	448	620	725	322	849	484	575	*25*
21	NC03-11465	318	106	320	329	402	390	311	*6*
22	NC04-27617	193	340	297	90	210	225	226	*1*
23	NC04-27618	193	413	307	95	284	170	244	*2*
24	NC04-27669	324	311	294	144	173	305	259	*3*
25	VA00W-38	421	235	399	188	478	448	362	*9*
26	VA05W-448	294	570	473	201	340	427	384	*10*
27	VA05W-491	493	595	734	220	226	494	460	*19*
28	VA05W-498	279	413	467	137	379	338	336	*8*
29	VA05W-500	590	629	563	194	201	558	456	*17*
30	VA05W-633	536	721	765	109	310	561	500	*23*
31	GA96693-4E16	.	.	.	.	.	.	.	.
32	GA961171-4E21	.	.	.	.	.	.	.	.
33	GA951231-4E26	.	.	.	.	.	.	.	.
34	GA961567-4A35	.	.	.	.	.	.	.	.
35	GA98401-5E23	.	.	.	.	.	.	.	.
36	GA981621-5E34	.	.	.	.	.	.	.	.
	Mean	475	434	500	250	536	474	445	

FHB SEVERITY
GGE BIPLOT ANALYSIS[1]



Environment main effect accounted for 59% of the variation in FHB Severity. Genotype main effect accounted for 20% of variation and Genotype x Environment interaction accounted for 21% of variation.

The single arrowed-line passing through the biplot origin approximated the genotype (G) effect. Entries towards the right of the line (e.g 21 and 28) had lower overall severities, while those to the left (e.g. 12, 15) had had the highest severity scores.

The doubled-arrow line approximated the Genotype x Environment (GE) interaction associated with each entry. The greater the projection onto the line, in either direction, the greater the instability of the entry over test locations. For example entry 13 was less stable than entry 14.

Entries 21, and 28, were ranked closest to 'Ideal' in terms of low and stable severity ratings. Nevertheless entries 24, 22, 23, 9 and 27 also plotted within the two concentric circles around the 'Ideal" for this trait.

[1]Yan et al., (2000). Crop Sci. 40:597-605

FHB Index (1-100)

	CULTIVAR/ DESIGNATION	BAY AR	RANK	W'BORO LA	RANK	S'BURY MD	RANK	B'BURG VA	RANK	URBANA IL	RANK	KINSTON NC	RANK	LEX'TON KY	RANK	COL'BIA MO	RANK	MEAN ALL LOC.	RANK
1	Ernie	35	28	0	1	47	22	11	9	18	5	1	2	13	17	6	2	16	9
2	Coker 9835	49	34	11	34	68	29	35	33	61	28	57	36	31	35	34	36	43	36
3	AR 97002-10-2	23	15	0	1	26	9	6	3	48	21	13	25	20	26	14	18	19	16
4	AR 97002-2-1	17	7	0	1	25	8	13	12	35	16	8	16	20	26	21	32	17	11
5	AR 97007-4-1	26	19	2	28	68	29	36	34	65	29	18	29	13	17	31	35	32	29
6	AR 97124-4-1	26	18	0	1	22	4	16	18	26	10	13	24	13	17	20	29	17	11
7	AR 97124-4-2	23	16	0	1	28	12	20	21	32	12	25	32	5	5	19	27	19	16
8	AR 97124-4-3	5	1	0	1	42	20	17	19	26	9	15	27	10	9	21	33	17	11
9	ARGE97-1060-5-5	19	10	0	1	15	2	7	4	20	6	3	11	11	12	7	3	10	1
10	ARGE97-1064-11-5	14	5	0	1	29	14	16	17	32	12	7	15	10	9	20	30	16	9
11	B010973	16	6	0	1	20	3	11	8	26	10	2	6	13	17	7	4	12	3
12	B011260	13	4	27	36	54	26	35	32	72	30	8	16	19	23	16	21	30	27
13	D02-8443	36	29	0	1	30	16	15	15	56	23	22	31	6	6	10	10	22	23
14	D02-8483	29	24	0	1	51	25	22	25	56	24	12	23	14	21	12	14	24	25
15	D02-8486	25	17	0	1	85	35	31	29	85	35	20	30	22	29	12	15	35	30
16	LA95135D54-2-3	44	31	9	33	77	32	30	28	73	31	38	35	30	34	16	24	40	33
17	LA98090D34-4	19	11	0	1	47	21	8	6	18	4	3	9	44	36	11	11	19	16
18	LA99042E-64-B	51	35	3	30	60	27	23	26	61	27	10	20	21	28	15	18	30	27
19	MV6-82-10	27	21	0	1	64	28	21	22	54	22	2	7	10	9	5	1	23	24
20	MV6-82-8	18	8	0	1	48	23	15	16	45	20	3	9	11	12	14	17	19	16
21	NC03-11465	29	23	0	1	22	4	5	1	22	7	6	14	2	1	17	26	13	5
22	NC04-27617	27	20	0	1	28	12	9	7	34	15	1	1	4	2	12	13	14	6
23	NC04-27618	33	25	0	1	29	14	5	2	17	2	6	12	19	23	10	8	15	8
24	NC04-27669	18	9	0	1	31	18	11	9	12	1	1	2	7	7	14	16	12	3
25	VA00W-38	35	27	0	1	22	4	22	24	44	19	11	22	11	12	19	27	21	21
26	VA05W-448	21	13	0	1	26	9	13	13	60	26	14	26	17	22	17	25	21	21
27	VA05W-491	37	30	0	1	23	7	8	5	43	18	6	12	12	15	9	7	17	11
28	VA05W-498	20	12	0	1	30	16	17	19	23	8	2	7	4	2	15	20	14	6
29	VA05W-500	9	2	6	32	9	1	13	13	17	3	1	2	25	32	9	5	11	2
30	VA05W-633	29	22	0	1	42	19	11	11	43	17	1	2	4	2	12	12	18	15
31	GA96693-4E16	47	33	3	29	72	31	31	30	85	34	10	20	23	30	10	9	35	30
32	GA961171-4E21	22	14	12	35	90	36	44	35	89		32	34	19	23	16	21	40	33
33	GA951231-4E26	34	26	4	31	81	34	34	31	77	32	10	19	23	30	31	34	37	32
34	GA961567-4A35	52	36	0	1	79	33	47	36	80	33	26	33	25	32	16	23	41	35
35	GA98401-5E23	47	32	0	1	49	24	21	23	33	14	9	18	12	15	21	31	24	25
36	GA981621-5E34	12	3	0	1	26	11	26	27	58	25	15	27	8	8	9	6	19	16
	Mean	27		2		43		20		44		12		15		15		23	
	L.S.D.(0.05)	.		8		23		13		18		10		14		11		11	
	CV%	65		256		26		41		25		42		78		.		49	

Percent Fusarium Damaged Kernels

	Cultivar/ Designation	K'STON NC	RANK	W'BORO LA	RANK	URBANA IL	RANK	COL'BIA MO	RANK	S'BURY MD	RANK	F'VILLE AR	RANK	FUN'LEA ROM	RANK	SZEGED HUN	RANK	MEAN ALL LOC	RANK
1	Ernie	3	1	19	3	13	1	3	1	43	19	1	1	30	4	19	22	16	1
2	Coker 9835	58	34	51	33	90	35	60	36	57	29	13	25	73	28	13	18	52	34
3	AR 97002-10-2	33	23	31	20	57	23	5	5	54	28	6	14	42	14	14	20	30	20
4	AR 97002-2-1	20	13	26	10	33	7	8	16	36	14	1	1	30	3	7	6	20	8
5	AR 97007-4-1	53	32	42	30	77	28	12	26	64	32	12	22	41	12	13	18	39	26
6	AR 97124-4-1	38	27	29	18	50	20	8	16	45	22	12	22	38	9	28	28	31	22
7	AR 97124-4-2	35	24	28	14	30	4	15	27	40	17	8	18	47	17	9	11	27	17
8	AR 97124-4-3	45	29	22	5	43	15	10	20	53	27	7	16	41	13	6	4	28	19
9	ARGE97-1060-5-5	5	3	14	1	30	4	3	1	31	10	2	6	67	25	7	6	20	8
10	ARGE97-1064-11-5	30	22	26	10	40	14	5	5	34	13	5	11	41	11	23	26	25	13
11	B010973	15	10	22	5	37	8	5	5	24	3	7	16	48	18	4	1	20	8
12	B011260	35	24	53	34	73	27	15	27	60	30	23	29	54	22	7	6	40	28
13	D02-8443	50	30	38	27	67	25	5	5	66	35	13	25	53	21	21	24	39	26
14	D02-8483	23	16	28	14	47	16	5	5	22	2	8	18	50	20	12	17	24	12
15	D02-8486	25	19	38	28	83	30	20	31	41	18	18	27	68	26	30	29	40	28
16	LA95135D54-2-3	68	36	43	31	83	30	30	33	65	33	23	29	58	24	36	30	51	32
17	LA98090D34-4	15	10	24	7	37	8	5	5	52	25	12	22	44	15	8	10	25	13
18	LA99042E-64-B	50	30	35	23	70	26	15	27	52	25	21	28	80	30	24	27	43	31
19	MV6-82-10	23	16	36	24	53	21	10	20	25	5	4	9	76	29	19	22	31	22
20	MV6-82-8	15	10	36	24	47	16	5	5	30	8	10	21	55	23	18	21	27	17
21	NC03-11465	10	6	36	24	20	2	3	1	29	7	1	1	32	6	4	1	17	3
22	NC04-27617	4	2	28	14	37	8	5	5	38	15	1	1	29	2	7	6	19	6
23	NC04-27618	11	9	33	22	37	8	3	1	9	1	2	6	28	1	10	14	17	3
24	NC04-27669	7	5	32	21	37	8	5	5	33	11	2	6	31	5	6	4	19	6
25	VA00W-38	28	21	28	14	47	16	10	20	48	23	5	11	35	7	9	11	26	15
26	VA05W-448	20	13	27	12	37	8	5	5	30	8	4	9	46	16	9	11	22	11
27	VA05W-491	20	13	25	9	47	16	10	20	28	6	5	11	48	19	22	25	26	15
28	VA05W-498	10	6	15	2	20	2	5	5	33	11	1	1	36	8	10	14	16	1
29	VA05W-500	6	4	19	3	30	4	8	16	24	3	6	14	39	10	5	3	17	3
30	VA05W-633	10	6	30	19	63	24	8	16	38	15	9	20	69	27	11	16	30	20
31	GA96693-4E16	25	19	24	7	90	35	15	27	43	19	.	.	.	.	.	.	36	25
32	GA961171-4E21	38	27	59	36	87	32	40	35	68	36	.	.	.	.	.	.	55	36
33	GA951231-4E26	53	32	44	32	88	34	30	33	65	33	.	.	.	.	.	.	53	35
34	GA961567-4A35	63	35	41	29	87	32	20	31	60	30	.	.	.	.	.	.	51	32
35	GA98401-5E23	23	16	53	34	80	29	10	20	49	24	.	.	.	.	.	.	40	28
36	GA981621-5E34	35	24	27	12	53	21	10	20	44	21	.	.	.	.	.	.	31	22
	Mean	27		32		51		12		42		8		48		15		30	
	L.S.D.(0.05)	18		13		19		.		24		16		.		4		10	
	CV%	36.6		24.3		22.2		.		28.0		.		.		.		33.2	

WEIGHT OF FUSARIUM DAMAGED KERNELS (FDK), RELATIVE WEIGHT OF FDK, AND VISUAL SEED QUALITY.

	Cultivar/ Designation	grams LEX'TON KY	RANK	% of SEED WT. FUN'LEA ROM	RANK	Seed Quality[1] F'VILLE AR	RANK
1	Ernie	12.3	7	4	2	4	1
2	Coker 9835	42.0	28	32	25	3	10
3	AR 97002-10-2	5.9	2	14	15	4	1
4	AR 97002-2-1	19.5	16	6	6	3	10
5	AR 97007-4-1	21.5	18	12	11	2	27
6	AR 97124-4-1	26.7	22	10	10	3	10
7	AR 97124-4-2	18.1	15	17	17	3	10
8	AR 97124-4-3	6.5	4	13	13	3	10
9	ARGE97-1060-5-5	25.2	20	34	26	4	1
10	ARGE97-1064-11-5	6.4	3	13	13	3	10
11	B010973	14.8	12	20	20	3	10
12	B011260	44.8	29	23	22	2	27
13	D02-8443	13.0	9	23	22	3	10
14	D02-8483	16.1	13	18	19	3	10
15	D02-8486	36.5	26	34	26	2	27
16	LA95135D54-2-3	73.5	34	26	24	2	27
17	LA98090D34-4	35.2	25	14	15	3	10
18	LA99042E-64-B	75.8	36	59	30	2	27
19	MV6-82-10	17.9	14	43	29	4	1
20	MV6-82-8	32.0	24	22	21	3	10
21	NC03-11465	13.1	10	3	1	4	1
22	NC04-27617	12.1	6	4	2	4	1
23	NC04-27618	11.9	5	4	2	3	10
24	NC04-27669	38.3	27	4	2	3	10
25	VA00W-38	19.9	17	6	6	3	10
26	VA05W-448	26.0	21	12	11	3	10
27	VA05W-491	13.7	11	17	17	4	1
28	VA05W-498	12.9	8	7	9	4	1
29	VA05W-500	4.0	1	6	6	4	1
30	VA05W-633	22.0	19	38	28	3	10
31	GA96693-4E16	45.7	30	.	.	3	10
32	GA961171-4E21	63.7	32	.	.	.	.
33	GA951231-4E26	45.8	31	.	.	.	.
34	GA961567-4A35	74.7	35	.	.	.	.
35	GA98401-5E23	64.2	33	.	.	.	.
36	GA981621-5E34	26.8	23	.	.	.	.
	Mean	29		18		3.1	
	L.S.D.(0.05)	20		.		1.4	
	CV%	59.3		.		.	

[1]0 = <5% plump seed
1 = 6-25% plump seed
2 = 26-75% plump see
3 = 76-95% plump see
4 = >95% plump seed

Incidence, Severity, Kernel Rating (ISK) Index [1]

(0.3 * Incidence + 0.3 * Severity + 0.4 * Fusarium Damaged Kernels)

	CULTIVAR/ DESIGNATION	K'STON NC	RANK	W'BORO LA	RANK	URBANA IL	RANK	COL'BIA MO	RANK	LEX'TON KY	RANK	S'BURY MD	RANK	MEAN ALL LOC.	RANK
1	Ernie	9	4	8	3	31	1	4	1	11	1	59	22	20	2
2	Coker 9835	68	36	38	33	84	30	34	36	50	34	72	30	58	35
3	AR 97002-10-2	36	23	12	14	65	21	5	5	26	13	53	18	33	23
4	AR 97002-2-1	25	15	10	5	51	14	9	21	25	12	46	8	28	12
5	AR 97007-4-1	46	31	17	26	80	28	11	26	42	29	75	32	45	29
6	AR 97124-4-1	39	26	12	14	51	14	7	12	24	11	47	11	30	14
7	AR 97124-4-2	44	30	12	14	47	10	10	24	28	19	47	11	31	16
8	AR 97124-4-3	41	29	9	4	48	11	11	26	26	13	60	23	32	20
9	ARGE97-1060-5-5	12	6	6	1	38	4	4	1	12	2	36	3	18	1
10	ARGE97-1064-11-5	30	17	10	5	50	13	7	12	21	7	46	8	27	11
11	B010973	15	8	17	26	46	9	5	5	23	10	37	4	24	9
12	B011260	32	22	50	36	80	28	12	28	46	31	69	29	48	31
13	D02-8443	48	32	15	20	72	26	4	1	28	19	61	24	38	26
14	D02-8483	30	17	11	10	63	20	6	9	26	13	52	17	31	16
15	D02-8486	37	24	15	20	89	33	13	30	45	30	72	30	45	29
16	LA95135D54-2-3	64	35	40	34	85	31	17	33	49	33	78	34	56	34
17	LA98090D34-4	18	10	10	5	41	8	7	12	18	4	61	24	26	10
18	LA99042E-64-B	40	27	14	19	75	27	12	28	39	27	67	27	41	27
19	MV6-82-10	18	10	15	20	66	23	7	12	31	24	58	21	32	20
20	MV6-82-8	16	9	15	20	59	17	7	12	29	21	54	19	30	14
21	NC03-11465	19	13	15	20	36	3	7	12	22	8	40	5	23	7
22	NC04-27617	7	1	11	10	48	11	5	5	19	5	47	11	23	7
23	NC04-27618	18	10	13	17	39	7	7	12	22	8	34	2	22	4
24	NC04-27669	7	1	13	17	35	2	7	12	20	6	48	14	22	4
25	VA00W-38	31	20	11	10	59	17	7	12	26	13	49	15	31	16
26	VA05W-448	31	20	15	20	62	19	5	5	27	17	45	7	31	16
27	VA05W-491	22	14	10	5	58	16	10	24	29	21	41	6	28	12
28	VA05W-498	13	7	6	1	38	4	4	1	12	2	46	8	20	2
29	VA05W-500	8	3	21	30	38	4	9	21	29	21	28	1	22	4
30	VA05W-633	11	5	18	29	65	21	9	21	36	26	54	19	32	20
31	GA96693-4E16	30	17	10	5	92	36	13	30	41	28	68	28	42	28
32	GA961171-4E21	48	32	42	35	91	35	27	35	52	36	84	36	58	35
33	GA951231-4E26	40	27	29	32	88	32	18	34	50	34	80	35	51	33
34	GA961567-4A35	55	34	17	26	89	33	13	30	46	31	77	33	50	32
35	GA98401-5E23	27	16	21	30	68	24	6	9	33	25	61	24	36	25
36	GA981621-5E34	38	25	11	10	68	24	6	9	27	17	49	15	33	23
	Mean	30		17		59		10		35		56		34	
	L.S.D.(0.05)	.		13		13		.		.		17		9	
	CV%	.		45		14		.		.		15		24	

[1] Kolb, F. L., and L. K. Boze. 2003. An alternative to the FHB index: incidence, severity, kernel rating (ISK) index In: Canty, S.M., J. Lewis, and R.W. Ward (Eds.), 2003 National Fusarium Head Blight Forum Proceedings. Dec 13-15, Bloomington, MN. Michigan State University, East Lansing, MI.

Seed Weight, Grain Yield, Test Weight and Relative Weight of Fusarium Damaged Heads

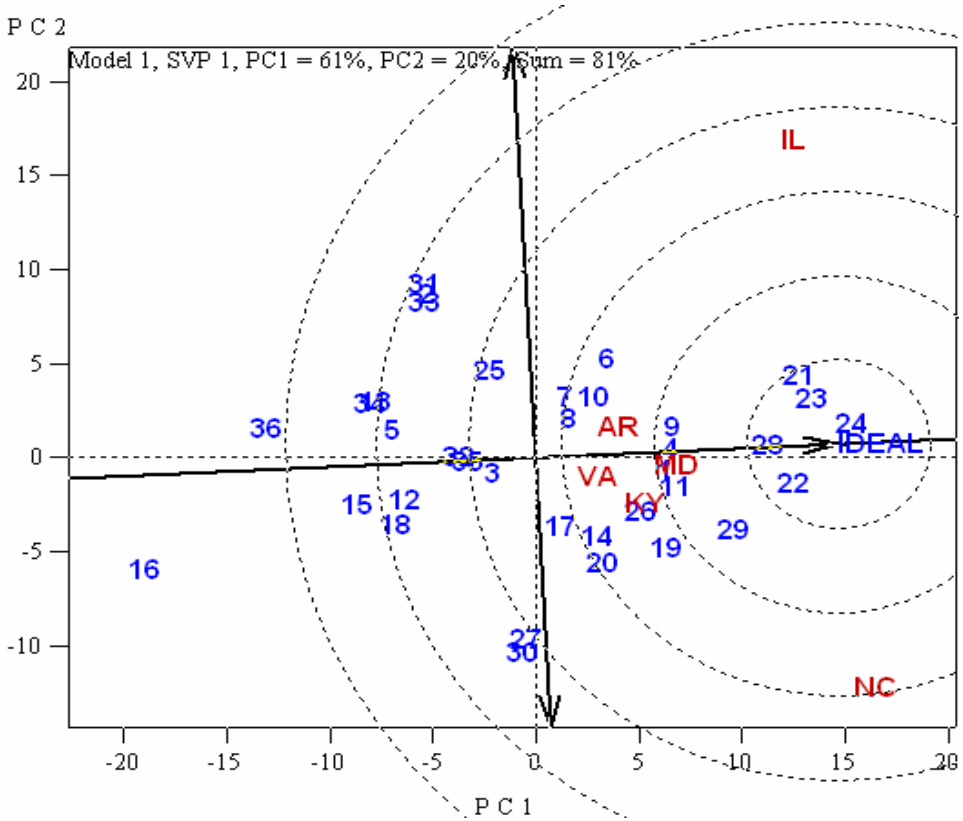
	Cultivar/ Designation	1000 Grain Weight W'BORO LA	RANK	1000 Grain Weight S'BURY MD	RANK	1000 Grain Weight FUN'LEA ROM	RANK	MEAN ALL LOC.	RANK	Grain Yield COL'BIA MO	RANK	Test Weight COL'BIA MO	RANK	% Relative Head Weight FUN'LEA ROM	RANK
1	Ernie	27.3	25	33.0	7	37.9	1	32.7	4	64	23	53.1	15	77	8
2	Coker 9835	21.5	36	20.9	33	19.3	28	20.5	36	55	32	47.5	34	53	28
3	AR 97002-10-2	25.2	28	20.6	34	29.0	12	24.9	33	61	26	49.8	32	63	21
4	AR 97002-2-1	26.3	26	30.9	14	27.4	15	28.2	21	62	24	51.5	27	70	13
5	AR 97007-4-1	26.0	27	19.2	36	30.2	7	25.1	32	34	36	29.2	36	75	10
6	AR 97124-4-1	24.7	29	32.3	9	28.1	14	28.3	20	75	13	52.1	22	70	13
7	AR 97124-4-2	23.3	32	27.1	24	27.2	16	25.9	25	52	34	48.6	33	68	15
8	AR 97124-4-3	24.4	31	22.3	29	29.9	9	25.5	29	68	18	52.1	22	76	9
9	ARGE97-1060-5-5	29.2	19	31.5	13	21.0	26	27.2	23	81	10	56.4	2	58	25
10	ARGE97-1064-11-5	31.8	12	29.5	19	29.6	10	30.3	11	69	17	53.8	11	71	12
11	B010973	22.0	34	30.6	16	23.5	24	25.4	30	83	8	52.2	21	64	18
12	B011260	32.5	11	29.0	20	25.9	21	29.1	17	77	12	51.4	28	55	26
13	D02-8443	29.0	21	22.3	29	26.1	20	25.8	26	56	30	52.7	18	64	18
14	D02-8483	31.0	15	33.1	6	26.4	19	30.7	10	74	14	54.2	8	64	18
15	D02-8486	42.5	2	32.1	10	23.5	23	32.7	4	61	25	53.4	12	54	26
16	LA95135D54-2-3	39.3	3	30.7	15	30.5	4	33.5	2	65	22	51.1	29	79	6
17	LA98090D34-4	34.4	8	30.4	17	30.5	3	31.7	8	78	11	52.0	25	62	22
18	LA99042E-64-B	44.2	1	35.5	1	19.6	27	33.1	3	87	4	55.6	3	41	30
19	MV6-82-10	33.7	9	35.3	2	16.5	30	28.5	19	81	9	55.4	5	48	29
20	MV6-82-8	37.0	4	28.7	21	24.3	22	30.0	12	83	7	54.1	10	61	23
21	NC03-11465	22.6	33	24.9	28	29.3	11	25.6	27	66	20	52.1	22	102	1
22	NC04-27617	28.7	23	28.3	22	26.9	18	28.0	22	60	27	53.2	14	79	6
23	NC04-27618	24.7	30	33.0	7	30.2	6	29.3	15	54	33	52.5	20	72	11
24	NC04-27669	28.2	24	27.8	23	30.2	8	28.7	18	55	31	53.1	15	86	3
25	VA00W-38	28.8	22	25.3	27	33.5	2	29.2	16	84	5	52.9	17	90	2
26	VA05W-448	21.8	35	26.5	25	22.6	25	23.6	35	110	1	55.5	4	65	16
27	VA05W-491	33.4	10	35.3	2	29.0	13	32.6	6	91	3	54.4	5	65	16
28	VA05W-498	30.1	17	33.9	5	30.4	5	31.5	9	110	2	56.9	1	81	4
29	VA05W-500	31.0	15	31.7	11	27.1	17	30.0	12	73	15	53.4	12	81	4
30	VA05W-633	29.9	18	30.3	18	18.8	29	26.3	24	65	21	54.4	5	59	24
31	GA96693-4E16	34.7	6	26.1	26	.	.	29.6	14	72	16	52.7	18	.	.
32	GA961171-4E21	31.7	13	21.1	31	.	.	25.6	27	60	28	51.6	26	.	.
33	GA951231-4E26	31.3	14	21.0	32	.	.	25.3	31	67	19	50.5	30	.	.
34	GA961567-4A35	29.1	20	20.0	35	.	.	23.7	34	56	29	50.2	31	.	.
35	GA98401-5E23	34.6	7	31.6	12	.	.	32.3	7	84	6	54.2	8	.	.
36	GA981621-5E34	35.4	5	34.5	4	.	.	34.2	1	40	35	39.2	35	.	.
	Mean	30.0		28.5		26.8		28.5		69.8		51.8		68	
	L.S.D.(0.05)	3.1		8.9		.		ns		.		.		.	
	CV%	6.1		15.4		.		17.1		.		.		.	

Vomitoxin (DON)*
(ppm)

	Cultivar/ Designation	B'BURG VA	RANK	URBANA IL	RANK	LEX'TON KY	RANK	F'VILLE AR	RANK	KINSTON NC	RANK	S'BURY MD	RANK	MEAN ALL LOC.	RANK
1	Ernie	0.8	19	8.5	13	0.3	5	1.9	11	6.5	9	16.5	24	5.7	10
2	Coker 9835	1.3	23	7.8	9	8.4	35	4.4	28	20.3	30	15.8	21	9.7	28
3	AR 97002-10-2	0.7	17	14.8	24	1.0	15	2.1	16	15.0	22	11.0	7	7.4	18
4	AR 97002-2-1	0.3	5	7.8	9	0.8	11	1.5	7	7.5	12	14.5	17	5.4	7
5	AR 97007-4-1	1.5	25	15.0	27	2.8	29	2.7	22	18.5	29	17.0	27	9.6	27
6	AR 97124-4-1	0.4	8	6.0	5	0.8	11	2.0	14	13.3	21	13.5	15	6.0	13
7	AR 97124-4-2	1.3	23	7.8	9	0.8	11	2.6	21	12.0	19	20.0	34	7.4	18
8	AR 97124-4-3	1.0	22	9.5	15	1.0	15	2.3	18	12.5	20	14.8	18	6.8	16
9	ARGE97-1060-5-5	0.5	10	6.3	6	0.6	10	2.3	18	7.3	11	17.5	29	5.7	10
10	ARGE97-1064-11-5	0.6	13	7.5	8	0.5	8	1.6	8	11.5	18	19.5	33	6.9	17
11	B010973	0.5	10	9.8	16	5.8	33	1.9	11	5.8	7	11.5	9	5.9	12
12	B011260	2.2	30	17.5	30	2.3	28	4.2	26	15.8	25	17.8	31	9.9	30
13	D02-8443	0.9	21	15.0	27	2.1	25	3.0	24	21.5	32	14.0	16	9.4	26
14	D02-8483	0.9	21	14.8	24	0.3	5	1.9	11	9.3	17	9.5	4	6.1	14
15	D02-8486	2.8	31	19.3	33	1.4	21	4.3	27	18.0	28	16.8	26	10.4	32
16	LA95135D54-2-3	3.6	35	28.0	36	8.1	34	6.2	29	22.8	36	17.5	29	14.4	36
17	LA98090D34-4	0.4	8	13.5	21	1.9	24	3.2	25	7.9	14	20.8	35	7.9	21
18	LA99042E-64-B	1.8	27	18.5	31	2.1	25	12.8	30	16.4	26	11.5	9	10.5	33
19	MV6-82-10	0.5	10	12.8	20	0.5	8	1.4	6	5.4	5	12.0	12	5.4	7
20	MV6-82-8	0.6	13	15.5	29	0.8	11	1.3	4	7.6	13	11.8	11	6.3	15
21	NC03-11465	0.1	1	2.3	1	0.2	4	0.9	1	6.9	10	6.8	2	2.9	3
22	NC04-27617	0.1	1	6.3	6	0.0	1	1.7	9	2.6	2	10.8	6	3.6	4
23	NC04-27618	0.3	5	3.3	3	0.3	5	1.1	3	6.3	8	4.0	1	2.5	1
24	NC04-27669	0.1	1	2.3	1	0.0	1	1.0	2	2.5	1	9.3	3	2.5	1
25	VA00W-38	0.8	19	10.0	17	2.1	25	1.7	9	17.3	27	15.8	21	7.9	21
26	VA05W-448	0.6	13	12.3	19	1.3	19	2.1	16	8.1	16	9.5	4	5.6	9
27	VA05W-491	0.3	5	20.8	35	1.4	21	2.4	20	8.0	15	12.3	14	7.5	20
28	VA05W-498	0.6	13	5.3	4	1.3	19	1.3	4	4.3	4	12.0	13	4.1	5
29	VA05W-500	0.7	17	10.0	17	1.1	17	2.0	14	3.1	3	11.3	8	4.7	6
30	VA05W-633	0.2	4	20.0	34	0.1	3	2.8	23	5.6	6	21.8	36	8.4	23
31	GA96693-4E16	3.4	34	7.8	9	4.1	32	.	.	21.5	32	17.8	31	10.1	31
32	GA961171-4E21	1.8	27	14.3	22	1.2	18	.	.	15.5	24	17.3	28	9.1	25
33	GA951231-4E26	3.0	32	8.8	14	3.4	30	.	.	21.5	32	16.5	24	9.8	29
34	GA961567-4A35	3.3	33	14.8	24	3.5	31	.	.	20.5	31	16.3	23	10.8	34
35	GA98401-5E23	1.9	29	14.5	23	1.5	23	.	.	15.3	23	15.5	20	8.9	24
36	GA981621-5E34	1.6	26	19.0	32	11.5	36	.	.	22.5	35	15.3	19	10.8	34
	Mean	1.2		11.4		2.1		2.7		11.9		14.3		7.5	
	L.S.D.(0.05)	.		6.6		2.8		2.8		7.1		11.3		3.9	
	CV%	.		28.8		112.9		.		29.3		39.1		46.0	

***DON analysis conducted by Benjamin Munn, Dept of Plant Pathology, Michigan State University.**

DON
GGE BIPLOT ANALYSIS[1]



Environment main effect accounted for 64% of the variation in DON which is reflected in the spread between the three highest DON locations Illinois, Maryland and North Carolina. Genotype main effect accounted for 18% of variation and Genotype x Environment interaction accounted for 19% of variation.

The single arrowed-line passing through the biplot origin approximated the genotype (G) effect. Entries towards the right of the line (e.g. 24, 22, 23, 21 and 28) had lower overall DON, while those to the left (e.g. 16, 36) had had the highest DON scores.

The doubled-arrow line approximated the Genotype x Environment (GE) interaction associated with each entry. The greater the projection onto the line, in either direction, the greater the instability of the entry over test locations. For example entry 30 was less stable than entry 3.

Entries 24, 23, 22, 21 and 28 were ranked closest to 'Ideal' in terms of low and stable DON scores.

[1]Yan et al., (2000). Crop Sci.40:597-605

Greenhouse Screening[1]

	Cultivar/ Designation	NC SEVERITY	RANK	VA SEVERITY	RANK	KY SEVERITY	RANK	MEAN SEVERITY	RANK	NC SPREAD	RANK
1	Ernie	9	1	9	11	61	19	26	9	1.5	1
2	Coker 9835	81	20	14	25	56	17	50	19	12.8	19
3	AR 97002-10-2	38	9	27	36	64	20	43	17	6.3	9
4	AR 97002-2-1	12	3	7	5	24	5	14	3	1.8	2
5	AR 97007-4-1	55	14	6	1	90	33	50	19	9.4	15
6	AR 97124-4-1	49	12	11	22	97	36	53	22	8.3	12
7	AR 97124-4-2	64	17	24	35	73	24	54	26	10.5	17
8	AR 97124-4-3	28	6	9	11	29	7	22	6	4.9	8
9	ARGE97-1060-5-5	55	15	16	31	58	18	43	17	8.5	13
10	ARGE97-1064-11-5	78	19	22	34	15	2	38	13	14.0	21
11	B010973	63	16	10	18	47	14	40	15	10.0	16
12	B011260	90	22	9	11	88	32	62	34	13.5	20
13	D02-8443	74	18	15	27	71	23	53	22	12.0	18
14	D02-8483	99	27	16	31	93	34	69	36	16.3	28
15	D02-8486	90	23	15	27	79	29	61	32	14.0	21
16	LA95135D54-2-3	100	29	15	30	39	12	51	21	16.3	28
17	LA98090D34-4	96	25	14	25	67	21	59	29	15.3	27
18	LA99042E-64-B	91	24	10	18	93	34	65	35	15.0	26
19	MV6-82-10	86	21	9	11	74	26	56	27	14.0	21
20	MV6-82-8	97	26	10	18	76	27	61	32	14.8	25
21	NC03-11465	53	13	9	11	52	15	38	13	9.1	14
22	NC04-27617	21	5	9	11	33	10	21	5	3.3	5
23	NC04-27618	29	8	8	6	31	8	23	7	4.6	7
24	NC04-27669	28	7	6	1	5	1	13	2	4.3	6
25	VA00W-38	10	2	6	1	18	3	11	1	2.0	3
26	VA05W-448	41	11	16	31	41	13	33	12	6.6	11
27	VA05W-491	99	28	6	1	73	24	59	29	17.0	30
28	VA05W-498	39	10	8	6	24	5	24	8	6.3	9
29	VA05W-500	18	4	8	6	22	4	16	4	2.5	4
30	VA05W-633	100	30	11	22	70	22	60	31	14.5	24
31	GA96693-4E16	.	.	12	24	77	28	53	22	.	.
32	GA961171-4E21	.	.	10	18	31	8	29	10	.	.
33	GA951231-4E26	.	.	8	6	55	16	40	15	.	.
34	GA961567-4A35	.	.	15	27	79	29	56	27	.	.
35	GA98401-5E23	.	.	9	11	79	29	53	22	.	.
36	GA981621-5E34	.	.	8	6	37	11	32	11	.	.
	Mean	60		11.5		56.1		42		9.6	
	L.S.D.(0.05)	.		2.0		1.9		31		.	
	CV%	.		76.6		54.2		45.9		.	

[1] Severity data based on the percentage of infected spikelets / total spikelets 21 to 28 days post inoculation.
Spread = total number of diseased spikelets in a head.

SSR Analyses of 3BS and 5A Regions Associated with FHB Resistance in Sumai 3

	CULTIVAR/ DESIGNATION	PEDIGREE	*Fhb1*			*Qfhs.ifa-5A*	
			Xcfd79 301.5 bp	*Xgwm 493* 214 bp	*Xgwm533.1* 161.5 bp	*Xbarc186* 227.5 bp	*Xgwm304* 332.5 bp
	Sumai 3		X	X	X	X	X
1	Ernie	*Pike /3/ Stoddard / Blueboy // Stoddard D1707*	.	.	.	.	.
2	Coker 9835	*CK68-19 // CK61-19*3 / IN4946A4-18-2-10-2 /4/ Bb /3/ CK65-20*5 / W17-TRANS // TIFT /5/ P 2550*	.	.	.	.	.
3	AR 97002-10-2	*AR 369-4-2 / Ning 8026*	.	.	.	.	.
4	AR 97002-2-1	*AR 369-4-2 / Ning 8026*	X	.	.	X	X
5	AR 97007-4-1	*AR 482A-11-2 / Super Zlatna*	.	.	.	.	.
6	AR 97124-4-1	*P88288C1-6-1-2 / Terra SR204*	.	.	.	.	.
7	AR 97124-4-2	*P88288C1-6-1-2 / Terra SR204*	.	.	.	.	.
8	AR 97124-4-3	*P88288C1-6-1-2 / Terra SR204*	.	.	.	.	.
9	ARGE97-1060-5-5	*Mason // Freedom / Super Zlatna*	.	.	.	.	.
10	ARGE97-1064-11-5	*Mason /3/ Freedom // Clark*4 / Ning 7840*	.	.	.	.	.
11	B010973	*L880085/XW502*	.	.	.	.	.
12	B011260	*COKER 9877/VA85-52-24*	.	.	.	.	.
13	D02-8443	*CLEMENS/MASON//SHILOH*	.	.	.	.	.
14	D02-8483	*COKER 9134/3/NEPAL 133/91D-2085//PIONEER 2580*	.	.	.	.	.
15	D02-8486	*NEPAL 133/91D-2085//PIONEER2580/3/SAVANNAH*	.	.	.	.	.
16	LA95135D54-2-3	*LA90239/LA8644*	.	.	.	.	.
17	LA98090D34-4	*PIONEER2548/COKER9766//MASON*	.	.	.	.	.
18	LA99042E-64-B	*DUCULA1/,ASON//PIONEER 26R61*	.	.	.	.	.
19	MV6-82-10	*PIO2643/MSY*3/BALKAN//SAL*	.	.	.	.	.
20	MV6-82-8	*PIO2643/MSY*3/BALKAN//SAL*	.	.	.	.	.
21	NC03-11465	*Ning 7840 / P2643 // NC95-22426*	X	X	X	.	.
22	NC04-27617	*Ning 7840 / P2684 // NC94-8620*	X	X	X	X	X
23	NC04-27618	*Ning 7840 / P2684 // NC94-8620*	X	X	X	X	X
24	NC04-27669	*Ning 7840 / P2684 // NC94-8620*	X	X	X	X	X
25	VA00W-38	*91-54-343(IN71761A4-31-5-48 //71-54-147/MCN1813)/91-54-222(71-54-147/CK68-15// IN65309C7-18-2-3-2).F15*	X	X	.	.	.
26	VA05W-448	*IL 94-1909(SCAB-RES)/SISSON"S"(VA97W-375WS*=CK9803/FREEDOM: WHITE SEED,F8*	.	.	.	.	.
27	VA05W-491	*ERNIE / VA96W-372//SS 520 (VA96W-158=FFR555W/GORE).F8*	.	.	.	.	.
28	VA05W-498	*Roane / Pion 2684//OH 552(P71761A4-31-5-33/MD55-286-21: FHB-RES),F8*	X	X	.	.	.
29	VA05W-500	*Roane / Pion 2684//OH 552(P71761A4-31-5-33/MD55-286-21: FHB-RES),F8*	X	.	.	.	.
30	VA05W-633	*RENWOOD 3260*2//W14/RENWOOD 3260/3/RENWOOD 3260.BC3F6*	.	.	.	.	.
31	GA96693-4E16	*88151 / Hickory // AGS 2000*	.	.	.	.	.
32	GA961171-4E21	*881130 *2 / Gore*	.	.	.	X	.
33	GA951231-4E26	*881130 / C 9134*	.	.	.	.	.
34	GA961567-4A35	*Jackson / 2* 881130*	.	.	.	.	.
35	GA98401-5E23	*AGS 2000 / 91215*	X	.	.	.	.
36	GA981621-5E34	*AGS 2485 / PIO 26R61*	.	.	.	.	.

Data collected by J. H. Lyerly, Dept. of Crop Science, NCSU using a Licor 4300 and M13 label (19bp)

Heading Date (Julian Days*)

		BAY AR	W'BORO LA	KINSTON NC	B'BURG VA	S'BURY MD	URBANA IL	COL'BIA MO	LEX'TON KY	FUN'LEA ROM	MEAN ALL LOC.
1	Ernie	105	85	101	122	121	129	124	120	137	116
2	Coker 9835	108	86	104	126	125	133	128	125	139	119
3	AR 97002-10-2	107	98	106	125	126	132	128	121	140	120
4	AR 97002-2-1	105	90	102	119	117	131	126	119	140	116
5	AR 97007-4-1	107	81	102	125	125	135	127	123	140	118
6	AR 97124-4-1	108	98	104	124	122	129	124	122	139	119
7	AR 97124-4-2	109	96	105	123	123	130	124	120	139	119
8	AR 97124-4-3	108	99	103	125	125	129	124	122	140	119
9	ARGE97-1060-5-!	106	100	104	124	123	129	124	119	139	119
10	ARGE97-1064-11	108	98	106	124	125	131	128	124	140	120
11	B010973	106	94	101	124	120	131	123	121	139	118
12	B011260	104	84	101	124	119	133	124	121	138	116
13	D02-8443	107	86	104	125	125	134	124	123	140	119
14	D02-8483	104	77	100	125	121	130	124	121	140	116
15	D02-8486	103	76	97	123	118	127	121	119	140	114
16	LA95135D54-2-3	106	88	104	125	124	134	128	124	141	119
17	LA98090D34-4	105	77	100	121	119	129	122	118	137	114
18	LA99042E-64-B	104	82	102	125	121	139	123	121	141	117
19	MV6-82-10	102	78	97	123	119	129	123	118	140	114
20	MV6-82-8	104	74	100	124	119	130	125	119	140	115
21	NC03-11465	109	91	101	127	126	137	130	126	139	121
22	NC04-27617	104	81	102	123	122	129	124	123	137	116
23	NC04-27618	105	84	101	124	121	130	124	120	138	116
24	NC04-27669	105	84	101	124	121	128	124	121	139	116
25	VA00W-38	105	82	104	125	126	131	125	122	140	118
26	VA05W-448	106	90	103	124	123	132	124	122	140	118
27	VA05W-491	102	79	97	122	120	128	122	118	137	114
28	VA05W-498	105	83	99	123	121	128	125	119	139	116
29	VA05W-500	103	76	99	124	121	129	126	121	140	115
30	VA05W-633	106	85	102	123	122	130	124	121	140	117
31	GA96693-4E16	104	82	97	123	122	131	125	122	.	116
32	GA961171-4E21	103	79	99	120	119	127	125	119	.	114
33	GA951231-4E26	103	81	101	121	122	129	124	120	.	115
34	GA961567-4A35	105	80	101	124	122	130	124	121	.	116
35	GA98401-5E23	103	80	101	122	119	131	124	122	.	115
36	GA981621-5E34	108	93	106	125	124	139	129	129	.	122
	Mean:	105.4	85	101	124	122	131	125	121	135	117
	L.S.D. (0.05)	2	4	4	1.1	3.0	2	3	.	.	2
	CV%	1.0	3.1	1.8	0.02	1.2	10.3	.	.	.	2.3

*Days after December 31, 2005

Plant Height (in)

	CULTIVAR/ DESIGNATION	S'BURY MD	B'BURG VA	COL'BIA MO	KINSTON NC	LEX'TON KY	FUN'LEA ROM	MEAN ALL LOC.
1	Ernie	30	34	34	30	36	33	33
2	Coker 9835	33	33	31	30	39	35	34
3	AR 97002-10-2	35	38	37	32	37	40	36
4	AR 97002-2-1	30	35	33	30	38	35	33
5	AR 97007-4-1	34	41	34	33	39	33	35
6	AR 97124-4-1	37	39	38	36	42	38	38
7	AR 97124-4-2	37	39	37	34	40	40	38
8	AR 97124-4-3	38	40	38	38	42	40	39
9	ARGE97-1060-5-5	40	41	43	38	43	40	41
10	ARGE97-1064-11-5	38	41	39	39	40	35	39
11	B010973	28	31	31	28	36	31	31
12	B011260	35	39	38	34	41	35	37
13	D02-8443	33	38	34	34	40	40	36
14	D02-8483	28	33	31	28	35	31	31
15	D02-8486	29	35	34	32	36	33	33
16	LA95135D54-2-3	35	39	38	31	40	33	36
17	LA98090D34-4	34	39	37	33	37	38	36
18	LA99042E-64-B	37	40	39	33	39	38	37
19	MV6-82-10	30	33	34	29	35	31	32
20	MV6-82-8	30	32	33	29	35	33	32
21	NC03-11465	34	36	33	33	37	31	34
22	NC04-27617	35	39	37	35	40	35	37
23	NC04-27618	36	40	38	36	38	38	37
24	NC04-27669	35	38	38	36	38	33	36
25	VA00W-38	32	34	35	32	36	31	33
26	VA05W-448	29	32	33	28	35	27	31
27	VA05W-491	32	36	37	32	37	35	35
28	VA05W-498	33	37	35	31	38	38	35
29	VA05W-500	33	36	34	31	38	31	34
30	VA05W-633	34	34	35	34	39	38	36
31	GA96693-4E16	34	37	36	30	38	.	35
32	GA961171-4E21	29	35	32	31	34	.	32
33	GA951231-4E26	31	35	34	33	35	.	33
34	GA961567-4A35	28	33	32	30	36	.	32
35	GA98401-5E23	33	36	34	29	37	.	34
36	GA981621-5E34	39	41	39	38	44	.	40
	Mean:	33	37	35	32	38	35	35
	L.S.D. (0.05)	2	2	3	3	.	.	2
	CV%	3.5	4.0	.	5.1	.	.	4.1

Leaf Disease Ratings

	CULTIVAR/ DESIGNATION	Stripe Rust % W'BORO LA	Stripe Rust % F'VILLE AR	Leaf Rust (1-9) KINSTON NC	Leaf Rust % SZEGED HUN	*Septoria tritici* (%) SZEGED HUN	*Stagonospora nodorum* (%) F'VILLE AR	Powdery (1-9) B'BURG VA	Mildew (1-9) KINSTON NC
1	Ernie	3	69	5.5	MS10	30	92	1.0	3.5
2	Coker 9835	3	72	2.5	0	5	85	1.0	4.0
3	AR 97002-10-2	1	6	2.5	0	20	37	3.0	6.0
4	AR 97002-2-1	2	17	2.0	0	30	50	2.0	5.5
5	AR 97007-4-1	0	5	1.0	0	35	50	2.0	3.0
6	AR 97124-4-1	3	2	1.0	MS5	15	43	2.0	4.5
7	AR 97124-4-2	1	1	1.5	0	15	43	2.0	4.5
8	AR 97124-4-3	0	1	1.5	0	10	57	2.0	4.0
9	ARGE97-1060-5-5	0	7	2.0	0	25	43	0.0	0.0
10	ARGE97-1064-11-	0	7	5.5	MS20	20	30	0.0	3.5
11	B010973	0	3	2.0	0	10	70	0.0	0.5
12	B011260	0	8	2.0	0	20	63	1.0	2.0
13	D02-8443	0	4	4.0	0	35	63	0.0	1.0
14	D02-8483	2	6	3.5	0	25	78	1.0	3.5
15	D02-8486	0	22	1.0	0	5	89	1.0	1.5
16	LA95135D54-2-3	3	14	1.0	0	3	63	1.0	1.5
17	LA98090D34-4	0	4	1.0	0	40	95	1.0	5.5
18	LA99042E-64-B	1	4	3.0	MS30	25	83	1.0	5.0
19	MV6-82-10	0	7	3.0	MS5	20	63	0.0	0.0
20	MV6-82-8	3	7	3.5	0	30	75	0.0	0.0
21	NC03-11465	4	9	1.5	0	40	63	0.0	0.0
22	NC04-27617	2	43	1.0	0	15	57	0.0	1.0
23	NC04-27618	4	49	2.5	0	15	68	0.0	3.0
24	NC04-27669	1	48	1.5	0	20	75	1.0	0.5
25	VA00W-38	0	1	1.5	0	5	79	0.0	1.0
26	VA05W-448	3	13	0.5	MS20	15	92	0.0	0.0
27	VA05W-491	0	5	3.0	0	10	75	0.0	0.5
28	VA05W-498	2	13	7.0	MS5	2	96	1.0	1.0
29	VA05W-500	1	11	3.5	0	2	89	0.0	1.5
30	VA05W-633	1	52	4.5	MSt	5	85	0.0	0.0
31	GA96693-4E16	0	.	1.0	.	.	.	0.0	0.5
32	GA961171-4E21	0	.	1.0	.	.	.	1.0	2.0
33	GA951231-4E26	2	.	2.0	.	.	.	1.0	2.0
34	GA961567-4A35	0	.	1.0	.	.	.	1.0	1.5
35	GA98401-5E23	0	.	1.5	.	.	.	0.0	0.0
36	GA981621-5E34	2	.	1.5	.	.	.	0.0	0.0
	Mean	1.1	17	2.3	.	18	68	.	2
	L.S.D.(0.05)	ns	28.6	2.0	.	.	24.9	.	1
	CV%	221.9	.	42.2	.	.	.	.	35.9

MILLING AND BAKING QUALITY DATA

	CULTIVAR/ DESIGNATION	MILLING QUALITY SCORE		BAKING QUALITY SCORE		TEST WT. SCORE		SOFT. EQUIV. SCORE		TEST WT. LB/BU	ADJ. YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID RET'N	SUCROSE RET'N %
1	Ernie (STANDARD)	54.6	D	75.8	B	49.2	E	75.7	B	60.4	67.8	54.9	8.78	97.9	86.1
2	Coker 9835	67.0	C	98.0	A	48.7	E	105.7	A	60.3	70.3	65.4	6.98	88.4	87.7
3	AR 97002-10-2	73.0	B	94.8	A	57.2	D	84.4	A	61.3	71.5	57.9	8.70	101.6	80.3
4	AR 97002-2-1	64.5	C	87.9	A	54.8	D	76.9	B	61.0	69.8	55.3	8.77	83.4	81.3
5	AR 97007-4-1	59.9	C	74.2	B	56.6	D	78.3	B	61.2	68.9	55.8	8.88	100.6	87.3
6	AR 97124-4-1	64.0	C	87.3	A	59.4	D	76.7	B	61.6	69.7	55.2	8.99	92.1	81.0
7	AR 97124-4-2	63.1	C	88.9	A	51.9	D	81.5	A	60.7	69.5	56.9	7.86	98.4	83.8
8	AR 97124-4-3	63.3	C	101.3	A	57.9	D	86.2	A	61.4	69.6	58.5	8.02	97.0	79.3
9	ARGE97-1060-5-5	51.8	D	64.4	C	61.7	C	72.5	B	61.9	67.3	53.8	9.41	104.2	88.9
10	ARGE97-1064-11-5	51.2	D	58.2	D	61.1	C	70.1	B	61.8	67.1	52.9	8.90	116.9	92.1
11	B010973	61.3	C	73.2	B	58.2	D	64.3	C	61.4	69.2	50.9	8.37	94.4	85.3
12	B011260	69.7	C	85.7	A	50.3	D	64.8	C	60.5	70.8	51.1	8.02	84.0	80.8
13	D02-8443	53.4	D	72.4	B	58.4	D	78.8	B	61.5	67.6	56.0	9.06	101.5	87.8
14	D02-8483	63.3	C	71.6	B	57.1	D	77.8	B	61.3	69.6	55.6	8.45	98.0	89.1
15	D02-8486	62.6	C	64.1	C	71.1	B	61.1	C	63.0	69.4	49.8	9.83	91.8	85.4
16	LA95135D54-2-3	54.0	D	54.4	D	67.5	C	78.9	B	62.5	67.7	56.0	8.74	104.2	96.2
17	LA98090D34-4	51.6	D	57.6	D	58.4	D	65.7	C	61.5	67.2	51.4	9.64	95.8	89.7
18	LA99042E-64-B	53.4	D	56.4	D	74.0	B	66.4	C	63.3	67.6	51.6	8.42	108.6	92.9
19	MV6-82-10	61.9	C	74.0	B	74.8	B	72.4	B	63.4	69.3	53.7	8.94	98.4	85.8
20	MV6-82-8	58.6	D	70.7	B	72.9	B	73.8	B	63.2	68.6	54.2	8.64	101.5	88.2
21	NC03-11465	57.2	D	64.3	C	61.2	C	60.1	C	61.8	68.3	49.4	9.78	110.3	85.2
22	NC04-27617	56.3	D	56.5	D	60.4	C	66.1	C	61.7	68.1	51.5	9.25	84.2	91.1
23	NC04-27618	59.3	D	64.6	C	54.1	D	67.7	C	60.9	68.8	52.1	8.77	88.4	89.0
24	NC04-27669	57.7	D	63.0	C	58.9	D	69.4	C	61.5	68.4	52.7	8.79	86.9	90.1
25	VA00W-38	56.2	D	77.8	B	46.4	E	84.9	A	60.0	68.1	58.1	7.81	109.5	89.5
26	VA05W-448	66.6	C	63.5	C	71.9	B	52.7	D	63.1	70.2	46.8	9.15	88.9	85.0
27	VA05W-491	55.4	D	57.0	D	63.9	C	60.5	C	62.1	68.0	49.6	9.29	105.4	89.4
28	VA05W-498	67.8	C	70.5	B	80.0	B	58.9	D	64.1	70.5	49.0	9.12	93.0	83.6
29	VA05W-500	66.9	C	77.3	B	67.3	C	72.4	B	62.5	70.3	53.7	8.40	91.4	85.5
30	VA05W-633	58.9	D	52.8	D	68.2	C	67.0	C	62.6	68.7	51.8	9.26	122.5	92.9
31	GA96693-4E16	74.5	B	86.1	A	77.1	B	63.3	C	63.7	71.8	50.5	8.06	86.2	80.2
32	GA961171-4E21	57.7	D	60.7	C	59.7	D	54.1	D	61.6	68.4	47.3	7.70	100.5	89.6
33	GA951231-4E26	71.5	B	69.9	B	56.3	D	82.3	A	61.2	71.2	57.2	7.90	115.5	92.1
34	GA961567-4A35	68.1	C	74.0	B	57.1	D	75.6	B	61.3	70.5	54.8	8.61	99.0	87.2
35	GA98401-5E23	50.0	D	53.4	D	76.0	B	71.9	B	63.6	66.9	53.6	8.59	102.8	95.2
36	GA981621-5E34	69.7	C	79.6	B	75.6	B	77.6	B	63.5	70.8	55.5	7.56	97.1	87.5
	Mean	61.0		71.7		62.1		72.1		61.9	69.1	53.6	8.7	98.3	87.3
	Adjusted LSD	.		.		.		.		1.2	0.7	3.0	0.9	4.3	3.8

Data provided by Ed Souza, USDA-ARS, Soft Wheat Quality Lab, Wooster, Ohio.
Samples provided by Carl Griffey, VA Tech, from nursery grown at Blacksburg, VA

GRAIN QUALITY, SZEGED, HUNGARY

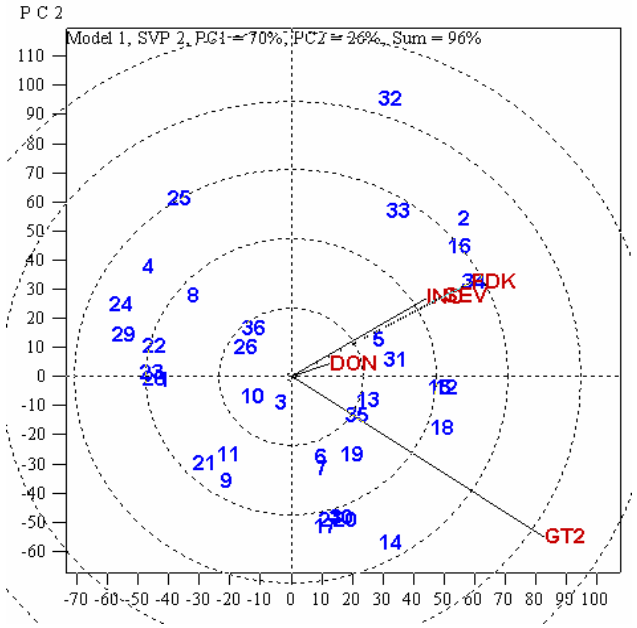
	Cultivar/ Designation	NIR %WET GLUTEN	RANK	NIR HARD-NESS	RANK	NIR %GRAIN PROTEIN	RANK
1	Ernie	29	7	-20.4	6	13.7	22
2	Coker 9835	25	2	-22.7	5	14.3	9
3	AR 97002-10-2	33	23	-24.4	4	15.0	4
4	AR 97002-2-1	30	12	-26.1	3	14.4	8
5	AR 97007-4-1	30	12	-6.0	17	13.8	20
6	AR 97124-4-1	28	7	-29.2	2	14.1	18
7	AR 97124-4-2	26	3	-37.5	1	13.7	22
8	AR 97124-4-3	30	12	-15.6	11	14.2	13
9	ARGE97-1060-5-5	37	30	18.8	29	15.1	2
10	ARGE97-1064-11-5	35	27	25.3	30	14.9	5
11	B010973	35	27	-19.0	7	15.5	1
12	B011260	31	16	-3.4	23	14.2	16
13	D02-8443	26	3	-16.4	9	13.1	28
14	D02-8483	27	5	-15.9	10	13.3	27
15	D02-8486	33	23	-3.5	21	14.5	7
16	LA95135D54-2-3	33	23	15.9	28	14.3	9
17	LA98090D34-4	32	19	0.3	25	14.2	16
18	LA99042E-64-B	23	1	9.1	26	12.1	30
19	MV6-82-10	31	16	-3.7	20	14.3	9
20	MV6-82-8	29	7	-0.8	24	13.7	22
21	NC03-11465	35	27	-14.3	12	15.1	2
22	NC04-27617	31	16	-10.4	13	14.2	13
23	NC04-27618	30	12	-4.5	19	13.8	20
24	NC04-27669	32	19	-5.5	18	14.2	13
25	VA00W-38	27	5	-18.9	8	12.9	29
26	VA05W-448	32	19	12.7	27	14.0	19
27	VA05W-491	33	23	-10.3	14	14.8	6
28	VA05W-498	29	7	-9.2	15	13.6	26
29	VA05W-500	29	7	-3.5	21	13.7	22
30	VA05W-633	32	19	-8.1	16	14.3	9
31	GA96693-4E16	.	.	.	.	.	.
32	GA961171-4E21	.	.	.	.	.	.
33	GA951231-4E26	.	.	.	.	.	.
34	GA961567-4A35	.	.	.	.	.	.
35	GA98401-5E23	.	.	.	.	.	.
36	GA981621-5E34	.	.	.	.	.	.
	Mean	30		-8.2		14.1	

Means Across Locations 2005-06

	Cultivar/ Designation	FHB Incidence	RANK	FHB Severity	RANK	FHB Index	RANK	FDK	RANK	ISK	RANK	DON	RANK	G'hse Type II	RANK	Heading Date	Plant Height	*Fhb1* *Xcfd79* 301.5 bp	*Xgwm 493* 214 bp	*Xgwm533.1* 161.5 bp	*Qfhs.ifa-5A* *Xbarc 186* 227.5 bp	*Xgwm1304* 332.5
1	Ernie	47	7	24	9	16	9	16	1	20	2	5.7	10	26	9	116	33	.	.	.		
2	Coker 9835	80	36	50	34	43	36	52	34	58	35	9.7	28	50	19	119	34	.	.	.		
3	AR 97002-10-2	54	13	27	16	19	16	30	20	33	23	7.4	18	43	17	120	36	.	.	.		
4	AR 97002-2-1	57	19	23	5	17	11	20	8	28	12	5.4	7	14	3	116	33	X	.	.	X	X
5	AR 97007-4-1	68	31	37	27	32	29	39	26	45	29	9.6	27	50	19	118	35	.	.	.		
6	AR 97124-4-1	54	13	28	19	17	11	31	22	30	14	6.0	13	53	22	119	38	.	.	.		
7	AR 97124-4-2	55	17	30	22	19	16	27	17	31	16	7.4	18	54	26	119	38	.	.	.		
8	AR 97124-4-3	52	11	25	11	17	11	28	19	32	20	6.8	16	22	6	119	39	.	.	.		
9	ARGE97-1060-5-5	44	1	23	5	10	1	20	8	18	1	5.7	10	43	17	119	41	.	.	.		
10	ARGE97-1064-11-5	54	13	25	11	16	9	25	13	27	11	6.9	17	38	13	120	39	.	.	.		
11	B010973	45	3	25	11	12	3	20	8	24	9	5.9	12	40	15	118	31	.	.	.		
12	B011260	68	31	44	30	30	27	40	28	48	31	9.9	30	62	34	116	37	.	.	.		
13	D02-8443	58	23	33	25	22	23	39	26	38	26	9.4	26	53	22	119	36	.	.	.		
14	D02-8483	60	25	34	26	24	25	24	12	31	16	6.1	14	69	36	116	31	.	.	.		
15	D02-8486	65	28	45	31	35	30	40	28	45	29	10.4	32	61	32	114	33	.	.	.		
16	LA95135D54-2-3	76	35	47	33	40	33	51	32	56	34	14.4	36	51	21	119	36	.	.	.		
17	LA98090D34-4	54	13	24	9	19	16	25	13	26	10	7.9	21	59	29	114	36	.	.	.		
18	LA99042E-64-B	61	26	40	28	30	27	43	31	41	27	10.5	33	65	35	117	37	.	.	.		
19	MV6-82-10	57	19	32	24	23	24	31	22	32	20	5.4	7	56	27	114	32	.	.	.		
20	MV6-82-8	55	17	27	16	19	16	27	17	30	14	6.3	15	61	32	115	32	.	.	.		
21	NC03-11465	49	8	18	1	13	5	17	3	23	7	2.9	3	38	13	121	34	X	X	X		
22	NC04-27617	46	5	23	5	14	6	19	6	23	7	3.6	4	21	5	116	37	X	X	X	X	X
23	NC04-27618	44	1	23	5	15	8	17	3	22	4	2.5	1	23	7	116	37	X	X	X	X	X
24	NC04-27669	46	5	21	4	12	3	19	6	22	4	2.5	1	13	2	116	36	X	X	X	X	X
25	VA00W-38	59	24	30	22	21	21	26	15	31	16	7.9	21	11	1	118	33	X	X	.		
26	VA05W-448	61	26	28	19	21	21	22	11	31	16	5.6	9	33	12	118	31	.		.		
27	VA05W-491	53	12	26	15	17	11	26	15	28	12	7.5	20	59	29	114	35	.		.		
28	VA05W-498	50	9	18	1	14	6	16	1	20	2	4.1	5	24	8	116	35	X	X	.		
29	VA05W-500	45	3	20	3	11	2	17	3	22	4	4.7	6	16	4	115	34	X		.		
30	VA05W-633	50	9	27	16	18	15	30	20	32	20	8.4	23	60	31	117	36	.		.		
31	GA96693-4E16	66	29	42	29	35	30	36	25	42	28	10.1	31	53	22	116	35	.		.		
32	GA961171-4E21	71	33	53	36	40	33	55	36	58	35	9.1	25	29	10	114	32	.		.	X	
33	GA951231-4E26	66	29	45	31	37	32	53	35	51	33	9.8	29	40	15	115	33	.		.		
34	GA961567-4A35	71	33	51	35	41	35	51	32	50	32	10.8	34	56	27	116	32	.		.		
35	GA98401-5E23	57	19	28	19	24	25	40	28	36	25	8.9	24	53	22	115	34	X		.		
36	GA981621-5E34	57	19	25	11	19	16	31	22	33	23	10.8	34	32	11	122	40	.		.		
	Sumai 3																	X	X	X	X	X
	Mean	57		32		23		30		34		7.5		42		117	35					
	L.S.D.(0.05)	11		9		11		10		9		3.9		31		2	2					
	CV%	20.2		35.0		49.0		33.2		24.2		46		46		2.3	4					

CORRELATIONS BETWEEN TRAITS OVER LOCATIONS

	SEVERITY	INDEX	FDK	ISK	DON	G'HOUSE TYPE 2	HEADING DATE	PLANT HEIGHT
INCIDENCE	0.91	0.95	0.87	0.94	0.79	0.40	ns	ns
SEVERITY		0.97	0.92	0.95	0.77	0.45	ns	ns
INDEX			0.92	0.96	0.79	0.42	ns	ns
FDK				0.96	0.84	0.45	ns	ns
ISK					0.82	0.4	ns	ns
VOMITOXIN (DON)						0.52	ns	ns
G'HOUSE TYPE 2							ns	ns
HEADING DATE								0.50



Vector view of the entry-by-trait biplot showing the interrelationships among resistance traits. Field-based estimates of Incidence, Severity, FDK and DON had greater correlations with each other than they had with greenhouse-based Type II resistance. Greenhouse Type II was the most discriminating variable in that it displayed the largest standard deviation, followed by FDK, Severity,Incidence, and DON.

Entry 14 was the most susceptible based on greenhouse Type II evaluation and Entry 34 displayed the greatest average susceptibility based on the combined estimates of Incidence, Severity, FDK and DON.

Entries 1, 4, 22, 23, 28 and 29 exhibited the best resistance based on combined estimates of all the resistance factors.