

FIELD EXPERIMENT HISTORY

Title: Site-Specific Management of Corn
Experiment: 20SSM **Trial ID:** 5748 **Year:** 2013
Personnel: J.G. Lauer, K.D. Kohn, T. Diallo, and H. Bunselmeyer
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS217 **Previous Crop:** Corn **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/25/13 **pH:** 6.8 **OM (%)** 4.1 **P (ppm)** 55 **K (ppm)** 111

Plot Management

Tillage Operations: Stalk Chopper Disk Ripper Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	82-0-0	120 lbs/A	4 /29/13
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Dual II Magnum 28 oz/A **Insecticide:** None
 Hornet 5 oz/A **Hybrid:** Dairyland Seed 9501 RA
 Roundup PowerMax 40 oz/A

Irrigation: None

Planting Date: 5/13/13 **Planting Depth:** 1.5" **Row Width:** 30'
Target Plant Density: See Factors **Planting Method:** John Deere 1700 Planter
Harvest Date: 10/10/13 **Harvest Method:** Case IH Axial-Flow 6130 Combine

Experimental Design

Design: Management Zones **Replications:** 8
Plot Size Seeded: 250' x 100' **Experiment Size:** 10 A
Harvest Plot Size: 250' x 45' **Harvest Plant Density:** See Factors

Factors/Treatments:

Plant density (Plants/A)

- 1) 22,000
- 2) 30,000
- 3) 38,000
- 4) 46,000

Results: Table 1320-01

**Table: 1320-01. Prescription Seeding Rates
Arlington, WI - 2013.**

Seeding Rate	Harvest density plants/A	Grain yield bu/A	Grain moisture %	Lodged			Return \$4.04/bu \$/A
				Total %	Stalk %	Root %	
22000	24125	186	25.8	0.0	0.0	0.0	670
30000	31000	207	24.4	0.0	0.0	0.0	750
38000	39000	206	26.3	0.0	0.0	0.0	742
46000	46750	207	26.0	0.3	0.3	0.0	746
Mean	35219	202	25.6	0.1	0.1	0.0	727
<u>Probability(%)</u>							
Seeding Rate	0.0	0.1	2.4	41.2	41.2	-	0.1
<u>LSD(0.10)</u>							
Seeding Rate	1316	9	1.0	NS	NS	-	32

FIELD EXPERIMENT HISTORY

Title: Site-Specific Management of Corn
Experiment: 20SSM **Trial ID:** 5749 **Year:** 2013
Personnel: J.G. Lauer, K.D. Kohn, T. Diallo, and H. Bunselmeyer
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS330C **Previous Crop:** Corn **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/25/13 **pH:** 6.5 **OM (%)** 3.3 **P (ppm)** 22 **K (ppm)** 116

Plot Management

Tillage Operations: Fall Chisel Plow

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	N/A	N/A	N/A
Starter :	46-0-0	320 lbs/A	5 /16/13
Post plant :	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Dual II Magnum 28 oz/A
 Hornet 5 oz/A
 Roundup PowerMax 40 oz/A
Insecticide: None
Hybrid: DKC 55-09

Irrigation: None

Planting Date: 5/16/13 **Planting Depth:** 1.75" **Row Width:** 30'

Target Plant Density: See Factors **Planting Method:** John Deere 1700 Planter

Harvest Date: 10/11/13 **Harvest Method:** Case IH Axial-Flow 6130 Combine

Experimental Design

Design: Management Zones **Replications:** 4
Plot Size Seeded: 100' x 50' **Experiment Size:** 2 A
Harvest Plot Size: 100' x 30' **Harvest Plant Density:** See Factors

Factors/Treatments:

Plant density (Plants/A)

- 1) 22,000
- 2) 30,000
- 3) 38,000
- 4) 46,000

Results: Table 1320-02

**Table: 1320-02. Prescription Seeding Rates
Arlington, WI - 2013.**

Seeding Rate	Harvest density plants/A	Grain yield bu/A	Grain moisture %	Lodged			Return \$4.04/bu \$/A
				Total %	Stalk %	Root %	
22000	22750	232	29.9	0.0	0	0.0	817
30000	30500	245	29	0	0	0	870
38000	38750	241	27.1	0.6	0.6	0.0	862
46000	47500	239	27.4	0.5	0.5	0.0	853
Mean	34875	240	28.3	0.3	0.3	0.0	851
<u>Probability(%)</u>							
Seeding Rate	0.0	89.7	5.5	59.1	59.1	-	82.3
<u>LSD(0.10)</u>							
Seeding Rate	1314	NS	1.7	NS	NS	-	NS

FIELD EXPERIMENT HISTORY

Title: Site-Specific Management of Corn
Experiment: 20SSM **Trial ID:** 5734 **Year:** 2013
Personnel: J.G. Lauer, K.D. Kohn, T. Diallo, and H. Bunselmeyer
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS339 **Previous Crop:** Corn **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/25/13 **pH:** 6.3 **OM (%)** 4.6 **P (ppm)** 89 **K (ppm)** 455

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	434 lbs/A	4 /26/13
	82-0-0	245 lbs/A	
Starter :	N/A	N/A	N/A
Post plant :	28-0-0	320 lbs/A	7 /01/13
Manure:	Dairy	8.14	10/28/13

Herbicide: Dual II Magnum 28 oz/A **Insecticide:** None
 Hornet 5 oz/A **Hybrid:** Dairyland Seed 9501 RA
 Roundup PowerMax 40 oz/A

Irrigation: None

Planting Date: 5/21/13 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** John Deere 1700 Planter

Harvest Date: 10/17/13 **Harvest Method:** Case IH Axial-Flow 6130 Combine

Experimental Design

Design: Management Zones **Replications:** 2
Plot Size Seeded: 150' x 60' **Experiment Size:** 20 A
Harvest Plot Size: 150' x 30' **Harvest Plant Density:** See Factors

Factors/Treatments:

Plant density (Plants/A)

- 1) 22,000
- 2) 30,000
- 3) 38,000
- 4) 46,000

Results: Table 1320-03

**Table: 1320-03. Prescription Seeding Rates
Arlington, WI - 2013.**

Seeding Rate	Harvest density plants/A	Grain yield bu/A	Grain moisture %	Lodged			Return \$4.04/bu \$/A
				Total %	Stalk %	Root %	
22000	22700	194	29.0	0.4	0.4	0.0	686
30000	29750	205	27.4	0.0	0.0	0.0	733
38000	38150	204	27.8	0.0	0.0	0.0	727
46000	45300	195	27.9	0.5	0.5	0.0	695
Mean	33975	200	28.0	0.2	0.2	0.0	710
<u>Probability(%)</u>							
Seeding Rate	0.0	0.0	18.0	39.1	39.1	-	0.0
<u>LSD(0.10)</u>							
Seeding Rate	990	4	NS	NS	NS	-	15