WHEAT (*Triticum aestivum* 'Whitebird')
Stripe rust; *Puccinia striiformis*

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Fungicide treatments for control of stripe rust in spring wheat in 2007.

The trial was established in a field at the university research farm in Bingham County, ID. The field had been cropped to green manure oats in the preceding year. The soil type is a Declo loam of 0-2% slope and 1.8% organic matter. Experimental plots (5 x 13.3 ft planted, 5 x 9.3 ft harvested) of the stripe rust susceptible variety 'Whitebird' (infection type 9) were arranged in a randomized complete block design with 4 replicates. Plots of the susceptible spring wheat variety 'Jubilee,' also having an infection type 9, were planted as buffer and rust spreader rows between plots. Fungicide treatments were applied using an R&D CO_2 handheld boom sprayer at 30 psi emitting 20 gpa through three Teejet 8002VS nozzles spaced 19 inches apart. Seed was planted at 1 million/A on 6 April. Row spacing was set at 7-in. with seven rows per plot, planted using a double disk opener with a Hege 500 series drill. Weeds were controlled by 2.0 pt/A Maestro MA applied 16 May. Natural inoculum appeared very late in the local area in the susceptible hard red winter wheat cultivar 'Moreland,' confirmed in the plots 29 Jun. Susceptible spreader rows were inoculated with stripe rust 21 Jun, and infected plants of the cultivar 'Moreland' were transplanted into spreader rows 25 Jun. Spread of the disease was minimal in this hot, dry year. The percent leaf area affected by stripe rust was rated on plots 5 Jul when plants were in Feekes growth stage 11, and 12 Jul when plants were in Feekes growth stage 12.1. Plots were harvested 14 Aug with a small plot combine. Yield and test weight were determined. Data were analyzed using general linear model (Proc GLM) in SAS. Fisher's protected LSD was used for mean comparisons.

There was significant stripe rust disease development on the untreated control treatment with 29% of the leaf area affected. Yields were significantly different at $P \leq 0.01$. There was a significant difference in test weight means, with the untreated control have significantly reduced test weight. There were no significant differences in the effectiveness of among fungicides for controlling stripe rust, but there was less disease in wheat treated with fungicides than the untreated control.

Product	Rate fl oz/A	Application Timing Feekes Growth Stage	7/5/2007 % Leaf area diseased	7/12/2007 % Leaf area diseased	Yield bu/A	Test Weight lb/bu
Untreated Control ..……..….....	none	-	10.0	28.8	114.9	59.7
Quilt 1.66 EC	14					
Non-ionic surfactant …..……	0.125% v/v	10.51	1.3	0.0	114.9	61.3
Tilt 3.6 EC	4					
Non-ionic surfactant …..……	0.125% v/v	10.51	3.8	0.0	119.0	61.0
Headline 2.08 EC	6					
Non-ionic surfactant …..……	0.125% v/v	9.00	2.5	1.3	125.9	61.6
Headline 2.08 EC	6					
Non-ionic surfactant …..……	0.125% v/v	10.51	0.0	2.5	120.0	60.7
Headline 2.08 EC	4					
Tilt 3.6 EC	4					
Non-ionic surfactant …..……	0.125% v/v	10.51	0.0	0.0	120.9	60.8
Headline 2.08 EC	4					
Tilt	3					
Non-ionic surfactant …..……	0.125% v/v	10.51	0.0	0.0	124.1	61.5
Headline 2.08 EC	4.5					
Caramba	4.5					
Non-ionic surfactant …..……	0.125% v/v	10.51	1.3	1.3	124.6	61.2
Headline 2.08 EC	6					
Caramba	6					
Non-ionic surfactant …..……	0.125% v/v	10.51	1.3	0.0	124.1	61.3
Caramba 0.75 SL	9					
Non-ionic surfactant …..……	0.125% v/v	10.51	3.8	0.0	119.2	60.6
		* FLSD (a=0.05)	3.4	4.4	6.2	0.9
		CV	99.86	89.14	3.522	0.9969
		Pr > F	< 0.0001	< 0.0001	0.0066	0.0075

* FLSD = Fisher's protected least significant difference value.