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# **1999 FUNGICIDE TRIALS: FIELD PLOT SUMMARIES**

Foliar Fungicides: Spring Wheat, Winter Wheat, Oat,  
Corn and Safflower

Seed Treatments: Spring Wheat, Winter Wheat and Soybeans

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# **Fungicide and Pathology Trials: Field Plot Summaries**

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The data contained in these pages are summarized from ongoing field trials aimed at evaluating and demonstrating the effects of fungicide seed treatments and foliar fungicides or cultural controls on various field crops. The data reflect variability due to site, weather and other factors and should be interpreted within the context of the particular study. Any questions about the studies or data should be directed to the authors.

Special thanks are extended to several projects at SDSU who were primarily responsible for the planting, maintenance and harvest of these plots. These individuals and projects include: Jackie Rudd, Brad Farber, and Ravindra Devkota (Spring Wheat Breeding), Scott Haley, Steve Kalsbeck, and Rich Little (Winter Wheat Breeding), Bruce Bleakley (Soil Microbiology and Biological Control), Leon Wrage, Scott Wagner, and Dave Vos (Extension Weeds), Roy Scott, Greg Lammers, and Steve Stein (Soybean Breeding), Dale Reeves and Lon Hall (Oat Breeding), and Bob Hall and Kevin Kirby (Crop Performance Testing). Additionally, we would like to thank Kendall and Kim Peterson of Northville, SD and Gary Erickson, Extension Educator in Brown County for their cooperation on various studies.

Most products in these trials are currently labeled for the particular use listed. However, some experimental compounds were used, as well as some applications not currently labeled on a particular crop where the timing or rate is different from that given on the label. The experimental uses included in these studies should not be considered as recommendations. Users should consult product labels with regards to information on intended uses, method of application, handling procedures, safety, waiting intervals, and other important information.

# TABLE OF CONTENTS

<u>Trial</u>	<u>Page</u>
<u>Winter Wheat Trials:</u>	
Seed treatment .....	3
Foliar fungicide for leaf disease control .....	5
Scab foliar fungicide .....	8
<u>Spring Wheat Trials:</u>	
Seed treatment .....	10
Foliar fungicide for leaf disease control .....	12
Scab foliar fungicide .....	14
Scab foliar fungicide variety trial .....	17
Scab biological control trial .....	17
<u>Oat Trials:</u>	
Foliar fungicide .....	18
<u>Safflower Trials:</u>	
Foliar fungicide .....	19
<u>Soybean Trials:</u>	
Seed treatment .....	20
Soybean cyst nematode trial - Roberts County .....	21
<u>Corn Trials:</u>	
Foliar fungicide .....	22

# Winter Wheat Seed Treatment Trial

M. Draper, S. Haley, S. Kalsbeck and R. Little

Planting Dates:	Wall: 9/10/98 Selby : 9/14/98 Winner: 9/15/98 Dakota Lakes: 9/16/98	Stand Counts: Fall: Wall: 10/23/98 Selby : 10/24/98 Winner: 10/22/98 Dakota Lakes: None-Residue too heavy
Harvest Dates:	Wall: No Count Taken (logistics) Selby: 5/21/99 Winner: 5/20/99 Dakota Lakes: None-Residue too heavy	Spring: Wall: No Count Taken (logistics) Selby: 5/21/99 Winner: 5/20/99 Dakota Lakes: None-Residue too heavy
Ratings:	Wall: 8/4/99 Selby: 7/29/99 Winner: 7/29/99 Dakota Lakes: 7/28/99	Previous Crop: Wall: Spring Wheat Selby: Winner: Dakota Lakes:

## Wall

Variety: Nekota		Ratings				Yield (bu/A)	Test Weight (lb/bu)
Treatment	Rate	Fall Stand Counts (plants/m)	Spring Stand Counts (plants/m)	OW Survival Rate (%)*	Root Rot (0-5)**		
Untreated	N/A	43.14	<b>DATA NOT AVAILABLE</b>	<b>NOT AVAILABLE</b>	<b>AVAILABLE</b>	22.12	52.45
RTU Vitavax-Thiram + Flo Pro IMZ	6 fl oz/cwt + 6 fl oz/cwt	36.75				21.17	57.71√
RTU Vitavax-Thiram C	0.25 fl oz/cwt	34.50				17.94	56.05√
Raxil XT	0.16 oz wt/cwt	36.38				20.67	59.13√
Raxil XT + Flo Pro IMZ	0.16 oz wt/cwt + 0.125 fl oz/cwt	37.13				20.12	55.91√
Raxil XT + Gaucho 480	0.16 oz wt/cwt + 1 fl oz/cwt	41.25				22.79	58.27√
Dividend RTA	5 fl oz/cwt	26.63				22.06	57.72√
DB Green L	3 fl oz/cwt	23.50				18.15	56.40√
Raxil-Thiram	3.5 fl oz/cwt	28.00				21.74	59.99√
EXPERIMENTAL B	0.5 fl oz/cwt	35.00				20.50	58.41√
EXPERIMENTAL C + EXPERIMENTAL B	0.16 oz wt/cwt + 0.11 fl oz/cwt	42.25				23.84	59.18√
<b>LSD (0.05)</b>		11.62				NS	3.04

## Selby

Variety: Nekota		Ratings				Yield (bu/A)	Test Weight (lb/bu)
Treatment	Rate	Fall Stand Counts (plants/m)	Spring Stand Counts (plants/m)	OW Survival Rate (%)*	Root Rot (0-5)**		
Untreated	N/A	44.03	27.88	64	1.66	48.97	62.61
RTU Vitavax-Thiram + Flo Pro IMZ	6 fl oz/cwt + 6 fl oz/cwt	35.63	27.50	78√	1.34	52.83	61.62
RTU Vitavax-Thiram C	0.25 fl oz/cwt	41.00	29.00	70	1.52	53.24	62.11
Raxil XT	0.16 oz wt/cwt	35.88	25.88	72	1.61	49.94	61.06
Raxil XT + Flo Pro IMZ	0.16 oz wt/cwt + 0.125 fl oz/cwt	43.00	28.13	65	1.69	51.70	61.34
Raxil XT + Gaucho 480	0.16 oz wt/cwt + 1 fl oz/cwt	46.00	29.25	64	1.16	45.98	61.76
Dividend RTA	5 fl oz/cwt	30.66	26.75	91√	1.51	47.89	61.97
DB Green L	3 fl oz/cwt	36.50	25.88	73	2.04	47.60	61.23
Raxil-Thiram	3.5 fl oz/cwt	42.82	24.38	57	1.63	47.99	60.81
EXPERIMENTAL B	0.5 fl oz/cwt	39.00	26.00	68	1.83	48.66	62.25
EXPERIMENTAL C + EXPERIMENTAL B	0.16 oz wt/cwt + 0.11 fl oz/cwt	31.75	27.25	68	1.38	49.49	62.18
<b>LSD (0.05)</b>		7.16	NS	17.0	NS	NS	NS

\* OW = Overwinter survival rates based on stand counts in the fall of 1998 and spring of 1999.

\*\* % diseased Sub Crown Internode of 20 random plants per plot on a scale of 0-5 (0 = no disease, 5 = 100% disease)

√ Significantly greater than the untreated check ( $P_{0.05}$ )

## Winter Wheat Seed Treatment Trial (con't)

### Winner

Variety: Nekota		Ratings				Yield (bu/A)	Test Weight (lb/bu)
Treatment	Rate	Fall Stand Counts (plants/m)	Spring Stand Counts (plants/m)	OW Survival Rate (%)*	Root Rot (0-5)**		
Untreated	N/A	30.88	31.13	103	1.49	64.76	64.01
RTU Vitavax-Thiram + Flo Pro IMZ	6 fl oz/cwt + 6 fl oz/cwt	54.75√	28.50	55	2.21	69.02	66.41
RTU Vitavax-Thiram C	0.25 fl oz/cwt	49.00√	27.25	57	1.43	66.73	65.28
Raxil XT	0.16 oz wt/cwt	39.25	23.63	60	1.51	68.59	63.03
Raxil XT + Flo Pro IMZ	0.16 oz wt/cwt + 0.125 fl oz/cwt	35.25	28.13	80	1.88	64.71	63.87
Raxil XT + Gaucho 480	0.16 oz wt/cwt + 1 fl oz/cwt	42.88√	30.13	70	1.75	64.66	64.58
Dividend RTA	5 fl oz/cwt	36.63	28.38	83	0.99	70.08	64.58
DB Green L	3 fl oz/cwt	38.60	28.25	75	1.76	67.75	63.17
Raxil-Thiram	3.5 fl oz/cwt	48.38√	28.13	59	2.03	67.07	***
EXPERIMENTAL B	0.5 fl oz/cwt	42.25	27.38	71	1.61	63.62	63.59
EXPERIMENTAL C + EXPERIMENTAL B	0.16 oz wt/cwt + 0.11 fl oz/cwt	45.75√	27.50	60	1.70	67.78	64.86
<b>LSD</b> (0.05)		11.95	NS	25.6	NS	NS	***

\*\*\* Note: Insufficient data for Analysis

### Dakota Lakes

Variety: Nekota		Ratings				Yield (bu/A)	Test Weight (lb/bu)	
Treatment	Rate	Fall Stand Counts (plants/m)	Spring Stand Counts (plants/m)	OW Survival Rate (%)*	Root Rot (0-5)**			
Untreated	N/A	<b>DATA NOT AVAILABLE</b>			1.68	58.77	60.77	
RTU Vitavax-Thiram + Flo Pro IMZ	6 fl oz/cwt + 6 fl oz/cwt				1.59	54.29	61.05	
RTU Vitavax-Thiram C	0.25 fl oz/cwt				1.84	61.20	60.91	
Raxil XT	0.16 oz wt/cwt				1.49	46.01	61.05	
Raxil XT + Flo Pro IMZ	0.16 oz wt/cwt + 0.125 fl oz/cwt				1.78	47.31	60.21	
Raxil XT + Gaucho 480	0.16 oz wt/cwt + 1 fl oz/cwt				1.85	52.40	60.91	
Dividend RTA	5 fl oz/cwt				1.46	53.95	61.34	
DB Green L	3 fl oz/cwt				1.76	60.30	61.76	
Raxil-Thiram	3.5 fl oz/cwt				1.66	57.34	61.05	
EXPERIMENTAL B	0.5 fl oz/cwt				1.67	58.08	61.16	
EXPERIMENTAL C + EXPERIMENTAL B	0.16 oz wt/cwt + 0.11 fl oz/cwt				1.69	57.18	60.35	
<b>LSD</b> (0.05)						NS	NS	

\* OW = Overwinter survival rates based on stand counts in the fall of 1998 and spring of 1999.

\*\* % diseased Sub Crown Internode of 20 random plants per plot on a scale of 0-5 (0 = no disease, 5 = 100% disease)

√ Significantly greater than the untreated check ( $P_{0.05}$ )

# Winter Wheat Foliar Fungicide Trial for Leaf Disease Control

M. Draper, S. Haley and S. Kalsbeck

Planting Date: Winner: 9/16/99	Spray Dates: Feekes 9:	Winner: 6/2/99
Dakota Lakes: 9/15/99		Dakota Lakes: 6/3/99
	Feekes 10.3:	Winner: 6/13/99
		Dakota Lakes: 6/13/99
Rating Date: Winner: 6/29/99		
Dakota Lakes: 7/6/99		
Harvest Date: Winner:		
Dakota Lakes:		
Varieties: 2137, Nekota & Arapahoe		

## Winner

Treatment	Rate	Feekes *	Flag Leaf Ratings (%)			Leaf Rust Ratings (%)			Yield (bu/A)			Test Weight (lb/bu)		
			Arapahoe	2137	Nekota	Arapahoe	2137	Nekota	Arapahoe	2137	Nekota	Arapahoe	2137	Nekota
Untreated	N/A	N/A	54.26	46.38	50.83	1.37	3.07	1.92	67.44	66.27	71.68	63.20	62.36	61.47
Folicur	4 fl oz/A	9	21.75	57.63	31.09	1.52	2.70	3.03	73.57	66.18	73.76	62.36	63.17	63.42
Tilt	4 fl oz/A	9	27.00	37.13	20.27	2.90	2.25	1.80	69.47	70.43	77.62	63.98	62.11	63.21
Quadris	0.075 lb ai/A	9	49.88	62.25	42.09	3.22	5.00	3.27	70.04	65.84	75.57	63.38	61.97	62.32
Exp. G + NIS	1 oz ai/A 0.25 ppm PR	9	34.63	21.71	37.25	1.53	1.36	2.72	71.64	72.92	74.46	63.10	64.09	62.43
Exp. G + NIS	1.5 oz ai/A 0.25 ppm PR	9	30.95	31.88	32.88	1.60	1.72	1.92	77.86	69.75	74.58	61.69	63.14	63.42
Exp. H + NIS	2 oz ai/A	9	34.61	62.50	31.46	1.08	1.80	3.07	71.75	66.76	76.69	63.10	63.03	62.78
Exp. G + NIS + Mancozeb	1.5 oz ai/A 0.25 ppm PR 1.5 lb/A	9	30.58	33.88	34.25	2.55	2.63	4.03	74.82	75.08	71.84	62.11	62.82	62.89
Quadris	0.2 lb ai/A	9	42.63	38.50	49.50	1.40	1.88	3.57	71.20	76.56	75.81	62.25	62.89	62.89
Mancozeb	2 lb/A	10.3	34.08	48.25	32.83	1.40	3.84	1.55	60.55	66.52	75.82	62.85	62.47	63.20
LSD (0.05)			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Treatment	Rate	Feekes *	Scab Incidence (%) **			Scab Severity (%) ***			Scab Index ****		
			Arapahoe	2137	Nekota	Arapahoe	2137	Nekota	Arapahoe	2137	Nekota
Untreated	N/A	N/A	0.05	0.04	0.05	12.46	16.0	10.98	1.08	1.27	0.78
Folicur	4 fl oz/A	9	0.04	0.05	0.09	6.64	3.44	14.93	0.53	0.27	1.35
Tilt	4 fl oz/A	9	0.06	0.04	0.04	13.77	3.32	18.87	1.29	0.26	1.50
Quadris	0.075 lb ai/A	9	0.05	0.02	0.05	3.04	16.8	12.78	0.29	0.51	0.27
Exp. G + NIS	1 oz ai/A 0.25 ppm PR	9	0.06	0.06	0.06	10.76	0.54	18.01	0.78	0.05	1.03
Exp. G + NIS	1.5 oz ai/A 0.25 ppm PR	9	0.09	0.04	0.02	13.05	0.28	0.43	1.11	0.02	0.02
Exp. H + NIS	2 oz ai/A	9	0.04	0.03	0.09	12.65	0.38	22.92	0.76	0.02	2.79
Exp. G + NIS + Mancozeb	1.5 oz ai/A 0.25 ppm PR 1.5 lb/A	9	0.03	0.04	0.07	4.29	6.36	25.75	0.26	0.25	1.35
Quadris	0.2 lb ai/A	9	0.10	0.05	0.06	17.33	8.99	17.88	2.09	0.52	1.03
Mancozeb	2 lb/A	10.3	0.05	0.04	0.12	4.47	0.26	20.05	0.28	0.02	1.42
LSD (0.05)			NS	NS	NS	NS	NS	NS	NS	NS	NS

\* Feekes growth stage      9= Flag leaf visible  
    10= In Boot  
    10.3= Head Emerged

\*\* % of infected heads, based on 50 head sample

\*\*\* % infection of blighted heads

\*\*\*\* % blighted heads X % infection on blighted heads

## Winter Wheat Foliar Fungicide Trial for Leaf Disease Control (con't)

### Dakota Lakes

Treatment	Rate	Feeke s*	Flag Leaf Ratings (%)			Leaf Rust Ratings (%)			Yield (bu/A)			Test Weight (lb/bu)		
			Arapahoe	2137	Nekota	Arapahoe	2137	Nekota	Arapahoe	2137	Nekota	Arapahoe	2137	Nekota
Untreated	N/A	N/A	31.67		27.75	2.97		1.75	67.44	66.27	74.68	62.89		
Folicur	4 fl oz/A	9	25.00			1.67			73.57	66.18	73.67	62.75		63.45
Tilt	4 fl oz/A	9	29.00		24.38	1.25		1.75	69.47	70.43	77.94	63.94		60.91
Quadris	0.075 lb ai/A	9	27.00		37.75	1.43		0.90	70.04	65.84	75.57	64.16		
Exp. G + NIS	1 oz ai/A 0.25 ppm PR	9	28.25	31.67	27.67	3.30	2.42	3.23	71.64	72.39	74.46	62.32		
Exp. G + NIS	1.5 oz ai/A 0.25 ppm PR	9	45.50	21.25	32.50	4.70	1.50	2.13	77.86	69.75	74.58	62.46		
Exp. H + NIS	2 oz ai/A	9	18.14	42.00	22.90	3.42	1.55	3.68	71.75	66.76	76.69	62.32		
Exp. G + NIS +	1.5 oz ai/A 0.25 ppm PR 1.5 lb/A	9	9.30	23.00		1.00	0.70		74.82	75.08	71.84	61.90	63.73	63.59
Mancozeb														
Quadris	0.2 lb ai/A	9	14.37	24.00	35.42	2.00	1.30	3.95	71.20	76.56	75.81	61.19		
Mancozeb	2 lb/A	9	24.00	29.75	25.25	3.40	2.35	2.33	60.55	66.52	75.82	63.03		
		10.3												
LSD (0.05)			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Treatment	Rate	Feeke s*	Scab Incidence (%) **			Scab Severity (%) ***			Scab Index ****		
			Arapahoe	2137	Nekota	Arapahoe	2137	Nekota	Arapahoe	2137	Nekota
Untreated	N/A	N/A	0.01	0.03	0.05	8.50	12.82	7.10	0.51	0.51	0.54
Folicur	4 fl oz/A	9	0.02	0.02	0.02	0.14	21.00	6.71	0.01	0.76	0.27
Tilt	4 fl oz/A	9	0.02	0.02	0.01	12.76	0.47	0.10	0.26	0.01	0.00
Quadris	0.075 lb ai/A	9	0.01	0.03	0.02	0.22	21.89	12.62	0.01	1.25	0.75
Exp. G + NIS	1 oz ai/A 0.25 ppm PR	9	0.03	0.00	0.03	9.44	0.17	12.97	0.75	0.00	0.78
Exp. G + NIS	1.5 oz ai/A 0.25 ppm PR	9	0.01	0.02	0.02	18.88	0.29	10.87	0.50	0.02	0.52
Exp. H + NIS	2 oz ai/A	9	0.04	0.04	0.02	16.01	17.86	4.50	0.52	0.77	0.27
Exp. G + NIS +	1.5 oz ai/A 0.25 ppm PR 1.5 lb/A	9	0.01	0.00	0.05	0.29	12.50	27.67	0.01	0.25	1.53
Mancozeb											
Quadris	0.2 lb ai/A	9	0.05	0.01	0.02	16.46	25.00	18.80	1.27	0.75	0.50
Mancozeb	2 lb/A	9	0.01	0.00	0.02	0.27	0.13	4.34	0.01	0.00	0.26
		10.3									
LSD (0.05)			NS	NS	NS	NS	NS	NS	NS	NS	NS

- \* Feekes growth stage    9= Flag leaf visible  
                                   10= In Boot  
                                   10.3= Head Emerged
- \*\* % of infected heads, based on 50 head sample
- \*\*\* % infection of blighted heads
- \*\*\*\* % blighted heads X % infection on blighted heads

## Winter Wheat Foliar Fungicide Trial for Leaf Disease Control (con't)

### Combined Data (Winner and Dakota Lakes)

Treatment	Rate	Feekes*	Flag Leaf Ratings (%)		Leaf Rust Ratings (%)		Yield (bu/A)		Test Weight (lb/bu)	
			Winner	Dak. Lakes	Winner	Dak. Lakes	Winner	Dak. Lakes	Winner	Dak. Lakes
Untreated	N/A	N/A	50.49	29.71	2.12	2.36	69.46	69.46	62.34	62.89
Folicur	4 fl oz/A	9	36.82	25.00	2.42	1.67	71.17	71.17	62.98	63.10
Tilt	4 fl oz/A	9	28.13	26.69	2.32	1.50√	72.51	72.61	63.10	62.93
Quadris	0.075 lb ai/A	9	51.41	32.38	2.83	1.17√	70.48	70.48	62.56	64.16
Exp. G + NIS	1 oz ai/A 0.25 ppm PR	9	31.19	29.19	1.87	2.98	73.01	73.01	63.21	62.32
Exp. G + NIS	1.5 oz ai/A 0.25 ppm PR	9	31.90	33.08	1.75	2.77	74.06	74.06	62.75	63.10
Exp. H + NIS	2 oz ai/A	9	42.86	27.68	1.98	2.89	71.73	71.73	62.97	62.32
Exp. G + NIS + Mancozeb	1.5 oz ai/A 0.25 ppm PR 1.5 lb/A	9	32.90	16.15√	3.07	0.85√	73.91	73.91	62.60	62.75
Quadris	0.2 lb ai/A	9	43.54	24.60	2.28	2.42	74.52	74.52	62.88	61.19
Mancozeb	2 lb/A	9	38.38	26.33	2.26	2.69	67.63	67.63	62.84	63.03
		10.3								
LSD (0.05)			NS	9.42	NS	0.76	NS	NS	NS	NS

Treatment	Rate	Feekes*	Scab Incidence (%) **		Scab Severity (%) ***		Scab Index ****	
			Winner	Dak. Lakes	Winner	Dak. Lakes	Winner	Dak. Lakes
Untreated	N/A	N/A	0.05	0.03	13.15	9.47	1.04	62.89
Folicur	4 fl oz/A	9	0.06	0.02	8.34	9.28	0.72	63.10
Tilt	4 fl oz/A	9	0.05	0.02	11.98	4.44	1.02	62.93
Quadris	0.075 lb ai/A	9	0.04	0.02	10.89	11.58	0.36	64.16
Exp. G + NIS	1 oz ai/A 0.25 ppm PR	9	0.06	0.02	9.77	7.53	0.62	62.32
Exp. G + NIS	1.5 oz ai/A 0.25 ppm PR	9	0.05	0.02	4.59	10.01	0.38	63.10
Exp. H + NIS	2 oz ai/A	9	0.05	0.03	11.98	12.79	1.19	62.32
Exp. G + NIS + Mancozeb	1.5 oz ai/A 0.25 ppm PR 1.5 lb/A	9	0.05	0.02	12.13	13.49	0.62	62.75
Quadris	0.2 lb ai/A	9	0.07	0.03	14.73	20.09	1.21	61.19
Mancozeb	2 lb/A	9	0.07	0.01	8.26	1.58	0.57	63.03
		10.3						
LSD (0.05)			NS	NS	NS	NS	NS	NS

- \* Feekes growth stage    9= Flag leaf visible  
                                   10= In Boot  
                                   10.3= Head Emerged
- \*\* % of infected heads, based on 50 head sample
- \*\*\* % infection of blighted heads
- \*\*\*\* % blighted heads X % infection on blighted heads
- √ Significantly greater than untreated check (P<sub>0.05</sub>)

# Winter Wheat Foliar Fungicide Trial for Scab Control

M. Draper, S. Haley and S. Kalsbeck

Planting Date: 9/9/98                      Spray Dates:    Feekes 10.3:  
 Rating Date: 7/12/99                      Feekes 10.5:    6/15/99  
 Harvest Date:                                  Feekes 10.51: 6/17/99  
 Varieties:                                      2137 & Arapahoe

## N.E. Farm

Treatment	Rate	Stage	Scab Incidence (%)**		Scab Severity (%)***		Scab Index****		FDK#		DON##	
			Arapahoe	2137	Arapahoe	2137	Arapahoe	2137	Arapahoe	2137	Arapahoe	2137
Untreated	N/A	N/A	3.00	14.00	45.88	63.30	1.00	8.90	1.25	2.00	0.65	1.38
Folicur	4 fl oz/A	Feekes 10.51	3.00	7.00√	35.13	44.78	1.04	2.83√	1.00	1.50	0.00	0.80
Benlate + Manzate	0.5 lb/A	Feekes 10.51	6.00	7.50√	12.51	73.54	0.76	5.05	1.25	2.75	0.20	1.25
Penncozeb	1 lb/A	Feekes 10.3 + 10.51	2.00	11.50	27.33	66.94	0.64	7.36	2.00	1.25	0.63	0.50√
	2 lb/A											
BAS 500	0.25 lb/A	Feekes 10.3	1.50	8.00√	3.50	55.75	0.11	3.98√	1.25	1.50	0.52	0.82
BAS 500	0.25 lb/A	Feekes 10.51	5.50	4.50√	10.23	37.12	0.76	3.46√	1.25	1.50	0.53	1.25
Stratego	10 fl oz/A	Feekes 10.51	3.00	4.00√	22.58	43.50	1.11	1.74√	0.75	2.00	0.00	0.80
Stratego	14 fl oz/A	Feekes 10.51	2.50	8.50	41.88	60.17	1.17	4.52√	1.00	2.50	0.00	0.52√
Quadris	0.2 lb ai/A	Feekes 10.51	3.50	5.50√	21.42	79.71	1.22	4.22√	1.00	1.50	0.68	1.35
Quadris	0.25 lb ai/A	Feekes 10.51	4.00	11.00	19.80	54.62	1.24	6.10	1.75	2.00	1.13	1.45
Tilt	4 fl oz/A	Feekes 10.51	2.50	10.50	20.50	75.07	0.48	7.93	0.75	1.25	0.40	1.08
Tilt	6 fl oz/A	Feekes 10.51	4.00	6.50√	33.94	36.99	0.98	2.81√	0.75	1.25	0.57	1.20
Folicur	6 fl oz/A	Feekes 10.51	3.50	6.00√	24.08	44.92	1.12	3.47√	1.50	2.25	0.50	1.13
EXPER. I	2 oz wt/A	Feekes 10.51	6.00	14.00	27.19	61.35	1.91	8.08	1.00	2.00	1.10	1.85
Deleted- Bad plot			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>LSD (0.05)</b>			NS	5.94	NS	31.79	NS	3.97	0.94	NS	8.04	0.70

Treatment	Rate	Stage	Flag Leaf Disease (%)		Leaf Rust of Flag Leaf (%)		Yield (bu/A)		Test Weight (lb/bu)	
			Arapahoe	2137	Arapahoe	2137	Arapahoe	2137	Arapahoe	2137
Untreated	N/A	N/A	87.50	96.88	5.75	6.75	53.95	38.74	59.04	53.86
Folicur	4 fl oz/A	Feekes 10.51	43.88√	79.63	0.75	6.25	62.70√	52.38√	60.17	58.55√
Benlate + Manzate	0.5 lb/A	Feekes 10.51	81.00	96.63	1.75	3.00	58.39	47.77	59.58	57.53√
Penncozeb	1 lb/A	Feekes 10.3 + 10.51	85.63	97.13√	1.00	8.00	54.19	58.25√	59.29	58.34√
	2 lb/A									
BAS 500	0.25 lb/A	Feekes 10.3	28.25√	41.25√	5.25	0.50	71.36√	58.88√	60.67	60.35√
BAS 500	0.25 lb/A	Feekes 10.51	33.13√	48.88√	3.00	3.00	62.64√	53.39√	59.64	58.62√
Stratego	10 fl oz/A	Feekes 10.51	31.25√	31.33√	1.50	2.25	62.29√	57.01√	60.45	59.22√
Stratego	14 fl oz/A	Feekes 10.51	30.67√	41.42√	0.50	0.75	54.95	54.70√	59.82	60.28√
Quadris	0.2 lb ai/A	Feekes 10.51	57.63√	69.38	9.50	2.50	51.53	54.07√	58.75	59.75√
Quadris	0.25 lb ai/A	Feekes 10.51	50.00√	51.38√	3.00	4.25	58.56	53.06√	60.35	59.59√
Tilt	4 fl oz/A	Feekes 10.51	52.13√	69.88	10.00	8.25	60.51	55.22√	60.14	59.68√
Tilt	6 fl oz/A	Feekes 10.51	52.63√	69.50	7.00	9.25	56.83	46.63	59.47	58.69√
Folicur	6 fl oz/A	Feekes 10.51	63.75√	59.38√	4.75	15.25	54.36	51.99√	58.48	56.97√
EXPER. I	2 oz wt/A	Feekes 10.51	63.75√	93.25	7.25	9.00	58.67	54.77√	59.12	56.72√
Deleted - Bad Plot			0.00	0.00	0.00	0.00	29.07	22.63	59.98	58.13√
<b>LSD (0.05)</b>			23.06	30.36	NS	NS	8.04	10.05	NS	2.77

\*\* % of infected heads, based on 50 head sample

\*\*\* % infection of blighted heads

\*\*\*\* % blighted heads X % infection on blighted heads

# Level of deoxynivalenol in sample, as detected by gas chromatography

## % of fusarium damaged heads as evaluated by visual examination

√ Significantly greater than the untreated check (P<sub>0.05</sub>)

## Winter Wheat Foliar Fungicide Trial for Scab Control, (Con't)

### N.E. Farm- Combined Data

Treatment	Rate	Stage	Scab Incidence (%)**	Scab Severity (%)***	Scab Index ****	Flag Leaf Disease (%)	Rust on Flag Leaf (%)	FDK#	DON###	Yield (bu/A)	Test Weight (lb/bu)
Untreated	N/A	N/A	8.50	54.49	4.95	92.19	6.25	1.63	1.01	46.34	56.45
Folicur	4 fl oz/A	Feekes 10.51	5.00	39.95	1.94√	61.75√	3.50	1.25	0.40√	57.54√	59.36√
Benlate + Manzate	0.5 lb/A 1 lb/A	Feekes 10.51	6.75	43.02	2.90	88.81	2.38	2.00	0.72	53.08√	58.55√
Penncoze b	2 lb/A	Feekes 10.3 + 10.51	6.75	47.13	4.00	91.38	4.50	1.63	0.56√	56.22√	58.82√
BAS 500	0.25 lb/A	Feekes 10.3	4.75√	29.63√	2.04√	34.75√	2.88	1.38	0.68	65.12√	60.51√
BAS 500	0.25 lb/A	Feekes 10.51	5.00√	23.67√	2.11√	41.00√	3.00	1.38	0.89	58.01√	59.13√
Stratego	10 fl oz/A	Feekes 10.51	3.50√	33.04	1.42√	31.29√	1.88	1.38	0.40√	59.65√	59.84√
Stratego	14 fl oz/A	Feekes 10.51	5.50	51.03	2.85√	36.05√	0.63	1.75	0.26√	54.83√	60.05√
Quadris	0.2 lb ai/A	Feekes 10.51	4.50√	50.56	2.72√	63.50√	6.00	1.25	1.01	52.80	59.25√
Quadris	0.25 lb ai/A	Feekes 10.51	7.50	37.21	3.67	50.69√	3.63	1.88	1.29	55.81√	59.47√
Tilt	4 fl oz/A	Feekes 10.51	6.50	47.79	4.21	61.00√	9.13	1.00	0.74	57.87√	59.91√
Tilt	6 fl oz/A	Feekes 10.51	5.25	35.46	1.90√	61.06√	8.13	1.00	0.89	51.73	59.08√
Folicur	6 fl oz/A	Feekes 10.51	4.75√	34.50	2.29√	61.56√	10.00	1.88	0.81	53.18√	57.72
EXPER. I	2 oz wt/A	Feekes 10.51	10.00	44.27	4.99	78.50	8.13	1.50	1.48	56.72√	57.92
Deleted- Bad plot			0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.84	58.55√
<b>LSD (0.05)</b>			3.37	24.59	2.08	18.72	NS	NS	0.39	6.55	1.59

\*\* % of infected heads, based on 50 head sample

\*\*\* % infection of blighted heads

\*\*\*\* % blighted heads X % infection on blighted heads

# Level of deoxynivalenol in sample, as detected by gas chromatography

### % of fusarium damaged heads as evaluated by visual examination

√ Significantly greater than the untreated check (P<sub>0.05</sub>)

# Spring Wheat Seed Treatment Trial

M. Draper, B. Farber, J. Rudd and S. Kalsbeck

Planting Date: 5/10/99  
Harvest Date:

Stand Count: 5/25/99  
Rating: 8/12/99 (post-harvest)

## Aurora

Treatment	Rate	Stand Counts (plants/m)		Root Rot Ratings (0-5, 5 crowns)		Yield (bu/A)		Test Weight (lb/bu)	
		Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
RTU Vitavax-Thiram	6 fl oz/cwt	51.13	50.88	2.36	2.31	27.66	21.16	54.11	55.94
RTU Vitavax-Extra	5 fl oz/cwt	51.88	55.25	2.01	2.29	24.45	22.65	54.14	56.33
Raxil-Thiram	3.5 oz wt/cwt	54.38	48.88	2.13	2.81	30.84	119.02	54.46	53.33
Raxil-Thiram + Flo Pro IMZ	3.5 oz wt/cwt 0.125 fl oz/cwt	48.88	47.75	2.20	2.20	28.57	18.60	55.17	51.15
Raxil-Thiram + Gaucho 480	3.5 oz wt/cwt 0.25 fl oz/cwt	56.13	55.38	2.20	2.17	31.60	19.84	54.53	55.77
Dividend XL RTA	5 fl oz/cwt	54.13	55.00	1.13√	1.83	32.41	21.89	53.19	55.91
DB Green L	3 fl oz/cwt	56.5	51.88	1.96	2.41	31.30	20.93	54.32	56.58
Experimental E	0.16 oz wt/cwt	50.13	52.75	2.1	2.15	25.42	19.26	54.32	54.0
Experimental F	5 fl oz/cwt	47.25	48.75	2.08	2.06	25.43	22.73	55.17	56.40
Experimental E + Experimental C	0.16 oz wt/cwt 25 ppm A	50.50	49.25	2.36	2.21	26.84	19.61	54.43	56.08
Experimental E + Experimental D	0.16 oz wt/cwt 40 ppm A	50.38	56.50	1.55√	2.41	26.72	20.89	53.62	56.33
Experimental D + Allegiance FL + Experimental C	40 ppm A .1 fl oz/cwt 25 ppm A	52.50	51.88	2.11	1.86	28.00	21.98	54.46	56.86
Untreated	n/a	50.38	47.75	1.94	2.01	23.43	22.96	54.64	56.75
DB Green L	5 fl oz/cwt	37.63	48.63	2.64	2.11	19.81	27.52	55.66	54.12
Agasco 4492	3 fl oz/cwt	47.63	48.00	1.49√	2.08	23.21	20.51	54.14	54.95
LSD <sub>(0.05)</sub>		7.07	NS	0.70	NS			NS	NS

## Combined Data-Aurora

Treatment	Rate	Stand Counts (plants/m)	Root Rot Ratings (0-5, 5 crowns)	Yield (bu/A)	Test Weight (lb/bu)
RTU Vitavax-Thiram	6 fl oz/cwt	51.0	2.34	24.42	55.03
RTU Vitavax-Extra	5 fl oz/cwt	53.56	2.15	23.55	55.24
Raxil-Thiram	3.5 oz wt/cwt	51.63	2.47	24.93	53.9
Raxil-Thiram + Flo Pro IMZ	3.5 oz wt/cwt 0.125 fl oz/cwt	48.31	2.2	23.60	53.16
Raxil-Thiram + Gaucho 480	3.5 oz wt/cwt 0.25 fl oz/cwt	55.75	2.19	25.72	55.15
Dividend XL RTA	5 fl oz/cwt	54.56	1.47	27.15	54.55
DB Green L	3 fl oz/cwt	54.19	2.19	26.10	55.45
Experimental E	0.16 oz wt/cwt	51.44	2.13	2234	54.16
Experimental F	5 fl oz/cwt	48.0	2.07	24.08	55.78
Experimental E + Experimental C	0.16 oz wt/cwt 25 ppm A	49.88	2.29	23.21	55.25
Experimental E + Experimental D	0.16 oz wt/cwt 40 ppm A	53.44	1.98	23.80	54.97
Experimental D + Allegiance FL + Experimental C	40 ppm A .1 fl oz/cwt 25 ppm A	52.19	1.99	24.99	55.66
Untreated	n/a	49.06	1.98	23.20	55.69
DB Green L	5 fl oz/cwt	43.13	2.38	23.66	54.89
Agasco 4492	3 fl oz/cwt	47.81	1.78	21.86	54.55
LSD <sub>(0.05)</sub>		7.87	NS		NS

√ Significantly greater than the untreated check (P<sub>0.05</sub>)

## Spring Wheat Seed Treatment Trial (con't)

Planting Date: 4/23/99

Stand Count: 5/25/99

Harvest Date:

Rating: 8/24/99 (post-harvest)

### Brookings

Treatment	Rate	Stand Counts (plants/m)		Root Rot Ratings (0-5, 5 crowns)		Yield (bu/A)		Test Weight (lb/bu)	
		Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
RTU Vitavax-Thiram	6 fl oz/cwt	50.63	47.38	1.2	1.9	43.71	38.53	56.36	59.12
RTU Vitavax-Extra	5 fl oz/cwt	44.00	47.13	1.03	1.74	42.98	36.53	56.76	59.33
Raxil-Thiram	3.5 oz wt/cwt	44.38	44.75	1.27	1.57	46.83	37.26	56.96	59.5
Raxil-Thiram + Flo Pro IMZ	3.5 oz wt/cwt 0.125 fl oz/cwt	45.63	46.25	.96	1.34	41.42	37.27	56.58	59.26
Raxil-Thiram + Gaucho 480	3.5 oz wt/cwt 0.25 fl oz/cwt	48.63	47.25	1.22	1.77	48.06 <sup>√</sup>	35.33	57.81 <sup>√</sup>	59.93
Dividend XL RTA	5 fl oz/cwt	48.38	47.13	1.39	1.83	46.02	36.98	57.11	59.54
DB Green L	3 fl oz/cwt	45.63	47.75	1.11	1.73	46.84	34.83	57.63	59.47
Experimental E	0.16 oz wt/cwt	45.88	45.75	1.42	1.96	43.84	37.77	57.03	59.26
Experimental F	5 fl oz/cwt	50.38	45.50	1.22	1.6	44.57	38.12	57	58.76
Experimental E + Experimental C	0.16 oz wt/cwt 25 ppm A	47.38	48.88	1.23	1.7	45.23	36.5	56.61	58.09
Experimental E + Experimental D	0.16 oz wt/cwt 40 ppm A	44.50	49.00	1.25	1.63	44.38	36.91	57.49	59.26
Experimental D + Allegiance FL + Experimental C	40 ppm A .1 fl oz/cwt 25 ppm A	47.28	52.00	1.45	1.92	46.43	36.01	57.49	58.62
Untreated	n/a	45.63	47.50	1.19	1.95	43.01	38.47	57.14	60
DB Green L	5 fl oz/cwt	46.25	47.13	1.83	1.39	37.35	39.98	59.64	57.49
Agasco 4492	3 fl oz/cwt	42.50	4400	1	1.72	43.12	36.27	56.96	59.29
<b>LSD<sub>(0.05)</sub></b>		NS	NS	NS	NS	3.58	NS	1.40	1.28

### Combined Data-Brookings

Treatment	Rate	Stand Counts (plants/m)	Root Rot Ratings (0-5, 5 crowns)	Yield (bu/A)	Test Weight (lb/bu)
RTU Vitavax-Thiram	6 fl oz/cwt	49.00	1.55	41.12	57.77
RTU Vitavax-Extra	5 fl oz/cwt	45.56	1.38	39.76	58.06
Raxil-Thiram	3.5 oz wt/cwt	44.56	1.43	42.04	58.23
Raxil-Thiram + Flo Pro IMZ	3.5 oz wt/cwt 0.125 fl oz/cwt	45.94	1.15	39.35	57.92
Raxil-Thiram + Gaucho 480	3.5 oz wt/cwt 0.25 fl oz/cwt	47.94	1.5	41.69	58.87
Dividend XL RTA	5 fl oz/cwt	47.75	1.61	41.5	58.32
DB Green L	3 fl oz/cwt	46.69	1.42	40.84	58.55
Experimental E	0.16 oz wt/cwt	45.81	1.69	40.81	58.14
Experimental F	5 fl oz/cwt	47.94	1.41	41.34	57.88
Experimental E + Experimental C	0.16 oz wt/cwt 25 ppm A	48.13	1.46	40.87	57.35
Experimental E + Experimental D	0.16 oz wt/cwt 40 ppm A	46.75	1.44	40.65	58.37
Experimental D + Allegiance FL + Experimental C	40 ppm A .1 fl oz/cwt 25 ppm A	49.63	1.69	41.22	58.06
Untreated	n/a	46.56	1.57	40.74	58.57
DB Green L	5 fl oz/cwt	46.69	1.61	38.67	58.57
Agasco 4492	3 fl oz/cwt	43.25	1.36	39.7	58.13
<b>LSD<sub>(0.05)</sub></b>		NS	0.51	4.38	1.32

<sup>√</sup> Significantly greater than the untreated check (P<sub>0.05</sub>)

# Spring Wheat Foliar Fungicide Trial for Leaf Disease Control

M. Draper, B. Farber and J. Rudd

Planting Date: 5/13/99

Rating: 7/28/99

Spray Dates:

Harvest Date:

## **N.E. Farm**

Treatment	Rate	Stage	Tan Spot (%)		Leaf Rust (%)		Whole Plot Ratings*		Yield (bu/A)		Test Weight (lb/bu)	
			Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
Untreated	N/A	N/A	97.3	98.9	1.0	1.3	3.3	3.4	24.65	26.84	53.86	58.09
Mancozeb	1 lb/A	Feekes 2	94.0	94.0	0.3	1.3	3.0	3.1	24.63	28.34	52.70	57.88
Mancozeb	1 lb/A	Feekes 2	90.6	94.5	0.8	2.8	3.0	3.4	25.13	28.22	52.09	56.05
	2 lb/A	Feekes 9										
	2 lb/A	Feekes 10										
Mancozeb	2 lb/A	Feekes 9	76.1√	86.1	1.5	2.5	2.6	2.9	24.05	27.45	58.16	55.73
	2 lb/A	Feekes 10										
Tilt	2 fl oz/A	Feekes 2	91.8	95.0	0.3	2.0	3.1	3.4	24.12	26.91	52.84	56.79
Tilt	2 fl oz/A	Feekes 9	51.0√	59.9√	1.3	8.3√	2.9	3.1	24.73	29.39	54.20	57.74
Tilt	4 fl oz/A	Feekes 9	43.5√	39.4√	1.5	7.5√	2.8	2.3	24.25	28.46	54.04	57.95
Tilt	2 fl oz/A	Feekes 2	51.6√	40.9√	2.3	5.8√	2.5	2.5	26.35	29.00	51.50	57.99
	2 fl oz/A	Feekes 9										
Folicur	4 fl oz/A	Feekes 9	46.5√	60.0√	0.5	2.3	2.3	2.5	26.78	29.79√	53.79	58.38
Folicur	2 fl oz/A	Feekes 9	65.0√	50.9√	0.5	3.0	2.6	2.4	24.83	29.96√	51.85	57.77
Govern	1.4 oz wt/A	Feekes 10	86.8	79.6	0.5	2.8	3.0	2.8	24.01	27.02	52.13	56.33
Govern	1.4 oz wt/A	Feekes 9	93.8	98.3	0.0	0.0	3.0	3.3	23.42	25.88	52.24	57.14
	1.4 oz wt/A	Feekes 10										
Govern	1.4 oz wt/A	Feekes 10	94.5	97.8	0.0	0.8	3.0	2.9	23.00	27.06	51.22	56.15
	1.4 oz wt/A	Feekes 10.3										
Quadris	0.125 lb ai/A	Feekes 9	22.1√	26.9√	1.0	3.5	2.1	2.0	26.87	29.35	52.84	57.56
Quadris	0.075 lb ai/A	Feekes 9	18.6√	25.6√	0.8	2.8	2.0	2.1	26.81	30.46√	53.47	58.51
Quadris	1 lb ai/A	Feekes 9	26.0√	53.9√	1.5	2.5	2.0	2.5	27.62√	29.52	53.40	57.46
<b>LSD<sub>(0.05)</sub></b>			18.53	20.68	NS	4.02	0.55	0.60	2.46	2.43	NS	NS

\* Rated on a scale of 0-5 (0 = no disease, 5 = 100% disease)

√ Significantly greater than the untreated check (P<sub>0.05</sub>)

## Spring Wheat Foliar Fungicide Trial for Leaf Disease Control (con't)

### N.E. Farm (Con't)

Treatment	Rate	Stage	Scab Incidence**		Scab Severity***		Scab Index****	
			Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
Untreated	N/A	N/A	0.6	0.6	11.0	11.0	7.05	58.09
Mancozeb	1 lb/A	Feekes 2	0.6	0.5	11.6	7.6	6.97	57.88
Mancozeb	1 lb/A	Feekes 2	0.6	0.5	11.5	8.1	7.21	56.05
	2 lb/A	Feekes 9						
	2 lb/A	Feekes 10						
Mancozeb	2 lb/A	Feekes 9	0.7	0.5	14.4	9.3	10.75√	55.73
	2 lb/A	Feekes 10						
Tilt	2 fl oz/A	Feekes 2	0.6	0.5	10.9	8.4	6.65	56.79
Tilt	2 fl oz/A	Feekes 9	0.7	0.6	12.5	9.6	8.33	57.74
Tilt	4 fl oz/A	Feekes 9	0.7	0.5	13.9	7.5	9.09	57.95
Tilt	2 fl oz/A	Feekes 2	0.6	0.4	9.0	5.1	5.74	57.99
	2 fl oz/A	Feekes 9						
Folicur	4 fl oz/A	Feekes 9	0.6	0.5	11.8	7.7	7.69	58.38
Folicur	2 fl oz/A	Feekes 9	0.6	0.6	11.6	8.6	7.10	57.77
Govern	1.4 oz wt/a	Feekes 10	0.6	0.5	10.0	7.8	6.02	56.33
Govern	1.4 oz wt/a	Feekes 9	0.6	0.5	9.8	8.9	6.35	57.14
	1.4 oz wt/a	Feekes 10						
Govern	1.4 oz wt/a	Feekes 10	0.7	0.5	11.2	8.0	7.43	56.15
	1.4 oz wt/a	Feekes 10.3						
Quadris	0.125# ai/A	Feekes 9	0.6	0.6	11.6	10.2	7.46	57.56
Quadris	0.075# ai/A	Feekes 9	0.6	0.6	10.4	9.2	6.71	58.51
Quadris	1# ai/A	Feekes 9	0.7	0.5	12.3	9.3	8.59	57.46
<b>LSD (0.05)</b>			NS	NS	NS	NS	2.46	NS

### Combined Data- N.E. Farm

Treatment	Rate	Stage	Tan Spot (%)	Leaf Rust (%)	Whole Plot Ratings*	Scab Incidence**	Scab Severity***	Scab Index****	Yield (bu/A)	Test Weight (lb/bu)
Untreated	N/A	N/A	98.1	1.1	3.3	0.6	11.0	6.67	25.74	55.91
Mancozeb	1 lb/A	Feekes 2	94.0	0.8	3.1	0.5	9.6	5.38	26.49	55.29
Mancozeb	1 lb/A	Feekes 2	92.6	1.8	3.2	0.6	9.8	5.93	26.68	54.12
	2 lb/A	Feekes 9								
	2 lb/A	Feekes 10								
Mancozeb	2 lb/A	Feekes 9	81.1	2.0	2.8	0.6	11.8	7.91	25.75	56.95
	2 lb/A	Feekes 10								
Tilt	2 fl oz/A	Feekes 2	93.4	1.1	3.3	0.6	9.7	5.41	25.51	54.81
Tilt	2 fl oz/A	Feekes 9	55.4	4.8	3.0	0.6	11.0	6.88	27.00	56.03
Tilt	4 fl oz/A	Feekes 9	41.4	4.5	2.5	0.6	10.7	6.49	26.36	55.99
Tilt	2 fl oz/A	Feekes 2	46.3	4.0	2.5	0.5	7.0	4.00	27.67	54.74
	2 fl oz/A	Feekes 9								
Folicur	4 fl oz/A	Feekes 9	53.3	1.4	2.4	0.6	9.7	5.80	28.24	56.02
Folicur	2 fl oz/A	Feekes 9	57.9	1.8	2.5	0.6	10.1	6.41	27.39	54.81
Govern	1.4 oz wt/a	Feekes 10	83.2	1.6	2.9	0.5	8.9	4.89	25.51	54.23
Govern	1.4 oz wt/a	Feekes 9	96.0	0.0	3.1	0.6	9.4	5.51	24.65	54.69
	1.4 oz wt/a	Feekes 10								
Govern	1.4 oz wt/a	Feekes 10	96.1	0.4	2.9	0.6	9.6	5.80	25.03	53.69
	1.4 oz wt/a	Feekes 10.3								
Quadris	0.125 lb ai/A	Feekes 9	24.5	2.3	2.1	0.6	10.9	6.91	28.11	55.20
Quadris	0.075lb ai/A	Feekes 9	22.1	1.8	2.1	0.6	9.8	6.31	28.64	55.999
Quadris	1 lb ai/A	Feekes 9	39.9	2.0	2.3	0.6	10.8	6.70	28.57	55.46
<b>LSD (0.05)</b>			NS	NS	NS	NS	NS	NS	NS	NS

\* Rated on a scale of 0-5 (0 = no disease, 5 = 100% disease)

\*\* % of infected heads, based on 50 head sample

\*\*\* % infection of blighted heads

\*\*\*\* % blighted heads X % infection on blighted heads

√ Significantly greater than the untreated check ( $P_{0.05}$ )

# Spring Wheat Foliar Fungicide Trial for Scab Control

M. Draper, B. Farber and J. Rudd

Planting Date: N.E. Farm:  
Groton:

Rating: N.E. Farm:  
Groton:

Spray Dates: N.E. Farm:  
Groton:

Harvest Date: N.E. Farm:  
Groton:

## N.E. Farm- By Variety

Treatment	Rate	Stage	Scab Incidence (%)**		Scab Severity (%)***		Scab Index****		FDK#		DON##	
			Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
Untreated	N/A	N/A	55.33	36.00	23.79	16.96	13.00	6.13	8.67	6.00	10.25	5.83
Folicur	4 fl oz/A	Feekes 10.5	54.00	27.67	25.43	14.96	13.73	4.31	8.67	5.33	9.25	5.73
Benlate + Manzate	0.5 lb/A	Feekes 10.5	41.33	30.00	22.79	14.92	9.49	4.72	7.67	4.00	7.57	5.17
Penncozeb	1 lb/A											
Penncozeb	2 lb/A	Feekes 10.5	49.00	35.00	19.49	18.34	9.53	6.17	9.00	6.00	10.35	7.83√
BAS 500	0.25 lb/A	Feekes 10.3	42.00	24.67	21.16	14.11	8.77	3.52	8.67	5.00	8.50	6.55
BAS 500	0.25 lb/A	Feekes 10.5	44.67	26.67	19.23	15.00	8.74	4.14	7.83	4.33	10.33	7.43
Stratego	14 fl oz/A	Feekes 10.5	40.33	32.33	18.14	17.13	7.23	5.77	7.00	5.67	9.35	5.83
Stratego	10 fl oz/A	Feekes 10.5	42.33	35.67	21.98	15.53	9.54	5.60	7.50	5.33	7.00	5.52
Quadris	0.2 lb ai/A	Feekes 10.5	44.00	30.67	22.27	21.87	9.81	6.61	9.83	6.67	10.92	8.15√
Quadris	0.25 lb ai/A	Feekes 10.5	47.67	30.67	21.88	17.30	10.54	5.26	8.83	6.00	11.67	10.53√
Tilt	4 fl oz/A	Feekes 10.5	48.67	27.00	21.03	18.10	10.13	4.78	7.17	5.83	9.82	5.82
Folicur	6 fl oz/A	Feekes 10.5	42.33	27.67	22.04	12.81	9.36	3.52	6.00	6.33	7.65	4.40
Tilt	6 fl oz/A	Feekes 10.5	47.33	22.67	17.85	16.23	8.56	3.74	8.33	5.67	9.22	6.22
Quadris	2 fl oz/A	Feekes 9	45.33	32.33	21.23	18.12	9.66	5.85	11.17	6.33	14.38	9.52√
Quadris	2 fl oz/A	Feekes 10.3	52.00	29.00	22.49	19.82	11.59	5.77	9.33	8.50	12.73	8.38√
Folicur	4 fl oz/A	Feekes 9	49.00	31.67	23.06	15.56	11.64	5.36	8.33	7.00	11.28	6.87
Quadris	0.15 lb ai/A	Feekes 10.5	48.00	31.00	21.53	16.45	10.23	5.27	10.17	5.83	11.77	8.58√
EXPER. I	1 oz wt/A	Feekes 10.5	47.67	35.83	22.83	16.22	11.40	6.32	8.67	7.00	12.73	8.28√
EXPER. I	2 oz wt/A	Feekes 10.5	53.00	37.00	28.26	18.25	15.13	6.88	13.00	7.33	12.92	8.58√
EXPER. I	3 oz wt/A	Feekes 10.5	54.17	36.67	25.96	18.38	21.67√	6.68	11.00	8.67	12.52	8.98√
<b>LSD (0.05)</b>			NS	9.10	6.70	NS	3.92	NS	NS	NS	NS	1.64

Treatment	Rate	Stage	Flag Leaf Disease (%)		Leaf Rust of Flag Leaf (%)		Yield (bu/A)		Test Weight (lb/bu)	
			Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
Untreated	N/A	N/A	53.67	59.00	2.67	6.00	22.32	26.28	53.44	58.05
Folicur	4 fl oz/A	Feekes 10.5	13.62	18.83√	0.00√	0.00√	25.36√	31.01	54.00	58.75
Benlate + Manzate	0.5 lb/A	Feekes 10.5	58.50√	51.67	1.17	1.83√	24.83	27.18	54.45	58.73
Penncozeb	1 lb/A									
Penncozeb	2 lb/A	Feekes 10.5	11.17√	11.89√	2.17	0.50√	24.57	28.91	54.31	58.44
BAS 500	0.25 lb/A	Feekes 10.3	4.50√	12.00√	0.17√	0.17√	29.04√	30.68	56.47	59.41
BAS 500	0.25 lb/A	Feekes 10.5	8.00√	11.33√	0.00√	0.33√	28.80√	32.67	54.68	59.31
Stratego	14 fl oz/A	Feekes 10.5	13.17√	15.83√	1.17	1.17√	24.77	27.96	54.36	58.77
Stratego	10 fl oz/A	Feekes 10.5	12.70√	17.83√	0.17√	0.23√	25.83√	30.05	54.83	58.91
Quadris	0.2 lb ai/A	Feekes 10.5	9.95√	14.25√	0.33√	0.17√	25.71√	30.00	54.52	58.26
Quadris	0.25 lb ai/A	Feekes 10.5	9.25√	9.75√	0.50√	0.67√	26.23√	30.59	54.38	58.70
Tilt	4 fl oz/A	Feekes 10.5	12.50√	15.00√	0.17√	0.50√	22.37	29.04	53.96	58.59
Folicur	6 fl oz/A	Feekes 10.5	9.25√	16.75√	0.00√	0.00√	26.39√	30.71	53.49	59.13
Tilt	6 fl oz/A	Feekes 10.5	18.83√	19.58√	1.83	1.33√	25.81√	29.74	54.00	58.70
Quadris	2 fl oz/A	Feekes 9	7.67√	11.08√	0.17√	0.00√	24.83	30.03	53.70	58.21
Quadris	2 fl oz/A	Feekes 10.3	15.00√	17.75√	0.83	2.33√	24.30	29.56	53.13	58.30
Folicur	4 fl oz/A	Feekes 9	12.83√	17.50√	0.17√	0.33√	25.06	29.96	54.38	58.63
Quadris	0.15 lb ai/A	Feekes 10.5	10.67√	14.67√	0.17√	1.33√	26.34√	29.14	53.89	58.19
EXPER. I	1 oz wt/A	Feekes 10.5	36.50√	38.75√	2.50	6.67	25.40√	26.56	52.99	57.90
EXPER. I	2 oz wt/A	Feekes 10.5	24.08√	35.50√	0.17√	5.17	22.82	27.20	53.20	58.33
EXPER. I	3 oz wt/A	Feekes 10.5	21.67√	28.58√	1.33	3.83	23.57	27.78	54.14	57.53
<b>LSD (0.05)</b>			10.63	11.64	1.96	2.64	3.04	NS	1.44	NS

\*\* % of infected heads, based on 50 head sample

\*\*\* % infection of blighted heads

\*\*\*\* % blighted heads X % infection on blighted heads

# Level of deoxynivalenol in sample, as detected by gas chromatography

## % of fusarium damaged heads as evaluated by visual examination

√ Significantly greater than the untreated check (P<sub>0.05</sub>)

## Spring Wheat Foliar Fungicide Trial for Scab Control (Con't)

### N.E. Farm- Combined Data

Treatment	Rate	Stage	Scab Incidence (%)**	Scab Severity (%)***	Scab Index ****	Flag Leaf Disease (%)	Rust on Flag Leaf (%)	FDK#	DON##	Yield (bu/A)	Test Weight (lb/bu)
Untreated	N/A	N/A	45.7	20.37	9.56	31.43	1.46	7.3	8.04	24.30	55.74
Folicur	4 fl oz/A	Feekes 10.5	40.8	20.19	9.02	8.38√	0.61√	7.0	7.49	28.19√	56.38
Benlate + Manzate	0.5 lb/A	Feekes 10.5	35.7√	18.85	7.10√	22.32√	1.52	5.8	6.37√	26.01	56.59√
1 lb/A											
Penncozeb	2 lb/A	Feekes 10.5	42.0	18.91	7.85	14.55√	1.03	7.5	9.09	26.74√	56.38
BAS 500	0.25 lb/A	Feekes 10.3	33.3√	17.63	6.15√	8.97√	1.07	6.8	7.52	29.86√	57.94√
BAS 500	0.25 lb/A	Feekes 10.5	35.7√	17.11	6.44√	8.43√	0.32√	6.1	8.88	30.73√	57.00√
Stratego	14 fl oz/A	Feekes 10.5	36.3√	17.64	6.50√	8.25√	0.48√	6.3	7.59	26.36√	56.56√
Stratego	10 fl oz/A	Feekes 10.5	39.0	118.76	7.57	7.33√	0.47√	6.4	6.26√	27.94√	56.87√
Quadris	0.2 lb ai/A	Feekes 10.5	37.3√	22.07	8.21	8.39√	0.48√	8.3	9.53	27.91√	56.39
Quadris	0.25 lb ai/A	Feekes 10.5	39.2	19.59	7.90	6.92√	0.37√	7.4	11.10	28.41√	56.54
Tilt	4 fl oz/A	Feekes 10.5	37.8√	19.57	7.45	8.12√	0.85√	6.5	7.82	25.70	56.27
Folicur	6 fl oz/A	Feekes 10.5	35.0√	17.43	6.44√	6.01√	0.57√	6.2	6.03√	28.55√	56.31
Tilt	6 fl oz/A	Feekes 10.5	35.0√	17.04	6.15√	9.57√	0.40√	7.0	7.72	27.78√	56.35
Quadris	2 fl oz/A	Feekes 9	38.8	19.67	7.75	11.10√	0.95	8.8	11.95	27.43√	55.95
Quadris	2 fl oz/A	Feekes 10.3	40.5	21.15	8.68	6.70√	0.38√	8.9	10.56	26.93√	55.72
Folicur	4 fl oz/A	Feekes 9	40.3	19.31	8.50	9.15√	0.52√	7.7	9.07	27.51√	56.51
Quadris	0.15 lb ai/A	Feekes 10.5	39.5	18.99	7.75	11.45√	0.58√	8.0	10.18	27.74√	56.04
EXPER. I	1 oz wt/A	Feekes 10.5	41.8	19.52	8.86	22.67√	1.01	7.8	10.51	25.98	55.45
EXPER. I	2 oz wt/A	Feekes 10.5	45.0	23.25	11.00	22.32√	0.88√	10.2	10.75	25.01	55.77
EXPER. I	3 oz wt/A	Feekes 10.5	45.4	22.17	9.96	28.03	1.77	9.8	10.75	25.68	55.84
<b>LSD (0.05)</b>			7.1	NS	2.42	6.31	0.75	2.1	1.33	1.97	0.82

### Groton- Combined Data

Treatment	Rate	Stage	Scab Incidence (%)**	Scab Severity (%)***	Scab Index ****	Flag Leaf Disease (%)	Rust on Flag Leaf (%)	FDK #	DON ##	Yield (bu/A)	Test Weight (lb/bu)
Untreated	N/A	N/A	17.0	28.58	5.00	31.43	1.46	5.2		29.30	57.59
Folicur	4 fl oz/A	Feekes 10.5	12.0√	18.54√	2.54√	8.38√	0.61√	3.1√		39.40√	55.42
Benlate + Manzate	0.5 lb/A	Feekes 10.5	11.0√	20.29√	2.93√	22.32√	1.52	4.0		35.45√	55.66
1 lb/A											
Penncozeb	2 lb/A	Feekes 10.5	14.2	20.36√	2.86√	14.55√	1.03	3.6√		36.79√	55.36
BAS 500	0.25 lb/A	Feekes 10.3	13.0	14.97√	2.61√	8.98√	1.07	3.8		41.63√	56.85
BAS 500	0.25 lb/A	Feekes 10.5	17.7	19.85√	3.80	9.43√	0.32√	4.2		38.08√	55.96
Stratego	14 fl oz/A	Feekes 10.5	13.5	15.52√	2.39√	8.25√	0.48√	3.8		39.87√	56.43
Stratego	10 fl oz/A	Feekes 10.5	14.3	16.08√	2.80√	7.33√	0.47√	4.0		38.88√	55.85
Quadris	0.2 lb ai/A	Feekes 10.5	16.7	20.33√	3.57	8.39√	0.48√	4.7		38.08√	55.87
Quadris	0.25 lb ai/A	Feekes 10.5	16.2	16.42√	2.63√	6.92√	0.37√	5.2		40.43√	55.42
Tilt	4 fl oz/A	Feekes 10.5	12.0√	14.63√	1.97√	8.12√	0.85	3.5√		36.52√	55.35
Folicur	6 fl oz/A	Feekes 10.5	9.8√	12.91√	1.34√	6.01√	0.57√	3.3√		39.11√	57.10
Tilt	6 fl oz/A	Feekes 10.5	15.2	14.71√	2.32√	9.57√	0.40√	4.2		38.03√	55.11
Quadris	2 fl oz/A	Feekes 9	17.5	18.04√	3.14√	11.10√	0.95	5.8		38.73√	55.78
Quadris	2 fl oz/A	Feekes 10.3	17.5	17.54√	3.22√	6.70√	0.38√	5.8		39.98√	55.34
Folicur	4 fl oz/A	Feekes 9	12.2√	11.75√	1.46√	9.15√	0.52√	3.3√		39.22√	56.52
Quadris	0.15 lb ai/A	Feekes 10.5	19.2	16.56√	3.20√	11.45√	0.58√	4.6		36.95√	54.79
EXPER. I	1 oz wt/A	Feekes 10.5	18.7	19.28√	3.32√	22.67√	1.01	5.8		34.13√	53.99
EXPER. I	2 oz wt/A	Feekes 10.5	17.0	19.62√	3.92	22.32√	0.88	5.3		34.92√	54.88
EXPER. I	3 oz wt/A	Feekes 10.5	19.8	16.04√	3.16√	28.02	1.77	5.3		33.53√	54.98
<b>LSD (0.05)</b>			4.3	7.12	1.53	6.31	0.76	1.5		2.36	NS

\*\* % of infected heads, based on 50 head sample

\*\*\* % infection of blighted heads

\*\*\*\* % blighted heads X % infection on blighted heads

# level of deoxynivalenol in sample, as detected by gas chromatography

## % of fusarium damaged heads as evaluated by visual examination

√ Significantly greater than untreated check (P<sub>0.05</sub>)

## Spring Wheat Foliar Fungicide Trial for Scab Control (Con't)

### Groton- By Variety

Treatment	Rate	Stage	Scab Incidence (%)**		Scab Severity (%)***		Scab Index****		FDK#		DON##	
			Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
Untreated	N/A	N/A	17.7	16.3	30.73	26.42	5.26	4.75	5.0	5.3		
Folicur	4 fl oz/A	Feekes 10.5	13.7	10.3√	16.55√	20.53	2.89√	2.19√	3.3	2.8		
Benlate + Manzate	0.5 lb/A 1 lb/A	Feekes 10.5	9.0	13.0√	24.31	16.28	3.21√	2.65	3.3	4.7		
Penncozeb	2 lb/A	Feekes 10.5	13.3	15.0	21.91	18.82	3.20√	2.52	3.0	4.2		
BAS 500	0.25 lb/A	Feekes 10.3	10.3	15.7	11.79√	18.15	1.50√	3.72	3.5	4.2		
BAS 500	0.25 lb/A	Feekes 10.5	16.0	19.3	17.84√	21.87	2.90√	4.70	3.0	5.3		
Stratego	14 fl oz/A	Feekes 10.5	12.7	14.3	14.46√	16.59	2.17√	2.71	3.7	4.0		
Stratego	10 fl oz/A	Feekes 10.5	12.0	16.7	14.41√	17.75	1.96√	3.65	3.5	4.5		
Quadris	0.2 lb ai/A	Feekes 10.5	17.0	16.3	15.35√	25.32	2.84√	4.30	4.3	5.0		
Quadris	0.25 lb ai/A	Feekes 10.5	17.3	15.0	15.53√	17.30	2.65√	2.61	5.3	5.0		
Tilt	4 fl oz/A	Feekes 10.5	13.0	11.0√	16.81√	12.42√	2.28√	1.67√	3.7	3.3		
Folicur	6 fl oz/A	Feekes 10.5	9.7	10.0√	14.78√	11.05√	1.41√	1.27√	3.7	2.8		
Tilt	6 fl oz/A	Feekes 10.5	17.0	13.3	16.36√	13.06√	2.94√	1.71√	3.8	4.5		
Quadris	2 fl oz/A	Feekes 9	16.0	19.0	21.82	14.26√	3.75	2.53	6.0	5.7		
Quadris	2 fl oz/A	Feekes 10.3	17.3	17.7	16.01√	19.07	2.82√	3.63	5.7	6.0		
Folicur	4 fl oz/A	Feekes 9	11.0	13.3	10.03√	13.47√	1.10√	1.82√	3.5	3.2		
Quadris	0.15 lb ai/A	Feekes 10.5	18.0	20.3	18.47√	14.66√	3.54	2.86	4.5	4.7		
EXPER. I	1 oz wt/A	Feekes 10.5	21.7	15.7	16.54√	22.03	3.65	2.99	6.0	5.7		
EXPER. I	2 oz wt/A	Feekes 10.5	14.7	19.3	14.16√	25.08	2.41√	5.43	6.2	4.3		
EXPER. I	3 oz wt/A	Feekes 10.5	18.0	21.7	16.92√	15.15√	2.92√	3.41	6.0	4.7		
<b>LSD (0.05)</b>			NS	NS	9.74	10.18	1.90	2.34	NS	NS		

Treatment	Rate	Stage	Flag Leaf Disease (%)		Leaf Rust of Flag Leaf (%)		Yield (bu/A)		Test Weight (lb/bu)	
			Oxen	Ingot	Oxen	Ingot	Oxen	Ingot	Oxen	Ingot
Untreated	N/A	N/A	40.10	22.76	1.30	1.62	30.25	28.35	55.65	53.53
Folicur	4 fl oz/A	Feekes 10.5	8.15√	8.60√	0.67	0.55√	38.11	40.69	53.11	57.74
Benlate + Manzate	0.5 lb/A 1 lb/A	Feekes 10.5	18.89√	25.75	1.05	1.98	33.87	37.02	53.70	57.62
Penncozeb	2 lb/A	Feekes 10.5	16.16√	12.94√	0.91	1.15	37.63	35.96	56.66	54.07
BAS 500	0.25 lb/A	Feekes 10.3	7.83√	10.12√	0.61	1.53	41.65	41.60	56.73	56.96
BAS 500	0.25 lb/A	Feekes 10.5	6.63√	10.22√	0.43	0.20√	38.76	37.39	56.78	55.15
Stratego	14 fl oz/A	Feekes 10.5	9.25√	7.25√	0.63	0.32√	40.46	39.27	56.26	56.61
Stratego	10 fl oz/A	Feekes 10.5	8.03√	6.62√	0.60	0.33√	38.74	39.01	56.12	55.58
Quadris	0.2 lb ai/A	Feekes 10.5	8.73√	8.04√	0.50	0.46√	38.83	37.34	55.55	56.19
Quadris	0.25 lb ai/A	Feekes 10.5	6.22√	7.62√	0.37	0.37√	40.01	40.85	56.24	54.61
Tilt	4 fl oz/A	Feekes 10.5	8.12√	8.12√	1.23	0.47√	36.69	36.34	55.81	54.90
Folicur	6 fl oz/A	Feekes 10.5	7.22√	4.80√	0.26	0.89	39.25	38.97	56.85	57.36
Tilt	6 fl oz/A	Feekes 10.5	11.18√	7.95√	0.40	0.40√	38.64	37.41	54.90	55.32
Quadris	2 fl oz/A	Feekes 9	13.97√	8.23√	1.55	0.35√	39.21	38.24	55.57	55.99
Quadris	2 fl oz/A	Feekes 10.3	7.73√	5.67√	0.32	0.45√	40.03	39.94	55.88	54.80
Folicur	4 fl oz/A	Feekes 9	7.00√	11.29√	0.48	0.55√	39.14	39.30	56.77	56.26
Quadris	0.15 lb ai/A	Feekes 10.5	12.44√	10.45√	0.69	0.46√	37.45	36.44	55.84	53.74
EXPER. I	1 oz wt/A	Feekes 10.5	29.57√	15.78√	1.16	0.86	33.69	34.57	53.25	54.73
EXPER. I	2 oz wt/A	Feekes 10.5	24.62√	20.02	0.68	1.08	34.78	35.05	55.95	53.81
EXPER. I	3 oz wt/A	Feekes 10.5	30.80	25.25	2.00	1.54	32.92	34.13	55.62	54.33
<b>LSD (0.05)</b>			10.50	6.92	1.08	1.07	NS	NS	NS	NS

\*\* % of infected heads, based on 50 head sample

\*\*\* % infection of blighted heads

\*\*\*\* % blighted heads X % infection on blighted heads

# Level of deoxynivalenol in sample, as detected by gas chromatography

## % of fusarium damaged heads as evaluated by visual examination

√ Significantly greater than the untreated check (P<sub>0.05</sub>)

## Spring Wheat Scab Foliar Fungicide Variety Trial

M. Draper

Location: Brookings

Planting Date:

Rating Date: 7/3/99

Harvest Date:

Variety	Scab Incidence *		Scab Severity **		Scab Index ***		Yield (bu/A)		Test Weight (lb/bu)	
	Untreated	Folicur	Untreated	Folicur	Untreated	Folicur	Untreated	Folicur	Untreated	Folicur
Oxen	8	5	2.44	0.51	0.38	0.04	15.66	15.97	46.11	45.33
Russ	6	6	4.83	3.25	0.31	0.32	15.52	14.38	44.31	43.78
Forge	8	6	5.80	7.10	0.54	0.32	15.28	14.45	48.29	47.16
Ingot	8	5	2.70	0.90	0.36	0.08	14.84	16.19	49.24	50.76
Butte 86	6	7	19.34	3.11	0.80	0.30	13.79	13.36	46.67	45.90
2375	4	4	0.67	0.42	0.04	0.03	10.93	10.91	47.09	46.00
LSD (0.05)	NS		NS		NS		2.05		1.55	

(Folicur applied at rate of 4 fl oz/A)

## Spring Wheat Scab Foliar Fungicide, Biological Control Trial

M. Draper and B. Bleakley

Location: Brookings

Planting Date:

Rating Date: 8/10/99

Harvest Date:

Treatment	Rate	Timing (Feekes)	Scab Incidence *	Scab Severity **	Scab Index ***	FDK	Yield (bu/A)	Test Weight (lb/bu)
Untreated	N/A	N/A	25.00	29.31	7.56	1.75	22.10	54.78
Folicur	4 fl oz/A	F 10.5	30.50	27.46	9.61	1.25	22.61	54.78
Benlate + Mancozeb	0.5 lb ai/A 1lb/A	F 10.5	20.00	19.04	4.83	2.50	22.83	53.20
Bio- SDSU #1	10.6 cfu/ml	F 9	28.00	28.85	8.27	2.75	22.93	54.38
Bio- SDSU #1	10.6 cfu/ml	F 10.3	21.00	22.03	4.91	1.25	20.68	51.22
Bio- SDSU #1	10.6 cfu/ml	F 10.5	34.00	28.60	9.83	2.50	22.92	53.79
Bio- SDSU #1	10.6 cfu/ml	F9 F 10.3	37.00	31.08	12.69	2.00	23.80	51.81
Phosphate buffer control			27.50	34.67	9.34	1.75	20.02	48.65
LSD (0.05)			10.22	NS	NS	NS	NS	NS

\* % of infected heads, based on 50 head sample

\*\* % infection of blighted heads

\*\*\* % blighted heads X % infection on blighted heads

# Oat Foliar Fungicide Trial

M. Draper, D. Reeves and L. Hall

**Locations: Brookings, N.E. Farm, S.E. Farm (lost due to flooding)**

<b>Planting Dates:</b>	NE Farm: Brookings:	<b>Spray Dates:</b>	<b>Feekes 2:</b> <b>Feekes 9:</b> <b>Feekes 10:</b>	NE Farm Brookings NE Farm Brookings NE Farm Brookings	5-27-99 5-28-99 6-7-99 6-9-99 6-14-99 6-14-99
<b>Rating Dates:</b>	NE Farm: Brookings:	<b>Feekes 10.3:</b>	<b>Feekes 10.3:</b>	NE Farm Brookings	6-25-99 6-25-99

Location: Brookings			Ratings				Yield (bu/A)		Test Weights (lb/bu)	
Treatment	Rate	Timing	Crown Rust/ Plot *		Overall Foliar Disease/Plot **					
			<u>Don</u>	<u>Riser</u>	<u>Don</u>	<u>Riser</u>	<u>Don</u>	<u>Riser</u>	<u>Don</u>	<u>Riser</u>
Untreated	N/A		0.00	0.00	2.88	3.25	110.30	100.14	35.88	36.87
Mancozeb	1 lb/A	Feekes 2	0.00	0.00	2.88	3.13	109.38	96.80	36.45	36.31
Mancozeb	2 lb/A	Feekes 9	0.00	0.00	2.88	3.25	110.41	100.78	36.06	36.91
Mancozeb	2 lb/A	Feekes 10	0.00	0.00	2.63	3.00	107.14	93.11	36.48	36.52
Mancozeb	2 lb/A	Feekes 10.3	0.00	0.00	3.00	3.50	106.50	102.41	36.77	37.08
Mancozeb	2 lb/A	Feekes 10	0.00	0.00	3.13	3.25	106.88	102.68	36.48	36.73
Mancozeb	2 lb/A	Feekes 10.3								
Mancozeb	1 lb/A	Feekes 2	0.00	0.00	2.13	3.25	116.88	96.81	36.27	36.77
Mancozeb	2 lb/A	Feekes 10								
Mancozeb	2 lb/A	Feekes 10.3								
Folicur	4 fl oz/A	Feekes 9	0.00	0.00	3.13	3.25	109.54	97.44	35.96	36.59
Folicur	4 fl oz/A	Feekes 10	0.00	0.00	2.25	3.25	107.14	100.51	36.66	36.38
Folicur	4 fl oz/A	Feekes 10.3	0.00	0.00	2.75	3.38	111.15	99.53	36.59	36.55
<b>LSD (0.05)</b>			NS	NS	NS	NS	NS	NS	NS	NS

\* on a scale of 0-100 (0 = no disease, 100 = 100% disease)

\*\* % diseased leaf area on flag leaf of 5 random flag leaves on a scale of 0-5 (0 = no disease, 5 = 100% disease)

Location: NE Farm			Ratings				Yield (bu/A)		Test Weights (lb/bu)	
Treatment	Rate	Timing	Crown Rust/ Plot *		Overall Foliar Disease/Plot **					
			<u>Don</u>	<u>Riser</u>	<u>Don</u>	<u>Riser</u>	<u>Don</u>	<u>Riser</u>	<u>Don</u>	<u>Riser</u>
Untreated	N/A		0.00	0.00	0.50	0.67	118.65	118.15	36.85	36.94
Mancozeb	1 lb/A	Feekes 2	0.00	0.00	0.67	1.00	108.20	108.78	36.33	35.86
Mancozeb	2 lb/A	Feekes 9	0.00	0.00	0.33	0.83	111.02	110.90	36.66	36.99
Mancozeb	2 lb/A	Feekes 10	0.00	0.00	0.50	0.67	117.90	105.45	36.47	34.50
Mancozeb	2 lb/A	Feekes 10.3	0.00	0.00	0.33	1.00	111.08	108.98	36.24	37.04
Mancozeb	2 lb/A	Feekes 10	0.00	0.00	0.67	1.00	107.73	105.50	36.57	35.86
Mancozeb	2 lb/A	Feekes 10.3								
Mancozeb	1 lb/A	Feekes 2	0.00	0.00	0.67	1.00	107.20	106.03	37.41	36.52
Mancozeb	2 lb/A	Feekes 10								
Mancozeb	2 lb/A	Feekes 10.3								
Folicur	4 fl oz/A	Feekes 9	0.00	0.00	0.67	1.17	114.33	107.35	37.41	36.80
Folicur	4 fl oz/A	Feekes 10	0.00	0.00	0.33	0.67	105.08	111.92	36.52	36.85
Folicur	4 fl oz/A	Feekes 10.3	0.00	0.00	0.67	0.83	108.70	105.72	35.95	37.41
<b>LSD (0.05)</b>			NS	NS	NS	NS	NS	NS	NS	NS

\*on a scale of 0-100 (0 = no disease, 100 = 100% disease)

\*\* % diseased leaf area on flag leaf of 5 random flag leaves on a scale of 0-5 (0 = no disease, 5 = 100% disease)

# Safflower Foliar Fungicide Trial

M. Draper, L. Wrage, D. Vos and S. Wagner

Location: Highmore

Planting Date:

Spray Dates: Early bud: 6/30/99  
Late bud: 7/12/99

Harvest Date:

Treatment	Rate	Stage	Yield (bu/A)	Yield (lb/A)	Test Weight (lb/bu)
Untreated	N/A	N/A	32.57	1974.14	27.20
Folicur	4 fl oz/A	Early Bud	33.70	2152.76	31.41
Folicur	4 fl oz/A	Late Bud	33.65	2027.92	28.47
Folicur	4 fl oz/A	Early & Late	34.36	2106.98	30.33
Tilt	4 fl oz/A	Early Bud	32.76	1908.19	25.65
Tilt	4 fl oz/A	Late Bud	33.04	1979.90	27.34
Tilt	4 fl oz/A	Early & Late	33.37	1961.01	26.89
Quadris	0.125 lb/A	Early Bud	33.75	2206.54	32.67
Quadris	0.125 lb/A	Late Bud	33.60	1992.70	27.64
Quadris	0.125 lb/A	Early & Late	34.59	2120.11	30.64
Polyram	1 fl oz/A	Early Bud	32.24	1861.14	24.54
Polyram	1 fl oz/A	Late Bud	32.57	1989.50	27.56
Polyram	1 fl oz/A	Early & Late	32.62	1972.22	27.16
<b>LSD</b> (0.05)			NS	NS	NS

# Soybean Seed Treatment Trial

M. Draper, R. Scott and G. Lammers

<b>Planting Dates:</b> Brookings:	<b>Stand Counts:</b> Early:	Brookings:	6/6/99
Northville:		Northville:	6/10/99
S.E. Farm:		S.E. Farm:	6/22/99

<b>Harvest Dates:</b> Brookings:	Late:	Brookings:	7/13/99
Northville:		Northville:	7/16/99
S.E. Farm:		S.E. Farm:	7/13/99

Location: S.E. Farm		Ratings		
Treatment	Rate	Early Population /Acre	Late Population /Acre	Yield (bu/A)
Untreated	N/A	161159.00	171785.00	39.21
Rival +	4 fl oz/cwt	177983.50	194808.00	42.14
Allegiance	0.2 fl oz/cwt			
EXPERIMENTAL J	0.32 oz wt/cwt	179754.50	182411.00	38.46
EXPERIMENTAL K	0.125 oz wt/cwt	193922.50	181525.50	39.70
Vitavax +	6.8 fl oz/cwt	202777.50	178869.00	43.63
Allegiance	0.375 fl oz/cwt			
ApronMaxx	N/A	168243.00	172670.50	32.41
<b>LSD (0.05)</b>		NS	NS	NS

Location: Brookings		Ratings	
Treatment	Rate	Early Population /Acre	Late Population /Acre
Untreated	N/A	128396.47	129281.96
Rival +	4 fl oz/cwt	145220.83	156289.48
Allegiance	0.2 fl oz/cwt		
Experimental J	0.32 oz wt/cwt	133709.42	143892.59
Experimental K	0.125 oz wt/cwt	150533.80	147434.56
Vitavax +	6.8 fl oz/cwt	134594.92	132823.94
Allegiance	0.375 fl oz/cwt		
ApronMaxx	N/A	131052.95	145220.84
<b>LSD (0.05)</b>		NS	NS

Location: Northville		Ratings	
Treatment	Rate	Early Population /Acre	Late Population /Acre
Untreated	N/A	111572.10	110243.86
Rival +	4 fl oz/cwt	106259.15	119541.53
Allegiance	0.2 fl oz/cwt		
EXPERIMENTAL J	0.32 oz wt/cwt	105595.03	129503.34
EXPERIMENTAL K	0.125 oz wt/cwt	100946.19	110243.34
Vitavax +	6.8 fl oz/cwt	90320.28	110907.98
Allegiance	0.375 fl oz/cwt		
ApronMaxx	N/A	90984.40	118877.41
<b>LSD (0.05)</b>		NS	NS

# Soybean Cyst Nematode Variety Trial

J. Smolik and M. Draper

Location: Roberts County, SD

Entry	Relative Maturity	Response to SCN	Yield (bu/A)*	# SCN eggs + J-2 per 100 cm <sup>3</sup> /soil at harvest**
P9234	2.3	Resistant	31.5	983
CX207c	2.0	Resistant	29.5	900
CX160c	1.6	Resistant	29.4	783
Turner	~2.3	Resistant	28.3	2050
SDK93-522E	~1.8	Resistant	25.9	2000
AG2201	2.2	Resistant	25.2	2067
P9245	2.4	Susceptible	20.6	5183
Sturdy	2.0	Susceptible	20.5	5650
Surge	2.0	Susceptible	11.6	7267
LSD <sub>(0.05)</sub>			7.4	

\* Average of 3 replications

\*\* Population density of SCN at planting was 2650 eggs + J-2 per 100 cm<sup>3</sup>/soil

## Corn Foliar Fungicide Trial for Leaf Disease Control

M. Draper and R. Dressen

Location: Hurley, SD

Planting Date: 5/11/99

Treatment Dates: Pretassel- 7/15/99

Tassel- 7/21/99

Brown Silk- 8/5/99

Harvest Date: 10/12/99

Variety	Gray Leaf Spot % Leaf Area	Common Rust % Leaf Area	Total Disease % Leaf Area	Ear Sample Weight lbs	Yield
Inbred A	5.40	1.30	6.70	5.10	54.61
Inbred B	4.10	1.00	5.20	3.14	33.92
Inbred C	2.90	0.90	3.70	4.41	47.29
<b>LSD</b> (0.05)	1.40	NS	1.50	0.43	4.61

Treatment	Rate	Time of Treatment	Gray Leaf Spot % Leaf Area	Common Rust % Leaf Area	Total Disease % Leaf Area	Ear Sample Weight lbs	Yield
Untreated	N/A	N/A	8.20	2.40	10.70	4.26	45.67
Quadris	0.125 lb ai/A	Pretassel	4.40	0.90	5.30	4.42	47.43
Quadris	0.125 lb ai/A	Tassel	1.30	0.40	1.70	4.27	45.93
Quadris	0.125 lb ai/A	Brown Silk	4.90	0.90	5.80	3.84	41.21
Quadris	0.125 lb ai/A	Tassel + Brown Silk	1.80	0.80	2.60	4.29	46.12
<b>LSD</b> (0.05)			1.80	0.50	2.00	NS	NS



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