

January 2002

# 2001 FUNGICIDE TRIALS: FIELD PLOT SUMMARIES

Foliar Fungicides: Spring Wheat, Winter Wheat, Barley and Safflower

Seed Treatments: Spring Wheat, Winter Wheat and Soybeans

Martin A. Draper  
Extension Plant Pathologist

Kay R. Ruden  
Research/Extension Assistant II

Plant Science Department  
South Dakota State University

## **2001 Fungicide and Pathology Trials: Field Plot Summaries**

Martin Draper – Extension Plant Pathologist  
Kay Ruden – Extension Assistant II

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 to inhibit plant diseases 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: Ravindra Devkota, and Greg Lammers (Spring Wheat Breeding), Amir Ibrahim, Steve Kalsbeck, and Rich Little (Winter Wheat Breeding), Bruce Bleakley (Soil Microbiology and Biological Control), Leon Wrage, Scott Wagner, Dave Vos, and Brian Rook (Extension Weeds), Roy Scott, Steve Stein, Chris Engbrecht, and Curt Reese (Soybean Breeding), and Bob Hall, Kevin Kirby, and Kyle Kepner (Crop Performance Testing). Additionally, we would like to thank Jon Anderson, Groton, SD, Lauren Christenson of Trent, SD, Gery Giese, Selby, SD, Jorgensen Farms (Mark), Winner, SD, John and Loren Locken of Bath, SD and Gary Erickson, County 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, preharvest and reentry 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 .....	4
Scab foliar fungicide .....	5
<u>Spring Wheat Trials:</u>	
Seed treatment .....	6
Foliar fungicide for leaf disease control .....	7
Scab foliar fungicide .....	9
Scab foliar fungicide variety (AYT) trial .....	11
<u>Barley Trial:</u>	
Scab biological control trial .....	12
<u>Soybean Trials:</u>	
Seed treatment .....	13
Date of planting study- Beresford .....	17
Soybean white mold trial .....	20
<u>Safflower Trial:</u>	
Foliar fungicide.....	22

**2001 HRWW Seed Treatment Trial<sup>a</sup>  
Winner, SD**

Planting Date: September 27, 2000  
Harvest Date: July 26, 2001

Stand Counts: June 7, 2001

Treatment Name	Rate	Rate Unit	Stand Counts Plants/ Meter Row	Sub Crown	Yield bu/A	Test Weight lb/bu
				Internode Ratings (0-3, 5 crowns) <sup>b</sup>		
Untreated			61.56	2.63	45.65	58.67
Raxil XT	0.16	oz wt/cwt	60.69	2.73	42.76	57.07
Raxil MD	5	fl oz/cwt	51.50	2.34	44.15	56.21
Raxil MD	5	fl oz/cwt	62.81	2.49	44.36	57.51
GaUCHO 480	16	fl oz/cwt				
Experimental A	5	fl oz/cwt	62.81	2.23	47.80	56.96
Raxil MD	5	fl oz/cwt	57.75	2.33	44.75	58.96
Experimental B	25	ppm pr				
GaUCHO XT	3.4	fl oz/cwt	61.31	2.53	41.21	57.70
Dividend XL	1	fl oz/cwt	67.31	2.65	45.39	56.08
DB Green L	5	fl oz/cwt	59.25	2.73	43.56	57.06
ST Gold	5	fl oz/cwt	70.75	2.77	45.58	57.73
Experimental C- Low	5	g ai/100kg	60.06	2.78	43.45	57.81
Experimental C- High	10	g ai/100kg	71.81	2.70	43.35	56.88
<b>LSD (0.05)</b>			NS <sup>c</sup>	NS	NS	NS

<sup>a</sup>Data represents an average of disease impact on Nekota and Wesley.

<sup>b</sup>0 = No disease, 3 = subcrown internode 100% necrotic.

<sup>c</sup>NS = No significant differences were detected (P= 0.05).

**2001 HRWW Foliar Fungicide Trial<sup>a</sup>  
Winner, SD**

Planting Date: September 27, 2001  
Harvest Date: July 26, 2001

Spray Date: June 7, 2001 (Feekes 8)  
Rating Date: July 9, 2001

<b>Treatment Name</b>	<b>Rate</b>	<b>Rate Unit</b>	<b>Leaf Disease % Leaf Area</b>	<b>Yield bu/ac</b>	<b>Test Weight lb/bu</b>	<b>Protein %</b>
Untreated			40.83	48.10	60.33	4.15
Folicur	4	fl oz/A	31.67	52.52	59.23	8.45
Stratego 250 EC	10	fl oz/A	22.08	51.37	57.58	2.07
Stratego 250 EC	5	fl oz/A	15.83	50.07	57.52	6.30
Tilt	2	fl oz/A	23.33	50.95	57.73	4.03
Induce NIS	0.125	% V/V				
Folicur	4	fl oz/A	30.83	49.32	58.55	4.23
Induce NIS	0.125	% V/V				
Stratego 250 EC	10	fl oz/A	16.67	51.87	58.17	10.28
Induce NIS	0.125	% V/V				
Stratego 250 EC	5	fl oz/A	14.58	49.05	58.28	4.15
Induce NIS	0.125	% V/V				
Tilt	2	fl oz/A	19.17	51.87	58.08	4.07
Induce NIS	0.125	% V/V				
Dithane Rainshield	1	lb ai/A	49.17	49.13	59.35	4.15
Tilt	4	fl oz/A	14.17	50.33	57.65	6.12
Dithane Rainshield	2	lb ai/A	27.50	49.20	56.47	6.12
<b>LSD (0.05)</b>			20.41	NS <sup>b</sup>	NS	NS

<sup>a</sup> Data represents an average of disease impact on Wesley and Nekota.

<sup>b</sup> NS = No significant differences were detected. (P= 0.05).

**2001 HRWW Scab Fungicide Trial<sup>a</sup>  
NE Research Farm, South Shore, SD**

Planting Date: September 21, 2000  
Harvest Date: August 7, 2001

Spray Date: June 19, 2001  
Rating Date: July 6, 2001

Treatment Name	Rate	Rate Unit	FHB Incidence <sup>b</sup> %	FHB Head Severity <sup>c</sup> %	FHB Field Severity Index <sup>d</sup> %	FDK <sup>e</sup> Score % Seed	DON <sup>f</sup> Score ppm	Yield bu/A	Test Weight lb/bu	Protein %
Untreated			1.00	4.25	0.14	1.38	0.08	59.15	57.84	13.47
Folicur	4	fl oz/A	1.75	5.54	0.16	1.38	0.06	67.13	58.45	13.66
Induce NIS	0.125	% V/V								
AMS 21619	5.7	fl oz/A	0.25	0.88	0.02	1.50	0.00	66.56	58.73	13.63
Induce NIS	0.125	% V/V								
BAS 505	2	lb ai/A	1.75	9.56	0.33	1.63	0.29	64.33	57.67	13.80
Induce NIS	0.125	% V/V								
BAS 505	0.1	lb ai/A	1.25	2.92	0.16	1.50	0.16	66.28	58.12	13.80
Folicur	2	fl oz/A								
Induce NIS	0.125	% V/V								
Caramba	13.5	fl oz/A	1.75	8.81	0.26	1.13	0.09	64.23	57.38	13.71
Tilt	4	fl oz/A	1.50	4.38	0.12	2.00	0.22	65.96	57.63	13.59
Tilt	2	fl oz/A	0.75	4.38	0.09	1.63	0.10	55.06	55.80	13.90
Untreated			1.25	10.31	0.28	1.13	0.13	56.11	55.52	13.60
Folicur	4	fl oz/A	1.50	5.60	0.23	1.38	0.00	63.21	58.22	13.90
28-0-0	29.4	lb ai/A	2.25	10.25	0.29	1.25	0.00	62.22	57.74	13.68
Folicur	4	fl oz/A								
Induce NIS	0.125	% V/V								
28-0-0	29.4	lb ai/A	2.75	4.08	0.26	1.63	0.19	68.20	57.94	13.74
Folicur	4	fl oz/A								
28-0-0	29.4	lb ai/A	2.25	7.27	0.32	1.50	0.09	56.64	56.69	13.29
Induce NIS	0.125	% V/V								
28-0-0	29.4	lb ai/A	2.50	9.19	0.26	1.75	0.13	58.81	57.07	13.35
<b>LSD (0.05)</b>			NS <sup>g</sup>	NS	NS	NS	NS	8.91	2.13	0.37

<sup>a</sup> Data represents an average of disease impact on Wesley and Nekota.

<sup>b</sup> % of infected heads, based on a 50 head sample.

<sup>c</sup> % infection of blighted heads.

<sup>d</sup> % blighted heads x % infection on blighted heads.

<sup>e</sup> FDK = Fusarium damaged kernels or tombstones.

<sup>f</sup> DON = Deoxynivalenol (vomitoxin).

<sup>g</sup> NS = No significant differences were detected (P= 0.05).

**2001 HRSW Seed Treatment Trial<sup>a</sup>  
Selby, SD**

Planting Date: May 1, 2001  
Harvest Date: August 17, 2001

Stand Counts: June 13, 2001

<b>Treatment Name</b>	<b>Rate</b>	<b>Rate Unit</b>	<b>Stand Counts Plants/Meter Row</b>	<b>Sub Crown Internode Ratings (0-3, 10 crowns)<sup>b</sup></b>	<b>Yield bu/A</b>	<b>Test Weight lb/bu</b>	<b>Protein %</b>
Untreated Check			126.38	2.32	40.10	58.50	14.57
Raxil MD	5	fl oz/cwt	114.75	1.97	39.25	58.56	14.36
Raxil MD	5	fl oz/cwt	114.44	2.11	40.58	57.91	14.52
Gaucho 480	0.16	fl oz/cwt					
Raxil MD Extra	5	fl oz/cwt	105.50	1.82	41.90	57.14	14.45
Raxil MD	5	fl oz/cwt	110.88	1.90	41.15	57.46	14.64
Experimental A	25	ppm pr					
Dividend XL	1	fl oz/cwt	107.31	1.70	37.83	57.63	14.56
RTU Vitavax-Thiram	6	fl oz/cwt	110.13	2.09	40.93	57.72	14.73
Experimental B	5.5	fl oz/cwt	116.63	2.03	43.45	56.15	14.76
Experimental C	5.8	fl oz/cwt	110.81	2.12	38.68	56.75	14.69
DB Green L	5.67	fl oz/cwt	117.94	1.86	40.49	58.24	14.36
Double R II	0.6	fl oz/cwt					
Vitavax 200	3.5	fl oz/cwt	108.88	1.94	40.75	57.60	14.52
Flo-Pro IMZ Chloride	0.25 60	fl oz/cwt lb/a	112.50	2.07	42.02	57.03	14.70
<b>LSD (0.05)</b>			NS <sup>c</sup>	NS	NS	NS	NS

<sup>a</sup> Data represents an average of disease impact on Oxen and Ingot.

<sup>b</sup> 0 = No disease, 3 = subcrown internode 100% necrotic.

<sup>c</sup> NS = No significant differences were detected. (P= 0.05).

**2001 HRSW Foliar Fungicide Trial<sup>a</sup>**  
**NE Research Farm, South Shore, SD**

Planting Date: May 12, 2001  
 Harvest Date: September 8, 2001

Spray Dates: June 20, 2001 & June 29, 2001  
 Rating Date: July 25, 2001

Treatment Name	Rate	Rate Unit	Growth Stage Feekes	Whole Plot Disease <sup>b</sup> Ratings	Leaf Disease % Leaf Area	Leaf Rust % Leaf Area	Yield bu/A	Test Weight lb/bu	Protein %
Untreated				5.38	43.75	5.90	55.41	58.26	14.21
Folicur	4	fl oz/A	F1	4.13	27.63	6.35	56.44	59.29	14.65
Induce NIS	0.125	% V/V							
Stratego 250 EC	10	fl oz/A	F1	4.00	32.25	5.25	55.73	58.54	14.81
Induce NIS	0.125	% V/V							
Stratego 250 EC	5	fl oz/A	F1	3.75	25.50	6.03	56.14	58.03	15.21
Induce NIS	0.125	% V/V							
Tilt	2	fl oz/A	F1	4.25	31.63	8.18	55.07	59.04	15.04
Folicur	4	fl oz/A	F9	2.38	14.63	1.03	56.51	59.15	15.15
Induce NIS	0.125	% V/V							
Stratego 250 EC	10	fl oz/A	F9	2.50	15.75	3.90	58.28	58.89	14.61
Induce NIS	0.125	% V/V							
Stratego 250 EC	5	fl oz/A	F9	2.63	15.75	3.63	58.49	57.28	14.96
Induce NIS	0.125	% V/V							
Tilt	2	fl oz/A	F9	2.38	15.25	4.63	59.10	57.72	15.01
Quadris 2.08 SC	7	fl oz/A	F9	1.38	9.90	2.28	56.93	59.06	14.84
Quadris 2.08 SC	3.12	fl oz/A	F9	2.50	13.00	4.40	57.78	58.60	14.56
Tilt 3.6 EC	4	fl oz/A							
Quadris 2.08 SC	3.89	fl oz/A	F9	1.63	8.45	2.03	58.45	58.66	14.64
Tilt 3.6 EC	4	fl oz/A							
Quadris 2.08 EC	4.68	fl oz/A	F9	2.25	14.32	1.58	58.63	58.72	14.26
Tilt 3.6 EC	4	fl oz/A							
Tilt	4	fl oz/A	F9	2.63	14.27	4.10	57.63	57.89	15.26
Untreated				5.63	43.75	8.80	53.75	58.95	14.39
<b>LSD (0.05)</b>				1.05	10.02	3.46	NS <sup>c</sup>	NS	0.61

<sup>a</sup> Data represents an average of disease impact on Oxen and Ingot.

<sup>b</sup> Subjective rating based on 0 = green, 9 = necrotic.

<sup>c</sup> NS = No significant differences were detected (P= 0.05).

**2001 HRSW Foliar Fungicide Trial<sup>a</sup>  
Brookings, SD**

Planting Date: April 20, 2001  
Harvest Date: August 7, 2001

Spray Date: June 20, 2001  
Rating Date: July 20, 2001

<b>Treatment Name</b>	<b>Rate</b>	<b>Rate Unit</b>	<b>Growth Stage Feekes</b>	<b>Whole Disease<sup>b</sup> Ratings</b>	<b>Yield bu/A</b>	<b>Test Weight lb/bu</b>	<b>Protein %</b>
Untreated				3.44	60.16	51.78	12.70
Folicur	4	fl oz/A	F9	3.38	68.67	59.30	14.60
Induce NIS	0.125	% V/V					
Stratego 250 EC	10	fl oz/A	F9	3.63	70.22	59.22	14.67
Induce NIS	0.125	% V/V					
Stratego 250 EC	5	fl oz/A	F9	2.56	51.31	45.19	11.03
Induce NIS	0.125	% V/V					
Tilt	2	fl oz/A	F9	2.81	51.07	44.84	11.05
Folicur	4	fl oz/A	F9	2.63	52.92	44.65	10.91
Induce NIS	0.125	% V/V					
Stratego 250 EC	10	fl oz/A	F9	3.44	70.18	58.72	14.69
Induce NIS	0.125	% V/V					
Stratego 250 EC	5	fl oz/A	F9	3.25	70.10	60.25	14.86
Induce NIS	0.125	% V/V					
Tilt	2	fl oz/A	F9	3.56	69.50	59.69	14.61
Quadris 2.08 SC	7	fl oz/A	F9	2.94	61.98	52.36	12.69
Quadris 2.08 SC	3.12	fl oz/A	F9	3.19	62.58	52.01	12.79
Tilt 3.6 EC	4	fl oz/A	F9				
Quadris 2.08 SC	3.89	fl oz/A	F9	3.31	69.21	59.57	14.68
Tilt 3.6 EC	4	fl oz/A	F9				
Quadris 2.08 EC	4.68	fl oz/A	F9	3.50	72.63	60.00	14.71
Tilt 3.6 EC	4	fl oz/A	F9				
Tilt	4	fl oz/A	F9	2.88	53.25	44.39	10.89
Untreated				3.44	60.86	51.82	12.75
<b>LSD (0.05)</b>				NS <sup>c</sup>	NS	NS	NS

<sup>a</sup> Data represents an average of disease impact on Oxen and Ingot.

<sup>b</sup> Subjective ratings based on 0 = green, 5 = necrotic.

<sup>c</sup> NS = No significant differences were detected (P= 0.05).

**2001 HRSW Scab Fungicide Trial<sup>a</sup>**  
**NE Research Farm, South Shore, SD**

Planting Date: May 12, 2001  
 Harvest Date: September 8, 2001

Spray Date: July 6, 2001  
 Rating Date: July 25, 2001

Treatment Name	Rate		Whole Plot Disease <sup>b</sup> Ratings	Leaf Disease % Leaf Area	Leaf Rust % Leaf Area	FHB Incidence <sup>c</sup> %	FHB Head Severity <sup>d</sup> %	FHB Field Severity Index <sup>e</sup> %	FDK <sup>f</sup> Score % Seed	DON <sup>g</sup> Score ppm	Yield bu/A	Test Weight lb/bu	Protein %
	Rate	Unit											
Untreated			4.25	24.20	4.78	2.25	3.94	0.19	0.38	0.00	55.43	57.76	14.98
Folicur	4	fl oz/A	3.75	18.63	3.18	1.50	3.06	0.12	0.25	0.00	53.31	58.01	14.98
Induce NIS	0.125	% V/V											
AMS 21619	5.7	fl oz/A	4.50	32.40	3.85	1.25	4.38	0.11	0.13	0.00	53.79	57.71	14.71
Induce NIS	0.125	% V/V											
BAS 505	2	lb ai/A	3.13	21.13	3.25	0.75	8.00	0.16	0.50	0.00	53.90	57.74	14.89
Induce NIS	0.125	% V/V											
BAS 505	0.1	lb ai/A	4.25	28.67	3.47	0.75	1.75	0.05	0.38	0.00	53.01	58.35	14.76
Folicur	2	fl oz/A											
Induce NIS	0.125	% V/V											
TrigoCor 1448			5.50	38.13	6.25	0.50	1.75	0.04	0.50	0.00	53.99	57.77	14.40
USDA OH 182.9			5.63	40.50	7.53	0.50	5.00	0.10	0.00	0.00	54.54	57.51	14.80
SDSU 1BC			4.88	27.63	4.90	1.25	13.00	0.29	0.38	0.00	49.32	56.78	15.03
Tilt	4	fl oz/A	3.63	23.13	3.70	1.00	3.50	0.07	0.25	0.00	54.98	58.34	14.65
Induce NIS	0.125	% V/V											
Caramba	13.5	fl oz/A	4.13	31.75	2.98	2.25	5.30	0.24	0.13	0.00	54.48	56.91	15.13
Folicur	4	fl oz/A	5.50	42.75	2.50	2.25	33.56	0.71	0.00	0.00	51.49	57.99	14.85
AG01005	1	% V/V											
28-0-0	29.4	lb ai/A	5.00	37.88	4.50	1.00	5.13	0.17	0.00	0.00	54.97	56.50	15.36
Folicur	4	fl oz/A											
Induce NIS	0.125	% V/V											
28-0-0	29.4	lb ai/A	3.88	31.25	2.10	1.25	4.38	0.11	0.00	0.00	54.14	57.85	15.26
Folicur	4	fl oz/A											
28-0-0	29.4	lb ai/A	5.13	31.13	3.25	1.75	6.13	0.16	0.38	0.00	55.78	57.86	14.95
Induce NIS	0.125	% V/V											
28-0-0	29.4	lb ai/A	4.50	22.08	4.28	0.75	2.63	0.05	0.25	0.00	52.46	58.28	14.78
<b>LSD (0.05)</b>			NS <sup>h</sup>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

<sup>a</sup> Data represents an average of disease impact on Oxen and Ingot.

<sup>b</sup> Subjective rating based on 0 = green, 9 = necrotic.

<sup>c</sup> % of infected heads, based on a 50 head sample.

<sup>d</sup> % infection of blighted heads.

<sup>e</sup> % blighted heads x % infection on blighted heads.

<sup>f</sup> FDK = Fusarium damaged kernels of tombstones.

<sup>g</sup> DON = Deoxynivalenol (vomitoxin).

<sup>h</sup> NS = No significant differences were detected (P= 0.05).

**2001 HRSW Scab Fungicide Trial<sup>a</sup>**  
**Groton, SD**

Planting Date: May 2, 2001  
 Harvest Date: August 20, 2001

Spray Date: July 2, 2001  
 Rating Date: July 25, 2001

Treatment Name	Rate	Rate Unit	Whole Plot Disease <sup>b</sup> Ratings	Leaf Disease % Leaf Area	Leaf Rust % Leaf Area	FHB Incidence <sup>c</sup> %	FHB Head Severity <sup>d</sup> %	FHB Field Severity Index <sup>e</sup> %	FDKf Score % Seed	DON <sup>g</sup> Score ppm	Yield bu/A	Test Weight lb/bu	Protein %
Untreated			5.25	46.08	42.98	0.83	4.50	0.10	0.42	0.04	68.33	54.19	15.39
Folicur	4	fl oz/A	6.00	47.92	26.25	0.33	3.33	0.07	0.42	0.00	72.11	54.48	14.96
Induce NIS	0.125	% V/V											
AMS 21619	5.7	fl oz/A	7.33	80.17	34.70	1.67	12.13	0.38	0.33	0.00	65.40	54.86	15.26
Induce NIS	0.125	% V/V											
BAS 505	2	lb ai/A	6.50	62.33	17.77	1.17	10.75	0.23	0.25	0.00	64.90	55.34	15.45
Induce NIS	0.125	% V/V											
BAS 505	0.1	lb ai/A	4.92	36.92	42.20	1.33	6.63	0.18	0.67	0.00	72.05	51.63	15.33
Folicur	2	fl oz/A											
Induce NIS	0.125	% V/V											
USDA OH 182.9			6.17	54.75	50.78	0.67	4.50	0.09	0.33	0.00	67.86	54.76	15.23
TrigoCor 1448			6.58	68.58	59.08	1.33	3.50	0.14	0.58	0.00	70.18	53.36	15.35
SDSU 1BC			5.42	45.75	26.58	0.50	2.92	0.06	0.50	0.00	69.13	53.67	15.33
Tilt	4	fl oz/A	5.08	42.42	51.15	1.50	4.83	0.21	0.42	0.00	68.41	54.03	15.20
Induce NIS	0.125	% V/V											
Caramba	13.5	fl oz/A	6.00	58.58	50.82	1.00	5.47	0.15	0.58	0.00	67.07	54.72	15.43
Folicur	4	fl oz/A	4.67	33.25	42.90	1.00	5.08	0.14	0.33	0.00	68.06	54.75	15.48
AG01005	1	% V/V											
28-0-0	29.4	lb ai/A	4.17	29.43	18.02	0.83	16.17	0.32	0.58	0.00	69.37	52.46	15.58
Folicur	4	fl oz/A											
Induce NIS	0.125	% V/V											
28-0-0	29.4	lb ai/A	5.83	49.33	42.65	1.33	14.53	0.45	0.50	0.04	66.21	53.80	15.62
Folicur	4	fl oz/A											
28-0-0	29.4	lb ai/A	5.92	57.83	58.87	1.00	7.71	0.18	0.92	0.04	65.96	52.56	15.44
Induce NIS	0.125	% V/V											
28-0-0	29.4	lb ai/A	5.75	56.58	50.37	0.67	2.33	0.05	0.67	0.00	65.55	54.52	15.69
<b>LSD (0.05)</b>			NS <sup>h</sup>	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.34

<sup>a</sup> Data represents an average of disease impact on Oxen and Ingot.

<sup>b</sup> Subjective rating based on 0 = green, 9 = necrotic.

<sup>c</sup> % of infected heads, based on a 50 head sample.

<sup>d</sup> % infection of blighted heads.

<sup>e</sup> % blighted heads x % infection on blighted heads.

<sup>f</sup> FDK = Fusarium damaged kernels of tombstones.

<sup>g</sup> DON = Deoxynivalenol (vomitoxin).

<sup>h</sup> NS = No significant differences were detected (P= 0.05).

**2001 Varietal/Advanced Selections Responses to Folicur (4 fl oz/A) Applied at Flowering.<sup>a</sup>  
Groton and NE Farm, South Shore, SD**

Name	Groton		NE Farm	
	Yield bu/A	Test Weight lb/bu	Yield bu/A	Test Weight lb/bu
Chris	5.21	0.57	-0.66	3.38
Butte 86	3.87	-3.53	-0.59	3.17
2375	-1.41	0.35	1.58	1.62
Russ	13.37	3.74	-3.97	3.39
Oxen	9.36	-3.10	-2.31	3.88
Forge	7.50	-3.88	1.19	7.48
Ingot	9.62	-2.05	-9.51	-0.35
Ember	16.13	18.55	5.03	7.34
SD3348	-0.96	0.77	-7.87	-0.14
SD3367	-2.30	11.56	2.68	-1.41
SD3496	8.22	0.49	-4.40	3.10
SD3506	7.06	0.92	1.77	4.02
SD3540	6.56	5.64	-0.74	2.89
SD3546	3.69	-2.61	2.52	-2.40
SD3478	-3.74	10.01	2.54	2.46
SD3533	8.89	4.59	-1.22	2.26
SD3576	8.86	1.56	-12.07	-0.63
SD3603	2.98	-0.35	-1.39	1.97
SD3608	4.39	-2.54	3.50	-1.20
SD3618	4.72	-1.77	0.02	0.14
SD3619	4.44	9.59	-0.28	1.13
SD3620	-1.37	-2.40	-0.31	-2.26
SD3621	-1.29	-2.82	-2.34	3.32
SD3623	7.13	-32.29	-0.14	1.97
SD3625	2.08	-4.72	-4.14	1.48
SD3630	6.60	-0.77	5.04	-1.77
SD3634	9.83	-3.18	0.16	-0.14
SD3635	3.32	0.42	2.00	0.22
SD3638	5.62	4.51	-1.81	-0.70
SD3640	2.79	4.87	-2.08	-0.21
SD3641	4.14	2.19	-3.51	-1.90
SD3648	1.71	-1.41	-12.20	2.19
SD3650	5.61	-4.30	-2.14	-2.12
SD3652	-0.37	1.91	-3.18	1.34
SD3664	6.65	-11.00	-5.11	1.84
SD3666	3.60	-1.55	-4.15	0.99
<b>Mean</b>	4.79	-0.06	-1.61	1.29

Values on this page are Fungicide-No Fungicide.

<sup>a</sup>Based on two replications.

**2001 Barley Scab Bio-Control Fungicide Trial  
Brookings, SD**

Planting Date: June 4, 2001  
Harvest Date: August 24, 2001  
Variety: Robust

Spray Date: July 28, 2001  
Rating Date: August 17, 2001

Treatment Name	Rate	Rate Unit	FHB	FHB	FHB Field	DON <sup>d</sup>	Yield bu/A	Test Weight lb/bu
			Incidence <sup>a</sup> %	Severity <sup>b</sup> %	Severity Index <sup>c</sup> %	Score ppm		
Untreated			1.50	3.50	0.11	2.15	43.14	39.92
Folicur	4	fl oz/a	1.00	1.75	0.07	1.85	41.00	40.70
Induce NIS	0.125	% V/V						
SDSU 1BA			1.00	5.25	0.11	2.33	48.73	40.39
SDSU 1BC			1.00	3.50	0.07	1.92	40.25	39.54
TrigoCor 9790			2.00	3.50	0.14	1.93	43.53	39.82
TrigoCor 1448			2.00	8.75	0.21	1.93	45.59	39.72
USDA BHWJ 4-1			0.50	1.75	0.04	1.85	42.77	39.93
USDA OH 182.9			0.50	1.75	0.04	1.68	41.17	39.94
<b>LSD (0.05)</b>			NS <sup>e</sup>	NS	NS	NS	NS	NS

<sup>a</sup> % of infected heads, based on a 50 head sample.

<sup>b</sup> % of infection of blighted heads.

<sup>c</sup> % blighted heads x % infection on blighted heads.

<sup>d</sup> DON = Deoxynivalenol (vomitoxin).

<sup>e</sup> NS = No significant differences were detected (P= 0.05).

**2001 Gustafson Seed Treatment on Soybeans  
Brookings, SD**

Planting Date: May 17, 2001  
Harvest Date: October 16, 2001

Early Stand Counts: June 11, 2001  
Late Stand Counts: August 7, 2001

Treatment Name	Rate	Rate Unit	Early Stand		Late Stand		Late VS Early	Yield bu/A
			Counts / 8 ft row	Counts Plants/A	Counts / 8 ft row	Counts Plants/A	Stand Counts Plants/A	
Untreated Check			53.00	115,451	57.38	124,981	1.10	25.22
Rival	4	fl oz/cwt	47.13	102,653	53.75	117,084	1.20	30.20
Allegiance	0.2	fl oz/cwt						
Protege/Allegiance	0.32	oz wt/cwt	49.38	107,554	61.38	133,694	1.28	36.34
Maxim	0.08	fl oz/cwt	48.25	105,104	52.25	113,817	1.09	37.68
Apron XL	0.16	fl oz/cwt						
Experimental A	0.125	oz wt/cwt	50.88	110,822	64.75	141,046	1.28	29.76
Stilleto	6.7	fl oz/cwt	51.88	113,000	51.00	111,094	1.00	33.90
Apron Maxx RTA	6.25	g ai/cwt	51.63	112,455	72.88	158,745	1.42	39.97
Allegiance	0.375	fl oz/cwt	39.80	86,705	47.41	103,275	1.21	40.11
<b>LSD (0.05)</b>			NS <sup>a</sup>	NS	14.46	31,496	NS	6.88

<sup>a</sup> NS = No significant differences were detected (P= 0.05).

**2001 Gustafson Seed Treatment on Soybeans  
SE Research Farm, Beresford, SD**

Planting Date: May 16, 2001  
Harvest Date: October 19, 2001

Early Stand Counts: June 18, 2001  
Late Stand Counts: August 15, 2001

<b>Treatment Name</b>	<b>Rate</b>	<b>Rate Unit</b>	<b>Early Stand Counts / 8 ft row</b>	<b>Early Stand Counts Plants/A</b>	<b>Late Stand Counts / 8 ft row</b>	<b>Late Stand Counts Plants/A</b>	<b>Late VS Early Stand Counts Plants/A</b>	<b>Yield bu/A</b>
Untreated Check			69.00	150,304	75.75	165,007	1.11	35.38
Rival	4	fl oz/cwt	74.88	163,101	78.25	170,453	1.05	36.12
Allegiance	0.2	fl oz/cwt						
Protege/Allegiance	0.32	oz wt/cwt	73.13	159,289	77.63	169,092	1.07	37.18
Maxim	0.08	fl oz/cwt	67.63	147,308	77.00	167,730	1.14	36.37
Apron XL	0.16	fl oz/cwt						
Experimental A	0.125	oz wt/cwt	68.13	148,398	73.13	159,289	1.07	34.08
Stilleto	6.7	fl oz/cwt	71.63	156,022	77.50	168,819	1.08	33.95
Apron Maxx RTA	6.25	g ai/cwt	70.13	152,754	74.88	163,101	1.08	37.19
Allegiance	0.375	fl oz/cwt	70.88	154,388	79.50	173,176	1.13	31.62
<b>LSD (0.05)</b>			NS <sup>a</sup>	NS	NS	NS	NS	NS

<sup>a</sup> NS = No significant differences were detected (P= 0.05).

**2001 Syngenta Seed Treatment on Soybeans  
Brookings, SD**

Planting Date: May 17, 2001  
Harvesting Date: October 17, 2001

Early Stand Counts: June 11, 2001  
Late Stand Counts: August 7, 2001

Treatment Name	Rate	Rate Unit	Early Stand Counts / 8 ft row	Early Stand Counts Plants/A	Late Stand Counts / 8 ft row	Late Stand Counts Plants/A	Late VS Early Stand Counts Plants/A	Root Nodulation (1-5) <sup>a</sup>	Yield bu/ac
Untreated Check			57.63	125,525	63.38	138,051	1.13	4.38	48.77
Nod+	275.00	g ai/100 kg	57.63	125,525	61.25	133,422	1.07	4.18	50.86
EXP 31	275.00	g ai/100 kg	56.63	123,347	61.00	132,877	1.08	4.30	44.75
Apron Maxx 2 EC	6.25	g ai/100 kg	65.50	142,679	62.75	136,689	0.96	3.97	47.03
Apron Maxx 2 EC Apron XL 3 LS	6.25 3.75	g ai/100 kg g ai/100 kg	56.25	122,530	66.13	144,041	1.18	3.88	49.40
Apron Maxx RTA 0.159 ES	6.25	g ai/100 kg	67.38	146,764	69.50	151,393	1.04	4.18	50.94
Apron Maxx RTA 0.159 ES Nod+	6.25 275.00	g ai/100 kg g ai/100 kg	60.50	131,788	66.50	144,858	1.11	4.55	48.40
Apron Maxx RTA 0.159 ES EXP 31	6.25 275.00	g ai/100 kg g ai/100 kg	70.13	152,754	65.75	143,224	0.94	4.32	45.27
A12780	10.00	g ai/100 kg	62.38	135,872	65.00	141,590	1.07	4.10	45.82
A12780 NOD+	10.00 275.00	g ai/100 kg g ai/100 kg	61.75	134,511	67.00	145,947	1.10	4.08	44.94
A12780 EXP 31	10.00 275.00	g ai/100 kg g ai/100 kg	53.50	116,540	62.25	135,600	1.17	4.38	42.64
Experimental A Experimental B	6.25 275.00	g ai/100 kg g ai/100 kg	62.88	136,961	59.50	129,610	0.97	4.18	42.74
<b>LSD (0.05)</b>			NS <sup>b</sup>	NS	NS	NS	NS	NS	NS

<sup>a</sup> Nodulation score. 1= 0 nodes, 2 = 1-5 nodes, 3 = 6-10 nodes, 4 = 10-20 nodes, 5 = 20-30 nodes.

<sup>b</sup> NS = No significant differences were detected (P= 0.05).

**2001 Syngenta Seed Treatment on Soybeans  
SE Research Farm, Beresford, SD**

Planting Date: May 16, 2001  
Harvest Date: October 19, 2001

Early Stand Counts: June 18, 2001  
Late Stand Counts: August 15, 2001

Treatment	Rate		Early Stand Counts	Early Stand Counts	Late Stand Counts	Late Stand Counts	Late VS Early Stand Counts	Root Nodulation	Yield
Name	Rate	Unit	/8 ft row	Plants/A	/8 ft row	Plants/A	Plants/A	(1-5) <sup>a</sup>	bu/A
Untreated Check			65.00	141,590	75.88	165,279	1.18	3.10	44.14
Nod+	275	g ai/ 100 kg	74.13	161,467	80.25	174,810	1.08	2.85	43.10
Exp 31	275	g ai/ 100 kg	68.25	148,670	75.00	163,373	1.10	3.17	45.10
Apron Maxx 2 EC	6.25	g ai/ 100 kg	73.63	160,378	75.38	164,190	1.03	3.28	44.90
Apron Maxx 2 EC	6.25	g ai/ 100 kg	67.63	147,308	73.13	159,289	1.08	2.67	45.31
Apron XL 3 LS	3.75	g ai/ 100 kg							
Apron Maxx RTA 0.159 ES	6.25	g ai/ 100 kg	71.88	156,566	74.00	161,195	1.03	2.78	44.81
Experimental B	10	g ai/ 100 kg	71.25	155,205	76.25	166,096	1.07	3.26	44.19
<b>LSD (0.05)</b>			NS <sup>b</sup>	NS	NS	NS	0.093	NS	NS

<sup>a</sup> Nodulation score. 1 = 0 nodes, 2 = 1-5 nodes, 3 = 6-10 nodes, 4 = 10-20 nodes, 5 = 20-30 nodes.

<sup>b</sup> NS = No significant differences were detected (P= 0.05).

**2001 Date of Planting Study in Soybeans  
SE Research Farm, Beresford, SD**

Harvest Date: October 11, 2001

<b>Variety</b>	<b>Stand Count</b>	<b>Height Inches</b>	<b>Test Weight lb/bu</b>	<b>Yield bu/A</b>	<b>Pop/AC</b>	<b>Gross Return</b>
Prairie Brand 1901RR	19.27	29.32	56.15	41.00	93,750	209.52
Prairie Brand 2717RR	19.05	35.76	54.77	46.60	92,660	238.13
<b>LSD (0.05)</b>	NS <sup>a</sup>	0.88	0.25	1.13	NS	5.79

<b>Planting Date</b>	<b>Stand Count</b>	<b>Height Inches</b>	<b>Test Weight lb/bu</b>	<b>Yield bu/A</b>	<b>Pop/AC</b>	<b>Gross Return</b>
Planting Date 1- 5/9	18.50	29.02	55.59	43.85	89,980	224.10
Planting Date 2- 5/16	19.13	33.46	55.76	47.44	93,020	242.43
Planting Date 3- 5/25	19.31	34.25	55.91	45.67	93,930	233.39
Planting Date 4- 6/4	19.13	33.46	55.69	42.45	93,020	216.94
Planting Date 5- 6/11	19.75	32.52	54.34	39.58	96,060	202.28
<b>LSD (0.05)</b>	NS	1.40	0.39	1.79	NS	9.15

<b>Treatment</b>	<b>Stand Count</b>	<b>Height Inches</b>	<b>Test Weight lb/bu</b>	<b>Yield bu/A</b>	<b>Pop/AC</b>	<b>Gross Return</b>
Untreated	18.65	32.81	55.45	43.86	90,710	224.12
Treated	19.67	32.28	55.48	43.74	95,700	223.53
<b>LSD (0.05)</b>	NS	NS	NS	NS	NS	NS

<sup>a</sup> NS= No significant differences were detected (P= 0.05).

**2001 Date of Planting Study in Soybeans  
SE Research Farm, Beresford, SD**

Harvest Date: October 11, 2001

<b>Variety by Planting Date</b>	<b>Yield bu/A</b>	<b>Pop/AC</b>
Prairie Brand 1901RR Planting Date 1- 5/9	39.68	89,980
Prairie Brand 2717RR Planting Date 1- 5/9	48.03	89,980
Prairie Brand 1901RR Planting Date 2- 5/16	44.43	96,060
Prairie Brand 2717RR Planting Date 2- 5/16	50.45	89,980
Prairie Brand 1901RR Planting Date 3- 5/25	42.23	96,670
Prairie Brand 2717RR Planting Date 3- 5/25	49.11	91,200
Prairie Brand 1901RR Planting Date 4- 6/4	40.16	93,020
Prairie Brand 2717RR Planting Date 4- 6/4	44.75	93,020
Prairie Brand 1901RR Planting Date 5- 6/11	38.51	93,020
Prairie Brand 2717RR Planting Date 5- 6/11	40.66	99,100
<b>LSD (0.05)</b>	2.53	NS <sup>a</sup>

<sup>a</sup> NS = No significant differences were detected (P= 0.05).

**2001 Date of Planting Study in Soybeans  
SE Research Farm, Beresford, SD**

Harvest Date: October 11, 2001

<b>Variety</b>	<b>Planting Date</b>	<b>Treatment</b>	<b>Yield bu/A</b>	<b>Pop/AC</b>
Prairie Brand 1901RR	Planting Date 1- 5/9	Untreated	38.74	80,250
Prairie Brand 2717RR	Planting Date 1- 5/9	Untreated	50.51	89,980
Prairie Brand 1901RR	Planting Date 2- 5/16	Untreated	45.44	91,200
Prairie Brand 2717RR	Planting Date 2- 5/16	Untreated	49.91	81,470
Prairie Brand 1901RR	Planting Date 3- 5/25	Untreated	41.21	93,630
Prairie Brand 2717RR	Planting Date 3- 5/25	Untreated	49.84	88,760
Prairie Brand 1901RR	Planting Date 4- 6/4	Untreated	39.31	100,920
Prairie Brand 2717RR	Planting Date 4- 6/4	Untreated	44.17	97,280
Prairie Brand 1901RR	Planting Date 5- 6/11	Untreated	38.70	92,410
Prairie Brand 2717RR	Planting Date 5- 6/11	Untreated	40.76	91,200
Prairie Brand 1901RR	Planting Date 1- 5/9	Treated	40.61	99,710
Prairie Brand 2717RR	Planting Date 1- 5/9	Treated	45.56	89,980
Prairie Brand 1901RR	Planting Date 2- 5/16	Treated	43.42	100,920
Prairie Brand 2717RR	Planting Date 2- 5/16	Treated	51.00	98,490
Prairie Brand 1901RR	Planting Date 3- 5/25	Treated	43.25	99,710
Prairie Brand 2717RR	Planting Date 3- 5/25	Treated	48.39	93,630
Prairie Brand 1901RR	Planting Date 4- 6/4	Treated	41.00	85,120
Prairie Brand 2717RR	Planting Date 4- 6/4	Treated	45.33	88,760
Prairie Brand 1901RR	Planting Date 5- 6/11	Treated	38.32	93,630
Prairie Brand 2717RR	Planting Date 5- 6/11	Treated	40.56	107,000
<b>LSD (0.05)</b>			NS <sup>a</sup>	NS

<sup>a</sup> NS = No significant differences were detected (P= 0.05).

**2001 Foliar Applied Fungicide Treatments on Soybeans  
Bath, SD**

Planting Date: June 2001  
Harvest Date: October 22, 2001

Spray Dates: 1st Spray-July 17, 2001 2nd Spray- August 2, 2001  
Rating Date: September 19, 2001

Variety	Mortality %	Yield bu/A	Test Weight lb/bu
Pioneer 91B91	12.00	51.24	54.78
Pioneer 91B64	5.06	48.26	53.86
<b>LSD (0.05)</b>	2.69	1.31	0.65

Treatment Name	Rate	Rate Unit	Mortality %	Yield bu/A	Test Weight lb/bu
Untreated			6.62	49.73	54.81
Benlate	1.0	lb/A	10.73	50.67	53.98
Benlate	2.0	lb/A	7.17	49.50	53.77
Benlate + CaSO4	0.5 1.0	lb/A gal/A	8.71	50.30	53.77
Benlate + CaSO4 (2 apps)	0.5 1.0	lb/A gal/A	6.22	49.35	54.79
Cobra	2.0	fl oz/A	8.51	49.91	54.89
Cobra	4.0	fl oz/A	9.03	48.95	54.30
CaSO4	3.0	qts/A	6.36	51.65	54.59
Quadris	0.15	lb ai/A	13.34	47.19	54.37
Hydrogen Peroxide	1.0	qt/A	8.06	49.45	54.61
Hydrogen Peroxide	2.0	qt/A	9.10	50.56	53.63
<b>LSD (0.05)</b>			NS <sup>a</sup>	NS	NS

<sup>a</sup> NS = No significant differences were detected (P= 0.05).

**2001 Foliar Applied Fungicide Treatments on Soybeans  
Trent, SD**

Planting Date: May 28, 2001  
 Harvest Date: October 24, 2001  
 Spray Dates: 1st Spray: July 19, 2001, 2nd Spray: August 3, 2001

<b>Treatment Name</b>	<b>Rate</b>	<b>Rate Unit</b>	<b>Yield bu/A</b>
Untreated			33.37
Benlate	1.00	lb/A	33.03
Benlate	2.00	lb/A	33.61
Benlate	0.50	lb/A	32.57
CaSO4	1.00	gal/A	
Benlate	0.50	lb/A	32.35
CaSO4	1.00	gal/A	
Cobra	2.00	fl oz/A	34.48
Cobra	4.00	fl oz/A	31.24
CaSO4	3.00	qts/A	33.14
Quadris	0.15	lb ai/A	34.43
Hydrogen Peroxide	1.00	qt/A	33.86
Hydrogen Peroxide	2.00	qts/A	34.79
<b>LSD(0.05)</b>			NS <sup>b</sup>

Note: No white mold was present in this trial.

<sup>a</sup> Data represents an average of disease impact on Pioneer 91B91 and Pioneer 91B64.

<sup>b</sup> NS = No significant differences were detected. (P= 0.05).

**2001 Safflower Foliar Fungicide Trial  
Highmore, SD**

Planting Date: May 2, 2001  
Harvest Date: September 11, 2001

Spray Date: July 12, 2001  
Rating Date: August 3, 2001

<b>Treatment Name</b>	<b>Rate</b>	<b>Rate Unit</b>	<b>Whole Plot Disease<sup>a</sup> Ratings</b>	<b>Yield bu/A</b>	<b>Actual Yield lb/A</b>	<b>Test Weight lb/bu</b>
Untreated			4.00	34.10	1372.97	40.35
Folicur	2	fl oz/A	2.75	36.92	1447.55	38.82
Induce NIS	0.125	% V/V				
Folicur	4	fl oz/A	2.00	39.12	1547.26	39.54
Induce NIS	0.125	% V/V				
Folicur	6	fl oz/A	3.00	38.24	1493.42	39.03
Induce NIS	0.125	% V/V				
Tilt	2	fl oz/A	2.75	36.69	1406.57	38.28
Induce NIS	0.125	% V/V				
Tilt	4	fl oz/A	2.50	37.54	1469.14	39.09
Induce NIS	0.125	% V/V				
Tilt	6	fl oz/A	2.25	37.09	1454.20	39.11
Induce NIS	0.125	% V/V				
Quadris 2.08 SC	0.075	lb ai/A	2.25	36.51	1397.21	38.31
Quadris 2.08 SC	0.1	lb ai/A	1.50	37.54	1498.37	39.86
Quadris 2.08 SC	0.125	lb ai/A	2.00	36.28	1434.39	39.35
Bravo Weatherstik	1	pt/A	3.25	34.58	1355.49	39.15
Bravo Weatherstik	1.5	pt/A	3.50	36.40	1440.28	39.63
Bravo Weatherstik	2	pt/A	3.25	35.36	1420.34	40.18
<b>LSD (0.05)</b>			NS <sup>b</sup>	NS	NS	NS

<sup>a</sup> Subjective rating based on 0 = green, 5 = necrotic.

<sup>b</sup> NS = No significant differences were detected (P= 0.05)



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Larry Tidemann, Director of Extension, Associate Dean, College of Agriculture and Biological Sciences, South Dakota State University, Brookings, SD. Educational programs and materials offered without regard for race, color, creed, religion, national origin, ancestry, citizenship, age, gender, sexual orientation, disability, or Vietnam Era Veteran status.

1000 copies printed by CES at a cost of \$1.82 each. January, 2002