

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6352 **Year:** 2019

**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn.

**Location:** Arlington, WI **County:** Columbia

**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** ARS411 **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loamsilt loam  
**Soil Test: Date:** 5 /13/19 **pH** 5.7 **OM (%)** 3.3 **P (ppm)** 30 **K (ppm)** 136

### Plot Management

**Tillage Operations:** Field Cultivator Disk Chisel

<b>Fertilizer:</b>	<u>Analysis</u>	<u>Rate</u>	<u>Date</u>
<b>Preplant</b>	32-0-0	35 gal/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	5/13/2019 5/13/2019
<b>Post plant</b>	N/A	N/A	N/A
<b>Manure:</b>	Dairy	9258 gal/A	N/A

**Herbicide:** Resicore 80.0 oz/A

**Insecticide:** Force 3G 4.4 lbs/A

**Irrigation:** None

**Hybrid:** Factor

**Planting Date:** 5/1/18 **Planting Depth:** 1.5" **Row Width:** 30"

**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter

**Harvest Date:** 10/24/19 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

**Replications:** 3

**Plot Size Seeded:** 10' x 25'

**Experiment Size:** 0.28 Acre

**Harvest Plot Size:** 5' x 23'

**Harvest Plant Density:** 32424 plants per acre

### **Factors/Treatments:**

#### Hybrid (RM):

- |                                |                                       |
|--------------------------------|---------------------------------------|
| 1) Jung 4D178RIB (84)          | 9) Golden Harvest G97N86-3220EZ (101) |
| 2) Dekalb DKC31-10 (81)        | 10) Dairyland RPM-4317AMXT (103)      |
| 3) FS InVision FS37TV1 (87)    | 11) Renk RK717SSTX (105)              |
| 4) Jung 39DP338 (89)           | 12) Wyffels W4196RIB (105)            |
| 5) Federal 4160VT2PRIB (91)    | 13) Dairyland RPM-4816AMXT (108)      |
| 6) Renk RK433RR (92)           | 14) LG Seeds LG5548STXRIB (109)       |
| 7) Jung 46SS427RIB (96)        | 15) Golden Harvest G12W66-3122 (112)  |
| 8) Dairyland RPM-3715AMXT (96) | 16) Dekalb DKC65-94RIB (115)          |

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-01**

**Table 1912 - 01. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Arlington, 2019**

Treatment		Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$3.44 \$/A	Lodged			Plant					
number	Fertilizer							Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		245	23.5	54.9	31747	802	4.9	0.3	4.6	112	--	--	--	--	--
	Pop-up		249	22.7	55.0	31250	820	2.5	0.5	2.1	109	--	--	--	--	--
	Starter		242	23.4	55.2	31691	794	7.6	0.4	7.2	112	--	--	--	--	--
		Dairyland RPM-3715AMXT	229	22.9	53.7	29755	753	16.4	0.4	15.9	116	--	--	--	--	--
		Dairyland RPM-4317AMXT	263	22.8	55.4	30176	865	0.1	0.1	0.0	118	--	--	--	--	--
		Dairyland RPM-4816AMXT	247	27.7	54.0	31649	790	11.6	0.8	10.8	117	--	--	--	--	--
		Dekalb DKC31-10	205	17.9	58.0	33670	694	2.6	0.8	1.8	98	--	--	--	--	--
		Dekalb DKC65-94RIB	250	29.9	55.0	32491	789	1.9	0.3	1.7	116	--	--	--	--	--
		FS InVision FS37TV1	229	19.1	55.0	31860	772	3.0	0.4	2.6	107	--	--	--	--	--
		Federal 4160VT2PRIB	253	21.0	55.3	33038	843	0.0	0.0	0.0	108	--	--	--	--	--
		Golden Harvest G12W66-3122	253	28.0	55.2	30345	808	0.7	0.0	0.7	121	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	261	21.6	55.0	32996	865	5.5	0.4	5.1	114	--	--	--	--	--
		Jung 39DP338	254	18.6	55.1	33922	858	0.6	0.5	0.1	102	--	--	--	--	--
		Jung 46SS427RIB	246	21.4	54.1	32154	817	5.6	0.7	4.9	117	--	--	--	--	--
		Jung 4D178RIB	233	18.8	55.7	32197	785	1.6	0.1	1.5	101	--	--	--	--	--
		LG Seeds LG5548STXRIB	253	29.3	54.9	27819	799	5.7	0.9	4.7	117	--	--	--	--	--
		Renk RK433RR	237	20.8	55.2	32070	790	0.5	0.3	0.3	103	--	--	--	--	--
		Renk RK717SSTX	231	26.3	54.5	28114	746	24.0	0.3	23.7	109	--	--	--	--	--
		Wyffels W4196RIB	281	25.3	54.7	32744	913	0.4	0.3	0.1	111	--	--	--	--	--
1	UTC	Jung 4D178RIB	234	19.6	56.7	31565	786	0.8	0.4	0.4	98	4.3	0.5	5.7	0.3	5.2
2	UTC	Dekalb DKC31-10	204	17.9	58.4	34090	693	3.7	0.7	3.0	104	4.1	0.6	6.1	0.4	7.3
3	UTC	FS InVision FS37TV1	236	19.9	54.7	32702	792	3.1	0.4	2.7	105	4.4	0.6	5.0	0.4	5.1
4	UTC	Jung 39DP338	248	18.9	54.5	33207	837	0.8	0.4	0.4	105	4.3	0.6	4.8	0.4	5.9
5	UTC	Federal 4160VT2PRIB	251	20.8	55.5	32828	836	0.0	0.0	0.0	107	4.3	0.6	5.5	0.3	5.5
6	UTC	Renk RK433RR	234	21.7	55.9	32575	776	1.2	0.4	0.8	103	4.3	0.5	6.3	0.4	6.3
7	UTC	Jung 46SS427RIB	246	21.9	54.4	32575	816	3.5	0.0	3.5	124	4.5	0.6	5.6	0.4	5.6
8	UTC	Dairyland RPM-3715AMXT	229	22.7	55.1	30934	753	22.8	0.0	22.8	118	4.6	0.6	5.4	0.4	5.2
9	UTC	Golden Harvest G97N86-3220EZ	258	21.7	54.9	32323	854	10.0	0.4	9.7	117	4.3	0.5	5.2	0.4	5.0
10	UTC	Dairyland RPM-4317AMXT	266	23.2	54.5	30934	875	0.0	0.0	0.0	118	4.4	0.6	4.6	0.4	5.8
11	UTC	Renk RK717SSTX	236	26.4	52.8	28535	760	13.9	0.0	13.9	113	4.5	0.6	5.0	0.3	5.1
12	UTC	Wyffels W4196RIB	278	26.2	54.6	32323	896	0.0	0.0	0.0	109	4.2	0.5	4.3	0.3	5.5
13	UTC	Dairyland RPM-4816AMXT	244	28.2	53.2	32449	779	13.3	0.0	13.3	115	4.6	0.6	5.2	0.3	5.2
14	UTC	LG Seeds LG5548STXRIB	259	29.4	54.1	28156	817	3.5	0.9	2.6	122	4.4	0.6	4.7	0.4	4.7
15	UTC	Golden Harvest G12W66-3122	251	27.4	54.2	31313	804	0.0	0.0	0.0	118	4.3	0.5	4.5	0.3	5.4
16	UTC	Dekalb DKC65-94RIB	240	30.7	54.7	31439	752	1.9	0.8	1.2	116	4.4	0.6	4.2	0.4	5.9

continue

**Table 1912 - 01. Corn Hybrid Response to Starter Fertilizer in Wisconsin.**(continued) **Arlington, 2019**

Treatment			Grain	Grain	Test	Harvest	*AGI	Lodged			Plant					
number	Fertilizer	Hybrid	yield	moisture	weight	density	\$3.44	Total	Stalk	Root	hight	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
17	Pop-up	Jung 4D178RIB	238	18.2	55.7	32449	805	0.0	0.0	0.0	100	4.0	0.5	4.6	0.3	9.4
18	Pop-up	Dekalb DKC31-10	207	17.0	57.4	34217	706	0.4	0.0	0.4	95	4.1	0.5	5.0	0.3	9.4
19	Pop-up	FS InVision FS37TV1	223	17.7	54.9	30681	757	1.6	0.0	1.6	107	4.2	0.6	6.3	0.3	9.0
20	Pop-up	Jung 39DP338	259	18.1	54.3	34090	877	1.1	1.1	0.0	102	4.0	0.6	5.1	0.3	8.6
21	Pop-up	Federal 4160VT2PRIB	253	20.8	55.1	33459	844	0.0	0.0	0.0	109	4.1	0.6	6.1	0.4	8.9
22	Pop-up	Renk RK433RR	241	19.9	54.6	31565	806	0.0	0.0	0.0	104	4.2	0.5	6.3	0.4	9.0
23	Pop-up	Jung 46SS427RIB	249	20.6	54.3	30808	831	5.0	2.1	3.0	112	4.3	0.6	5.0	0.3	8.1
24	Pop-up	Dairyland RPM-3715AMXT	229	22.8	53.9	28914	754	9.9	0.0	9.9	114	4.1	0.6	5.7	0.4	8.5
25	Pop-up	Golden Harvest G97N86-3220EZ	255	22.0	55.1	32702	845	2.4	0.8	1.6	111	3.8	0.5	6.1	0.3	7.7
26	Pop-up	Dairyland RPM-4317AMXT	266	21.8	55.1	29419	881	0.0	0.0	0.0	117	4.1	0.6	5.2	0.4	8.8
27	Pop-up	Renk RK717SSTX	250	25.7	54.9	28787	808	9.9	0.4	9.5	110	4.0	0.6	5.9	0.4	8.6
28	Pop-up	Wyffels W4196RIB	292	24.7	55.8	33459	951	0.0	0.0	0.0	111	3.9	0.5	5.2	0.3	8.9
29	Pop-up	Dairyland RPM-4816AMXT	245	28.0	54.6	30681	783	4.8	1.6	3.3	113	4.4	0.5	5.5	0.3	8.0
30	Pop-up	LG Seeds LG5548STXRIB	253	28.8	54.4	26136	802	3.4	1.5	1.9	112	4.1	0.5	5.0	0.3	6.6
31	Pop-up	Golden Harvest G12W66-3122	261	28.6	55.6	30050	831	1.7	0.0	1.7	117	4.0	0.5	5.3	0.3	7.3
32	Pop-up	Dekalb DKC65-94RIB	267	29.3	54.9	32575	846	0.4	0.0	0.4	113	4.1	0.5	5.7	0.3	7.2
33	Starter	Jung 4D178RIB	226	18.6	54.8	32575	763	4.0	0.0	4.0	105	3.8	0.6	5.4	0.3	7.4
34	Starter	Dekalb DKC31-10	203	18.8	58.0	32702	684	3.6	1.6	2.0	94	3.9	0.5	5.6	0.3	10.1
35	Starter	FS InVision FS37TV1	228	19.8	55.5	32197	766	4.3	0.8	3.6	108	4.3	0.5	5.6	0.3	7.8
36	Starter	Jung 39DP338	255	18.9	56.4	34469	860	0.0	0.0	0.0	99	3.9	0.5	5.3	0.4	8.7
37	Starter	Federal 4160VT2PRIB	255	21.4	55.3	32828	848	0.0	0.0	0.0	109	4.0	0.5	5.6	0.4	6.9
38	Starter	Renk RK433RR	236	20.6	55.1	32070	789	0.4	0.4	0.0	102	4.0	0.5	5.8	0.3	8.7
39	Starter	Jung 46SS427RIB	243	21.7	53.7	33080	805	8.3	0.0	8.3	116	4.1	0.5	5.9	0.3	7.0
40	Starter	Dairyland RPM-3715AMXT	229	23.4	52.2	29419	752	16.4	1.2	15.1	116	4.1	0.5	5.7	0.3	6.3
41	Starter	Golden Harvest G97N86-3220EZ	269	21.2	55.1	33964	894	4.1	0.0	4.1	113	4.0	0.4	5.5	0.3	6.9
42	Starter	Dairyland RPM-4317AMXT	256	23.3	56.6	30176	840	0.4	0.4	0.0	120	4.0	0.5	5.1	0.4	7.6
43	Starter	Renk RK717SSTX	209	26.9	55.8	27020	670	48.2	0.5	47.7	102	3.8	0.5	5.4	0.4	6.3
44	Starter	Wyffels W4196RIB	275	25.1	53.8	32449	892	1.1	0.8	0.4	114	3.9	0.5	5.7	0.3	8.2
45	Starter	Dairyland RPM-4816AMXT	252	26.8	54.0	31818	809	16.7	0.8	15.8	124	3.9	0.5	6.1	0.3	7.2
46	Starter	LG Seeds LG5548STXRIB	247	29.8	56.2	29166	779	10.1	0.4	9.7	117	4.0	0.5	5.2	0.3	5.8
47	Starter	Golden Harvest G12W66-3122	247	28.1	55.7	29671	789	0.4	0.0	0.4	128	4.3	0.5	5.6	0.3	6.2
48	Starter	Dekalb DKC65-94RIB	244	29.8	55.5	33459	771	3.4	0.0	3.4	120	4.1	0.5	5.1	0.4	5.6
Mean			245	23.2	55.1	31563	806	5.0	0.4	4.6	111	4.1	0.5	5.4	0.3	7.1
<b>Probability(%):</b>																
Fertilizer(F)			3.0	0.2	51.0	19.4	1.6	0.0	40.8	0.0	3.5	--	--	--	--	--
Hybrid (H)			0.0	0.0	0.0	0.0	0.0	0.0	25.2	0.0	0.0	--	--	--	--	--
F x H			48.3	72.8	20.1	34.7	53.6	0.0	5.4	0.0	20.1	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			4.5	0.4	NS	NS	15.2	1.8	NS	1.8	2.0	--	--	--	--	--
Hybrid (H)			10.3	0.9	1.1	1144.8	35.0	4.2	NS	4.1	4.6	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	7.3	1.0	7.1	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6411 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn  
**Location:** Chippewa Falls, WI **County:** Chippewa  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** **Previous Crop:** Corn **Soil Type:** Sattre silt loam  
**Soil Test: Date:** 5 /4 /19 **pH** 6.5 **OM (%)** 1.3 **P (ppm)** 27 **K (ppm)** 54

### Plot Management

**Tillage Operations:** Field Cultivator Spring Chisel

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
<b>Preplant</b>	21-0-0-24S	50 lbs/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	5/4/19 5/4/19
<b>Post plant</b>	46-0-0	200 lbs/A	N/A
<b>Manure:</b>	Dairy	10000 gal/A	N/A

**Herbicide:** Acuron 3.0 qt/A

**Insecticide:** Force 3G 4.4 lbs/A

**Irrigation:** Jul - Aug: 4"

**Hybrid:** Factor

**Planting Date:** 5/4/19

**Planting Depth:** 1.5"

**Row Width:** 30"

**Target Plant Density:** 32000 plants per acre

**Planting Method:** Almaco Precision Planter

**Harvest Date:** 10/17/19

**Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

**Replications:** 3

**Plot Size Seeded:** 10' x 25'

**Experiment Size:** 0.7 Acre

**Harvest Plot Size:** 5' x 23'

**Harvest Plant Density:** 32759 plants per acre

### **Factors/Treatments:**

#### **Hybrid (RM):**

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 7) Jung 46SS427RIB (96)
- 8) Dairyland RPM-3715AMXT (96)
- 9) Golden Harvest G97N86-3220EZ (101)
- 10) Dairyland RPM-4317AMXT (103)
- 11) Renk RK717SSTX (105)
- 13) Dairyland RPM-4816AMXT (108)

#### **Fertilizer:**

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-02**

**Table 1912 - 02. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Chippewa Falls, 2019**

Treatment		Hybrid	Grain		Test weight	Harvest density	*AGI \$/A	Lodged			Plant					
number	Fertilizer		yield bu/A	moisture %				Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		219	26.7	52.8	32796	704	0.9	0.9	0.0	98	--	--	--	--	--
	Pop-up		225	26.2	51.4	32260	724	0.9	0.8	0.1	95	--	--	--	--	--
	Starter		231	27.2	52.3	33222	742	0.5	0.5	0.0	101	--	--	--	--	--
		Dairyland RPM-3715AMXT	232	27.2	50.5	32533	744	0.9	0.7	0.2	101	--	--	--	--	--
		Dairyland RPM-4317AMXT	234	28.3	52.9	32491	746	0.3	0.3	0.0	94	--	--	--	--	--
		Dairyland RPM-4816AMXT	230	35.2	53.0	32239	701	0.3	0.3	0.0	101	--	--	--	--	--
		Federal 4160VT2PRIB	220	23.5	51.3	32533	723	0.4	0.4	0.0	97	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	230	23.5	53.3	33249	755	3.1	3.0	0.1	102	--	--	--	--	--
		Jung 46SS427RIB	221	24.3	52.5	33375	723	0.1	0.1	0.0	97	--	--	--	--	--
		Jung 4D178RIB	202	22.9	51.5	33754	664	0.6	0.6	0.0	89	--	--	--	--	--
		Renk RK717SSTX	230	28.6	52.3	31902	731	0.4	0.4	0.0	104	--	--	--	--	--
1	UTC	Jung 4D178RIB	199	23.0	54.0	33964	654	0.4	0.4	0.0	89	4.0	0.4	3.9	0.3	2.9
5	UTC	Federal 4160VT2PRIB	208	24.2	53.9	31691	678	0.9	0.9	0.0	94	3.8	0.5	4.6	0.3	3.8
7	UTC	Jung 46SS427RIB	223	24.6	53.5	34217	725	0.0	0.0	0.0	97	3.9	0.5	5.2	0.3	3.5
8	UTC	Dairyland RPM-3715AMXT	223	26.5	50.6	32197	718	2.0	2.0	0.0	102	4.2	0.5	4.5	0.3	3.5
9	UTC	Golden Harvest G97N86-3220EZ	220	23.5	53.1	33585	721	3.4	3.4	0.0	104	3.8	0.5	5.0	0.3	3.3
10	UTC	Dairyland RPM-4317AMXT	234	27.6	52.5	32954	749	0.4	0.4	0.0	95	4.0	0.5	4.4	0.3	3.7
11	UTC	Renk RK717SSTX	226	29.0	52.5	32197	717	0.0	0.0	0.0	104	4.1	0.5	4.6	0.3	3.1
13	UTC	Dairyland RPM-4816AMXT	219	35.0	52.5	31565	668	0.4	0.4	0.0	104	4.1	0.5	4.5	0.3	3.3
17	Pop-up	Jung 4D178RIB	210	22.0	48.8	33207	695	0.0	0.0	0.0	86	3.4	0.5	3.6	0.2	3.7
21	Pop-up	Federal 4160VT2PRIB	225	23.2	46.8	33333	739	0.4	0.4	0.0	96	3.3	0.5	3.4	0.2	3.9
23	Pop-up	Jung 46SS427RIB	210	23.4	52.1	32070	691	0.4	0.4	0.0	92	3.8	0.5	3.9	0.2	3.9
24	Pop-up	Dairyland RPM-3715AMXT	233	26.9	50.8	32954	748	0.7	0.0	0.7	98	3.6	0.5	3.5	0.3	3.6
25	Pop-up	Golden Harvest G97N86-3220EZ	228	23.9	54.3	32323	747	4.1	3.7	0.4	97	3.4	0.4	4.2	0.3	4.2
26	Pop-up	Dairyland RPM-4317AMXT	231	28.4	53.3	31313	736	0.4	0.4	0.0	94	3.8	0.5	4.1	0.3	4.5
27	Pop-up	Renk RK717SSTX	230	26.7	52.2	30429	739	0.8	0.8	0.0	101	3.8	0.6	3.6	0.3	3.4
29	Pop-up	Dairyland RPM-4816AMXT	229	35.2	52.6	32449	698	0.4	0.4	0.0	98	3.3	0.4	2.8	0.2	3.8
33	Starter	Jung 4D178RIB	196	23.7	51.9	34090	642	1.5	1.5	0.0	93	3.6	0.5	4.3	0.3	4.7
37	Starter	Federal 4160VT2PRIB	229	23.2	53.3	32575	753	0.0	0.0	0.0	102	3.5	0.5	4.9	0.3	4.9
39	Starter	Jung 46SS427RIB	231	24.8	52.0	33838	752	0.0	0.0	0.0	102	3.8	0.5	4.6	0.3	4.5
40	Starter	Dairyland RPM-3715AMXT	240	28.1	50.2	32449	765	0.0	0.0	0.0	103	3.6	0.5	4.5	0.2	4.8
41	Starter	Golden Harvest G97N86-3220EZ	243	23.0	52.4	33838	799	1.9	1.9	0.0	105	3.5	0.5	4.6	0.3	5.3
42	Starter	Dairyland RPM-4317AMXT	237	28.9	52.8	33207	753	0.0	0.0	0.0	94	3.9	0.6	4.6	0.3	4.2
43	Starter	Renk RK717SSTX	234	30.1	52.2	33080	736	0.4	0.4	0.0	108	3.9	0.5	4.5	0.3	3.9
45	Starter	Dairyland RPM-4816AMXT	242	35.5	53.9	32702	736	0.0	0.0	0.0	100	4.0	0.5	4.6	0.3	4.1
Mean			225	26.7	52.2	32759	723	0.8	0.7	0.0	98	3.8	0.5	4.3	0.3	3.9
<b>Probability(%):</b>																
Fertilizer(F)			3.4	4.7	14.5	5.4	5.4	48.2	50.1	16.8	0.3	--	--	--	--	--
Hybrid (H)			0.2	0.0	31.6	7.5	1.7	0.2	0.2	53.1	0.0	--	--	--	--	--
F x H			89.0	45.6	24.2	42.3	85.8	88.4	80.6	58.6	83.5	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			8	0.6	NS	649	26	NS	NS	NS	2.5	--	--	--	--	--
Hybrid (H)			13	1.1	NS	1059	42	1.2	1.1	NS	4.1	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6412 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn,  
**Location:** Coleman, WI **County:** Marinette  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** N/A **Previous Crop:** Soybean **Soil Type:** Oconto Silt Loam  
**Soil Test: Date:** 5/16/19 **pH** 5.5 **OM (%)** 1.4 **P (ppm)** 28 **K (ppm)** 136

### Plot Management

**Tillage Operations:** Field Cultivator Disk Chisel

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
<b>Preplant</b>	18-46-0	25 lbs/A	N/A
	21-0-0-24S	75 lbs/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn	200 lbs/A	5/16/19
	10-34-0	4.08 gal/A	5/16/19
<b>Post plant</b>	N/A	N/A	N/A
<b>Manure:</b>	Dairy	5000 gal	N/A

**Herbicide:** Acuron 3.0 qt/A **Insecticide:** Force 3G 4.4 lbs/A  
**Irrigation:** None **Hybrid:** Factor  
**Planting Date:** 5/16/19 **Planting Depth:** 1.5" **Row Width:** 30"  
**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter  
**Harvest Date:** 10/31/18 **Harvest Method:** Massey 8XP  
**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

**Replications:** 3  
**Plot Size Seeded:** 10' x 25' **Experiment Size:** 0.28 Acre  
**Harvest Plot Size:** 5' x 23' **Harvest Plant Density:** 32123 plants per acre

### **Factors/Treatments:**

<b>Hybrid (RM):</b>	<b>Fertilizer</b>
1) Jung 4D178RIB (84)	1) UTC
2) Dekalb DKC31-10 (81)	2) Pop-pop: 10-34-0
4) Jung 39DP338 (89)	3) Starter: 9-11-30-6S-1Zn
5) Federal 4160VT2PRIB (91)	
6) Renk RK433RR (92)	
7) Jung 46SS427RIB (96)	
9) Golden Harvest G97N86-3220EZ (101)	
13) Dairyland RPM-4816AMXT (108)	

**Results: Table 1912-03**

**Table 1912 - 03. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Coleman, 2019**

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$/A	Lodged			Plant					
								Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		187	26.1	52.6	32417	602	10.6	10.6	0.0	101	--	--	--	--	--
	Pop-up		192	25.0	52.3	31770	625	10.0	10.0	0.0	102	--	--	--	--	--
	Starter		191	26.0	52.3	32181	619	10.2	10.1	0.1	104	--	--	--	--	--
		Dairyland RPM-4816AMXT	183	36.0	51.9	31313	554	6.4	6.4	0.0	110	--	--	--	--	--
		Dekalb DKC31-10	188	20.3	54.6	33080	628	2.4	2.4	0.0	100	--	--	--	--	--
		Federal 4160VT2PRIB	185	25.6	53.2	32617	598	20.4	20.4	0.0	101	--	--	--	--	--
		Golden Harvest G97N86-322	195	26.5	50.8	31944	629	12.6	12.3	0.3	112	--	--	--	--	--
		Jung 39DP338	201	23.0	52.5	32912	661	17.1	17.1	0.0	95	--	--	--	--	--
		Jung 46SS427RIB	181	25.9	50.8	32828	585	15.9	15.9	0.0	102	--	--	--	--	--
		Jung 4D178RIB	190	22.2	52.7	32702	630	5.8	5.8	0.0	97	--	--	--	--	--
		Renk RK433RR	198	26.2	52.5	29587	639	1.5	1.5	0.0	101	--	--	--	--	--
1	UTC	Jung 4D178RIB	186	22.9	52.3	32954	614	5.8	5.8	0.0	97	4.2	0.5	5.3	0.5	7.4
2	UTC	Dekalb DKC31-10	191	20.4	54.5	33459	637	3.3	3.3	0.0	100	3.9	0.5	5.5	0.4	8.3
4	UTC	Jung 39DP338	208	23.3	52.3	33207	682	10.6	10.6	0.0	94	4.0	0.4	5.9	0.3	6.9
5	UTC	Federal 4160VT2PRIB	153	26.6	56.7	32575	491	32.7	32.7	0.0	98	4.1	0.4	5.8	0.4	6.7
6	UTC	Renk RK433RR	198	26.0	52.0	31060	640	0.8	0.8	0.0	103	4.0	0.4	5.7	0.4	7.2
7	UTC	Jung 46SS427RIB	179	27.0	50.6	33080	575	16.5	16.5	0.0	100	4.2	0.4	5.2	0.5	5.4
9	UTC	Golden Harvest G97N86-322	194	27.2	50.4	31691	622	10.3	10.3	0.0	110	3.9	0.4	5.9	0.4	5.5
13	UTC	Dairyland RPM-4816AMXT	184	35.7	51.8	31313	557	5.0	5.0	0.0	109	3.9	0.4	6.4	0.3	7.2
17	Pop-up	Jung 4D178RIB	188	22.1	53.2	32070	622	6.3	6.3	0.0	98	3.9	0.4	5.2	0.4	8.6
18	Pop-up	Dekalb DKC31-10	178	19.9	54.9	32575	597	0.8	0.8	0.0	95	3.9	0.4	5.1	0.4	8.9
20	Pop-up	Jung 39DP338	194	22.5	53.4	32197	639	23.2	23.2	0.0	96	4.0	0.4	5.0	0.4	8.5
21	Pop-up	Federal 4160VT2PRIB	201	24.7	52.4	32575	653	16.1	16.1	0.0	102	3.9	0.4	5.3	0.4	9.4
22	Pop-up	Renk RK433RR	200	25.3	52.5	29671	650	1.3	1.3	0.0	101	3.9	0.4	5.5	0.5	9.4
23	Pop-up	Jung 46SS427RIB	187	24.5	50.6	32197	608	17.6	17.6	0.0	102	4.3	0.4	4.6	0.4	6.9
25	Pop-up	Golden Harvest G97N86-322	203	24.9	50.5	31565	661	9.2	9.2	0.0	112	4.0	0.4	5.7	0.5	8.4
29	Pop-up	Dairyland RPM-4816AMXT	188	36.0	51.3	31313	569	5.6	5.6	0.0	108	4.0	0.4	6.3	0.4	8.6
33	Starter	Jung 4D178RIB	197	21.8	52.6	33080	653	5.4	5.4	0.0	96	4.1	0.4	4.9	0.4	7.5
34	Starter	Dekalb DKC31-10	195	20.7	54.5	33207	650	3.0	3.0	0.0	105	4.1	0.5	6.3	0.5	8.6
36	Starter	Jung 39DP338	201	23.2	51.9	33333	660	17.5	17.5	0.0	95	4.4	0.5	4.8	0.4	8.3
37	Starter	Federal 4160VT2PRIB	201	25.5	50.5	32702	650	12.3	12.3	0.0	104	4.5	0.4	6.0	0.4	8.5
38	Starter	Renk RK433RR	196	27.2	53.2	28030	628	2.4	2.4	0.0	97	4.0	0.4	6.1	0.4	9.2
39	Starter	Jung 46SS427RIB	177	26.4	51.1	33207	571	13.7	13.7	0.0	104	4.1	0.4	6.0	0.4	8.1
41	Starter	Golden Harvest G97N86-322	188	27.2	51.6	32575	603	18.4	17.6	0.8	115	3.8	0.4	6.5	0.5	8.3
45	Starter	Dairyland RPM-4816AMXT	177	36.1	52.8	31313	535	8.6	8.6	0.0	113	4.5	0.4	5.0	0.4	7.5
Mean			190	25.7	52.4	32123	615	10.3	10.2	0.0	102	4.1	0.4	5.6	0.4	7.9
<b>Probability(%):</b>																
Fertilizer(F)			34.4	0.7	88.2	50.3	24.7	95.3	94.7	37.6	12.4	--	--	--	--	--
Hybrid (H)			4.7	0.0	0.9	0.5	0.1	0.0	0.0	44.4	0.0	--	--	--	--	--
F x H			4.9	74.4	35.3	98.4	3.9	10.0	11.7	46.9	33.3	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			NS	0.6	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			12	1.0	1.7	1519	38	5.6	5.6	NS	3	--	--	--	--	--
F x H			20	NS	NS	NS	66	9.7	NS	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6413 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn  
**Location:** Fond du Lac, WI **County:** Columbia  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam  
**Soil Test: Date:** 6/4/19 **pH** 6.6 **OM (%)** 3.0 **P (ppm)** 18 **K (ppm)** 92

### Plot Management

**Tillage Operations:** Field Cultivator Fall Chisel

<b>Fertilizer:</b>	<u>Analysis</u>	<u>Rate</u>	<u>Date</u>
<b>Preplant</b>	46-0-0	391.3 lb/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	6/4/19 6/4/19
<b>Post plant</b>	32-0-0	32 gal/A	N/A
<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** Acuron 3.0 qt/A **Insecticide:** Force 3G 4.4 lbs/A

**Irrigation:** None **Hybrid:** Factor

**Planting Date:** 6/4/19 **Planting Depth:** 1.5" **Row Width:** 30"

**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter

**Harvest Date:** 11/5/19 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

### Experimental Design RCB in a split-plot

<b>Plot Size Seeded:</b> 10' x 25'	<b>Replications:</b> 3
<b>Harvest Plot Size:</b> 5' x 23'	<b>Experiment Size:</b> 0.28 Acre
	<b>Harvest Plant Density:</b> 32653 plants per acre

### **Factors/Treatments:**

#### Hybrid (RM):

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 9) Golden Harvest G97N86-3220EZ (101)
- 10) Dairyland RPM-4317AMXT (103)
- 11) Renk RK717SSTX (105)
- 12) Wyffels W4196RIB (105)
- 13) Dairyland RPM-4816AMXT (108)
- 14) LG Seeds LG5548STXRIB (109)

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-04**



**Table 1912 - 04. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Fond Du Lac, 2019**

Treatment		Hybrid	Grain yield	Grain moisture	Test weight	Harvest density	*AGI \$3.44 \$/A	Lodged			Plant					
number	Fertilizer							Total	Stalk	Root	height	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
	UTC		199	30.9	51.2	32541	623	0.1	0.1	0.0	114	--	--	--	--	--
	Pop-up		208	29.0	52.0	32717	658	0.3	0.3	0.0	114	--	--	--	--	--
	Starter		197	30.8	53.5	32702	617	0.4	0.2	0.2	120	--	--	--	--	--
		Dairyland RPM-4317AMXT	208	30.0	51.5	32235	655	0.1	0.1	0.0	117	--	--	--	--	--
		Dairyland RPM-4816AMXT	185	36.2	55.0	32193	559	0.4	0.3	0.1	118	--	--	--	--	--
		Federal 4160VT2PRIB	205	23.3	51.5	32509	673	0.2	0.2	0.0	118	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	200	25.6	50.9	33414	648	0.0	0.0	0.0	116	--	--	--	--	--
		Jung 4D178RIB	202	21.0	54.2	33750	673	0.5	0.5	0.0	102	--	--	--	--	--
		LG Seeds LG5548STXRIB	195	39.9	52.2	31688	576	0.4	0.1	0.3	123	--	--	--	--	--
		Renk RK717SSTX	203	31.7	50.9	32298	632	0.3	0.3	0.0	118	--	--	--	--	--
		Wyffels W4196RIB	211	34.4	51.5	33140	648	0.1	0.1	0.0	118	--	--	--	--	--
1	UTC	Jung 4D178RIB	207	21.2	53.2	33701	691	0.0	0.0	0.0	105	4.2	0.5	4.5	0.4	3.5
5	UTC	Federal 4160VT2PRIB	201	23.5	51.5	31997	660	0.6	0.6	0.0	107	4.3	0.6	4.5	0.4	3.6
9	UTC	Golden Harvest G97N86-3220EZ	200	26.9	48.9	32944	643	0.0	0.0	0.0	115	4.2	0.4	3.9	0.4	3.2
10	UTC	Dairyland RPM-4317AMXT	205	30.7	50.2	32944	642	0.0	0.0	0.0	114	3.9	0.4	4.0	0.4	3.0
11	UTC	Renk RK717SSTX	202	32.5	51.5	31239	627	0.0	0.0	0.0	120	4.2	0.5	4.1	0.4	3.0
12	UTC	Wyffels W4196RIB	208	34.3	51.5	33133	637	0.0	0.0	0.0	118	4.2	0.5	4.0	0.4	3.7
13	UTC	Dairyland RPM-4816AMXT	184	36.6	50.3	32186	556	0.0	0.0	0.0	115	4.0	0.4	3.7	0.4	3.1
14	UTC	LG Seeds LG5548STXRIB	181	41.8	52.4	32186	528	0.0	0.0	0.0	119	4.3	0.4	4.0	0.4	2.9
17	Pop-up	Jung 4D178RIB	202	20.1	54.9	33712	677	0.8	0.8	0.0	98	4.0	0.5	4.0	0.4	4.6
21	Pop-up	Federal 4160VT2PRIB	210	22.3	51.5	32702	693	0.0	0.0	0.0	109	3.8	0.5	3.9	0.4	4.9
25	Pop-up	Golden Harvest G97N86-3220EZ	199	24.6	52.6	34090	647	0.0	0.0	0.0	116	4.0	0.5	3.9	0.4	4.0
26	Pop-up	Dairyland RPM-4317AMXT	210	29.6	52.9	31691	664	0.4	0.4	0.0	122	4.1	0.5	4.7	0.4	4.8
27	Pop-up	Renk RK717SSTX	215	29.9	51.0	33207	679	0.4	0.4	0.0	115	4.2	0.6	4.7	0.4	3.8
28	Pop-up	Wyffels W4196RIB	227	32.3	51.3	32954	703	0.4	0.4	0.0	114	4.6	0.5	4.0	0.4	4.8
29	Pop-up	Dairyland RPM-4816AMXT	193	35.0	50.2	32575	588	0.0	0.0	0.0	118	4.2	0.5	4.2	0.4	4.4
30	Pop-up	LG Seeds LG5548STXRIB	206	38.2	51.4	30808	615	0.4	0.4	0.0	122	4.1	0.5	4.1	0.4	3.9
33	Starter	Jung 4D178RIB	196	21.7	54.5	33838	649	0.8	0.8	0.0	105	3.9	0.5	4.3	0.4	4.4
37	Starter	Federal 4160VT2PRIB	204	24.2	51.4	32828	665	0.0	0.0	0.0	139	3.9	0.5	4.2	0.4	4.2
41	Starter	Golden Harvest G97N86-3220EZ	202	25.3	51.1	33207	655	0.0	0.0	0.0	117	3.7	0.5	4.1	0.4	3.8
42	Starter	Dairyland RPM-4317AMXT	209	29.8	51.4	32070	658	0.0	0.0	0.0	115	4.3	0.5	4.2	0.4	4.5
43	Starter	Renk RK717SSTX	191	32.7	50.2	32449	590	0.4	0.4	0.0	119	3.8	0.5	4.0	0.5	3.3
44	Starter	Wyffels W4196RIB	199	36.6	51.7	33333	603	0.0	0.0	0.0	122	3.9	0.5	3.5	0.4	3.4
45	Starter	Dairyland RPM-4816AMXT	177	36.9	64.5	31818	533	1.2	0.8	0.4	120	4.1	0.4	3.8	0.3	3.2
46	Starter	LG Seeds LG5548STXRIB	197	39.5	52.9	32070	584	0.8	0.0	0.8	127	4.1	0.5	3.5	0.4	3.7
Mean			201	30.3	52.2	32653	633	0.3	0.2	0.1	116	4.1	0.5	4.1	0.4	3.8
<b>Probability(%):</b>																
Fertilizer(F)			0.6	0.1	43.2	85.6	0.2	39.4	40.9	26.3	18.3	--	--	--	--	--
Hybrid (H)			0.2	0.0	76.0	0.5	0.0	85.1	71.9	72.4	16.2	--	--	--	--	--
F x H			43.3	77.9	63.8	58.4	38.6	77.4	62.7	76.5	76.6	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			6	0.9	NS	NS	21	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			10	1.4	NS	894	33	NS	NS	NS	NS	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6414 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn.  
**Location:** Galesville, WI **County:** Trempealeau  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** **Previous Crop:** Soybean **Soil Type:** Downs Silt Loam  
**Soil Test: Date:** 4 /30/18 **pH** 5.6 **OM (%)** 3.5 **P (ppm)** 18 **K (ppm)** 163

### Plot Management

**Tillage Operations:** Field Cultivator

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
<b>Preplant</b>	46-0-0	217.4 lb/A	N/A
	21-0-0-24S	100 lb/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn	200 lbs/A	4/29/19
	10-34-0	4.08 gal/A	4/29/19
<b>Post plant</b>	N/A	N/A	N/A
<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** Callisto 3.0 oz/A  
Me-too-lachlor 1.25 pt/A  
Banvel 2.0 oz/A

**Insecticide:** Force 3G 4.4 lbs/A  
**Hybrid:** Factor

**Irrigation:** None

**Planting Date:** 4/29/19 **Planting Depth:** 1.5" **Row Width:** 30"

**Target Plant Density:** 32000 **plants per acre** **Planting Method:** Almaco Precision Planter

**Harvest Date:** 10/17/19 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

**Replications:** 3

**Plot Size Seeded:** 10' x 25'

**Experiment Size:** 0.28 Acre

**Harvest Plot Size:** 5' x 23'

**Harvest Plant Density:** 31185 **plants per acre**

### **Factors/Treatments:**

#### Hybrid (RM):

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 9) Golden Harvest G97N86-3220EZ (101)
- 10) Dairyland RPM-4317AMXT (103)
- 11) Renk RK717SSTX (105)
- 12) Wyffels W4196RIB (105)
- 13) Dairyland RPM-4816AMXT (108)
- 14) LG Seeds LG5548STXRIB (109)

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-05**

**Table 1912 - 05. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Galesville, 2019**

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$/A	Lodged			Plant					
								Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		189	30.6	54.3	31310	594	29.1	2.8	26.3	114	--	--	--	--	--
	Pop-up		200	28.1	54.2	30957	638	17.2	2.8	14.1	114	--	--	--	--	--
	Starter		195	31.5	54.5	31289	609	25.5	2.1	23.2	116	--	--	--	--	--
		Dairyland RPM-4317AMXT	203	28.3	54.3	29705	647	7.3	4.6	2.4	122	--	--	--	--	--
		Dairyland RPM-4816AMXT	184	33.2	54.2	31178	567	35.6	0.3	35.1	117	--	--	--	--	--
		Federal 4160VT2PRIB	210	26.1	52.8	33080	680	6.4	3.7	2.7	114	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	147	27.3	54.5	34969	472	66.5	2.7	63.4	114	--	--	--	--	--
		Jung 4D178RIB	180	27.3	53.3	32391	578	12.3	6.4	5.6	107	--	--	--	--	--
		LG Seeds LG5548STXRIB	185	34.7	55.1	24823	566	23.6	0.5	22.9	119	--	--	--	--	--
		Renk RK717SSTX	175	33.5	54.5	30176	540	35.4	2.4	33.0	112	--	--	--	--	--
		Wyffels W4196RIB	273	29.9	56.0	33159	860	4.5	0.0	4.5	115	--	--	--	--	--
1	UTC	Jung 4D178RIB	168	27.2	53.2	31313	540	20.3	7.2	13.1	106	4.0	0.3	4.2	0.3	4.3
5	UTC	Federal 4160VT2PRIB	213	27.8	53.1	33080	679	2.2	2.2	0.0	117	4.4	0.4	4.3	0.4	4.4
9	UTC	Golden Harvest G97N86-3220EZ	125	26.9	54.8	37910	400	99.3	0.0	99.4	113	4.1	0.3	4.2	0.4	4.0
10	UTC	Dairyland RPM-4317AMXT	199	29.4	54.2	30050	629	13.7	10.3	3.4	118	4.3	0.4	4.2	0.3	4.7
11	UTC	Renk RK717SSTX	187	32.1	54.6	29908	585	46.0	2.6	43.3	111	4.2	0.4	4.3	0.4	2.4
12	UTC	Wyffels W4196RIB	268	30.8	55.2	33317	840	0.5	0.0	0.5	109	4.0	0.3	4.1	0.4	2.9
13	UTC	Dairyland RPM-4816AMXT	171	35.2	55.1	32172	521	28.1	0.0	27.6	117	4.3	0.4	4.7	0.3	4.3
14	UTC	LG Seeds LG5548STXRIB	183	35.2	54.5	22727	557	22.9	0.0	22.9	119	4.5	0.4	4.0	0.4	3.5
17	Pop-up	Jung 4D178RIB	173	21.3	53.1	31850	574	13.2	11.9	1.4	101	3.8	0.4	4.7	0.3	4.9
21	Pop-up	Federal 4160VT2PRIB	210	25.7	52.9	33333	682	5.4	5.4	0.0	115	4.0	0.4	5.0	0.4	8.1
25	Pop-up	Golden Harvest G97N86-3220EZ	170	27.6	54.8	33308	546	41.3	0.0	40.7	114	4.0	0.3	4.5	0.3	6.2
26	Pop-up	Dairyland RPM-4317AMXT	202	26.2	53.8	27248	654	6.5	2.8	3.2	122	4.3	0.4	4.2	0.3	3.6
27	Pop-up	Renk RK717SSTX	154	33.0	54.1	31793	476	14.8	1.1	13.1	111	4.2	0.4	4.0	0.3	3.7
28	Pop-up	Wyffels W4196RIB	288	28.5	55.5	34090	916	2.9	0.0	2.9	116	4.4	0.4	5.0	0.4	7.6
29	Pop-up	Dairyland RPM-4816AMXT	191	29.9	53.9	30303	603	40.8	0.0	40.8	113	4.1	0.4	4.8	0.4	6.5
30	Pop-up	LG Seeds LG5548STXRIB	212	32.5	55.3	25733	658	12.7	1.5	10.6	121	4.1	0.4	4.4	0.3	4.0
33	Starter	Jung 4D178RIB	201	33.3	53.7	34010	621	3.5	0.0	2.2	114	4.0	0.4	4.4	0.3	5.9
37	Starter	Federal 4160VT2PRIB	208	24.7	52.4	32828	678	11.5	3.3	8.2	109	4.2	0.5	5.7	0.4	6.3
41	Starter	Golden Harvest G97N86-3220EZ	146	27.5	53.8	33687	469	58.9	8.2	50.1	115	4.1	0.4	5.6	0.4	6.2
42	Starter	Dairyland RPM-4317AMXT	208	29.4	55.0	31818	659	1.6	0.8	0.8	125	4.7	0.5	5.9	0.4	6.1
43	Starter	Renk RK717SSTX	184	35.3	54.6	28828	559	45.4	3.6	42.5	113	4.3	0.4	5.0	0.4	4.3
44	Starter	Wyffels W4196RIB	262	30.6	57.3	32070	824	10.0	0.0	10.0	119	4.2	0.5	5.7	0.4	6.2
45	Starter	Dairyland RPM-4816AMXT	189	34.4	53.7	31060	577	37.8	0.9	36.9	120	4.3	0.4	5.6	0.4	5.4
46	Starter	LG Seeds LG5548STXRIB	160	36.5	55.6	26010	483	35.2	0.0	35.2	117	4.1	0.5	5.0	0.3	4.2
Mean			195	30.0	54.3	31185	614	23.9	2.6	21.2	115	4.2	0.4	4.7	0.4	5.0
<b>Probability(%):</b>																
Fertilizer(F)			48.4	1.8	79.1	86.4	33.7	15.0	91.2	11.0	26.5	--	--	--	--	--
Hybrid (H)			0.0	0.0	0.3	0.0	0.0	0.0	46.3	0.0	0.1	--	--	--	--	--
F x H			63.3	75.9	86.5	21.8	74.0	49.0	74.5	42.5	25.8	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			NS	2	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			24	3.2	1.3	1987	82	16.5	NS	15.7	5	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6415 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo Kent Kohn  
**Location:** Hancock, WI **County:** Waushara  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** **Previous Crop:** Corn **Soil Type:** Plainfield Sand  
**Soil Test: Date:** 4 /30/19 **pH** 5.7 **OM (%)** 0.8 **P (ppm)** 124 **K (ppm)** 122

### Plot Management

**Tillage Operations:** Soil finisher

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
<b>Preplant</b>	N/A	N/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn	200 lbs/A	4/30/19
	10-34-0	4.08 gal/A	4/30/19
<b>Post plant</b>	21-0-0-24S	152.3 lbs/A	N/A
	11-52-0	355 lbs/A	N/A
	32-0-0	331 lbs/A	N/A
<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** Prowl 2.0 pt/A  
Laudis 3.0 oz/A

**Insecticide:** Force 3G 4.4 lbs/A

**Hybrid:** Factor

**Irrigation:** May - Sept:  
11.1"

**Planting Date:** 4/30/19 **Planting Depth:** 1.5" **Row Width:** 30"  
**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter  
**Harvest Date:** 10/24/19 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

**Replications:** 3  
**Plot Size Seeded:** 10' x 25' **Experiment Size:** 0.28 Acre  
**Harvest Plot Size:** 5' x 23' **Harvest Plant Density:** 28961 plants per acre

### **Factors/Treatments:**

#### **Hybrid (RM):**

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 9) Golden Harvest G97N86-3220EZ (101)
- 10) Dairyland RPM-4317AMXT (103)
- 11) Renk RK717SSTX (105)
- 12) Wyffels W4196RIB (105)
- 13) Dairyland RPM-4816AMXT (108)
- 14) LG Seeds LG5548STXRIB (109)

#### **Fertilizer:**

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-06**

**Table 1912 - 06. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Hancock, 2019**

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$/A	Lodged			Plant					
								Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		197	27.0	51.9	29813	634	0.0	0.0	0.0	97	--	--	--	--	--
	Pop-up		199	25.6	54.5	27020	645	0.1	0.1	0.0	96	--	--	--	--	--
	Starter		203	25.4	52.4	30050	659	0.2	0.1	0.1	97	--	--	--	--	--
		Dairyland RPM-4317AMXT	198	25.3	53.1	26767	643	0.3	0.3	0.0	95	--	--	--	--	--
		Dairyland RPM-4816AMXT	190	30.9	51.5	30976	596	0.0	0.0	0.0	101	--	--	--	--	--
		Federal 4160VT2PRIB	217	21.3	52.3	32449	723	0.0	0.0	0.0	94	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	220	23.4	51.7	32659	722	0.0	0.0	0.0	100	--	--	--	--	--
		Jung 4D178RIB	192	20.1	53.9	32954	644	0.3	0.1	0.1	87	--	--	--	--	--
		LG Seeds LG5548STXRIB	169	32.8	52.7	19234	524	0.4	0.2	0.2	97	--	--	--	--	--
		Renk RK717SSTX	183	25.9	51.7	24537	593	0.0	0.0	0.0	101	--	--	--	--	--
		Wyffels W4196RIB	227	28.3	57.0	32112	722	0.0	0.0	0.0	98	--	--	--	--	--
1	UTC	Jung 4D178RIB	194	20.5	52.9	33207	649	0.0	0.0	0.0	87	3.9	0.3	4.2	0.3	5.2
5	UTC	Federal 4160VT2PRIB	214	22.4	51.9	33333	707	0.0	0.0	0.0	94	4.4	0.4	4.8	0.3	6.1
9	UTC	Golden Harvest G97N86-3220EZ	213	23.3	50.8	32954	699	0.0	0.0	0.0	101	4.0	0.4	4.9	0.3	5.6
10	UTC	Dairyland RPM-4317AMXT	199	27.1	52.2	29545	637	0.0	0.0	0.0	96	4.4	0.5	4.4	0.3	5.4
11	UTC	Renk RK717SSTX	180	26.9	51.4	26010	578	0.0	0.0	0.0	99	4.3	0.4	4.6	0.5	5.1
12	UTC	Wyffels W4196RIB	225	29.1	51.2	31313	714	0.0	0.0	0.0	100	3.8	0.4	4.9	0.3	5.7
13	UTC	Dairyland RPM-4816AMXT	184	32.0	51.9	32449	572	0.0	0.0	0.0	101	4.0	0.4	4.5	0.3	4.9
14	UTC	LG Seeds LG5548STXRIB	168	34.6	53.2	19697	514	0.0	0.0	0.0	98	4.2	0.4	4.8	0.3	4.2
17	Pop-up	Jung 4D178RIB	181	19.6	53.7	32197	606	0.4	0.4	0.0	85	4.3	0.4	4.7	0.4	6.3
21	Pop-up	Federal 4160VT2PRIB	219	20.8	53.0	30555	731	0.0	0.0	0.0	91	3.9	0.4	4.4	0.4	7.1
25	Pop-up	Golden Harvest G97N86-3220EZ	215	23.8	52.4	32070	705	0.0	0.0	0.0	100	3.9	0.4	4.9	0.4	7.0
26	Pop-up	Dairyland RPM-4317AMXT	195	24.1	53.6	22222	638	0.0	0.0	0.0	93	3.7	0.4	4.8	0.3	7.0
27	Pop-up	Renk RK717SSTX	181	25.3	51.4	20454	588	0.0	0.0	0.0	105	4.0	0.5	5.1	0.3	8.7
28	Pop-up	Wyffels W4196RIB	232	29.0	67.6	32197	735	0.0	0.0	0.0	98	3.9	0.4	4.3	0.3	6.3
29	Pop-up	Dairyland RPM-4816AMXT	204	29.4	51.7	29166	645	0.0	0.0	0.0	100	4.3	0.5	5.7	0.4	6.3
30	Pop-up	LG Seeds LG5548STXRIB	164	32.7	52.9	17298	508	0.7	0.7	0.0	94	4.0	0.4	4.3	0.3	6.4
33	Starter	Jung 4D178RIB	203	20.2	55.1	33459	678	0.4	0.0	0.4	91	4.0	0.4	4.9	0.4	5.0
37	Starter	Federal 4160VT2PRIB	219	20.6	51.9	33459	730	0.0	0.0	0.0	97	3.8	0.4	4.9	0.3	6.8
41	Starter	Golden Harvest G97N86-3220EZ	232	23.1	51.9	32954	761	0.0	0.0	0.0	99	3.8	0.4	5.4	0.4	9.1
42	Starter	Dairyland RPM-4317AMXT	201	24.9	53.4	28535	653	0.9	0.9	0.0	95	4.0	0.5	4.4	0.3	7.0
43	Starter	Renk RK717SSTX	189	25.5	52.3	27146	612	0.0	0.0	0.0	99	4.7	0.5	4.8	0.3	6.3
44	Starter	Wyffels W4196RIB	223	26.9	52.0	32828	716	0.0	0.0	0.0	95	3.7	0.4	4.9	0.4	6.5
45	Starter	Dairyland RPM-4816AMXT	183	31.4	50.9	31313	570	0.0	0.0	0.0	101	4.0	0.4	4.7	0.4	7.1
46	Starter	LG Seeds LG5548STXRIB	176	31.0	52.1	20707	551	0.6	0.0	0.6	99	4.1	0.4	4.9	0.3	4.3
Mean			200	26.0	53.0	28961	646	0.1	0.1	0.0	97	4.0	0.4	4.8	0.4	6.2
<b>Probability(%):</b>																
Fertilizer(F)			36.9	0.0	22.4	0.0	19.1	27.1	50.1	15.7	57.3	--	--	--	--	--
Hybrid (H)			0.0	0.0	45.7	0.0	0.0	33.9	62.7	53.9	0.0	--	--	--	--	--
F x H			66.3	8.9	40.9	1.8	64.1	82.8	43.1	59.7	49.1	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			NS	1	NS	833	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			11	0.9	NS	1360	37	NS	NS	NS	3	--	--	--	--	--
F x H			NS	2	NS	2355	NS	NS	NS	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6416 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn.  
**Location:** Janesville **County:** Rock  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** N/A **Previous Crop:** Corn **Soil Type:** Plano Silt Loam  
**Soil Test: Date:** 5 /1 /18 **pH** 6.0 **OM (%)** 3.0 **P (ppm)** 29 **K (ppm)** 93

### Plot Management

**Tillage Operations:** Field Cultivator Chisel plow

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
<b>Preplant</b>	N/A	N/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	5/13/19 5/13/19
<b>Post plant</b>	28-0-0	714.3 lb/A	N/A
<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** Acuron 3.0 qt/A  
Status 10 oz/A **Insecticide:** Force 3G 4.4 lbs/A

**Irrigation:** None **Hybrid:** Factor

**Planting Date:** 5/13/19 **Planting Depth:** 1.5" **Row Width:** 30"

**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter

**Harvest Date:** 10/25/19 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

### Experimental Design RCB in a split-plot

**Replications:** 3  
**Plot Size Seeded:** 10' x 25' **Experiment Size:** 0.28 Acre  
**Harvest Plot Size:** 5' x 23' **Harvest Plant Density:** 31771 plants per acre

### **Factors/Treatments:**

#### Hybrid (RM):

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 9) Golden Harvest G97N86-3220EZ (101)
- 12) Wyffels W4196RIB (105)
- 13) Dairyland RPM-4816AMXT (108)
- 14) LG Seeds LG5548STXRIB (109)
- 15) Golden Harvest G12W66-3122 (112)
- 16) Dekalb DKC65-94RIB (115)

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 19-12-07**

**Table 1912 - 07. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Janesville, 2019**

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$/A	Lodged			Plant					
								Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		220	23.6	55.1	31358	721	3.7	3.5	0.2	122	--	--	--	--	--
	Pop-up		230	23.6	55.2	31444	753	2.4	2.3	0.1	110	--	--	--	--	--
	Starter		239	22.6	55.7	32511	787	1.8	1.6	0.2	111	--	--	--	--	--
		Dairyland RPM-4816AMXT	240	25.4	54.2	31944	778	0.8	0.7	0.1	113	--	--	--	--	--
		Dekalb DKC65-94RIB	238	27.3	55.8	33585	761	0.9	0.9	0.0	115	--	--	--	--	--
		Federal 4160VT2PRIB	223	18.5	56.0	34568	753	1.5	1.5	0.0	104	--	--	--	--	--
		Golden Harvest G12W66-3122	237	27.1	54.0	26136	760	0.2	0.0	0.2	118	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	222	20.3	55.7	32239	741	2.7	1.9	0.8	111	--	--	--	--	--
		Jung 4D178RIB	187	17.4	57.6	33702	636	12.8	12.6	0.2	120	--	--	--	--	--
		LG Seeds LG5548STXRIB	245	26.8	54.0	28535	787	0.9	0.9	0.0	114	--	--	--	--	--
		Wyffels W4196RIB	249	23.4	55.3	33459	816	1.3	1.1	0.1	121	--	--	--	--	--
1	UTC	Jung 4D178RIB	168	18.3	59.4	34828	568	19.1	19.0	0.0	158	3.5	0.5	5.2	0.2	7.8
5	UTC	Federal 4160VT2PRIB	223	18.7	56.1	34343	753	0.7	0.7	0.0	101	3.4	0.5	4.1	0.3	8.7
9	UTC	Golden Harvest G97N86-3220EZ	209	20.3	55.4	30303	698	6.3	5.0	1.4	111	4.0	0.5	3.4	0.2	7.3
12	UTC	Wyffels W4196RIB	234	23.4	54.0	33333	768	2.3	2.3	0.0	146	3.6	0.5	3.6	0.3	8.8
13	UTC	Dairyland RPM-4816AMXT	228	25.9	54.8	32449	738	0.4	0.4	0.0	110	3.6	0.5	4.2	0.3	8.1
14	UTC	LG Seeds LG5548STXRIB	240	27.1	52.2	27651	769	0.4	0.4	0.0	116	3.9	0.5	3.7	0.3	6.2
15	UTC	Golden Harvest G12W66-3122	222	27.4	53.8	24495	710	0.5	0.0	0.5	115	3.9	0.6	4.1	0.3	6.1
16	UTC	Dekalb DKC65-94RIB	240	27.7	55.2	33459	766	0.0	0.0	0.0	116	3.8	0.6	4.7	0.3	7.2
17	Pop-up	Jung 4D178RIB	182	17.7	58.0	29924	617	10.3	10.4	0.0	104	3.7	0.6	4.1	0.2	9.9
21	Pop-up	Federal 4160VT2PRIB	221	18.9	56.2	35523	747	3.4	3.4	0.0	102	3.3	0.5	5.3	0.2	9.2
25	Pop-up	Golden Harvest G97N86-3220EZ	223	20.2	55.1	32954	747	1.1	0.7	0.4	108	3.6	0.5	3.9	0.2	7.9
28	Pop-up	Wyffels W4196RIB	251	23.7	54.1	33080	821	1.6	1.2	0.4	105	3.5	0.5	3.8	0.2	11.1
29	Pop-up	Dairyland RPM-4816AMXT	247	26.6	53.7	31186	796	0.4	0.4	0.0	113	3.8	0.6	4.4	0.2	9.6
30	Pop-up	LG Seeds LG5548STXRIB	238	26.0	53.2	28156	770	1.4	1.4	0.0	113	3.7	0.6	4.8	0.2	8.0
31	Pop-up	Golden Harvest G12W66-3122	244	27.0	54.6	26894	782	0.0	0.0	0.0	120	3.6	0.6	4.1	0.2	7.7
32	Pop-up	Dekalb DKC65-94RIB	235	28.5	56.4	33838	747	0.8	0.8	0.0	116	3.6	0.6	4.6	0.2	7.7
33	Starter	Jung 4D178RIB	210	16.2	55.3	36354	722	9.0	8.5	0.5	97	3.4	0.5	4.8	0.3	10.6
37	Starter	Federal 4160VT2PRIB	224	17.9	55.6	33838	760	0.4	0.4	0.0	108	3.6	0.5	6.1	0.4	10.8
41	Starter	Golden Harvest G97N86-3220EZ	232	20.3	56.5	33459	777	0.7	0.0	0.7	114	3.5	0.5	4.9	0.3	9.5
44	Starter	Wyffels W4196RIB	261	23.2	57.8	33964	857	0.0	0.0	0.0	112	3.6	0.5	5.3	0.3	10.9
45	Starter	Dairyland RPM-4816AMXT	245	23.8	54.0	32197	800	1.6	1.2	0.4	116	3.9	0.6	6.1	0.3	11.5
46	Starter	LG Seeds LG5548STXRIB	257	27.2	56.6	29798	822	0.9	0.9	0.0	112	3.9	0.5	5.7	0.3	7.9
47	Starter	Golden Harvest G12W66-3122	245	26.9	53.6	27020	789	0.0	0.0	0.0	119	3.8	0.5	4.9	0.3	8.4
48	Starter	Dekalb DKC65-94RIB	238	25.6	55.8	33459	771	1.9	1.9	0.0	114	3.8	0.6	5.9	0.4	9.5
	Mean		230	23.3	55.3	31771	754	2.6	2.4	0.2	114	3.7	0.5	4.7	0.3	8.8
<b>Probability(%):</b>																
	Fertilizer(F)		0.1	1.5	34.5	6.9	0.1	17.7	12.4	75.3	11.8	--	--	--	--	--
	Hybrid (H)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	69.5	--	--	--	--	--
	F x H		74.0	37.5	0.3	24.1	79.1	42.2	24.6	93.5	35.5	--	--	--	--	--
<b>LSD(0.10):</b>																
	Fertilizer(F)		8	1	NS	921	28	NS	NS	NS	NS	--	--	--	--	--
	Hybrid (H)		13	1.0	1.1	1497	45	2.9	3	NS	NS	--	--	--	--	--
	F x H		NS	NS	2	NS	NS	NS	NS	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6417 **Year:**  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn.  
**Location:** Marshfield, WI **County:** Wood  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** **Previous Crop:** Corn **Soil Type:** Withee Silt Loam  
**Soil Test: Date:** 5 /15/19 **pH:** 6.1 **OM (%)** 2.9 **P (ppm)** 67 **K (ppm)** 147

### Plot Management

**Tillage Operations:** Field cultivator Chisel plow

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn	200 lbs/A	5/15/19
	10-34-0	4.08 gal/A	5/15/19
Post plant	46-0-0	100 lbs/A	N/A
	46-0-0	250 lbs/A	N/A
Manure:	N/A	N/A	N/A

**Herbicide:** Callisto Xtra 26 oz/A  
Primero 0.5 oz/A  
Charger Max 1.0 pt/A

**Insecticide:** Force 3G 4.4 lbs/A  
**Hybrid:** Factor

**Irrigation:** None

**Planting Date:** 5/15/19 **Planting Depth:** 1.5" **Row Width:** 30"

**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter

**Harvest Date:** 11/7/2019 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

### Experimental Design RCB in a split-plot

**Replications:** 3  
**Plot Size Seeded:** 10' x 25' **Experiment Size:** 0.28 Acre  
**Harvest Plot Size:** 5' x 23' **Harvest Plant Density:** 28939 plants per acre

### **Factors/Treatments:**

#### Hybrid (RM):

- |                                |                                       |
|--------------------------------|---------------------------------------|
| 1) Jung 4D178RIB (84)          | 9) Golden Harvest G97N86-3220EZ (101) |
| 2) Dekalb DKC31-10 (81)        | 10) Dairyland RPM-4317AMXT (103)      |
| 3) FS InVision FS37TV1 (87)    | 11) Renk RK717SSTX (105)              |
| 4) Jung 39DP338 (89)           | 12) Wyffels W4196RIB (105)            |
| 5) Federal 4160VT2PRIB (91)    | 13) Dairyland RPM-4816AMXT (108)      |
| 6) Renk RK433RR (92)           | 14) LG Seeds LG5548STXRIB (109)       |
| 7) Jung 46SS427RIB (96)        | 15) Golden Harvest G12W66-3122 (112)  |
| 8) Dairyland RPM-3715AMXT (96) | 16) Dekalb DKC65-94RIB (115)          |

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-08**



**Table 1912 - 08. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Marshfield, 2019**

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$3.44 \$/A	Lodged			Plant								
								Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr			
	UTC																		
	Pop-up																		
	Starter																		
		Jung 4D178RIB																	
		Dekalb DKC31-10																	
		FS InVision FS37TV1																	
		Jung 39DP338																	
		Federal 4160VT2PRIB																	
		Renk RK433RR																	
		Jung 46SS427RIB					**												
		Dairyland RPM-3715AMXT																	
		Golden Harvest G97N86-3220EZ																	
		Dairyland RPM-4317AMXT																	
		Renk RK717SSTX																	
		Wyffels W4196RIB																	
		Dairyland RPM-4816AMXT																	
		LG Seeds LG5548STXRIB																	
		Golden Harvest G12W66-3122																	
		Dekalb DKC65-94RIB																	
1	UTC	Jung 4D178RIB																	
2	UTC	Dekalb DKC31-10																	
3	UTC	FS InVision FS37TV1																	
4	UTC	Jung 39DP338																	
5	UTC	Federal 4160VT2PRIB					**												
6	UTC	Renk RK433RR																	
7	UTC	Jung 46SS427RIB																	
8	UTC	Dairyland RPM-3715AMXT																	
9	UTC	Golden Harvest G97N86-3220EZ																	
10	UTC	Dairyland RPM-4317AMXT																	
11	UTC	Renk RK717SSTX																	
12	UTC	Wyffels W4196RIB																	
13	UTC	Dairyland RPM-4816AMXT																	
14	UTC	LG Seeds LG5548STXRIB																	
15	UTC	Golden Harvest G12W66-3122																	
16	UTC	Dekalb DKC65-94RIB																	

continue

\*AGI: Adjusted Gross Income.

\*\*Dropped trial due to emergence and stand issues.

**Table 1912 - 08. Corn Hybrid Response to Starter Fertilizer in Wisconsin.**continued **Marshfield, 2019**

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$3.44 \$/A	Lodged			Plant							
								Total %	Stalk %	Root %	hight in	N %	P %	K %	S %	DM gr		
17	Pop-up	Jung 4D178RIB																
18	Pop-up	Dekalb DKC31-10																
19	Pop-up	FS InVision FS37TV1																
20	Pop-up	Jung 39DP338																
21	Pop-up	Federal 4160VT2PRIB																
22	Pop-up	Renk RK433RR																
23	Pop-up	Jung 46SS427RIB																
24	Pop-up	Dairyland RPM-3715AMXT																
25	Pop-up	Golden Harvest G97N86-3220EZ					**											
26	Pop-up	Dairyland RPM-4317AMXT																
27	Pop-up	Renk RK717SSTX																
28	Pop-up	Wyffels W4196RIB																
29	Pop-up	Dairyland RPM-4816AMXT																
30	Pop-up	LG Seeds LG5548STXRIB																
31	Pop-up	Golden Harvest G12W66-3122																
32	Pop-up	Dekalb DKC65-94RIB																
33	Starter	Jung 4D178RIB																
34	Starter	Dekalb DKC31-10																
35	Starter	FS InVision FS37TV1																
36	Starter	Jung 39DP338																
37	Starter	Federal 4160VT2PRIB																
38	Starter	Renk RK433RR					**											
39	Starter	Jung 46SS427RIB																
40	Starter	Dairyland RPM-3715AMXT																
41	Starter	Golden Harvest G97N86-3220EZ																
42	Starter	Dairyland RPM-4317AMXT																
43	Starter	Renk RK717SSTX																
44	Starter	Wyffels W4196RIB																
45	Starter	Dairyland RPM-4816AMXT																
46	Starter	LG Seeds LG5548STXRIB																
47	Starter	Golden Harvest G12W66-3122																
48	Starter	Dekalb DKC65-94RIB																

Mean

**Probability(%):**

Fertilizer(F)

Hybrid (H)

F x H

**LSD(0.10):**

Fertilizer(F)

Hybrid (H)

F x H

\*AGI: Adjusted Gross Income.

**\*\*Dropped trial due to emergence and stand issues.**

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6418 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn.  
**Location:** Montfort, WI **County:** Grant  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** **Previous Crop:** Soybean **Soil Type:** Dodgeville Silt Loam  
**Soil Test: Date:** 5 /11/19 **pH:** 6.1 **OM (%)** 3.3 **P (ppm)** 57 **K (ppm)** 135

### Plot Management

**Tillage Operations:** Field cultivator

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
<b>Preplant</b>	32-0-0	20 gal/A	N/A
	12-0-0-26S	5 gal/A	N/A
<b>Starter</b>	9-11-30-6S-1Zn	200 lbs/A	5/11/19
	10-34-0	4.08 gal/A	5/11/19
<b>Post plant</b>	N/A	N/A	N/A
<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** Explorer 3 oz/A  
 Zidua 3.5 oz/A  
 Power Max 25.6 oz/A  
 Atrazine 4L 32 oz/A

**Insecticide:** Force 3G 4.4 lbs/A  
**Hybrid:** Factor

**Irrigation:** None

**Planting Date:** 5/11/19 **Planting Depth:** 1.5" **Row Width:** 30"

**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter

**Harvest Date:** 10/23/19 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

<b>Plot Size Seeded:</b> 10' x 25'	<b>Replications:</b> 3
<b>Harvest Plot Size:</b> 5' x 23'	<b>Experiment Size:</b> 0.28 Acre
	<b>Harvest Plant Density:</b> 32084 plants per acre

### **Factors/Treatments:**

#### Hybrid (RM):

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 9) Golden Harvest G97N86-3220EZ (101)
- 12) Wyffels W4196RIB (105)
- 13) Dairyland RPM-4816AMXT (108)
- 14) LG Seeds LG5548STXRIB (109)
- 15) Golden Harvest G12W66-3122 (112)
- 16) Dekalb DKC65-94RIB (115)

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-09**

**Table 1912 - 09 Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Montfort, 2019**

Treatment		Hybrid	Grain		Test weight	Harvest density	*AGI \$/A	Lodged			Plant					
number	Fertilizer		yield bu/A	moisture %				Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		250	25.0	54.0	32263	811	4.1	0.8	3.3	116	--	--	--	--	--
	Pop-up		245	24.9	54.0	31893	798	7.5	1.8	5.7	117	--	--	--	--	--
	Starter		251	25.3	53.6	32095	813	5.9	2.3	3.6	119	--	--	--	--	--
		Dairyland RPM-4816AMXT	258	26.2	53.8	33291	832	11.7	0.4	11.3	121	--	--	--	--	--
		Dekalb DKC65-94RIB	256	28.0	54.5	33922	817	4.0	0.4	3.7	118	--	--	--	--	--
		Federal 4160VT2PRIB	245	21.4	53.6	33165	814	3.6	3.0	0.5	113	--	--	--	--	--
		Golden Harvest G12W66-3122	244	27.5	54.7	26178	781	3.1	0.8	2.3	123	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	241	22.4	53.2	33568	795	11.7	0.1	11.5	120	--	--	--	--	--
		Jung 4D178RIB	216	19.5	55.7	34215	728	6.9	6.4	0.4	112	--	--	--	--	--
		LG Seeds LG5548STXRIB	249	29.3	52.6	28787	789	4.7	0.7	3.9	120	--	--	--	--	--
		Wyffels W4196RIB	280	26.4	53.0	33543	903	1.2	1.0	0.1	112	--	--	--	--	--
1	UTC	Jung 4D178RIB	229	19.2	56.6	33861	772	2.1	1.1	0.9	109	4.5	0.5	3.6	0.3	5.0
5	UTC	Federal 4160VT2PRIB	245	21.0	53.1	33080	816	3.0	1.9	1.1	112	4.5	0.6	5.0	0.4	5.3
9	UTC	Golden Harvest G97N86-3220EZ	243	23.0	53.1	33838	800	14.3	0.0	14.3	120	4.7	0.5	5.0	0.3	4.9
12	UTC	Wyffels W4196RIB	285	26.3	52.8	34469	920	0.4	0.4	0.0	109	4.6	0.6	4.7	0.4	4.6
13	UTC	Dairyland RPM-4816AMXT	255	26.6	54.1	33712	820	4.9	0.0	4.9	120	4.6	0.6	4.3	0.4	4.9
14	UTC	LG Seeds LG5548STXRIB	237	29.7	53.5	28535	749	3.5	1.3	2.2	116	4.6	0.6	4.8	0.4	3.3
15	UTC	Golden Harvest G12W66-3122	244	27.0	54.2	26010	782	2.4	1.5	1.0	122	4.5	0.6	4.1	0.3	4.1
16	UTC	Dekalb DKC65-94RIB	259	27.6	54.5	34595	827	2.6	0.4	2.2	116	4.7	0.6	4.3	0.4	4.3
17	Pop-up	Jung 4D178RIB	199	19.7	55.6	34618	671	11.9	11.0	0.8	110	4.6	0.6	4.4	0.3	5.6
21	Pop-up	Federal 4160VT2PRIB	251	21.3	53.6	33080	834	0.8	0.8	0.0	110	4.2	0.6	4.0	0.4	6.0
25	Pop-up	Golden Harvest G97N86-3220EZ	234	22.3	53.7	33787	774	6.5	0.0	6.4	121	4.5	0.5	4.9	0.4	5.3
28	Pop-up	Wyffels W4196RIB	273	26.1	53.2	32828	881	1.2	0.8	0.4	112	4.1	0.5	4.1	0.4	5.7
29	Pop-up	Dairyland RPM-4816AMXT	259	25.6	53.9	32954	838	23.0	0.8	22.2	120	4.6	0.6	4.4	0.3	5.0
30	Pop-up	LG Seeds LG5548STXRIB	261	28.6	52.7	28914	831	4.5	0.0	4.5	119	4.5	0.6	4.8	0.3	4.2
31	Pop-up	Golden Harvest G12W66-3122	236	27.8	55.1	26010	755	4.4	0.5	3.9	125	4.9	0.6	5.1	0.3	4.7
32	Pop-up	Dekalb DKC65-94RIB	250	27.8	54.1	32954	798	8.1	0.4	7.7	118	4.6	0.6	3.5	0.3	4.2
33	Starter	Jung 4D178RIB	220	19.6	54.9	34165	739	6.9	7.2	-0.4	117	4.5	0.6	4.3	0.3	4.9
37	Starter	Federal 4160VT2PRIB	239	21.9	54.2	33333	792	6.9	6.5	0.4	115	4.5	0.6	4.9	0.5	5.4
41	Starter	Golden Harvest G97N86-3220EZ	244	21.9	52.7	33080	809	14.4	0.4	14.0	118	4.5	0.6	4.7	0.4	5.7
44	Starter	Wyffels W4196RIB	282	26.7	52.8	33333	908	1.9	1.9	0.0	116	4.6	0.6	4.4	0.4	5.1
45	Starter	Dairyland RPM-4816AMXT	260	26.5	53.3	33207	838	7.2	0.4	6.8	123	5.0	0.7	4.7	0.3	5.0
46	Starter	LG Seeds LG5548STXRIB	249	29.6	51.6	28914	787	6.0	0.9	5.2	124	4.4	0.7	5.5	0.4	3.2
47	Starter	Golden Harvest G12W66-3122	252	27.7	54.8	26515	806	2.4	0.5	2.0	122	4.2	0.6	4.5	0.3	3.7
48	Starter	Dekalb DKC65-94RIB	260	28.5	54.8	34217	827	1.4	0.4	1.1	119	4.5	0.6	4.0	0.3	4.6
Mean			249	25.1	53.9	32084	807	5.9	1.6	4.2	117	4.5	0.6	4.5	0.4	4.8
<b>Probability(%):</b>																
Fertilizer (F)			49.4	30.2	52.4	45.4	57.6	21.8	4.7	34.7	3.0	--	--	--	--	--
Hybrid (H)			0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	--	--	--	--	--
F x H			69.4	69.3	83.2	64.1	67.8	11.5	2.7	16.1	80.6	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer (F)			NS	NS	NS	NS	NS	NS	1	NS	2	--	--	--	--	--
Hybrid (H)			13	0.7	1.1	774	43	5.1	1.6	4.8	4	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	NS	3	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6419 **Year:** 2919  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn.  
**Location:** Seymour, WI **County:** Outagamie  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** N/A **Previous Crop:** Soybean **Soil Type:** Onaway Silt Loam  
**Soil Test: Date:** 5 /15/19 **pH:** 7.2 **OM (%)** 2.4 **P (ppm)** 18 **K (ppm)** 114

### Plot Management

**Tillage Operations:** Field Cultivator Chisel plow

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
<b>Preplant</b>	46-0-0	152.2 lbs/A	N/A
	11-52-0	154 lbs/A	N/A
<b>Starter</b>	9-11-30-6S-1ZN	200 lbs/A	5/15/19
	10-34-0	4.08 gal/A	5/15/19
<b>Post plant</b>	32-0-0	275 lb/A	N/A
<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** Capreno 4.0 oz/A  
Atrazine 0.75 lb/A **Insecticide:** Force 3G 4.4 lbs/A

**Irrigation:** None **Hybrid:** Factor

**Planting Date:** 5/15/19 **Planting Depth:** 1.5" **Row Width:** 30"

**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter

**Harvest Date:** 11/01/2019 **Harvest Method:** Massey 8XP

**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

**Replications:** 3  
**Plot Size Seeded:** 10' x 25' **Experiment Size:** 0.28 Acre  
**Harvest Plot Size:** 5' x 23' **Harvest Plant Density:** 31471 plants per acre

### **Factors/Treatments:**

#### Hybrid (RM):

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 7) Jung 46SS427RIB (96)
- 8) Dairyland RPM-3715AMXT (96)
- 9) Golden Harvest G97N86-3220EZ (101)
- 10) Dairyland RPM-4317AMXT (103)
- 11) Renk RK717SSTX (105)
- 13) Dairyland RPM-4816AMXT (108)

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-10**

**Table 1912 - 10. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Seymour, 2019**

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$/A	Lodged			Plant					
								Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		173	27.3	50.4	31691	556	2.4	2.3	0.1	103	--	--	--	--	--
	Pop-up		173	27.0	49.7	30587	556	1.5	1.5	0.0	103	--	--	--	--	--
	Starter		198	26.9	50.3	32133	635	2.1	1.7	0.3	105	--	--	--	--	--
		Dairyland RPM-3715AMXT	201	27.1	49.3	29166	644	1.7	1.4	0.3	105	--	--	--	--	--
		Dairyland RPM-4317AMXT	188	30.2	51.2	31523	593	2.3	2.3	0.0	106	--	--	--	--	--
		Dairyland RPM-4816AMXT	176	35.9	51.0	31649	534	0.9	0.9	0.0	111	--	--	--	--	--
		Federal 4160VT2PRIB	179	24.0	50.3	32365	587	2.6	2.4	0.2	102	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	196	24.4	50.9	33249	638	1.4	1.4	0.0	104	--	--	--	--	--
		Jung 46SS427RIB	171	25.0	49.6	32028	557	1.5	1.5	0.0	100	--	--	--	--	--
		Jung 4D178RIB	169	20.9	50.6	32575	562	2.0	1.7	0.2	94	--	--	--	--	--
		Renk RK717SSTX	172	28.8	48.5	29208	544	3.3	3.0	0.3	107	--	--	--	--	--
1	UTC	Jung 4D178RIB	164	21.0	52.2	33712	548	1.9	1.9	0.0	91	3.1	0.7	4.4	0.3	6.9
5	UTC	Federal 4160VT2PRIB	171	23.8	49.4	31565	560	4.4	4.4	0.0	101	3.2	0.6	4.7	0.4	7.6
7	UTC	Jung 46SS427RIB	177	24.0	49.5	32070	579	2.9	2.9	0.0	102	3.4	0.6	4.9	0.3	5.8
8	UTC	Dairyland RPM-3715AMXT	204	26.4	49.5	29671	656	1.4	1.4	0.0	106	3.2	0.7	5.0	0.4	8.5
9	UTC	Golden Harvest G97N86-3220EZ	181	24.7	50.9	33964	590	3.3	3.3	0.0	105	3.0	0.5	4.8	0.4	7.5
10	UTC	Dairyland RPM-4317AMXT	164	31.9	50.8	32197	511	0.8	0.8	0.0	103	3.2	0.7	4.8	0.3	5.4
11	UTC	Renk RK717SSTX	162	29.3	50.2	28282	514	3.8	3.4	0.4	107	3.2	0.7	4.7	0.4	6.0
13	UTC	Dairyland RPM-4816AMXT	163	37.1	50.7	32070	490	0.4	0.4	0.0	111	3.1	0.6	5.0	0.3	6.1
17	Pop-up	Jung 4D178RIB	141	20.7	47.8	30303	469	1.8	1.8	0.0	93	3.3	0.6	4.3	0.3	5.5
21	Pop-up	Federal 4160VT2PRIB	168	24.1	49.4	32323	550	2.3	2.3	0.0	96	3.1	0.6	4.8	0.4	6.8
23	Pop-up	Jung 46SS427RIB	154	25.1	49.0	31186	500	1.2	1.2	0.0	99	3.4	0.6	4.8	0.4	5.3
24	Pop-up	Dairyland RPM-3715AMXT	182	28.2	48.3	27525	579	2.5	2.5	0.0	104	3.2	0.7	4.5	0.3	6.1
25	Pop-up	Golden Harvest G97N86-3220EZ	205	24.1	51.5	32702	669	0.0	0.0	0.0	104	3.0	0.6	5.0	0.3	7.9
26	Pop-up	Dairyland RPM-4317AMXT	191	29.3	51.1	30429	603	1.2	1.2	0.0	106	3.5	0.6	4.8	0.3	8.0
27	Pop-up	Renk RK717SSTX	170	28.8	49.9	28787	541	2.6	2.6	0.0	106	3.3	0.7	5.2	0.3	6.8
29	Pop-up	Dairyland RPM-4816AMXT	177	35.5	50.9	31439	539	0.0	0.0	0.0	112	2.8	0.6	3.9	0.3	8.7
33	Starter	Jung 4D178RIB	201	21.0	51.9	33712	669	2.2	1.5	0.7	98	2.9	0.6	5.3	0.4	10.7
37	Starter	Federal 4160VT2PRIB	199	23.9	52.2	33207	650	1.1	0.4	0.7	107	3.1	0.6	6.4	0.4	11.1
39	Starter	Jung 46SS427RIB	183	25.9	50.2	32828	592	0.4	0.4	0.0	98	3.0	0.6	5.2	0.3	9.4
40	Starter	Dairyland RPM-3715AMXT	217	26.7	49.9	30303	698	1.3	0.4	0.8	106	3.1	0.7	6.0	0.3	10.2
41	Starter	Golden Harvest G97N86-3220EZ	201	24.5	50.3	33080	656	0.8	0.8	0.0	103	3.4	0.5	5.6	0.3	10.8
42	Starter	Dairyland RPM-4317AMXT	210	29.5	51.6	31944	665	4.8	4.8	0.0	109	3.0	0.6	5.4	0.3	9.3
43	Starter	Renk RK717SSTX	182	28.3	45.3	30555	579	3.5	3.1	0.4	107	3.3	0.6	5.2	0.4	7.4
45	Starter	Dairyland RPM-4816AMXT	188	35.1	51.4	31439	574	2.4	2.4	0.0	110	3.3	0.6	5.0	0.3	7.7
Mean			182	27.0	50.2	31471	583	2.0	1.8	0.1	104	3.2	0.6	5.0	0.3	7.7
<b>Probability(%):</b>																
Fertilizer(F)			0.0	39.1	52.5	0.6	0.0	43.5	48.7	2.6	47.2	--	--	--	--	--
Hybrid (H)			0.1	0.0	13.2	0.0	0.1	55.2	70.9	52.5	0.0	--	--	--	--	--
F x H			13.1	4.4	16.9	64.6	8.5	53.1	45.6	62.7	81.4	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			9	NS	NS	797	28	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			14	0.8	NS	1301	45	NS	NS	NS	5	--	--	--	--	--
F x H			NS	1	NS	NS	79	NS	NS	NS	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.

## FIELD EXPERIMENT HISTORY

**Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.**

**Experiment:** 12Fertilizer **Trial ID:** 6420 **Year:** 2019  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn.  
**Location:** Valders, WI **County:** Manitowoc  
**Supported By:** HATCH, Wisconsin Fertilizer Research Program

### Site Information

**Field:** N/A **Previous Crop:** Soybean **Soil Type:** Kewaunee Clay Loam  
**Soil Test: Date:** 5/31/2019 **pH:** 7.3 **OM (%)** 3.6 **P (ppm)** 46 **K (ppm)** 230

### Plot Management

**Tillage Operations:** Field Cultivator Chisel Plow

<b>Fertilizer:</b>	<b>Analysis</b>	<b>Rate</b>	<b>Date</b>
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn	200 lbs/A	5/31/2019
	10-34-0	4.08 gal/A	5/31/2019
Post plant	32-0-0	40 gal/A	N/A
Manure:	Dairy	10000 gal/A	N/A

**Herbicide:** TripleFlex 3.0 pts/A **Insecticide:** Force 3G 4.4 lbs/A  
**Irrigation:** None **Hybrid:** Factor  
**Planting Date:** 5/31/2019 **Planting Depth:** 1.5" **Row Width:** 30"  
**Target Plant Density:** 32000 plants per acre **Planting Method:** Almaco Precision Planter  
**Harvest Date:** 11/10/2019 **Harvest Method:** Massey 8XP  
**Notes:** Corn Hybrid Response to Starter Fertilizer in Wisconsin.

**Experimental Design** RCB in a split-plot

<b>Replications:</b>	3
<b>Plot Size Seeded:</b>	10' x 25'
<b>Experiment Size:</b>	0.28 Acre
<b>Harvest Plot Size:</b>	5' x 23'
<b>Harvest Plant Density:</b>	31672 plants per acre

### **Factors/Treatments:**

#### Hybrid (RM):

- 1) Jung 4D178RIB (84)
- 5) Federal 4160VT2PRIB (91)
- 7) Jung 46SS427RIB (96)
- 8) Dairyland RPM-3715AMXT (96)
- 9) Golden Harvest G97N86-3220EZ (101)
- 10) Dairyland RPM-4317AMXT (103)
- 11) Renk RK717SSTX (105)
- 13) Dairyland RPM-4816AMXT (108)

#### Fertilizer:

- 1). UTC
- 2). Pop-up: 10-34-0
- 3). Starter: 9-11-30-6S-1Zn

**Results: Table 1912-11**

Table 1912 - 11. Corn Hybrid Response to Starter Fertilizer in Wisconsin.  
Valders, 2019

Treatment number	Fertilizer	Hybrid	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Harvest density plants/A	*AGI \$/A	Lodged			Plant					
								Total %	Stalk %	Root %	height in	N %	P %	K %	S %	DM gr
	UTC		131	42.5	48.4	31983	386	1.0	0.9	0.1	97	--	--	--	--	--
	Pop-up		146	40.1	47.9	31705	436	1.2	1.2	0.0	98	--	--	--	--	--
	Starter		130	44.5	48.8	31328	376	0.4	0.4	0.0	94	--	--	--	--	--
		Dairyland RPM-3715AMXT	149	37.1	45.4	30850	453	0.2	0.2	0.0	99	--	--	--	--	--
		Dairyland RPM-4317AMXT	136	43.7	49.4	31102	393	0.7	0.7	0.0	98	--	--	--	--	--
		Dairyland RPM-4816AMXT	91	57.9	48.8	32365	237	0.6	0.6	0.0	103	--	--	--	--	--
		Federal 4160VT2PRIB	154	35.3	47.2	32449	470	0.0	0.0	0.0	95	--	--	--	--	--
		Golden Harvest G97N86-3220EZ	138	38.3	47.5	30826	414	2.8	2.6	0.2	95	--	--	--	--	--
		Jung 46SS427RIB	148	40.9	49.9	32236	441	0.4	0.4	0.0	93	--	--	--	--	--
		Jung 4D178RIB	140	35.2	49.2	32320	428	1.6	1.6	0.0	88	--	--	--	--	--
		Renk RK717SSTX	130	50.7	49.5	31229	360	0.6	0.6	0.0	102	--	--	--	--	--
1	UTC	Jung 4D178RIB	142	33.1	49.6	33080	439	1.9	1.9	0.0	85	1.7	0.5	4.2	0.3	5.0
5	UTC	Federal 4160VT2PRIB	151	36.2	45.0	32070	460	0.0	0.0	0.0	99	1.8	0.3	4.6	0.3	7.3
7	UTC	Jung 46SS427RIB	139	41.5	50.1	32575	408	0.4	0.4	0.0	97	1.7	0.4	3.9	0.3	4.5
8	UTC	Dairyland RPM-3715AMXT	140	38.9	46.3	30934	423	0.0	0.0	0.0	97	1.8	0.4	4.0	0.3	5.1
9	UTC	Golden Harvest G97N86-3220EZ	129	38.0	47.3	32379	387	2.8	2.2	0.6	97	1.7	0.4	4.0	0.4	5.7
10	UTC	Dairyland RPM-4317AMXT	128	45.7	49.3	30934	363	0.8	0.8	0.0	96	1.4	0.3	3.8	0.3	5.2
11	UTC	Renk RK717SSTX	141	46.6	50.8	30934	398	1.7	1.7	0.0	106	2.2	0.4	4.1	0.4	5.8
13	UTC	Dairyland RPM-4816AMXT	82	60.2	49.0	32954	210	0.4	0.4	0.0	102	1.4	0.3	4.0	0.3	4.0
17	Pop-up	Jung 4D178RIB	143	36.3	48.9	31811	436	1.0	1.0	0.0	90	2.3	0.4	4.6	0.3	12.8
21	Pop-up	Federal 4160VT2PRIB	167	31.3	48.7	32954	522	0.0	0.0	0.0	93	1.5	0.3	4.2	0.3	7.5
23	Pop-up	Jung 46SS427RIB	134	44.4	50.4	32568	388	0.4	0.4	0.0	95	1.7	0.3	4.3	0.3	9.5
24	Pop-up	Dairyland RPM-3715AMXT	165	34.3	43.6	32449	505	0.0	0.0	0.0	100	2.3	0.4	4.6	0.3	8.2
25	Pop-up	Golden Harvest G97N86-3220EZ	158	32.5	47.7	29924	493	5.3	5.3	0.0	101	2.0	0.3	4.4	0.4	9.0
26	Pop-up	Dairyland RPM-4317AMXT	156	38.8	49.0	31060	467	1.2	1.2	0.0	103	2.1	0.4	4.7	0.4	8.5
27	Pop-up	Renk RK717SSTX	141	48.5	47.8	30429	396	0.0	0.0	0.0	103	2.4	0.3	4.4	0.3	10.5
29	Pop-up	Dairyland RPM-4816AMXT	106	54.8	47.3	32449	284	1.5	1.5	0.0	103	2.1	0.3	4.2	0.3	8.2
33	Starter	Jung 4D178RIB	135	36.2	49.1	32070	410	2.0	2.0	0.0	88	1.5	0.4	4.1	0.3	3.9
37	Starter	Federal 4160VT2PRIB	143	38.4	48.1	32323	427	0.0	0.0	0.0	94	1.4	0.3	4.2	0.4	6.8
39	Starter	Jung 46SS427RIB	171	36.7	49.2	31565	527	0.4	0.4	0.0	86	1.5	0.3	4.2	0.3	4.1
40	Starter	Dairyland RPM-3715AMXT	144	38.1	46.4	29166	431	0.5	0.5	0.0	99	1.8	0.3	3.8	0.3	6.4
41	Starter	Golden Harvest G97N86-3220EZ	126	44.4	47.5	30176	362	0.4	0.4	0.0	88	1.5	0.2	3.9	0.3	3.6
42	Starter	Dairyland RPM-4317AMXT	124	46.5	50.1	31313	348	0.0	0.0	0.0	95	1.7	0.3	4.0	0.3	5.9
43	Starter	Renk RK717SSTX	109	57.0	50.0	32323	284	0.0	0.0	0.0	96	1.5	0.3	3.9	0.3	2.4
45	Starter	Dairyland RPM-4816AMXT	84	58.6	50.1	31691	218	0.0	0.0	0.0	104	1.7	0.3	3.9	0.4	6.2
Mean			136	42.4	48.4	31672	399	0.9	0.8	0.0	97	1.8	0.3	4.2	0.3	6.5
<b>Probability(%):</b>																
Fertilizer(F)			16.3	6.8	40.4	20.0	15.0	27.9	28.6	8.2	5.1	--	--	--	--	--
Hybrid (H)			0.4	0.0	0.1	1.1	0.1	3.0	4.6	3.4	0.0	--	--	--	--	--
F x H			92.9	54.4	52.5	11.2	88.7	43.1	37.8	2.6	50.2	--	--	--	--	--
<b>LSD(0.10):</b>																
Fertilizer(F)			NS	3	NS	NS	NS	NS	NS	0	3	--	--	--	--	--
Hybrid (H)			25	5.0	1.7	1001	88	1.4	1.3	0	5	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	NS	NS	0	NS	--	--	--	--	--

\*AGI: Adjusted Gross Income.



**Table 1912 - 12. Corn Hybrid Response to Starter Fertilizer in Wisconsin - Soil analysis.**

<b>Arlington, 2019</b>												
Location	OM			pH			P			K		
	%	CV	STDDEV	value	CV	STDDEV	ppm	CV	STDDEV	ppm	CV	STDDEV
Arlington, WI	3.30	5.25	0.17	5.73	5.33	0.31	29.67	13.62	4.04	136.00	10.11	13.75
Chippewa Falls, WI	1.33	8.66	0.12	6.53	0.88	0.06	26.67	5.73	1.53	54.33	13.81	7.51
Coleman, WI	1.40	12.37	0.17	5.47	5.59	0.31	32.67	24.93	8.14	136.00	11.49	15.62
Fond du Lac, WI	2.97	18.56	0.55	6.63	4.85	0.32	21.33	27.47	5.86	92.33	4.10	3.79
Galesville, WI	3.47	1.67	0.06	5.57	4.15	0.23	18.00	5.56	1.00	163.33	8.49	13.87
Hancock, WI	0.80	12.50	0.10	5.70	3.04	0.17	124.00	31.74	39.36	122.33	13.71	16.77
Janesville, WI	3.60	10.02	0.36	6.13	0.94	0.06	38.67	6.51	2.52	115.67	16.73	19.35
Marshfield, WI	2.93	1.97	0.06	6.07	0.95	0.06	66.67	8.53	5.69	147.33	5.77	8.50
Montfort, WI	3.33	1.73	0.06	6.07	0.95	0.06	57.00	3.04	1.73	135.33	2.38	3.21
Seymour, WI	2.37	16.00	0.38	7.17	1.61	0.12	22.33	33.90	7.57	114.00	8.90	10.15
Valders, WI	3.57	8.57	0.31	7.30	1.37	0.10	46.00	17.25	7.94	230.00	13.16	30.27
Overall STD			1.01			0.62			31.57			44.14

**Table: 1912-13. Hybrid Maturity - Corn Leaf Development.  
Arlington, WI - 2019.**

Hybrid	Observation date	Leaf Development			Plant height
		Leaf	Hail adjusters	Total	
		collars	method	leaves	
	day of year	no./plant	no./plant	no./plant	inches
	156	2.0	2.9	3.8	4.1
	169	4.3	5.7	7.5	12.0
	184	8.0	10.5	12.1	39.6
	197	12.8	15.2	16.7	85.6
	211	18.2	18.4	19.1	109.0
Dairyland RPM-3715AMXT		9.2	10.4	11.7	51.3
Dairyland RPM-4317AMXT		8.9	12.1	11.4	50.2
Dairyland RPM-4816AMXT		8.8	10.0	11.6	48.8
Dekalb DKC31-10		9.7	11.5	12.4	49.3
Dekalb DKC65-94RIB		8.8	10.2	11.7	47.1
FS InVision FS37TV1		9.4	10.6	12.9	50.7
Federal 4160VT2PRIB		9.5	11.1	12.5	51.6
Golden Harvest G12W66-3122		8.4	9.5	11.1	49.5
Golden Harvest G97N86-3220EZ		8.9	9.4	11.6	51.8
Jung 39DP338		9.3	10.8	12.2	49.9
Jung 46SS427RIB		8.5	10.0	11.4	51.0
Jung 4D178RIB		9.4	11.1	12.1	49.1
LG Seeds LG5548STXRIB		8.9	10.0	11.7	49.7
Renk RK433RR		9.1	10.8	11.9	48.6
Renk RK717SSTX		8.9	10.4	11.6	47.4
Wyffels W4196RIB		8.6	10.1	11.6	52.6
Dairyland RPM-3715AMXT	156	1.9	2.8	3.8	3.9
Dairyland RPM-3715AMXT	169	4.5	5.3	7.2	12.7
Dairyland RPM-3715AMXT	184	7.9	10.3	12.0	39.8
Dairyland RPM-3715AMXT	197	12.7	14.9	16.4	90.3
Dairyland RPM-3715AMXT	211	18.9	18.9	19.2	109.9
Dairyland RPM-4317AMXT	156	2.0	3.0	3.9	4.2
Dairyland RPM-4317AMXT	169	4.1	5.3	6.9	12.3
Dairyland RPM-4317AMXT	184	7.6	9.5	11.3	38.6
Dairyland RPM-4317AMXT	197	12.1	15.1	16.3	82.8
Dairyland RPM-4317AMXT	211	18.6	27.4	18.8	113.3
Dairyland RPM-4816AMXT	156	2.0	3.0	3.8	3.8
Dairyland RPM-4816AMXT	169	4.1	5.4	6.9	10.5
Dairyland RPM-4816AMXT	184	7.7	9.8	11.4	36.8
Dairyland RPM-4816AMXT	197	11.7	14.8	16.4	81.7
Dairyland RPM-4816AMXT	211	18.6	17.1	19.6	111.3
Dekalb DKC31-10	156	2.0	3.6	4.0	4.3
Dekalb DKC31-10	169	4.9	6.8	8.3	12.9
Dekalb DKC31-10	184	9.0	12.0	13.6	44.1
Dekalb DKC31-10	197	15.1	17.4	17.9	92.7
Dekalb DKC31-10	211	18.6	18.6	18.6	98.0

Continued

**Table: 1912-13. Hybrid Maturity - Corn Leaf Development.**

(continued)

**Arlington, WI - 2019.**

Hybrid	Observation date	Leaf Development			Plant height
		Leaf	Hail adjusters	Total	
		collars	method	leaves	
	day of year	no./plant	no./plant	no./plant	inches
Dekalb DKC65-94RIB	156	2.0	2.7	3.6	3.4
Dekalb DKC65-94RIB	169	4.0	5.7	6.7	9.3
Dekalb DKC65-94RIB	184	7.6	9.9	11.7	34.3
Dekalb DKC65-94RIB	197	11.8	15.2	16.7	77.6
Dekalb DKC65-94RIB	211	18.7	17.6	19.7	111.1
FS InVision FS37TV1	156	2.0	3.0	4.0	4.2
FS InVision FS37TV1	169	4.5	6.1	11.8	12.3
FS InVision FS37TV1	184	8.5	11.0	12.7	41.4
FS InVision FS37TV1	197	13.9	15.2	17.1	89.7
FS InVision FS37TV1	211	18.3	17.6	18.8	105.9
Federal 4160VT2PRIB	156	2.0	3.1	4.1	4.4
Federal 4160VT2PRIB	169	4.5	5.9	7.7	13.2
Federal 4160VT2PRIB	184	8.6	11.6	13.2	41.6
Federal 4160VT2PRIB	197	13.7	16.3	17.7	87.7
Federal 4160VT2PRIB	211	18.9	18.6	19.6	111.3
Golden Harvest G12W66-3122	156	1.9	2.1	3.0	4.0
Golden Harvest G12W66-3122	169	4.0	4.9	6.2	11.1
Golden Harvest G12W66-3122	184	7.0	9.1	10.9	34.8
Golden Harvest G12W66-3122	197	11.3	14.3	15.9	78.7
Golden Harvest G12W66-3122	211	17.8	17.2	19.2	118.7
Golden Harvest G97N86-3220EZ	156	2.0	2.8	3.9	4.4
Golden Harvest G97N86-3220EZ	169	4.3	5.5	6.9	13.4
Golden Harvest G97N86-3220EZ	184	7.7	9.7	11.5	41.1
Golden Harvest G97N86-3220EZ	197	12.2	13.6	16.2	88.2
Golden Harvest G97N86-3220EZ	211	18.3	15.6	19.7	111.7
Jung 39DP338	156	2.0	3.1	4.0	4.5
Jung 39DP338	169	4.8	6.2	7.9	12.5
Jung 39DP338	184	8.6	11.1	13.2	42.4
Jung 39DP338	197	13.9	15.4	16.9	87.4
Jung 39DP338	211	17.2	18.2	18.8	102.7
Jung 46SS427RIB	156	2.0	2.7	3.6	4.1
Jung 46SS427RIB	169	4.1	5.6	7.0	12.8
Jung 46SS427RIB	184	7.7	10.3	11.8	40.6
Jung 46SS427RIB	197	12.3	14.6	16.2	88.2
Jung 46SS427RIB	211	16.3	17.0	18.5	109.2
Jung 4D178RIB	156	2.0	3.2	4.0	4.2
Jung 4D178RIB	169	4.8	6.2	7.8	12.3
Jung 4D178RIB	184	8.6	11.7	12.9	39.3
Jung 4D178RIB	197	13.7	16.0	17.1	88.3
Jung 4D178RIB	211	18.1	18.2	18.4	101.4

Continued

**Table: 1912-13. Hybrid Maturity - Corn Leaf Development.**

(continued)

**Arlington, WI - 2019.**

Hybrid	Observation date day of year	Leaf Development			Plant height inches
		Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
LG Seeds LG5548STXRIB	156	2.0	2.8	3.5	3.6
LG Seeds LG5548STXRIB	169	4.1	5.2	6.8	10.9
LG Seeds LG5548STXRIB	184	7.3	9.9	11.6	36.8
LG Seeds LG5548STXRIB	197	12.0	14.3	16.5	82.8
LG Seeds LG5548STXRIB	211	19.3	17.9	19.9	114.2
Renk RK433RR	156	2.0	2.7	3.8	4.2
Renk RK433RR	169	4.3	5.9	7.2	12.1
Renk RK433RR	184	8.2	11.2	12.7	40.2
Renk RK433RR	197	13.3	15.6	16.9	82.9
Renk RK433RR	211	17.4	18.5	19.1	103.4
Renk RK717SSTX	156	1.9	2.8	3.6	4.0
Renk RK717SSTX	169	4.1	5.3	6.8	11.3
Renk RK717SSTX	184	8.0	10.4	12.0	37.9
Renk RK717SSTX	197	12.3	15.5	16.8	83.1
Renk RK717SSTX	211	19.3	18.9	19.4	107.3
Wyffels W4196RIB	156	2.0	2.9	3.9	4.8
Wyffels W4196RIB	169	4.1	5.8	7.2	12.2
Wyffels W4196RIB	184	7.9	9.8	11.7	44.4
Wyffels W4196RIB	197	12.4	14.8	16.3	88.3
Wyffels W4196RIB	211	16.6	17.4	19.1	113.3
Mean		9.0	10.5	11.8	49.9
<b><u>Probability(%)</u></b>					
Hybrid(H)		0.0	11.2	0.2	0.4
Sample DOY (S)		0.0	0.0	0.0	0.0
H x S		0.0	27.4	0.8	0.0
<b><u>LSD(0.10)</u></b>					
Hybrid(H)		0.3	NS	0.5	1.8
Sample DOY (S)		0.1	NS	0.2	0.7
H x S		0.4	2.1	1.0	2.7