

Corn In-Furrow and Sequential Fungicide Program Evaluations, Carrington; BASF Collaboration

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In 2013, a trial was conducted at the NDSU Carrington Research Extension Center in cooperation with BASF to evaluate fungicide application strategies in corn. Experimental design was a randomized complete block with four replicates. The field trial was established on a conventionally-tilled Heimdal-Emrick loam soil with 3.0 percent organic matter and 7.7 pH. Pioneer 39D97 79-day maturity corn was planted on May 23 at 29,000 plants per acre on 30-inch row spacing. In-furrow treatments were applied during planting at 5 gal/ac. V7 treatments were made on July 1 with a hand-held boom sprayer delivering 17 gal/ac through 8002 flat-fan nozzles to the center two rows of the four-row plots. The trial was combine harvested for seed yield on October 8.

An early-season vigor and stand population response to the in-furrow treatments was evident as the treated plots were statistically smaller than the untreated (Table 1). This, however, corrected itself as the growing season progressed and did not have an impact on yield. The CREC experienced below-average rainfall in 2013 thus causing nearly zero disease pressure in this dryland trial. No disease was evident throughout the entire season and there were no differences in corn stay-green measurements. There were a few minor differences in test weight and no significant differences in yield.



Field preparation for in-furrow fungicide evaluation of corn.

Table 1. In-Furrow and Sequential Fungicide Programs in Corn.

Treatment	Rate fl oz/acre	Application		Population plants/ac	Emergence	Vigor	Emergence	Vigor	Test	Yield bu/ac
		Timing	(14 DAP)		(14 DAP)	(21 DAP)	(21 DAP)	Weight lb/bu		
1	Non Treated	-	-	30876	95.0	93.8	95.0	93.8	56.7	109.7
2	Headline	3	In-Furrow	28955	93.8	83.8	95.0	76.3	56.6	98.4
3	Headline	6	In-Furrow	28122	92.5	85.0	95.0	78.8	56.3	127.2
4	Headline	3	In-Furrow	28250	92.5	83.8	95.0	75.0	56.6	118.8
	Priaxor	4	V7							
	Headline Amp	10	R1							
	NIS	0.25*	R1							
5	Headline	6	In-Furrow	27610	95.0	87.5	93.8	80.0	56.4	94.5
	Priaxor	4	V7							
	Headline Amp	10	R1							
	NIS	0.25*	R1							
6	Priaxor	4	V7	29852	95.0	88.8	95.0	81.3	56	99.7
	Headline Amp	10	R1							
	Metconazole**	2.74	R1							
	NIS	.025*	R1							
7	Headline Amp	10	R1	28122	93.8	90.0	95.0	80.0	56.7	131.5
	NIS	0.25*	R1							
Mean				28827	93.9	87.5	94.8	80.7	56.5	111.4
C.V. (%)				5.5	2.2	6.1	1.0	9.0	0.75	24.6
LSD (0.05)				2012	NS	6.6	NS	7.3	0.6	NS

*% v/v

**Caramba at 1.67 fl oz/ac