

FIELD EXPERIMENT HISTORY

Title: Valent BioSciences - Root Growth Promoter Trial
Experiment: 08 Valent **Trial ID** 3269 **Year:** 2009
Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Arlington, WI **County:** Columbia
Supported By: Valent BioSciences

Site Information

Field: **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/25/09 **pH** 6.2 **OM (%)** 2.9 **P (ppm)** 39 **K (ppm)** 110

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator Soil Finisher
Fertilizer: **Preplant Analysis:** N/A **Rate lbs/A:** N/A **Date:** N/A
Starter Analysis: 10-34-0 **Rate lbs/A:** 3.0 gal/A **Date:** 5 /2 /09
Post plant Analysis: 46-0-0 **Rate lbs/A:** 50 **Date:** 6 /26/09
Manure: N/A
Herbicide: Dual II Mag 24 oz/A Hornet 4 oz/A **Insecticide:** None
Hybrid: See Factors
Irrigation: None
Planting Date: 5/2/09 **Planting Depth:** 1.5" **Row Width** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Kinze Plot Planter
Harvest Date: 11/04/09 **Harvest Method:** Massey 8XP
Notes:

Experimental Design

Design: RCB Split-plot **Replications:** 6
Plot Size Seeded: 23' x 5' **Experiment Size:** 0.36 A
Harvest Plot Size: 23' x 5' **Harvest Plant Density:** 31818 plants per acre

Factors/Treatments:

Hybrid

A). 129
B). 144
C). 147

Root Growth Promoter

0 gai/hkg
25 gai/hkg
50 gai/hkg
100 gai/hkg
50 gai/hkg soluble

Results: Table C-33.

FIELD EXPERIMENT HISTORY

Title: Valent BioSciences - Root Growth Promoter Trial
Experiment: 08 Valent **Trial ID** 3270 **Year:** 2009
Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Fond du Lac, WI **County:** Fond du Lac
Supported By: Valent BioSciences

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam
Soil Test: **Date:** 10/25/09 **pH** 6.9 **OM (%)** 3.4 **P (ppm)** 31 **K (ppm)** 73

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator
Fertilizer: **Preplant Analysis:** N/A **Rate lbs/A:** N/A **Date:** N/A
Starter Analysis: 10-34-0 **Rate lbs/A:** 3.0 gal/A **Date:** 5/20/09
Post plant Analysis: 28-0-0 **Rate lbs/A:** 120 **Date:** 6/25/09
Manure: N/A
Herbicide: Lumax 3.0 qt/A **Insecticide:** None
Hybrid: See Factors
Irrigation: None
Planting Date: 5/20/09 **Planting Depth:** 1.5" **Row Width** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Kinze Plot Planter
Harvest Date: 11/11/09 **Harvest Method:** Massey 8XP
Notes:

Experimental Design

Design: RCB Split-plot **Replications:** 6
Plot Size Seeded: 23' x 5' **Experiment Size:** 0.36 A
Harvest Plot Size: 23' x 5' **Harvest Plant Density:** 32452 plants per acre

Factors/Treatments:

Hybrid

A). 129
B). 144
C). 147

Root Growth Promoter

0 gai/hkg
25 gai/hkg
50 gai/hkg
100 gai/hkg
50 gai/hkg soluble

Results: Table C-34.

**Table C-34. Valent BioSciences - Root Growth Promoter Study.
Fond du Lac, WI - 2009.**

Hybrid	Treatment	Grain yield	Grain moisture	Test weight	Plant lodging	Root lodging	Stalk lodging	Harvest		V2 population	V2 vigor	V5 vigor	V10 vigor	Grower return
								plants	ears					
	gai/hkg	bu/A	%	lb/bu	%	%	%	plants/A	ears/A	plants/A	1-5	1-5	1-5	\$/A
	0	189	29.3	51	5	3	2	32538	32666	33733	4.1	4.1	4.0	639
	25	188	29.6	51	5	2	3	32759	32800	32533	4.0	4.0	3.9	632
	50	187	29.7	51	5	2	3	32040	32152	32681	4.1	4.1	4.0	630
	100	185	29.9	51	5	1	4	32733	32829	32891	4.0	3.9	4.1	623
	50 soluble	188	29.3	51	3	2	1	32191	32288	33080	4.1	4.1	4.2	635
129		167	33.0	49	8	5	3	32656	32826	33510	4.1	4.1	4.0	554
144		196	25.0	51	1	0	1	32070	32083	32941	4.0	4.0	4.1	676
147		199	30.6	53	5	1	4	32631	32732	32500	4.0	4.0	4.0	665
129	0	167	32.3	47	11	9	2	32184	32473	33964	4.0	4.0	4.0	555
129	25	169	32.9	49	7	4	3	33254	33292	33270	4.2	4.2	3.8	559
129	50	170	33.6	50	8	4	4	32244	32409	33396	4.2	4.2	4.0	561
129	100	159	34.0	48	7	2	4	33226	33419	33270	4.2	4.0	4.3	525
129	50 soluble	172	32.3	48	5	4	1	32370	32535	33649	4.0	4.0	4.0	571
144	0	199	24.9	51	0	0	0	32891	32891	33775	4.0	4.0	4.0	689
144	25	193	25.3	50	1	0	1	32323	32323	32449	3.8	3.8	4.0	666
144	50	197	24.5	50	1	0	1	31565	31565	33080	4.0	4.0	4.0	680
144	100	195	25.1	51	2	0	2	31755	31755	32638	3.8	3.8	4.0	674
144	50 soluble	195	25.4	51	1	0	1	31818	31881	32765	4.2	4.2	4.5	672
147	0	202	30.7	53	3	1	3	32538	32633	33459	4.2	4.2	4.0	675
147	25	201	30.5	53	6	1	5	32702	32784	31881	4.0	4.0	4.0	670
147	50	195	30.9	53	5	1	4	32310	32481	31565	4.0	4.0	4.0	650
147	100	201	30.6	53	6	1	5	33219	33315	32765	4.0	4.0	4.0	671
147	50 soluble	198	30.3	53	3	0	3	32386	32449	32828	4.0	4.0	4.0	662
Mean		188	29.6	51	4	2	3	32452	32547	32984	4.0	4.0	4.0	632
<u>Probability(%)</u>														
Hybrid (H)		36.5	0.0	1.5	7.6	27.3	1.8	17.1	10.7	3.1	22.9	35.0	25.1	27.8
Treatment (T)		84.7	17.5	86.8	58.6	20.5	3.1	36.3	44.7	0.7	93.0	61.8	2.3	79.4
H x T		70.4	2.3	53.8	47.5	22.2	80.9	60.8	69.7	54.8	32.7	33.4	0.2	68.9
<u>LSD(0.10)</u>														
Hybrid (H)		NS	1.6	2	5	NS	2	NS	NS	581	NS	NS	NS	NS
Treatment (T)		NS	NS	NS	NS	NS	1	NS	NS	559	NS	NS	0.1	NS
H x T		NS	1.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.2	NS

FIELD EXPERIMENT HISTORY

Title: Valent BioSciences - Root Growth Promoter Trial
Experiment: 08 Valent **Trial ID** 3271 **Year:** 2009
Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Janesville, WI **County:** Rock
Supported By: Valent BioSciences

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/25/09 **pH** 7.1 **OM (%)** 3.2 **P (ppm)** 53 **K (ppm)** 132

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator
Fertilizer: **Preplant Analysis:** N/A **Rate lbs/A:** N/A **Date:** N/A
Starter Analysis: 10-34-0 **Rate lbs/A:** 3.0 gal/A **Date:** 5 /6 /09
Post plant Analysis: 32-0-0 **Rate lbs/A:** 150 **Date:** 5 /10/09
Manure: N/A
Herbicide: Dual II Mag 28 oz/A **Insecticide:** None
Atrazine 4L 1.0 qt/A **Hybrid:** See Factors
Irrigation: None
Planting Date: 5/6/09 **Planting Depth:** 1.5" **Row Width** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Kinze Plot Planter
Harvest Date: 10/28/09 **Harvest Method:** Massey 8XP
Notes:

Experimental Design

Design: RCB Split-plot **Replications:** 6
Plot Size Seeded: 23' x 5' **Experiment Size:** 0.36 A
Harvest Plot Size: 23' x 5' **Harvest Plant Density:** 31009 plants per acre
Factors/Treatments:

Hybrid

A). 129
B). 144
C). 147

Root Growth Promoter

0 gai/hkg
25 gai/hkg
50 gai/hkg
100 gai/hkg
50 gai/hkg soluble

Results: Table C-35.

**Table C-35. Valent BioSciences - Root Growth Promoter Study.
Janesville, WI - 2009.**

Hybrid	Treatment	Grain yield	Grain moisture	Test weight	Plant lodging	Root lodging	Stalk lodging	Harvest		V2 population	V2 vigor	V5 vigor	V10 vigor	Grower return
								plants	ears					
	gai/hkg	bu/A	%	lb/bu	%	%	%	plants/A	ears/A	plants/A	1-5	1-5	1-5	\$/A
	0	260	28.1	55	4	3	1	32198	31313	32807	3.9	3.9	4.1	881
	25	264	28.6	55	6	5	1	32156	32470	32533	4.0	4.1	4.1	893
	50	259	28.5	55	5	4	1	29869	28893	31797	4.0	4.1	3.9	877
	100	260	28.4	54	4	4	1	31643	31944	32617	4.0	4.1	3.9	881
	50 soluble	252	28.3	54	2	2	1	29177	29419	31186	4.0	4.2	4.0	852
129		255	29.7	53	9	8	1	31173	31035	32727	4.0	4.1	4.0	857
144		271	24.9	55	1	0	1	31593	31111	32133	4.0	4.1	4.0	935
147		251	30.6	56	3	2	1	30260	30277	31704	4.0	4.0	3.9	839
129	0	261	29.5	53	8	7	1	32202	30934	33143	3.7	4.2	4.2	877
129	25	257	29.9	54	14	13	1	31123	32070	33143	4.0	4.0	4.2	862
129	50	260	29.5	53	9	7	2	31913	31818	33207	4.0	4.0	3.8	873
129	100	256	29.5	53	9	9	1	32207	32070	33080	4.2	4.2	4.0	860
129	50 soluble	243	29.8	53	4	3	2	28419	28282	31060	4.0	4.2	4.0	814
144	0	272	24.7	56	1	0	1	33270	31944	32702	4.2	4.0	4.3	940
144	25	281	24.8	55	0	0	0	33139	33270	32702	4.0	4.0	4.0	972
144	50	258	25.3	55	0	0	1	27262	24179	30303	3.8	4.2	3.8	889
144	100	271	24.8	54	1	0	1	32591	33838	32765	4.0	4.2	4.0	935
144	50 soluble	271	24.9	55	1	0	1	31702	32323	32197	4.0	4.2	4.0	937
147	0	247	30.2	56	3	2	1	31123	31060	32575	4.0	3.7	3.8	826
147	25	254	31.1	57	3	2	1	32207	32070	31755	4.0	4.2	4.0	846
147	50	260	30.7	56	5	5	0	30431	30681	31881	4.2	4.0	4.0	868
147	100	255	30.7	57	3	2	1	30131	29924	32007	3.8	4.0	3.8	850
147	50 soluble	241	30.2	56	2	1	1	27409	27651	30303	4.0	4.3	4.0	805
Mean		259	28.4	55	4	3	1	31009	30808	32188	4.0	4.1	4.0	877
<u>Probability(%)</u>														
Hybrid (H)		20.6	0.0	0.1	0.2	0.9	43.1	36.1	75.2	25.6	86.1	83.2	35.4	5.7
Treatment (T)		45.1	13.2	28.7	68.2	65.2	90.1	4.7	12.1	17.6	96.2	7.6	16.4	48.6
H x T		55.5	34.0	16.5	67.0	65.3	72.6	25.9	16.7	62.9	2.4	11.2	22.2	53.3
<u>LSD(0.10)</u>														
Hybrid (H)		NS	0.9	1	3	4	NS	NS	NS	NS	NS	NS	NS	66
Treatment (T)		NS	NS	NS	NS	NS	NS	1990	NS	NS	NS	0.2	NS	NS
H x T		NS	NS	NS	NS	NS	NS	NS	NS	NS	0.3	NS	NS	NS