

# WHEAT VARIETAL RESPONSE TO FUNGICIDE TREATMENT 2000-01

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**Location:** Edisto Research and Education Center, Barnwell Co. SC, Field B-6 B.

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

**Soil Type:** Varina sandy loam.

**Rotation:** 1996 corn/wheat; 1997 wheat/fallow; 1998 corn/fallow; 1999 peanut/fallow; 2000 strip-till corn/wheat; 2001 wheat.

**Seeding**

**Rate:** 24 seed / row foot

**General**

**Fertility:** 35 lb/acre P<sub>2</sub>O<sub>5</sub> + 100 lbs. K<sub>2</sub>O was applied in late October 2000. 30 lb/acre N (11.3 gal S-25) was applied 15 Dec (early post-emergence) and 70 lb/acre N (26.4 gal S-25) was applied 23 Feb (GS 23). Total N = 100 lb/acre, total S = 14 lb/acre.

**Herbicide:** 0.28 oz Express 75DF was applied with N on 23 Feb.

**Insecticide:** 3.87 oz. Warrior 1EC 5 Mar.

**Methods:** Quadris fungicide (7.7 oz/ac) was applied 5 Apr (boot stage, GS 47) with a tractor-mounted CO<sub>2</sub> pressurized sprayer delivering 20 gpa @ 30 psi through Tee Jet 11003 flat fan tips. The boom was shielded with Red Ball broadcast hoods to prevent drift. Disease ratings were taken by two observers May 1 (early soft dough, GS 80), each estimating disease affected area on F-1 and flag leaves by scanning approximately one row meter from two randomly selected areas of each plot. The inner six rows of each 8-row plot were harvested 1 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 13.5% moisture before analysis.

**Analysis:** ANOVA, using SAS PROC GLM.

Fisher's protected LSD was used for mean separation ( $P=0.05$ ).

**Table 1. Variety and fungicide treatment effects on disease incidence, yield, and test weight, Blackville, SC 2000-01.**

Variety	Fungicide* Treatment	Tan spot ** % area affected (F-1 leaf) 1 May	PM % area affected (F-1 leaf) 1 May	Yield bu/ac	Test weight lb/bu
Pioneer 2684	7.7 oz Quadris	4.6 b	0 b	101 a	59.7 a
Pioneer 2684	None	16.3 a	0 b	101 a	59.7 a
AGS 2000	7.7 oz Quadris	0.8 c	0 b	100 ab	59.6 a
AGS 2000	None	2.6 bc	0 b	99 ab	59.7 a
Coker 9835***	7.7 oz Quadris	0 c	0.7 b	97 b	56.6 c
Coker 9835***	None	0.9 c	2.7 a	92 c	55.9 d
Pioneer 26R61	7.7 oz Quadris	0 c	0 b	90 c	58.6 b
Pioneer 26R61	None	0.6 c	0 b	88 c	58.5 b

Yield LSD = 4.0 bu/ac ( $P=0.05$ ); Test weight LSD = 0.4 lb/bu.

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Means followed by the same letter are not significantly different, Fisher's protected LSD ( $P=0.05$ ).

Planted 30 Nov 2000; harvested 1 Jun 2001.

\* Fungicide treatment was applied 5 Apr prior to head emergence (boot stage). Disease ratings were taken @ late milk-early soft dough.

\*\* Tan spot lesions were also found on flag leaves of the untreated Pioneer 2684 (< 2% affected area).

\*\*\* Rust symptoms developed on untreated Coker 9835 after the disease ratings were taken on 1 May. Yield and test weight differences may be due to this late-season rust infection.