

FIELD EXPERIMENT HISTORY

Expt. Number: 9789 **Year:** 1997
Title: Managing Corn Seed Decay and Seedling Blight in Corn Production Systems
Personnel: J.G. Lauer, C. Grau, K. D. Kohn, P.J. Flannery, K.D. Hudelson and H.M. Darby
Location: Arlington Research Station, Arlington, WI
Supported by: Gustafson, Inc., Hatch Project 1890

FIELD INFORMATION

Field: 427
 Soil Type: Plano Silt Loam
 Soil Test Results: Test Date: 7/96 pH: 6.3 P (ppm): 40 K (ppm): 150 OM (%): 2.9
 Fertilizer: 23-Apr 150 lbs N/a 46-0-0
 24-Apr 150 lbs/a 6-24-24 starter
 Tillage Operations: None
 Previous Crop: Soybean
 Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB
 Replicates: 3
 Factors: A: Seed Quality, B: Seed Treatment

	Seed Treatments:	Rates
	Captan 300DD + Apron FL + Raxil	1.5 fl oz + 0.1 fl oz + 0.1 oz
	Captan 400 + Apron FL	1.76 fl oz + 0.1 fl oz
	Captan 400 + Apron XL	1.76 fl oz + 0.0425 fl oz
	Maxim + Apron XL	0.08 fl oz + 0.0425 fl oz
	Untreated Control	

Area Planted: 5' x 25'
 Area Harvested: 5.0' x 22'
 Row Spacing: 30"

Hybrid/Variety: Pioneer 3556 (Poor Seedling Vigor)
 Pioneer 3475 (Average Seedling Vigor)

Planting Date: 24-Apr
 Soil Temperature: 50 F
 Planting Equip: Kinze Plot planter with seed cones

Planting Rate: 32,000 seeds/acre

Harvesting Date: 31-Oct
 Harvesting Equip: Massey Ferguson Plot Combine

	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Insecticide:	None			
Herbicides:	25-Apr	Frontier	20 oz/A	preemerg
	25-Apr	Bladex	2.2 lb/A	preemerg

Results: Table E-37.

**Table E-37. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems
Arlington, WI 1997 (Gustafson)**

Seedling Vigor	Seed Treatment	V6 Stand plants/A	Final Stand plants/A	Broken Stalks %	Yield bu/A	Moist %	Test Weight lb/bu	Grower return \$/A
\1\								
P3475 MQ		27878	24341	3.3	179	32.2	54.3	419
P3556 LQ		28274	26030	1.0	176	29.6	55.8	419
	Captan30DD+ApronFL+Raxil	29040	25278	1.4	177	31.0	55.4	418
	Captan400+ApronFL	28842	24948	2.6	175	30.6	55.0	414
	Captan400+ApronXL	26598	25806	2.9	181	30.7	54.9	429
	Maxim+ApronXL	29898	24882	2.3	182	30.7	55.2	431
	UTC	26004	25014	1.4	171	31.5	54.6	402
P3475 MQ	Captan30DD+ApronFL+Raxil	28644	25212	1.8	186	31.9	54.6	436
P3475 MQ	Captan400+ApronFL	28380	24948	4.2	173	32.4	53.9	405
P3475 MQ	Captan400+ApronXL	28512	24552	3.8	187	32.2	54.6	439
P3475 MQ	Maxim+ApronXL	29832	24288	4.2	184	31.9	54.5	432
P3475 MQ	UTC	24024	22704	2.3	164	32.8	53.7	382
P3556 LQ	Captan30DD+ApronFL+Raxil	29436	25344	1.1	169	30.1	56.2	401
P3556 LQ	Captan400+ApronFL	29304	24948	1.0	177	28.8	56.2	423
P3556 LQ	Captan400+ApronXL	24684	27060	2.0	175	29.3	55.3	418
P3556 LQ	Maxim+ApronXL	29964	25476	0.5	180	29.5	55.8	430
P3556 LQ	UTC	27984	27324	0.5	177	30.1	55.4	421
Mean		28076	25186	2.1	177	30.9	55.0	419
Probability (%)								
Seedling Vigor (V)		76.5	5.7	1.5	50.5	0.0	0.0	100
Seed Treatment (S)		30.7	95.3	71.1	44.6	70.1	9.8	46
V x S		47.8	39.7	79.3	21.8	73.3	14.8	24
LDS (0.10)								
Seedling Vigor (V)		NS	NS	2.3	NS	1.2	0.5	NS
Seed Treatment (S)		NS	NS	NS	NS	NS	0.3	NS
CV%								
		13	9	107	7	4	1	7

\1\ LQ=Low Quality, MQ=Medium Quality

FIELD EXPERIMENT HISTORY

Expt. Number: 9789 **Year:** 1997
Title: Managing Corn Seed Decay and Seedling Blight in Corn Production Systems
Personnel: J.G. Lauer, C. Grau, K. D. Kohn, K.D. Hudelson, M. Rankin, and D. Halbach
Location: Fond du Lac, WI
Supported by: Gustafson, Inc., Hatch Project 1890

FIELD INFORMATION

Field: East Field
Soil Type: Virgil silt loam
Soil Test Results: Test Date: 4/96 pH: 7.2 P (ppm): 69 K (ppm): 180
Fertilizer: 22-Apr 160 lbs N/a 82-0-0
 29-Apr 150 lbs/a 6-24-24 starter
Tillage Operations: Moldboard plow
 Field cultivator (2x)
Previous Crop: Soybean
Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB
Replicates: 3
Factors: A: Seed Quality, B: Seed Treatment

	Seed Treatments:	Rates
	Captan 300DD + Apron FL + Raxil	1.5 fl oz + 0.1 fl oz + 0.1 oz
	Captan 400 + Apron FL	1.76 fl oz + 0.1 fl oz
	Captan 400 + Apron XL	1.76 fl oz + 0.0425 fl oz
	Maxim + Apron XL	0.08 fl oz + 0.0425 fl oz
	Untreated Control	

Area Planted: 5' x 25'
Area Harvested: 5.0' x 22'
Row Spacing: 30"
Hybrid/Variety: Pioneer 3556 (Poor Seedling Vigor)
 Pioneer 3475 (Average Seedling Vigor)
Planting Date: 29-Apr
Soil Temperature:
Planting Equip: Kinze Plot planter with seed cones
Planting Rate: 32,000 seeds/acre
Harvesting Date: 31-Oct
Harvesting Equip: Massey Ferguson Plot Combine

	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Insecticide:	None			
Herbicides:	12-Jun	Accent	0.67 oz/A	postemerge
	12-Jun	Exceed	0.88 oz/A	postemerge

Results: Table E-38.

**Table E-38. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems
Fond du Lac, WI 1997 (Gustafson)**

Seedling Vigor	Seed Treatment	V6 Stand plants/A	Final Stand plants/A	Broken Stalks %	Yield bu/A	Moist %	Test Weight lb/bu	Grower return \$/A
\1\								
P3475 MQ		27562	24842	7.4	167	31.0	53.9	394
P3556 LQ		30124	26560	5.6	167	29.0	55.3	399
	Captan30DD+ApronFL+Raxil	30175	26453	8.0	149	29.5	53.7	355
	Captan400+ApronFL	29040	26334	5.4	179	29.1	55.0	427
	Captan400+ApronXL	29634	25146	12.1	164	30.0	55.2	389
	Maxim+ApronXL	29502	26334	4.4	165	30.6	54.3	392
	UTC	25872	24222	3.0	174	30.8	54.5	411
P3475 MQ	Captan30DD+ApronFL+Raxil	30360	25740	9.2	150	29.7	53.3	358
P3475 MQ	Captan400+ApronFL	26928	25740	6.6	178	30.3	54.1	421
P3475 MQ	Captan400+ApronXL	28512	24420	13.9	181	31.0	55.3	429
P3475 MQ	Maxim+ApronXL	27720	24684	5.9	135	32.5	52.4	315
P3475 MQ	UTC	24288	23628	1.6	189	31.4	54.4	446
P3556 LQ	Captan30DD+ApronFL+Raxil	29898	27522	6.4	147	29.3	54.4	351
P3556 LQ	Captan400+ApronFL	31152	26928	4.2	180	27.8	56.0	434
P3556 LQ	Captan400+ApronXL	30756	25872	10.4	146	29.0	55.0	350
P3556 LQ	Maxim+ApronXL	31284	27984	2.8	195	28.6	56.2	468
P3556 LQ	UTC	27456	24816	4.4	159	30.2	54.7	377
Mean		28799	25672	6.5	167	30.0	54.6	396
Probability (%)								
Seedling Vigor (V)		0.0	0.4	39.0	99.8	< 0.1	2.7	86.9
Seed Treatment (S)		0.1	5.7	8.1	70.1	14.8	55.1	71.6
V x S		20.4	70.8	85.4	19.4	27.3	18.0	19.1
LDS (0.10)								
Seedling Vigor (V)		962	933	NS	NS	2.6	0.9	NS
Seed Treatment (S)		1522	1475	5.5	NS	NS	NS	NS
CV%								
		5	6	85	22	4	3	22

\1\ LQ=Low Quality, MQ=Medium Quality

FIELD EXPERIMENT HISTORY

Expt. Number: 9789 **Year:** 1997
Title: Managing Corn Seed Decay and Seedling Blight in Corn Production Systems
Personnel: J.G. Lauer, C. Grau, K. D. Kohn, P.J. Flannery, K.D. Hudelson and H.M. Darby
Location: Rock County Farm, Janesville, WI
Supported by: Gustafson, Inc., Hatch Project 1890

FIELD INFORMATION

Field: East
 Soil Type: Plano Silt Loam
 Soil Test Results: Test Date: 4/96 pH: 6.6 P (ppm): 37 K (ppm): 180
 Fertilizer: 1-May 160 lbs N/a 28-0-0
 6-May 150 lbs/a 6-24-24 starter
 Tillage Operations: Chisel plow, Field cultivator, Dyna-drive
 Previous Crop: Corn
 Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB
 Replicates: 3
 Factors: A: Seed Quality, B: Seed Treatment

Seed Treatments:	Captan 300DD + Apron FL + Raxil	Rates 1.5 fl oz + 0.1 fl oz + 0.1 oz
	Captan 400 + Apron FL	1.76 fl oz + 0.1 fl oz
	Captan 400 + Apron XL	1.76 fl oz + 0.0425 fl oz
	Maxim + Apron XL	0.08 fl oz + 0.0425 fl oz
	Untreated Control	

Area Planted: 5' x 25'
 Area Harvested: 5.0' x 22'
 Row Spacing: 30"

Hybrid/Variety: Pioneer 3556 (Poor Seedling Vigor)
 Pioneer 3475 (Average Seedling Vigor)

Planting Date: 6-May
 Soil Temperature:
 Planting Equip: Kinze Plot planter with seed cones

Planting Rate: 32,000 seeds/acre

Harvesting Date: 18-Oct
 Harvesting Equip: Massey Ferguson Plot Combine

	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Insecticide:	6-May	Lorsban	7 lbs/A	planter
Herbicides:	5-Jun	Frontier	20 oz/A	postemerge
	5-Jun	Marksman	2 pt/A	postemerge

Results: Table E-39.

**Table E-39. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems
Janesville, WI 1997 (Gustafson)**

Seedling Vigor	Seed Treatment	V6 Stand plants/A	Final Stand plants/A	Broken Stalks %	Yield bu/A	Moist %	Test Weight lb/bu	Grower return \$/A
\1\		plants/A	plants/A	%	bu/A	%	lb/bu	\$/A
P3475 MQ		31654	28063	5.5	181	27.5	55.9	437
P3556 LQ		32129	28142	2.6	177	24.3	58.2	435
	Captan30DD+ApronFL+Raxil	32802	29304	1.3	185	26.3	57.1	450
	Captan400+ApronFL	32406	27192	1.1	189	25.8	57.0	462
	Captan400+ApronXL	32010	27786	4.4	173	25.7	57.3	422
	Maxim+ApronXL	32274	29172	9.8	178	25.5	57.0	435
	UTC	29964	27060	3.7	169	26.2	56.8	411
P3475 MQ	Captan30DD+ApronFL+Raxil	32736	29568	0.9	191	28.0	55.9	459
P3475 MQ	Captan400+ApronFL	32340	25740	2.2	192	27.3	55.9	465
P3475 MQ	Captan400+ApronXL	32076	27060	6.6	176	27.6	56.1	425
P3475 MQ	Maxim+ApronXL	32076	30492	16.0	175	26.8	56.1	423
P3475 MQ	UTC	29040	27456	1.8	172	27.7	55.6	415
P3556 LQ	Captan30DD+ApronFL+Raxil	32868	29040	1.7	180	24.5	58.3	442
P3556 LQ	Captan400+ApronFL	32472	28644	0.0	186	24.2	58.2	459
P3556 LQ	Captan400+ApronXL	31944	28512	2.3	170	23.9	58.5	419
P3556 LQ	Maxim+ApronXL	32472	27852	3.7	182	24.2	57.9	447
P3556 LQ	UTC	30888	26664	5.5	165	24.6	58.0	406
Mean		31891	28103	4.1	179	25.9	57.0	436
Probability (%)								
Seedling Vigor (V)		42.1	92.5	14.3	23.3	0.0	0.0	79.5
Seed Treatment (S)		4.8	29.3	5.3	2.0	6.2	9.5	1.7
V x S		82.4	29.4	12.0	65.2	33.8	30.7	68.3
LDS (0.10)								
Seedling Vigor (V)		NS	NS	NS	NS	0.3	0.2	NS
Seed Treatment (S)		1580	NS	5.1	11	0.5	0.3	25
CV%								
		5	8	126	6	2	1	6

\1\ LQ=Low Quality, MQ=Medium Quality