

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6157 **Year:** 2017

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn.

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

Supported By: HATCH, Wisconsin Fertilizer Research Program

Site Information

Field: ARS406 **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam

Soil Test: Date: 10/20/2017 **pH** 6.7 **OM (%)** 3.5 **P (ppm)** 53 **K (ppm)** 168

Plot Management

Tillage Operations: Field Cultivator Fall Disk Chisel

Fertilizer:	<u>Analysis</u>	<u>Product Rate</u>	<u>Date</u>
Preplant	46-0-0	250 lbs/A	N/A
Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	5/8/2017 5/8/2017
Post plant	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Harness 28 oz/A
Hornet 4.0 oz/A

Insecticide: Force 3G 4.4 lbs/A

Hybrid: Factor

Irrigation: None

Planting Date: 5/8/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/20/2017 **Harvest Method:** Massey 8XP

Notes:

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: 32277 plants per acre

Factors/Treatments:

Hybrid (RM):

Fertilizer:

- | | | |
|--------------------------------------|-----------------------------------|-----------------------------|
| 1). Jung 4D178RIB (82) | 9). Renk RK595SSTX (99) | 1). Pop-up: 10-34-0 |
| 2). Dekalb DKC31-10RIB (81) | 10). DuPont Pioneer P0157AM (101) | 2). Starter: 9-11-30-6S-1Zn |
| 3). Tracy T086-26 311A (85) | 11). Renk RK717SSTX (105) | 3). UTC |
| 4). Munson 4877-3010 (88) | 12). DuPont Pioneer P0506AM (105) | |
| 5). Federal Hybrids 4160VT2PRIB (91) | 13). Dekalb DKC58-06RIB (108) | |
| 6). NK Brand N27P-3110A (92) | 14). Power Plus 4J95AMX (109) | |
| 7). NuTech 5F-196 (96) | 15). AgriGold A6499STXRIB (112) | |
| 8). Dekalb DKC46-36RIB (96) | 16). Dekalb DKC65-79 (115) | |

Results: Table 1712-01

**Table 1712 - 01. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
Arlington, 2017**

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		242	26.4	52.6	32047	778	2.9	2.7	0.2	106	--	--	--	--	--
	Pop-up		241	27.0	56.4	32145	771	2.9	2.7	0.2	105	--	--	--	--	--
	Starter		239	27.2	54.4	32639	766	3.1	2.6	0.5	107	--	--	--	--	--
		AgriGold A6499STXRIB	257	33.6	54.6	32744	791	1.2	1.2	0.0	104	--	--	--	--	--
		DeKalb DKC46-36RIB	252	25.6	55.6	32281	814	2.0	2.0	0.0	103	--	--	--	--	--
		Dekalb DKC31-10	180	20.3	53.8	31818	602	3.3	3.2	0.1	95	--	--	--	--	--
		Dekalb DKC58-06RIB	256	30.4	53.8	32912	805	5.0	5.0	0.0	107	--	--	--	--	--
		Dekalb DKC65-79RIB	227	37.1	52.6	32491	682	6.6	3.1	3.5	117	--	--	--	--	--
		DuPont Pioneer P0157AM	240	26.2	51.2	31649	775	4.5	4.4	0.1	102	--	--	--	--	--
		DuPont Pioneer P0506AM	251	28.6	53.6	30913	797	1.2	1.1	0.1	115	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	239	21.9	56.6	33627	791	4.0	4.0	0.0	103	--	--	--	--	--
		Jung 4D178RIB	215	21.3	58.2	32365	714	2.1	2.1	0.0	94	--	--	--	--	--
		Munson 4877-3010	236	23.6	57.0	32154	774	3.5	3.5	0.0	107	--	--	--	--	--
		NK Brand N27P-3110A	247	24.0	58.4	32954	808	3.8	3.8	0.0	109	--	--	--	--	--
		NuTech 5F-196	258	26.3	54.5	31607	832	3.2	3.2	0.0	110	--	--	--	--	--
		Power Plus 4J95AMX	266	32.9	53.3	31902	823	1.1	1.1	0.0	112	--	--	--	--	--
		Renk RK595SSTX	249	26.0	50.5	32744	804	0.4	0.4	0.0	107	--	--	--	--	--
		Renk RK717SSTX	250	28.8	52.5	32617	795	3.9	3.1	0.8	109	--	--	--	--	--
		Tracy T086-26 311A	226	23.5	55.4	31649	741	1.2	1.1	0.1	103	--	--	--	--	--
1	UTC	Jung 4D178RIB	217	20.4	57.9	32070	726	2.4	2.4	0.0	97	3.6	0.5	4.7	0.3	7.0
2	UTC	Dekalb DKC31-10	195	20.0	59.4	30681	654	2.0	2.0	0.0	98	3.2	0.5	4.7	0.2	8.2
3	UTC	Tracy T086-26 311A	219	22.6	50.1	30176	722	1.3	1.3	0.0	106	3.7	0.4	4.5	0.2	6.1
4	UTC	Munson 4877-3010	245	23.0	57.2	32449	807	3.9	3.9	0.0	109	3.5	0.4	4.1	0.3	6.0
5	UTC	Federal Hybrids 4160VT2PRIB	242	21.1	57.1	32702	804	3.5	3.5	0.0	100	3.3	0.5	4.5	0.3	6.2
6	UTC	NK Brand N27P-3110A	245	23.8	57.6	33333	802	5.3	5.3	0.0	108	3.7	0.5	3.9	0.3	6.4
7	UTC	NuTech 5F-196	254	25.3	54.4	30808	824	2.5	2.5	0.0	111	3.8	0.5	4.6	0.3	5.9
8	UTC	DeKalb DKC46-36RIB	256	24.7	55.9	32449	833	0.0	0.0	0.0	102	3.6	0.5	4.7	0.3	5.7
9	UTC	Renk RK595SSTX	248	26.2	41.9	32197	799	0.0	0.0	0.0	107	3.6	0.5	4.2	0.2	6.0
10	UTC	DuPont Pioneer P0157AM	244	24.4	41.2	31818	796	5.1	5.1	0.0	101	3.8	0.5	4.2	0.2	6.3
11	UTC	Renk RK717SSTX	250	27.2	57.2	32070	803	3.9	3.9	0.0	111	3.8	0.5	4.6	0.2	6.6
12	UTC	DuPont Pioneer P0506AM	256	29.2	48.0	30681	810	0.0	0.0	0.0	115	4.0	0.5	4.3	0.3	6.8
13	UTC	Dekalb DKC58-06RIB	251	31.2	49.8	33207	784	6.8	6.8	0.0	106	3.6	0.5	3.9	0.2	6.2
14	UTC	Power Plus 4J95AMX	259	32.9	50.8	31439	799	1.6	1.6	0.0	111	3.8	0.5	4.2	0.3	5.9
15	UTC	AgriGold A6499STXRIB	264	33.9	51.2	33459	811	1.2	1.2	0.0	104	3.8	0.6	4.2	0.2	6.4
16	UTC	Dekalb DKC65-79RIB	221	35.8	51.3	33207	671	6.9	3.0	3.9	114	3.7	0.6	4.5	0.2	6.0

continue

Table 1712 - 01. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
(continued) **Arlington, 2017**

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	208	21.7	58.4	31439	689	3.3	3.3	0.0	94	3.7	0.5	4.5	0.2	7.9
18	Pop-up	Dekalb DKC31-10	167	20.2	59.2	31818	558	4.4	4.0	0.4	91	3.6	0.5	4.1	0.3	7.6
19	Pop-up	Tracy T086-26 311A	227	24.4	58.6	31439	742	1.2	1.2	0.0	101	3.2	0.4	4.5	0.2	6.6
20	Pop-up	Munson 4877-3010	223	24.6	57.3	31818	726	4.4	4.4	0.0	105	3.3	0.5	4.1	0.2	7.4
21	Pop-up	Federal Hybrids 4160VT2PRIB	242	22.2	56.4	34469	799	0.7	0.7	0.0	102	3.4	0.5	4.0	0.2	7.6
22	Pop-up	NK Brand N27P-3110A	247	24.3	58.6	32070	806	4.2	4.2	0.0	108	3.4	0.5	4.3	0.3	6.4
23	Pop-up	NuTech 5F-196	266	27.6	54.2	32323	851	1.6	1.6	0.0	108	3.7	0.5	4.2	0.3	6.5
24	Pop-up	DeKalb DKC46-36RIB	248	26.5	54.8	32070	799	1.6	1.6	0.0	105	4.0	0.5	5.0	0.3	6.8
25	Pop-up	Renk RK595SSTX	247	26.3	52.6	32954	794	0.4	0.4	0.0	107	3.7	0.6	4.5	0.3	7.2
26	Pop-up	DuPont Pioneer P0157AM	239	25.4	56.8	31313	775	4.9	4.9	0.0	102	3.1	0.5	3.8	0.3	6.8
27	Pop-up	Renk RK717SSTX	260	29.1	55.5	32575	825	3.1	3.1	0.0	106	3.1	0.5	3.9	0.2	7.3
28	Pop-up	DuPont Pioneer P0506AM	252	28.3	56.1	32009	801	2.4	2.5	0.0	115	3.5	0.5	4.5	0.2	7.1
29	Pop-up	Dekalb DKC58-06RIB	270	29.1	56.8	32449	854	3.0	3.0	0.0	107	3.5	0.5	4.3	0.3	6.6
30	Pop-up	Power Plus 4J95AMX	261	32.5	54.4	31439	809	1.2	1.2	0.0	112	3.7	0.5	4.3	0.3	6.8
31	Pop-up	AgriGold A6499STXRIB	258	33.5	57.3	32070	795	1.6	1.6	0.0	104	3.7	0.5	4.3	0.2	6.3
32	Pop-up	Dekalb DKC65-79RIB	238	36.9	55.7	32070	718	7.7	5.0	2.7	118	3.4	0.5	4.4	0.4	6.4
33	Starter	Jung 4D178RIB	219	21.9	58.2	33585	726	0.7	0.7	0.0	92	3.5	0.5	3.8	0.2	7.6
34	Starter	Dekalb DKC31-10	178	20.5	42.9	32956	595	3.6	3.7	0.0	97	3.6	0.6	4.2	0.3	7.5
35	Starter	Tracy T086-26 311A	232	23.6	57.3	33333	760	1.2	0.7	0.4	102	3.4	0.5	4.1	0.3	6.4
36	Starter	Munson 4877-3010	240	23.1	56.6	32197	787	2.3	2.3	0.0	107	3.4	0.4	4.2	0.3	5.4
37	Starter	Federal Hybrids 4160VT2PRIB	233	22.3	56.2	33712	770	7.9	7.9	0.0	105	3.5	0.5	4.2	0.3	6.8
38	Starter	NK Brand N27P-3110A	249	23.9	59.2	33459	816	1.9	1.9	0.0	111	3.3	0.5	4.2	0.2	6.7
39	Starter	NuTech 5F-196	255	26.1	54.9	31691	822	5.5	5.5	0.0	110	3.5	0.6	5.2	0.3	5.9
40	Starter	DeKalb DKC46-36RIB	251	25.7	55.9	32323	811	4.4	4.4	0.0	103	3.3	0.6	5.0	0.3	6.4
41	Starter	Renk RK595SSTX	253	25.5	56.9	33080	819	0.7	0.7	0.0	107	3.3	0.5	4.5	0.3	7.5
42	Starter	DuPont Pioneer P0157AM	237	28.8	55.5	31818	754	3.6	3.1	0.4	104	3.4	0.5	4.6	0.3	6.0
43	Starter	Renk RK717SSTX	240	29.9	44.7	33207	757	4.6	2.3	2.3	110	3.2	0.6	5.6	0.3	6.6
44	Starter	DuPont Pioneer P0506AM	245	28.2	56.7	30050	780	1.2	0.8	0.4	114	3.2	0.5	4.9	0.3	6.2
45	Starter	Dekalb DKC58-06RIB	248	30.8	54.8	33080	777	5.0	5.0	0.0	107	3.3	0.5	4.6	0.3	6.0
46	Starter	Power Plus 4J95AMX	279	33.4	54.8	32828	861	0.4	0.4	0.0	113	3.6	0.5	4.9	0.3	5.6
47	Starter	AgriGold A6499STXRIB	249	33.4	55.5	32702	767	0.8	0.8	0.0	103	3.3	0.6	5.5	0.4	6.0
48	Starter	Dekalb DKC65-79RIB	221	38.6	50.9	32197	658	5.1	1.2	4.0	118	3.4	0.6	5.3	0.3	5.7
Mean			241	26.9	54.5	32277	772	2.9	2.6	0.3	106	3.5	0.5	4.4	0.3	6.6
Probability(%):																
Fertilizer(F)			86.1	49.4	43.0	23.2	75.6	94.2	98.9	51.1	67.3	--	--	--	--	--
Hybrid (H)			0.0	0.0	43.8	5.3	0.0	0.0	0.8	0.0	0.0	--	--	--	--	--
F x H			9.3	43.6	30.6	78.9	9.4	52.2	37.7	99.9	36.4	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			10	1.3	NS	1172	32	2.2	2.1	0.9	3	--	--	--	--	--
F x H			17	NS	NS	NS	58	NS	NS	NS	NS	--	--	--	--	--

*AGI: Adjusted Gross Income.

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6232 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Chippewa Falls, WI **County:** Chippewa
Supported By: HATCH, Wisconsin Fertilizer Research Program.

Site Information

Field: N/A **Previous Crop:** Corn **Soil Type:** Sattre Silt Loam
Soil Test: Date: 10/10/2017 **pH** 6.1 **OM (%)** 1.3 **P (ppm)** 49 **K (ppm)** 137

Plot Management

Tillage Operations: Spring Chisel

Fertilizer:	Analysis	Product Rate	Date
Preplant	46-0-0	217.4 lbs/A	N/A
Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	5/5/2017 5/5/2017
Post plant	N/A	N/A	N/A
Manure:	Dairy	10000 gal/A	N/A

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

Irrigation: None

Planting Date: 5/5/2017 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Almaco Precision Planter
Harvest Date: 10/10/2017 **Harvest Method:** Massey 8XP

Notes:

Experimental Design RCB in a split-plot

Plot Size Seeded: 10' x 25'	Replications: 3
Harvest Plot Size: 5' x 23'	Experiment Size: 0.28 Acre
	Harvest Plant Density: 30798 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). NuTech 5F-196 (96)
- 4). Dekalb DKC46-36RIB (96)
- 5). Renk RK595SSTX (99)
- 6). DuPont Pioneer P0157AM (101)
- 7). Renk RK717SSTX (105)
- 8). Dekalb DKC58-06RIB (108)

Fertilizer:

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

Results: Table 1712-02

**Table 1712 - 02. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
Chippewa Falls, 2017**

Treatment		Hybrid	Grain yield	Grain moisture	Test weight	Harvest density	*AGI \$3.44	Lodged			Plant					
number	Fertilizer							Total	Stalk	Root	height	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
	UTC		241	28.5	53.6	30620	764	0.4	0.4	0.0	93	--	--	--	--	--
	Pop-up		240	27.8	55.5	30967	765	0.2	0.1	0.1	95	--	--	--	--	--
	Starter		249	28.3	54.4	30808	791	0.3	0.3	0.0	98	--	--	--	--	--
		DeKalb DKC46-36RIB	244	26.4	54.1	30179	786	1.0	0.8	0.2	93	--	--	--	--	--
		Dekalb DKC58-06RIB	273	34.0	56.9	31944	838	0.1	0.1	0.0	98	--	--	--	--	--
		DuPont Pioneer P0157AM	255	30.4	55.3	30303	800	0.0	0.0	0.0	96	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	230	23.4	54.1	31060	756	0.7	0.7	0.0	96	--	--	--	--	--
		Jung 4D178RIB	204	22.7	54.0	30892	672	0.4	0.3	0.1	87	--	--	--	--	--
		NuTech 5F-196	248	28.3	53.0	30387	790	0.0	0.0	0.0	99	--	--	--	--	--
		Renk RK595SSTX	239	28.1	54.3	31144	763	0.1	0.1	0.0	100	--	--	--	--	--
		Renk RK717SSTX	251	32.2	54.1	30477	780	0.0	0.0	0.0	95	--	--	--	--	--
1	UTC	Jung 4D178RIB	199	23.1	52.8	30303	654	0.4	0.4	0.0	85	3.2	0.6	4.8	0.3	6.2
5	UTC	Federal Hybrids 4160VT2PRIB	225	23.3	53.8	30555	741	2.1	2.1	0.0	91	3.6	0.6	5.6	0.2	5.8
7	UTC	NuTech 5F-196	233	28.7	51.8	29798	741	0.0	0.0	0.0	100	3.4	0.6	5.6	0.2	5.7
8	UTC	DeKalb DKC46-36RIB	243	27.6	53.7	30681	778	0.0	0.0	0.0	92	3.5	0.6	5.0	0.3	5.2
9	UTC	Renk RK595SSTX	243	28.0	54.1	31691	773	0.4	0.4	0.0	97	3.4	0.7	5.8	0.2	5.9
10	UTC	DuPont Pioneer P0157AM	246	31.3	55.6	29924	769	0.0	0.0	0.0	98	3.3	0.6	5.2	0.3	6.0
11	UTC	Renk RK717SSTX	261	32.4	51.4	29688	808	0.1	0.1	0.0	89	3.6	0.6	5.8	0.2	5.1
13	UTC	Dekalb DKC58-06RIB	275	33.9	55.7	32323	845	0.4	0.4	0.0	94	3.7	0.6	4.4	0.2	4.5
17	Pop-up	Jung 4D178RIB	207	21.9	55.8	31060	686	0.9	0.4	0.4	87	3.0	0.6	5.3	0.3	7.7
21	Pop-up	Federal Hybrids 4160VT2PRIB	225	23.9	54.7	32070	736	0.0	0.0	0.0	96	2.8	0.6	5.7	0.2	5.9
23	Pop-up	NuTech 5F-196	246	27.6	54.0	30429	787	0.0	0.0	0.0	96	3.5	0.6	5.3	0.2	5.6
24	Pop-up	DeKalb DKC46-36RIB	251	25.0	54.7	30689	812	0.6	0.0	0.6	94	3.4	0.6	5.3	0.2	6.1
25	Pop-up	Renk RK595SSTX	232	29.0	54.9	30429	737	0.0	0.0	0.0	99	3.7	0.6	5.1	0.2	5.9
26	Pop-up	DuPont Pioneer P0157AM	255	30.9	54.7	30176	800	0.0	0.0	0.0	95	3.6	0.6	5.0	0.2	5.8
27	Pop-up	Renk RK717SSTX	234	30.7	56.3	30808	733	0.0	0.0	0.0	92	3.4	0.6	5.8	0.2	5.4
29	Pop-up	Dekalb DKC58-06RIB	269	33.7	58.4	32071	825	0.0	0.0	0.0	100	3.2	0.6	5.4	0.2	6.2
33	Starter	Jung 4D178RIB	205	23.1	53.5	31313	675	0.0	0.0	0.0	89	3.2	0.6	5.6	0.3	9.0
37	Starter	Federal Hybrids 4160VT2PRIB	240	23.1	53.8	30555	790	0.0	0.0	0.0	102	3.2	0.6	5.9	0.3	9.1
39	Starter	NuTech 5F-196	266	28.7	53.3	30934	842	0.0	0.0	0.0	101	3.7	0.6	4.9	0.2	6.9
40	Starter	DeKalb DKC46-36RIB	238	26.7	53.9	29166	766	2.4	2.4	0.0	95	3.3	0.6	5.8	0.3	7.2
41	Starter	Renk RK595SSTX	243	27.4	54.0	31313	778	0.0	0.0	0.0	103	3.1	0.7	5.8	0.2	7.9
42	Starter	DuPont Pioneer P0157AM	263	29.2	55.7	30808	832	0.0	0.0	0.0	95	3.0	0.6	5.6	0.2	7.5
43	Starter	Renk RK717SSTX	259	33.7	54.7	30934	798	0.0	0.0	0.0	104	3.0	0.6	5.6	0.2	8.1
45	Starter	Dekalb DKC58-06RIB	276	34.3	56.5	31439	845	0.0	0.0	0.0	99	3.1	0.6	4.8	0.2	7.5
Mean			243	28.2	54.5	30798	773	0.3	0.3	0.0	95	3.3	0.6	5.4	0.2	6.5
Probability(%):																
Fertilizer(F)			14.8	78.9	21.6	71.3	15.0	86.6	70.8	18.8	12.3	--	--	--	--	--
Hybrid (H)			0.0	0.0	0.0	15.7	0.0	69.4	81.1	34.2	0.0	--	--	--	--	--
F x H			30.7	82.4	50.9	70.5	28.5	62.2	57.3	37.7	22.1	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			11	1.7	1.2	NS	34	NS	NS	NS	4	--	--	--	--	--
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:** 6236 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Coleman, WI **County:** Marinette
Supported By: HATCH, Wisconsin Fertilizer Research Program

Site Information

Field: N/A **Previous Crop:** Corn **Soil Type:** Oconto Silt Loam
Soil Test: Date: 10/26/2017 **pH** 6.4 **OM (%)** 2.4 **P (ppm)** 33 **K (ppm)** 155

Plot Management

Tillage Operations: Field Cultivator

Fall Chisel

Fertilizer:		Analysis	Product Rate	Date
Preplant		21-0-0-24S	76 lb/A	N/A
		11-52-0	27.3 lb/A	NA
		44-0-0	200 lb/A	NA
Starter		9-11-30-6S-1Zn	200 lbs/A	5/15/2017
		10-34-0	4.08 gal/A	5/15/2017
Post plant		N/A	N/A	N/A
Manure:		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: 5/15/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/26/2017

Harvest Method: Massey 8XP

Notes:

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: 31534 plants per acre

Factors/Treatments:

Hybrid (RM):

Fertilizer:

- 1). Jung 4D178RIB (82)
- 2). Dekalb DKC31-10RIB (81)
- 3). Munson 4877-3010 (88)
- 4). Federal Hybrids 4160VT2PRIB (91)
- 5). NK Brand N27P-3110A (92)
- 6). NuTech 5F-196 (96)
- 7). Renk RK595SSTX (99)
- 8). Dekalb DKC58-06RIB (108)

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

Results: Table 1712-03

**Table 1712 - 03. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
Coleman, 2017**

Treatment		Grain	Grain	Test	Harvest	*AGI	Lodged			Plant						
number	Fertilizer Hybrid	yield	moisture	weight	density	\$/A	Total	Stalk	Root	height	N	P	K	S	DM	
		bu/A	%	lb/bu	plants/A		%	%	%	in	%	%	%	%	gr	
	UTC	167	26.9	54.3	31242	536	2.0	2.0	0.0	84	--	--	--	--	--	
	Pop-up	211	24.9	55.9	31770	684	1.1	1.0	0.0	88	--	--	--	--	--	
	Starter	205	24.8	54.2	31589	665	1.3	1.3	0.0	92	--	--	--	--	--	
	Dekalb DKC31-10	152	19.7	56.1	31060	510	2.5	2.5	0.0	86	--	--	--	--	--	
	Dekalb DKC58-06RIB	210	36.0	56.3	31481	639	2.5	2.4	0.1	89	--	--	--	--	--	
	Federal Hybrids 4160VT2PRIB	187	24.2	53.5	31923	611	1.6	1.6	0.0	81	--	--	--	--	--	
	Jung 4D178RIB	177	21.5	56.3	31186	587	1.1	1.1	0.0	83	--	--	--	--	--	
	Munson 4877-3010	211	22.2	55.0	31965	699	1.1	1.1	0.0	93	--	--	--	--	--	
	NK Brand N27P-3110A	207	22.3	56.3	31207	686	2.0	2.0	0.0	90	--	--	--	--	--	
	NuTech 5F-196	222	27.0	51.4	31965	712	0.3	0.3	0.0	91	--	--	--	--	--	
	Renk RK595SSTX	187	31.5	53.6	31481	585	0.4	0.4	0.0	91	--	--	--	--	--	
1	UTC	Jung 4D178RIB	139	20.8	55.4	30681	462	1.6	1.6	0.0	77	3.4	0.4	4.9	0.3	3.9
2	UTC	Dekalb DKC31-10	116	20.5	55.3	30176	384	5.7	5.7	0.0	78	3.2	0.4	4.4	0.2	3.6
4	UTC	Munson 4877-3010	199	23.3	55.8	32386	654	-0.1	-0.1	0.0	89	3.7	0.4	4.4	0.2	3.6
5	UTC	Federal Hybrids 4160VT2PRIB	145	26.2	53.0	32007	469	2.8	2.8	0.0	73	3.3	0.4	3.6	0.2	3.4
6	UTC	NK Brand N27P-3110A	213	22.8	56.3	29924	704	4.3	4.3	0.0	92	3.7	0.3	4.6	0.2	3.4
7	UTC	NuTech 5F-196	202	27.1	51.0	32386	649	-0.1	-0.1	0.0	90	3.6	0.4	4.4	0.2	2.9
9	UTC	Renk RK595SSTX	168	33.7	53.1	31944	517	0.0	0.0	0.0	93	4.1	0.4	5.2	0.3	4.0
13	UTC	Dekalb DKC58-06RIB	152	40.5	54.8	30429	449	1.8	1.8	0.0	84	3.6	0.4	4.4	0.2	3.2
17	Pop-up	Jung 4D178RIB	181	21.8	57.3	31439	599	1.6	1.6	0.0	82	3.5	0.4	4.5	0.2	6.3
18	Pop-up	Dekalb DKC31-10	181	19.1	58.6	31944	609	0.4	0.4	0.0	87	4.2	0.5	4.7	0.2	5.5
20	Pop-up	Munson 4877-3010	225	21.7	55.9	32449	744	1.6	1.6	0.0	92	4.1	0.4	5.4	0.2	4.3
21	Pop-up	Federal Hybrids 4160VT2PRIB	211	23.4	54.6	31439	693	1.2	1.2	0.0	87	3.6	0.4	4.9	0.2	1.8
22	Pop-up	NK Brand N27P-3110A	192	23.4	57.3	31691	632	0.0	0.0	0.0	84	3.6	0.4	4.2	0.2	4.9
23	Pop-up	NuTech 5F-196	250	26.3	51.6	32197	807	1.2	1.2	0.0	97	3.7	0.5	5.1	0.3	4.4
25	Pop-up	Renk RK595SSTX	211	30.2	53.8	31186	664	1.3	1.3	0.0	87	3.8	0.5	4.7	0.2	5.0
29	Pop-up	Dekalb DKC58-06RIB	236	33.4	58.2	31818	727	1.6	1.2	0.4	89	3.7	0.4	4.8	0.2	4.8
33	Starter	Jung 4D178RIB	211	21.7	56.1	31439	700	0.2	0.2	0.0	90	3.5	0.4	4.5	0.2	4.4
34	Starter	Dekalb DKC31-10	160	19.6	54.4	31060	537	1.5	1.5	0.0	94	3.9	0.5	4.9	0.2	4.7
36	Starter	Munson 4877-3010	211	21.4	53.4	31060	700	1.9	1.9	0.0	99	3.9	0.4	4.9	0.3	4.2
37	Starter	Federal Hybrids 4160VT2PRIB	204	23.0	52.9	32323	671	0.8	0.8	0.0	83	3.8	0.4	5.0	0.3	4.7
38	Starter	NK Brand N27P-3110A	216	20.7	55.3	32007	721	1.8	1.8	0.0	95	3.9	0.4	5.5	0.2	4.4
39	Starter	NuTech 5F-196	213	27.7	51.5	31313	679	0.0	0.0	0.0	87	4.0	0.5	4.8	0.2	4.0
41	Starter	Renk RK595SSTX	183	30.5	53.9	31313	574	0.0	0.0	0.0	93	3.8	0.4	4.8	0.2	4.5
45	Starter	Dekalb DKC58-06RIB	241	34.2	56.0	32197	741	4.3	4.3	0.0	95	3.9	0.4	4.2	0.2	3.9
Mean		194	25.5	54.8	31534	629	1.5	1.4	0.0	88	3.7	0.4	4.7	0.2	4.2	
Probability(%):																
Fertilizer(F)		2.0	6.0	8.8	45.1	1.9	37.7	33.5	56.0	10.0	--	--	--	--	--	
Hybrid (H)		0.7	0.0	0.0	75.3	1.4	6.4	7.0	71.0	3.0	--	--	--	--	--	
F x H		38.5	6.1	41.9	59.9	35.6	1.8	1.3	74.0	26.7	--	--	--	--	--	
LSD(0.10):																
Fertilizer(F)		22	1.4	1.4	NS	71	NS	NS	NS	5	--	--	--	--	--	
Hybrid (H)		28	1.6	1.2	NS	92	1.4	1.4	NS	7	--	--	--	--	--	
F x H		NS	2.8	NS	NS	NS	2.5	2.5	NS	NS	--	--	--	--	--	

*AGI: Adjusted Gross Income.

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6229 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Fond du Lac, WI **County:** Fond du Lac
Supported By: HATCH, Wisconsin Fertilizer Research Program

Site Information

Field: N/A **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam
Soil Test: Date: 10/27/2017 **pH** 6.8 **OM (%)** 4.1 **P (ppm)** 18 **K (ppm)** 105

Plot Management

Tillage Operations: Field Cultivator Fall Chisel

Fertilizer:	<u>Analysis</u>	<u>Product Rate</u>	<u>Date</u>
Preplant	46-0-0	391.3 lb/A	N/A
Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	5/17/2017 5/17/2017
Post plant	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

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

Irrigation: None

Planting Date: 5/17/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/27/2017 **Harvest Method:** Massey 8XP

Notes:

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: 30965 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). Renk RK595SSTX (99)
- 4). DuPont Pioneer P0157AM (101)
- 5). Renk RK717SSTX (105)
- 6). DuPont Pioneer P0506AM (105)
- 7). Dekalb DKC58-06RIB (108)
- 8). Power Plus 4J95AMX (109)

Fertilizer:

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

Results: Table 1712-04

**Table 1712 - 04. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
Fond Du Lac, 2017**

Treatment			Grain	Grain	Test	Harvest	*AGI	Lodged			Plant					
number	Fertilizer	Hybrid	yield	moisture	weight	density	\$3.44	Total	Stalk	Root	height	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
	UTC		232	23.9	55.7	31250	758	1.5	1.5	0.0	100	--	--	--	--	--
	Pop-up		233	24.0	56.3	30539	763	1.8	1.7	0.1	99	--	--	--	--	--
	Starter		240	24.2	56.6	31108	785	1.5	1.5	0.0	104	--	--	--	--	--
		Dekalb DKC58-06RIB	248	26.0	55.9	31144	800	4.3	4.1	0.3	101	--	--	--	--	--
		DuPont Pioneer P0157AM	231	25.1	56.4	30871	750	1.3	1.3	0.0	104	--	--	--	--	--
		DuPont Pioneer P0506AM	242	25.8	55.9	30555	781	0.3	0.3	0.0	105	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	233	19.8	56.3	31229	782	0.8	0.8	0.0	95	--	--	--	--	--
		Jung 4D178RIB	209	18.2	57.4	31271	707	1.3	1.3	0.0	91	--	--	--	--	--
		Power Plus 4J95AMX	241	31.4	54.3	30892	754	0.4	0.4	0.0	107	--	--	--	--	--
		Renk RK595SSTX	237	23.1	56.6	30934	780	0.7	0.7	0.0	105	--	--	--	--	--
		Renk RK717SSTX	241	22.9	56.8	30829	794	3.6	3.6	0.0	99	--	--	--	--	--
1	UTC	Jung 4D178RIB	190	18.2	57.0	31313	643	0.4	0.4	0.0	87	3.7	0.4	4.6	0.2	6.5
5	UTC	Federal Hybrids 4160VT2PRIB	238	19.6	55.7	32197	799	2.4	2.4	0.0	94	3.4	0.4	5.3	0.3	6.2
9	UTC	Renk RK595SSTX	233	22.4	55.9	31186	771	0.4	0.4	0.0	106	4.2	0.4	5.5	0.2	6.1
10	UTC	DuPont Pioneer P0157AM	230	24.9	56.7	30934	748	1.2	1.2	0.0	103	4.0	0.3	4.2	0.2	5.5
11	UTC	Renk RK717SSTX	234	22.6	55.0	31439	771	4.8	4.8	0.0	99	4.0	0.4	5.7	0.3	6.2
12	UTC	DuPont Pioneer P0506AM	241	26.0	55.1	30050	777	0.0	0.0	0.0	107	3.0	0.4	4.3	0.2	4.6
13	UTC	Dekalb DKC58-06RIB	246	26.7	56.3	31186	791	2.8	2.8	0.0	103	3.6	0.3	4.4	0.2	4.7
14	UTC	Power Plus 4J95AMX	243	31.2	53.9	31691	761	0.0	0.0	0.0	104	3.9	0.3	4.5	0.2	4.2
17	Pop-up	Jung 4D178RIB	212	17.2	57.2	30808	724	1.6	1.6	0.0	90	3.7	0.4	5.2	0.2	7.4
21	Pop-up	Federal Hybrids 4160VT2PRIB	215	19.6	55.8	29671	723	0.0	0.0	0.0	92	3.9	0.4	5.3	0.3	4.8
25	Pop-up	Renk RK595SSTX	233	23.5	57.2	30429	764	0.0	0.0	0.0	103	3.4	0.4	4.5	0.2	6.5
26	Pop-up	DuPont Pioneer P0157AM	227	25.2	56.7	30492	739	2.2	2.3	0.0	104	3.9	0.4	5.2	0.2	5.5
27	Pop-up	Renk RK717SSTX	250	24.0	57.4	30113	820	3.6	3.6	0.0	97	3.3	0.5	5.4	0.2	8.0
28	Pop-up	DuPont Pioneer P0506AM	239	25.6	56.2	31060	774	0.4	0.4	0.0	103	3.5	0.4	5.2	0.2	6.3
29	Pop-up	Dekalb DKC58-06RIB	248	25.7	55.2	31565	803	6.5	5.7	0.8	98	4.0	0.5	5.2	0.2	7.5
30	Pop-up	Power Plus 4J95AMX	242	31.2	54.5	30176	756	0.0	0.0	0.0	102	3.8	0.4	5.2	0.2	5.2
33	Starter	Jung 4D178RIB	224	19.3	57.9	31691	753	2.0	2.0	0.0	95	4.0	0.4	5.3	0.3	6.1
37	Starter	Federal Hybrids 4160VT2PRIB	247	20.1	57.5	31818	825	0.0	0.0	0.0	98	4.2	0.4	5.8	0.2	8.0
41	Starter	Renk RK595SSTX	245	23.4	56.7	31186	804	1.6	1.6	0.0	107	3.9	0.4	4.7	0.2	6.2
42	Starter	DuPont Pioneer P0157AM	235	25.2	55.7	31186	763	0.4	0.4	0.0	106	4.1	0.4	5.7	0.2	5.9
43	Starter	Renk RK717SSTX	240	22.2	58.0	30934	792	2.5	2.5	0.0	102	4.2	0.4	5.4	0.2	5.7
44	Starter	DuPont Pioneer P0506AM	245	26.0	56.4	30555	791	0.4	0.4	0.0	106	4.0	0.5	5.3	0.2	5.9
45	Starter	Dekalb DKC58-06RIB	249	25.7	56.2	30681	806	3.8	3.8	0.0	104	3.8	0.4	5.4	0.2	5.8
46	Starter	Power Plus 4J95AMX	239	31.9	54.4	30808	744	1.2	1.2	0.0	114	4.2	0.5	6.2	0.2	5.2
Mean			235	24.1	56.2	30965	768	1.6	1.6	0.0	101	3.8	0.4	5.1	0.2	6.0
Probability(%):																
Fertilizer(F)			67.6	85.4	29.7	24.4	67.0	89.9	94.9	13.0	13.7	--	--	--	--	--
Hybrid (H)			0.0	0.0	0.1	93.6	1.1	0.9	1.3	0.3	0.0	--	--	--	--	--
F x H			53.6	98.5	48.9	70.7	55.6	83.6	89.1	0.0	19.9	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			13	1.5	1.0	NS	42	2.1	2.0	0	3	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	NS	NS	0	NS	--	--	--	--	--

*AGI: Adjusted Gross Income.

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6230 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Galesville, WI **County:** Trempealeau
Supported By: HATCH, Wisconsin Fertilizer Research Program

Site Information

Field: N/A **Previous Crop:** Soybean **Soil Type:** Downs Silt Loam
Soil Test: Date: 10/10/2017 **pH** 5.6 **OM (%)** 3.5 **P (ppm)** 24 **K (ppm)** 198

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:		<u>Analysis</u>	<u>Product Rate</u>	<u>Date</u>
Preplant		46-0-0	217.4 lb/A	N/A
		21-0-0-24S	100 lb/A	
		18-46-0	100 lb/A	
Starter		9-11-30-6S-1Zn	200 lbs/A	5/4/2017
		10-34-0	4.08 gal/A	5/4/2017
Post plant		N/A	N/A	N/A
Manure:		N/A	N/A	N/A

Herbicide: Parallel 1.7 pt/A
Oracle 1.5 pt/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** Factor

Planting Date: 5/4/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/10/2017 **Harvest Method:** Massey 8XP

Notes:

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:** 31346 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). Renk RK595SSTX (99)
- 4). DuPont Pioneer P0157AM (101)
- 5). Renk RK717SSTX (105)
- 6). DuPont Pioneer P0506AM (105)
- 7). Dekalb DKC58-06RIB (108)
- 8). Power Plus 4J95AMX (109)

Fertilizer:

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

Results: Table 1712-05

Table 1712 - 05. Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Galesville, 2017

Treatment			Grain	Grain	Test	Harvest	*AGI	Lodged			Plant					
numer	Fertilizer	Hybrid	yield	moisture	weight	density	\$3.44	Total	Stalk	Root	height	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
	UTC		--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pop-up		240	28.4	55.8	31202	760	1.1	1.0	0.0	105	--	--	--	--	--
	Starter		239	29.3	55.9	31548	754	2.1	2.1	0.1	108	--	--	--	--	--
		Dekalb DKC58-06RIB	277	32.0	57.2	32365	861	0.8	0.8	0.0	107	--	--	--	--	--
		DuPont Pioneer P0157AM	250	29.1	55.9	31734	791	0.9	0.9	0.0	107	--	--	--	--	--
		DuPont Pioneer P0506AM	245	30.9	55.5	29124	766	0.3	0.3	0.0	113	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	232	22.3	55.1	32281	765	0.4	0.4	0.0	103	--	--	--	--	--
		Power Plus 4J95AMX	251	35.4	55.5	30008	762	0.3	0.3	0.0	113	--	--	--	--	--
		Renk RK595SSTX	241	27.0	55.4	32407	774	0.1	0.1	0.0	111	--	--	--	--	--
		Renk RK717SSTX	253	30.7	55.1	31355	792	1.5	1.2	0.3	110	--	--	--	--	--
		Jung 4D178RIB*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1	UTC	Jung 4D178RIB	--	--	--	--	--	--	--	--	--	3.8	0.4	5.9	0.2	8.5
5	UTC	Federal Hybrids 4160VT2PRIB	233	21.8	55.3	32323	771	0.4	0.4	0.0	109	3.7	0.4	6.1	0.2	8.1
9	UTC	Renk RK595SSTX	243	26.6	55.6	32702	783	0.4	0.4	0.0	114	4.3	0.4	6.1	0.3	6.8
10	UTC	DuPont Pioneer P0157AM	248	29.7	55.1	31313	784	2.1	2.1	0.0	109	3.8	0.4	5.6	0.3	7.2
11	UTC	Renk RK717SSTX	255	29.8	55.6	30934	803	0.4	0.4	0.0	111	3.9	0.5	6.6	0.3	6.3
12	UTC	DuPont Pioneer P0506AM	244	30.5	54.7	30050	765	0.0	0.0	0.0	113	3.6	0.4	5.6	0.2	7.2
13	UTC	Dekalb DKC58-06RIB	271	31.4	57.0	30808	847	1.6	1.6	0.0	107	3.8	0.5	6.1	0.2	6.9
14	UTC	Power Plus 4J95AMX	262	34.0	55.8	30934	803	0.0	0.0	0.0	117	4.0	0.4	6.5	0.2	5.7
17	Pop-up	Jung 4D178RIB	172	19.8	57.5	32323	575	6.0	6.0	0.0	95	3.9	0.4	5.5	0.2	7.4
21	Pop-up	Federal Hybrids 4160VT2PRIB	233	22.0	54.8	31565	772	0.0	0.0	0.0	99	3.3	0.4	6.4	0.3	7.3
25	Pop-up	Renk RK595SSTX	242	26.3	54.7	31565	780	0.0	0.0	0.0	109	3.3	0.4	5.1	0.3	6.7
26	Pop-up	DuPont Pioneer P0157AM	248	29.2	56.3	31439	784	0.0	0.0	0.0	104	3.4	0.4	5.7	0.2	6.8
27	Pop-up	Renk RK717SSTX	256	30.7	54.8	31691	804	1.2	0.8	0.4	106	3.7	0.4	5.5	0.2	6.2
28	Pop-up	DuPont Pioneer P0506AM	246	31.2	55.9	28661	770	0.9	0.9	0.0	113	3.3	0.4	4.9	0.2	7.1
29	Pop-up	Dekalb DKC58-06RIB	280	32.1	57.3	32828	869	0.4	0.4	0.0	105	3.6	0.4	5.4	0.2	6.7
30	Pop-up	Power Plus 4J95AMX	241	36.3	54.9	29545	728	0.0	0.0	0.0	112	3.5	0.4	4.1	0.2	5.0
33	Starter	Jung 4D178RIB	171	23.3	56.4	30919	561	11.4	11.4	0.0	102	3.1	0.4	5.8	0.2	7.6
37	Starter	Federal Hybrids 4160VT2PRIB	229	23.1	55.2	32954	751	0.7	0.7	0.0	101	3.3	0.4	5.7	0.2	7.0
41	Starter	Renk RK595SSTX	238	28.1	55.8	32954	760	0.0	0.0	0.0	112	3.6	0.4	5.6	0.2	5.8
42	Starter	DuPont Pioneer P0157AM	253	28.3	56.3	32449	806	0.8	0.8	0.0	107	3.2	0.4	5.8	0.2	6.1
43	Starter	Renk RK717SSTX	247	31.7	54.9	31439	770	2.9	2.4	0.4	113	3.5	0.5	5.0	0.3	5.9
44	Starter	DuPont Pioneer P0506AM	244	31.2	55.8	28661	764	0.0	0.0	0.0	114	3.4	0.4	5.6	0.2	6.1
45	Starter	Dekalb DKC58-06RIB	279	32.4	57.3	33459	866	0.4	0.4	0.0	108	3.8	0.4	5.5	0.2	5.9
46	Starter	Power Plus 4J95AMX	249	36.0	55.8	29545	756	0.8	0.8	0.0	111	4.1	0.4	5.6	0.2	5.1
	Mean		244	29.1	55.8	31346	772	1.2	1.1	0.0	108	3.6	0.4	5.7	0.2	6.6
Probability(%):																
	Fertilizer(F)		80.6	17.2	78.7	73.3	59.1	54.5	53.6	62.2	3.9	--	--	--	--	--
	Hybrid (H)		0.0	0.0	0.0	0.0	0.0	0.1	0.1	9.9	0.0	--	--	--	--	--
	F x H		71.5	23.5	43.4	1.7	70.4	96.7	97.2	91.4	48.3	--	--	--	--	--
LSD(0.10):																
	Fertilizer(F)		NS	NS	NS	NS	NS	NS	NS	NS	2	--	--	--	--	--
	Hybrid (H)		8	1.0	0.7	767.1	29	2.4	2.4	0	3	--	--	--	--	--
	F x H		NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--

*AGI: Adjusted Gross Income.

*Wild life damaged the Hybrid.

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6231 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Hancock, WI **County:** Waushara
Supported By: HATCH, Wisconsin Fertilizer Research Program

Site Information

Field: N/A **Previous Crop:** Corn **Soil Type:** Plainfield Sand
Soil Test: Date: 10/17/2017 **pH** 6.0 **OM (%)** 0.8 **P (ppm)** 45 **K (ppm)** 92.5

Plot Management

Tillage Operations: Spring Disk

Fertilizer:	Preplant	Analysis	Product Rate	Date
	Preplant	N/A	N/A	N/A
	Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	4/28/2017 4/28/2017
	Post plant	21-0-0-24S 46-0-0	152.3 lb/A 126.1 lb/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Prowl 2.0 pt/A
Laudis 3.0 oz/A **Insecticide:** Force 3G 4.4 lbs/A

Irrigation: May - Sept: 8.5" **Hybrid:** Factor

Planting Date: 4/28/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/17/2017 **Harvest Method:** Massey 8XP

Notes:

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:** 36784 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). Renk RK595SSTX (99)
- 4). DuPont Pioneer P0157AM (101)
- 5). Renk RK717SSTX (105)
- 6). DuPont Pioneer P0506AM (105)
- 7). Dekalb DKC58-06RIB (108)
- 8). Power Plus 4J95AMX (109)

Fertilizer:

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

Results: Table 1712-06

Table 1712 - 06. Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Hancock, 2017

Treatment			Grain	Grain	Test	Harvest	*AGI	Lodged			Plant					
number	Fertilizer	Hybrid	yield	moisture	weight	density	\$3.44	Total	Stalk	Root	height	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
	UTC		221	26.9	54.1	36363	709	0.1	0.0	0.0	83	--	--	--	--	--
	Pop-up		219	27.0	54.5	36884	702	0.0	0.0	0.0	80	--	--	--	--	--
	Starter		233	27.5	54.3	37105	746	0.0	0.0	0.0	83	--	--	--	--	--
		Dekalb DKC58-06RIB	244	31.9	53.9	36784	758	0.0	0.0	0.0	84	--	--	--	--	--
		DuPont Pioneer P0157AM	218	27.3	53.9	35521	697	0.1	0.0	0.1	80	--	--	--	--	--
		DuPont Pioneer P0506AM	226	28.9	53.9	38762	718	0.1	0.1	0.0	79	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	237	22.7	53.7	37205	781	0.0	0.0	0.0	85	--	--	--	--	--
		Jung 4D178RIB	211	20.2	57.4	33796	706	0.0	0.0	0.0	84	--	--	--	--	--
		Power Plus 4J95AMX	216	33.4	52.9	38510	666	0.0	0.0	0.0	73	--	--	--	--	--
		Renk RK595SSTX	224	27.4	54.3	38047	716	0.1	0.0	0.1	85	--	--	--	--	--
		Renk RK717SSTX	219	25.3	54.5	35648	710	0.1	0.0	0.1	85	--	--	--	--	--
1	UTC	Jung 4D178RIB	206	20.3	57.3	33838	688	0.0	0.0	0.0	81	3.8	0.5	4.7	0.2	8.7
5	UTC	Federal Hybrids 4160VT2PRIB	227	21.9	52.6	35732	751	0.0	0.0	0.0	87	4.1	0.5	6.2	0.3	7.7
9	UTC	Renk RK595SSTX	220	27.1	54.2	38131	705	0.0	0.0	0.0	85	3.9	0.5	5.0	0.2	9.7
10	UTC	DuPont Pioneer P0157AM	222	27.7	53.9	34217	710	0.0	0.0	0.0	83	3.9	0.5	4.9	0.2	9.0
11	UTC	Renk RK717SSTX	212	24.8	55.0	35984	690	0.3	0.0	0.3	82	3.4	0.5	4.8	0.2	9.0
12	UTC	DuPont Pioneer P0506AM	225	27.8	53.1	39393	718	0.3	0.3	0.0	78	3.4	0.5	5.3	0.1	8.5
13	UTC	Dekalb DKC58-06RIB	239	32.3	55.0	36237	743	0.0	0.0	0.0	85	4.0	0.5	5.0	0.2	7.5
14	UTC	Power Plus 4J95AMX	216	33.7	52.1	37373	664	0.0	0.0	0.0	82	4.1	0.5	5.9	0.2	6.9
17	Pop-up	Jung 4D178RIB	210	19.9	57.2	33712	704	0.0	0.0	0.0	85	3.2	0.4	4.6	0.2	9.1
21	Pop-up	Federal Hybrids 4160VT2PRIB	240	22.5	55.0	37752	791	0.0	0.0	0.0	85	3.4	0.5	6.0	0.2	11.1
25	Pop-up	Renk RK595SSTX	220	27.7	54.3	38005	703	0.0	0.0	0.0	80	4.1	0.5	5.0	0.2	10.9
26	Pop-up	DuPont Pioneer P0157AM	207	26.2	53.7	37626	669	0.3	0.0	0.3	79	3.4	0.5	5.0	0.1	11.4
27	Pop-up	Renk RK717SSTX	223	25.5	54.5	34469	722	0.0	0.0	0.0	91	4.1	0.5	5.4	0.2	10.3
28	Pop-up	DuPont Pioneer P0506AM	216	29.6	54.1	38257	680	0.0	0.0	0.0	77	3.8	0.4	4.7	0.2	9.8
29	Pop-up	Dekalb DKC58-06RIB	238	32.8	53.8	36111	738	0.0	0.0	0.0	80	4.0	0.5	5.8	0.2	10.2
30	Pop-up	Power Plus 4J95AMX	197	32.2	53.0	39141	612	0.0	0.0	0.0	61	4.1	0.6	5.1	0.2	9.2
33	Starter	Jung 4D178RIB	217	20.3	57.6	33838	725	0.0	0.0	0.0	86	4.0	0.4	4.8	0.2	11.5
37	Starter	Federal Hybrids 4160VT2PRIB	244	23.8	53.6	38131	799	0.0	0.0	0.0	84	3.5	0.5	5.1	0.2	10.2
41	Starter	Renk RK595SSTX	231	27.5	54.5	38005	740	0.3	0.0	0.3	89	4.2	0.5	4.9	0.2	10.6
42	Starter	DuPont Pioneer P0157AM	224	28.0	54.0	34722	713	0.0	0.0	0.0	78	3.7	0.5	5.4	0.1	9.4
43	Starter	Renk RK717SSTX	222	25.8	54.0	36489	718	0.0	0.0	0.0	82	3.5	0.5	5.1	0.1	9.6
44	Starter	DuPont Pioneer P0506AM	239	29.3	54.5	38636	755	0.0	0.0	0.0	84	3.4	0.5	5.3	0.2	12.4
45	Starter	Dekalb DKC58-06RIB	253	30.7	53.0	38005	794	0.0	0.0	0.0	89	4.0	0.4	5.0	0.2	11.3
46	Starter	Power Plus 4J95AMX	236	34.3	53.6	39015	723	0.0	0.0	0.0	75	4.1	0.5	5.1	0.2	8.2
Mean			224	27.1	54.3	36784	719	0.1	0.0	0.0	82	3.8	0.5	5.2	0.2	9.7
Probability(%):																
Fertilizer(F)			6.2	27.1	66.9	46.4	7.4	79.5	44.4	100.0	17.9	--	--	--	--	--
Hybrid (H)			0.0	0.0	0.0	0.0	0.0	77.4	44.5	66.0	0.0	--	--	--	--	--
F x H			14.6	2.3	39.7	60.8	20.6	37.9	47.1	35.2	1.1	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			10	NS	NS	NS	31	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			8	0.8	0.9	1529	26	NS	NS	NS	5	--	--	--	--	--
F x H			NS	1.4	NS	NS	NS	NS	NS	NS	8	--	--	--	--	--

*AGI: Adjusted Gross Income.

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6227 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Janesville, WI **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: 10/18/2017 **pH** 6.1 **OM (%)** 3.1 **P (ppm)** 33 **K (ppm)** 110

Plot Management

Tillage Operations: Spring Chisel Fall Disk Chisel

Fertilizer:	<u>Analysis</u>	<u>Product Rate</u>	<u>Date</u>
Preplant	28-0-0	714.3 lb/A	N/A
Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	4/25/2017 4/25/2017
Post plant	28-0-0	714.3 lb/A	N/A
Manure:	N/A	N/A	N/A

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

Hybrid: Factor

Irrigation: None

Planting Date: 4/25/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/18/2017 **Harvest Method:** Massey 8XP

Notes:

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: 31431 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). Renk RK595SSTX (99)
- 4). DuPont Pioneer P0506AM (105)
- 5). Dekalb DKC58-06RIB (108)
- 6). Power Plus 4J95AMX (109)
- 7). AgriGold A6499STXRIB (112)
- 8). Dekalb DKC65-79 (115)

Fertilizer:

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

Results: Table 1712-07

**Table 1712 - 07. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
Janesville, 2017**

Treatment number	Fertilizer	Hybrid	Grain yield	Grain moisture	Test weight	Harvest density	*AGI \$/A	Lodged			Plant					
								Total	Stalk	Root	height	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
	UTC		228	21.6	55.9	31361	752	0.5	0.5	0.0	93	--	--	--	--	--
	Pop-up		231	22.3	56.8	31163	758	0.8	0.7	0.0	95	--	--	--	--	--
	Starter		236	21.7	57.3	31769	780	0.1	0.1	0.0	101	--	--	--	--	--
		AgriGold A6499STXRIB	247	26.6	55.3	32533	794	0.3	0.3	0.0	96	--	--	--	--	--
		Dekalb DKC58-06RIB	252	22.6	56.1	33080	831	0.1	0.0	0.1	94	--	--	--	--	--
		Dekalb DKC65-79RIB	257	29.0	55.8	32239	813	0.3	0.3	0.0	109	--	--	--	--	--
		DuPont Pioneer P0506AM	229	21.5	56.8	28787	761	0.2	0.2	0.0	98	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	217	16.0	57.1	32523	742	0.0	0.0	0.0	91	--	--	--	--	--
		Jung 4D178RIB	198	16.0	58.4	31931	678	1.3	1.3	0.0	86	--	--	--	--	--
		Power Plus 4J95AMX	227	24.3	55.6	28619	740	0.7	0.7	0.0	99	--	--	--	--	--
		Renk RK595SSTX	222	19.1	58.1	31734	747	0.8	0.8	0.0	98	--	--	--	--	--
1	UTC	Jung 4D178RIB	196	15.4	57.4	31824	674	0.7	0.7	0.0	84	3.9	0.5	3.1	0.1	4.3
5	UTC	Federal Hybrids 4160VT2PRIB	204	15.4	55.8	32575	699	0.0	0.0	0.0	87	4.0	0.5	2.4	0.1	2.0
9	UTC	Renk RK595SSTX	217	18.2	57.6	31060	735	0.4	0.4	0.0	96	4.0	0.5	2.5	0.1	4.1
12	UTC	DuPont Pioneer P0506AM	230	22.1	56.5	28914	759	0.0	0.0	0.0	93	4.0	0.5	2.9	0.1	3.8
13	UTC	Dekalb DKC58-06RIB	238	22.5	55.3	32449	785	0.0	0.0	0.0	93	3.8	0.6	2.8	0.1	4.2
14	UTC	Power Plus 4J95AMX	219	22.6	54.4	29166	723	2.1	2.1	0.0	96	4.1	0.6	3.1	0.1	3.8
15	UTC	AgriGold A6499STXRIB	246	26.5	55.7	32197	792	0.4	0.4	0.0	92	4.4	0.5	2.9	0.1	3.5
16	UTC	Dekalb DKC65-79RIB	270	30.3	54.6	32702	847	0.4	0.4	0.0	106	4.2	0.5	2.8	0.1	3.4
17	Pop-up	Jung 4D178RIB	192	16.3	58.0	31029	652	3.2	3.1	0.0	81	4.3	0.5	3.1	0.1	4.8
21	Pop-up	Federal Hybrids 4160VT2PRIB	223	16.8	57.7	32165	757	0.1	0.0	0.0	87	4.3	0.3	3.9	0.2	5.0
25	Pop-up	Renk RK595SSTX	221	21.1	59.7	31818	735	1.6	1.6	0.0	98	4.4	0.5	3.6	0.1	5.5
28	Pop-up	DuPont Pioneer P0506AM	224	21.2	58.2	28282	744	0.0	0.0	0.0	100	4.4	0.5	3.0	0.1	4.7
29	Pop-up	Dekalb DKC58-06RIB	252	22.7	57.0	33333	830	0.4	0.0	0.4	94	4.1	0.5	3.4	0.1	4.7
30	Pop-up	Power Plus 4J95AMX	235	25.4	55.2	28282	762	0.0	0.0	0.0	100	4.5	0.4	3.8	0.1	4.0
31	Pop-up	AgriGold A6499STXRIB	243	26.7	53.8	32575	780	0.4	0.4	0.0	93	3.8	0.5	3.4	0.1	4.7
32	Pop-up	Dekalb DKC65-79RIB	254	28.6	54.9	31818	805	0.4	0.4	0.0	107	4.2	0.5	3.5	0.1	4.4
33	Starter	Jung 4D178RIB	207	16.2	59.7	32939	706	0.0	0.0	0.0	95	4.4	0.5	3.4	0.2	8.0
37	Starter	Federal Hybrids 4160VT2PRIB	224	15.8	57.8	32828	770	0.0	0.0	0.0	100	4.3	0.5	4.3	0.2	8.7
41	Starter	Renk RK595SSTX	228	18.2	57.1	32323	772	0.4	0.4	0.0	101	4.2	0.5	3.5	0.1	6.1
44	Starter	DuPont Pioneer P0506AM	234	21.0	55.8	29166	780	0.5	0.5	0.0	102	4.2	0.5	3.6	0.2	5.6
45	Starter	Dekalb DKC58-06RIB	266	22.6	56.1	33459	877	0.0	0.0	0.0	95	4.4	0.4	3.8	0.1	6.1
46	Starter	Power Plus 4J95AMX	226	25.0	57.4	28409	735	0.0	0.0	0.0	101	4.0	0.6	3.7	0.2	4.1
47	Starter	AgriGold A6499STXRIB	252	26.6	56.4	32828	812	0.0	0.0	0.0	102	4.2	0.5	3.6	0.1	6.5
48	Starter	Dekalb DKC65-79RIB	248	28.1	57.9	32197	787	0.0	0.0	0.0	114	4.1	0.6	3.0	0.1	5.5
Mean			231	21.9	56.7	31431	763	0.5	0.4	0.0	96	4.2	0.5	3.3	2.8	4.9
Probability(%):																
Fertilizer(F)			93.3	86.5	22.3	22.6	90.4	32.9	37.8	49.9	2.4	--	--	--	--	--
Hybrid (H)			0.0	0.0	7.8	0.0	0.2	41.2	35.9	51.0	0.0	--	--	--	--	--
F x H			93.5	50.1	55.8	64.7	94.1	38.0	37.2	56.0	27.1	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			NS	NS	NS	NS	NS	NS	NS	NS	4	--	--	--	--	--
Hybrid (H)			18	1.4	1.9	747	55	NS	NS	NS	4	--	--	--	--	--
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:** 6233 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Marshfield, WI **County:** Wood
Supported By: HATCH, Wisconsin Fertilizer Research Program

Site Information

Field: N/A **Previous Crop:** Alfalfa **Soil Type:** Withee Silt Loam
Soil Test: Date: 10/25/2017 **pH** 5.9 **OM (%)** 3.2 **P (ppm)** 32 **K (ppm)** 122

Plot Management

Tillage Operations: Field Cultivator Fall Chisel Plow

Fertilizer:	<u>Analysis</u>	<u>Product Rate</u>	<u>Date</u>
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	5/12/2017 5/12/2017
Post plant	46-0-0	100 lb/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Roundup 32.0 oz/A
Parallel 1.7 pt/A
Accent Q 1.0 oz/A
Status 5.0 oz/A

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

Irrigation: None

Planting Date: 5/12/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/25/2017 **Harvest Method:** Massey 8XP

Notes:

Experimental Design RCB in a split-plot

Plot Size Seeded: 10' x 25'	Replications: 3
Harvest Plot Size: 5' x 23'	Experiment Size: 0.28 Acre
	Harvest Plant Density: 33750 plants per acre

Factors/Treatments:

Hybrid (RM):

- | | |
|--|---|
| <ul style="list-style-type: none"> 1). Jung 4D178RIB (82) 2). Dekalb DKC31-10RIB (81) 3). Tracy T086-26 311A (85) 4). Munson 4877-3010 (88) 5). Federal Hybrids 4160VT2PRIB (91) 6). NK Brand N27P-3110A (92) 7). NuTech 5F-196 (96) 8). Dekalb DKC46-36RIB (96) | <ul style="list-style-type: none"> 9). Renk RK595SSTX (99) 10). DuPont Pioneer P0157AM (101) 11). Renk RK717SSTX (105) 12). DuPont Pioneer P0506AM (105) 13). Dekalb DKC58-06RIB (108) 14). Power Plus 4J95AMX (109) 15). AgriGold A6499STXRIB (112) 16). Dekalb DKC65-79 (115) |
|--|---|

Fertilizer:

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

Results: Table 1712-08

**Table 1712 - 08. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
Marshfield, 2017**

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		142	38.1	53.0	33745	429	0.4	0.4	0.0	71	--	--	--	--	--
	Pop-up		--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Starter		152	35.4	54.0	34595	465	1.0	1.0	0.0	74	--	--	--	--	--
		AgriGold A6499STXRIB	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		DeKalb DKC46-36RIB	166	35.9	53.2	31983	507	0.2	0.2	0.0	63	--	--	--	--	--
		Dekalb DKC31-10	148	25.9	56.6	31439	481	0.5	0.5	0.0	75	--	--	--	--	--
		Dekalb DKC58-06RIB	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Dekalb DKC65-79RIB	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		DuPont Pioneer P0157AM	184	38.0	54.5	33165	552	0.0	0.0	0.0	80	--	--	--	--	--
		DuPont Pioneer P0506AM	151	39.8	54.4	35398	456	0.2	0.2	0.0	73	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	190	31.0	52.2	32828	595	0.1	0.1	0.0	78	--	--	--	--	--
		Jung 4D178RIB	169	27.3	54.7	32954	542	0.1	0.1	0.0	75	--	--	--	--	--
		Munson 4877-3010	168	28.2	53.9	34605	537	3.4	3.4	0.0	73	--	--	--	--	--
		NK Brand N27P-3110A	164	27.3	54.8	32515	527	3.8	3.8	0.0	64	--	--	--	--	--
		NuTech 5F-196	194	33.0	51.9	33513	602	0.0	0.0	0.0	72	--	--	--	--	--
		Power Plus 4J95AMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Renk RK595SSTX	164	39.9	53.6	33670	486	0.1	0.0	0.1	69	--	--	--	--	--
		Renk RK717SSTX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Tracy T086-26 311A	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1	UTC	Jung 4D178RIB	158	32.7	54.3	32070	490	0.0	0.0	0.0	73	2.6	0.3	4.6	0.2	3.9
2	UTC	Dekalb DKC31-10	138	33.7	55.1	30050	431	0.4	0.4	0.0	75	3.0	0.3	4.7	0.2	4.9
3	UTC	Tracy T086-26 311A	114	33.9	46.9	30566	359	0.2	0.2	0.0	46	3.6	0.4	6.0	0.2	3.0
4	UTC	Munson 4877-3010	176	25.3	54.3	33838	570	4.2	4.2	0.0	73	3.0	0.3	5.0	0.2	4.4
5	UTC	Federal Hybrids 4160VT2PRIB	173	33.3	50.2	32449	537	0.0	0.0	0.0	78	2.9	0.4	5.1	0.2	3.2
6	UTC	NK Brand N27P-3110A	138	31.4	53.8	32575	433	1.7	1.7	0.0	53	3.5	0.3	5.3	0.2	4.0
7	UTC	NuTech 5F-196	203	32.8	51.8	33080	627	0.0	0.0	0.0	76	3.0	0.4	4.9	0.2	3.5
8	UTC	DeKalb DKC46-36RIB	143	39.1	52.6	31313	428	0.0	0.0	0.0	58	3.0	0.3	5.4	0.2	3.3
9	UTC	Renk RK595SSTX	150	44.6	53.5	34090	430	0.0	0.0	0.0	68	3.4	0.4	5.0	0.2	3.4
10	UTC	DuPont Pioneer P0157AM	189	37.2	54.9	33459	568	0.0	0.0	0.0	81	2.5	0.3	4.5	0.2	3.6
11	UTC	Renk RK717SSTX	92	42.0	52.5	35869	264	0.2	0.2	0.0	77	3.7	0.4	4.6	0.2	3.3
12	UTC	DuPont Pioneer P0506AM	106	49.0	54.8	35490	304	0.2	0.2	0.0	70	2.6	0.3	4.0	0.2	3.5
13	UTC	Dekalb DKC58-06RIB	88	40.5	54.6	35984	255	0.0	0.0	0.0	83	2.9	0.3	4.5	0.2	2.9
14	UTC	Power Plus 4J95AMX	137	41.7	53.0	35869	411	0.2	0.2	0.0	75	2.9	0.4	4.7	0.2	3.4
15	UTC	AgriGold A6499STXRIB	168	41.6	54.6	33975	501	0.2	0.2	0.0	79	2.9	0.3	4.7	0.2	3.5
16	UTC	Dekalb DKC65-79RIB	98	51.2	52.0	39246	255	-0.3	-0.3	0.0	73	3.2	0.4	4.6	0.2	3.1

continue

Table 1712 - 08. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
continued **Marshfield, 2017**

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	166	26.4	54.2	33080	535	0.0	0.0	0.0	74	3.1	0.3	4.4	0.2	4.3
18	Pop-up	Dekalb DKC31-10	156	21.2	57.9	31691	518	0.7	0.7	0.0	81	3.2	0.4	5.7	0.2	7.7
19	Pop-up	Tracy T086-26 311A	--	--	--	--	--	--	--	--	--	2.8	0.3	4.8	0.2	5.9
20	Pop-up	Munson 4877-3010	187	25.4	54.4	34252	609	0.1	0.1	0.0	78	3.7	0.3	4.5	0.2	4.2
21	Pop-up	Federal Hybrids 4160VT2PRIB	201	28.1	53.4	32702	642	0.4	0.4	0.0	76	2.7	0.3	4.4	0.2	4.3
22	Pop-up	NK Brand N27P-3110A	157	26.0	55.2	33333	509	9.3	9.3	0.0	68	3.0	0.3	4.8	0.2	6.6
23	Pop-up	NuTech 5F-196	176	33.8	52.0	33116	546	0.1	0.1	0.0	62	2.6	0.4	4.2	0.2	5.0
24	Pop-up	DeKalb DKC46-36RIB	157	34.0	52.7	30808	483	0.4	0.4	0.0	58	2.7	0.3	4.1	0.2	3.7
25	Pop-up	Renk RK595SSTX	156	37.7	53.4	33207	474	0.0	0.0	0.0	65	3.5	0.4	4.7	0.2	3.9
26	Pop-up	DuPont Pioneer P0157AM	194	36.1	54.1	32323	591	0.0	0.0	0.0	79	3.4	0.4	4.7	0.2	5.5
27	Pop-up	Renk RK717SSTX	--	--	--	--	--	--	--	--	--	3.2	0.3	4.2	0.2	4.4
28	Pop-up	DuPont Pioneer P0506AM	178	26.0	52.3	34146	572	-0.1	-0.1	0.0	69	3.1	0.4	5.3	0.2	4.2
29	Pop-up	Dekalb DKC58-06RIB	--	--	--	--	--	--	--	--	--	2.8	0.4	5.0	0.2	4.9
30	Pop-up	Power Plus 4J95AMX	--	--	--	--	--	--	--	--	--	2.7	0.4	4.7	0.2	4.1
31	Pop-up	AgriGold A6499STXRIB	--	--	--	--	--	--	--	--	--	2.5	0.3	4.1	0.2	4.2
32	Pop-up	Dekalb DKC65-79RIB	--	--	--	--	--	--	--	--	--	2.4	0.3	4.2	0.2	3.9
33	Starter	Jung 4D178RIB	183	23.0	55.7	33712	602	0.4	0.4	0.0	78	3.0	0.3	4.5	0.2	4.2
34	Starter	Dekalb DKC31-10	150	22.9	56.8	32575	494	0.4	0.4	0.0	69	3.6	0.3	4.9	0.2	5.2
35	Starter	Tracy T086-26 311A	131	26.9	55.2	32070	420	6.7	6.7	0.0	71	2.9	0.3	4.8	0.2	4.5
36	Starter	Munson 4877-3010	141	33.9	53.0	35724	433	5.8	5.8	0.0	67	3.4	0.3	5.9	0.3	5.4
37	Starter	Federal Hybrids 4160VT2PRIB	195	31.6	53.1	33333	607	0.0	0.0	0.0	80	2.9	0.3	4.5	0.3	4.3
38	Starter	NK Brand N27P-3110A	195	24.5	55.4	31636	638	0.4	0.5	0.0	70	2.7	0.3	5.0	0.2	5.7
39	Starter	NuTech 5F-196	204	32.4	51.8	34343	633	0.0	0.0	0.0	78	3.9	0.3	4.6	0.2	4.4
40	Starter	DeKalb DKC46-36RIB	198	34.7	54.4	33830	609	0.1	0.1	0.0	72	3.8	0.4	4.8	0.2	3.9
41	Starter	Renk RK595SSTX	184	37.2	53.9	33712	554	0.4	0.0	0.4	74	3.0	0.4	5.7	0.2	3.9
42	Starter	DuPont Pioneer P0157AM	169	40.7	54.6	33712	497	0.0	0.0	0.0	80	2.7	0.3	4.4	0.2	4.6
43	Starter	Renk RK717SSTX	189	41.4	54.7	36560	557	0.4	0.5	0.0	75	2.8	0.3	5.1	0.3	4.3
44	Starter	DuPont Pioneer P0506AM	170	44.3	56.1	36560	493	0.4	0.5	0.0	81	3.3	0.3	4.5	0.2	4.0
45	Starter	Dekalb DKC58-06RIB	130	56.4	54.2	35424	350	0.4	0.5	0.0	84	3.0	0.3	4.2	0.2	4.3
46	Starter	Power Plus 4J95AMX	109	54.1	54.4	36181	300	0.4	0.5	0.0	49	3.8	0.4	5.8	0.2	3.9
47	Starter	AgriGold A6499STXRIB	18	24.1	46.9	33803	61	-0.2	-0.2	0.0	79	3.8	0.4	4.5	0.2	4.5
48	Starter	Dekalb DKC65-79RIB	61	37.7	53.9	40348	188	0.4	0.5	0.0	75	3.6	0.4	4.9	0.3	3.8
Mean			156	34.6	53.7	33750	481	0.8	0.8	0.0	72	3.1	0.3	4.8	0.2	4.3
Probability(%):																
Fertilizer(F)			60.6	5.8	36.2	27.9	43.9	64.0	64.0	66.9	56.3	--	--	--	--	--
Hybrid (H)			0.0	0.0	0.6	0.0	0.0	18.8	17.5	86.4	0.1	--	--	--	--	--
F x H			10.4	8.6	18.1	95.2	12.1	49.5	49.0	80.0	17.1	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			NS	3.5	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			34	6.2	2.3	1514	112	NS	NS	NS	9	--	--	--	--	--
F x H			NS	10.1	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6228 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Montfort, WI **County:** Grant
Supported By: HATCH, Wisconsin Fertilizer Research Program

Site Information

Field: N/A **Previous Crop:** Soybean **Soil Type:** Dodgeville Silt Loam
Soil Test: Date: 10/18/2017 **pH** 6.5 **OM (%)** 2.9 **P (ppm)** 23 **K (ppm)** 104

Plot Management

Tillage Operations: Strip-till

Fertilizer:	Preplant	Analysis	Product Rate	Date
		21-0-0-24S 11-52-0	100 lb/A 54.5 lb/A	N/A
	Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	4/24/2017 4/24/2017
	Post plant	32-0-0	278.1 lb/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Compadre 2.6 oz/A
Atrazine 4L 28.8 oz/A
Callisto 3.0 oz/A
Zidua 2.0 oz/A

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

Irrigation: None

Planting Date: 4/24/2017 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Almaco Precision Planter
Harvest Date: 10/18/2017 **Harvest Method:** Massey 8XP
Notes:

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:** 31339 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). Renk RK595SSTX (99)
- 4). DuPont Pioneer P0506AM (105)
- 5). Dekalb DKC58-06RIB (108)
- 6). Power Plus 4J95AMX (109)
- 7). AgriGold A6499STXRIB (112)
- 8). Dekalb DKC65-79 (115)

Fertilizer:

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

Results: Table 1712-09

Table 1712 - 09 Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Montfort, 2017

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		236	26.3	56.1	31628	761	0.7	0.7	0.1	93	--	--	--	--	--
	Pop-up		230	25.9	56.3	31013	742	3.8	3.8	0.0	95	--	--	--	--	--
	Starter*		--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Jung 4D178RIB	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		AgriGold A6499STXRIB	237	31.8	55.1	31818	738	0.1	0.1	0.0	94	--	--	--	--	--
		Dekalb DKC58-06RIB	257	27.3	55.2	32659	824	0.4	0.4	0.0	96	--	--	--	--	--
		Dekalb DKC65-79RIB	263	34.7	54.5	31818	804	0.1	0.1	0.0	106	--	--	--	--	--
		DuPont Pioneer P0506AM	240	26.0	56.0	28619	774	0.4	0.3	0.1	99	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	241	19.7	57.1	32323	808	2.0	2.0	0.0	90	--	--	--	--	--
		Power Plus 4J95AMX	244	30.3	54.8	30092	769	0.4	0.3	0.1	100	--	--	--	--	--
		Renk RK595SSTX	241	23.0	57.4	31818	793	0.5	0.5	0.0	96	--	--	--	--	--
1	UTC	Jung 4D178RIB	189	18.8	59.1	32575	643	2.3	2.4	0.0	77	3.6	0.3	2.6	0.2	4.4
5	UTC	Federal Hybrids 4160VT2PRIB	237	19.9	57.4	33080	794	2.0	2.0	0.0	88	3.7	0.3	2.1	0.1	4.6
9	UTC	Renk RK595SSTX	242	23.4	57.3	32575	796	0.0	0.0	0.0	94	3.9	0.4	2.9	0.2	3.9
12	UTC	DuPont Pioneer P0506AM	240	25.4	55.1	28661	779	0.0	0.0	0.0	98	3.9	0.3	1.9	0.1	3.7
13	UTC	Dekalb DKC58-06RIB	248	27.2	57.2	32070	794	0.0	0.0	0.0	93	4.2	0.3	2.6	0.1	3.8
14	UTC	Power Plus 4J95AMX	248	29.6	54.3	30303	782	0.8	0.4	0.4	99	3.8	0.4	2.7	0.2	3.4
15	UTC	AgriGold A6499STXRIB	226	31.7	54.2	31186	706	0.4	0.4	0.0	94	3.9	0.3	2.4	0.2	3.4
16	UTC	Dekalb DKC65-79RIB	259	34.0	54.2	32575	795	0.4	0.4	0.0	103	3.9	0.4	2.7	0.2	3.6
17	Pop-up	Jung 4D178RIB	137	18.0	58.8	31060	465	24.4	24.4	0.0	84	3.5	0.3	2.2	0.1	5.8
21	Pop-up	Federal Hybrids 4160VT2PRIB	233	19.6	57.3	31565	782	2.9	2.9	0.0	87	3.6	0.3	2.5	0.1	5.8
25	Pop-up	Renk RK595SSTX	237	21.7	56.8	31691	786	1.6	1.6	0.0	99	3.5	0.3	2.2	0.2	5.0
28	Pop-up	DuPont Pioneer P0506AM	237	25.9	56.8	29166	765	0.4	0.4	0.0	98	3.8	0.3	2.2	0.2	4.5
29	Pop-up	Dekalb DKC58-06RIB	256	27.1	57.4	32575	820	0.8	0.8	0.0	94	4.0	0.3	2.8	0.2	4.8
30	Pop-up	Power Plus 4J95AMX	241	30.1	55.1	29545	759	0.0	0.0	0.0	99	4.2	0.3	2.4	0.1	4.5
31	Pop-up	AgriGold A6499STXRIB	236	31.4	55.3	31186	735	0.0	0.0	0.0	92	4.0	0.3	2.4	0.1	4.8
32	Pop-up	Dekalb DKC65-79RIB	267	33.7	52.8	31313	820	0.0	0.0	0.0	107	4.1	0.3	2.2	0.1	4.6
33	Starter	Jung 4D178RIB	--	--	--	--	--	--	--	--	--	3.7	0.3	2.9	0.1	4.8
37	Starter	Federal Hybrids 4160VT2PRIB	253	19.7	56.7	32323	849	1.2	1.2	0.0	94	3.6	0.3	4.6	0.2	4.1
41	Starter	Renk RK595SSTX	243	23.8	58.0	31186	797	0.0	0.0	0.0	95	3.9	0.3	4.1	0.2	5.1
44	Starter	DuPont Pioneer P0506AM	242	26.7	56.1	28030	778	0.9	0.4	0.4	102	3.6	0.3	3.8	0.1	5.2
45	Starter	Dekalb DKC58-06RIB	269	27.7	51.1	33333	859	0.4	0.4	0.0	101	3.7	0.4	4.3	0.1	4.4
46	Starter	Power Plus 4J95AMX	245	31.1	54.9	30429	765	0.4	0.4	0.0	101	3.9	0.3	3.8	0.1	3.8
47	Starter	AgriGold A6499STXRIB	249	32.4	55.8	33080	771	0.0	0.0	0.0	95	3.8	0.4	4.2	0.1	4.3
48	Starter	Dekalb DKC65-79RIB	264	36.5	56.6	31565	797	0.0	0.0	0.0	109	3.9	0.3	3.3	0.1	4.4
	Mean		240	26.9	56.0	31339	770	1.5	1.4	0.0	96	3.8	0.3	2.9	0.2	4.4
Probability(%):																
Fertilizer(F)			31.7	26.5	94.8	52.7	35.7	0.5	0.4	69.7	6.2	--	--	--	--	--
Hybrid (H)			0.0	0.0	20.9	0.0	0.0	0.0	0.0	65.6	0.0	--	--	--	--	--
F x H			12.0	78.2	47.4	86.7	11.1	0.0	0.0	46.9	61.5	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			NS	NS	NS	NS	NS	0.9	0.9	0.2	NS	--	--	--	--	--
Hybrid (H)			9	1.0	NS	1303	30	0.9	0.8	0.2	3	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	1.7	1.6	NS	NS	--	--	--	--	--

*Many plots of the same hybrid dropped.

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6234 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
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: 10/26/2017 **pH** 7.2 **OM (%)** 2.5 **P (ppm)** 32 **K (ppm)** 156

Plot Management

Tillage Operations: Field Cultivator Fall Chisel Plow

Fertilizer:	<u>Analysis</u>	<u>Product Rate</u>	<u>Date</u>
Preplant	46-0-0	152.2 lb/A	N/A
	18-46-0	172.2 lb/A	
Starter	9-11-30-6S-1Zn	200 lbs/A	5/10/2017
	10-34-0	4.08 gal/A	5/10/2017
Post plant	32-0-0	165.7 lb/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Capreno 3.0 oz/A **Insecticide:** Force 3G 4.4 lbs/A
Atrazine 0.75 lb/A **Hybrid:** Factor

Irrigation: None

Planting Date: 5/10/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/26/2017 **Harvest Method:** Massey 8XP

Notes:

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:** 31597 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). NuTech 5F-196 (96)
- 4). Dekalb DKC46-36RIB (96)
- 5). Renk RK595SSTX (99)
- 6). DuPont Pioneer P0157AM (101)
- 7). Renk RK717SSTX (105)
- 8). Dekalb DKC58-06RIB (108)

Fertilizer:

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

Results: Table 1712-010

**Table 1712 - 10. Corn Hybrid Response to Starter Fertilizer in Wisconsin.
Seymour, 2017**

Treatment		Grain yield	Grain moisture	Test weight	Harvest density	*AGI \$3.44	Lodged			Plant						
number	Fertilizer						Hybrid	Total	Stalk	Root	height	N	P	K	S	DM
		bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr	
	UTC	219	23.2	56.5	31660	720	0.1	0.1	0.0	90	--	--	--	--	--	
	Pop-up	224	23.2	57.0	31360	736	0.3	0.2	0.0	94	--	--	--	--	--	
	Starter	235	23.4	57.5	31770	769	0.2	0.2	0.0	94	--	--	--	--	--	
		DeKalb DKC46-36RIB	228	21.6	56.4	31860	755	0.0	0.0	0.0	90	--	--	--	--	
		Dekalb DKC58-06RIB	240	28.2	56.3	31734	765	0.1	0.1	0.0	91	--	--	--	--	
		DuPont Pioneer P0157AM	251	25.2	57.1	31523	814	0.0	0.0	0.0	96	--	--	--	--	
		Federal Hybrids 4160VT2PRIB	217	20.0	58.2	31691	728	0.0	0.0	0.0	92	--	--	--	--	
		Jung 4D178RIB	175	18.4	58.2	31102	590	0.4	0.4	0.0	86	--	--	--	--	
		NuTech 5F-196	233	25.7	54.4	31523	755	0.0	0.0	0.0	95	--	--	--	--	
		Renk RK595SSTX	232	21.5	58.4	31691	769	0.1	0.1	0.0	95	--	--	--	--	
		Renk RK717SSTX	233	25.5	56.9	31649	756	0.8	0.5	0.3	94	--	--	--	--	
1	UTC	Jung 4D178RIB	161	18.4	58.3	29924	546	0.4	0.4	0.0	80	3.9	0.4	4.3	0.1	10.8
5	UTC	Federal Hybrids 4160VT2PRIB	213	20.0	58.8	32070	713	0.0	0.0	0.0	91	3.9	0.5	6.0	0.2	10.0
7	UTC	NuTech 5F-196	230	25.5	54.4	31439	744	0.0	0.0	0.0	93	3.8	0.4	4.8	0.2	9.2
8	UTC	DeKalb DKC46-36RIB	221	21.4	55.6	31818	734	0.0	0.0	0.0	88	3.9	0.4	4.9	0.2	9.4
9	UTC	Renk RK595SSTX	230	21.6	57.7	31944	762	0.0	0.0	0.0	94	3.9	0.4	4.9	0.1	11.2
10	UTC	DuPont Pioneer P0157AM	245	24.9	54.9	31944	796	0.0	0.0	0.0	93	3.5	0.4	4.2	0.1	9.4
11	UTC	Renk RK717SSTX	213	25.6	57.1	31691	689	0.0	0.0	0.0	92	3.8	0.5	5.2	0.2	9.8
13	UTC	Dekalb DKC58-06RIB	242	28.0	55.3	32449	772	0.0	0.0	0.0	88	3.7	0.4	4.1	0.2	9.9
17	Pop-up	Jung 4D178RIB	164	18.0	57.9	30934	557	0.4	0.4	0.0	90	3.5	0.4	5.1	0.2	13.4
21	Pop-up	Federal Hybrids 4160VT2PRIB	218	20.3	58.4	30681	730	0.0	0.0	0.0	92	3.8	0.4	5.2	0.1	11.7
23	Pop-up	NuTech 5F-196	231	25.7	55.0	32197	747	0.0	0.0	0.0	96	3.6	0.4	4.8	0.1	10.6
24	Pop-up	DeKalb DKC46-36RIB	228	21.5	56.5	31565	758	0.0	0.0	0.0	91	4.0	0.5	5.9	0.2	11.2
25	Pop-up	Renk RK595SSTX	223	21.4	58.6	32070	740	0.4	0.4	0.0	92	3.5	0.5	4.9	0.1	11.1
26	Pop-up	DuPont Pioneer P0157AM	248	24.7	58.5	31565	807	0.0	0.0	0.0	99	3.5	0.4	5.3	0.2	11.3
27	Pop-up	Renk RK717SSTX	244	25.5	55.5	31060	791	1.2	0.8	0.4	98	3.6	0.4	5.0	0.2	10.8
29	Pop-up	Dekalb DKC58-06RIB	237	28.6	55.6	30808	754	0.0	0.0	0.0	91	3.7	0.4	4.5	0.1	10.9
33	Starter	Jung 4D178RIB	198	18.9	58.5	32449	667	0.4	0.4	0.0	88	3.7	0.5	4.5	0.2	11.4
37	Starter	Federal Hybrids 4160VT2PRIB	220	19.6	57.5	32323	740	0.0	0.0	0.0	94	3.4	0.4	5.1	0.2	12.3
39	Starter	NuTech 5F-196	239	26.0	53.8	30934	773	0.0	0.0	0.0	97	3.4	0.4	4.9	0.2	7.1
40	Starter	DeKalb DKC46-36RIB	233	22.0	57.1	32197	772	0.0	0.0	0.0	92	3.5	0.4	4.7	0.2	8.9
41	Starter	Renk RK595SSTX	243	21.7	59.0	31060	806	0.0	0.0	0.0	101	3.7	0.4	4.8	0.2	10.7
42	Starter	DuPont Pioneer P0157AM	260	26.1	57.8	31060	839	0.0	0.0	0.0	96	3.5	0.5	5.6	0.1	10.3
43	Starter	Renk RK717SSTX	243	25.3	58.0	32197	787	1.1	0.8	0.4	92	3.6	0.5	5.6	0.2	11.1
45	Starter	Dekalb DKC58-06RIB	241	27.9	57.9	31944	769	0.4	0.4	0.0	95	3.7	0.5	5.4	0.2	10.0
Mean		226	23.3	57.0	31597	741	0.2	0.1	0.0	93	3.7	0.4	5.0	0.2	10.5	
Probability(%):																
Fertilizer(F)		34.1	76.1	17.4	52.6	37.9	46.3	55.0	64.0	9.8	--	--	--	--	--	
Hybrid (H)		0.0	0.0	0.0	91.7	0.0	6.4	19.9	7.8	0.0	--	--	--	--	--	
F x H		11.2	87.1	10.3	21.2	13.0	85.8	95.9	92.0	17.4	--	--	--	--	--	
LSD(0.10):																
Fertilizer(F)		NS	NS	NS	NS	NS	NS	NS	NS	4	--	--	--	--	--	
Hybrid (H)		9	0.7	1.1	896	30	0.5	NS	0.2	3	--	--	--	--	--	
F x H		NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--	

FIELD EXPERIMENT HISTORY

Title: Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Experiment: 12Fertilizer **Trial ID:** 6235 **Year:** 2017
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
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: 10/31/2017 **pH** 7.6 **OM (%)** 2.9 **P (ppm)** 46 **K (ppm)** 100

Plot Management

Tillage Operations: Field Cultivator Fall Chisel Plow

Fertilizer:	<u>Analysis</u>	<u>Product Rate</u>	<u>Date</u>
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn 10-34-0	200 lbs/A 4.08 gal/A	6/1/2017 6/1/2017
Post plant	28-0-0	642.9 lb/A	N/A
Manure:	Dairy	9000 gal/A	N/A

Herbicide: Steadfast 1.0 oz/A
Keystone 1.5 pt/A
Callisto 3.0 oz/A
Atrazine 0.25 lb/A

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

Irrigation: None

Planting Date: 6/1/2017 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/31/2017 **Harvest Method:** Massey 8XP

Notes:

Experimental Design RCB in a split-plot

Plot Size Seeded: 10' x 25'	Replications: 3
Harvest Plot Size: 5' x 23'	Experiment Size: 0.28 Acre
	Harvest Plant Density: 31147 plants per acre

Factors/Treatments:

Hybrid (RM):

- 1). Jung 4D178RIB (82)
- 2). Federal Hybrids 4160VT2PRIB (91)
- 3). NuTech 5F-196 (96)
- 4). Dekalb DKC46-36RIB (96)
- 5). Renk RK595SSTX (99)
- 6). DuPont Pioneer P0157AM (101)
- 7). Renk RK717SSTX (105)
- 8). Dekalb DKC58-06RIB (108)

Fertilizer:

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

Results: Table 1712-11

Table 1712 - 11. Corn Hybrid Response to Starter Fertilizer in Wisconsin.

Valders, 2017

Treatment			Grain	Grain	Test	Harvest	*AGI	Lodged			Plant					
number	Fertilizer	Hybrid	yield	moisture	weight	density	\$3.44	Total	Stalk	Root	height	N	P	K	S	DM
			bu/A	%	lb/bu	plants/A	\$/A	%	%	%	in	%	%	%	%	gr
	UTC		225	34.1	54.3	31431	692	0.4	0.4	0.0	100	--	--	--	--	--
	Pop-up		230	33.1	53.9	31013	710	0.5	0.3	0.2	95	--	--	--	--	--
	Starter		232	32.2	54.2	30997	721	0.4	0.4	0.0	101	--	--	--	--	--
		DeKalb DKC46-36RIB	232	33.1	53.7	31313	718	0.2	0.2	0.0	97	--	--	--	--	--
		Dekalb DKC58-06RIB	245	39.9	57.2	30829	726	0.8	0.4	0.4	101	--	--	--	--	--
		DuPont Pioneer P0157AM	217	34.7	54.5	30997	663	0.4	0.4	0.0	101	--	--	--	--	--
		Federal Hybrids 4160VT2PRIB	237	26.7	51.6	31397	764	0.4	0.4	0.0	94	--	--	--	--	--
		Jung 4D178RIB	216	24.3	54.4	30976	705	0.8	0.8	0.0	91	--	--	--	--	--
		NuTech 5F-196	252	29.6	52.6	32112	796	0.4	0.4	0.0	99	--	--	--	--	--
		Renk RK595SSTX	213	36.3	54.1	31207	645	0.0	0.0	0.0	102	--	--	--	--	--
		Renk RK717SSTX	218	40.4	55.1	30345	645	0.4	0.3	0.1	101	--	--	--	--	--
1	UTC	Jung 4D178RIB	200	25.9	53.4	30934	649	1.6	1.6	0.0	85	2.7	0.3	3.4	0.2	3.6
5	UTC	Federal Hybrids 4160VT2PRIB	245	25.6	51.3	31818	792	0.0	0.0	0.0	95	3.3	0.3	3.6	0.2	4.2
7	UTC	NuTech 5F-196	255	30.5	53.4	32197	800	0.8	0.8	0.0	103	2.9	0.4	3.8	0.2	2.8
8	UTC	DeKalb DKC46-36RIB	234	34.5	54.5	31439	718	0.0	0.0	0.0	101	3.5	0.3	3.5	0.2	3.7
9	UTC	Renk RK595SSTX	194	39.8	54.4	31313	580	0.0	0.0	0.0	102	3.7	0.3	3.3	0.2	3.4
10	UTC	DuPont Pioneer P0157AM	214	35.5	55.0	31439	652	0.6	0.6	0.0	102	3.8	0.3	3.3	0.2	3.5
11	UTC	Renk RK717SSTX	225	39.1	55.3	31818	670	0.4	0.4	0.0	105	3.4	0.3	3.4	0.2	3.3
13	UTC	Dekalb DKC58-06RIB	229	41.8	57.3	30492	675	0.0	0.0	0.0	103	3.2	0.4	4.4	0.2	3.6
17	Pop-up	Jung 4D178RIB	219	23.6	53.7	31060	717	0.0	0.0	0.0	90	2.8	0.3	3.9	0.2	4.6
21	Pop-up	Federal Hybrids 4160VT2PRIB	229	27.3	51.2	31313	736	1.2	1.2	0.0	91	2.9	0.3	3.7	0.2	4.5
23	Pop-up	NuTech 5F-196	247	31.1	51.9	31439	771	0.0	0.0	0.0	93	3.6	0.3	3.5	0.2	3.6
24	Pop-up	DeKalb DKC46-36RIB	236	31.9	54.0	31250	736	0.0	0.0	0.0	95	3.0	0.3	3.3	0.2	4.2
25	Pop-up	Renk RK595SSTX	232	33.1	54.4	31628	718	0.0	0.0	0.0	98	2.6	0.4	3.7	0.2	3.7
26	Pop-up	DuPont Pioneer P0157AM	215	35.6	53.9	30681	654	0.0	0.0	0.0	95	2.5	0.3	3.5	0.2	3.4
27	Pop-up	Renk RK717SSTX	204	42.5	54.8	30050	597	0.4	0.0	0.4	97	2.2	0.3	3.2	0.2	2.9
29	Pop-up	Dekalb DKC58-06RIB	255	40.2	57.1	30681	749	2.4	1.2	1.2	98	2.8	0.4	4.1	0.2	3.8
33	Starter	Jung 4D178RIB	228	23.3	56.1	30934	750	0.9	0.9	0.0	97	3.4	0.4	4.1	0.2	5.8
37	Starter	Federal Hybrids 4160VT2PRIB	238	27.3	52.4	31060	764	0.0	0.0	0.0	97	3.5	0.3	4.3	0.2	4.3
39	Starter	NuTech 5F-196	254	27.1	52.5	32702	815	0.4	0.4	0.0	102	3.6	0.4	3.8	0.2	4.0
40	Starter	DeKalb DKC46-36RIB	225	33.0	52.5	31250	700	0.6	0.6	0.0	96	3.6	0.3	3.5	0.2	4.3
41	Starter	Renk RK595SSTX	211	36.1	53.4	30681	638	0.1	0.1	0.0	105	3.6	0.4	4.4	0.2	5.1
42	Starter	DuPont Pioneer P0157AM	221	33.0	54.8	30871	682	0.7	0.7	0.0	104	3.6	0.4	4.0	0.2	4.3
43	Starter	Renk RK717SSTX	226	39.7	55.1	29166	669	0.4	0.4	0.0	101	3.4	0.3	3.7	0.2	3.8
45	Starter	Dekalb DKC58-06RIB	251	37.6	57.1	31313	752	0.0	0.0	0.0	102	3.3	0.4	4.1	0.2	4.6
Mean			229	33.1	54.1	31147	708	0.4	0.4	0.1	98	3.2	0.3	3.7	0.2	4.0
Probability(%):																
Fertilizer(F)			82.9	69.3	75.7	46.3	81.2	91.7	92.4	21.0	42.8	--	--	--	--	--
Hybrid (H)			1.2	0.0	0.0	14.0	0.5	78.1	83.1	28.8	0.0	--	--	--	--	--
F x H			79.6	68.2	56.8	67.4	80.2	21.3	49.2	29.1	20.7	--	--	--	--	--
LSD(0.10):																
Fertilizer(F)			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--
Hybrid (H)			20	2.9	1.2	NS	71	NS	NS	NS	4	--	--	--	--	--
F x H			NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--	--	--

Table 1712 - 12. Corn Hybrid Response to Starter Fertilizer in Wisconsin - Soil analysis.

Arlington, 2016												
Location	OM			pH			P			K		
	%	CV	STDDEV	%	CV	STDDEV	%	CV	STDDEV	%	CV	STDDEV
Arlington, WI	3.47	1.67	5.77	6.73	2.27	0.15	53.00	23.19	12.29	168.33	16.32	27.47
Chippewa Falls, WI	1.37	4.22	0.06	6.03	1.91	0.12	49.67	2.32	1.15	137.00	10.35	14.18
Coleman, WI	2.37	12.20	0.29	6.47	0.89	0.06	32.67	9.35	3.06	154.67	8.68	13.43
Fond du Lac, WI	4.10	32.27	1.32	6.80	1.47	0.10	17.67	37.69	6.66	105.00	6.67	7.00
Galesville, WI	3.53	4.32	0.15	5.63	3.70	0.21	24.67	18.72	4.62	198.67	12.66	25.15
Hancock, WI	0.80	12.50	0.10	6.00	3.33	0.20	44.67	5.63	2.52	92.67	24.90	23.07
Janesville, WI	3.10	0.00	0.00	6.07	2.52	0.15	33.67	12.37	4.16	110.33	16.47	18.18
Marshfield, WI	3.17	1.82	0.06	5.90	3.39	0.20	31.67	7.29	2.31	122.33	22.09	27.02
Montfort, WI	2.90	5.97	0.17	6.47	1.79	0.12	23.00	4.35	1.00	104.67	3.07	3.21
Seymour, WI	2.47	2.34	0.06	7.17	0.81	0.06	31.67	9.65	3.06	156.00	5.09	7.94
Valders, WI	2.87	8.06	0.23	7.63	1.51	0.12	46.00	28.43	13.08	100.33	16.14	16.20
Overall STD			0.99			0.59			12.34			36.18

**Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.
Arlington, WI - 2017.**

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
		149	1.9	2.4	3.4	3.1
		163	5.7	7.7	8.8	16.8
		177	8.2	11.1	12.8	39.0
		191	13.2	13.9	16.7	81.4
		205	19.4	18.5	19.7	114.4
		219	19.8	19.8	19.8	115.0
	Pop-up		11.3	12.4	13.5	61.4
	Starter		11.4	12.1	13.6	62.3
	UTC		11.4	12.1	13.6	61.1
	Pop-up	149	1.8	2.5	3.3	3.0
	Pop-up	163	5.7	7.7	8.8	17.0
	Pop-up	177	8.2	11.9	12.8	39.4
	Pop-up	191	13.2	13.9	16.7	81.5
	Pop-up	205	19.3	18.7	19.6	113.5
	Pop-up	219	19.7	19.7	19.7	114.1
	Starter	149	1.9	2.2	3.4	3.2
	Starter	163	5.7	7.6	8.8	16.9
	Starter	177	8.1	10.7	12.8	39.2
	Starter	191	13.3	13.9	16.8	82.9
	Starter	205	19.5	18.5	19.8	115.5
	Starter	219	19.9	19.9	19.9	116.2
	UTC	149	1.9	2.5	3.6	3.0
	UTC	163	5.7	7.7	8.8	16.4
	UTC	177	8.2	10.7	12.7	38.4
	UTC	191	13.2	13.8	16.8	80.0
	UTC	205	19.5	18.2	19.8	114.2
	UTC	219	19.9	19.9	19.9	114.6
AgriGold A6499STXRIB			11.3	11.5	13.7	57.6
DeKalb DKC46-36RIB			11.8	12.7	13.9	59.3
Dekalb DKC31-10			11.4	12.6	13.6	57.6
Dekalb DKC58-06RIB			11.5	13.6	13.7	63.1
Dekalb DKC65-79RIB			11.2	11.4	13.6	65.5
DuPont Pioneer P0157AM			10.7	11.7	12.8	59.5
DuPont Pioneer P0506AM			11.3	12.0	13.5	63.7
Federal Hybrids 4160VT2PRIB			11.7	12.8	13.9	60.9
Jung 4D178RIB			11.4	12.4	13.5	60.4
Munson 4877-3010			11.4	12.1	13.3	63.0
NK Brand N27P-3110A			11.5	12.4	13.7	62.7
NuTech 5F-196			11.3	12.2	13.4	64.5
Power Plus 4J95AMX			10.9	11.2	13.2	61.1
Renk RK595SSTX			12.0	12.8	14.1	62.6
Renk RK717SSTX			11.2	11.8	13.3	64.4
Tracy T086-26 311A			11.4	12.3	13.4	60.0

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters method	Total leaves	
			no./plant	no./plant	no./plant	
AgriGold A6499STXRIB		149	1.6	2.2	2.9	2.7
AgriGold A6499STXRIB		163	5.4	6.9	8.0	14.6
AgriGold A6499STXRIB		177	7.9	10.2	12.4	35.8
AgriGold A6499STXRIB		191	12.4	13.6	16.6	70.6
AgriGold A6499STXRIB		205	18.8	14.8	20.6	108.0
AgriGold A6499STXRIB		219	21.5	21.5	21.5	114.3
DeKalb DKC46-36RIB		149	2.0	2.1	3.3	2.9
DeKalb DKC46-36RIB		163	6.0	7.9	9.2	17.6
DeKalb DKC46-36RIB		177	8.4	10.9	12.9	38.7
DeKalb DKC46-36RIB		191	13.4	14.2	17.2	79.2
DeKalb DKC46-36RIB		205	20.4	20.4	20.4	108.6
DeKalb DKC46-36RIB		219	20.4	20.4	20.4	108.6
Dekalb DKC31-10		149	2.0	2.9	3.9	3.2
Dekalb DKC31-10		163	5.9	8.3	9.4	17.1
Dekalb DKC31-10		177	8.7	12.0	13.8	42.7
Dekalb DKC31-10		191	15.1	15.2	17.2	88.6
Dekalb DKC31-10		205	18.5	18.5	18.5	97.1
Dekalb DKC31-10		219	18.5	18.5	18.5	97.1
Dekalb DKC58-06RIB		149	2.0	2.4	3.2	3.0
Dekalb DKC58-06RIB		163	5.9	7.8	8.9	16.4
Dekalb DKC58-06RIB		177	8.1	18.0	12.7	37.9
Dekalb DKC58-06RIB		191	12.8	14.0	17.1	80.2
Dekalb DKC58-06RIB		205	19.9	19.4	20.2	120.4
Dekalb DKC58-06RIB		219	20.1	20.1	20.1	120.4
Dekalb DKC65-79RIB		149	1.8	2.3	3.2	3.1
Dekalb DKC65-79RIB		163	5.2	7.1	8.1	16.4
Dekalb DKC65-79RIB		177	7.9	10.2	12.2	38.6
Dekalb DKC65-79RIB		191	12.1	13.3	16.7	86.1
Dekalb DKC65-79RIB		205	18.9	14.2	20.4	123.8
Dekalb DKC65-79RIB		219	21.0	21.0	21.0	124.8
DuPont Pioneer P0157AM		149	1.7	2.0	2.9	2.9
DuPont Pioneer P0157AM		163	5.1	7.0	8.1	16.2
DuPont Pioneer P0157AM		177	7.7	10.2	12.0	37.3
DuPont Pioneer P0157AM		191	12.1	13.3	16.2	76.3
DuPont Pioneer P0157AM		205	18.9	18.9	18.9	112.1
DuPont Pioneer P0157AM		219	18.9	18.9	18.9	112.1
DuPont Pioneer P0506AM		149	1.9	2.6	3.7	3.4
DuPont Pioneer P0506AM		163	5.3	7.6	8.7	16.5
DuPont Pioneer P0506AM		177	8.0	10.3	12.0	38.5
DuPont Pioneer P0506AM		191	12.7	13.6	16.9	82.9
DuPont Pioneer P0506AM		205	19.6	18.1	19.9	120.1
DuPont Pioneer P0506AM		219	20.1	20.1	20.1	120.5

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Federal Hybrids 4160VT2PRIB		149	2.0	2.7	3.8	3.6
Federal Hybrids 4160VT2PRIB		163	5.9	8.1	9.4	19.0
Federal Hybrids 4160VT2PRIB		177	8.7	11.8	13.6	41.4
Federal Hybrids 4160VT2PRIB		191	14.1	14.5	17.1	80.6
Federal Hybrids 4160VT2PRIB		205	19.8	19.8	19.8	110.4
Federal Hybrids 4160VT2PRIB		219	19.8	19.8	19.8	110.4
Jung 4D178RIB		149	2.1	2.6	3.9	3.5
Jung 4D178RIB		163	5.9	8.3	9.7	17.9
Jung 4D178RIB		177	8.8	11.8	13.9	43.2
Jung 4D178RIB		191	14.7	14.8	16.8	88.8
Jung 4D178RIB		205	18.4	18.4	18.4	104.6
Jung 4D178RIB		219	18.4	18.4	18.4	104.6
Munson 4877-3010		149	1.8	2.3	3.1	2.8
Munson 4877-3010		163	5.8	7.6	8.7	15.3
Munson 4877-3010		177	8.1	10.4	12.7	39.2
Munson 4877-3010		191	13.4	13.4	16.1	84.6
Munson 4877-3010		205	19.5	19.5	19.5	118.0
Munson 4877-3010		219	19.5	19.5	19.5	118.0
NK Brand N27P-3110A		149	1.9	2.4	3.8	3.2
NK Brand N27P-3110A		163	5.8	7.9	8.9	17.3
NK Brand N27P-3110A		177	7.9	10.1	12.6	38.4
NK Brand N27P-3110A		191	13.2	13.8	16.4	82.9
NK Brand N27P-3110A		205	20.2	20.2	20.2	117.3
NK Brand N27P-3110A		219	20.2	20.2	20.2	117.3
NuTech 5F-196		149	1.8	2.7	3.6	2.8
NuTech 5F-196		163	5.7	7.7	8.7	17.7
NuTech 5F-196		177	8.0	10.3	12.7	41.1
NuTech 5F-196		191	13.2	13.4	16.7	87.6
NuTech 5F-196		205	19.5	19.5	19.5	118.9
NuTech 5F-196		219	19.5	19.5	19.5	118.9
Power Plus 4J95AMX		149	1.8	2.3	3.4	2.8
Power Plus 4J95AMX		163	5.6	7.2	8.3	16.3
Power Plus 4J95AMX		177	7.6	9.6	11.9	34.1
Power Plus 4J95AMX		191	12.0	13.2	16.3	72.4
Power Plus 4J95AMX		205	18.8	15.3	19.6	119.6
Power Plus 4J95AMX		219	19.7	19.7	19.7	121.1
Renk RK595SSTX		149	1.9	2.3	3.3	2.9
Renk RK595SSTX		163	5.9	7.9	9.0	17.4
Renk RK595SSTX		177	8.8	11.1	13.3	37.8
Renk RK595SSTX		191	13.8	14.7	17.6	80.8
Renk RK595SSTX		205	20.7	19.9	20.7	118.1
Renk RK595SSTX		219	20.7	20.7	20.7	118.3

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Renk RK717SSTX		149	2.0	2.3	3.4	3.3
Renk RK717SSTX		163	5.8	7.6	8.7	18.3
Renk RK717SSTX		177	8.0	10.1	12.6	41.3
Renk RK717SSTX		191	12.7	13.1	16.4	80.7
Renk RK717SSTX		205	19.3	18.6	19.3	121.4
Renk RK717SSTX		219	19.3	19.3	19.3	121.0
Tracy T086-26 311A		149	1.8	2.2	3.5	2.7
Tracy T086-26 311A		163	5.8	7.7	8.8	14.4
Tracy T086-26 311A		177	8.1	11.0	12.8	37.7
Tracy T086-26 311A		191	13.6	14.2	16.6	80.6
Tracy T086-26 311A		205	19.4	19.4	19.4	112.2
Tracy T086-26 311A		219	19.4	19.4	19.4	112.2
AgriGold A6499STXRIB	Pop-up		11.1	11.5	13.6	57.0
AgriGold A6499STXRIB	Starter		11.3	11.4	13.8	58.7
AgriGold A6499STXRIB	UTC		11.5	11.7	13.7	57.3
DeKalb DKC46-36RIB	Pop-up		11.8	12.7	13.9	60.7
DeKalb DKC46-36RIB	Starter		11.9	12.8	14.0	61.0
DeKalb DKC46-36RIB	UTC		11.8	12.6	13.8	56.1
Dekalb DKC31-10	Pop-up		11.5	12.8	13.7	52.7
Dekalb DKC31-10	Starter		11.3	12.3	13.4	59.5
Dekalb DKC31-10	UTC		11.5	12.6	13.6	60.7
Dekalb DKC58-06RIB	Pop-up		11.6	16.3	13.8	64.0
Dekalb DKC58-06RIB	Starter		11.6	12.6	13.8	64.0
Dekalb DKC58-06RIB	UTC		11.3	12.0	13.5	61.2
Dekalb DKC65-79RIB	Pop-up		11.1	11.3	13.4	65.8
Dekalb DKC65-79RIB	Starter		11.4	11.5	13.8	66.9
Dekalb DKC65-79RIB	UTC		11.0	11.3	13.6	63.7
DuPont Pioneer P0157AM	Pop-up		10.6	11.8	12.7	59.5
DuPont Pioneer P0157AM	Starter		10.9	11.7	13.1	60.2
DuPont Pioneer P0157AM	UTC		10.8	11.7	12.8	58.8
DuPont Pioneer P0506AM	Pop-up		11.3	12.3	13.5	64.7
DuPont Pioneer P0506AM	Starter		11.3	12.0	13.6	64.3
DuPont Pioneer P0506AM	UTC		11.3	11.8	13.6	61.9
Federal Hybrids 4160VT2PRIB	Pop-up		11.8	12.8	13.9	60.0
Federal Hybrids 4160VT2PRIB	Starter		11.7	12.7	13.9	61.5
Federal Hybrids 4160VT2PRIB	UTC		11.8	12.8	14.0	61.2
Jung 4D178RIB	Pop-up		11.3	12.1	13.4	60.7
Jung 4D178RIB	Starter		11.4	12.3	13.4	59.6
Jung 4D178RIB	UTC		11.6	12.7	13.8	61.1
Munson 4877-3010	Pop-up		11.2	11.9	12.9	63.0
Munson 4877-3010	Starter		11.5	12.2	13.3	62.7
Munson 4877-3010	UTC		11.4	12.3	13.5	63.3
NK Brand N27P-3110A	Pop-up		11.4	12.4	13.6	63.6
NK Brand N27P-3110A	Starter		11.5	12.4	13.7	63.4
NK Brand N27P-3110A	UTC		11.7	12.6	13.8	61.2

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
NuTech 5F-196	Pop-up		11.3	12.2	13.4	65.0
NuTech 5F-196	Starter		11.3	12.1	13.4	65.1
NuTech 5F-196	UTC		11.3	12.3	13.5	63.4
Power Plus 4J95AMX	Pop-up		10.9	11.6	13.1	60.6
Power Plus 4J95AMX	Starter		10.9	10.9	13.3	61.5
Power Plus 4J95AMX	UTC		10.9	11.1	13.3	61.1
Renk RK595SSTX	Pop-up		12.1	12.9	14.2	62.3
Renk RK595SSTX	Starter		11.9	12.9	14.1	63.3
Renk RK595SSTX	UTC		11.9	12.5	14.0	62.1
Renk RK717SSTX	Pop-up		11.0	11.6	13.0	64.7
Renk RK717SSTX	Starter		11.2	12.0	13.2	63.9
Renk RK717SSTX	UTC		11.4	11.9	13.6	64.5
Tracy T086-26 311A	Pop-up		11.3	12.3	13.3	58.8
Tracy T086-26 311A	Starter		11.3	12.3	13.3	61.2
Tracy T086-26 311A	UTC		11.5	12.4	13.6	60.0
AgriGold A6499STXRIB	Pop-up	149	1.3	2.2	2.7	2.4
AgriGold A6499STXRIB	Pop-up	163	5.2	6.8	7.8	14.5
AgriGold A6499STXRIB	Pop-up	177	7.8	10.0	12.2	36.5
AgriGold A6499STXRIB	Pop-up	191	12.2	13.3	16.5	68.7
AgriGold A6499STXRIB	Pop-up	205	18.5	15.2	20.7	107.7
AgriGold A6499STXRIB	Pop-up	219	21.5	21.5	21.5	112.0
AgriGold A6499STXRIB	Starter	149	1.7	1.8	3.2	3.1
AgriGold A6499STXRIB	Starter	163	5.7	7.0	8.0	15.3
AgriGold A6499STXRIB	Starter	177	8.0	10.8	13.0	38.3
AgriGold A6499STXRIB	Starter	191	12.2	13.5	16.7	72.5
AgriGold A6499STXRIB	Starter	205	18.3	13.7	20.3	106.3
AgriGold A6499STXRIB	Starter	219	21.7	21.7	21.7	116.7
AgriGold A6499STXRIB	UTC	149	1.7	2.5	3.0	2.5
AgriGold A6499STXRIB	UTC	163	5.5	7.0	8.2	13.8
AgriGold A6499STXRIB	UTC	177	8.0	9.8	12.0	32.5
AgriGold A6499STXRIB	UTC	191	12.8	13.8	16.7	70.5
AgriGold A6499STXRIB	UTC	205	19.5	15.7	20.8	110.0
AgriGold A6499STXRIB	UTC	219	21.3	21.3	21.3	114.2
DeKalb DKC46-36RIB	Pop-up	149	2.0	2.0	3.0	3.1
DeKalb DKC46-36RIB	Pop-up	163	6.0	8.0	9.5	19.2
DeKalb DKC46-36RIB	Pop-up	177	8.3	11.0	13.5	38.8
DeKalb DKC46-36RIB	Pop-up	191	13.8	14.7	17.3	81.8
DeKalb DKC46-36RIB	Pop-up	205	20.2	20.2	20.2	110.5
DeKalb DKC46-36RIB	Pop-up	219	20.2	20.2	20.2	110.5
DeKalb DKC46-36RIB	Starter	149	2.0	2.3	3.3	2.8
DeKalb DKC46-36RIB	Starter	163	6.0	8.0	9.2	17.0
DeKalb DKC46-36RIB	Starter	177	8.5	10.7	12.8	38.2
DeKalb DKC46-36RIB	Starter	191	13.8	14.7	17.5	81.0
DeKalb DKC46-36RIB	Starter	205	20.5	20.5	20.5	113.7
DeKalb DKC46-36RIB	Starter	219	20.5	20.5	20.5	113.7

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters method	Total leaves	
			no./plant	no./plant	no./plant	
DeKalb DKC46-36RIB	UTC	149	2.0	2.0	3.5	3.0
DeKalb DKC46-36RIB	UTC	163	6.0	7.8	8.8	16.7
DeKalb DKC46-36RIB	UTC	177	8.5	11.0	12.5	39.2
DeKalb DKC46-36RIB	UTC	191	12.7	13.2	16.7	74.7
DeKalb DKC46-36RIB	UTC	205	20.7	20.7	20.7	101.5
DeKalb DKC46-36RIB	UTC	219	20.7	20.7	20.7	101.5
Dekalb DKC31-10	Pop-up	149	2.0	3.2	3.8	3.3
Dekalb DKC31-10	Pop-up	163	6.0	8.8	9.8	16.3
Dekalb DKC31-10	Pop-up	177	9.0	12.7	14.5	41.2
Dekalb DKC31-10	Pop-up	191	15.5	15.8	17.7	89.7
Dekalb DKC31-10	Pop-up	205	18.2	18.2	18.2	82.8
Dekalb DKC31-10	Pop-up	219	18.2	18.2	18.2	82.8
Dekalb DKC31-10	Starter	149	2.0	2.7	3.8	3.3
Dekalb DKC31-10	Starter	163	6.0	8.0	9.3	17.3
Dekalb DKC31-10	Starter	177	8.7	11.7	13.7	43.8
Dekalb DKC31-10	Starter	191	14.7	14.8	17.0	89.7
Dekalb DKC31-10	Starter	205	18.3	18.3	18.3	101.3
Dekalb DKC31-10	Starter	219	18.3	18.3	18.3	101.3
Dekalb DKC31-10	UTC	149	2.0	2.8	4.0	3.2
Dekalb DKC31-10	UTC	163	5.7	8.0	9.2	17.5
Dekalb DKC31-10	UTC	177	8.3	11.7	13.3	43.2
Dekalb DKC31-10	UTC	191	15.0	15.0	17.0	86.5
Dekalb DKC31-10	UTC	205	19.0	19.0	19.0	107.0
Dekalb DKC31-10	UTC	219	19.0	19.0	19.0	107.0
Dekalb DKC58-06RIB	Pop-up	149	2.0	2.3	3.0	2.8
Dekalb DKC58-06RIB	Pop-up	163	6.0	8.0	9.0	16.8
Dekalb DKC58-06RIB	Pop-up	177	8.0	32.5	12.8	38.5
Dekalb DKC58-06RIB	Pop-up	191	13.0	14.0	17.2	81.7
Dekalb DKC58-06RIB	Pop-up	205	20.3	20.3	20.3	122.2
Dekalb DKC58-06RIB	Pop-up	219	20.3	20.3	20.3	122.2
Dekalb DKC58-06RIB	Starter	149	2.0	2.3	3.2	3.6
Dekalb DKC58-06RIB	Starter	163	6.0	7.7	8.8	16.5
Dekalb DKC58-06RIB	Starter	177	8.2	10.8	12.8	38.5
Dekalb DKC58-06RIB	Starter	191	12.8	14.3	17.2	80.3
Dekalb DKC58-06RIB	Starter	205	20.3	20.3	20.3	122.5
Dekalb DKC58-06RIB	Starter	219	20.3	20.3	20.3	122.5
Dekalb DKC58-06RIB	UTC	149	2.0	2.7	3.3	2.5
Dekalb DKC58-06RIB	UTC	163	5.8	7.8	8.8	16.0
Dekalb DKC58-06RIB	UTC	177	8.2	10.7	12.5	36.8
Dekalb DKC58-06RIB	UTC	191	12.7	13.7	16.8	78.7
Dekalb DKC58-06RIB	UTC	205	19.2	17.5	19.8	116.7
Dekalb DKC58-06RIB	UTC	219	19.7	19.7	19.7	116.5

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Dekalb DKC65-79RIB	Pop-up	149	1.7	2.5	3.0	3.1
Dekalb DKC65-79RIB	Pop-up	163	5.0	7.0	8.0	15.7
Dekalb DKC65-79RIB	Pop-up	177	8.0	10.2	12.0	40.2
Dekalb DKC65-79RIB	Pop-up	191	12.0	13.2	16.3	86.3
Dekalb DKC65-79RIB	Pop-up	205	18.8	14.0	20.0	124.7
Dekalb DKC65-79RIB	Pop-up	219	20.8	20.8	20.8	125.2
Dekalb DKC65-79RIB	Starter	149	2.0	2.2	3.3	3.3
Dekalb DKC65-79RIB	Starter	163	5.5	7.3	8.3	17.9
Dekalb DKC65-79RIB	Starter	177	8.0	10.3	12.3	39.0
Dekalb DKC65-79RIB	Starter	191	12.2	13.2	16.7	89.7
Dekalb DKC65-79RIB	Starter	205	19.5	14.7	21.0	125.2
Dekalb DKC65-79RIB	Starter	219	21.2	21.2	21.2	126.3
Dekalb DKC65-79RIB	UTC	149	1.8	2.3	3.2	3.1
Dekalb DKC65-79RIB	UTC	163	5.2	7.0	8.0	15.5
Dekalb DKC65-79RIB	UTC	177	7.7	10.0	12.2	36.7
Dekalb DKC65-79RIB	UTC	191	12.2	13.5	17.0	82.3
Dekalb DKC65-79RIB	UTC	205	18.3	14.0	20.2	121.7
Dekalb DKC65-79RIB	UTC	219	21.0	21.0	21.0	122.8
DuPont Pioneer P0157AM	Pop-up	149	1.7	2.0	2.8	3.3
DuPont Pioneer P0157AM	Pop-up	163	5.2	7.2	8.2	17.0
DuPont Pioneer P0157AM	Pop-up	177	7.5	10.5	12.0	38.0
DuPont Pioneer P0157AM	Pop-up	191	11.8	13.5	15.8	74.8
DuPont Pioneer P0157AM	Pop-up	205	18.7	18.7	18.7	111.8
DuPont Pioneer P0157AM	Pop-up	219	18.7	18.7	18.7	111.8
DuPont Pioneer P0157AM	Starter	149	1.7	1.7	2.8	2.8
DuPont Pioneer P0157AM	Starter	163	5.0	6.8	8.2	15.9
DuPont Pioneer P0157AM	Starter	177	7.5	9.8	12.0	37.3
DuPont Pioneer P0157AM	Starter	191	12.0	13.0	16.5	78.7
DuPont Pioneer P0157AM	Starter	205	19.5	19.5	19.5	113.3
DuPont Pioneer P0157AM	Starter	219	19.5	19.5	19.5	113.3
DuPont Pioneer P0157AM	UTC	149	1.7	2.3	3.0	2.7
DuPont Pioneer P0157AM	UTC	163	5.2	7.0	8.0	15.6
DuPont Pioneer P0157AM	UTC	177	8.0	10.3	12.0	36.7
DuPont Pioneer P0157AM	UTC	191	12.3	13.3	16.2	75.5
DuPont Pioneer P0157AM	UTC	205	18.7	18.7	18.7	111.2
DuPont Pioneer P0157AM	UTC	219	18.7	18.7	18.7	111.2
DuPont Pioneer P0506AM	Pop-up	149	2.0	2.5	3.5	3.3
DuPont Pioneer P0506AM	Pop-up	163	5.5	7.7	8.7	17.7
DuPont Pioneer P0506AM	Pop-up	177	8.0	10.7	12.0	40.2
DuPont Pioneer P0506AM	Pop-up	191	12.7	13.5	17.0	83.2
DuPont Pioneer P0506AM	Pop-up	205	19.8	19.8	19.8	122.0
DuPont Pioneer P0506AM	Pop-up	219	19.8	19.8	19.8	122.0

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
DuPont Pioneer P0506AM	Starter	149	1.8	2.2	3.5	3.5
DuPont Pioneer P0506AM	Starter	163	5.0	7.5	8.7	15.8
DuPont Pioneer P0506AM	Starter	177	8.0	10.0	11.7	38.5
DuPont Pioneer P0506AM	Starter	191	12.7	13.7	17.0	83.2
DuPont Pioneer P0506AM	Starter	205	19.8	18.2	20.2	122.5
DuPont Pioneer P0506AM	Starter	219	20.3	20.3	20.3	122.5
DuPont Pioneer P0506AM	UTC	149	2.0	3.0	4.0	3.6
DuPont Pioneer P0506AM	UTC	163	5.5	7.7	8.7	16.0
DuPont Pioneer P0506AM	UTC	177	8.0	10.2	12.3	36.8
DuPont Pioneer P0506AM	UTC	191	12.8	13.5	16.7	82.5
DuPont Pioneer P0506AM	UTC	205	19.2	16.3	19.8	115.7
DuPont Pioneer P0506AM	UTC	219	20.2	20.2	20.2	117.0
Federal Hybrids 4160VT2PRIB	Pop-up	149	2.3	3.0	3.8	4.1
Federal Hybrids 4160VT2PRIB	Pop-up	163	6.0	8.2	9.5	19.5
Federal Hybrids 4160VT2PRIB	Pop-up	177	9.0	12.0	13.8	40.8
Federal Hybrids 4160VT2PRIB	Pop-up	191	13.8	14.3	17.2	76.8
Federal Hybrids 4160VT2PRIB	Pop-up	205	19.7	19.7	19.7	109.3
Federal Hybrids 4160VT2PRIB	Pop-up	219	19.7	19.7	19.7	109.3
Federal Hybrids 4160VT2PRIB	Starter	149	1.7	2.3	3.5	3.6
Federal Hybrids 4160VT2PRIB	Starter	163	5.8	8.0	9.3	18.3
Federal Hybrids 4160VT2PRIB	Starter	177	8.3	11.3	13.3	40.5
Federal Hybrids 4160VT2PRIB	Starter	191	13.8	14.3	16.7	81.5
Federal Hybrids 4160VT2PRIB	Starter	205	20.2	20.2	20.2	112.5
Federal Hybrids 4160VT2PRIB	Starter	219	20.2	20.2	20.2	112.5
Federal Hybrids 4160VT2PRIB	UTC	149	2.0	2.7	4.0	3.2
Federal Hybrids 4160VT2PRIB	UTC	163	6.0	8.2	9.5	19.2
Federal Hybrids 4160VT2PRIB	UTC	177	8.8	12.0	13.7	42.8
Federal Hybrids 4160VT2PRIB	UTC	191	14.5	14.8	17.5	83.3
Federal Hybrids 4160VT2PRIB	UTC	205	19.7	19.7	19.7	109.3
Federal Hybrids 4160VT2PRIB	UTC	219	19.7	19.7	19.7	109.3
Jung 4D178RIB	Pop-up	149	2.2	2.8	3.8	3.3
Jung 4D178RIB	Pop-up	163	6.0	8.3	9.8	18.5
Jung 4D178RIB	Pop-up	177	9.0	11.3	14.0	44.2
Jung 4D178RIB	Pop-up	191	14.5	14.3	16.7	89.5
Jung 4D178RIB	Pop-up	205	18.0	18.0	18.0	104.3
Jung 4D178RIB	Pop-up	219	18.0	18.0	18.0	104.3
Jung 4D178RIB	Starter	149	2.0	2.3	3.8	3.5
Jung 4D178RIB	Starter	163	5.8	8.3	9.5	18.0
Jung 4D178RIB	Starter	177	8.8	11.7	13.8	44.0
Jung 4D178RIB	Starter	191	14.8	15.0	16.8	89.2
Jung 4D178RIB	Starter	205	18.3	18.3	18.3	101.3
Jung 4D178RIB	Starter	219	18.3	18.3	18.3	101.3

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Jung 4D178RIB	UTC	149	2.0	2.5	4.0	3.8
Jung 4D178RIB	UTC	163	6.0	8.3	9.7	17.2
Jung 4D178RIB	UTC	177	8.7	12.3	14.0	41.5
Jung 4D178RIB	UTC	191	14.8	15.0	17.0	87.8
Jung 4D178RIB	UTC	205	19.0	19.0	19.0	108.2
Jung 4D178RIB	UTC	219	19.0	19.0	19.0	108.2
Munson 4877-3010	Pop-up	149	1.3	2.2	2.7	2.4
Munson 4877-3010	Pop-up	163	5.7	7.5	8.5	15.3
Munson 4877-3010	Pop-up	177	8.2	10.2	12.3	39.5
Munson 4877-3010	Pop-up	191	13.2	13.2	15.5	85.7
Munson 4877-3010	Pop-up	205	19.3	19.3	19.3	117.7
Munson 4877-3010	Pop-up	219	19.3	19.3	19.3	117.7
Munson 4877-3010	Starter	149	2.2	2.0	3.2	3.3
Munson 4877-3010	Starter	163	6.0	7.7	8.8	15.0
Munson 4877-3010	Starter	177	8.2	10.8	12.8	39.0
Munson 4877-3010	Starter	191	14.0	13.8	16.5	83.7
Munson 4877-3010	Starter	205	19.3	19.3	19.3	117.5
Munson 4877-3010	Starter	219	19.3	19.3	19.3	117.5
Munson 4877-3010	UTC	149	1.8	2.7	3.5	2.7
Munson 4877-3010	UTC	163	5.8	7.7	8.7	15.7
Munson 4877-3010	UTC	177	8.0	10.3	12.8	39.2
Munson 4877-3010	UTC	191	13.2	13.3	16.3	84.5
Munson 4877-3010	UTC	205	19.8	19.8	19.8	118.8
Munson 4877-3010	UTC	219	19.8	19.8	19.8	118.8
NK Brand N27P-3110A	Pop-up	149	1.7	2.5	3.7	3.1
NK Brand N27P-3110A	Pop-up	163	5.8	8.0	9.0	17.4
NK Brand N27P-3110A	Pop-up	177	8.0	9.5	12.7	42.0
NK Brand N27P-3110A	Pop-up	191	13.2	14.3	16.5	84.3
NK Brand N27P-3110A	Pop-up	205	20.0	20.0	20.0	117.3
NK Brand N27P-3110A	Pop-up	219	20.0	20.0	20.0	117.3
NK Brand N27P-3110A	Starter	149	2.0	2.3	3.8	3.3
NK Brand N27P-3110A	Starter	163	5.8	7.8	8.8	17.5
NK Brand N27P-3110A	Starter	177	7.7	10.0	12.5	35.8
NK Brand N27P-3110A	Starter	191	13.2	13.7	16.5	84.7
NK Brand N27P-3110A	Starter	205	20.2	20.2	20.2	119.7
NK Brand N27P-3110A	Starter	219	20.2	20.2	20.2	119.7
NK Brand N27P-3110A	UTC	149	2.0	2.5	3.8	3.3
NK Brand N27P-3110A	UTC	163	5.8	7.8	8.8	17.0
NK Brand N27P-3110A	UTC	177	8.2	10.7	12.7	37.5
NK Brand N27P-3110A	UTC	191	13.2	13.3	16.2	79.7
NK Brand N27P-3110A	UTC	205	20.5	20.5	20.5	114.8
NK Brand N27P-3110A	UTC	219	20.5	20.5	20.5	114.8

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
NuTech 5F-196	Pop-up	149	1.7	3.0	3.5	2.7
NuTech 5F-196	Pop-up	163	5.7	7.8	8.8	18.8
NuTech 5F-196	Pop-up	177	8.0	10.0	12.5	40.0
NuTech 5F-196	Pop-up	191	13.2	13.2	16.8	87.8
NuTech 5F-196	Pop-up	205	19.5	19.5	19.5	120.3
NuTech 5F-196	Pop-up	219	19.5	19.5	19.5	120.3
NuTech 5F-196	Starter	149	2.0	2.5	3.5	2.9
NuTech 5F-196	Starter	163	5.8	7.7	8.8	17.8
NuTech 5F-196	Starter	177	8.0	10.3	12.8	43.0
NuTech 5F-196	Starter	191	13.3	13.7	16.3	90.7
NuTech 5F-196	Starter	205	19.3	19.3	19.3	118.0
NuTech 5F-196	Starter	219	19.3	19.3	19.3	118.0
NuTech 5F-196	UTC	149	1.8	2.7	3.7	2.8
NuTech 5F-196	UTC	163	5.7	7.5	8.5	16.5
NuTech 5F-196	UTC	177	8.0	10.7	12.8	40.2
NuTech 5F-196	UTC	191	13.0	13.5	16.8	84.2
NuTech 5F-196	UTC	205	19.7	19.7	19.7	118.3
NuTech 5F-196	UTC	219	19.7	19.7	19.7	118.3
Power Plus 4J95AMX	Pop-up	149	1.8	2.7	3.3	2.8
Power Plus 4J95AMX	Pop-up	163	5.3	7.2	8.2	15.3
Power Plus 4J95AMX	Pop-up	177	7.8	9.7	12.0	34.2
Power Plus 4J95AMX	Pop-up	191	12.0	13.2	16.2	71.8
Power Plus 4J95AMX	Pop-up	205	19.0	17.3	19.5	117.3
Power Plus 4J95AMX	Pop-up	219	19.7	19.7	19.7	122.0
Power Plus 4J95AMX	Starter	149	1.5	1.8	3.2	2.8
Power Plus 4J95AMX	Starter	163	5.5	7.2	8.2	17.0
Power Plus 4J95AMX	Starter	177	7.3	9.3	11.8	33.2
Power Plus 4J95AMX	Starter	191	12.2	13.0	16.7	73.3
Power Plus 4J95AMX	Starter	205	18.8	14.3	19.8	121.3
Power Plus 4J95AMX	Starter	219	20.0	20.0	20.0	121.3
Power Plus 4J95AMX	UTC	149	2.0	2.3	3.8	3.0
Power Plus 4J95AMX	UTC	163	5.8	7.3	8.5	16.5
Power Plus 4J95AMX	UTC	177	7.7	9.8	12.0	35.0
Power Plus 4J95AMX	UTC	191	11.8	13.3	16.2	72.2
Power Plus 4J95AMX	UTC	205	18.5	14.3	19.5	120.2
Power Plus 4J95AMX	UTC	219	19.5	19.5	19.5	119.8
Renk RK595SSTX	Pop-up	149	2.0	2.7	3.5	2.9
Renk RK595SSTX	Pop-up	163	6.0	8.0	9.0	17.5
Renk RK595SSTX	Pop-up	177	9.0	10.8	13.5	39.0
Renk RK595SSTX	Pop-up	191	14.0	14.8	17.7	79.5
Renk RK595SSTX	Pop-up	205	20.7	20.7	20.7	117.3
Renk RK595SSTX	Pop-up	219	20.7	20.7	20.7	117.3

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Renk RK595SSTX	Starter	149	1.7	2.0	3.2	2.8
Renk RK595SSTX	Starter	163	5.8	7.7	9.0	17.7
Renk RK595SSTX	Starter	177	8.8	11.5	13.5	36.3
Renk RK595SSTX	Starter	191	13.8	14.7	17.8	83.0
Renk RK595SSTX	Starter	205	20.7	20.7	20.7	120.2
Renk RK595SSTX	Starter	219	20.7	20.7	20.7	120.2
Renk RK595SSTX	UTC	149	2.0	2.3	3.3	3.2
Renk RK595SSTX	UTC	163	6.0	8.0	9.0	17.0
Renk RK595SSTX	UTC	177	8.7	10.8	13.0	38.2
Renk RK595SSTX	UTC	191	13.5	14.5	17.3	80.0
Renk RK595SSTX	UTC	205	20.7	18.5	20.7	116.7
Renk RK595SSTX	UTC	219	20.7	20.7	20.7	117.5
Renk RK717SSTX	Pop-up	149	1.8	2.3	3.2	3.5
Renk RK717SSTX	Pop-up	163	5.8	7.5	8.5	18.8
Renk RK717SSTX	Pop-up	177	8.0	9.5	12.7	41.5
Renk RK717SSTX	Pop-up	191	12.5	12.5	16.2	81.5
Renk RK717SSTX	Pop-up	205	18.8	18.8	18.8	121.5
Renk RK717SSTX	Pop-up	219	18.8	18.8	18.8	121.5
Renk RK717SSTX	Starter	149	2.0	2.0	3.3	3.4
Renk RK717SSTX	Starter	163	5.7	7.3	8.5	18.0
Renk RK717SSTX	Starter	177	8.0	10.5	12.3	41.3
Renk RK717SSTX	Starter	191	12.7	13.2	16.2	81.2
Renk RK717SSTX	Starter	205	19.5	19.5	19.5	119.7
Renk RK717SSTX	Starter	219	19.5	19.5	19.5	119.7
Renk RK717SSTX	UTC	149	2.2	2.5	3.7	3.1
Renk RK717SSTX	UTC	163	6.0	8.0	9.0	18.2
Renk RK717SSTX	UTC	177	8.0	10.3	12.8	41.2
Renk RK717SSTX	UTC	191	13.0	13.5	17.0	79.5
Renk RK717SSTX	UTC	205	19.5	17.3	19.5	123.0
Renk RK717SSTX	UTC	219	19.5	19.5	19.5	121.8
Tracy T086-26 311A	Pop-up	149	1.7	2.2	3.2	2.5
Tracy T086-26 311A	Pop-up	163	5.7	7.8	8.8	14.0
Tracy T086-26 311A	Pop-up	177	8.0	10.7	12.3	36.0
Tracy T086-26 311A	Pop-up	191	13.3	14.2	16.5	80.3
Tracy T086-26 311A	Pop-up	205	19.5	19.5	19.5	109.8
Tracy T086-26 311A	Pop-up	219	19.5	19.5	19.5	109.8
Tracy T086-26 311A	Starter	149	2.0	2.2	3.5	2.8
Tracy T086-26 311A	Starter	163	5.8	7.8	8.8	15.5
Tracy T086-26 311A	Starter	177	8.2	11.2	13.0	40.5
Tracy T086-26 311A	Starter	191	13.8	14.5	16.7	83.5
Tracy T086-26 311A	Starter	205	19.0	19.0	19.0	112.3
Tracy T086-26 311A	Starter	219	19.0	19.0	19.0	112.3

Continued

Table: 1712-13. Hybrid Maturity and Starter Fertilizer Influence on Corn Leaf Development.

(continued)

Arlington, WI - 2017.

Hybrid	Type of Fertilizer	Observation date day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Tracy T086-26 311A	UTC	149	1.8	2.2	3.8	2.8
Tracy T086-26 311A	UTC	163	5.8	7.5	8.7	13.7
Tracy T086-26 311A	UTC	177	8.0	11.2	13.0	36.7
Tracy T086-26 311A	UTC	191	13.5	14.0	16.7	78.0
Tracy T086-26 311A	UTC	205	19.8	19.8	19.8	114.3
Tracy T086-26 311A	UTC	219	19.8	19.8	19.8	114.3
Mean			11.4	12.2	13.5	61.6
<u>Probability(%)</u>						
Hybrid(H)			0.0	0.6	0.1	0.0
Fertilizer (F)			0.5	26.1	0.4	0.0
HxF			12.0	18.0	0.2	0.0
Sample DOY (S)			0.0	0.0	0.0	0.0
H x S			0.0	0.0	0.0	0.0
FxS			51.7	50.8	2.9	7.8
HxFxS			60.3	34.3	85.1	5.5
<u>LSD(0.10)</u>						
Hybrid(H)			0.9	2.4	1.1	0.2
Fertilizer (F)			0.1	NS	0.1	0.4
HxF			NS	NS	0.2	1.5
Sample DOY (S)			0.1	0.3	0.1	0.5
H x S			0.3	1.4	0.3	2.2
FxS			NS	NS	0.1	0.9
HxFxS			NS	NS	NS	3.7