

Wheat (*Triticum aestivum* 'Seward')
 Target diseases: *Tilletia caries*
Ustilago spp.
Fusarium spp.
Pythium spp.
Rhizoctonia spp.
Bipolaris sorokiniana

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NuFarm HRWW seed treatment performance on Bunt trial, New Hradec, ND, 2007- 2008.

This experiment was conducted in a field located near New Hradec, ND (NE ¼ Sec 2, T140N, R97W, Stark County, ND). The previous crop was spring wheat in 2007. Prior to seeding, seed was treated with Raxil MD, Dividend XL or one of two experimental fungicide treatments. Untreated seed was used as a check. Ground bunt contaminated wheat grain was ground and added to seed as it was planted to inoculate the trial with bunt. Plots were seeded with a drill equipped with Cross-slot openers on 2 Oct 2007 at the rate of 100 pls m⁻². A blended fertilizer of 29-19-6 was placed in a separate band at the rate of 193 lbs/acre was applied through the drill during the seeding operation. A post emergent herbicide and foliar fungicide application of 12oz/a Husky + 2 oz/a of Propanazol + AMS + Surfactant was applied 4 Jun 2008. Plant counts were made on 21 Apr. Root and crown samples of this trial were submitted for analysis of soil-borne pathogens at the soft dough stage of crop development. Harvest was with a Massy Ferguson 8 XP combine on 6 Aug 2008. Grain yield, and test weight were adjusted to a 12% moisture basis. Bunted kernels were sorted from 50g grain samples and counted. All data was statistically analyzed using SAS Statistical Software.

Rainfall was well below normal for Oct through May and Jul with Jun near normal which affected winter survival and development of the crop. No significant differences were detected for grain yield, test weight, plant vigor or density. However bunted kernels were found in significantly greater numbers in the untreated check than any of the fungicide seed treatments but test weight did not appear to be affected. Tissue analysis for root and crown disease pathogens indicated that nearly half of the sample submitted had *Fusarium graminearum* present. *Pythium* spp, *Rhizoctonia* spp. and *Bipolaris sorokiniana* were not detected.

Treatment Name	21Apr		----- Grain ¹ -----		
	Plant density	Vigor	Test weight	Yield	Bunted kernels
	no m ⁻²		lb/bu	bu/acre	no 50g ⁻¹
Check	41.5	5.8	54.9	17.4	151.8
NUP 07132 plus NUP 07267	51.8	7.3	54.9	16.8	14.8
NUP 07268 plus NUP 07267	48.6	7.3	54.2	16.8	29.0
Dividend Extreme	44.5	6.5	54.2	16.8	23.5
Raxil MD	47.0	6.8	54.9	18.5	20.5
Mean	46.7	6.7	54.7	17.7	47.9
CV%	16.1	16.0	1.6	12.7	39.9
LSD	NS	NS	NS	NS	29.4
SE	3.7678	0.5362	0.4426	1.1285	9.5461
Rep F Prob	0.0056	0.1211	0.0628	0.0893	0.5914
Trt F Prob	0.4074	0.3086	0.8035	0.5120	<0.0001

¹ Grain values adjusted to 12% moisture basis.