

# WHEAT VARIETY CHALLENGE

## 2004-05

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**Location:** Edisto Research and Education Center, Barnwell Co. SC, Field B-5 Ab.

**Design:** RCB with six replicates; plot size 8 rows (8" spacing) x 40'

**Soil Type:** Dothan loamy sandy.

**Rotation:** 2004 strip-till corn; 2003 peanut, fallow; 2002 strip-till corn, fallow; 2001 wheat, fallow.

### Planting

**Date:** 18 Nov 2004

### Seeding

**Rate:** 24 seed / row foot

### General

**Fertility:** 30 lbs./acre N (11.3 gal S-25) was applied 22 Nov and 70 lbs./acre N (26.4 gal S-25) was applied 11 Feb (GS 23). Total N = 100 lbs./acre, total S = 14 lbs./acre.

**Herbicide:** 0.33 oz Express 75DF was applied 12 Jan.

**Insecticide:** Warrior T (3.87 oz /ac) applied 15 Feb.

**Methods:** Three replicates were treated with fungicide (Headline 6 oz/ac 6 April (GS 40), 10 GPA, TX 8 hollow cone nozzles) and three were left untreated.

Tan spot was rated 10 May by counting lesions on 10 flag leaves per plot from the untreated replicates (2 observers, 5 leaves each). No other disease symptoms were observed season-long.

Wheat maturity was determined by examining representative plants from one replicate. Heights were measured from one representative location per plot. The inner six rows of each 8-row plot were harvested 8 June with an Almaco plot combine. Yield samples were weighed on an electronic balance. Test weight was taken by funneling a sub-sample of grain through a Seedburo No. 151 filling hopper and weighing one dry pint of grain on an electronic scale. Grain moisture content was measured with a Burrows DMC-700 moisture meter. All yields were adjusted to 12.0 % moisture before analysis.

**Analysis:** ANOVA, using SAS PROC GLM and Fisher's protected LSD ( $P=0.05$ ).

**Notes:** Test weight was affected by late season rainfall and delayed harvest. Prolonged cloudy, humid conditions after maturity resulted in approximately 10% sprouts at harvest. Natural senescence, accelerated by hot, dry conditions shortly after disease rating 10 May possibly reduced tan spot effects.

**Table 1. Wheat varietal characteristics, yield and test weight. Blackville, SC 2004-05.**

Variety	Joint Date	Head Date	Maturity Date	Pl. Hgt. cm	Awns ?	Overall		Untreated Replicates		Fungicide Treated Replicates.		Fungicide Treatment Response		Tan Spot
						Yield bu/ac	Test wt. lb/bu	Yield bu/ac	Test wt. lb/bu	Yield bu/ac	Test wt. lb/bu	Yield bu/ac	TW lb/bu	Lesions/FL 10 May
USG 3209	6-Mar	13-Apr	28-May	88	no	93.6	56.6	92.2	56.8	95.1	56.5	2.9	(0.3)	6.4
Vigoro McIntosh	8-Mar	13-Apr	28-May	102	no	92.5	57.1	90.3	57.0	94.7	57.2	4.4	0.2	9.5
Agri Pro Panola	14-Mar	14-Apr	28-May	100	yes	91.5	53.9	90.5	54.0	92.5	53.8	2.0	(0.2)	17.0
Pioneer 26R12	20-Mar	17-Apr	1-Jun	98	yes	90.0	58.0	87.9	57.9	92.2	58.1	4.3	0.2	4.4
AGS 2000	9-Mar	12-Apr	27-May	98	yes	89.4	57.0	88.4	57.1	90.4	57.1	2.0	0	21.1
Pioneer 26R61	6-Mar	12-Apr	29-May	107	yes	88.3	57.0	84.6	56.6	91.9	57.4	7.3	0.8	10.7
APW 749	10-Mar	11-Apr	28-May	99	yes	88.0	56.8	89.1	57.0	86.9	56.7	(2.2)	(0.3)	13.3
Coker 9375	13-Mar	15-Apr	28-May	102	no	87.2	52.6	88.7	52.6	85.8	52.5	(2.9)	(0.1)	10.1
Pioneer 26R38	6-Mar	13-Apr	28-May	102	yes	86.5	55.9	86.1	55.4	86.9	56.4	0.8	1.0	18.5
APW 742	7-Mar	12-Apr	27-May	98	yes	83.6	57.1	81.3	56.9	85.9	57.2	4.6	0.3	17.0
Pioneer 26R31	5-Mar	11-Apr	27-May	84	yes	83.2	50.9	81.1	51.1	85.3	50.8	4.2	(0.3)	5.6
B980582	13-Mar	14-Apr	27-May	97	no	82.4	57.3	78.4	57.2	86.4	57.4	8.0	0.2	14.0
AGS 2485	7-Mar	14-Apr	28-May	100	yes	81.7	57.9	81.4	57.1	81.9	58.8	0.5	1.7	5.0
Pioneer 2684	11-Mar	11-Apr	28-May	99	yes	81.3	55.7	79.1	55.3	83.5	55.9	4.4	0.6	16.4
Coker 9436	14-Mar	17-Apr	28-May	84	no	81.2	52.8	78.3	52.6	84.0	53.0	5.7	0.4	12.0
B980416	20-Mar	18-Apr	3-Jun	86	no	80.8	54.8	78.8	54.3	82.8	55.3	4.0	1.0	4.0
Vigoro Tribute	18-Mar	15-Apr	1-Jun	84	no	79.4	59.2	81.9	59.6	77.1	58.9	(4.8)	(0.7)	4.4
<b>mean</b>						<b>85.9</b>	<b>55.9</b>	<b>84.6</b>	<b>55.8</b>	<b>87.3</b>	<b>56.1</b>	<b>2.7</b>	<b>0.3</b>	<b>11.1</b>
<b>LSD (P=0.05)</b>						<b>5.3</b>	<b>0.8</b>	<b>8.1</b>	<b>0.9</b>	<b>7.5</b>	<b>1.4</b>			<b>7.3</b>

Planted 18 Nov; harvested 8 June.

Delayed harvest due to excessive rainfall caused approximately 10% spouts.

Three replicates were treated with Headline (6 oz /ac) 6 April (GS 40).

Tan spot was the only obvious disease season-long. Natural senescence, accelerated by hot, dry conditions shortly after rating 10 May possibly reduced tan spot effects.