

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

and

Cooperating State Agricultural Experiment Stations

2006-07

UNIFORM BREAD WHEAT TRIAL

FINAL REPORT

Coordinator: David Marshall/Myron Fountain

This is a joint progress report of cooperative investigations underway in the Agricultural Research Service of the U. S. Department of Agriculture and the State Agricultural Experiment Stations containing preliminary data which have not been sufficiently confirmed to justify general release; interpretations may be modified with additional experimentation. Confirmed results will be published through established channels. This report is primarily a tool for use by cooperators and those persons having direct and special interest in the development of agricultural research programs. This report includes data furnished by the State Agricultural Experiment Stations and 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 agency or agencies involved.

USDA-ARS
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The purpose of the Uniform Bread Wheat Trial (UBWT) is to evaluate hard endosperm, bread quality, winter habit cultivars and advanced lines for adaptation to the high rainfall, humid environments of the eastern United States. The entries in this 5th UBWT were selected from public and private breeding programs in the southern and central Great Plains. A total of 48 entries (22 hard red, 9 hard white, and 4 soft red) were included in the trial. There were 17 testing locations for the 2005-06 UBWT, with 1 in Georgia, 2 in Kentucky, 2 in Maryland, 5 in North Carolina, 2 in Oklahoma, 2 in Texas, 2 in Virginia, and 1 in Washington.

Plains, GA: Plot size=50 ft²; 2 reps; Planted=15 Nov 06; Harvested=23 May 07.

Cooperator-J.W.Johnson.

Lexington, KY: Cooperator-D. A. Van Sanford.

Schochoh, KY: Rough year, high cvs extensive freeze damage. Cooperator-D.A. Van Sanford.

Clarksville, MD: Cooperator-J.M.Costa.

Wye, MD: Cooperator-J.M.Costa.

Kinston, NC: Not harvested due to severe freeze damage during early April and severe soil-borne mosaic virus infestation, wet in Nov, very dry spring, warm fall, cold Jan, moderate powdery mildew, moderate leaf rust. Plot size=45ft²; 2 reps; Planted=25 Oct 06. Cooperators-M.O.Fountain, D.S.Marshall.

Laurel Springs, NC: Harvested for grain quality testing. Screening nursery for stripe rust and winter kill (elevation=3,000ft). Warm fall, cold Jan, Plot size=50ft²; 2 reps; Planted=2 Oct 06; Harvested=17 Jul 07. Cooperators-M.O.Fountain, D.S.Marshall.

Pilot Mountain, NC: Dry spring, freeze during early April (but not much plant damage). Plot size=55ft²; 2 reps; Planted=2 Nov 06; Harvested=19 Jun 07. Cooperators-M.O.Fountain, D.S.Marshall.

Salisbury, NC: Dry spring, freeze during early April (but not much plant damage). Plot size=45ft²; 2 reps; Planted=13 Oct 06; Harvested=18 Jun 07. Cooperators-M.O.Fountain, D.S.Marshall.

Waynesville, NC: Not harvested due to severe freeze damage during early April. Screening nursery for stripe rust and winter kill (elevation=2,500 ft). Warm fall, cold Jan. Plot size=20ft²; 2 reps; Planted=5 Oct 06. Cooperators-M.O.Fountain, D.S. Marshall.

Hobart, OK: Not harvested (drown). Cooperator-B.F.Carver.

Stillwater, OK: Not harvested (drown/freeze). Cooperator-B.F.Carver.

Castroville, TX: Observation nursery; leaf rust. Cooperator-R. Devkota,J.Rudd.

Dallas, TX: Cooperator-R.Sutton.

Blacksburg, VA: Cooperator-C.A.Griffey.

Warsaw, VA: Cooperator-C.A.Griffey.

Pullman, WA: Plot size=44 ft²; 2 reps; Planted=30 Sep 06; Harvested=24 Aug 07. Cooperator-K.Campbell.

USDA/ARS Uniform Bread Wheat Trial 2006-07

Entry	Designation	Pedigree	Class	Origin	Seed Source	Yrs in trial
1	AGS 2000	Pioneer 2555/PF84301//Florida 302 (=PI612956; GA89482E7)	SRW	GA	AGS	5
2	Hondo	W84-179/W81-171/3/Sturdy/Hawk//Vona/W76-1141 (=PI603958; W95-210)	HRW	AgriPro	ARS	5
3	Jagalene	Jagger/Abilene (=PI631376; W98-362)	HRW	AgriPro	ARS	5
4	Jagger	KS82W418/Stephens (=PI593688; KS84063-9-39-3)	HRW	KS	ARS	4
5	Lakin	KS89H130/Arlin (=PI617032; KS96HW115)	HWW	KS	ARS	4
6	Neuse	Coker 86-29//Stella/CHD756-80/3/Coker 9907 (=PI633037; NC96-13156)	SRW	NC	NC	4
7	Roane	VA71-54-147/Coker 68-15//IN65309C1-18-2-3-2 (=PI612958; VA93-54-429)	SRW	VA	ARS	5
8	TAM 303	TX89D1253*2/TTCC404 (=WX93D208-9-1-2) (=TX98D1170)	HRW	TX	ARS	5
9	Tribute	VA92-51-39/AL870365 (=VA98W-593)	SRW	VA	ARS	5
10	OK Bullet	KS96WGRC39/Jagger (=PI642415)	HWW	OK	OK	1
11	Deliver	OK91724/Karl (=PI639232; OK98690)	HRW	OK	OK	1
12	Duster	W0405D/NE78448//W7469/TX81V6187	HRW	OK	OK	1
13	Endurance	HBV756A/Siouxland//2180 (=PI639233; OK94P549-11)	HRW	OK	OK	1
14	OK05737W	KS96WGRC39/Jagger	HWW	OK	OK	1
15	Hatcher	Yuma/PI 372129//TAM-200/3/4*Yuma/4/KS91H184/Vista (=CO980607)	HRW	CO	CO	1
16	Ripper	PI220127/P5//TAM-200/KS87H66 (CO940606)/3/TAM107R-2 (=CO00016)	HRW	CO	CO	1
17	CO01385-A1	Yumar/Arlin	HRW	CO	CO	1
18	TX99A0153-1	Ogallala/TAM 202	HRW	TX	TX	1
19	TX01V5314	TX89V4132/704LI-2221	HRW	TX	TX	1
20	VA92PAN2#26	W8447D/W2436//W3420	HRW	VA	VA	1
21	KS03HW73	KS97HW16/KS97HW206 (KS97HW206=KS91HW19/Jagger sib) (=KS5233)	HWW	KS	ARS	3
22	KS03HW82	KS97HW202/KS97HW257 (KS97HW257=KS91HW19/KS95W663-11-6-1) (=KS5311)	HWW	KS	ARS	3
23	ARS03-3725	TX00D1626*2/TTCC567 (=WX02ARS159-158)	HRW	ARS	ARS	1
24	ARS03-3747	TX99D4612/Lockett (=WX02ARS137-83)	HRW	ARS	ARS	2
25	ARS03-3806	X94-748-2-2/TAM 301 (=WX02ARS143-37)	HRW	ARS	ARS	2
26	ARS03-4299	TAM 302*2/TTCCC621 (=WX02ARS147-62)	HRW	ARS	ARS	2
27	ARS03-4736	KS00U755/TX98D1170 (=WX02ARS113-9)	HRW	ARS	ARS	2
28	ARS03-4769	KS00U754/TX98D1170 (=WX02ARS112-5)	HRW	ARS	ARS	1
29	ARS03-4813	TAM 302/X940793-10-8 (=WX02ARS123-2)	HRW	ARS	ARS	1
30	ARS03-6180	TX94D4360/TAM 302 (=WX02ARS130-45)	HRW	ARS	ARS	1
31	ARS03-6198	TX98D1170*2/TTCC160 (=WX02ARS152-7)	HRW	ARS	ARS	1
32	ARS03-6201	TX98D1170/KS98U662 (=WX02ARS164-278)	HRW	ARS	ARS	2
33	ARS04-1249	CO960293-1/KS98HW151-6//KS99HW37 (=KS2023-U18)	HWW	ARS	ARS	2
34	ARS04-1267	KS98HW151-6/KS01HW101(01-6101) (=KS2135-U54)	HWW	ARS	ARS	2
35	ARS05-0242	Coker9835/RL6042//TX99D4657 (WX02ARS030-591-25)	HRW	ARS	ARS	1
36	ARS05-1025	KS2108-U5/Trego (=WX03ARS1065-11)	HWW	ARS	ARS	1
37	ARS05-1034	KS2136-U142/Trego (=WX03ARS1066-8)	HWW	ARS	ARS	1
38	ARS05-1044	KS2132-U138/Trego (=WX03ARS1069-26)	HWW	ARS	ARS	1
39	ARS05-1053	Lakin/KS2139-U51 (=WX03ARS1070-2)	HWW	ARS	ARS	1
40	ARS05-1061	Lakin/KS2202-U12 (=WX03ARS1071-11)	HWW	ARS	ARS	1
41	ARS05-1073	KS2142-U3/Lakin (=WX03ARS1073-25)	HWW	ARS	ARS	1
42	ARS05-1094	Lakin/KS2007-U9 (=WX03ARS1074-3)	HWW	ARS	ARS	1
43	ARS05-1101	Lakin/KS2007-U9 (=WX03ARS1074-10)	HWW	ARS	ARS	1
44	ARS05-1179	KS2091-U5/Lakin (=WX03ARS1077-1)	HWW	ARS	ARS	1
45	ARS05-1234	KS2016-U2/Lakin (=WX03ARS1080-19)	HWW	ARS	ARS	1
46	ARS05-1267	KS2133-U1/Lakin (=WX03ARS1084-3)	HWW	ARS	ARS	1
47	ARS05-1279	KS00754/TX98D1170 (WX02ARS132-151)	HRW	ARS	ARS	1
48	ARS05-1326	TX98D1519*2/TTCC580 (=WX02ARS153-2)	HRW	ARS	ARS	1

Seed Requirements: GA(280g); KY(350g); MD(400g); NC-ARS(560g); NE(40g); OK(200g); TX-Ama(5g); TX-Dal(50g); VA(450g); WA(70g)= 2,405g

Cooperators - USDA/ARS Uniform Bread Wheat Trial 2006-07

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2006-2007 Uniform Bread Wheat Trial

Means across locations

Entry	Designation	Class	Yr in trial	Yield bu/a	Rank	Test Weight		Heading Julian	Height in	Lodging 0-9	BYDV 0-9	Leaf Rust 0-9		Powdery Mildew 0-9		SBMV 0-9	Stripe Rust %		Freeze Damage 0-9	Growth Habit 0-9	Flour Protein %	Gluten %	Zeleny %	Falling Numbers	Kernel Hardness score	Kernel Weight mg	Kernel Diameter mm
						lb/bu	lb/bu					Rust 0-9	Mildew 0-9	Rust %	Damage 0-9												
7	Roane	SRW	5	73.5	1	59.8	126	31	2	1	2	1	6	16	0	7	13.51	24.3	35.9	512	45	25.54	2.07				
9	Tribute	SRW	5	69.8	2	61.0	123	30	0	2	3	1	8	23	1	7	13.64	24.1	38.1	436	44	31.23	2.30				
20	VA92PAN2#26	HRW	1	69.2	3	57.8	126	31	0	3	3	3	7	8	0	7	14.56	27.7	57.7	539	83	30.02	2.25				
1	AGS 2000	SRW	5	67.7	4	59.0	120	33	0	1	2	1	7	44	6	3	13.80	27.4	46.4	490	25	37.70	2.53				
13	Endurance	HRW	1	67.3	5	59.1	125	35	3	1	1	2	4	11	0	7	13.25	22.4	35.2	487	72	30.66	2.29				
35	ARS05-0242	HRW	1	67.2	6	59.0	124	29	0	3	1	0	7	6	5	4	14.19	26.0	47.8	529	81	33.59	2.54				
27	ARS03-4736	HRW	2	65.8	7	61.1	124	35	1	3	1	2	6	26	0	5	14.99	27.8	55.5	531	83	32.36	2.42				
6	Neuse	SRW	4	65.7	8	59.5	127	32	0	2	1	0	7	59	0	6	14.68	25.3	47.0	464	39	30.71	2.33				
25	ARS03-3806	HRW	2	65.2	9	58.8	127	34	0	3	4	1	8	1	0	7	15.30	24.3	42.8	515	86	25.72	2.08				
44	ARS05-1179	HWW	1	65.1	10	60.0	118	32	1	2	3	2	5	2	6	5	14.99	32.1	67.9	427	71	35.31	2.55				
8	TAM 303	HRW	5	65.0	11	58.5	122	33	2	1	1	0	8	18	0	6	14.12	26.4	48.2	486	77	31.53	2.31				
31	ARS03-6198	HRW	1	64.8	12	61.2	124	36	1	3	1	3	6	31	0	5	14.55	25.7	48.6	540	81	32.29	2.43				
33	ARS04-1249	HWW	2	64.8	13	59.1	126	32	0	4	3	0	5	1	0	6	15.26	30.7	64.5	393	82	32.47	2.39				
24	ARS03-3747	HRW	2	64.5	14	56.8	122	34	2	3	5	0	7	3	6	3	13.70	23.6	37.2	475	74	34.44	2.46				
34	ARS04-1267	HWW	2	63.4	15	59.7	121	33	1	3	4	0	9	5	3	5	16.16	33.7	74.4	530	82	29.30	2.20				
41	ARS05-1073	HWW	1	62.5	16	59.3	123	33	2	4	2	0	7	21	2	6	14.59	24.9	47.5	426	75	31.63	2.30				
14	OK05737W	HWW	1	62.2	17	58.9	124	35	1	3	3	4	7	2	0	5	14.46	27.5	54.8	492	73	31.67	2.41				
17	CO01385-A1	HRW	1	62.1	18	59.8	126	31	1	4	2	1	.	15	0	7	13.91	24.1	36.8	531	88	26.36	2.18				
22	KS03HW82	HWW	3	61.9	19	58.5	124	34	1	3	1	2	5	1	0	7	13.77	24.0	44.9	465	66	29.94	2.35				
12	Duster	HRW	1	61.7	20	59.7	123	34	2	2	1	2	6	24	0	5	14.39	22.6	35.6	486	91	27.65	2.25				
42	ARS05-1094	HWW	1	61.6	21	59.4	126	33	2	3	1	1	7	3	2	5	15.02	29.8	60.7	472	85	30.15	2.32				
46	ARS05-1267	HWW	1	61.5	22	60.5	127	34	1	2	4	3	5	3	0	7	14.26	26.7	50.9	505	86	30.95	2.37				
5	Lakin	HWW	4	61.3	23	59.6	125	35	2	2	6	4	7	53	2	7	14.40	27.2	50.6	543	76	30.90	2.32				
30	ARS03-6180	HRW	1	61.3	24	59.0	126	33	1	4	4	1	8	1	0	7	15.73	27.8	54.7	492	84	26.47	2.04				
38	ARS05-1044	HWW	1	60.4	25	59.6	124	35	3	3	1	0	3	23	0	6	14.52	27.4	56.8	416	82	35.69	2.54				
10	OK Bullet	HWW	1	60.2	26	60.8	124	35	0	5	2	6	7	2	0	5	15.48	25.9	52.6	560	90	31.23	2.42				
15	Hatcher	HRW	1	60.0	27	59.1	121	31	2	4	5	1	.	15	4	5	13.52	24.7	35.3	503	68	31.46	2.30				
45	ARS05-1234	HWW	1	59.8	28	58.8	129	33	1	3	0	1	4	1	0	7	15.45	29.9	58.6	558	85	26.46	2.17				
48	ARS05-1326	HRW	1	59.8	29	58.8	126	36	3	2	1	3	8	2	1	7	14.39	24.4	41.0	635	89	28.11	2.19				
47	ARS05-1279	HRW	1	59.7	30	59.3	122	34	1	4	2	1	6	21	2	6	14.72	27.2	56.3	540	80	32.76	2.37				
3	Jagalene	HRW	5	59.5	31	61.0	122	32	0	4	4	7	8	1	4	5	14.23	24.7	44.2	497	85	31.00	2.43				
43	ARS05-1101	HWW	1	59.3	32	59.0	124	32	2	3	2	2	6	2	1	7	14.86	26.0	52.2	478	73	29.30	2.30				
29	ARS03-4813	HRW	1	59.1	33	56.6	127	32	2	4	2	2	8	66	0	8	15.71	26.3	45.9	501	75	25.01	2.18				
11	Deliver	HRW	1	58.8	34	60.4	126	34	2	6	2	2	4	2	1	7	14.33	23.3	47.3	490	72	32.34	2.35				
19	TX01V5314	HRW	1	58.2	35	58.2	122	31	0	3	3	6	7	2	4	5	14.98	28.5	52.7	552	86	28.67	2.22				
26	ARS03-4299	HRW	2	58.2	36	59.4	125	35	2	2	3	1	4	6	0	6	14.98	26.3	50.7	520	79	34.90	2.42				
39	ARS05-1053	HWW	1	57.3	37	58.4	129	32	0	3	3	1	6	53	1	8	14.67	26.9	48.5	485	86	25.96	2.18				
23	ARS03-3725	HRW	1	56.8	38	59.5	127	34	0	2	1	0	6	13	0	8	14.14	24.2	45.7	580	85	26.25	2.12				
18	TX99A0153-1	HRW	1	56.6	39	57.9	124	30	0	2	2	1	8	8	1	4	13.41	24.1	36.9	463	75	30.52	2.24				
32	ARS03-6201	HRW	2	56.5	40	58.5	119	31	1	4	2	1	7	28	6	5	14.39	29.1	60.6	463	52	34.77	2.49				
16	Ripper	HRW	1	55.5	41	56.7	127	34	1	4	7	6	.	36	0	6	14.45	26.8	45.1	490	76	31.15	2.30				
36	ARS05-1025	HWW	1	55.5	42	60.2	124	35	0	3	5	1	3	18	2	6	15.60	33.2	70.6	505	68	32.28	2.40				
21	KS03HW73	HWW	3	55.3	43	60.5	127	32	0	5	1	2	8	2	0	7	14.46	28.3	55.8	411	78	28.16	2.25				
28	ARS03-4769	HRW	1	55.3	44	59.9	123	36	1	4	2	1	4	43	0	6	14.35	29.6	62.4	510	76	35.02	2.52				
4	Jagger	HRW	4	55.2	45	59.6	117	31	2	3	5	5	7	1	7	3	15.35	31.1	63.7	482	86	29.35	2.35				
2	Hondo	HRW	5	55.1	46	59.8	129	34	1	3	5	1	5	56	0	7	15.17	28.1	53.2	486	92	28.74	2.30				
40	ARS05-1061	HWW	1	53.8	47	59.6	120	32	1	3	3	1	7	2	4	4	14.67	26.3	46.7	534	73	31.57	2.34				
37	ARS05-1034	HWW	1	52.5	48	61.2	123	36	2	5	5	0	4	5	2	6	16.40	33.1	75.7	382	77	35.30	2.54				
	Mean			61.1		59.3	124	33	1	3	3	2	6	16	1	6	14.61	26.9	50.9	496	76	30.72	2.33				
	CV (%)			14.5		2.4	2	6	155	41	78	69	18	102	80	20	6.19	6.0	8.9	16	7	7.33	4.45				
	LSD (0.05)			6.8		1.1	2	2	2	2	3	2	2	27	2	1	0.84	2.2	6.1	73	5	2.09	0.10				
	R ²			0.52		0.78	0.97	0.68	0.43	0.53	0.52	0.74	0.78	0.66	0.80	0.71	0.59			0.42	0.89	0.79	0.77				
	Number of loc.			11		12	8	8	4	4	4	4	1	2	2	3	7	1	1	7	7	7	7				

Entry	Designation	Plains, GA		Lexington, KY		Schochoh, KY		Clarksville, MD		Wye, MD		Pilot Mtn, NC		Salisbury NC		Dallas, TX		B'burg, VA		Warsaw, VA		Pullman, WA		11-location mean		
		bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	bu/a	rank	
1	AGS 2000	96.9	1	69.8	6	50.2	14	45.3	34	72.6	4	67.3	8	52.0	31	82.5	4	68.4	9	77.3	7	74	18	67.7	4	
2	Hondo	67.6	37	62.7	19	54.7	5	49.5	29	62.9	26	47.7	48	61.3	20	40.6	47	53.5	32	61.6	41	41	48	55.1	46	
3	Jagalene	79.9	13	57.8	33	37.0	39	57.2	14	63.9	21	62.0	24	46.3	40	53.1	41	62.3	18	65.7	30	76	12	59.5	31	
4	Jagger	77.3	17	57.9	32	36.2	41	57.2	15	60.8	35	52.3	44	39.7	46	55.5	35	55.0	31	59.4	43	70	25	55.2	45	
5	Lakin	69.0	34	62.6	21	45.0	22	67.9	2	65.1	19	61.9	25	48.4	36	61.8	26	76.0	5	66.8	27	58	41	61.3	23	
6	Neuse	73.2	26	67.8	8	52.2	9	62.3	5	63.2	23	68.8	5	62.1	17	68.5	20	79.9	4	76.8	8	44	47	65.7	8	
7	Roane	77.0	19	72.2	3	57.1	3	61.4	6	78.3	2	70.2	3	72.3	3	69.3	18	93.5	1	87.3	2	70	26	73.5	1	
8	TAM 303	80.8	12	58.0	31	36.2	42	60.7	9	66.7	12	59.1	32	64.1	12	87.2	1	63.8	15	69.7	23	72	21	65.0	11	
9	Tribute	85.8	5	76.1	1	59.0	1	49.7	28	83.2	1	63.2	20	56.0	25	64.4	24	80.1	3	89.8	1	77	10	69.8	2	
10	OK Bullet	68.4	35	61.6	24	40.3	32	56.7	16	59.3	39	57.7	37	54.7	27	74.1	9	50.0	39	65.6	31	78	8	60.2	26	
11	Deliver	64.5	40	62.3	23	53.3	7	58.9	12	55.4	45	55.6	40	50.8	33	60.5	30	64.9	13	63.5	36	64	30	58.8	34	
12	Duster	74.5	22	57.7	34	26.9	48	58.5	13	59.2	40	67.2	10	53.4	29	65.0	23	55.9	29	83.8	3	76	13	61.7	20	
13	Endurance	68.4	36	68.1	7	35.7	44	63.1	4	65.4	18	58.1	35	68.6	8	72.3	13	80.6	2	79.5	6	85	2	67.3	5	
14	OK05737W	70.0	31	58.3	29	46.5	19	49.7	27	56.9	43	65.7	16	71.7	5	54.0	38	59.1	22	62.1	39	73	20	62.2	17	
15	Hatcher	87.5	4	55.3	40	34.9	45	43.3	35	65.7	17	69.1	4	43.1	44	50.4	44	52.9	34	75.8	9	85	3	60.0	27	
16	Ripper	60.4	42	54.1	43	37.2	38	49.1	30	67.4	11	59.3	30	68.2	9	28.6	48	48.7	41	57.9	45	59	37	55.5	41	
17	CO01385-A1	69.9	32	66.3	9	43.1	27	41.7	39	60.6	36	53.4	41	69.4	7	64.3	25	59.0	23	72.1	19	81	6	62.1	18	
18	TX99A0153-1	82.4	9	44.1	48	28.1	47	26.1	47	69.4	9	51.7	46	60.9	21	72.5	12	39.9	47	71.5	20	72	22	56.6	39	
19	TX01V5314	74.3	23	62.8	18	43.1	28	60.9	8	63.3	22	50.0	47	44.6	42	59.6	31	58.0	26	64.6	35	76	14	58.2	35	
20	VA92PAN2#26	78.2	16	70.3	5	57.6	2	69.4	1	71.5	5	63.0	21	65.6	11	66.5	22	75.4	6	75.7	10	74	19	69.2	3	
21	KS03HW73	71.3	29	63.2	14	36.1	43	51.5	24	50.7	48	53.1	42	50.7	34	50.5	43	55.5	30	65.0	33	63	32	55.3	43	
22	KS03HW82	84.5	7	61.0	25	36.2	40	53.1	21	59.4	38	59.1	31	62.9	15	50.9	42	64.2	14	62.0	40	85	4	61.9	19	
23	ARS03-3725	56.8	47	54.3	42	42.3	29	46.2	32	62.7	28	56.3	38	52.3	30	71.2	15	53.5	33	59.2	44	71	23	56.8	38	
24	ARS03-3747	93.8	2	63.1	16	37.7	37	30.1	46	66.2	16	61.2	26	48.2	37	83.4	3	60.5	21	82.8	4	98	1	64.5	14	
25	ARS03-3806	58.6	45	62.6	22	55.1	4	52.3	23	70.3	7	63.3	19	67.2	10	69.5	17	62.7	16	74.6	12	77	11	65.2	9	
26	ARS03-4299	75.6	20	55.5	39	43.8	25	47.5	31	62.9	25	64.9	17	44.2	43	71.5	14	50.5	37	74.7	11	52	45	58.2	36	
27	ARS03-4736	78.3	15	63.1	17	39.4	34	61.2	7	73.5	3	67.2	9	70.5	6	77.0	7	47.1	42	73.6	15	63	33	65.8	7	
28	ARS03-4769	73.9	24	52.0	46	46.4	20	42.0	37	57.5	41	51.9	45	49.9	35	60.7	29	58.4	25	60.8	42	59	38	55.3	44	
29	ARS03-4813	58.9	44	60.9	26	51.6	11	38.7	41	56.3	44	60.0	29	60.2	22	61.5	27	66.2	11	70.8	21	59	39	59.1	33	
30	ARS03-6180	72.1	27	57.4	35	51.6	10	32.6	44	62.4	30	60.1	28	61.6	18	77.0	6	57.3	27	68.4	26	71	24	61.3	24	
31	ARS03-6198	82.3	10	58.2	30	40.9	30	56.6	17	69.2	10	68.7	6	63.6	14	79.8	5	52.1	36	74.5	13	60	36	64.8	12	
32	ARS03-6201	78.4	14	54.1	44	45.0	23	42.8	36	63.1	24	56.2	39	45.9	41	76.7	8	39.9	48	72.8	18	53	44	56.5	40	
33	ARS04-1249	71.7	28	62.7	20	51.4	12	41.7	40	66.6	13	67.1	11	71.9	4	55.1	36	62.5	17	72.8	17	75	17	64.8	13	
34	ARS04-1267	85.1	6	64.7	10	44.3	24	59.4	11	64.7	20	70.7	2	54.2	28	61.3	28	56.1	28	65.4	32	69	27	63.4	15	
35	ARS05-0242	84.5	8	63.9	12	52.4	8	60.7	10	66.3	14	67.0	12	55.9	26	85.0	2	71.3	7	81.0	5	59	40	67.2	6	
36	ARS05-1025	67.2	39	74.4	2	47.5	18	45.3	33	62.9	27	58.4	34	36.5	47	53.1	40	65.1	12	57.6	47	55	43	55.5	42	
37	ARS05-1034	63.0	41	54.8	41	51.4	13	36.5	43	56.9	42	62.6	23	33.2	48	68.7	19	46.4	44	57.8	46	51	46	52.5	48	
38	ARS05-1044	73.7	25	64.0	11	40.4	31	52.5	22	69.9	8	58.0	36	62.9	16	73.0	10	46.5	43	63.1	38	56	42	60.4	25	
39	ARS05-1053	60.1	43	58.4	28	54.5	6	36.8	42	59.6	37	64.5	18	47.1	39	56.5	34	62.0	19	66.1	29	64	31	57.3	37	
40	ARS05-1061	82.2	11	49.6	47	30.9	46	41.8	38	53.7	46	68.2	7	41.2	45	48.8	45	45.9	45	63.1	37	61	35	53.8	47	
41	ARS05-1073	69.1	33	56.6	38	48.0	17	63.2	3	61.9	32	66.7	14	51.5	32	70.6	16	49.6	40	73.3	16	79	7	62.5	16	
42	ARS05-1094	77.2	18	63.6	13	45.4	21	50.9	25	62.5	29	58.6	33	63.8	13	67.7	21	52.5	35	56.1	48	76	15	61.6	21	
43	ARS05-1101	67.5	38	52.3	45	39.4	33	53.4	20	53.3	47	66.9	13	72.4	2	53.6	39	50.2	38	64.8	34	76	16	59.3	32	
44	ARS05-1179	93.5	3	57.2	36	43.3	26	50.3	26	62.3	31	71.6	1	58.1	24	58.7	32	70.6	8	68.7	24	78	9	65.1	10	
45	ARS05-1234	57.0	46	70.9	4	49.6	15	25.5	48	61.5	33	66.4	15	61.5	19	44.1	46	58.6	24	66.2	28	84	5	59.8	28	
46	ARS05-1267	53.9	48	56.7	37	38.1	36	55.7	19	66.3	15	52.8	43	80.7	1	54.6	37	67.2	10	70.8	22	65	29	61.5	22	
47	ARS05-1279	75.5	21	63.2	15	49.0	16	31.9	45	61.5	34	60.7	27	58.9	23	72.9	11	42.6	46	74.3	14	62	34	59.7	30	
48	ARS05-1326	71.2	30	59.8	27	38.7	35	56.4	18	71.3	6	62.8	22	47.7	38	58.5	33	61.8	20	68.4	25	66	28	59.8	29	
	Mean	73.8		60.9		44.3		50.1		63.9		61.4		56.8		63.8		59.7		69.5		69		61.1		
	CV (%)	12.3		13.0		19.5		16.1		8.5		11.8		9.8				7.8		9.5		13		14.5		
	LSD (0.05)	18.3		14.5		14.2		16.3		10.9		14.5		11.2				7.8		8.9		19		6.8		
	R ²											0.59		0.87											0.52	

Entry	Designation	TEST WEIGHT (lb/bu)														12-location mean
		Plains GA	Lexington KY	Schochoh KY	Clarksville MD	Wye MD	L' Springs NC	Pilot Mtn NC	Salisbury NC	Dallas TX	Blacksburg VA	Warsaw VA	Pullman WA			
1	AGS 2000	61.4	54.1	55.5	61.7	59.5	55.7	61.0	61.3	57.2	57.6	62.3	61.8	59.0		
2	Hondo	61.1	57.7	58.9	61.8	61.6	55.2	61.7	62.8	52.2	60.4	62.8	61.1	59.8		
3	Jagalene	62.7	57.9	58.7	62.4	62.0	58.9	60.8	63.9	54.7	59.4	63.9	63.9	61.0		
4	Jagger	61.6	56.9	57.2	62.2	59.3	58.8	60.4	62.2	51.5	58.0	62.1	63.1	59.6		
5	Lakin	61.0	57.2	58.6	62.2	62.0	55.1	60.6	62.4	55.2	60.8	63.8	58.6	59.6		
6	Neuse	59.0	56.5	57.4	63.7	60.5	56.6	62.2	62.0	56.7	60.6	62.7	57.3	59.5		
7	Roane	58.6	55.6	55.9	62.1	60.7	58.0	61.1	62.0	57.8	61.1	62.7	62.6	59.8		
8	TAM 303	59.4	54.7	56.4	61.4	60.4	55.8	60.3	60.6	55.8	57.7	62.2	60.0	58.5		
9	Tribute	61.8	58.3	59.4	61.9	61.1	60.0	62.4	64.0	56.6	62.0	64.4	60.3	61.0		
10	OK Bullet	60.4	59.4	59.5	62.0	61.1	55.3	62.2	63.7	57.8	61.5	63.5	62.9	60.8		
11	Deliver	61.4	57.5	58.3	62.8	61.5	58.2	59.8	61.8	57.1	60.7	63.4	62.3	60.4		
12	Duster	60.8	57.2	53.7	62.4	60.1	53.8	61.0	63.5	55.7	56.7	63.8	63.7	59.7		
13	Endurance	59.8	55.2	54.6	61.0	60.0	53.9	60.2	63.1	55.7	58.8	63.4	62.7	59.1		
14	OK05737W	59.2	57.2	57.5	60.8	61.3	54.4	59.9	61.0	52.6	59.6	62.1	62.6	58.9		
15	Hatcher	61.7	55.2	56.3	61.9	59.9	59.4	60.1	61.3	53.6	55.6	62.3	61.9	59.1		
16	Ripper	57.1	54.1	55.0	61.6	59.9	51.7	59.6	58.3	47.2	56.4	60.5	60.1	56.7		
17	CO01385-A1	60.8	56.1	55.6	61.2	62.2	55.7	60.5	63.2	56.3	57.9	62.9	63.5	59.8		
18	TX99A0153-1	58.9	53.4	54.3	59.9	51.9	57.5	59.5	61.7	53.9	53.8	62.2	63.1	57.9		
19	TX01V5314	60.5	55.6	56.6	60.8	58.5	54.8	58.5	60.9	54.0	58.0	60.4	59.7	58.2		
20	VA92PAN2#26	58.7	53.9	55.3	60.5	56.4	55.6	62.1	60.8	52.8	57.5	62.0	60.3	57.8		
21	KS03HW73	60.7	58.6	59.2	63.3	62.0	59.3	58.8	62.0	52.9	62.0	63.3	62.1	60.5		
22	KS03HW82	60.1	55.4	57.5	61.9	59.4	54.5	58.7	60.4	50.4	58.4	61.9	62.1	58.5		
23	ARS03-3725	60.4	54.4	57.1	63.0	63.0	56.6	62.3	60.7	55.6	60.3	62.2	62.6	59.5		
24	ARS03-3747	58.5	51.3	51.4	62.7	55.4	53.5	62.4	59.8	55.6	52.2	61.9	59.3	56.8		
25	ARS03-3806	60.0	55.9	58.1	61.6	62.1	56.4	59.1	58.8	54.9	59.9	61.3	61.8	58.8		
26	ARS03-4299	60.5	57.4	58.0	61.4	60.0	55.3	60.3	61.4	56.9	58.1	62.9	61.3	59.4		
27	ARS03-4736	61.9	60.1	59.1	64.5	61.7	58.5	62.2	58.3	59.7	64.0	61.7	61.1	61.1		
28	ARS03-4769	60.2	57.0	58.3	61.8	60.2	58.1	57.0	61.7	55.4	60.9	62.4	61.5	59.9		
29	ARS03-4813	57.0	52.2	53.9	60.0	60.7	51.5	58.8	59.1	52.9	58.7	59.8	56.9	56.6		
30	ARS03-6180	60.5	55.3	58.5	62.3	61.5	56.9	60.1	60.0	56.2	59.3	60.9	61.3	59.0		
31	ARS03-6198	61.6	59.8	58.9	62.4	62.6	58.4	63.1	59.4	61.0	63.9	62.3	61.2	61.2		
32	ARS03-6201	59.5	54.8	56.5	60.7	58.4	56.7	60.7	61.5	55.7	58.0	61.3	58.4	58.5		
33	ARS04-1249	59.6	56.5	58.3	61.2	59.9	55.7	61.1	62.6	49.5	59.9	62.7	62.6	59.1		
34	ARS04-1267	62.4	59.2	59.7	61.9	53.2	56.4	59.7	62.5	52.5	60.8	63.4	61.9	59.7		
35	ARS05-0242	60.6	55.9	55.7	62.7	58.9	54.1	59.9	60.9	57.8	57.9	62.3	59.3	59.0		
36	ARS05-1025	61.3	53.7	59.8	62.6	62.3	59.0	61.8	61.7	56.2	61.3	63.1	62.0	60.2		
37	ARS05-1034	61.4	60.2	61.1	61.8	63.9	60.3	60.1	63.1	53.4	61.1	64.1	62.9	61.2		
38	ARS05-1044	60.4	58.1	59.7	62.5	61.4	57.2	59.6	63.0	54.0	58.4	62.8	58.1	59.6		
39	ARS05-1053	58.3	54.7	57.6	61.1	61.4	53.0	60.9	61.6	51.0	60.4	61.8	60.1	58.4		
40	ARS05-1061	61.1	56.2	57.2	61.7	60.9	58.7	61.1	63.4	49.7	57.9	62.8	63.1	59.6		
41	ARS05-1073	59.7	55.1	58.0	61.4	61.5	58.0	61.3	62.5	52.3	58.1	62.1	62.1	59.3		
42	ARS05-1094	58.8	56.7	57.4	61.6	61.4	56.6	62.6	62.6	52.3	59.5	62.4	61.8	59.4		
43	ARS05-1101	59.7	55.5	58.3	61.9	59.7	57.8	61.2	61.5	50.0	57.9	62.3	62.5	59.0		
44	ARS05-1179	62.1	57.5	58.7	61.8	61.8	57.6	61.1	60.4	55.7	59.8	62.3	62.8	60.0		
45	ARS05-1234	56.9	57.3	58.3	60.7	59.7	58.2	60.8	59.7	51.8	59.6	62.5	61.9	58.8		
46	ARS05-1267	58.9	56.6	56.5	63.4	62.6	60.1	58.7	61.7	55.3	61.8	63.9	62.9	60.5		
47	ARS05-1279	59.5	57.8	60.7	62.4	60.3	54.0	61.3	60.8	54.7	58.4	62.3	61.3	59.3		
48	ARS05-1326	60.9	54.7	55.3	63.1	60.4	54.9	58.3	61.8	55.6	56.6	62.1	62.1	58.8		
	Mean	60.2	56.3	57.4	61.8	60.3	56.4	60.4	61.7	54.4	59.0	62.5	61.5	59.3		
	CV (%)		3.7	3.5	2.3	3.6		0.9	2.1		1.6	0.5	4.3	2.4		
	LSD (0.05)		4.2	3.3	2.9	4.4		1.1	2.6		1.5	0.4		1.1		
	R ²							0.92	0.68					0.78		

DAYS TO HEADING (JULIAN)

Entry	Designation	Plains	Lexington	Clarksville	Wye	Kinston	Pilot Mtn	Blacksburg	Warsaw	Pullman	8-location
		GA	KY	MD	MD	NC	NC	VA	VA	WA	mean
1	AGS 2000	88	130	134	125	97	114	128	115	154	120
2	Hondo	103	132	138	134	112	125	134	128	152	129
3	Jagalene	94	131	133	126	107	114	128	118	152	122
4	Jagger	86	129	129	123	96	112	126	115	145	117
5	Lakin	107	130	134	129	108	119	131	119	149	125
6	Neuse	Late	133	136	131	111	121	132	124	153	127
7	Roane	Late	130	136	131	112	120	131	123	150	126
8	TAM 303	98	130	132	127	108	115	127	117	146	122
9	Tribute	95	130	134	127	107	116	130	118	147	123
10	OK Bullet	105	132	132	128	108	114	130	120	146	124
11	Deliver	107	131	136	132	110	119	132	123	150	126
12	Duster	98	130	133	128	108	115	130	119	151	123
13	Endurance	103	129	134	129	109	119	130	120	149	125
14	OK05737W	103	132	133	128	109	118	130	120	145	124
15	Hatcher	91	128	133	124	.	115	128	116	147	121
16	Ripper	103	136	136	131	.	124	132	124	148	127
17	CO01385-A1	107	131	133	130	.	121	131	119	150	126
18	TX99A0153-1	98	134	135	128	109	120	129	119	147	124
19	TX01V5314	93	130	131	125	106	117	129	118	149	122
20	VA92PAN2#26	Late	132	136	131	111	121	132	121	152	126
21	KS03HW73	107	133	135	131	112	122	132	123	149	127
22	KS03HW82	93	131	133	128	109	121	130	118	147	124
23	ARS03-3725	Late	133	137	133	112	122	133	123	149	127
24	ARS03-3747	92	131	135	126	102	120	130	116	149	122
25	ARS03-3806	104	134	137	132	111	120	133	123	153	127
26	ARS03-4299	105	135	135	130	110	116	130	119	150	125
27	ARS03-4736	101	134	132	127	109	117	129	120	147	124
28	ARS03-4769	100	131	132	127	109	116	128	118	147	123
29	ARS03-4813	Late	132	136	132	112	122	132	123	150	127
30	ARS03-6180	99	133	136	131	111	120	132	119	152	126
31	ARS03-6198	101	134	133	129	109	119	129	119	147	124
32	ARS03-6201	92	130	129	123	103	111	128	115	146	119
33	ARS04-1249	103	137	135	130	110	121	131	119	152	126
34	ARS04-1267	94	131	131	125	107	115	128	116	146	121
35	ARS05-0242	94	136	135	129	105	120	131	118	152	124
36	ARS05-1025	Late	130	135	128	110	116	131	119	146	124
37	ARS05-1034	Late	130	133	126	108	117	127	119	146	123
38	ARS05-1044	104	134	132	127	109	119	129	120	146	124
39	ARS05-1053	Late	135	138	133	116	125	134	125	147	129
40	ARS05-1061	91	132	131	125	104	114	127	115	145	120
41	ARS05-1073	103	130	131	126	108	115	128	118	147	123
42	ARS05-1094	104	136	133	129	109	123	130	122	146	126
43	ARS05-1101	104	131	131	127	109	120	129	120	146	124
44	ARS05-1179	87	130	130	123	99	113	125	115	146	118
45	ARS05-1234	Late	137	136	132	115	124	133	124	151	129
46	ARS05-1267	Late	133	135	131	114	123	132	124	146	127
47	ARS05-1279	100	135	132	126	107	114	127	117	147	122
48	ARS05-1326	Late	131	136	131	110	121	131	122	152	126
	Mean	99	132	134	128	108	118	130	120	149	124
	CV (%)			8	11	1	1	1	1	1	2
	LSD (0.05)			2	2	3	3	2	1		2
	R ²					0.94	0.94				0.97

		HEIGHT (in)									
Entry	Designation	Plains GA	Lexington KY	Clarksville MD	Wye MD	Pilot Mtn NC	Salisbury NC	Blacksburg VA	Warsaw VA	8-location mean	
1	AGS 2000	34	32	29	37	33	32	33	29	33	
2	Hondo	39	31	36	40	34	35	32	31	34	
3	Jagalene	34	29	33	36	28	31	32	29	32	
4	Jagger	34	27	35	35	30	30	32	28	31	
5	Lakin	39	31	37	38	29	35	37	32	35	
6	Neuse	34	28	33	37	34	35	32	32	32	
7	Roane	35	26	31	36	33	32	33	28	31	
8	TAM 303	36	28	35	37	34	36	33	30	33	
9	Tribute	31	27	27	34	34	32	31	28	30	
10	OK Bullet	39	31	38	39	32	39	36	32	35	
11	Deliver	32	30	36	37	30	38	33	32	34	
12	Duster	37	29	36	37	27	36	32	31	34	
13	Endurance	37	31	37	38	29	40	36	34	35	
14	OK05737W	37	29	35	39	33	38	35	33	35	
15	Hatcher	33	28	28	34	33	32	34	30	31	
16	Ripper	36	31	34	38	33	36	33	29	34	
17	CO01385-A1	33	28	31	35	36	34	32	30	31	
18	TX99A0153-1	31	26	27	35	31	32	29	29	30	
19	TX01V5314	33	31	35	36	33	31	32	29	31	
20	VA92PAN2#26	32	28	31	35	29	31	32	30	31	
21	KS03HW73	35	31	33	36	28	34	33	31	32	
22	KS03HW82	37	31	36	39	31	34	35	34	34	
23	ARS03-3725	38	30	34	39	34	33	32	41	34	
24	ARS03-3747	36	33	29	38	30	36	34	34	34	
25	ARS03-3806	33	30	35	38	32	35	35	31	34	
26	ARS03-4299	38	33	31	40	33	36	34	34	35	
27	ARS03-4736	39	30	37	38	30	39	32	32	35	
28	ARS03-4769	38	31	34	40	31	41	35	33	36	
29	ARS03-4813	30	30	28	35	31	34	34	31	32	
30	ARS03-6180	34	29	31	38	31	36	35	32	33	
31	ARS03-6198	41	33	37	39	31	38	34	32	36	
32	ARS03-6201	32	29	27	34	33	31	32	29	31	
33	ARS04-1249	33	29	29	36	34	34	33	32	32	
34	ARS04-1267	32	29	35	35	29	32	31	31	33	
35	ARS05-0242	29	26	30	34	35	29	32	29	29	
36	ARS05-1025	36	29	35	38	31	36	37	33	35	
37	ARS05-1034	39	35	32	42	31	38	33	34	36	
38	ARS05-1044	40	32	37	38	33	36	32	33	35	
39	ARS05-1053	34	29	30	37	31	30	34	31	32	
40	ARS05-1061	32	30	33	37	29	31	31	31	32	
41	ARS05-1073	36	29	35	36	29	35	32	30	33	
42	ARS05-1094	36	31	32	36	30	32	32	29	33	
43	ARS05-1101	37	30	34	35	30	33	32	30	32	
44	ARS05-1179	31	31	30	37	32	32	34	31	32	
45	ARS05-1234	32	32	34	37	28	32	35	33	33	
46	ARS05-1267	34	32	38	37	28	35	35	33	34	
47	ARS05-1279	35	32	30	39	31	38	33	33	34	
48	ARS05-1326	42	33	37	39	34	36	36	35	36	
	Mean	35	30	33	36	31	35	33	31	33	
	CV (%)			7	3	6	5	4	7	6	
	LSD (0.05)			5	2	4	3	2	3	2	
	R ²					0.75	0.85			0.68	

		LODGING									
Entry	Designation	Plains	Lexington	Pilot Mtn	Salisbury	Blacksburg	Warsaw	2-location	4-location		
		GA %	KY %	NC 0-9	NC 0-9	VA 0.2-10.0*	VA 0.2-10.0*	mean 0.2-10.0*	mean 0.2-10.0*	mean 0-9	mean 0-9
1	AGS 2000	0	0	2	0	2.0	0.2	1.1	0		
2	Hondo	0	0	2	3	2.9	0.5	1.7	1		
3	Jagalene	0	0	6	0	0.9	0.2	0.6	0		
4	Jagger	50	0	5	1	2.0	0.2	1.1	2		
5	Lakin	0	0	2	1	0.2	1.5	0.9	2		
6	Neuse	0	0	2	0	0.5	0.2	0.4	0		
7	Roane	0	0	3	2	3.3	0.2	1.8	2		
8	TAM 303	0	0	1	3	3.0	0.3	1.7	2		
9	Tribute	0	0	2	0	1.5	0.5	1.0	0		
10	OK Bullet	0	0	2	0	0.5	0.2	0.4	0		
11	Deliver	70	0	1	1	1.7	1.0	1.4	2		
12	Duster	0	0	1	6	6.7	1.7	4.2	2		
13	Endurance	0	0	4	4	1.5	0.3	0.9	3		
14	OK05737W	0	0	7	1	0.5	0.2	0.4	1		
15	Hatcher	0	0	3	3	1.5	1.1	1.3	2		
16	Ripper	0	0	2	0	0.7	0.2	0.5	1		
17	CO01385-A1	0	0	6	3	0.8	0.2	0.5	1		
18	TX99A0153-1	0	0	1	1	1.3	0.4	0.9	0		
19	TX01V5314	0	0	1	2	1.8	0.2	1.0	0		
20	VA92PAN2#26	0	0	1	0	0.9	0.2	0.6	0		
21	KS03HW73	0	0	2	1	0.3	0.2	0.3	0		
22	KS03HW82	0	0	9	3	0.6	0.5	0.6	1		
23	ARS03-3725	0	0	6	1	1.7	1.5	1.6	0		
24	ARS03-3747	20	0	2	2	2.0	0.7	1.4	2		
25	ARS03-3806	0	0	5	1	1.9	0.2	1.1	0		
26	ARS03-4299	0	15	2	0	3.2	1.9	2.6	2		
27	ARS03-4736	0	0	2	3	1.6	1.0	1.3	1		
28	ARS03-4769	0	0	4	2	0.6	0.2	0.4	1		
29	ARS03-4813	0	0	5	3	0.9	1.5	1.2	2		
30	ARS03-6180	0	0	3	3	3.9	0.5	2.2	1		
31	ARS03-6198	0	0	4	2	1.3	1.5	1.4	1		
32	ARS03-6201	0	0	7	1	1.2	0.2	0.7	1		
33	ARS04-1249	0	0	2	0	0.9	0.2	0.6	0		
34	ARS04-1267	0	0	6	1	2.7	0.2	1.5	1		
35	ARS05-0242	0	0	8	0	0.5	0.2	0.4	0		
36	ARS05-1025	0	0	1	0	0.4	0.5	0.5	0		
37	ARS05-1034	0	0	1	0	3.7	1.5	2.6	2		
38	ARS05-1044	0	0	2	2	4.5	1.6	3.1	3		
39	ARS05-1053	0	0	2	0	0.5	0.2	0.4	0		
40	ARS05-1061	0	0	2	2	5.7	0.5	3.1	1		
41	ARS05-1073	0	0	1	1	1.6	1.6	1.6	2		
42	ARS05-1094	0	0	1	0	1.9	0.4	1.2	2		
43	ARS05-1101	0	0	3	2	3.7	2.5	3.1	2		
44	ARS05-1179	40	0	1	0	1.4	0.2	0.8	1		
45	ARS05-1234	0	0	1	2	3.0	0.2	1.6	1		
46	ARS05-1267	0	0	0	3	0.4	0.2	0.3	1		
47	ARS05-1279	0	0	1	2	1.9	0.8	1.4	1		
48	ARS05-1326	0	0	5	1	2.4	1.7	2.1	3		
	Mean	4	0	3	1	1.8	0.7	1.3	1		
	CV (%)			49	127	60.1	117.6	72.9	155		
	LSD (0.05)			3	3	1.8	1.1	1.8	2		
	R ²			0.83	0.60			0.73	0.43		

*Belgian Lodging Scale = Area x Intensity x 0.2 [Area is rated on a scale from 1 (plot unaffected) to 10 (entire plot affected). Intensity is rated on a scale from 1 (plants standing upright) to 5 (plants lying flat on the ground)].

Entry	Designation	DISEASE																							
		BYDV				LRIT*			Leaf Rust				Powdery Mildew				SBMV		Stripe Rust IT*				Stripe Rust		
		Plains GA 0-9	Salisbury NC 0-9	Blacksville VA 0-9	Warsaw VA 0-9	4-location mean 0-9	Kinston NC 1-9	Plains GA 0-9	Kinston NC 0-9	Castroville TX 0-9	Warsaw VA 0-9	4-location mean 0-9	Plains GA 0-9	Kinston NC 0-9	Blacksburg VA 0-9	Warsaw VA 0-9	4-location mean 0-9	Clarksville MD %	Kinston NC 0-9	L' Springs NC 1-9	Pullman WA 1-9	2-location mean 1-9	L' Springs NC %	Pullman WA %	2-location mean %
1	AGS 2000	0	3	2	1	1	4	TR	2	1	3	2	2	1	0	0	1	70	7	6	2	5	65	5	44
2	Hondo	5	2	4	2	3	6	1	6	9	6	5	0	1	0	1	1	25	5	9	4	7	80	10	56
3	Jagalene	3	8	3	2	4	5	3	4	9	4	4	7	9	6	8	7	15	8	2	2	2	1	3	1
4	Jagger	3	6	4	1	3	5	4	5	9	4	5	7	4	3	7	5	35	7	1	1	1	1	3	1
5	Lakin	3	4	2	1	2	7	3	8	9	5	6	5	7	3	3	4	10	7	7	7	7	65	30	53
6	Neuse	3	3	1	1	2	3	2	2	1	1	1	0	2	0	0	0	3	7	8	8	8	60	60	59
7	Roane	1	3	1	1	1	3	2	2	1	4	2	0	2	2	2	1	5	6	6	4	5	20	10	16
8	TAM 303	1	1	2	1	1	3	0	1	1	3	1	TR	0	0	0	0	30	8	4	5	4	21	15	18
9	Tribute	2	3	2	2	2	6	0	6	1	2	3	0	3	0	0	1	75	8	5	5	5	30	10	23
10	OK Bullet	6	5	5	3	5	5	0	4	1	3	2	5	5	5	7	6	15	7	3	2	3	1	5	2
11	Deliver	5	7	8	2	6	4	0	3	1	4	2	3	4	0	2	2	50	4	2	2	2	1	5	2
12	Duster	0	4	5	1	2	3	0	1	1	4	1	3	3	2	1	2	15	6	4	4	4	30	15	24
13	Endurance	2	0	1	2	1	2	0	1	1	4	1	4	3	0	3	2	25	4	4	2	3	15	5	11
14	OK05737W	1	4	3	3	3	5	0	6	1	3	3	5	3	4	5	4	20	7	2	2	2	1	5	2
15	Hatcher	2	8	7	1	4	.	1	.	9	5	5	4	.	0	0	1	90	.	6	2	4	16	10	15
16	Ripper	4	5	4	1	4	.	3	.	9	7	7	7	.	5	7	6	35	.	7	7	7	35	40	36
17	CO01385-A1	4	6	4	2	4	.	0	.	1	4	2	3	.	0	0	1	60	.	5	3	4	21	5	15
18	TX99A0153-1	2	4	3	1	2	4	0	4	1	4	2	0	3	0	1	1	85	8	3	2	2	11	5	8
19	TX01V5314	2	5	2	3	3	6	0	7	1	3	3	6	7	3	8	6	8	7	2	2	2	1	5	2
20	VA92PAN2#26	3	2	3	3	3	5	2	4	1	4	3	4	4	2	3	3	20	7	5	3	4	8	10	8
21	KS03HW73	5	8	6	2	5	2	0	1	1	3	1	4	1	0	2	2	45	8	2	2	2	1	5	2
22	KS03HW82	3	6	3	2	3	1	0	0	1	3	1	3	1	1	1	2	30	5	2	1	1	1	3	1
23	ARS03-3725	2	5	2	1	2	1	0	1	1	3	1	0	0	0	0	0	50	6	2	8	4	1	40	13
24	ARS03-3747	2	5	5	1	3	8	2	9	1	4	5	0	1	0	0	0	80	7	3	5	4	1	10	3
25	ARS03-3806	4	3	3	1	3	7	0	8	1	3	4	0	2	0	0	1	35	8	1	1	1	1	3	1
26	ARS03-4299	TR	4	2	1	2	7	0	7	1	3	3	0	2	0	0	1	80	4	6	2	4	6	10	6
27	ARS03-4736	1	5	5	1	3	3	0	0	3	2	1	1	4	0	3	2	10	6	6	7	6	15	50	26
28	ARS03-4769	4	6	2	3	4	6	0	4	1	3	2	0	3	0	0	1	55	4	8	6	7	50	30	43
29	ARS03-4813	4	5	3	3	4	5	0	4	1	2	2	1	2	2	2	2	75	8	9	6	8	90	20	66
30	ARS03-6180	3	4	6	2	4	8	0	9	1	3	4	0	2	0	0	1	85	8	2	1	1	1	2	1
31	ARS03-6198	3	3	3	2	3	2	0	0	1	3	1	3	5	1	4	3	25	6	7	5	6	40	15	31
32	ARS03-6201	3	6	5	3	4	5	0	5	1	3	2	0	3	0	1	1	85	7	7	6	7	33	20	28
33	ARS04-1249	4	6	4	3	4	4	1	2	9	3	3	0	2	0	0	0	90	5	1	2	1	1	3	1
34	ARS04-1267	1	7	2	3	3	3	2	2	9	5	4	0	1	0	0	0	25	9	2	5	3	1	15	5
35	ARS05-0242	1	8	2	1	3	2	0	1	1	3	1	0	1	0	0	0	18	7	4	4	4	3	15	6
36	ARS05-1025	2	5	3	1	3	7	2	6	7	4	5	1	2	0	1	1	35	3	5	3	4	20	15	18
37	ARS05-1034	6	6	6	2	5	7	1	7	9	3	5	0	0	0	1	0	95	4	3	2	2	5	5	5
38	ARS05-1044	1	4	5	1	3	1	0	0	1	3	1	0	1	0	1	0	30	3	6	6	6	15	40	23
39	ARS05-1053	3	6	3	1	3	5	0	6	1	3	3	0	3	0	0	1	65	6	8	5	7	65	30	53
40	ARS05-1061	1	6	6	1	3	3	0	2	9	4	3	3	2	0	0	1	50	7	1	2	1	1	5	2
41	ARS05-1073	4	5	5	3	4	4	0	4	1	4	2	0	1	0	1	0	20	7	5	6	5	25	15	21
42	ARS05-1094	3	4	6	2	3	2	0	1	1	4	1	2	1	1	1	1	40	7	1	2	2	1	5	3
43	ARS05-1101	3	5	5	2	3	5	0	4	1	3	2	1	1	0	4	2	15	6	3	2	2	1	5	2
44	ARS05-1179	2	4	3	1	2	3	0	3	9	3	3	3	2	1	3	2	80	5	1	3	2	1	5	2
45	ARS05-1234	3	6	3	1	3	1	0	0	1	2	0	0	1	1	1	1	25	4	1	2	1	0	3	1
46	ARS05-1267	2	3	3	1	2	5	1	4	7	4	4	4	2	2	5	3	30	5	3	4	3	1	10	3
47	ARS05-1279	5	5	4	1	4	4	0	3	1	4	2	0	2	0	0	1	75	6	6	5	6	25	15	21
48	ARS05-1326	3	3	1	3	2	2	0	1	1	3	1	4	3	2	4	3	15	8	3	3	3	1	5	2
	Mean	3	4	4	2	3	4	1	3	3	3	3	2	2	1	2	2	43	6	4	4	4	18	14	16
	CV (%)		43	31	38	41	24		44	29	78	67		68	51	69	29	18	28		36	78		102	
	LSD (0.05)		4	2	1	2	2		3	1	3	3		1	1	2	25	2			2			27	
	R ²		0.65			0.53	0.89		0.87		0.52	0.74				0.74		0.78			0.78			0.66	

* Stripe Rust and Leaf Rust Infection Type = 1-9, 1=no lesions.

** Stripe Rust severity = % of plot infected.

Entry	Designation	Hessian Fly		Growth Habit			Freeze Damage		
		Kinston	Kinston	Pilot Mtn	Salisbury	3-location	Kinston	Salisbury	2-location
		NC 0-9	NC 0-9	NC 0-9	NC 0-9	mean 0-9	NC 0-9	NC 0-9	mean 0-9
1	AGS 2000	0	3	5	1	3	8	5	6
2	Hondo	1	8	3	6	7	0	0	0
3	Jagalene	4	6	7	3	5	3	5	4
4	Jagger	2	3	7	2	3	8	6	7
5	Lakin	5	8	7	7	7	1	4	2
6	Neuse	2	7	3	4	6	0	0	0
7	Roane	2	7	5	7	7	0	0	0
8	TAM 303	8	7	4	5	6	1	0	0
9	Tribute	6	8	3	6	7	0	2	1
10	OK Bullet	4	7	5	4	5	0	1	0
11	Deliver	3	9	6	7	7	0	2	1
12	Duster	5	8	7	3	5	0	1	0
13	Endurance	2	8	7	6	7	0	0	0
14	OK05737W	5	7	5	5	5	0	0	0
15	Hatcher	.	.	6	3	5	.	5	4
16	Ripper	.	.	4	5	6	.	0	0
17	CO01385-A1	.	.	4	6	7	.	1	0
18	TX99A0153-1	8	5	7	3	4	1	1	1
19	TX01V5314	4	6	6	3	5	4	5	4
20	VA92PAN2#26	4	8	7	7	7	0	0	0
21	KS03HW73	8	9	7	5	7	0	0	0
22	KS03HW82	3	8	7	6	7	1	0	0
23	ARS03-3725	5	9	5	8	8	0	1	0
24	ARS03-3747	3	4	5	0	3	6	6	6
25	ARS03-3806	8	9	6	6	7	0	0	0
26	ARS03-4299	2	8	5	5	6	0	1	0
27	ARS03-4736	4	8	7	3	5	0	0	0
28	ARS03-4769	3	8	8	4	6	0	0	0
29	ARS03-4813	6	9	6	7	8	0	0	0
30	ARS03-6180	8	8	7	6	7	0	1	0
31	ARS03-6198	3	7	5	4	5	0	1	0
32	ARS03-6201	3	7	6	3	5	7	6	6
33	ARS04-1249	3	7	5	6	6	0	0	0
34	ARS04-1267	8	8	8	4	5	2	3	3
35	ARS05-0242	5	5	6	0	4	5	6	5
36	ARS05-1025	1	8	4	6	6	0	3	2
37	ARS05-1034	3	9	7	6	6	0	4	2
38	ARS05-1044	1	7	5	4	6	0	0	0
39	ARS05-1053	4	9	6	7	8	0	2	1
40	ARS05-1061	5	6	7	3	4	4	3	4
41	ARS05-1073	6	8	7	5	6	1	3	2
42	ARS05-1094	4	5	7	4	5	4	1	2
43	ARS05-1101	3	8	5	6	7	1	0	1
44	ARS05-1179	1	6	6	3	5	8	3	6
45	ARS05-1234	1	8	6	6	7	0	0	0
46	ARS05-1267	6	8	6	5	7	0	0	0
47	ARS05-1279	3	8	6	4	6	1	3	2
48	ARS05-1326	6	8	5	6	7	0	3	1
	Mean	4	7	6	4	6	1	2	1
	CV (%)	47	13	14	16	20	54	67	80
	LSD (0.05)	3	2	2	1	1	1	2	2
	R ²	0.75	0.83	0.84	0.93	0.71	0.96	0.87	0.80

		FLOUR PROTEIN									GLUTEN		ZELENY		FALLING NUMBER							
		Plains	Lexington	L' Springs	Pilot Mtn	Salisbury	B'burg	Warsaw	7-location	Warsaw	Warsaw	Plains	Lexington	L' Springs	Pilot Mtn	Salisbury	B'burg	Warsaw	7-location			
		GA	KY	NC	NC	NC	VA	VA data	mean	VA	VA	GA	KY	NC	NC	NC	VA	VA	7-location			
Entry	Designation	%	%	%	%	%	%	%	%	%	%	s	s	s	s	s	s	s	s			
1	AGS 2000	14.33	12.38	14.45	13.90	14.84	12.87	13.5	13.80	27.4	46.4	530	518	422	431	537	492	502	490			
2	Hondo	16.14	15.28	14.80	15.97	15.13	14.93	14.0	15.17	28.1	53.2	436	459	435	509	525	519	445	486			
3	Jagalene	15.18	13.47	15.80	14.72	14.50	12.64	13.3	14.23	24.7	44.2	534	478	475	483	501	494	512	497			
4	Jagger	15.41	15.15	14.24	14.83	16.83	15.20	15.6	15.35	31.1	63.7	531	472	417	337	592	568	483	482			
5	Lakin	16.15	12.85	14.64	15.02	15.61	12.17	13.3	14.40	27.2	50.6	721	422	421	525	634	482	517	543			
6	Neuse	16.16	14.23	15.32	15.29	15.11	12.86	13.5	14.68	25.3	47.0	412	468	404	525	511	420	388	464			
7	Roane	15.08	13.89	12.24	14.25	13.98	12.47	12.2	13.51	24.3	35.9	458	556	422	581	538	493	428	512			
8	TAM 303	15.19	14.43	13.75	14.67	14.58	12.73	13.2	14.12	26.4	48.2	575	441	425	475	496	486	500	486			
9	Tribute	14.68	12.89	13.38	13.19	15.63	12.27	12.7	13.64	24.1	38.1	392	460	427	424	435	503	413	436			
10	OK Bullet	17.15	14.99	16.76	15.25	16.59	13.74	13.8	15.48	25.9	52.6	750	500	504	469	654	503	532	560			
11	Deliver	16.79	13.32	13.22	14.66	15.81	12.70	12.8	14.33	23.3	47.3	462	475	486	542	514	465	400	490			
12	Duster	15.88	13.20	15.91	15.28	14.73	13.11	12.2	14.39	22.6	35.6	614	364	448	410	500	555	564	486			
13	Endurance	15.26	13.38	14.42	12.95	13.69	11.59	12.1	13.25	22.4	35.2	588	444	535	464	471	475	458	487			
14	OK05737W	16.41	14.33	16.66	14.80	13.51	13.11	13.8	14.46	27.5	54.8	584	482	534	356	519	480	590	492			
15	Hatcher	15.12	12.89	11.87	13.30	15.05	13.03	12.9	13.52	24.7	35.3	548	544	429	496	522	530	427	503			
16	Ripper	15.49	14.42	17.71	13.44	14.70	13.75	13.2	14.45	26.8	45.1	444	502	541	440	520	503	487	490			
17	CO01385-A1	15.95	13.33	15.94	13.33	14.17	13.22	12.5	13.91	24.1	36.8	630	477	515	500	545	535	522	531			
18	TX99A0153-1	14.74	13.64	15.36	12.38	13.63	13.28	12.4	13.41	24.1	36.9	508	535	388	447	460	449	461	463			
19	TX01V5314	15.17	14.10	17.81	13.98	16.31	13.73	14.2	14.98	28.5	52.7	630	504	542	553	536	570	531	552			
20	VA92PAN2#26	15.89	14.38	13.29	14.71	15.61	13.31	14.3	14.56	27.7	57.7	590	574	411	600	540	448	538	539			
21	KS03HW73	15.95	13.07	16.78	14.11	15.28	12.85	13.5	14.46	28.3	55.8	613	370	273	264	475	450	505	411			
22	KS03HW82	13.98	13.93	14.98	14.04	14.17	12.59	12.8	13.77	24.0	44.9	469	373	461	440	539	461	456	465			
23	ARS03-3725	15.38	14.87	13.82	14.61	14.08	13.57	13.1	14.14	24.2	45.7	735	595	455	602	531	602	552	580			
24	ARS03-3747	14.56	13.39	12.66	13.68	15.19	13.68	12.0	13.70	23.6	37.2	446	458	438	500	512	451	443	475			
25	ARS03-3806	17.39	13.95	16.30	15.91	15.82	14.29	13.1	15.30	24.3	42.8	531	547	333	559	581	489	448	515			
26	ARS03-4299	15.29	14.34	15.78	14.96	16.90	13.03	13.4	14.98	26.3	50.7	611	429	466	473	604	483	525	520			
27	ARS03-4736	14.84	15.03	15.69	14.87	14.99	16.65	13.8	14.99	27.8	55.5	492	590	578	530	506	513	522	531			
28	ARS03-4769	15.57	14.24	15.38	13.12	15.40	13.14	14.6	14.35	29.6	62.4	640	467	432	492	512	478	559	510			
29	ARS03-4813	18.50	15.04	16.40	16.60	15.79	13.57	13.8	15.71	26.3	45.9	555	469	467	496	497	468	550	501			
30	ARS03-6180	15.84	15.64	15.69	16.24	16.94	14.49	14.4	15.73	27.8	54.7	538	529	339	471	526	524	493	492			
31	ARS03-6198	15.34	14.12	14.97	15.17	15.02	13.71	13.2	14.55	25.7	48.6	481	463	577	602	522	496	581	540			
32	ARS03-6201	13.65	14.07	13.27	15.49	14.70	14.16	14.8	14.39	29.1	60.6	491	452	411	449	496	485	427	463			
33	ARS04-1249	17.03	15.21	16.55	15.29	15.16	13.90	14.5	15.26	30.7	64.5	606	258	276	149	573	480	459	393			
34	ARS04-1267	16.49	15.00	16.39	16.87	16.74	15.24	15.9	16.16	33.7	74.4	622	470	536	325	657	548	624	530			
35	ARS05-0242	15.40	14.38	15.01	13.72	15.17	12.91	13.0	14.19	26.0	47.8	514	619	563	540	499	479	496	529			
36	ARS05-1025	17.11	13.26	14.93	15.58	17.52	13.98	15.7	15.60	33.2	70.6	676	424	570	287	610	512	557	505			
37	ARS05-1034	18.42	14.91	16.93	15.33	17.86	15.78	16.0	16.40	33.1	75.7	509	358	243	203	514	377	511	382			
38	ARS05-1044	15.12	14.97	13.85	14.93	14.94	14.33	13.5	14.52	27.4	56.8	444	419	408	252	482	542	456	416			
39	ARS05-1053	15.63	14.75	14.56	15.45	15.09	13.51	13.3	14.67	26.9	48.5	634	453	418	302	671	479	421	485			
40	ARS05-1061	14.86	14.63	15.44	14.90	15.33	14.36	13.1	14.67	26.3	46.7	546	500	628	406	580	588	561	534			
41	ARS05-1073	16.64	14.38	12.13	15.18	15.39	14.98	12.8	14.59	24.9	47.5	503	351	384	309	506	484	470	426			
42	ARS05-1094	16.19	15.53	14.27	15.31	14.87	15.49	14.1	15.02	29.8	60.7	482	499	477	415	486	489	485	472			
43	ARS05-1101	16.27	14.68	15.99	14.23	15.39	14.57	13.7	14.86	26.0	52.2	655	355	432	298	618	452	569	478			
44	ARS05-1179	16.04	13.88	14.82	15.31	16.05	12.87	15.3	14.99	32.1	67.9	528	403	370	302	494	476	464	427			
45	ARS05-1234	18.13	15.63	15.52	15.70	15.54	13.80	14.2	15.45	29.9	58.6	771	491	532	427	591	515	667	558			
46	ARS05-1267	16.63	14.62	14.67	14.25	14.48	12.89	12.9	14.26	26.7	50.9	492	581	454	431	606	439	497	505			
47	ARS05-1279	15.78	14.54	16.96	14.70	14.13	14.46	13.8	14.72	27.2	56.3	548	460	757	563	469	499	518	540			
48	ARS05-1326	15.17	13.78	15.03	13.95	16.54	12.94	12.4	14.39	24.4	41.0	789	666	557	582	654	612	612	635			
	Mean	15.82	14.22	15.05	14.69	15.30	13.63	13.6	14.61	26.9	50.9	560	473	459	442	538	497	503	496			
	CV (%)				6.17	3.44		4.3	6.19	6.0	8.9				17	13			16			
	LSD (0.05)				1.82	1.06		0.8	0.84	2.2	6.1				153	136			73			
	R ²				0.70	0.90			0.59						0.81	0.60			0.42			