

Fungicide Effectiveness and Control of Wheat Head Scab

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Objective

To evaluate and compare the effectiveness of two fungicides in controlling wheat head scab.

Background

Crop Year:	1997	Soil Test:	pH 7.0; P 41ppm; K 156ppm
Cooperator:	University of Findlay Equestrian Farm	Fertilizer Applied:	60# top dress N
County/Town:	Hancock/ Findlay	Herbicide:	None
Drainage:	Surface; Minimal tile	Variety:	Pioneer 2545
Major Soil Type:	Blount	Planting Rate:	120 lbs. seed/A
Previous Crop:	Alfalfa		
Tillage:	Conventional		

Materials and Methods

A study was designed to compare two fungicides and an untreated control to determine how best to control wheat head scab. The field used was an eight-acre wheat field planted October 5, 1996, which had an excellent stand. Pioneer 2545 was planted specifically since it showed the highest susceptibility to scab in the Hoytville, Ohio, 1996 tests. The field was also planted next to woods and a creek to help create more moisture for scab infection.

A 4x replicated randomized block design was used. The size of each plot was 20 ft. by 120 ft., with a 10-ft. buffer between each of the plots. The two fungicides were Benlate and Folicur, compared to an untreated control. Folicur was applied at 50% head emergence, and Benlate was applied at mid-flower. We used a 30-ft. custom-built sprayer to spray 10 ft. on each side of the plot without entering the plot. Yield data was recorded for each plot. A conventional 15-ft. combine did the harvesting. Also recorded for each plot was the percent head scab infection one month after flowering. The scab rating consisted of five counts of 20 heads per plot for a total of 100 heads per plot. Vomitoxin levels of the grain were not determined due to low levels of scab infection. Dr. Pat Lipps, plant pathologist at the Ohio Agricultural Research and Development Center's Wooster campus, assisted with the study.

Results

Treatment	Avg. Yield (bu/A)	Avg. % Head Scab
No Treatment	86.8	4.0
Folicur - Applied 6/5/97 at 50% head emergence	95.9	3.8
Benlate - Applied 6/11/97 at mid-flower	89.3	4.0
LSD (p=.05)	6.6	NS

Summary and Notes

Due to dryer weather during wheat pollination, the head scab infection was kept at a low level. However, the data shows that Folicur improved yield over the no-treatment control by 9.1 bu/acre. Benlate did not significantly improve yield as compared to the no-treatment control. The level of head scab was low in all plots, and no significant differences could be detected in the level of head scab among the treatments.

Research at other states indicates that Benlate is the better material for control of head scab. We did not see a response to Benlate. Folicur is the better material for Stagonospora leaf blotch. This leads us to conclude that the response to Folicur was due to leaf disease control and not scab control. This conclusion is supported by the fact that the wheat at harvest time was lodged quite severely, and Stagonospora leaf blotch is more severe in lodged conditions. Since this study was designed for head scab, a leaf-disease rating was not done, but more research should be completed in this area.

For additional information, contact:

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