Section III
Field Crop Pests

Valent Nipsit + Metconek 2011 Trials

David Bragg
Washington State University Extension Entomologist
P O Box 190 Pomeroy WA 99347
braggd@wsu.edu

Protocol: to reevaluate the effect of Metconazole fungicide as a systemic leaf rust inhibitor at the registered rate and a double rate compared to Nipsit alone at the standard insecticide rate a trial was established at Central Ferry WA. The only variables in the trial will be leaf rust inhibition in Jefferson DNS prior to mature plant resistance. A UTC included will show efficacy of the package treatments for wire worm and rust. (Limonius californicus). The Trial was seeded May 12 at Central Ferry in a RCDB with 4 replications per treatment. A Hegi Cone seeder was used. 2010 trials showed positive rust control plus excellent wire worm control by the now labeled and patented combination.

One-Way AOV for: NA NM2 NM4 UTC

Source	**DF**	**SS**	**MS**	**F**	**P**
Between	3	3.78302	1.26101	114.23	0.0000
Within	12	0.13248	0.01104		
Total	15	3.91549			

Grand Mean 1.0694 CV 9.83

Homogeneity of Variances	**F**	**P**
Levene's Test	1.93	0.1787
O'Brien's Test	1.23	0.3400
Brown and Forsythe Test	1.41	0.2872

Welch's Test for Mean Differences

Source	**DF**	**F**	**P**
Between	3.0	319.50	0.0000
Within	6.1		

Component of variance for between groups 0.31249
Effective cell size 4.0

Variable	Mean Kg/ 9 Meters Square
Nipsit alone	0.7600
Nipsit + Metconazole 2	1.5750
Nipsit + Metconazole 4	1.5075
UTC	0.4350
Observations per Mean	4
Standard Error of a Mean	0.0525
Std Error (Diff of 2 Means)	0.0743

Experiment 2. LSD All-Pairwise Comparisons Test for Yield

Variable	Mean Kg/9 Meters Square
Nipsit + Metconazole 2	1.5750 A
Nipsit + Metconazole 4	1 075 A
Nipsit alone	0.7600 B
UTC	0.4350 C

Alpha 0.05 Standard Error for Comparison 0.0743
Critical T Value 2.179 Critical Value for Comparison 0.1619
There are 3 groups (A, B, etc.) in which the means
are not significantly different from one another.

Conclusions: The only yield reducing factors in this trial was leaf rust damage during jointing and wire worm in the untreated check. The Nipsit only treatment w/o fungicide was literally burned up by rust. Wire worm was a factor in the UTC and reduced stand at emergence. The UTC also had rust during jointing. Both Metconazole treatments were not SD indicating doubling the rate did not show an enhanced fungicide treatment to be more effective than the label rates of Nipsit + Meconazole. Conclusions: Leaf rust is a yield reducing factor in spring wheats w/o a fungicide at jointing stage and beyond. A systemic fungicide in the plant from germination does prevent rust injury w/o needing an aerial application of fungicide. The combination with a powerful insecticide seed treatment such as Nispsit is an effective seed treatment in insect and rust control.