

Evaluation of Tilt 3.6EC, Quadris 2.08SC, Headline 2.08EC and Stratego for managing stripe rust on wheat, 2004.

Wheat was planted (95 lb seeds/A) 6 Nov03 in a field with a Gigger silt loam soil at the Macon Ridge Research Station near Winnsboro, LA. Standard chemical and cultural practices for wheat production were implemented according to Louisiana Cooperative Extension Service recommendations. Treatments were replicated three times in a randomized complete block. Blocks were separated by 15 ft alleys. Plots were 8 rows (7.5-in. spacing) by 15 ft. Rainfall totals for Feb, Mar, Apr, and May were 9.85, 3.44, 3.74, and 7.79 in., respectively. Fungicide treatments were applied on 18 Mar 04 at Feekes’ growth stage F8 (flag leaf emergence) or 30 Mar at Feekes’ F10.2 (50% heading) using a CO₂-charged hand-held boom configured with Hypro ULD 120-015 nozzles spaced 19-in. apart and calibrated to deliver 13.1 gal/A at 26 psi. Percent area of the flag leaf and flag leaf minus one colonized by *Puccinia striiformis* was assessed on 14 Apr and 20 Apr. Plots were harvested on 24 May 04 and test weights recorded. Data were subjected to analysis of variance and treatment means were compared using Fisher’s protected least significant difference test.

Stripe rust severity was present at low levels during late March and increased dramatically by 14 Apr. Less stripe rust was observed on both rating dates in all fungicide-treated wheat compared to the non-treated. Stripe rust severity was less on 20 Apr in wheat treated with Tilt 3.6EC, Stratego, or Quadris 2.08SC at F8 than in wheat treated with Quadris 2.08SC at F10.2 or Headline 2.08EC. Early applications resulted in less rust severity than later applications, indicating the importance of timing for managing this disease. Yields and test weights increased significantly with all fungicide applications compared to the non-treated.

Treatment and rate/A	GS @ Appl ^z	14 Apr Stripe Rust ^y	20 Apr Stripe Rust ^y	Test Weight (lb/bu)	24 May Yield (bu /A)
Non-treated.....	--	53.8	94.8	46.4	66.6
Tilt 3.6EC 4.0 fl oz.....	F8	0.3	4.8	53.0	90.6
Tilt 3.6EC 4.0 fl oz.....	F10.2	3.5	1.3	48.9	101.6
Quadris 2.08SC 6.2 fl oz.....	F8	2.8	11.8	53.9	89.2
Quadris 2.08SC 6.2 fl oz.....	F10.2	17.8	26.8	53.6	94.0
Headline 2.08EC 6.2 fl oz.....	F8	3.0	26.8	54.0	85.6
Headline 2.08EC 6.2 fl oz.....	F10.2	7.3	27.0	52.1	92.0
Stratego 8.0 fl oz.....	F8	1.3	14.0	51.8	92.5
LSD (P=0.10) ^x	--	13.1	11.4	3.7	7.8

^zGrowth stage at fungicide application.

^yPercent leaf area of flag leaf and flag leaf minus one covered by rust pustules.

^xTreatment means were compared using Fisher’s protected least significant difference test, alpha level 10%.