

EFFECT OF FUNGICIDE TREATMENTS ON WHEAT 2003-04

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

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

Soil Type: Dothan loamy sandy.

Rotation: 2003 strip-till corn; 2002 peanut, fallow; 2001 strip-till corn, fallow; 2000 wheat, fallow.

Planting

Date: 21 Nov 2003

Variety/ Seeding

Rate: Coker 9835 @ 24 seed / row foot

General

Fertility: No preplant N. 30 lb/ac N (11.3 gal S-25 + 11.0 gal water) was applied 25 Nov. 65 lb/ac N (23.4 gal S-25) was applied 13 Feb (GS 23). Total N = 95 lb/ac, total S = 13 lb/ac.

Insecticide: Warrior (3.87 oz/ac) was applied with top-dress N 13 Feb.

Methods: Fungicides were applied at flag leaf emergence 3 April (GS 39, ligules showing on approximately 50% of plants) and 16 April (GS 59, 50% head emergence) with a tractor-mounted CO₂ pressurized sprayer delivering 7.5 gpa @ 50 psi through Tee Jet TX-8 hollow cone tips. The boom was shielded with Red Ball broadcast hoods to prevent drift. No leaf diseases were evident throughout the season. Head scab (approximately 30% dark heads) was present in all plots at harvest, but no differences were observed between treatments. The inner six rows of each 8-row plot were harvested 26 May 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 ($P=0.05$).

Table 1. Monthly rainfall and degree day accumulation.

Month	Rainfall (in)	Growing Degree Days (Base = 0° C)
Nov	0.13	111.7
Dec	1.3	194.4
Jan	3.37	198.6
Feb	5.84	203.6
Mar	0.77	440.6
Apr	0.8	519.7
May	2.09	726.7
Seasonal Total	14.3	2395.3

Seasonal Daily Temperatures and Rainfall

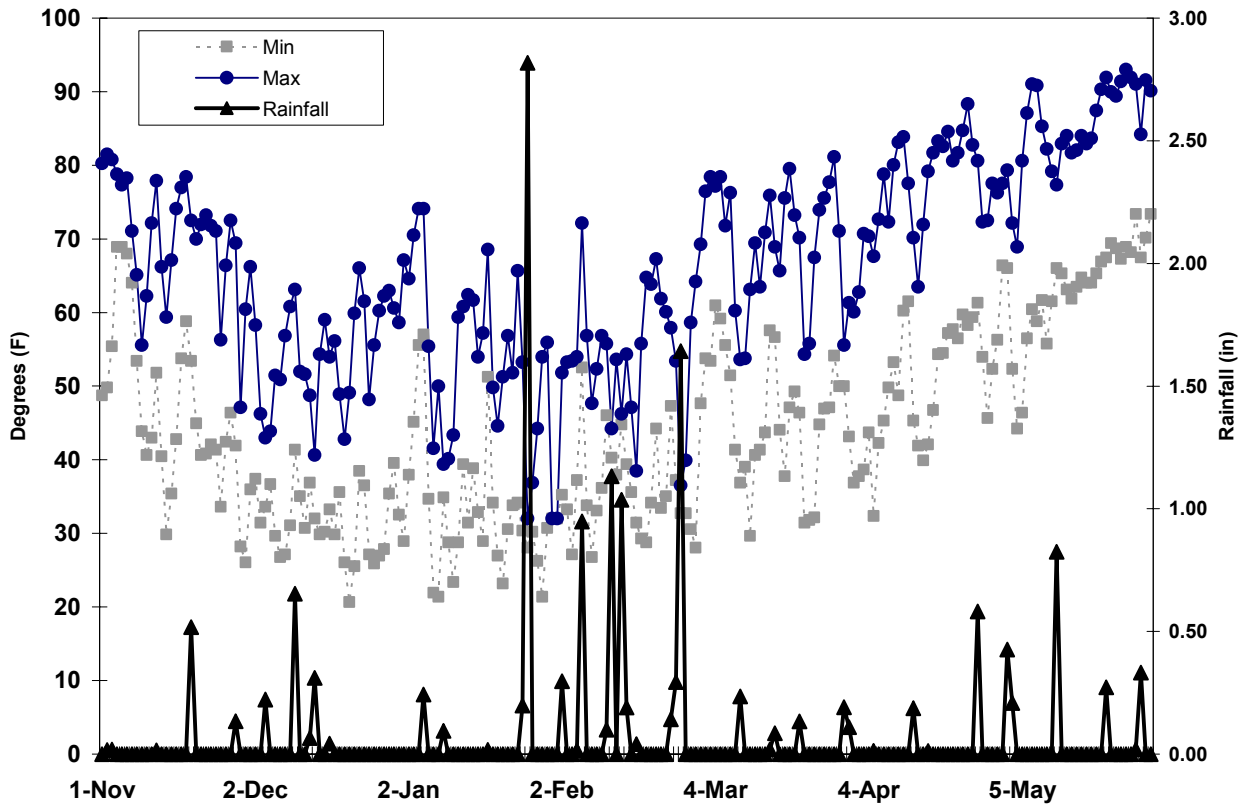


Table 2. Effect of fungicide treatment on wheat grain yield and test weight, Blackville, SC 2003-04.

Treatment	Rate oz product /acre	Application Timing ¹	Yield (bu/ac)	Test Weight (lb/bu)
Tilt	4.0	FL	74.8 a	58.5 b
Quilt	7.0	FL	72.6 ab	58.7 ab
Quadris	4.0	HD	71.4 abc	58.8 ab
Headline	6.0	FL	71.4 abc	58.5 b
Quilt	14.0	FL	71.3 abc	58.8 ab
Headline	4.0	FL	70.7 abc	58.9 a
Quadris	6.0	FL	70.1 abc	58.8 ab
Quilt	10.5	FL	69.5 abc	58.6 b
Stratego	10.0	FL	68.5 abc	58.5 b
Headline	9.0	FL	67.8 abc	58.5 b
Headline	6.0	HD	67.0 bc	58.8 ab
Untreated Check	---	---	65.2 bc	58.6 b
Headline	4.0	HD	64.3 c	58.6 b

Coker 9835 wheat was planted 21 November 2003.

1. FL = 2 April (GS 39); HD = 16 April (GS 59).

Column means followed by the same letter are not significantly different, Fisher's protected LSD ($P=0.05$). Yield LSD = 7.5 bu/ac.