

2006 WHEAT FUSARIUM HEAD BLIGHT FUNGICIDE TEST

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As part of the multi-state, National 2006 Uniform Fusarium Head Blight (FHB) Fungicide Trials, a test was established on the Kevil Tract of the University of Kentucky Research and Education Center in Princeton, KY. The soft red winter wheat variety Pioneer 25R54 was planted no-till following corn harvest on 12 October 2005. Wheat was planted at a rate that would achieve a final stand of approximately 36 plants ft². The block of wheat was treated with Warrior insecticide on 21 November and again at green-up on 22 March to reduce the potential for barley yellow dwarf to be a factor in the test. Nitrogen was applied at a rate of 40 lbs actual N on 15 February and 80 lbs actual N on 17 March. Weeds were controlled by applying the herbicide Harmony Extra on 22 March. Plots approximately 4-ft-wide x 15-ft-long were established by mowing when plants were entering the stem elongation stage (Feeke's stage 6). Fungicide treatments were applied with a hand-held CO₂-powered backpack sprayer equipped with a twin nozzle (twinjet XR8001) configuration (fore- and rear-facing). Treatments were applied in 20 gpa at 40 psi. Treatments were arranged following a randomized complete block with four replications. Plots were rated for FHB and leaf blotch complex (primarily tan spot, but also *Stagonospora* leaf blotch) at the mid-dough stage (Feeke's stage 11.2) on 24

May, 2006. Both FHB and leaf blotch complex ratings were made on ten arbitrarily-collected main tillers per plot and were based on visual estimation of percent surface area diseased. Entire plots were harvested on 21 June 2006 using a Hege 125B small plot combine. Yields were adjusted to standard moisture content and 60 lbs/bu. Fusarium damaged kernels (FDK) was assessed by counting the number of damaged kernels out of 200 for each treatment plot. Counts were repeated and the average was used. Deoxynivalenol (DON) levels were based on 50-g ground grain samples from each treatment plot. Ground grain samples were analyzed for DON by the DON Testing Laboratory at Michigan State University, East Lansing, MI.

Overall, target diseases were light to moderate in the test. FHB/DON pressure was very limited and leaf blotch complex did not become significant until late in the season. Glume blotch was almost undetectable in the test. Plots were generally impacted by wheat streak mosaic virus through early May, but excellent growing conditions and limited foliar and head diseases compensated for damage and high yields were produced. No phytotoxicity was noted in the test.

Treatment	Rate/A	Feeke's stage applied ¹	Yield (bu/A)	Test weight (lbs/bu)	FHB ² index (%)	FDK ³ (%)	DON ⁴ (ppm)	Blotch complex ⁵ (% Flag)	(%F-1)
Non-treated	na	na.....	92.3	55.7	0.05	13.3	0.35	25.1	70.6
Folicur 3.6F	4.0 fl oz	10.51.....	108.5	56.3	0.10	11.8	0.33	6.4	40.9
+ Induce	0.125% v/v								
Folicur 3.6F	2.0 fl oz	10.51.....	96.3	56.0	0.05	9.7	0.53	9.1	40.9
+ Topsin M 70 WP	8.0 oz								
+ Induce	0.125% v/v								
Absolute 500 SC	5.0 fl oz	10.1-3.....	106.9	56.5	0.00	11.1	0.53	7.8	28.6
Prosaro 421 SC	6.5 fl oz	10.1-3.....	101.3	56.7	0.08	9.1	0.33	8.6	35.4
+ Induce	0.125% v/v								
Prosaro 421 SC	6.5 fl oz	10.51.....	105.2	56.5	0.00	10.3	0.35	5.6	36.7
+ Induce	0.125% v/v								
Caramba 90 SL	13.5 fl oz	10.51.....	94.6	56.2	0.00	8.4	0.23	9.7	36.6
+ Induce	0.125% v/v								
Topguard 125 SC	14.0 fl oz	10.51.....	100.0	56.8	0.10	10.9	0.33	20.6	51.48
+ Induce	0.125% v/v								
Tilt 3.6 EC	4.0 fl oz	10.51.....	95.8	55.4	0.05	11.8	0.73	10.7	31.1
+ Induce	0.125% v/v								
Punch 3.3 EC	4.0 fl oz	10.51.....	95.7	56.0	0.10	11.7	0.45	10.4	42.5
DPX-LEM17 200 SC	9.7 fl oz	10.51.....	96.7	56.3	0.00	11.3	0.30	19.6	50.9
DPX-LEM17 200 SC	16.9 fl oz	10.51.....	92.5	56.3	0.15	13.2	0.50	13.6	50.9
DPX-LEM17 200 SC	24.1 fl oz	10.51.....	99.0	56.7	0.08	9.8	0.50	8.9	55.3
DPX-LEM17 200 SC	9.7 fl oz	10.51.....	96.0	56.3	0.00	10.3	0.38	11.0	55.4
+ Punch 3.3 EC	3.0 fl oz								
DPX-LEM17 200 SC	9.7 fl oz	10.51.....	95.0	56.5	0.1	9.3	0.38	7.1	39.5
+ Folicur 3.6 F	3.0 fl oz								
LSD (P=0.05)			13.54	1.13	0.12	4.31	0.25	10.65	18.93
CV			9.6	1.4	152.02	27.9	42.9	64.23	29.8

1 = Feeke's 10.1-3 is mid head emergence; 10.51 is the beginning of flowering.

2 = FHB Index is incidence x severity and reflects overall FHB conditions in each treatment.

3 = FDK is % Fusarium damaged kernels.

4 = DON is deoxynivalenol, a fungal toxin associated with infection by *Fusarium* spp.; DON is measured in parts per million (PPM).

5 = Leaf blotch complex was mostly tan spot with some *Stagonospora* leaf blotch.