

WHEAT VARIETY CHALLENGE

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: 22 Nov 2003 (Triticale planted 9 Dec)

Seeding

Rate: 24 seed / row foot

General

Fertility: 30 lbs./acre N (11.3 gal S-25) was applied 19 Dec and 65 lbs./acre N (23.4 gal S-25) was applied 13 Feb (GS 23). 15 lbs. N (foliar urea) was applied in late March. Total N = 110 lbs./acre, total S = 13 lbs./acre.

Herbicide: 0.33 oz Express 75DF was applied with N 13 Feb.

Insecticide: Warrior T (3.87 oz /ac) applied with N 13 Feb.

Methods: Three replicates were treated with fungicide (Headline 6 oz/ac 1 April, GS 40) and three were left untreated.

Wheat maturity was determined by examining representative plants from one replicate. Heights were measured from one representative location per plot. No leaf disease was observed season long, but head scab was evident as wheat matured. Scab was rated by estimating the percent darkened heads in all six replicates. 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 ($P=0.05$).

Notes: A drier than normal spring resulted in extremely low levels of leaf diseases; however rainfall (1.3") which began hours after topdress N, herbicide, and insecticide was applied (13 Feb) resulted in poor wild radish control and N leaching. Another 2" rain 10 days later may have also contributed to N leaching. An attempt was made to correct N deficiency by applying two foliar applications of feed-grade urea (10 lbs N / acre 26 March, followed by 5 lb N / acre 29 March. These applications, however, did not appear to significantly help correct deficiency symptoms.

Table 1. Wheat varietal characteristics, yield and test weight. Blackville, SC 2003-04.

Variety	Jointing Date	Heading Date	Plant Height (cm)	Scab Rating (% dark heads)	Overall		Untrt. Reps.		Fung. Trt. Reps.	
					Yield bu/ac	Test wt. lb/bu	Yield bu/ac	Test wt. lb/bu	Yield bu/ac	Test wt. lb/bu
Coker 9375	11-Mar	12-Apr	89 bc	8.3 i	73.0 a	57.1 j	75.5	57.2	70.5	57.0
USG 3209	5-Mar	10-Apr	74 gh	31.7 cd	71.3 ab	59.0 gh	66.6	58.8	76.0	59.2
Agri Pro Panola	9-Mar	7-Apr	80 e	10.8 h	71.2 ab	58.8 h	72.4	59.0	70.1	58.5
Pioneer 26R31	5-Mar	7-Apr	75 fg	20.0 e-g	70.9 ab	58.6 h	74.5	58.5	67.2	58.7
AGS 2000	8-Mar	11-Apr	85 cd	8.8 i	70.2 a-c	59.9 de	70.3	59.9	70.2	60.0
Pioneer 26R38	10-Mar	12-Apr	89 bc	26.7 c-e	69.6 a-c	59.1 gh	72.4	59.3	66.9	58.9
AGS 2485	7-Mar	10-Apr	87 bc	15.8 f-i	69.5 a-c	61.1 b	74.0	61.1	65.0	61.0
HBK 3266	8-Mar	9-Apr	84 c-d	19.2 e-h	68.0 a-c	60.1 de	63.9	59.8	72.1	60.3
USG 3592	8-Mar	12-Apr	87 bc	51.7 b	67.6 a-c	59.3 fg	64.3	59.0	70.8	59.7
Pioneer 2684	11-Mar	7-Apr	81 de	14.2 g-i	66.6 d	59.6 ef	68.8	59.7	64.4	59.5
Tribute	13-Mar	9-Apr	75 gh	22.5 e-g	65.5 b-d	61.7 a	69.1	61.8	61.9	61.5
Coker 9835	8-Mar	13-Apr	69 h	33.3 c	64.7 b-d	58.7 h	65.2	58.5	64.1	58.9
Pioneer 26R12	14-Mar	14-Apr	79 ef	24.2 de	63.9 cd	60.6 bc	66.8	60.6	60.9	60.6
Pioneer 26R61	12-Mar	12-Apr	90 b	20.0 e-g	60.3 de	60.4 cd	62.0	60.5	58.5	60.4
Vigaro WX74-01	9-Mar	10-Apr	90 b	86.7 a	56.9 ef	57.7 i	56.1	57.5	57.7	57.8
RSI 342 (triticale)	19-Mar	13-Apr	110 a	7.7 i	54.5 ef	54.4 l	50.2	54.3	58.8	54.5
RSI 314 (triticale)	17-Mar	10-Apr	80 de	20.8 e-g	53.5 ef	54.9 k	51.4	54.6	55.7	55.2
Pioneer 2684 (9 Dec)	21-Mar	15-Apr	73 gh	15.8 f-i	51.9 f	60.1 c-e	52.8	60.1	51.0	60.1
mean	---	---	---	---	65.0	59.0	65.4	58.9	64.5	59.0

Wheat was planted 22 Nov unless otherwise noted; triticale was planted 9 Dec; All plots were harvested 26 May.

Means followed by the same letter are not significantly different, Fisher's protected LSD ($P=0.05$). Overall Yield LSD = 6.8 bu/ac.