

2009 Durum Fungicide X Variety Trial
North Central Research Extension Center – Minot, ND
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Objective:

This trial was conducted to evaluate agronomic performance of selected durum varieties as affected by a fungicide program consisting of an early-season and late-season application.

Trial Description:

The trial was located on the North Central Research Extension Center south of Minot, ND. Eight durum varieties were sown on May 12th into wheat stubble that had 217 lb/acre urea spread and chisel plowed the fall prior to seeding. Each variety was sown at a rate of 1.5 million PLS/acre using a plot-drill with double disc openers on six inch spacing. Two plots were sown for each variety, one plot to receive fungicide treatment and one to be left untreated. Plots were 5 feet wide x 16 feet long and treatments were replicated three times. On June 13th the crop had reached the 4 leaf stage and untreated plots received Wolverine at 1.7 pt/acre for weed control and fungicide treated plots received 1.7 pt/acre Wolverine + 3 fl oz/acre Headline. Herbicides and early-season fungicide treatments were applied with a CO₂ pressurized tractor-mounted sprayer calibrated to deliver 10 gallons/acre through flat fan nozzles. Fungicide plots were treated with 6.5 fl oz/acre of Prosaro at early flower. The Prosaro treatments were delivered through a CO₂ pressurized hand-held boom calibrated to deliver 20 gallons/acre through twin jet nozzles. The trial was harvested with a plot combine on September 15.

Results/Discussion:

Foliar and head disease pressure were very low and visual evaluation at early heading provided inconclusive results. Flag leaf necrosis and fusarium head blight levels in untreated plots were <15 % and < 1%, respectively. Some wild oat competition and establishment problems related to trash clearance added variability to the trial. Yield and other agronomic parameters were not significantly impacted by fungicide treatment and statistically significant differences in yield between varieties were not detected when means were combined across fungicide and no fungicide. Varietal differences for test weight and protein were detected with Grande D’ORO having the heaviest test weight and Maier the highest protein content.

Variety	Yield				Agronomics					
	No Fungicide	Fungicide	Combined		Test Weight		Protein		Height	
	Bu/acre	Bu/acre	Bu/acre	Rank	lb/bu	Rank	%	Rank	inches	Rank
ALKABO	54.3	59.7	57.0	1	60.2	3	12.5	8	25.5	1
MOUNTRAIL	56.7	55.8	56.3	2	58.6	8	13.6	3	27.8	4
GRANDE D'ORO	56.9	55.5	56.2	3	60.8	1	13.2	4	28.4	6
GRENORA	54.8	56.5	55.7	4	58.9	7	13.1	6	26.1	2
MAIER	54.4	55.4	54.9	5	60.1	5	13.6	1	30.2	8
DIVIDE	52.5	55.4	54.0	6	59.1	6	13.6	2	28.9	7
DG MAX	51.8	55.9	53.9	7	60.2	4	13.2	5	27.0	3
LEBSOCK	52.5	51.8	52.2	8	60.6	2	12.7	7	28.0	5
Average	54.2	55.8	55.0		59.8		13.2		27.4	
LSD(P = 0.05)	NS		NS		0.6		0.5		NS	
CV	8.7				1.1		4.0		9.6	

Soil test: (N),(S) @ 0-6",6-24"=(27,93),(10,873)lb/a; (P),(K) @ 0-6"=(13),(360)ppm, O.M.=3.4%, pH = 5.6.

