

## FIELD EXPERIMENT HISTORY

**Title:** Date of Planting and Hybrid Influence on Corn Forage and Corn Grain Yield  
**Experiment:** 03DOP **Trial ID:** 6342 **Year:** 2019  
**Personnel:** Joe Lauer, Kent Kohn, Thierno Diallo  
**Location:** Arlington, WI **County:** Columbia  
**Supported By:** HATCH

### Site Information

**Field:** ARS358 **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam  
**Soil Test:** **Date:** 11/1 /16 **pH:** 6.1 **OM (%)** 2.9 **P (ppm)** 27 **K (ppm)** 161

### Plot Management

**Tillage Operations:** Disk Chisel Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
<b>Fertilizer:</b>			
<b>Preplant :</b>	32-0-0	123 lbs/A	N/A
<b>Starter :</b>	N/A	N/A	N/A
<b>Post plant :</b>	N/A	N/A	N/A
<b>Manure:</b>	N/A	N/A	N/A
<b>Herbicide:</b>	Dual II 1.5 pt/A Hornet 4.0 oz/A	<b>Insecticide:</b> None	
		<b>Hybrid:</b> Factor	
<b>Irrigation:</b>	None		
<b>Planting Date:</b>	See Factors	<b>Planting Depth:</b> 1.5"	<b>Row Width:</b> 30"
<b>Target Plant Density:</b>	34000 plants per acre	<b>Planting Method:</b>	JD1700 w RTK
<b>Harvest Date:</b>	S: See Factors G: 11/15/19	<b>Harvest Method:</b>	S: New Holland 707 G: Massey Ferguson 8XP

**Notes:**

### Experimental Design

**Design:** RCB split-plot (2 x 4 Factorial for split) **Replications:** 4  
**Plot Size Seeded:** 10' x 30' **Experiment Size:** 1.7 A  
**Harvest Plot Size:** S: 30' x 2.5'  
 G: 30' x 5' **Harvest Plant Density:** 32960 plants per acre

### Factors/Treatments:

<u>Planting Date:</u>	<u>Hybrid:</u>	<u>Harvest Date:</u>
1) April 22	1) Pioneer P9998AMXT	1) September 06
2) May 03	2) DeKalb DKC58-06RIB	2) September 24
3) May 14		
4) May 31		
5) June 14		

**Results: Tables 1903-01, 1903-02 & 1903-03.**



**Table: 1903-02. Planting Date and Harvest Timing Influence on Corn Silage Performance.****Arlington, WI - 2019.**

Hybrid	Planting date	Harvest date	Plant density plants/A	Whole Plant														
				Dry Matter		Plant height inches	Kernel milk %	KMR 0-5	SMR 0-5	VMR 0-10	Crude		In Vitro			Milk per		
				yield tons/A	Moisture %						protein %	ADF %	NDF %	Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A
DKC58-06RIB			32046	8.8	73.5	108	74	3.7	3.0	6.7	7.5	22.5	41.2	83.3	59.5	22.7	2835	25221
P9998AMXT			34470	8.8	72.9	105	69	3.4	2.3	5.8	7.5	22.2	40.3	84.4	61.4	24.6	2983	26746
	April 22		31254	9.5	70.6	101	58	2.9	2.3	5.2	7.4	20.1	37.5	85.1	60.2	28.1	3093	29718
	May 03		32307	9.1	71.8	104	60	3.0	2.0	5.0	7.2	21.0	38.8	84.4	59.8	26.5	3001	27554
	May 14		32706	8.8	71.7	102	68	3.4	2.4	5.8	7.3	20.3	38.1	85.2	61.1	27.1	3055	26808
	May 31		35247	9.1	73.9	111	80	4.0	2.9	6.9	7.5	22.4	41.0	84.1	61.4	23.9	2966	27213
	June 14		34775	7.5	78.0	113	92	4.6	3.6	8.3	8.0	27.9	48.5	80.4	59.7	12.6	2431	18625
		September 6	33106	8.3	75.4	105	85	4.2	3.4	7.6	7.8	24.0	43.2	83.2	61.2	18.9	2691	22822
		September 24	33411	9.3	71.0	107	58	2.9	1.9	4.8	7.2	20.7	38.4	84.5	59.7	28.4	3128	29145
DKC58-06RIB	April 22		29330	9.3	70.6	103	61	3.1	2.6	5.7	7.4	19.5	37.1	85.2	60.0	28.2	3072	28721
DKC58-06RIB	May 03		30710	9.0	72.1	105	65	3.3	2.5	5.8	7.2	20.9	38.8	84.1	58.9	25.5	2906	26474
DKC58-06RIB	May 14		30928	8.9	71.8	103	71	3.5	2.7	6.3	7.2	20.4	38.4	84.6	59.9	26.7	3005	26919
DKC58-06RIB	May 31		34630	9.0	74.5	112	81	4.0	3.1	7.1	7.6	23.3	42.5	83.0	60.0	21.7	2830	25707
DKC58-06RIB	June 14		34630	7.5	78.3	114	94	4.7	4.0	8.7	8.0	28.4	49.3	79.6	58.8	11.6	2363	18284
P9998AMXT	April 22		33178	9.8	70.6	98	54	2.7	2.0	4.6	7.4	20.6	37.9	85.0	60.4	28.1	3115	30715
P9998AMXT	May 03		33904	9.2	71.5	102	54	2.7	1.6	4.3	7.2	21.2	38.7	84.7	60.6	27.5	3096	28635
P9998AMXT	May 14		34485	8.6	71.6	101	64	3.2	2.1	5.3	7.4	20.2	37.8	85.7	62.3	27.6	3106	26697
P9998AMXT	May 31		35864	9.2	73.3	111	80	4.0	2.7	6.7	7.5	21.5	39.5	85.3	62.9	26.1	3101	28719
P9998AMXT	June 14		34921	7.4	77.6	112	91	4.5	3.3	7.9	8.0	27.5	47.7	81.2	60.6	13.7	2498	18965
DKC58-06RIB		September 6	32234	8.2	75.6	106	85	4.3	3.7	8.0	7.8	24.4	44.0	82.5	60.5	17.3	2585	21611
DKC58-06RIB		September 24	31857	9.3	71.3	109	63	3.2	2.2	5.4	7.1	20.6	38.4	84.1	58.5	28.2	3086	28831
P9998AMXT		September 6	33977	8.5	75.1	104	84	4.2	3.1	7.3	7.7	23.5	42.3	83.8	61.9	20.6	2796	24033
P9998AMXT		September 24	34964	9.2	70.7	106	53	2.7	1.6	4.2	7.2	20.9	38.4	84.9	60.9	28.5	3170	29459
	April 22	September 6	30855	9.1	72.8	97	77	3.8	3.4	7.2	7.7	20.9	38.8	85.2	61.9	25.3	2985	27176
	April 22	September 24	31654	10.0	68.3	105	38	1.9	1.2	3.1	7.1	19.3	36.2	85.0	58.6	31.0	3202	32260
	May 03	September 6	31436	9.0	73.4	104	76	3.8	2.8	6.7	7.4	21.3	39.6	84.5	60.9	24.7	2938	26661
	May 03	September 24	33178	9.2	70.2	103	44	2.2	1.2	3.4	6.9	20.8	38.0	84.3	58.6	28.3	3064	28448
	May 14	September 6	33614	8.7	73.6	103	82	4.1	2.9	6.9	7.5	21.0	39.1	85.2	62.1	24.6	2942	25659
	May 14	September 24	31799	8.8	69.8	101	53	2.7	2.0	4.6	7.1	19.6	37.0	85.2	60.1	29.7	3169	27956
	May 31	September 6	34267	8.2	76.5	110	91	4.6	3.7	8.3	7.9	24.9	44.4	82.9	61.8	17.5	2659	21931
	May 31	September 24	36227	9.9	71.3	113	69	3.5	2.0	5.5	7.2	19.9	37.6	85.3	61.1	30.3	3272	32496
	June 14	September 6	35356	6.6	80.6	113	98	4.9	4.2	9.1	8.4	31.7	54.0	78.0	59.3	2.8	1929	12682
	June 14	September 24	34195	8.4	75.3	114	87	4.3	3.1	7.5	7.5	24.2	43.1	82.8	60.1	22.5	2932	24567

continued



**Table: 1903-03. Planting Date and Hybrid Influence on Corn Leaf Development.  
Arlington, WI - 2019.**

Hybrid	Date of planting	Observation date	Leaf Development			Plant height
			Leaf collars	Hail adjusters method	Total leaves	
		day of year	no./plant	no./plant	no./plant	inches
		156	2.3	3.5	4.2	4.7
		169	4.2	5.9	6.9	11.3
		184	6.5	9.0	10.2	27.3
		197	10.8	12.0	14.8	67.1
		211	16.6	16.0	18.1	94.9
		225	18.9	17.5	18.9	106.1
	April 22		11.3	12.1	13.5	56.8
	May 03		10.9	11.8	13.3	57.7
	May 14		10.4	11.1	12.7	55.3
	May 31		10.4	11.0	12.8	57.9
	June 14		9.5	10.0	12.0	54.9
	April 22	156	2.8	4.0	4.6	4.9
	April 22	169	5.1	6.9	8.0	13.3
	April 22	184	8.3	11.5	12.9	36.5
	April 22	197	13.4	14.9	17.1	84.0
	April 22	211	18.7	17.4	18.9	100.9
	April 22	225	19.3	18.0	19.3	101.3
	May 03	156	2.1	3.6	4.2	5.0
	May 03	169	4.7	6.6	7.5	13.3
	May 03	184	8.1	10.9	12.6	38.4
	May 03	197	12.8	14.1	16.9	82.1
	May 03	211	18.5	17.4	19.3	104.1
	May 03	225	19.4	18.5	19.4	103.6
	May 14	156	2.0	3.0	3.8	4.1
	May 14	169	4.3	6.2	7.1	11.6
	May 14	184	7.3	9.7	11.0	32.3
	May 14	197	11.8	12.8	16.1	78.8
	May 14	211	18.1	16.7	19.1	102.6
	May 14	225	19.0	18.3	19.0	102.4
	May 31	156	-	-	-	-
	May 31	169	2.7	3.9	4.9	7.1
	May 31	184	5.6	7.9	8.8	19.2
	May 31	197	9.3	10.1	13.7	57.1
	May 31	211	15.9	16.1	17.8	95.3
	May 31	225	18.7	17.1	18.7	110.9
	June 14	156	-	-	-	-
	June 14	169	-	-	-	-
	June 14	184	2.9	4.4	5.2	7.6
	June 14	197	6.8	8.0	10.4	33.6
	June 14	211	10.9	12.1	14.7	68.3
	June 14	225	17.9	15.6	17.9	113.1

Continued

**Table: 1903-03. Planting Date and Hybrid Influence on Corn Leaf Development.**  
 (continued) **Arlington, WI - 2019.**

Hybrid	Date of planting	Observation date	Leaf Development			Plant height
			Leaf collars	Hail adjusters method	Total leaves	
		day of year	no./plant	no./plant	no./plant	inches
DKC58-06RIB			10.8	11.6	13.3	56.9
P9998AMXT			10.4	11.1	12.6	56.3
DKC58-06RIB		156	2.4	3.5	4.0	4.8
DKC58-06RIB		169	4.3	6.0	6.9	10.6
DKC58-06RIB		184	6.7	9.2	10.5	27.0
DKC58-06RIB		197	10.9	12.05	15.4	68.3
DKC58-06RIB		211	16.8	16.7	18.7	96.6
DKC58-06RIB		225	19.6	18.3	19.6	107.2
P9998AMXT		156	2.3	3.5	4.4	4.6
P9998AMXT		169	4.1	5.8	6.8	12.1
P9998AMXT		184	6.4	8.8	10.0	27.5
P9998AMXT		197	10.7	12.0	14.3	66.0
P9998AMXT		211	16.3	15.5	17.4	93.3
P9998AMXT		225	18.3	16.8	18.3	105.0
DKC58-06RIB	April 22		11.4	12.3	13.7	56.6
DKC58-06RIB	June 14		9.7	10.4	12.5	56.3
DKC58-06RIB	May 03		11.1	12.1	13.7	57.9
DKC58-06RIB	May 14		10.6	11.4	13.0	55.4
DKC58-06RIB	May 31		10.6	11.2	13.1	58.4
P9998AMXT	April 22		11.1	12.0	13.3	57.1
P9998AMXT	May 03		10.8	11.6	12.9	57.5
P9998AMXT	May 14		10.2	10.8	12.3	55.2
P9998AMXT	May 31		10.3	10.9	12.5	57.5
P9998AMXT	June 14		9.4	9.6	11.6	53.7
DKC58-06RIB	April 22	156	2.9	3.9	4.3	5.0
DKC58-06RIB	April 22	169	5.0	6.8	7.8	11.8
DKC58-06RIB	April 22	184	8.1	11.3	12.8	34.3
DKC58-06RIB	April 22	197	13.0	14.6	17.4	82.9
DKC58-06RIB	April 22	211	19.3	18.0	19.6	102.3
DKC58-06RIB	April 22	225	20.3	19.1	20.3	103.4
DKC58-06RIB	May 03	156	2.3	3.6	4.1	5.1
DKC58-06RIB	May 03	169	4.9	6.8	7.6	12.4
DKC58-06RIB	May 03	184	8.0	11.1	12.8	37.6
DKC58-06RIB	May 03	197	12.8	13.8	17.4	81.6
DKC58-06RIB	May 03	211	18.5	17.8	20.0	105.6
DKC58-06RIB	May 03	225	20.4	19.6	20.4	105.4

Continued

**Table: 1903-03. Planting Date and Hybrid Influence on Corn Leaf Development.**  
 (continued) **Arlington, WI - 2019.**

Hybrid	Date of planting	Observation date	Leaf Development			Plant height
			Leaf collars	Hail adjusters method	Total leaves	
			no./plant	no./plant	no./plant	
		day of year				inches
DKC58-06RIB	May 14	156	2.0	3.0	3.5	4.3
DKC58-06RIB	May 14	169	4.5	6.4	7.4	11.3
DKC58-06RIB	May 14	184	7.5	10.0	11.4	31.8
DKC58-06RIB	May 14	197	11.9	12.8	16.5	78.1
DKC58-06RIB	May 14	211	18.1	17.5	19.9	103.3
DKC58-06RIB	May 14	225	19.6	18.9	19.6	104.0
DKC58-06RIB	May 31	156	-	-	-	-
DKC58-06RIB	May 31	169	2.9	4.0	5.0	7.1
DKC58-06RIB	May 31	184	5.9	8.0	9.1	19.4
DKC58-06RIB	May 31	197	9.3	10.1	14.1	57.3
DKC58-06RIB	May 31	211	15.9	16.4	18.1	97.1
DKC58-06RIB	May 31	225	18.9	17.3	18.9	110.9
DKC58-06RIB	June 14	156	-	-	-	-
DKC58-06RIB	June 14	169	-	-	-	-
DKC58-06RIB	June 14	184	2.8	4.3	5.3	7.2
DKC58-06RIB	June 14	197	7.6	9.0	11.5	41.4
DKC58-06RIB	June 14	211	10.8	12.7	15.2	67.7
DKC58-06RIB	June 14	225	18.3	16.2	18.3	114.0
P9998AMXT	April 22	156	2.8	4.1	4.9	4.9
P9998AMXT	April 22	169	5.3	7.0	8.3	14.9
P9998AMXT	April 22	184	8.4	11.8	13.1	38.8
P9998AMXT	April 22	197	13.8	15.3	16.8	85.1
P9998AMXT	April 22	211	18.1	16.9	18.3	99.5
P9998AMXT	April 22	225	18.3	16.9	18.3	99.3
P9998AMXT	May 03	156	2.0	3.5	4.3	4.9
P9998AMXT	May 03	169	4.5	6.4	7.4	14.3
P9998AMXT	May 03	184	8.1	10.8	12.4	39.1
P9998AMXT	May 03	197	12.9	14.5	16.5	82.5
P9998AMXT	May 03	211	18.5	17.0	18.5	102.6
P9998AMXT	May 03	225	18.5	17.4	18.5	101.8
P9998AMXT	May 14	156	2.0	3.0	4.0	3.9
P9998AMXT	May 14	169	4.0	6.0	6.9	12.0
P9998AMXT	May 14	184	7.0	9.4	10.6	32.9
P9998AMXT	May 14	197	11.8	12.9	15.6	79.4
P9998AMXT	May 14	211	18.1	15.9	18.4	102.0
P9998AMXT	May 14	225	18.4	17.8	18.4	100.8
P9998AMXT	May 31	156	-	-	-	-
P9998AMXT	May 31	169	2.5	3.8	4.9	7.1
P9998AMXT	May 31	184	5.3	7.8	8.5	19.0
P9998AMXT	May 31	197	9.3	10.1	13.3	56.9
P9998AMXT	May 31	211	15.9	15.8	17.5	93.4
P9998AMXT	May 31	225	18.5	16.9	18.5	111.0

Continued

**Table: 1903-03. Planting Date and Hybrid Influence on Corn Leaf Development.**  
 (continued) **Arlington, WI - 2019.**

Hybrid	Date of planting	Observation date	Leaf Development			Plant height
			Leaf collars	Hail adjusters method	Total leaves	
		day of year	no./plant	no./plant	no./plant	inches
P9998AMXT	June 14	156	-	-	-	-
P9998AMXT	June 14	169	-	-	-	-
P9998AMXT	June 14	184	3.0	4.5	5.1	7.9
P9998AMXT	June 14	197	5.9	7.0	9.3	25.9
P9998AMXT	June 14	211	11.0	11.8	14.4	68.8
P9998AMXT	June 14	225	17.6	15.1	17.6	112.4
Mean			10.6	11.3	12.9	56.6
<b><u>Probability(%)</u></b>						
Hybrid(H)			1.6	6.4	1.7	26.9
Date of Planting (D)			0.0	0.0	0.0	0.0
HxD			97.3	47.0	54.1	62.1
Sample DOY (S)			0.0	0.0	0.0	0.0
H x S			0.1	0.0	0.0	45.3
DxS			0.0	0.0	0.0	0.0
HxDxS			0.8	2.76	44.8	54.7
<b><u>LSD(0.10)</u></b>						
Hybrid(H)			0.1	0.2	0.2	NS
Date of Planting (D)			0.2	0.2	0.3	1.8
HxD			NS	NS	NS	NS
Sample DOY (S)			0.2	0.3	0.3	1.9
H x S			0.3	0.4	0.4	2.7
DxS			0.5	0.6	0.6	4.3
HxDxS			0.7	0.8	NS	NS