

Section IV.

2006-2007 Bayer Crop Science Winter Wheat Rate Study Trial

Dr. David Bragg, WSU Extension Entomologist

Location Central Ferry Research Farm Garfield County WA

Seeding Date October 30, 2006

Variety Rod/Madsen 50/50

Seeded by Hegi Cone Plot Seeder on 7 rows x 48 Inches x 20 feet replicates with 4 replicates per treatment.

Emergence date was November 09, 2006.

Plant stand per ¼ meter square counted November 16, 2006 (wire worm injury).

Harvest by Winter Steiger Plot Combine on July 12, 2007. No aphids were found throughout the trial period.

One-Way AOV for: Plant Stand

Source	DF	SS	MS	F	P
Between	11	1098.92	99.9015	59.0	0.0000
Within	36	61.00	1.6944		
Total	47	1159.92			
Grand Mean		20.542	CV 6.34		

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	9.69	11	0.5581

Cochran's Q 0.3730

Largest Var / Smallest Var 11.375

Component of variance for between groups 24.5518

Effective cell size 4.0

Observations per Mean 4

Standard Error of a Mean 0.6509

Std Error (Diff of 2 Means) 0.9204

LSD All-Pairwise Comparisons Test for Plant Stand (0.05)

Treatment (fl oz cwt)	Mean Plant Stand
Gaucht XT 1.00/Cyfluthrin 2.10	29.000 A
Gaucht 600 FS 1.44	27.500 AB
Poncho 600 FS 0.128	26.750 B
Poncho 600 FS 0.790	23.250 C
Cruiser 5 S 0.790	20.750 D
Poncho 600 FS 0.320	19.250 DE
Gaucht XT 1.00	18.750 E
Gaucht 600 FS 0.320	18.250 E
Gaucht 600 FS 0.128	18.000 E
Raxil XT	15.250 F
Poncho 600 FS 0.128	15.000 F
Cyfluthrin XL 2.10	14.750 F

Alpha 0.05 Standard Error for Comparison 0.9204

Critical T Value 2.028 Critical Value for Comparison 1.8668

There are 6 groups (A, B, etc.) in which the means are not significantly different from one another.

Significant differences in plant stand from wire worm (*Limonius canus* and *L. californicus*) occurred. The treatments followed by A, AB, and B are not SD. C, D, and E are SD from each other but all have stands suitable for winter wheat. The F group stands are significantly lower than those of the other groups. Cyfluthrin alone seems to be equal to the fungicide check and the lowest rate of Poncho 600.

One-Way AOV for yield (Bushels/Acre):

Source	DF	SS	MS	F	P
Between	11	6509.9	591.811	2.61	0.0149
Within	36	8170.5	226.957		
Total	47	14680.4			
Grand Mean		160.60	CV 9.38		

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	20.0	11	0.0447
Cochran's Q	0.2271		
Largest Var / Smallest Var	46.018		
Component of variance for between groups	91.2136		
Effective cell size	4.0		

LSD (0.01) All-Pairwise Comparisons Test for Yield Bu/Ac Bayer WW 2006-2007

Variable fl oz cwt	Mean Bu/AC	
Poncho 0.790	177.65	A
Cruiser 0.790	175.33	AB
Gaucho 1.44	171.06	AB
Gaucho XT/Cyfluthrin	170.16	AB
Gaucho XT 1.00	169.43	B
Gaucho 0.320	163.92	BC
Poncho 0.128	159.95	BC
Poncho 0.510	151.44	C
Poncho 0.256	150.19	C
Gaucho 0.128	146.85	D
Raxil XT (check)	146.06	D
Cyfluthrin XL 2.10	145.20	D

Alpha 0.01 Standard Error for Comparison 10.653
 Critical T Value 2.719 Critical Value for Comparison 28.970
 There are 3 groups (A, B, etc.) in which the means are not significantly different from one another.

It appears that yield is variable similar to that of plant stand. Poncho 600 treatments are variable but in most trials NSD.