2022
Wisconsin Research Report of

STUDIES ON CULTURAL PRACTICES AND MANAGEMENT SYSTEMS FOR CORN

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2022 Wisconsin Research Report of Studies on Cultural Practices and Management Systems for Corn

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The information presented in this report is for the purpose of informing cooperators in industry of the results of research conducted during 2022. The cooperation of other faculty and staff and the support of funding agencies and industry are gratefully acknowledged. The information presented in this report does not constitute recommendation or endorsement. This information is **NOT FOR PUBLICATION** unless prior approval is received.

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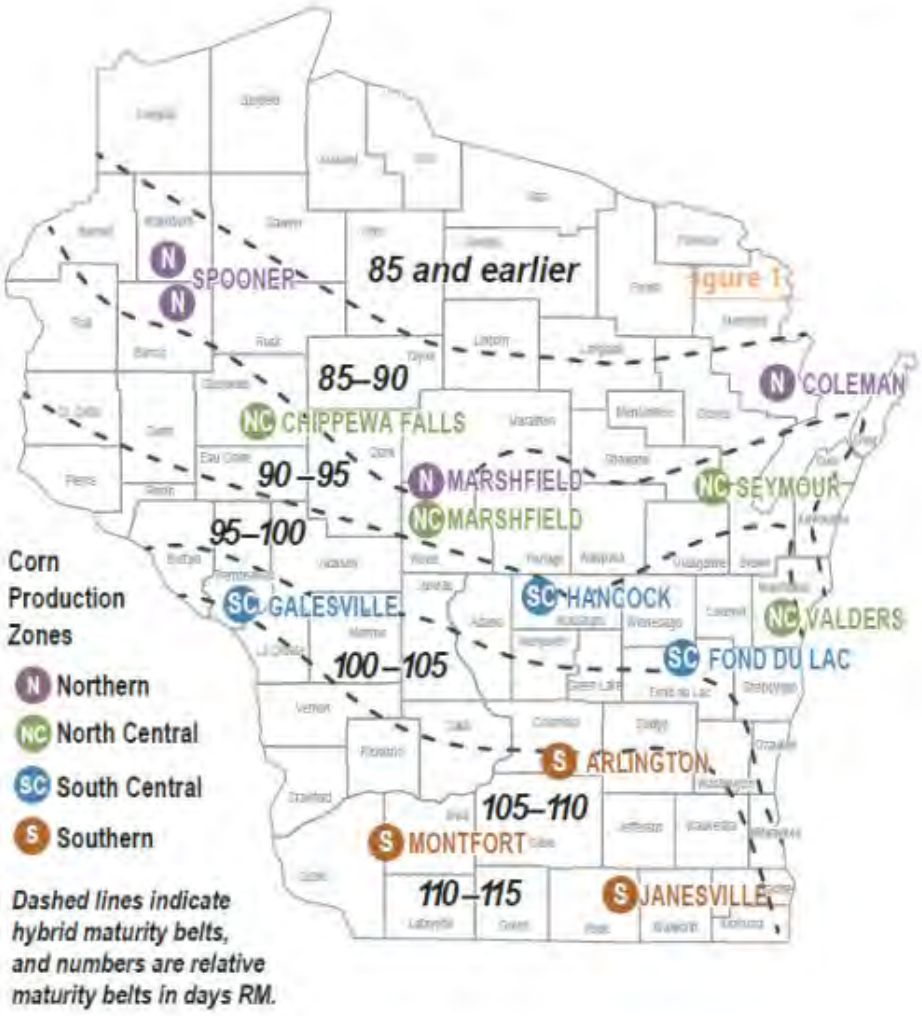
Wisconsin Corn
Agronomy Research Sites



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UW College of Agriculture and Life Sciences-Hatch Program
AgriGold Seeds
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Legend Seeds
LG Seeds
National Crop Insurance Services
Prairie Hybrids
Renk Seed
SARE - Sustainable Agriculture Research and Education Grant
Syngenta Seeds
Wisconsin Corn Growers Association

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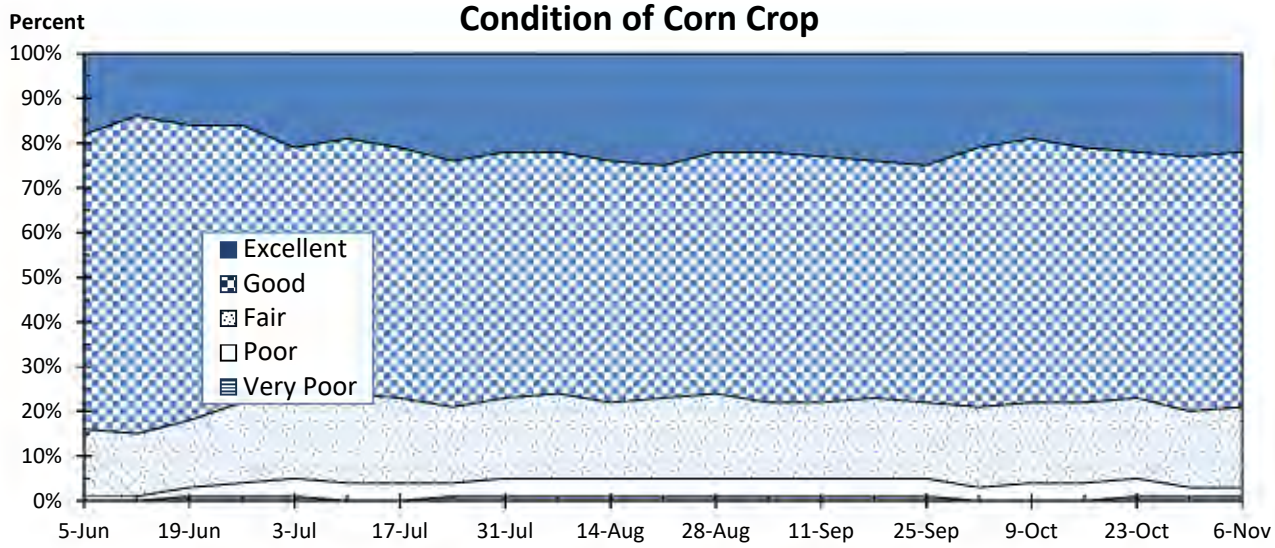
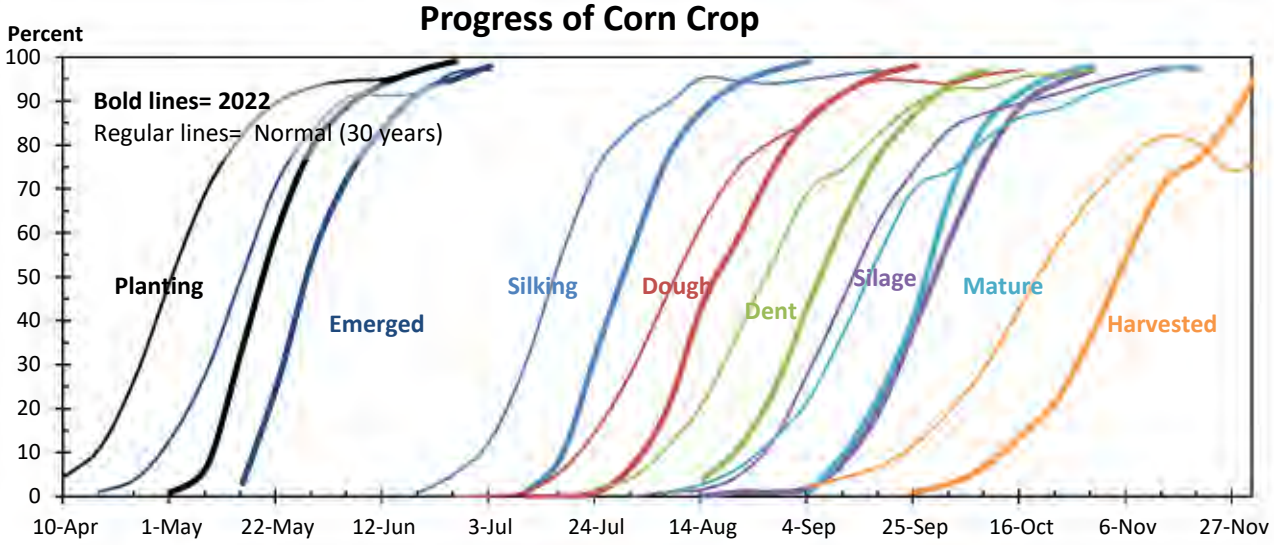
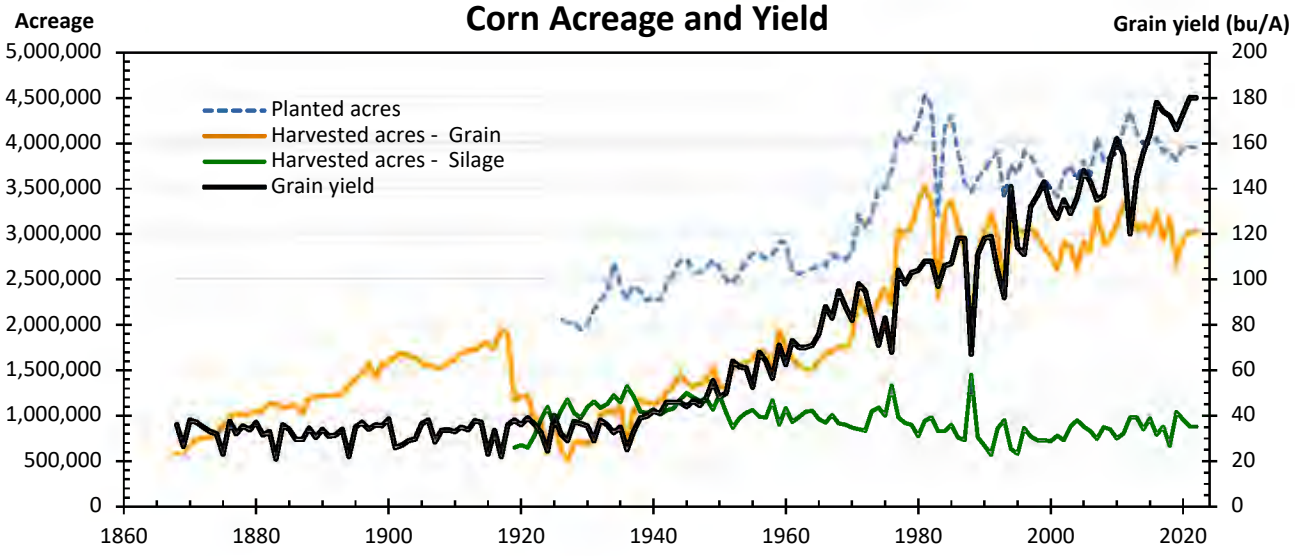
Condition of Corn Crop



Progress of Corn Crop



Corn Acreage and Yield



Crop Progress Review of 2022

Derived from USDA-NASS report at:
https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress_&_Condition/

The 2022 growing season started with below average temperatures and many parts of the state still covered in snow. Topsoil moisture was rated 29 percent surplus on April 3, 2022, compared to just 4 percent surplus on April 4, 2021. The cool, wet spring weather meant crops were planted behind normal, and there were few days available for fieldwork until mid-May. Days suitable for fieldwork averaged 1.2 in April 2022 compared to 4.3 days in April 2021. Spring tillage was only 8 percent complete on April 24, 11 days behind the 5-year average. Generally warm and dry weather throughout the summer helped crop development catch up from the slow spring. Statewide topsoil moisture was rated at least 70 percent adequate or better throughout the season, although there were pockets of dry areas in north-central, west-central and southern Wisconsin. By September 4 winter wheat harvest was 99 percent complete, a few days behind the 5-year average. Oat harvest wrapped up in late September with 98 percent complete by September 25. Soybean harvest was virtually complete by mid-November but there was still over 10 percent of corn for grain still in the field as of November 27. A warm, dry fall led to favorable conditions for post-harvest activities such as tillage and manure application.

The average temperature for June through September was 65.6 degrees, compared to 67.3 degrees in 2021 and a normal of 65.3 degrees. April had below normal temperatures while May through September all had above normal temperatures. March was 1.0 degrees below normal. October was 0.4 degrees above normal and November was 2.0 degrees above normal.

The statewide precipitation total for April through September was 21.50 inches, compared to 21.17 inches the previous year and a normal of 23.36 inches. May, June, July and September had below normal precipitation while April and August had above normal precipitation. June precipitation was 1.67 inches below normal while August precipitation was 0.99 inches above normal.

Corn

Corn planting got off to a late start with only 1 percent being planted by May 1, almost 2 weeks behind the 5-year average. By June 5, almost 90 percent of corn acres were planted, 1 day ahead of the average. The first crop condition rating of the season showed 84 percent good to excellent. Conditions declined through the month of June, but then remained fairly constant with the percentage of good to excellent mostly in the upper 70s for the remainder of the season. Forty-four percent of corn acres were in or beyond dough stage by August 14, even with the average. Harvest for silage began in mid-August. On September 18, corn silage harvest was almost a week behind the 5-year average with 20 percent complete, but by October 30 silage harvest was 97 percent complete, 5 days ahead of the average. Corn for grain harvest got off to a slow start with only 7 percent harvested by October 9, almost a week behind average. Just over half of the corn for grain was harvested by November 6. As November came to a close, harvest for grain was still on-going at only 87 percent complete.

Soybean

By May 1, only 3 percent of Wisconsin soybean acres had been planted, 3 days behind the 5-year average. By June 5, eighty-six percent were planted, 5 days ahead of the average. Soybeans reached 89 percent emerged on June 19, 4 days ahead of normal. The first soybean crop condition rating of the season showed 81 percent rated in good to excellent condition as of June 5. Soybean condition spent most of the season in the 70's for good to excellent rating. Soybeans began setting pods in early July. As of July 24, twenty-six percent of soybeans were setting pods, 2 days behind the average. Harvest began in late September. By October 2, eleven percent of acres were harvested, 3 days behind average. Warm, dry conditions helped the harvest progress quickly, and by October 30, eighty-six percent of soybeans were harvested, over a week ahead of average. Harvest was nearly complete by November 13 with 97 percent harvested, over 2 weeks ahead of normal.

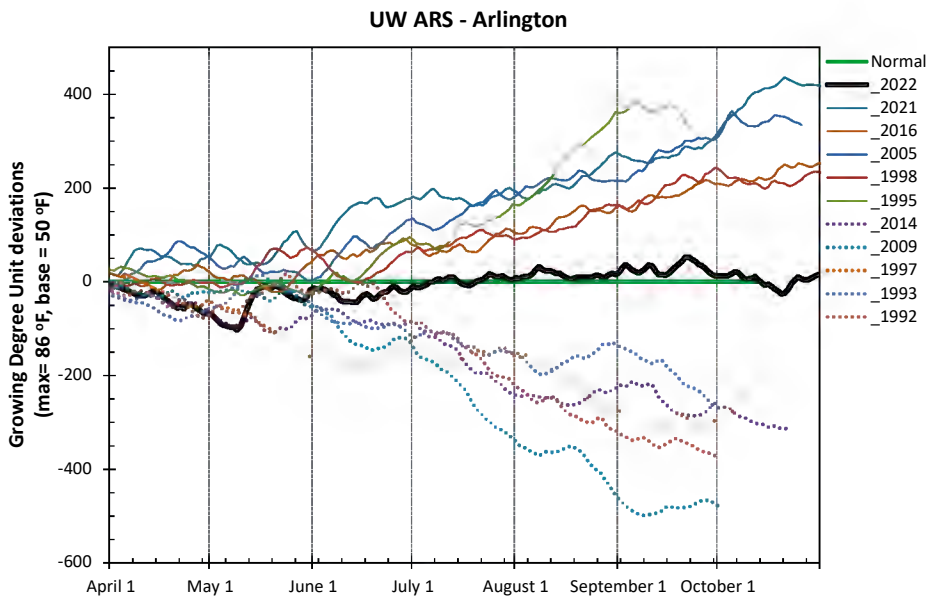
Oats
A cool, wet spring meant oat seeding and emergence began well behind normal. By April 17 only 4 percent of the 2022 oat crop was planted, 10 days behind the 5-year average. As of July 3, ninety-seven percent of oats were emerged, 1 week behind the average. Ninety-five percent of the oat crop was heading or beyond by July 24. Nearly all of the oat crop had turned color by mid-August. By September 4, ninety-one percent of oats for grain were harvested, 5 days ahead of average. Harvest was virtually complete by late September. The first oat crop condition rating of the season showed 76 percent rated in good to excellent condition as of May 22. Conditions peaked by mid-June to 85 percent rated good to excellent and this remained in the mid-80's to upper 70's for the rest of the season.

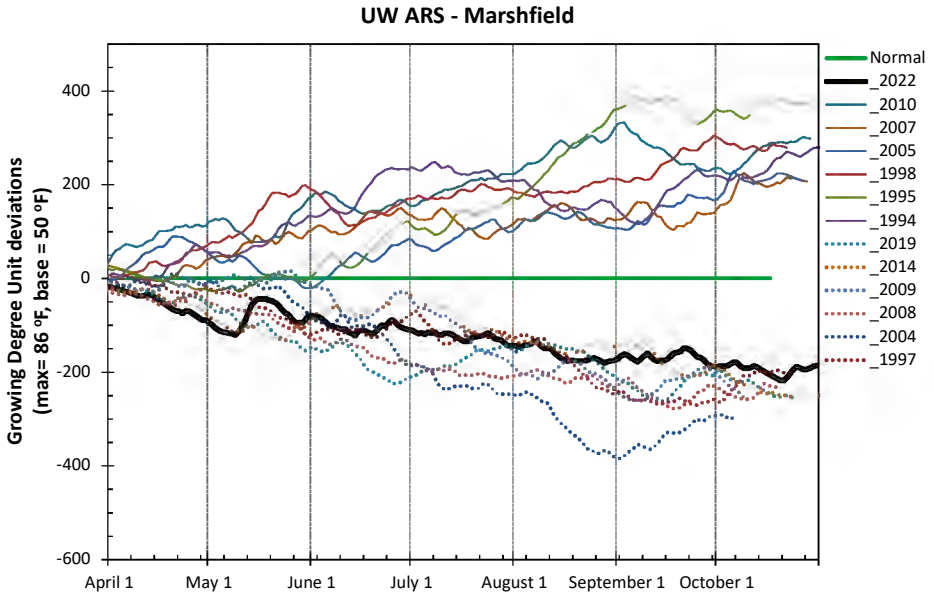
Winter Wheat
Planting for winter wheat began in late August 2021. As of October 31, planting was 97 percent complete, over 2 weeks ahead of the 5-year average. As of November 14, ninety-six percent of the crop had emerged, also over 2 weeks ahead of the average. As fall came to a close, wheat condition rated 80 percent good to excellent. The first condition report of the spring showed 61 percent good to excellent. Conditions improved throughout the spring and early summer and the percent of crop in good to excellent condition was in the 80's throughout the summer. As of June 19, seventy-five percent of wheat was headed, even with the 5-year average. On August 14 harvest was 86 percent complete, 2 days behind the average. The final wheat condition rating of the season, on July 31, was 83 percent good to excellent.

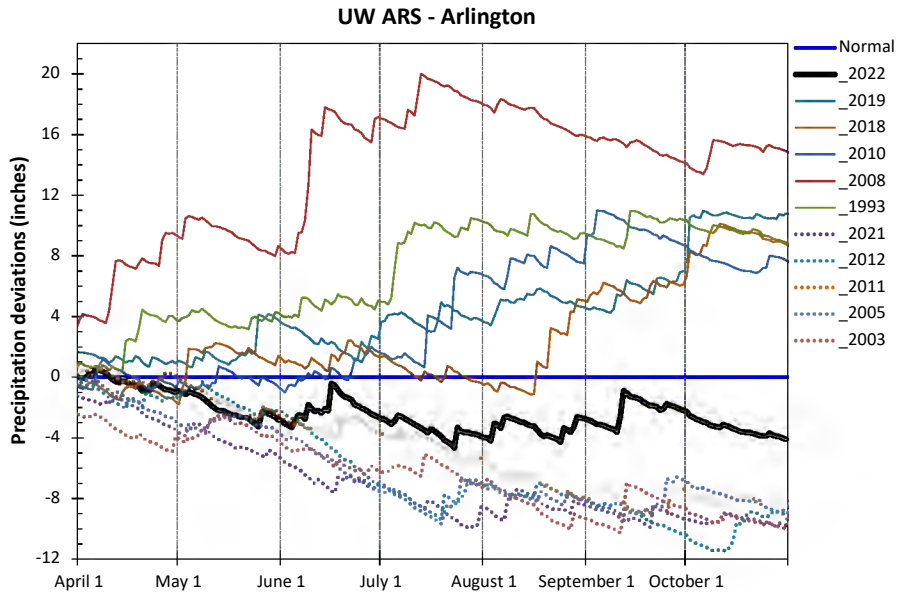
Alfalfa
As of May 15, winter freeze damage to alfalfa was rated 0 percent severe, 2 percent moderate and 10 percent light. There was reportedly no damage to the remaining 88 percent of alfalfa, 24 percentage points higher than the previous year. Alfalfa hay harvest began behind normal, but sunny weather moved harvest ahead of average for most of the year. The first cutting was 13 percent complete on May 29, two days behind the 5-year average. By July 3, the first cutting was 98 percent complete and the second cutting was 43 percent complete, 3 days ahead of average. Subsequent cuttings continued to be mostly ahead of average. All hay condition began the year on May 8 with 60 percent in good to excellent condition, 3 percentage points below average. Conditions improved throughout May with the precent in good to excellent in the high 70's to mid-80's through June, July and August. For the months of June, July, and August, all hay in good to excellent condition averaged 9 percentage points above normal.

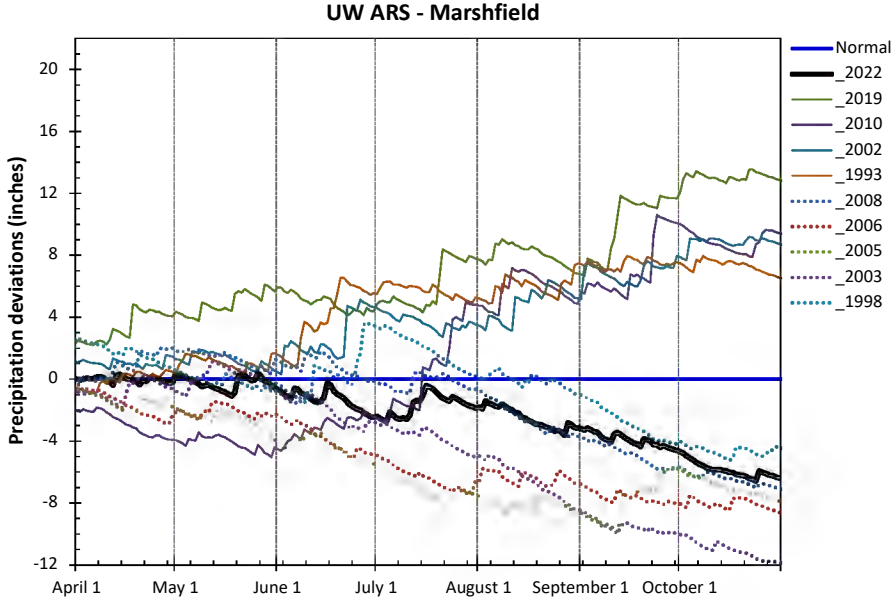
Pastures
The cold, wet spring meant pasture and range development began the year behind normal. On April 24, forty-one percent of pasture was rated good to excellent, 8 percentage points below the 5-year average. Warmer and drier weather helped to improve conditions in the usual peak grazing months of June, July, and August. The good to excellent rating peaked in mid-June at 78 percent and remained in the upper 60's and 70's for the remainder of the summer. Lack of precipitation in the fall months meant pasture condition declined to 56 percent good to excellent by October 23, just below the average.

2022 Seasonal Growing Degree Unit and Precipitation Deviations from April 1 to the current date (or fall killing frost date ≤ 28 °F or October 31).
Years were selected using ± 1 standard deviation of the 30-year normal.



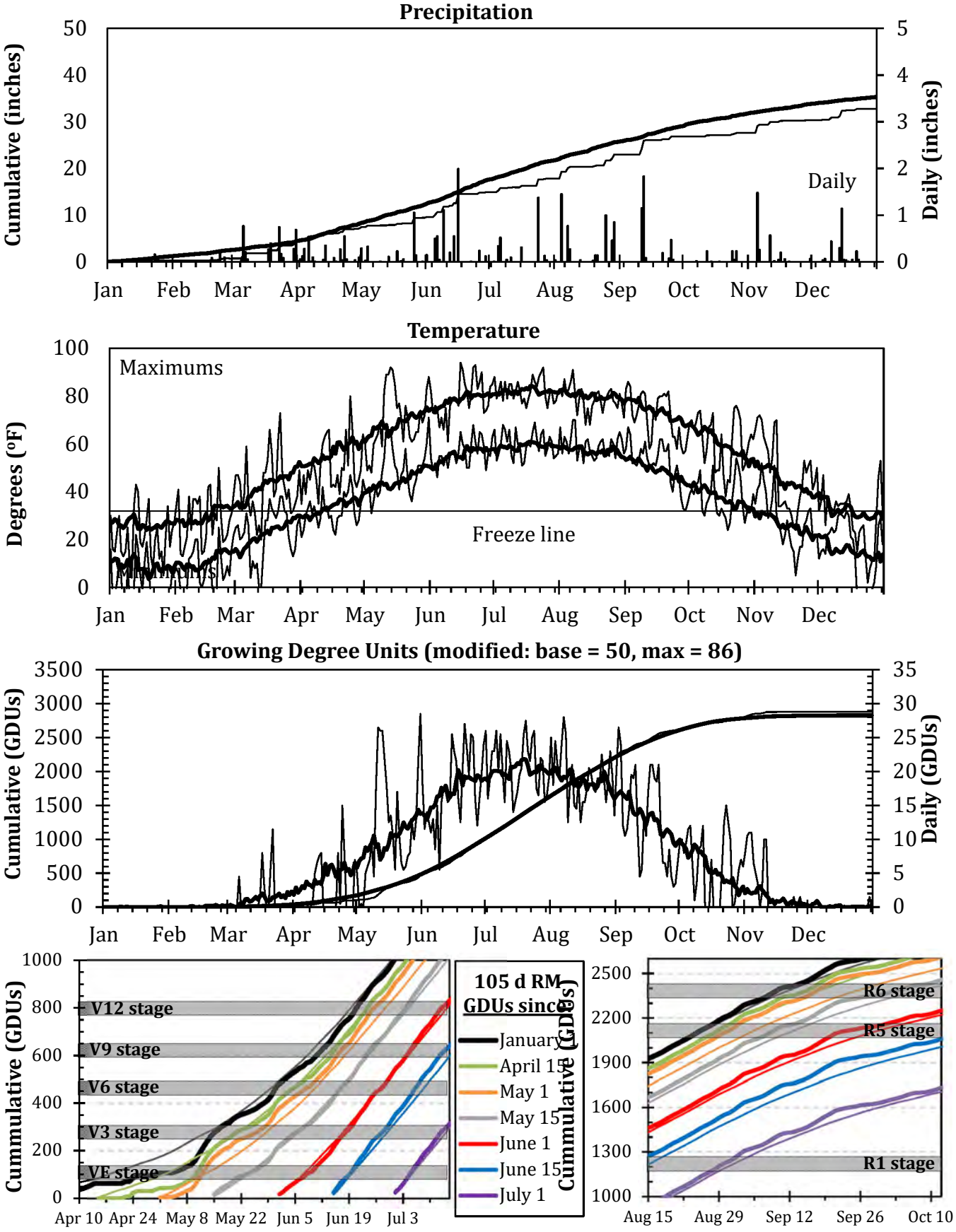






2022 Weather Summary for UW ARS - Arlington, WI

Bold Line = 30 year Normal



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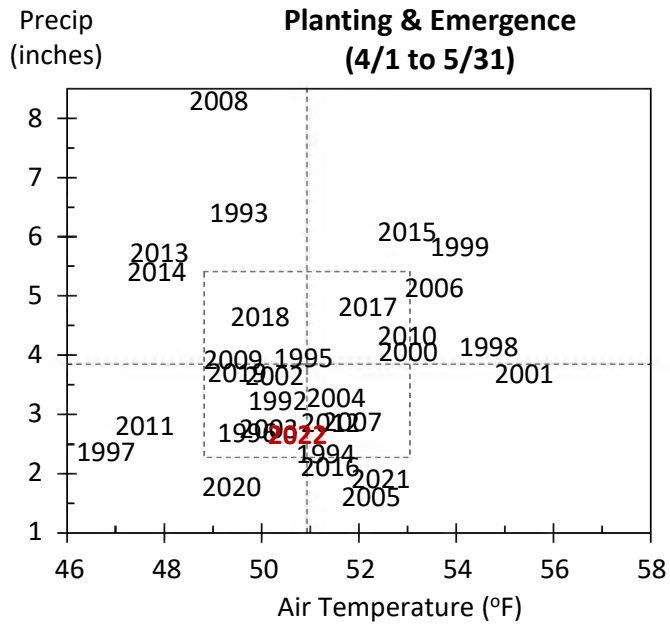
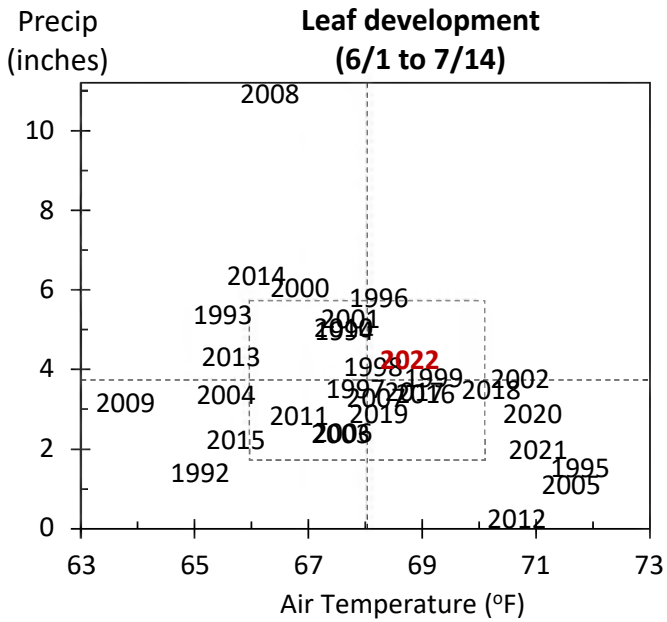
Data Source: Midwest Regional Climatological Center

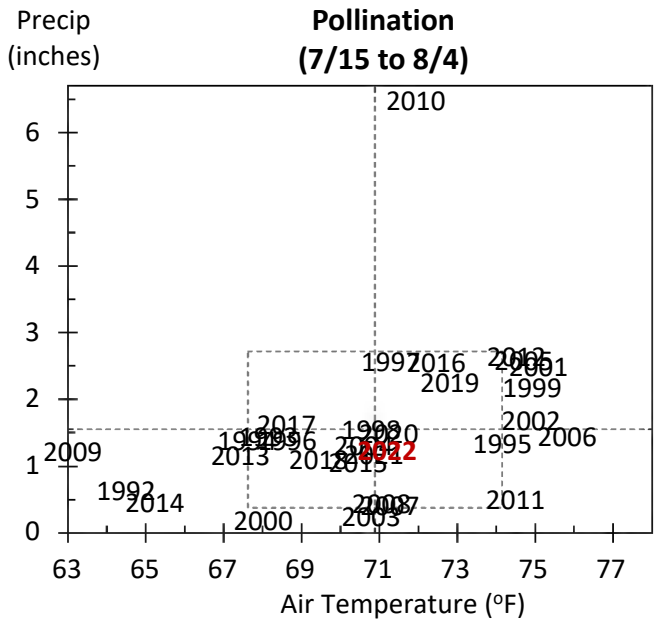
Last updated on 1/26/2023

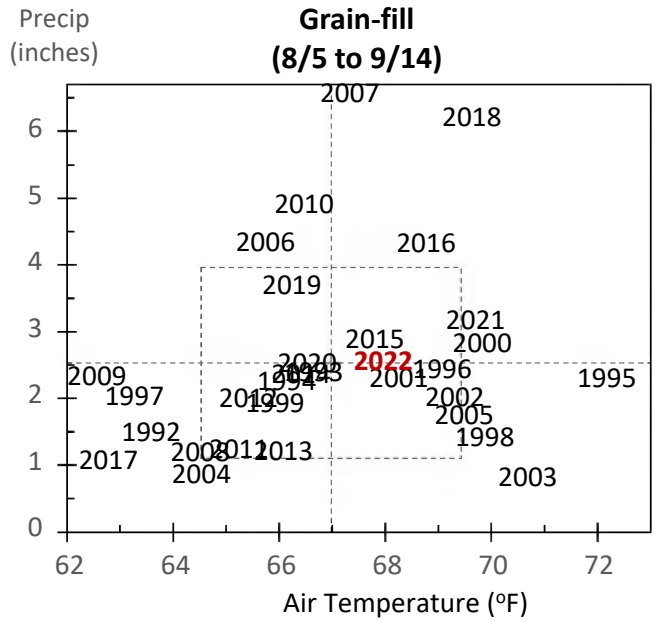
Average Temperature and Precipitation

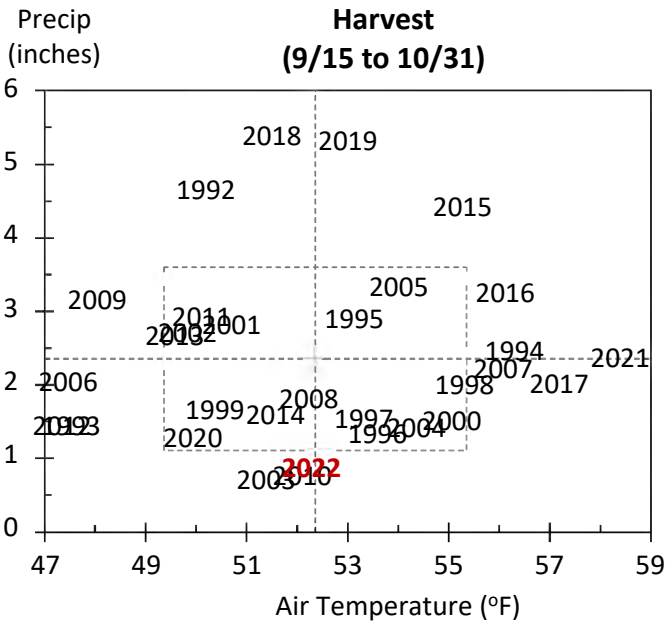
Dashed lines = 30-yr Normal; Dashed box = ± one standard deviation

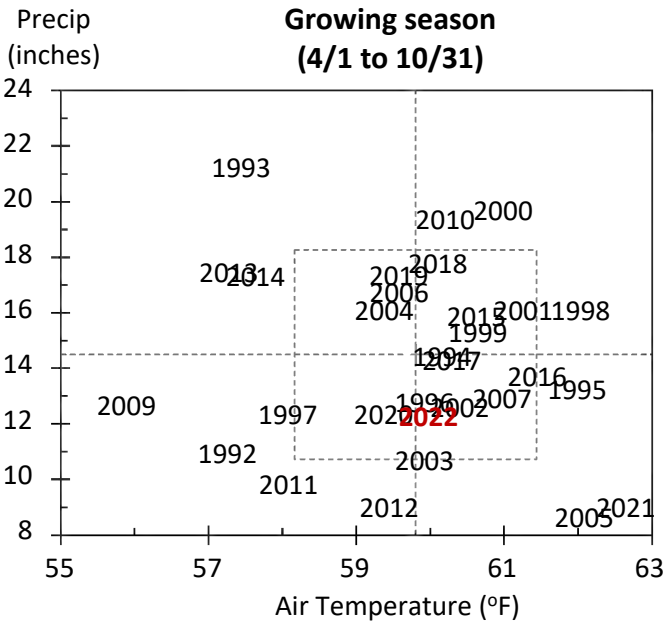












Source: Weather data obtained from the Midwest Region Climatological Center.

http://corn.agronomy.wisc.edu

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Table A-1. Monthly and total precipitation (inches) data for the Arlington Research Station.

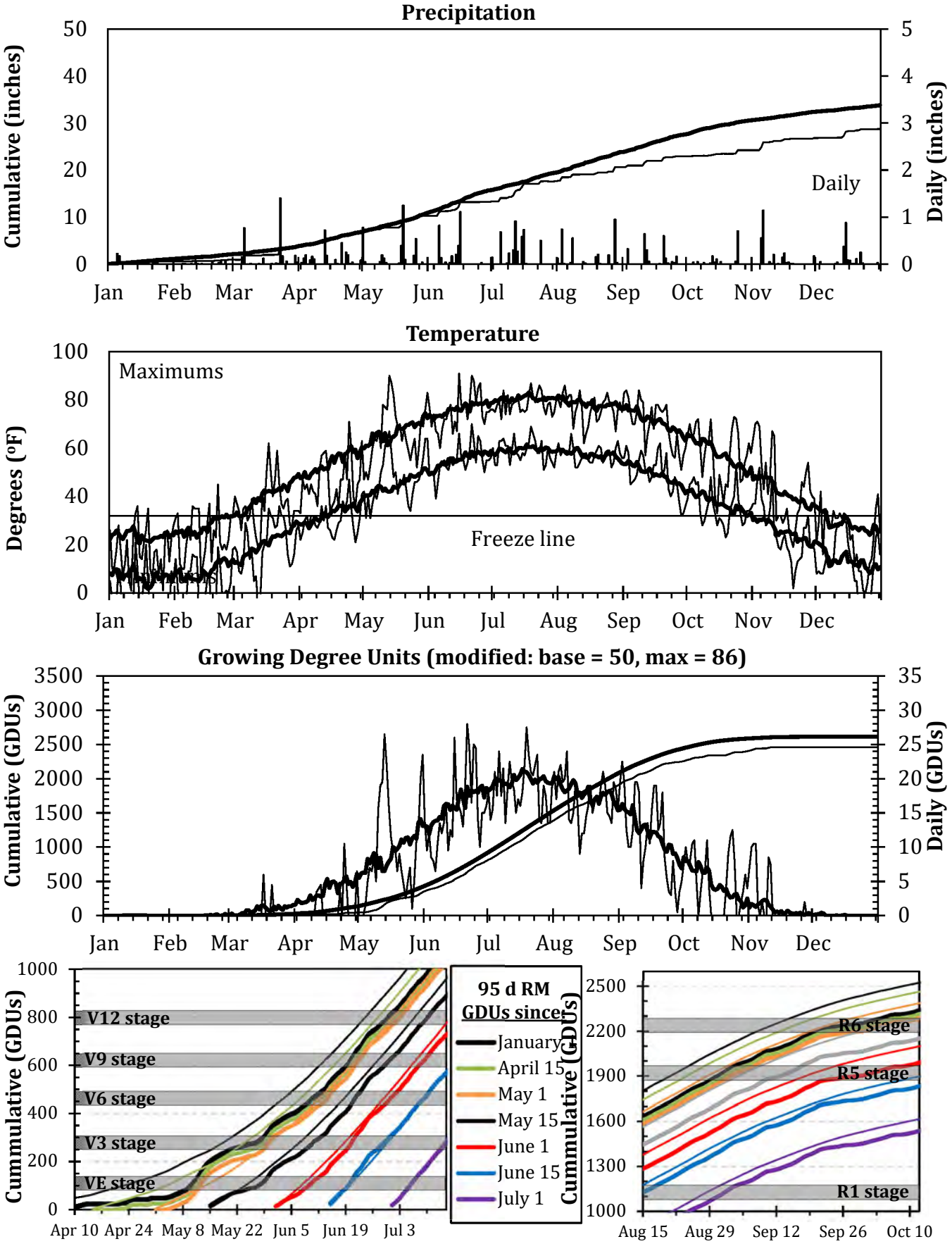
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual
1993	1.6	1.0	2.3	7.1	4.5	6.1	9.4	3.2	4.2	1.2	1.6	0.2	42.3
1994	0.9	2.0	0.1	2.3	2.0	7.9	6.1	4.0	4.7	0.5	2.8	0.8	34.0
1995	1.3	0.1	2.2	3.4	6.0	2.2	2.8	5.0	1.8	4.2	2.4	0.7	31.9
1996	1.8	0.5	0.3	2.6	3.2	7.8	2.4	2.8	0.9	3.3	0.8	1.6	28.0
1997	0.7	2.8	2.2	2.0	3.3	4.9	6.3	3.2	1.6	1.4	1.0	0.8	30.0
1998	1.2	0.9	3.3	4.0	4.1	6.8	2.1	6.7	3.0	3.4	1.6	0.3	37.4
1999	2.8	1.2	0.6	6.0	3.9	5.3	3.4	2.5	1.4	1.4	1.3	1.0	30.9
2000	1.0	2.3	1.4	3.4	10.5	7.2	3.4	3.3	3.1	0.7	1.5	1.5	39.3
2001	0.8	1.4	0.4	3.1	4.7	7.0	2.9	5.3	5.2	1.7	1.7	1.4	35.8
2002	0.5	1.1	0.8	3.4	3.2	4.3	2.9	3.7	1.9	4.0	2.1	0.6	28.7
2003	0.4	0.2	1.4	2.2	3.8	3.3	3.3	1.8	4.0	1.3	5.3	1.9	28.9
2004	0.3	1.2	2.7	1.9	10.3	4.1	4.3	3.0	0.5	3.3	1.6	1.6	34.8
2005	1.5	1.2	1.8	0.8	3.4	1.5	4.4	3.1	4.7	0.6	3.8	1.0	27.6
2006	1.6	0.6	2.1	5.1	4.3	4.5	4.1	6.1	5.4	3.2	1.7	0.9	39.6
2007	0.5	1.5	3.2	3.3	1.2	3.3	2.9	11.3	2.8	2.3	0.5	3.3	36.3
2008	2.9	2.6	2.8	9.3	3.3	13.8	5.1	1.9	1.6	3.4	1.3	1.8	49.8
2009	0.4	1.7	4.8	4.3	3.6	4.3	2.3	3.2	2.4	4.6	1.3	2.8	35.5
2010	1.7	1.1	1.0	3.7	4.2	7.6	9.3	4.7	4.5	1.7	1.4	1.7	42.5
2011	0.6	0.7	3.4	3.5	1.6	4.1	2.5	1.5	3.9	1.6	3.3	2.4	28.9
2012	0.8	1.0	2.5	3.1	2.9	0.3	4.3	2.9	1.0	4.0	1.1	2.5	26.3
2013	2.3	1.9	2.4	5.4	6.0	7.5	3.0	1.8	3.0	1.5	2.6	1.1	38.5
2014	0.7	1.0	1.0	6.4	2.8	9.3	1.9	3.7	1.8	2.7	1.7	1.1	34.3
2015	0.4	1.0	0.4	6.4	4.4	3.1	3.2	4.3	5.7	2.0	4.9	3.4	39.1
2016	0.8	0.4	4.3	1.5	3.4	4.4	6.5	5.5	6.2	3.4	1.6	1.3	39.2
2017	2.5	1.6	2.8	5.3	3.3	6.1	3.7	1.7	0.8	3.7	0.7	0.6	32.7
2018	1.5	1.7	0.8	2.6	7.1	5.3	2.4	9.4	4.4	5.3	1.5	1.6	43.6
2019	2.1	3.0	1.0	2.9	7.0	4.1	5.4	4.9	5.7	6.5	2.4	1.9	46.8
2020	1.7	1.0	3.4	1.4	4.3	4.4	5.0	3.6	4.3	4.0	2.8	0.9	36.7
2021	1.2	0.7	1.3	1.5	2.4	3.5	2.6	4.2	2.4	2.2	0.4	1.2	23.5
2022	0.3	0.4	3.7	2.7	2.3	5.5	2.9	5.2	3.9	0.8	2.7	2.4	32.8
30-year Average	1.2	1.3	2.0	3.7	4.2	5.3	4.0	4.1	3.2	2.7	2.0	1.5	35.2

Table A-2. Average monthly and annual temperature (F) data for the Arlington Research Station.

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual
1993	19	19	29	42	57	64	69	69	55	46	33	23	44
1994	6	13	33	46	56	68	67	67	64	53	40	28	45
1995	20	23	37	44	57	72	73	76	60	52	29	21	47
1996	16	22	29	44	55	68	69	70	62	51	30	23	45
1997	17	24	33	42	51	68	69	65	61	50	32	27	45
1998	23	33	33	48	62	66	71	71	65	51	39	30	50
1999	15	30	35	48	60	68	75	67	59	48	43	25	48
2000	20	29	41	45	61	65	69	71	62	54	34	10	47
2001	20	17	30	51	59	67	72	71	59	48	46	31	48
2002	26	27	29	46	54	69	75	70	64	44	34	27	47
2003	17	17	32	44	56	66	71	72	61	49	35	28	46
2004	14	22	37	47	56	65	69	64	65	50	39	24	46
2005	17	27	30	50	54	72	73	70	65	50	36	17	47
2006	29	21	34	50	57	66	73	69	58	44	38	29	48
2007	21	13	37	43	60	68	70	70	62	53	33	17	46
2008	15	14	27	45	53	66	70	67	61	47	34	14	43
2009	8	21	31	43	56	64	63	64	60	42	38	18	42
2010	14	19	36	49	57	66	71	70	58	50	36	15	45
2011	13	18	28	41	54	65	73	68	57	49	36	27	44
2012	21	27	46	44	59	68	76	67	58	45	34	25	47
2013	16	17	22	39	56	64	68	67	60	46	31	13	42
2014	6	8	22	41	55	67	65	69	60	48	28	27	41
2015	18	9	33	47	59	66	69	68	66	51	41	34	47
2016	18	25	38	45	58	69	71	71	64	52	43	21	48
2017	22	30	32	49	55	68	70	65	64	52	34	21	47
2018	17	19	32	35	64	69	71	71	64	47	30	27	46
2019	15	16	28	45	54	66	73	67	64	47	29	29	45
2020	24	21	36	43	56	69	74	70	60	44	42	25	47
2021	21	12	38	48	57	71	71	72	64	56	36	29	48
2022	11	18	32	42	60	68	71	69	62	49	38	22	45
30-year Average	17	20	33	45	57	67	71	69	61	49	36	24	46

2022 Weather Summary for UW ARS - Marshfield, WI

Bold Line = 30 year Normal



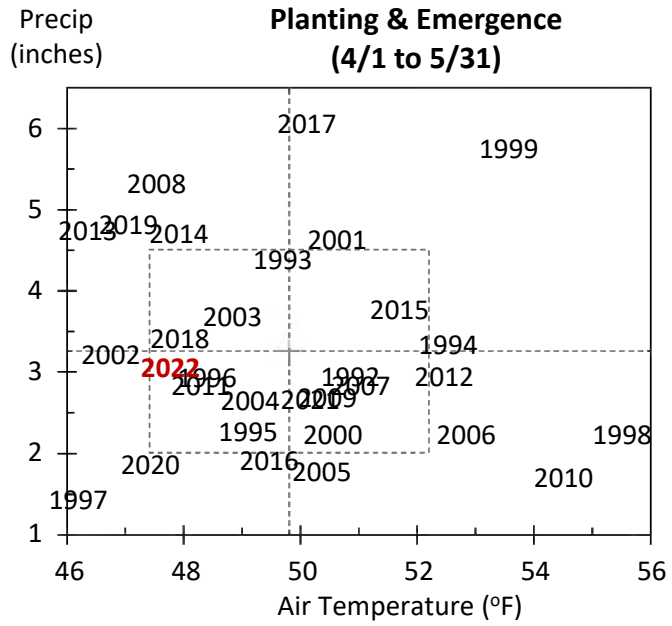
Lauer

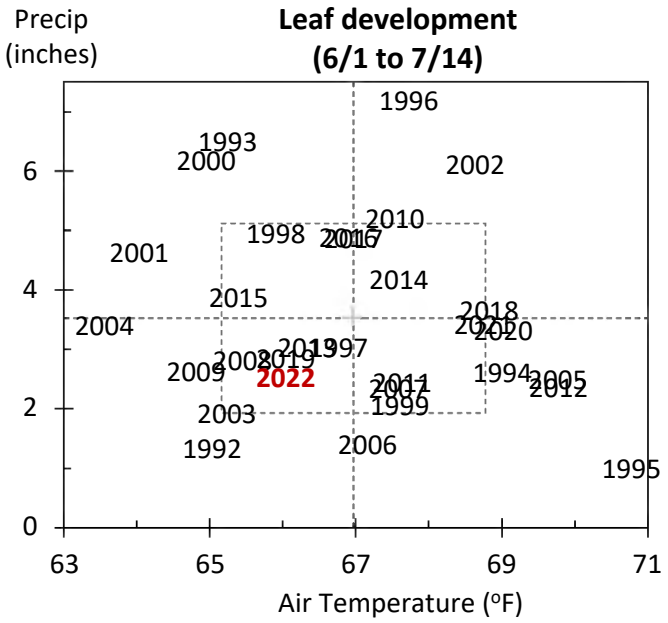
Data Source: Midwest Regional Climatological Center

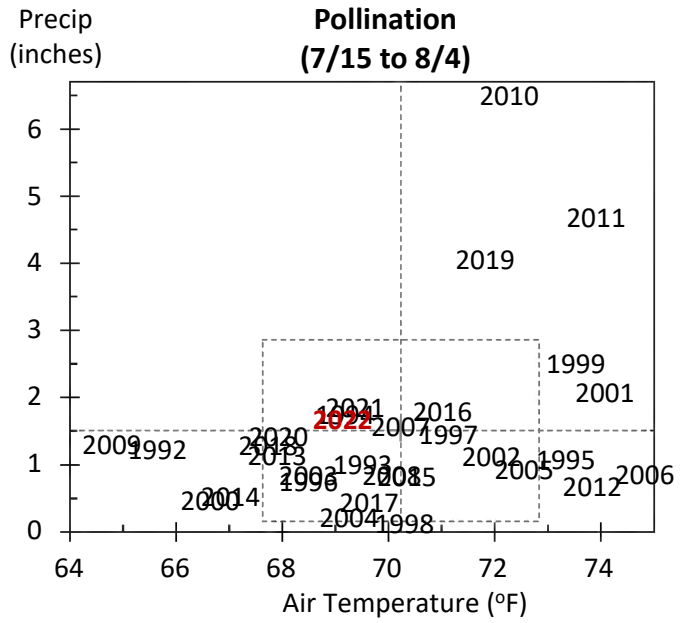
Last updated on 1/26/2023

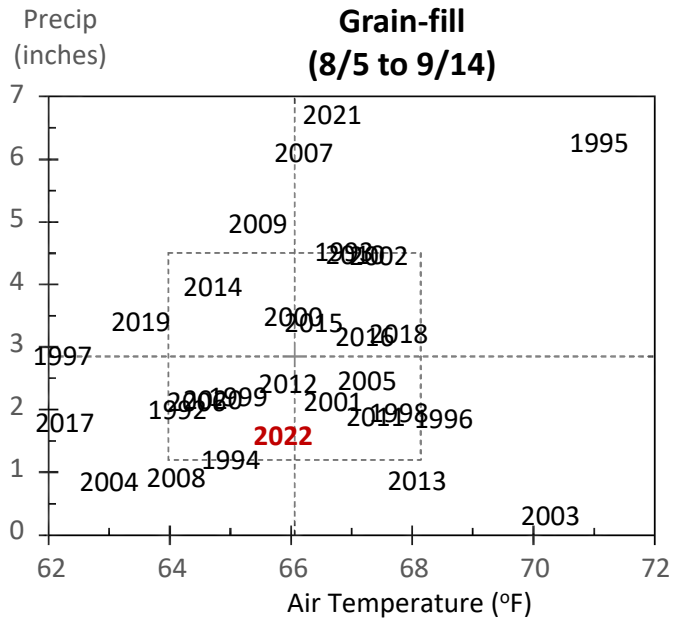
Average Temperature and Precipitation

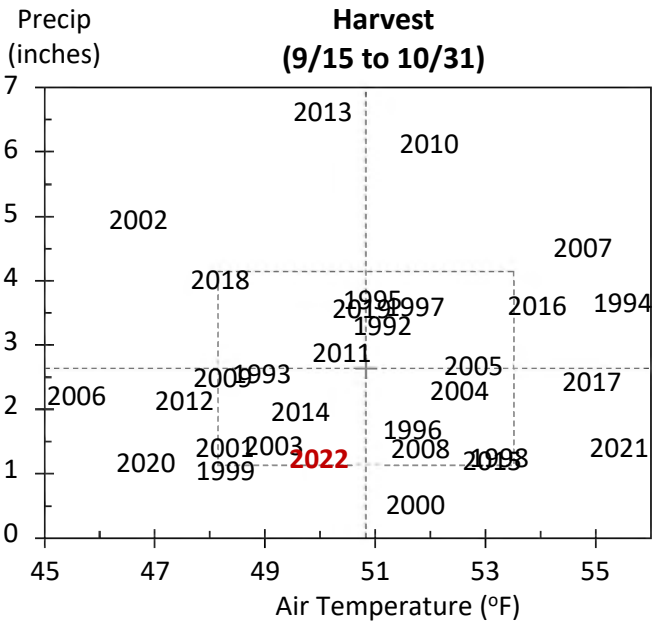
Dashed lines = 30-yr Normal; Dashed box = ± one standard deviation

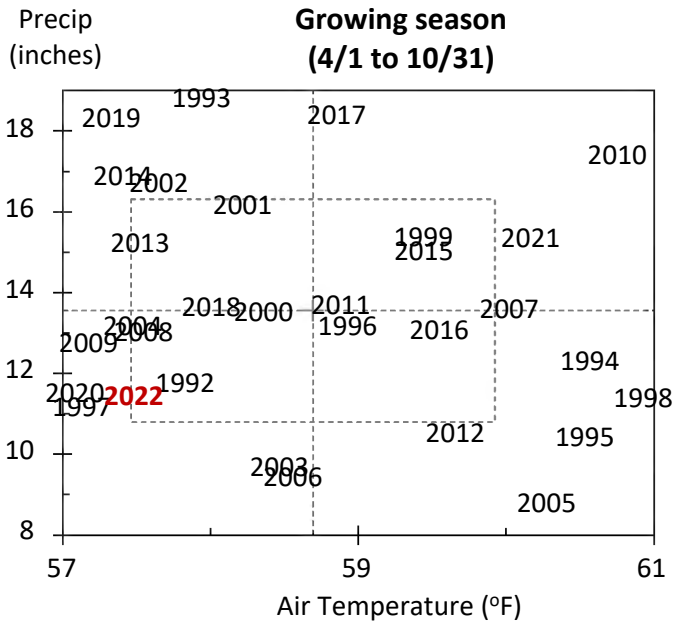












Source: Weather data obtained from the Midwest Region Climatological Center.

http://corn.agronomy.wisc.edu

Lauer, UW-ARS Marshfield

Table A-3. Monthly and total precipitation (inches) data for the Marshfield Research Station.

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual
1993	1.4	0.2	1.6	4.1	5.2	8.7	3.5	6.5	3.8	2.0	1.7	0.4	39.2
1994	0.8	0.6	0.3	4.4	1.0	2.3	7.7	2.1	4.9	1.4	2.5	0.3	28.3
1995	0.6	0.4	2.5	2.3	2.8	1.1	2.2	8.9	2.2	5.1	1.8	0.5	30.2
1996	2.5	0.5	1.8	3.1	2.6	8.6	2.0	2.0	2.8	3.1	2.8	1.4	33.1
1997	1.8	0.4	2.0	0.5	3.0	3.4	5.1	6.5	3.1	3.2	0.3	0.6	29.9
1998	1.8	1.7	2.2	1.9	3.1	8.6	0.5	3.2	0.6	2.8	1.5	0.3	28.0
1999	1.9	1.0	0.2	5.7	3.5	1.8	8.3	3.7	1.4	1.2	1.8	0.4	30.9
2000	1.4	0.5	2.0	1.9	3.7	7.5	2.3	4.0	4.7	0.3	2.0	1.3	31.5
2001	0.9	1.2	0.6	3.6	5.7	6.1	3.2	3.9	4.1	1.9	2.5	1.1	34.8
2002	0.3	1.9	2.7	3.3	3.1	9.0	2.7	6.0	6.5	3.8	0.1	0.3	39.8
2003	0.4	0.8	1.9	3.1	3.9	2.8	1.5	0.9	2.2	1.1	2.1	1.5	22.4
2004	0.7	1.4	2.8	1.3	8.7	4.2	1.9	2.5	1.6	4.2	1.6	1.8	32.6
2005	0.8	1.2	1.2	1.8	1.9	3.3	1.7	3.2	6.7	0.9	2.9	0.7	26.3
2006	0.9	0.4	1.6	1.6	4.1	2.2	2.1	4.2	2.5	2.5	1.3	2.1	25.5
2007	0.9	1.0	1.7	1.9	4.7	2.7	3.3	9.7	3.8	4.8	0.1	1.0	35.7
2008	1.3	1.1	0.6	5.8	3.3	3.4	3.2	1.3	1.9	1.6	2.0	2.2	27.8
2009	0.4	0.7	1.3	3.3	3.9	3.7	2.5	7.3	0.4	6.2	0.5	1.8	31.8
2010	0.9	0.3	0.7	1.0	3.6	6.8	11.1	4.4	9.0	2.4	2.9	2.0	45.0
2011	0.7	0.6	1.9	3.0	3.2	4.1	8.2	2.7	3.6	2.3	0.9	1.3	32.5
2012	1.2	1.1	1.3	2.3	3.8	3.6	1.3	4.1	1.7	5.8	1.2	1.7	29.1
2013	1.3	1.4	1.8	4.3	6.6	4.7	2.4	1.1	3.3	7.2	1.9	1.3	37.3
2014	1.4	1.5	0.8	5.2	4.8	5.2	3.0	6.9	3.1	3.5	2.2	1.6	39.1
2015	0.5	0.2	0.4	3.6	5.0	5.2	2.9	3.1	6.6	2.3	2.7	5.0	37.3
2016	0.7	0.7	4.8	1.8	2.9	6.6	4.3	3.9	6.0	2.2	1.9	2.1	37.6
2017	2.3	1.4	2.2	6.0	5.7	6.9	4.1	2.9	1.2	4.2	0.8	0.8	38.5
2018	1.3	2.5	0.7	2.5	4.1	5.5	2.6	4.5	4.9	5.0	1.8	1.3	36.6
2019	1.1	3.7	1.6	4.5	5.6	3.6	7.2	3.4	8.6	4.2	1.6	3.4	48.5
2020	1.0	0.6	3.4	1.7	4.2	4.5	3.6	3.8	2.4	2.8	2.3	0.4	30.5
2021	0.8	1.0	1.7	2.3	4.0	6.5	4.4	10.0	1.2	1.5	1.3	2.2	36.8
2022	0.6	0.3	2.9	2.7	3.7	2.9	4.4	3.1	2.3	1.3	2.6	1.9	28.7
30-year Average	1.1	1.0	1.7	3.0	4.0	4.8	3.8	4.3	3.6	3.0	1.7	1.4	33.5

Table A-4. Average monthly and annual temperature (F) data for the Marshfield Research Station.

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual
1993	17	19	30	42	57	63	70	70	55	48	32	22	44
1994	6	15	34	46	59	69	69	66	63	52	38	27	46
1995	19	20	35	41	57	71	73	74	59	49	26	18	45
1996	12	18	25	42	54	68	68	70	60	49	27	19	43
1997	13	23	28	42	50	67	68	64	60	48	30	26	43
1998	20	31	32	48	62	64	71	69	64	49	37	25	48
1999	12	26	32	48	59	67	73	67	58	46	40	22	46
2000	15	24	38	43	58	63	68	68	58	51	32	8	44
2001	19	13	27	45	56	63	71	70	57	46	43	27	45
2002	23	26	24	43	51	67	73	67	62	42	32	23	44
2003	13	11	29	43	55	64	69	71	60	46	32	25	43
2004	10	20	32	45	53	62	68	62	64	48	36	19	43
2005	13	24	27	48	53	70	71	68	63	50	33	17	45
2006	26	17	31	49	56	66	73	68	56	42	36	25	46
2007	19	11	34	43	59	67	69	68	61	53	32	14	45
2008	13	11	23	42	53	64	69	67	60	47	34	12	41
2009	6	20	30	44	57	65	65	66	62	42	40	19	43
2010	16	22	38	51	58	66	72	71	57	51	35	18	46
2011	12	18	27	41	55	65	74	70	57	50	36	24	44
2012	19	25	45	45	59	67	75	68	58	45	34	24	47
2013	16	16	24	37	56	64	70	68	61	47	30	12	42
2014	5	5	18	40	56	68	67	67	59	46	25	24	40
2015	14	7	31	46	57	65	69	66	65	48	39	31	45
2016	14	21	36	42	56	66	70	69	62	50	42	19	46
2017	18	26	28	47	53	66	70	65	62	49	30	16	44
2018	14	22	30	33	63	67	70	69	61	43	27	24	44
2019	13	11	25	42	52	64	72	66	62	44	28	21	42
2020	20	18	33	40	54	67	71	69	57	41	38	24	44
2021	20	10	37	45	55	69	69	69	61	53	33	23	46
2022	7	13	28	38	57	65	69	67	60	47	35	17	42
30-year Average	15	18	30	43	56	66	70	68	60	47	34	21	44

Observations and Data Collected

STATISTICAL ANALYSIS

All data are analyzed using generally accepted statistical tests. In most cases the probabilities of main effects and interactions are shown. The number listed is a percent probability that the effect difference is due to chance (i.e. not due to treatment). A Fisher's Protected Least Significant Difference (LSD) is calculated for all main effect probabilities of 10 percent or less.

Table B-1. Observations and Data Collected

Corn Measurements

AGI (Adjusted Gross Income)	Units	$/acre
	Formula	(weighted price per bushel x yield) - (yield x (handling + hauling + trucking)) -(storage x 0.02) - (yield x (grain moisture-15.5) x drying).
	Determination	Handling cost = $0.02 per bushel Hauling cost = $0.04 per bushel Trucking cost = $0.11 $ per bushel (100 miles) On-farm drying cost = $0.02 per point per bushel Storage = (yield*0.25 *4) + (yield*0.25*8); On-farm $0.02/bu. 3 days Weighted Price per Bushel = $6.09 per bushel = (50% December Average Cash price) + (25% March CBOT Futures price) + (25% July CBOT Futures price). December Average Cash price derived from Wisconsin Ag Statistics; CBOT Futures prices derived from closing price on first business day in December.
Grain Yield	Units	Bu/acre
	Formula	(43560/(plot width * plot length in feet)) * weight of sample in lbs.* ((100-sample moisture)/(100-15.5{moisture standard}))/56 lb/bu
Moisture	Units	%
	Determination	GRAIN: determined by Harvest Master unit on combine or wet weight method and adjusted to standard corn moisture 15.5% WHOLE PLANT: moisture of subsample of chopped whole plant moisture of subsample of chopped stover (whole plant less ears)
Test Weight	Units	lbs/bushel
	Determination	weight of known volume converted to lbs/bushel
Plant Height	Units	inches or centimeters
	Determination	plant height from soil surface to top leaf (flag) canopy.
	Observations	average of several plants in each plot
Ear Height	Units	inches
	Determination	height from soil surface to base of ear
	Observations	average of several plants in each plot
Broken Stalks	Units	%
	Determination	at harvest
	Observations	number of stalks broken below the ear + number of plants lodged at >45% from the whole plot (22' x 2 rows)
	Formula	(broken stalks + lodged plants)/total stalks x 100%

Table B-1. Observations and Data Collected

Kernel Mass	Units	mg/seed
	Determination	weight of 100 seeds converted to mg/seed
Plant Density	Units	plants per acre
	Determination	Early = plants at v3-v5 stage Late = just prior to harvest
	Observations	plant counts on whole plot (22' x 2 rows)
Ear Density	Units	Ears per acre
	Determination	Just prior to harvest
	Observations	Ear counts are taken from whole plot (22' x 2 rows)
Leaf Development	Units	none
	Determination	count of leaf number
	Observations	LEAF COLLARS: total number of visible leaf collars HAIL ADJUSTERS: total number of drooping leaves TOTAL: total number of leaves visible
Starch (Grain)	Units	%
	Determination	Near Infra-Red Transmittance Spectroscopy using a global calibration equation from Foss
	Observations	Plot subsample
Protein (Grain)	Units	%
	Determination	Near Infra-Red Transmittance Spectroscopy using a global calibration equation from Foss
	Observations	Plot subsample
Oil (Grain)	Units	%
	Determination	Near Infra-Red Transmittance Spectroscopy using a global calibration equation from Foss
	Observations	Plot subsample
Ethanol (Grain)	Units	%
	Determination	Near Infra-Red Transmittance Spectroscopy using a global calibration equation from Pioneer
	Observations	Plot subsample
Diseases ratings	Units	Rating score = 1-9 1,2,3= Worst; 4,5,6= Mid; 7,8,9= Best
	Determination	Based on amount of disease on plant part of interest
	Observations	Plot measured in the field
Forage Yield (Whole Plant)	Units	Tons of dry mater per acre
	Formula	weight of sample in lbs.* (43560/(2000*plot width * plot length in feet)).* ((100-sample moisture)/100)
Kernel Milk	Units	%
	Determination	percent milk remaining in kernel at harvest
	Observations	visual average of three ears from a non-harvest row
Kernel Milk Rating (KMR)	Formula	% Kernel Milk x 5
	Scale	0-5
Stover Moisture	Formula	% Greenness x Leaf Rating (Leaf Rating scale 1-5, Based on % of

Table B-1. Observations and Data Collected

Rating (SMR)		upright leaves)
	Scale	0-5
Visual Moisture Rating (VMR)	Formula	KMR + SMR
	Scale	0-10
Crude Protein (CP)	Units	%
	Determination	wet lab or NIRS procedure on plot sub sample
Neutral Detergent Fiber	Units	%
	Determination	wet lab or NIRS procedure on plot sub sample
Neutral Detergent Fiber Digestibility	Units	%
	Determination	wet lab or NIRS procedure on plot sub sample
Acid Detergent Fiber	Units	%
	Determination	wet lab or NIRS procedure on plot sub sample
***In Vitro* Digestibility**	Units	%
	Determination	In vitro wet lab or NIRS procedure on plot sub sample
Starch content	Units	%
	Determination	wet lab or NIRS on plot sub sample
Kernel Rot	Units	none
	Determination	visual average of 5 plants at V2-V4
	Scale	1=deterioration 2=no deterioration
Emergence	Units	%
	Formula	Early stand / late stand count x 100%
Residue cover	Units	%
	Determination	Point transects centered on row.
% Survival	Units	%
	Formula	Early stand / late stand count x 100%
Root Rating	Determination	The ISU 0 to 3 node-injury root rating scale was used. A rating of 0.50 or below is considered acceptable economic root protection.
	Scale	0-3
Soybean Measurements		
AGI (Adjusted Gross Income)	Units	$/acre
	Formula	(weighted price per bushel x yield) - (yield x (handling + hauling + trucking)) -(storage x 0.02).
	Determination	Handling cost = $0.02 per bushel Hauling cost = $0.04 per bushel Trucking cost = $0.11 $ per bushel (100 miles) Storage = (yield*0.25*4)+ (yield*0.25*8); On-farm $0.02/bu. 30 days. Weighted Price per Bushel = $13.85 per bushel = (50% December Average Cash price) + (25% March CBOT Futures price) + (25% July CBOT Futures price). December Average Cash price derived from Wisconsin Ag Statistics; CBOT Futures prices derived from closing price on first business day in December.

Table B-1. Observations and Data Collected

Grain Yield	Units	Bu/acre
	Formula	(43560/(plot width * plot length in feet)) * weight of sample in lbs.* ((100-sample moisture)/(100-13{moisture standard}))/60 lb/bu
Grain Moisture	Units	%
	Determination	determined by detector on combine 13% is standard soybean moisture
Plant Height	Units	inches
	Determination	plant height from soil surface to tip of main stem
	Observations	average of several plants in each plot
Plant Lodging	Units	none
	Determination	based on average erectness of main stem of plant
	Observations	whole plot is assessed
	Scale	1=ALL PLANTS ERECT 2=SLIGHT LODGING 3=PLANTS LODGED AT 45 DEGREE ANGLE 4=PLANTS LODGED AT 60-80 DEGREE ANGLE
Seed Weight	Units	seeds/lb
	Determination	weight of 300 seeds converted to seeds/lb
Plant Density	Units	plants per acre
	Determination	early = plants at V3 to V5 stage late = just prior to harvest
	Observations	plants counts are taken from 5 linear feet of plot X the harvested area
% Survival	Units	%
	Formula	Early stand / late stand count x 100%
Wheat Measurements		
AGI (Adjusted Gross Income)	Units	$/acre
	Formula	(weighted price per bushel x yield) – (yield x (handling + hauling + trucking)) -(storage x 0.02).
	Determination	Handling cost = $0.02 per bushel Hauling cost = $0.04 per bushel Trucking cost = $0.11 $ per bushel (100 miles) Storage = (yield*0.25*4)+ (yield*0.25*8); On-farm $0.02/bu. 30 days. Weighted Price per Bushel = $8.02 per bushel = (50% December Average Cash price) + (25% March CBOT Futures price) + (25% July CBOT Futures price). December Average Cash price derived from Wisconsin Ag Statistics; CBOT Futures prices derived from closing price on first business day in December.
Grain Yield	Units	Bu/acre
	Formula	(43560/(plot width * plot length in feet)) * weight of sample in lbs.* ((100-sample moisture)/(100-13.5{moisture standard}))/60 lb/bu
Grain Moisture	Units	%
	Determination	Determined by sensor on combine 13.5% is standard wheat moisture

Soils Information

Table B-2.

Location Lat - Long	Soil Series	Soil Family	Soil Subgroup
Arlington ARS 43 º 18 ’- 89º 21’	Plano silt loam (predominant soil)	Fine-silty, mixed, mesic	Typic Agriudoll
	Ringwood silt loam	Fine-loamy, mixed, mesic	Typic Argiudoll
	Saybrook silt loam	Fine-silty, mixed, mesic	Typic Argiudoll
	Radford silt loam	Fine-silty, mixed, mesic	Fluvaquentic Hapludoll
	Sable silt loam	Fine-silty, mixed, mesic	Typic Haplaquoll
	Huntsville silt loam	Fine-silty, mixed, mesic	Cumulic Hapludoll
	Elburn silt loam	Fine-silty, mixed mesic	Aquic Argiudoll
	Channahon silt loam	Loamy, mixed, mesic	Lithic Argiudoll
Hancock ARS 44 º 7 ‘ - 89 º 32 ‘	Plainfield loamy sand (Predominant soil)	Mixed, mesic	Typic Udipsamment
	Sparta loamy sand	Sandy, mixed, mesic	Entic Hapludoll
Lancaster ARS 42 º 50 ‘ - 90 º 47 ‘	Fayette silt loam	Fine-silty, mixed, mesic	Typic Hapludalf
	Rozetta silt loam	Fine-silty, mixed, mesic	Typic Hapludalf
	Dubuque silt loam	Fine-silty, mixed, mesic	Typic Hapludalf
Marshfield ARS 44 º 39 ‘ - 90 º 8 ‘	Withee silt loam (Predominant soil)	Fine-loamy, mixed	Aquic Glossoboralf
	Marshfield silt loam	Fine-loamy, mixed, frigid	Typic Ochraqualf
Spooner ARS 45 º 49 ‘ - 91 º 53 ‘	Chetek sandy loam	Coarse-loamy, mixed	Eutric Glossaboralf
	Pence sandy loam	Sandy, mixed, frigid	Entic Haplorthod
	Omega loamy sand	Sandy, mixed, frigid	Typic Udipsamment
	Antigo silt loam	Well drained silt loam-sandy loam soils	

FIELD EXPERIMENT HISTORY

Title: **Corn Hybrid Growth and Development**

Experiment: 01GD **Trial ID:** 6612 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

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

Supported By: HATCH

Site Information

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

Soil Test: **Date:** 10/1 /22 **pH:** 6.1 **OM (%)** 2.8 **P (ppm)** 40 **K (ppm)** 127

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:

Preplant Analysis:	32-0-0	**Rate lbs/A:** 43 lbs/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Z	**Rate lbs/A:** 200 lbs/A	**Date:**	5 /9 /22
Post plant Analysis:	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
Manure:	N/A			

Herbicide: Bellum 6.0 oz/A
Medal II EC 24 oz/A

Insecticide: Force 3G 4.4 lbs/A

Hybrid: Factor

Irrigation: None

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Precision Planter

Harvest Date: 10/24/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33332 **plants per acre**

Factors/Treatments:

Hybrid (RM):

1) Dekalb DKC31-10RIB (81)
2) Jung 33DP303 (83)
3) LG Seeds LG35C41VT2RIB (85)
4) NK Brand NK8760-3220 (87)
5) Brunner 3911GT-3110A (91)
6) Federal 4225R (92)
7) Dairyland DS-3366AM (93)
8) Jung 47DP429 (97)
9) Renk RK579DGVT2P (99)
10) Dairyland DS-4018AM (101)
11) AgriGold A633-14STXRIB (103)
12) Dairyland DS-4510Q (105)
13) Legend LR9106 PCE (106)
14) Jung 59SS581 (109)
15) FS InVision FS6217XRIB (112)
16) Dekalb DKC65-94RIB (115)

Results: Table 2201-01 & 2201-02.

Table: 2201-01. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2022.

Hybrid	Relative maturity	Grain yield	Grain moisture	Test wt	Lodged			AGI	Silking	Early	Kernel Milk			Black
					Total	Stalk	Root	$6.09	date	dent	75%	50%	25%	layer
		bu/A	%	lb/bu	%	%	%	$/A	---------- doy ----------					
Dekalb DKC31-10RIB	81	189	19.4	56	4	4	0	929	191	226	229	236	244	249
Jung 33DP303	83	170	18.3	52	2	2	0	839	192	227	229	242	249	256
LG Seeds LG35C41VT2RI	85	212	19.1	57	2	2	0	1043	193	225	232	247	254	265
NK Brand NK8760-3220	87	202	20.7	56	3	3	0	988	196	227	235	243	249	257
Brunner 3911GT-3110A	91	235	19.3	53	0	0	0	1157	196	229	237	246	252	264
Federal 4225R	92	227	18.1	54	3	3	0	1123	196	229	234	242	245	250
Dairyland DS-3366AM	93	240	19.3	54	1	1	0	1181	197	231	240	244	251	262
Jung 47DP429	97	266	19.8	55	3	3	0	1307	198	231	240	248	254	264
Renk RK579DGVT2P	99	258	20.6	54	1	1	0	1263	197	228	241	248	255	266
Dairyland DS-4018AM	101	286	23.2	53	0	0	0	1382	199	237	243	250	257	269
AgriGold A633-14STXRIB	103	260	24.6	56	1	1	0	1249	203	236	245	255	264	272
Dairyland DS-4510Q	105	269	27.4	54	1	1	0	1277	199	237	244	252	267	277
Legend LR9106 PCE	106	260	26.8	51	1	1	0	1239	199	233	247	255	262	269
Jung 59SS581	109	262	31.6	54	1	1	0	1225	202	239	245	253	263	277
FS InVision FS6217XRIB	112	271	29.7	54	0	0	0	1275	202	235	243	251	262	276
Dekalb DKC65-94RIB	115	236	30.2	56	0	0	0	1110	203	236	241	253	261	278
		240	23.0	54	2	1	0	1162	198	232	239	248	256	266
Probability(%)														
Hybrid (H)		0.0	0.0	6.1	22.4	28.9	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD(0.10)														
Hybrid (H)		16	1.8	3	NS	NS	NS	78	1	4	6	5	5	5

Table: 2201-02. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2022.

Hybrid	Relative maturity	Observation Day of year	Leaf Development Leaf collars	Hail adjusters method	Total leaves	Plant height
			no./plant	no./plant	no./plant	inches
		151	2.8	3.8	5.1	6.1
		165	3.5	6.8	8.2	16.5
		179	8.4	12.7	14.1	44.4
		193	15.2	16.4	17.4	91.9
		207	19.1	19.1	19.1	107.5
Dekalb DKC31-10RIB	81		10.0	12.0	13.0	53.7
Jung 33DP303	83		9.5	11.6	12.5	52.8
LG Seeds LG35C41VT2RIB	85		9.0	11.0	12.1	49.6
NK Brand NK8760-3220	87		10.3	12.2	13.4	51.7
Brunner 3911GT-3110A	91		9.5	11.5	12.5	52.3
Federal 4225R	92		9.8	11.6	12.7	51.2
Dairyland DS-3366AM	93		9.5	11.7	12.6	53.1
Jung 47DP429	97		9.9	11.8	12.7	55.9
Renk RK579DGVT2P	99		9.9	11.8	12.9	55.4
Dairyland DS-4018AM	101		10.1	12.1	13.2	55.7
AgriGold A633-14STXRIB	103		9.7	11.7	12.6	54.2
Dairyland DS-4510Q	105		9.7	11.7	12.7	55.8
Legend LR9106 PCE	106		9.9	12.0	13.0	52.9
Jung 59SS581	109		10.2	12.4	13.5	54.8
FS InVision FS6217XRIB	112		9.4	11.4	12.3	52.4
Dekalb DKC65-94RIB	115		9.9	11.9	12.9	50.8
Dekalb DKC31-10RIB	81	151	2.7	4.2	5.5	6.4
Dekalb DKC31-10RIB	81	165	3.5	7.5	8.7	15.3
Dekalb DKC31-10RIB	81	179	8.8	13.0	14.5	46.3
Dekalb DKC31-10RIB	81	193	16.2	16.8	17.8	96.5
Dekalb DKC31-10RIB	81	207	18.7	18.7	18.7	104.2
Jung 33DP303	83	151	3.2	4.2	5.7	6.9
Jung 33DP303	83	165	3.7	6.2	7.7	16.7
Jung 33DP303	83	179	7.3	13.3	14.5	49.3
Jung 33DP303	83	193	15.5	16.2	16.7	93.2
Jung 33DP303	83	207	18.0	18.0	18.0	97.7
LG Seeds LG35C41VT2RIB	85	151	2.2	3.0	4.5	4.3
LG Seeds LG35C41VT2RIB	85	165	3.0	5.3	7.0	13.3
LG Seeds LG35C41VT2RIB	85	179	6.5	12.2	13.3	40.2
LG Seeds LG35C41VT2RIB	85	193	15.0	16.2	17.0	89.0
LG Seeds LG35C41VT2RIB	85	207	18.5	18.5	18.5	101.2

continued

Table: 2201-02. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2022.
(continued)

Hybrid	Relative maturity	Observation Day of year	Leaf Development Leaf collars	Hail adjusters method	Total leaves	Plant height
			no./plant	no./plant	no./plant	inches
NK Brand NK8760-3220	87	151	3.0	3.8	5.3	7.0
NK Brand NK8760-3220	87	165	3.3	8.2	9.7	17.6
NK Brand NK8760-3220	87	179	10.0	13.0	14.7	42.5
NK Brand NK8760-3220	87	193	16.3	17.2	18.3	91.7
NK Brand NK8760-3220	87	207	19.0	19.0	19.0	99.8
Brunner 3911GT-3110A	91	151	2.5	3.3	4.5	5.9
Brunner 3911GT-3110A	91	165	3.2	6.5	7.8	16.4
Brunner 3911GT-3110A	91	179	7.8	12.8	14.2	48.0
Brunner 3911GT-3110A	91	193	15.2	16.3	17.3	90.2
Brunner 3911GT-3110A	91	207	18.7	18.7	18.7	100.8
Federal 4225R	92	151	2.2	3.5	4.8	5.0
Federal 4225R	92	165	3.8	6.5	8.0	16.0
Federal 4225R	92	179	8.5	12.2	13.7	38.8
Federal 4225R	92	193	15.5	16.7	17.7	90.8
Federal 4225R	92	207	19.2	19.2	19.2	105.5
Dairyland DS-3366AM	93	151	2.7	4.2	5.3	5.7
Dairyland DS-3366AM	93	165	3.2	6.0	7.5	17.5
Dairyland DS-3366AM	93	179	7.7	13.3	14.3	47.7
Dairyland DS-3366AM	93	193	15.2	16.2	17.2	91.3
Dairyland DS-3366AM	93	207	18.7	18.7	18.7	103.2
Jung 47DP429	97	151	2.8	4.0	5.2	6.5
Jung 47DP429	97	165	3.8	5.8	7.5	17.2
Jung 47DP429	97	179	8.0	13.2	14.2	46.2
Jung 47DP429	97	193	15.2	16.3	17.3	96.2
Jung 47DP429	97	207	19.5	19.5	19.5	113.7
Renk RK579DGVT2P	99	151	3.2	4.2	5.7	7.1
Renk RK579DGVT2P	99	165	3.3	6.3	8.0	18.6
Renk RK579DGVT2P	99	179	8.7	12.8	14.2	49.7
Renk RK579DGVT2P	99	193	15.5	16.5	17.7	92.7
Renk RK579DGVT2P	99	207	19.0	19.0	19.0	109.2
Dairyland DS-4018AM	101	151	3.0	4.0	5.2	6.7
Dairyland DS-4018AM	101	165	3.7	7.7	9.3	17.5
Dairyland DS-4018AM	101	179	8.5	12.8	14.2	47.0
Dairyland DS-4018AM	101	193	15.5	16.5	17.5	94.5
Dairyland DS-4018AM	101	207	19.7	19.7	19.7	112.7
AgriGold A633-14STXRIB	103	151	3.0	3.8	5.0	6.1
AgriGold A633-14STXRIB	103	165	3.7	6.3	7.3	16.5
AgriGold A633-14STXRIB	103	179	7.5	12.3	13.5	45.5

continued

Table: 2201-02. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2022.
(continued)

Hybrid	Relative maturity	Observation Day of year	Leaf Development Leaf collars	Hail adjusters method	Total leaves	Plant height
			no./plant	no./plant	no./plant	inches
AgriGold A633-14STXRIB	103	193	14.3	16.0	17.0	89.3
AgriGold A633-14STXRIB	103	207	20.2	20.2	20.2	113.5
Dairyland DS-4510Q	105	151	2.8	3.5	5.0	5.8
Dairyland DS-4510Q	105	165	3.5	6.8	8.2	15.8
Dairyland DS-4510Q	105	179	8.3	12.2	13.5	45.5
Dairyland DS-4510Q	105	193	14.7	16.5	17.5	92.7
Dairyland DS-4510Q	105	207	19.3	19.3	19.3	119.0
Legend LR9106 PCE	106	151	2.7	3.8	5.0	5.7
Legend LR9106 PCE	106	165	4.0	7.5	8.7	16.7
Legend LR9106 PCE	106	179	9.0	13.0	14.5	39.3
Legend LR9106 PCE	106	193	15.0	16.7	17.7	91.7
Legend LR9106 PCE	106	207	19.0	19.0	19.0	111.0
Jung 59SS581	109	151	3.0	4.0	5.2	6.7
Jung 59SS581	109	165	3.7	8.5	10.0	20.2
Jung 59SS581	109	179	9.8	13.2	15.0	45.2
Jung 59SS581	109	193	15.2	17.2	18.2	93.3
Jung 59SS581	109	207	19.3	19.3	19.3	108.3
FS InVision FS6217XRIB	112	151	2.7	3.8	4.8	5.6
FS InVision FS6217XRIB	112	165	2.8	6.3	7.3	14.8
FS InVision FS6217XRIB	112	179	8.0	11.7	13.0	41.8
FS InVision FS6217XRIB	112	193	14.3	16.0	17.0	90.5
FS InVision FS6217XRIB	112	207	19.2	19.2	19.2	109.3
Dekalb DKC65-94RIB	115	151	2.8	3.8	4.8	5.6
Dekalb DKC65-94RIB	115	165	3.5	7.5	9.0	14.4
Dekalb DKC65-94RIB	115	179	9.2	12.5	14.0	37.3
Dekalb DKC65-94RIB	115	193	14.2	15.8	17.0	86.2
Dekalb DKC65-94RIB	115	207	19.7	19.7	19.7	110.5
Mean			9.8	11.8	12.8	53.3
Probability(%)						
Hybrid (H)			0.0	0.0	0.0	0.1
Day Of Year (D)			0.0	0.0	0.0	0.0
H x D			0.7	4.6	8.0	0.7
LSD(0.10)						
Hybrid (H)			0.4	0.4	0.4	2.7
Day Of Year (D)			0.2	0.2	0.2	1.5
H x D			1.0	1.0	1.0	5.9

FIELD EXPERIMENT HISTORY

Title: **Corn Hybrid Growth and Development**

Experiment: 01GD **Trial ID:** 6613 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Marshfield, WI **County:** Marathon

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Owen Withee Silt Loam

Soil Test: **Date:** 10/1 /21 **pH:** 6.6 **OM (%)** 2.7 **P (ppm)** 31 **K (ppm)** 113

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:	**Preplant Analysis:**	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
	Starter Analysis:	9-11-30-6S-1Z	**Rate lbs/A:** 200 lbs/A	**Date:**	5 /16/22
	Post plant Analysis:	32-0-0	**Rate lbs/A:** 170 lbs/A	**Date:**	N/A
	Manure: N/A				

Herbicide: Resicore 2.5 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Factor

Planting Date: 5/16/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Precision Planter

Harvest Date: 11/1/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 31020 **plants per acre**

Factors/Treatments:

Hybrid (RM):

1) Dekalb DKC31-10RIB (81)
2) Jung 33DP303 (83)
3) LG Seeds LG35C41VT2RIB (85)
4) NK Brand NK8760-3220 (87)
5) Brunner 3911GT-3110A (91)
6) Federal 4225R (92)
7) Dairyland DS-3366AM (93)
8) Jung 47DP429 (97)
9) Renk RK579DGVT2P (99)
10) Dairyland DS-4018AM (101)
11) AgriGold A633-14STXRIB (103)
12) Dairyland DS-4510Q (105)
13) Legend LR9106 PCE (106)
14) Jung 59SS581 (109)
15) FS InVision FS6217XRIB (112)
16) Dekalb DKC65-94RIB (115)

Results: Table 2201-03.

Table: 2201-03. Determining Corn Hybrid Maturity - Comparison of Hybrids. Marshfield, WI - 2022.

Hybrid	Relative maturity	Harvest density	Grain yield	Grain moisture	Test weight	Total	Stalk	Root	AGI $6.09
		plants/A	bu/A	%	lb/bu	%	%	%	$/A
Dekalb DKC31-10RIB	81	31565	188	20.1	56	0	0	0	829
Jung 33DP303	83	32323	189	20.3	53	0	0	0	835
LG Seeds LG35C41VT2RIB	85	31818	191	19.9	56	0	0	0	901
NK Brand NK8760-3220	87	26767	170	22.5	53	5	5	0	822
Brunner 3911GT-3110A	91	30681	199	23.4	51	0	0	0	960
Federal 4225R	92	29040	185	23.9	50	0	0	0	892
Dairyland DS-3366AM	93	28787	195	22.3	53	0	0	0	922
Jung 47DP429	97	32702	203	25.2	50	0	0	0	974
Renk RK579DGVT2P	99	32828	194	26.7	48	0	0	0	923
Dairyland DS-4018AM	101	31060	187	30.1	48	0	0	0	934
AgriGold A633-14STXRIB	103	31944	169	35.4	48	0	0	0	877
Dairyland DS-4510Q	105	32070	184	31.2	48	0	0	0	883
Legend LR9106 PCE	106	31691	191	33.4	46	0	0	0	854
Jung 59SS581	109	31060	181	34.2	47	0	0	0	836
FS InVision FS6217XRIB	112	31818	180	36.2	49	0	0	0	875
Dekalb DKC65-94RIB	115	30176	158	34.9	49	0	0	0	773
Mean		31021	185	27.5	50	0	0	0	881
Probability(%)									
Hybrid (H)		21.2	0.4	0.0	0.0	49.0	48.0	48.0	12.1
LSD(0.10)									
Hybrid (H)		NS	16	2.2	2.1	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Syngenta**

Experiment: 01ST **Trial ID:** 6712 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

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

Supported By: Syngenta

Site Information

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

Soil Test: **Date:** 9 /1 /22 **pH:** 6.1 **OM (%)** 2.8 **P (ppm)** 40 **K (ppm)** 127

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:

	Analysis	Rate	Date
Preplant	32-0-0	43 lbs/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /9 /22
Post plant	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Bellum 6.0 oz/A
Medal II EC 24 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Factor

Irrigation: None

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/15/22 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 34090 **plants per acre**

Hybrids:

SK6758DS
SL6768DS
SL7506DD
SP6613DQ
SP8011DX

Results: Table 2201-01.

Table: 2201-01. Syngenta Corn Silage Evaluation Study.

Arlington, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
SK6758DS	12.0	66.4	7.5	21.2	40.3	83.4	58.9	28.6	3253	38993
SL6768DS	10.6	62.6	7.5	18.2	36.3	85.2	59.3	33.9	3431	36488
SL7506DD	11.4	64.7	7.4	19.4	37.2	85.2	60.4	34.3	3543	40360
SP6613DQ	11.3	70.3	8.3	20.9	39.3	84.5	60.5	29.2	3344	37714
SP8011DX	9.4	68.1	8.0	19.3	38.3	87.3	66.7	29.9	3467	32814
Mean	10.9	66.4	7.7	19.8	38.3	85.1	61.2	31.2	3407	37274
Probability (%)										
Hybrid (H)	2.3	0.0	2.9	7.7	16.1	3.3	0.4	8.5	18.9	15.0
LSD (0.10)										
Hybrid (H)	1.1	1.5	0.5	1.9	NS	1.7	2.7	4.1	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Syngenta**

Experiment: 01ST **Trial ID:** 6713 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Montfort, WI **County:** Iowa

Supported By: Syngenta

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Dodgeville Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.3 **OM (%)** 2.5 **P (ppm)** 64 **K (ppm)** 215

Plot Management

Tillage Operations: Disk Chisel Field Cultivator

Fertilizer:

	Analysis	Rate	Date
Preplant	32-0-0	71 lbs/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	4 /29/23
Post plant	N/A	N/A	N/A
Manure:	Dairy	10000 gal/A	N/A

Herbicide: Atrazine 4L 32.0 oz/A
Explorer 3.2 oz/A
Roundup 25.6 oz/A
Zidua 3.25 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Factor

Irrigation: None

Planting Date: 4/29/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/8/22 **Harvest Method:** New Holland 707

Notes:

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 24091 **plants per acre**

Hybrids:

SK6758DS
SL6768DS
SL7506DD
SP6613DQ
SP8011DX

Results: Table 2201-02.

Table: 2201-02. Syngenta Corn Silage Evaluation Study.

Montfort, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
SK6758DS	11.4	69.1	8.0	19.9	38.7	85.6	62.8	29.3	3387	38463
SL6768DS	10.9	67.9	8.3	16.9	34.7	87.7	64.7	33.6	3584	39074
SL7506DD	9.9	68.7	7.9	17.3	34.8	88.4	66.9	34.3	3660	36026
SP6613DQ	8.5	73.0	8.7	19.6	37.9	87.0	65.6	28.5	3401	29062
SP8011DX	7.2	72.9	8.7	19.2	38.4	88.2	69.2	28.0	3469	25170
Mean	9.6	70.3	8.3	18.6	36.9	87.4	65.8	30.7	3500	33559
Probability (%)										
Hybrid (H)	0.5	0.3	0.9	8.3	6.6	8.9	0.9	3.7	7.9	0.4
LSD (0.10)										
Hybrid (H)	1.5	2.0	0.4	2.1	2.8	1.7	2.4	3.8	176	5357

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Syngenta**

Experiment: 01ST **Trial ID:** 6714 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Fond du Lac, WI **County:** Fond du Lac

Supported By: Syngenta

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 2.8 **P (ppm)** 36 **K (ppm)** 136

Plot Management

Tillage Operations: Strip-Till

Fertilizer:

	Analysis	Rate	Date
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /9 /22
Post plant	28-0-0	30 lbs/A	N/A
	32-0-0	128 lbs/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Factor

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/16/22 **Harvest Method:** New Holland 707

Notes:

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 33334 **plants per acre**

Hybrids:

SK5738DS
SK6167DD
SK6217ZJ
SK6758DS
SL5196
SP2007DQ

Results: Table 2201-03.

Table: 2201-03. Syngenta Corn Silage Evaluation Study.

Fond du Lac, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
SK5738DS	9.9	61.3	5.6	18.2	35.9	85.2	58.8	34.4	3238	32031
SK6167DD	10.9	68.4	6.3	19.8	38.1	83.4	56.4	32.3	3280	35868
SK6217ZJ	9.6	61.4	6.4	17.2	35.0	85.9	59.8	35.9	3405	32641
SK6758DS	11.1	64.7	6.2	19.7	38.0	84.3	58.7	31.6	3240	36055
SL5196	9.6	61.6	5.6	20.6	38.8	84.0	58.9	33.8	3349	32129
SP2007DQ	9.7	63.7	5.8	17.2	34.0	87.6	63.5	35.0	3357	32736
Mean	10.1	63.5	6.0	18.8	36.6	85.1	59.4	33.8	3312	33577
Probability (%)										
Hybrid (H)	54.4	1.4	17.7	11.5	8.4	6.4	4.5	37.4	58.7	82.2
LSD (0.10)										
Hybrid (H)	NS	3.2	NS	NS	3.0	2.3	3.2	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Syngenta**

Experiment: 01ST **Trial ID:** 6715 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Galesville, WI **County:** Trempealeau

Supported By: Syngenta

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Downs Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 3.6 **P (ppm)** 75 **K (ppm)** 192

Plot Management

Tillage Operations:

Fertilizer:

	Analysis	Rate	Date
Preplant	46-0-0	100 lbs/A	N/A
	21-0-0-24S	21 lbs/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /5 /22
Post plant	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Strelius II 2.0 pt/A
Atrazine 4L 16.0 oz/A
Dicamba 2.0 oz/A

Insecticide: Force 6.5G 2.0 lbs/A
Factor

Irrigation: None

Planting Date: 5/5/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/9/22 **Harvest Method:** New Holland 707

Notes:

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 33334 **plants per acre**

Factors/Treatments:

Hybrids:

SK5738DS
SK6167DD
SK6217ZJ
SK6758DS
SL5196
SP2007DQ

Results: Table 2201-04.

Table: 2201-04. Syngenta Corn Silage Evaluation Study.

Galesville, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
SK5738DS	11.1	68.6	7.4	19.7	37.1	84.4	58.1	31.7	3286	36543
SK6167DD	10.3	71.7	7.5	21.6	39.7	82.2	55.3	29.0	3142	32305
SK6217ZJ	10.7	70.1	7.9	22.0	40.5	82.2	56.0	27.4	3095	33102
SK6758DS	12.0	70.7	7.3	24.0	43.0	81.1	56.3	23.3	2846	34161
SL5196	11.3	66.9	7.5	20.2	37.4	83.9	56.8	32.4	3331	37712
SP2007DQ	11.7	69.7	7.3	19.8	36.7	85.3	59.9	30.6	3214	37470
Mean	11.2	69.6	7.5	21.2	39.1	83.2	57.1	29.1	3153	35215
Probability (%)										
Hybrid (H)	1.2	1.9	29.7	9.5	3.4	9.7	15.8	2.9	6.2	10.6
LSD (0.10)										
Hybrid (H)	0.7	2.0	NS	2.7	3.2	2.5	NS	4.3	254	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Syngenta**

Experiment: 01ST **Trial ID:** 6716 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Chippewa Falls, WI **County:** Chippewa

Supported By: Syngenta

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Sattre Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 1.4 **P (ppm)** 40 **K (ppm)** 92

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

Fertilizer:

	Analysis	Rate	Date
Preplant	21-0-0-24S	11 lbs/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /5 /22
Post plant	32-0-0	64 lbs/A	N/A
Manure:	Dairy	10000 gal/A	N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: Yes **Hybrid:** Factor

Planting Date: 5/5/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/12/22 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 32577 **plants per acre**

Hybrids:

SH2517DD
SH4370DD
SH4397DS
SI3232DL
SP7500DQ

Results: Table 2201-05.

Table: 2201-05. Syngenta Corn Silage Evaluation Study.

Chippewa Falls, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
SH2517DD	8.2	62.8	7.3	16.7	33.1	87.0	60.9	36.0	3475	28555
SH4370DD	8.0	63.8	7.4	17.5	34.5	87.5	63.7	33.4	3422	27269
SH4397DS	8.0	66.8	7.3	19.4	37.2	85.7	61.6	31.5	3389	27085
SI3232DL	8.3	61.4	7.1	16.4	32.7	87.1	60.5	36.4	3410	28436
SP7500DQ	8.7	66.4	7.3	18.2	35.8	87.2	64.2	32.9	3474	30775
Mean	8.3	64.2	7.3	17.6	34.7	86.9	62.2	34.0	3434	28424
Probability (%)										
Hybrid (H)	71.0	5.1	78.8	12.0	5.5	51.5	12.4	14.6	86.8	49.0
LSD (0.10)										
Hybrid (H)	NS	3.1	NS	NS	2.5	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Syngenta**

Experiment: 01ST **Trial ID:** 6717 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Marshfield, WI **County:** Marathon

Supported By: Syngenta

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Owen Withee Silt Loam

Soil Test: **Date:** 9/1/227 **pH:** 6.6 **OM (%)** 2.7 **P (ppm)** 31 **K (ppm)** 113

Plot Management

Tillage Operations: Strip-Till Vertical-Till

Fertilizer:

	Analysis	Rate	Date
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /16/22
Post plant	32-0-0	170 lbs/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Resicore 2.5 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Factor

Planting Date: 5/16/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/23/22 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 32387 **plants per acre**

Hybrids:

SH2517DD
SH4370DD
SH4397DS
SI3232DL
SP7500DQ

Results: Table 2201-06.

Table: 2201-06. Syngenta Corn Silage Evaluation Study.

Marshfield, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
SH2517DD	8.7	71.0	7.6	20.0	37.5	85.1	60.3	30.6	3330	29099
SH4370DD	9.3	70.7	7.6	19.7	38.2	87.0	65.8	27.0	3195	29588
SH4397DS	8.3	73.7	7.4	23.5	42.7	83.3	60.9	25.2	3151	26141
SI3232DL	8.8	69.2	7.2	20.0	37.5	85.6	61.7	29.9	3275	29357
SP7500DQ	9.8	71.1	7.4	19.8	38.0	87.4	67.1	28.3	3296	32206
Mean	9.0	71.1	7.4	20.6	38.8	85.7	63.1	28.2	3249	29278
Probability (%)										
Hybrid (H)	12.7	2.8	46.0	14.3	9.8	8.8	1.9	13.7	58.3	30.9
LSD (0.10)										
Hybrid (H)	NS	2.0	NS	NS	3.5	2.5	3.4	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Syngenta**

Experiment: 01ST **Trial ID:** 6718 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Valders, WI **County:** Manitowoc

Supported By: Syngenta

Site Information

Field: **Previous Crop:** Wheat **Soil Type:** Kewaunee Clay Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.6 **OM (%)** 2.7 **P (ppm)** 77 **K (ppm)** 128

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

Fertilizer:

	Analysis	Rate	Date
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /13/22
Post plant	28-0-0-5S	61 lbs/A	N/A
Manure:	Dairy	5000 gal/A	N/A

Herbicide: Atrazine 1.0 lb/A
Realm Q 3.0oz/A
TripleFlex 3.0 qt/A
Yukon 4.0 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Factor

Irrigation: None

Planting Date: 5/13/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/19/22 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 34092 **plants per acre**

Hybrids:

SH2517DD
SH4370DD
SH4397DS
SI3232DL
SP7500DQ

Results: Table 2201-07.

Table: 2201-07. Syngenta Corn Silage Evaluation Study.

Valders, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
SH2517DD	8.6	59.0	7.1	16.6	33.3	86.4	59.2	38.1	3471	29499
SH4370DD	10.0	63.5	7.7	17.5	35.2	87.3	64.0	33.6	3507	35339
SH4397DS	9.3	64.8	7.6	18.2	35.6	87.7	65.3	32.9	3498	32631
SI3232DL	9.3	53.0	7.1	16.3	33.5	86.9	60.9	38.0	3343	31202
SP7500DQ	9.5	66.1	7.3	17.9	35.4	88.1	66.6	32.6	3484	32592
Mean	9.3	61.3	7.3	17.3	34.6	87.3	63.2	35.0	3461	32253
Probability (%)										
Hybrid (H)	38.2	0.0	0.1	20.5	16.2	43.9	1.1	0.5	20.1	20.8
LSD (0.10)										
Hybrid (H)	NS	1.5	0.2	NS	NS	NS	3.1	2.4	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Prairie Hybrids**

Experiment: 01ST **Trial ID:** 6719 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Arlington, WI **County:** Dane

Supported By: Prairie Hybrids

Site Information

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

Soil Test: **Date:** 9 /1 /22 **pH:** 6.1 **OM (%)** 2.8 **P (ppm)** 40 **K (ppm)** 127

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:

	Analysis	Rate	Date
Preplant	32-0-0	43 lbs/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /9 /22
Post plant	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Bellum 6.0 oz/A
Medal II EC 24 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Factor

Irrigation: None

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/15/22 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 34090 **plants per acre**

Hybrids:

8290
EX0806

Results: Table 2201-08.

Table: 2201-08. Prairie Hybrids Corn Silage Evaluation Study.

Arlington, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
8290	11.3	67.9	7.7	21.0	39.3	83.5	58.2	28.9	3195	36010
EX0806	11.2	67.8	8.0	21.5	39.5	82.9	56.8	29.2	3213	36070
Mean	11.2	67.8	7.8	21.3	39.4	83.2	57.5	29.0	3204	36040
Probability (%)										
Hybrid (H)	69.4	82.1	18.3	71.3	93.0	66.6	41.0	90.9	86.5	96.9
LSD (0.10)										
Hybrid (H)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Prairie Hybrids**

Experiment: 01ST **Trial ID:** 6720 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Montfort, WI **County:** Iowa

Supported By: Prairie Hybrids

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Dodgeville Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.3 **OM (%)** 2.5 **P (ppm)** 64 **K (ppm)** 215

Plot Management

Tillage Operations:

Fertilizer:

	Analysis	Rate	Date
Preplant	32-0-0	71 lbs/A	N/A
	12-0-0-26S	7 lbs/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	4 /29/23
Post plant	N/A	N/A	N/A
Manure:	Dairy	10000 gal/A	N/A

Herbicide: Atrazine 4L 32.0 oz/A
Explorer 3.2 oz/A
Roundup 25.6 oz/A
Zidua 3.25 oz/A

Insecticide: Force 6.5G 2.0 lbs/A
Factor

Irrigation: None

Planting Date: 4/29/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/8/22 **Harvest Method:** New Holland 707

Notes:

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 24091 **plants per acre**

Factors/Treatments:

Hybrids:

8290
EX0806

Results: Table 2201-09.

Table: 2201-09. Prairie Hybrids Corn Silage Evaluation Study.

Montfort, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
8290	10.1	69.9	8.4	19.2	37.3	86.3	63.3	27.2	3179	32003
EX0806	9.8	69.1	8.6	19.3	37.6	86.2	63.5	28.8	3330	32486
Mean	9.9	69.5	8.5	19.2	37.4	86.3	63.4	28.0	3255	32244
Probability (%)										
Hybrid (H)	78.3	51.1	38.9	95.9	91.6	96.2	92.9	53.1	30.2	89.4
LSD (0.10)										
Hybrid (H)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Prairie Hybrids**

Experiment: 01ST **Trial ID:** 6721 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Fond du Lac, WI **County:**

Supported By: Prairie Hybrids

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 2.8 **P (ppm)** 36 **K (ppm)** 136

Plot Management

Tillage Operations: Strip-Till

Fertilizer:

	Analysis	Rate	Date
Preplant	N/A	N/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /9 /22
Post plant	28-0-0	30 lbs/A	N/A
	32-0-0	128 lbs/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Factor

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/16/22 **Harvest Method:** New Holland 707

Notes:

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 33334 **plants per acre**

Hybrids:

4273
5200
5281
EX6425

Results: Table 2201-10.

Table: 2201-10. Prairie Hybrids Corn Silage Evaluation Study.

Fond du Lac, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
4273	8.0	67.9	6.6	19.1	37.2	85.5	61.1	32.9	3410	27319
5200	10.0	62.7	6.2	17.3	34.8	86.2	60.5	35.4	3393	33928
5281	8.7	65.1	6.4	17.7	35.0	87.0	62.8	35.0	3474	30343
EX6425	9.4	67.3	6.6	19.0	36.9	84.8	59.0	32.7	3347	31456
Mean	9.0	65.7	6.5	18.3	36.0	85.9	60.9	34.0	3406	30762
Probability (%)										
Hybrid (H)	14.8	16.7	70.4	62.1	58.5	44.2	13.3	66.5	82.0	36.4
LSD (0.10)										
Hybrid (H)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Private Silage - Prairie Hybrids**

Experiment: 01ST **Trial ID:** 6722 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Galesville, WI **County:** Trempealeau

Supported By: Prairie Hybrids

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Downs Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 3.6 **P (ppm)** 75 **K (ppm)** 192

Plot Management

Tillage Operations:

Fertilizer:

	Analysis	Rate	Date
Preplant	46-0-0	100 lbs/A	N/A
	21-0-0-24S	21 lbs/A	N/A
Starter	9-11-30-6S-1Zn	18 lbs/A	5 /5 /22
Post plant	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Strelius II 2.0 pt/A
Atrazine 4L 16.0 oz/A
Dicamba 2.0 oz/A

Insecticide: Force 6.5G 2.0 lbs/A
Factor

Irrigation: None

Planting Date: 5/5/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/9/22 **Harvest Method:** New Holland 707

Notes:

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 5' x 23' **Experiment Size:** 0.125 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 33334 **plants per acre**

Factors/Treatments:

Hybrids:

4273
5200
5281
EX6425

Results: Table 2201-11.

Table: 2201-11. Prairie Hybrids Corn Silage Evaluation Study.

Galesville, WI - 2022.

	Dry Matter								Milk Per	
Hybrid	Yield	Moisture	CP	ADF	NDF	IVD	NDFD	Starch	Ton	Acre
	T/A	%	%	%	%	%	%	%	lbs/T	lbs/A
4273	10.2	71.0	7.3	21.5	38.5	83.8	58.3	30.3	3241	33012
5200	12.2	68.4	7.7	19.9	37.3	84.0	57.0	29.9	3154	38383
5281	9.9	67.7	7.6	19.7	36.5	84.6	57.7	33.9	3443	33972
EX6425	10.4	71.3	7.4	20.3	37.3	84.0	57.1	31.4	3259	33921
Mean	10.7	69.6	7.5	20.3	37.4	84.1	57.5	31.4	3274	34822
Probability (%)										
Hybrid (H)	0.4	4.0	42.7	79.2	86.7	97.5	91.5	55.6	43.5	19.7
LSD (0.10)										
Hybrid (H)	0.7	2.2	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain and Silage Performance**

Experiment: 02PD **Trial ID:** 6660 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

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

Supported By: HATCH

Site Information

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

Soil Test: **Date:** 9 /1 /22 **pH:** 6.1 **OM (%)** 2.8 **P (ppm)** 40 **K (ppm)** 127

Plot Management

Tillage Operations: Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	32-0-0	43 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /9 /22
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Bellum 6.0 oz/A
Medal II EC 24 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: S: 9/15/22
G: 10/24/22

Harvest Method: S: New Holland 707
G: Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 20' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: S: 2.5' x 23'
G: 5' x 23'

Harvest Plant Density: 34536

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 49DP441 99RM
2) 26000	2) Dairyland DS-4510Q 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-01 & 2202-02.

Table: 2202-01. Plant Density and Hybrid Influence on Corn Grain. Arlington, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dairyland DS-4510Q		34006	263	21.4	53	5.9	4.0	1.9	1510
Jung 49DP441		35065	244	18.3	54	3.0	3.0	0.0	1416
	20000	20454	237	21.0	54	0.3	0.3	0.0	1362
	26000	26641	249	20.8	54	0.5	0.5	0.0	1431
	32000	32323	255	19.7	53	2.3	2.3	0.0	1470
	38000	38277	258	20.4	53	1.5	0.7	0.8	1489
	44000	39898	253	18.6	54	7.2	5.2	2.0	1468
	50000	49621	269	18.7	56	14.9	12.0	2.9	1557
Dairyland DS-4510Q	20000	20454	239	23.1	54	0.0	0.0	0.0	1365
Dairyland DS-4510Q	26000	26767	261	21.8	53	0.9	0.9	0.0	1498
Dairyland DS-4510Q	32000	31313	280	21.3	52	0.8	0.8	0.0	1607
Dairyland DS-4510Q	38000	37373	261	23.2	52	2.1	0.4	1.7	1491
Dairyland DS-4510Q	44000	38636	252	19.4	54	6.4	2.4	4.0	1460
Dairyland DS-4510Q	50000	49494	284	19.9	55	25.3	19.5	5.8	1637
Jung 49DP441	20000	20454	235	18.8	54	0.6	0.6	0.0	1360
Jung 49DP441	26000	26515	236	19.8	54	0.0	0.0	0.0	1365
Jung 49DP441	32000	33333	229	18.0	53	3.7	3.7	0.0	1333
Jung 49DP441	38000	39180	256	17.7	53	0.9	0.9	0.0	1487
Jung 49DP441	44000	41161	254	17.9	54	8.1	8.1	0.0	1476
Jung 49DP441	50000	49747	254	17.5	56	4.6	4.6	0.0	1476
Mean		34536	253	19.9	54	4.6	3.5	1.0	1463
Probability(%)									
Hybrid (H)		31.9	0.9	0.0	2.7	64.1	69.0	10.6	2.5
Plant Density (D)		0.0	16.1	3.2	0.1	9.3	9.7	54.5	14.1
Hybrid x Plant Density		94.7	21.5	23.6	95.9	31.2	28.0	54.5	23.5
LSD (0.10)									
Hybrid (H)		NS	11	0.8	1	NS	NS	NS	67
Plant Density (D)		3093	NS	1.5	1	7.7	7.7	NS	NS
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	NS

Table: 2202-02. Plant Density and Hybrid Influence on Silage Preformance.

Arlington WI - 2022.

Hybrid	Target density	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
Dairyland DS-4510Q		32323	10.9	64.4	33.6	1.7	2.5	4.1	7.4	18.1	35.6	86.6	62.6	35.2	3596	39318
Jung 49DP441		33192	10.7	59.7	59.3	3.0	1.4	4.3	7.5	17.7	34.7	86.8	61.9	37.0	3510	37510
	20000	20454	9.9	63.9	48.3	2.4	2.5	4.9	8.0	17.4	34.8	87.4	63.9	35.4	3622	35917
	26000	21717	8.7	64.1	40.0	2.0	2.2	4.2	7.8	17.6	34.7	86.9	62.3	35.7	3613	31412
	32000	29166	10.9	62.9	48.3	2.4	1.6	4.1	7.5	18.1	35.3	86.6	62.2	35.9	3547	38799
	38000	34424	11.2	60.8	36.3	1.8	2.1	3.9	7.3	17.2	34.4	87.1	62.5	37.2	3576	40198
	44000	44444	12.3	60.8	50.8	2.5	1.6	4.2	7.1	18.7	36.0	86.0	61.2	36.0	3493	42883
	50000	46338	11.9	59.9	55.0	2.8	1.4	4.2	7.1	18.5	35.7	86.2	61.3	36.3	3470	41275
Dairyland DS-4510Q	20000	19949	9.2	65.7	45.0	2.3	3.2	5.5	7.9	17.9	35.3	87.3	64.0	34.5	3621	33215
Dairyland DS-4510Q	26000	21969	9.2	65.9	26.7	1.3	2.6	3.9	7.7	17.5	34.7	87.0	62.5	35.6	3634	33239
Dairyland DS-4510Q	32000	30050	11.4	63.9	33.3	1.7	2.1	3.8	7.3	18.3	35.7	86.5	62.4	35.5	3594	41206
Dairyland DS-4510Q	38000	33080	11.4	62.8	35.0	1.8	2.8	4.6	7.2	16.5	33.9	87.9	64.3	37.5	3678	41976
Dairyland DS-4510Q	44000	44696	12.5	64.8	30.0	1.5	2.1	3.6	7.2	19.3	36.9	85.6	61.0	34.2	3552	44271
Dairyland DS-4510Q	50000	44191	12.0	63.3	31.7	1.6	1.9	3.5	7.0	19.5	37.3	85.6	61.4	33.7	3499	42001
Jung 49DP441	20000	20959	10.7	62.1	51.7	2.6	1.8	4.4	8.1	16.9	34.2	87.6	63.7	36.3	3622	38620
Jung 49DP441	26000	21464	8.3	62.4	53.3	2.7	1.9	4.5	7.9	17.7	34.7	86.8	62.2	35.9	3592	29586
Jung 49DP441	32000	28282	10.3	61.8	63.3	3.2	1.1	4.3	7.6	17.9	35.0	86.7	62.1	36.4	3499	36392
Jung 49DP441	38000	35768	11.1	58.8	37.5	1.9	1.4	3.2	7.3	17.8	34.8	86.4	60.8	36.9	3475	38420
Jung 49DP441	44000	44191	12.1	56.8	71.7	3.6	1.1	4.7	7.1	18.2	35.0	86.5	61.4	37.7	3433	41494
Jung 49DP441	50000	48484	11.8	56.5	78.3	3.9	0.9	4.8	7.2	17.6	34.2	86.7	61.1	38.9	3440	40550
Mean		32757	10.8	62.1	46.5	2.3	1.9	4.2	7.5	17.9	35.1	86.7	62.2	36.1	3553	38414
Probability(%)																
Hybrid (H)		54.1	63.7	0.0	0.0	0.0	0.0	39.5	3.4	44.9	20.7	79.9	21.6	5.5	1.4	36.8
Plant Density (D)		0.0	0.6	0.8	24.2	24.2	1.4	17.0	0.0	60.4	82.1	48.3	11.6	92.3	5.6	3.0
Hybrid x Density (H x D)		81.1	73.7	18.1	6.5	6.5	86.9	0.9	65.6	75.1	73.8	71.9	53.2	48.3	59.9	69.2
LSD (0.10)																
Hybrid (H)		NS	NS	1.2	7.9	0.4	0.3	NS	0.1	NS	NS	NS	NS	1.6	55	NS
Plant Density (D)		4168	1.5	2.2	NS	NS	0.5	NS	0.2	NS	NS	NS	NS	NS	96	5856
Hybrid x Density (H x D)		NS	NS	NS	19.3	1.0	NS	0.9	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6661 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Chippewa Falls, WI **County:** Chippewa

Supported By: HATCH

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Sattre Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 1.4 **P (ppm)** 40 **K (ppm)** 92

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	21-0-0-24S	11 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /5 /22
	Post plant :	32-0-0	64 lbs/A	N/A
	Manure:	Dairy	10000 gal/A	N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: Irrigated **Hybrid:** See Factors

Planting Date: 5/5/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/18/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 32733

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 49DP441 99RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-03.

Table: 2202-03. Plant Density and Hybrid Influence on Corn Grain. Chippewa Falls, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		32154	186	20.4	60	1.7	1.4	0.4	1072
Jung 49DP441		33312	208	24.0	54	0.5	0.5	0.1	1186
	20000	20707	158	23.1	68	0.0	0.0	0.0	903
	26000	23358	186	22.5	55	1.5	0.6	0.9	1062
	32000	29671	184	22.7	53	2.7	2.7	0.4	1055
	38000	34911	209	21.4	54	1.0	1.0	0.0	1200
	44000	41540	223	21.9	55	0.0	0.0	0.0	1276
	50000	46211	223	21.9	55	1.5	1.5	0.3	1280
Dekalb DKC43-75RIB	20000	19823	155	21.1	82	0.0	0.0	0.0	893
Dekalb DKC43-75RIB	26000	23358	169	20.3	56	2.9	1.2	1.8	971
Dekalb DKC43-75RIB	32000	31439	182	20.5	54	3.2	2.4	0.8	1047
Dekalb DKC43-75RIB	38000	31691	193	19.5	55	2.1	2.1	0.0	1115
Dekalb DKC43-75RIB	44000	40656	202	20.6	56	0.0	0.0	0.0	1164
Dekalb DKC43-75RIB	50000	45959	216	20.5	55	2.9	2.9	0.0	1244
Jung 49DP441	20000	21591	161	25.1	54	0.0	0.0	0.0	912
Jung 49DP441	26000	23358	203	24.6	53	0.0	0.0	0.0	1153
Jung 49DP441	32000	27904	187	24.8	53	2.9	2.9	0.0	1062
Jung 49DP441	38000	38131	225	23.3	54	0.0	0.0	0.0	1284
Jung 49DP441	44000	42424	243	23.1	54	0.0	0.0	0.0	1387
Jung 49DP441	50000	46464	231	23.3	54	0.5	0.0	0.5	1317
Mean		32733	197	22.2	57	1.1	1.0	0.3	1129
Probability(%)									
Hybrid (H)		31.4	0.1	0.0	20.8	11.7	11.5	31.9	0.2
Plant Density (D)		0.0	0.0	26.5	44.0	32.9	12.1	61.0	0.0
Hybrid x Plant Density		26.8	30.5	71.0	43.9	61.2	52.9	44.5	29.7
LSD (0.10)									
Hybrid (H)		NS	10	0.7	NS	NS	NS	NS	55
Plant Density (D)		3339	17	NS	NS	NS	NS	NS	95
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6662 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Coleman, WI **County:** Marinette

Supported By: HATCH

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Oconto Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.2 **OM (%)** 1.6 **P (ppm)** 77 **K (ppm)** 93

Plot Management

Tillage Operations: Disk Chisel Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	21-0-0-24S	21 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	6 /2 /22
	Post plant :	11-52-0 46-0-0	18 lbs/A 143 lbs/A	N/A N/A
	Manure:	N/A	N/A	N/A

Herbicide: Resicore 2.5 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 6/2/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 11/2/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 34764

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 49DP441 99RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-04.

Table: 2202-04. Plant Density and Hybrid Influence on Corn Grain. Coleman, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		34490	146	27.8	49	0.0	0.0	0.0	819
Jung 49DP441		35037	133	32.1	47	0.1	0.1	0.0	738
	20000	20391	132	29.3	49	0.0	0.0	0.0	736
	26000	25883	138	29.4	49	0.0	0.0	0.0	773
	32000	31755	140	29.0	48	0.0	0.0	0.0	782
	38000	38194	143	29.3	47	0.0	0.0	0.0	801
	44000	43497	144	31.8	47	0.1	0.1	0.0	797
	50000	48863	141	30.8	47	0.3	0.3	0.1	782
Dekalb DKC43-75RIB	20000	20328	137	27.5	50	0.0	0.0	0.0	772
Dekalb DKC43-75RIB	26000	25000	141	27.1	50	0.0	0.0	0.0	793
Dekalb DKC43-75RIB	32000	31439	146	26.7	50	0.0	0.0	0.0	825
Dekalb DKC43-75RIB	38000	37752	150	27.4	48	0.0	0.0	0.0	842
Dekalb DKC43-75RIB	44000	43686	155	29.1	47	0.0	0.0	0.0	867
Dekalb DKC43-75RIB	50000	48737	145	29.0	48	0.0	0.0	0.3	814
Jung 49DP441	20000	20454	126	31.1	48	0.0	0.0	0.0	701
Jung 49DP441	26000	26767	136	31.7	49	0.0	0.0	0.0	753
Jung 49DP441	32000	32070	133	31.4	47	0.0	0.0	0.0	739
Jung 49DP441	38000	38636	137	31.2	47	0.0	0.0	0.0	759
Jung 49DP441	44000	43307	133	34.4	47	0.3	0.3	0.0	728
Jung 49DP441	50000	48989	136	32.7	46	0.5	0.5	0.0	749
Mean		34764	140	29.9	48	0.1	0.1	0.0	778
Probability(%)									
Hybrid (H)		1.3	0.5	0.0	1.3	20.6	20.6	32.8	0.3
Plant Density (D)		0.0	56.6	22.6	9.6	63.2	63.2	44.1	69.1
Hybrid x Plant Density		8.9	88.0	97.6	42.3	63.2	63.2	44.1	90.1
LSD (0.10)									
Hybrid (H)		348	7	1.2	1	NS	NS	NS	41
Plant Density (D)		602	NS	NS	2	NS	NS	NS	NS
Hybrid x Plant Density		852	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6663 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Fond du Lac, WI **County:** Fond du Lac

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 2.8 **P (ppm)** 36 **K (ppm)** 136

Plot Management

Tillage Operations: Strip-Till

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /9 /22
	Post plant :	28-0-0 32-0-0	30 lbs/A 128 lbs/A	N/A N/A
	Manure:	N/A	N/A	N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/28/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33007

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 49DP441 99RM
2) 26000	2) Dairyland DS-4510Q 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-05.

Table: 2202-05. Plant Density and Hybrid Influence on Corn Grain. Fond du Lac, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dairyland DS-4510Q		33228	223	25.8	51	0.1	0.1	-	1259
Jung 49DP441		32786	227	21.2	53	0.2	0.2	-	1306
	20000	20265	206	23.5	52	0.0	0.0	-	1175
	26000	25568	211	23.5	53	0.0	0.0	-	1206
	32000	31376	231	23.1	52	0.0	0.0	-	1320
	38000	34659	234	24.5	52	0.2	0.2	-	1330
	44000	41035	233	22.6	52	0.4	0.4	-	1332
	50000	45138	234	23.7	52	0.3	0.3	-	1335
Dairyland DS-4510Q	20000	20707	203	26.3	52	0.0	0.0	-	1148
Dairyland DS-4510Q	26000	25631	208	26.3	52	0.0	0.0	-	1175
Dairyland DS-4510Q	32000	31186	231	25.1	51	0.0	0.0	-	1308
Dairyland DS-4510Q	38000	36111	231	25.3	52	0.3	0.3	-	1309
Dairyland DS-4510Q	44000	39772	236	24.7	51	0.0	0.0	-	1340
Dairyland DS-4510Q	50000	45959	226	26.7	51	0.0	0.0	-	1274
Jung 49DP441	20000	19823	209	20.6	53	0.0	0.0	-	1201
Jung 49DP441	26000	25505	215	20.6	53	0.0	0.0	-	1236
Jung 49DP441	32000	31565	232	21.1	53	0.0	0.0	-	1331
Jung 49DP441	38000	33207	237	23.6	53	0.0	0.0	-	1352
Jung 49DP441	44000	42297	230	20.6	53	0.9	0.9	-	1323
Jung 49DP441	50000	44318	242	20.7	54	0.5	0.5	-	1395
Mean		33007	225	23.5	52	0.1	0.1	-	1283
Probability(%)									
Hybrid (H)		62.6	35.5	0.0	0.0	30.0	30.0	-	11.7
Plant Density (D)		0.0	0.7	50.5	88.6	56.9	56.9	-	0.8
Hybrid x Plant Density		61.4	86.7	19.5	36.3	34.8	34.8	-	84.0
LSD (0.10)									
Hybrid (H)		NS	NS	0.9	1	NS	NS	-	NS
Plant Density (D)		2656	15	NS	NS	NS	NS	-	86
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	-	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6664 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Galesville, WI **County:** Trempealeau

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Downs Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 3.6 **P (ppm)** 75 **K (ppm)** 192

Plot Management

Tillage Operations: Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	46-0-0	100 lbs/A	N/A
		21-0-0-24S	21 lbs/A	N/A
		18-46-0	18 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /5 /22
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Strelius II 2.0 pt/A
Atrazine 4L 16.0 oz/A
Dicamba 2.0 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/5/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/11/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 34953

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 49DP441 99RM
2) 26000	2) Dairyland DS-4510Q 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-06.

Table: 2202-06. Plant Density and Hybrid Influence on Corn Grain. Galesville, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dairyland DS-4510Q		35311	250	26.6	53	0.2	0.2	0.2	1408
Jung 49DP441		34595	239	21.5	55	0.1	0.1	0.0	1374
	20000	22474	207	23.7	54	0.0	0.0	0.0	1179
	26000	27967	237	24.0	53	0.0	0.0	0.0	1351
	32000	30997	250	24.4	53	0.0	0.0	0.0	1422
	38000	37689	247	24.2	54	0.7	0.7	0.0	1406
	44000	43434	265	23.6	54	0.0	0.0	0.0	1508
	50000	47158	261	24.5	54	0.3	0.3	0.5	1481
Dairyland DS-4510Q	20000	24116	207	26.7	53	0.0	0.0	0.0	1166
Dairyland DS-4510Q	26000	26010	239	26.6	53	0.0	0.0	0.0	1346
Dairyland DS-4510Q	32000	31944	263	27.3	52	0.0	0.0	0.0	1477
Dairyland DS-4510Q	38000	36742	244	26.6	53	1.3	1.3	0.0	1374
Dairyland DS-4510Q	44000	44696	275	25.0	52	0.0	0.0	0.0	1560
Dairyland DS-4510Q	50000	48358	271	27.3	53	0.0	0.0	1.0	1524
Jung 49DP441	20000	20833	207	20.7	55	0.0	0.0	0.0	1193
Jung 49DP441	26000	29924	236	21.3	54	0.0	0.0	0.0	1355
Jung 49DP441	32000	30050	238	21.5	54	0.0	0.0	0.0	1367
Jung 49DP441	38000	38636	251	21.7	55	0.0	0.0	0.0	1438
Jung 49DP441	44000	42171	254	22.1	55	0.0	0.0	0.0	1455
Jung 49DP441	50000	45959	251	21.7	55	0.6	0.6	0.0	1439
Mean		34953	245	24.1	54	0.2	0.2	0.1	1391
Probability(%)									
Hybrid (H)		51.7	0.5	0.0	0.3	63.4	63.4	32.8	9.0
Plant Density (D)		0.0	0.0	74.5	89.3	52.5	52.5	44.1	0.0
Hybrid x Plant Density		34.4	4.7	36.0	97.5	36.9	36.9	44.1	5.0
LSD (0.10)									
Hybrid (H)		NS	6	0.7	1	NS	NS	NS	32
Plant Density (D)		3232	10	NS	NS	NS	NS	NS	56
Hybrid x Plant Density		NS	14	NS	NS	NS	NS	NS	79

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6665 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Hancock, WI **County:** Waushara

Supported By: HATCH

Site Information

Field: **Previous Crop:** Cucumber **Soil Type:** Plainfield Sand

Soil Test: **Date:** 9 /1 /22 **pH:** 5.8 **OM (%)** 0.9 **P (ppm)** 61 **K (ppm)** 108

Plot Management

Tillage Operations: Soil Finisher

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /4 /22
	Post plant :	21-0-024S	32 lbs/A	N/A
		32-0-0	106 lbs/A	N/A
		34-0-0		N/A
	Manure:	N/A	N/A	N/A

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

Insecticide: Force 6.5G 2.0 lbs/A

Irrigation: Irrigated

Hybrid: See Factors

Planting Date: 5/4/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/19/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 34490

Factors/Treatments:

Target Plant Density:

1) 20000
2) 26000
3) 32000
4) 38000
5) 44000
6) 50000

Hybrid:

1) Jung 49DP441 99RM
2) Dairyland DS-4510Q 106RM

Results: Tables 2202-07.

Table: 2202-07. Plant Density and Hybrid Influence on Corn Grain. Hancock, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dairyland DS-4510Q		34553	190	19.9	52	1.1	1.1	0.0	1096
Jung 49DP441		34427	176	17.9	52	0.3	0.3	0.0	1026
	20000	20517	152	18.8	52	0.0	0.0	0.0	883
	26000	26515	175	18.5	52	0.2	0.2	0.0	1012
	32000	34532	186	19.0	53	0.8	0.8	0.0	1078
	38000	38194	188	19.0	52	0.3	0.3	0.0	1088
	44000	41919	197	19.2	52	0.6	0.6	0.0	1139
	50000	45265	201	18.9	53	2.4	2.3	0.1	1166
Dairyland DS-4510Q	20000	20075	157	19.6	51	0.0	0.0	0.0	908
Dairyland DS-4510Q	26000	26136	183	19.7	52	0.0	0.0	0.0	1056
Dairyland DS-4510Q	32000	32575	192	19.5	53	1.6	1.6	0.0	1108
Dairyland DS-4510Q	38000	37499	195	20.1	53	0.7	0.7	0.0	1125
Dairyland DS-4510Q	44000	42929	201	20.4	52	0.9	0.9	0.0	1160
Dairyland DS-4510Q	50000	48105	212	19.9	53	3.7	3.4	0.3	1222
Jung 49DP441	20000	20959	148	17.9	52	0.0	0.0	0.0	858
Jung 49DP441	26000	26894	166	17.4	52	0.5	0.5	0.0	968
Jung 49DP441	32000	36489	181	18.4	53	0.0	0.0	0.0	1049
Jung 49DP441	38000	38888	181	17.9	52	0.0	0.0	0.0	1050
Jung 49DP441	44000	40909	192	18.0	53	0.3	0.3	0.0	1118
Jung 49DP441	50000	42424	191	17.9	52	1.1	1.1	0.0	1111
Mean		34490	183	18.9	52	0.7	0.7	0.0	1061
Probability(%)									
Hybrid (H)		92.6	0.0	0.0	61.7	9.4	11.0	32.8	0.0
Plant Density (D)		0.0	0.0	20.3	38.9	9.2	12.6	44.1	0.0
Hybrid x Plant Density		43.1	57.9	20.0	28.0	47.7	55.7	44.1	60.6
LSD (0.10)									
Hybrid (H)		NS	4	0.3	NS	0.8	NS	NS	21
Plant Density (D)		3988	6	NS	NS	1.4	NS	NS	37
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6666 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Janesville, WI **County:** Rock

Supported By: HATCH

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.9 **OM (%)** 2.6 **P (ppm)** 59 **K (ppm)** 190

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /10/22
	Post plant :	21-0-0-24S 32-0-0 46-0-0	11 lbs/A 88 lbs/A	N/A N/A N/A
	Manure:	N/A	N/A	N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/10/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/21/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 35206

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 49DP441 99RM
2) 26000	2) Dairyland DS-4510Q 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-08.

Table: 2202-08. Plant Density and Hybrid Influence on Corn Grain. Janesville, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dairyland DS-4510Q		34764	254	26.4	53	1.4	0.3	1.1	1435
Jung 49DP441		35648	248	21.4	55	0.5	0.1	0.4	1425
	20000	21022	220	22.6	53	0.0	0.0	0.0	1260
	26000	27714	246	23.8	53	0.2	0.2	0.0	1402
	32000	32070	258	24.3	54	0.4	0.0	0.4	1468
	38000	37626	260	23.9	54	1.4	0.0	1.4	1481
	44000	45265	263	23.7	54	0.3	0.0	0.3	1496
	50000	47537	260	24.9	55	3.5	1.0	2.5	1475
Dairyland DS-4510Q	20000	21086	225	24.6	53	0.0	0.0	0.0	1278
Dairyland DS-4510Q	26000	26641	251	26.4	52	0.5	0.5	0.0	1417
Dairyland DS-4510Q	32000	31313	267	26.3	53	0.8	0.0	0.8	1508
Dairyland DS-4510Q	38000	35732	265	26.5	53	2.7	0.0	2.7	1495
Dairyland DS-4510Q	44000	45580	262	27.0	53	0.6	0.0	0.6	1473
Dairyland DS-4510Q	50000	48232	256	27.6	53	3.9	1.2	2.7	1440
Jung 49DP441	20000	20959	216	20.6	53	0.0	0.0	0.0	1242
Jung 49DP441	26000	28787	241	21.3	54	0.0	0.0	0.0	1386
Jung 49DP441	32000	32828	249	22.4	54	0.0	0.0	0.0	1427
Jung 49DP441	38000	39520	256	21.3	55	0.0	0.0	0.0	1468
Jung 49DP441	44000	44949	264	20.5	56	0.0	0.0	0.0	1519
Jung 49DP441	50000	46843	264	22.1	56	3.1	0.8	2.3	1511
Mean		35206	251	23.9	54	0.5	0.2	0.8	1430
Probability(%)									
Hybrid (H)		21.2	8.0	0.0	0.0	93.9	47.1	21.5	62.8
Plant Density (D)		0.0	0.0	18.5	6.1	0.6	2.3	13.4	0.0
Hybrid x Plant Density		28.7	30.9	61.7	37.2	99.4	88.9	76.7	26.2
LSD (0.10)									
Hybrid (H)		NS	6	0.8	1	NS	NS	NS	NS
Plant Density (D)		2044	10	NS	1	1.3	0.5	NS	58
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain and Silage Performance**

Experiment: 02PD **Trial ID:** 6667 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Marshfield, WI **County:** Marathon

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Fenwood Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.6 **OM (%)** 2.7 **P (ppm)** 31 **K (ppm)** 113

Plot Management

Tillage Operations: Strip-Till Vertical-Till

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /16/22
	Post plant :	32-0-0	170 lbs/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Resicore 2.5 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/16/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: S: 9/23/22 G: 11/1/22 **Harvest Method:** S: New Holland 707 G: Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 20' x 25' **Experiment Size:** 1.0 A

Harvest Plot Size: S: 2.5' x 23' G: 5' x 23' **Harvest Plant Density:** 33943

Factors/Treatments:

Target Plant Density:	Hybrid :
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 49DP441 99RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-09 & 2202-10.

Table: 2202-09. Plant Density and Hybrid Influence on Corn Grain. Marshfield, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		33964	201	23.4	51	0.3	0.3	-	1143
Jung 49DP441		33922	194	26.7	48	0.2	0.2	-	1094
	20000	19634	171	23.6	50	0.0	0.0	-	972
	26000	23800	191	24.2	49	0.0	0.0	-	1084
	32000	31565	203	25.0	50	0.0	0.0	-	1150
	38000	37815	204	25.8	48	0.4	0.4	-	1157
	44000	42739	209	25.8	49	0.3	0.3	-	1180
	50000	48105	207	25.8	48	0.6	0.6	-	1169
Dekalb DKC43-75RIB	20000	19444	170	20.9	52	0.0	0.0	-	980
Dekalb DKC43-75RIB	26000	23737	193	21.8	51	0.0	0.0	-	1104
Dekalb DKC43-75RIB	32000	33712	204	23.9	52	0.0	0.0	-	1163
Dekalb DKC43-75RIB	38000	37121	212	24.1	50	0.7	0.7	-	1208
Dekalb DKC43-75RIB	44000	42676	210	25.1	50	0.0	0.0	-	1191
Dekalb DKC43-75RIB	50000	47095	214	24.6	49	0.8	0.8	-	1213
Jung 49DP441	20000	19823	171	26.2	49	0.0	0.0	-	964
Jung 49DP441	26000	23863	189	26.7	48	0.0	0.0	-	1064
Jung 49DP441	32000	29419	201	26.1	48	0.0	0.0	-	1137
Jung 49DP441	38000	38510	197	27.5	47	0.0	0.0	-	1105
Jung 49DP441	44000	42802	207	26.5	47	0.6	0.6	-	1169
Jung 49DP441	50000	49115	200	27.1	48	0.5	0.5	-	1125
Mean		33943	197	25.0	49	0.2	0.2	-	1119
Probability(%)									
Hybrid (H)		96.2	6.9	0.0	0.0	74.8	74.8	-	2.0
Plant Density (D)		0.0	0.0	0.1	1.0	46.4	46.4	-	0.0
Hybrid x Plant Density		40.1	67.5	0.7	19.3	66.8	66.8	-	70.2
LSD (0.10)									
Hybrid (H)		NS	6	0.5	1	NS	NS	-	34
Plant Density (D)		2598	10	0.9	1	NS	NS	-	58
Hybrid x Plant Density		NS	NS	1.3	NS	NS	NS	-	NS

Table: 2202-10. Plant Density and Hybrid Influence on Silage Preformance.

Marshfield, WI - 2022.

Hybrid	Target density	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
Dekalb DKC43-75RIB		31944	8.6	69.9	62.1	3.1	2.7	5.9	7.4	20.0	38.8	85.7	63.3	29.7	3373	29082
Jung 49DP441		34890	9.0	72.4	72.5	3.6	2.9	6.6	7.9	21.1	40.2	85.3	63.4	26.9	3265	29495
	20000	23485	7.7	70.0	62.5	3.1	3.2	6.4	8.1	19.0	38.0	86.8	65.4	28.8	3360	25912
	26000	29293	8.8	70.7	71.2	3.6	3.0	6.6	7.7	20.1	38.9	86.0	64.2	28.5	3331	29336
	32000	31060	9.0	70.5	67.5	3.4	2.9	6.4	7.6	20.0	38.8	85.7	63.1	29.3	3351	30215
	38000	37499	8.8	71.6	68.7	3.4	2.7	6.1	7.5	21.0	40.0	85.0	62.5	28.2	3299	28886
	44000	39141	9.2	71.9	68.7	3.4	2.6	6.0	7.5	21.4	40.5	84.8	62.4	27.6	3284	30221
	50000	40025	9.5	72.1	65.0	3.3	2.5	5.8	7.6	21.8	40.8	84.7	62.4	27.5	3289	31162
Dekalb DKC43-75RIB	20000	19697	7.9	67.4	55.0	2.8	3.1	6.0	8.0	17.3	36.0	87.8	66.1	31.6	3480	27564
Dekalb DKC43-75RIB	26000	28787	8.7	69.4	57.5	2.9	2.8	5.7	7.4	19.7	38.4	86.3	64.2	29.5	3358	29197
Dekalb DKC43-75RIB	32000	25757	8.7	69.9	65.0	3.3	2.7	6.1	7.2	19.6	38.4	85.6	62.4	30.7	3402	29580
Dekalb DKC43-75RIB	38000	37878	8.6	70.0	57.5	2.9	2.5	5.5	7.3	20.5	39.4	85.4	63.0	29.4	3360	28912
Dekalb DKC43-75RIB	44000	40151	8.3	71.9	70.0	3.5	2.5	6.1	7.1	22.2	41.6	83.7	60.8	27.3	3254	27027
Dekalb DKC43-75RIB	50000	39393	9.5	70.8	67.5	3.4	2.5	6.0	7.5	20.6	39.0	85.7	63.3	29.6	3383	32212
Jung 49DP441	20000	27272	7.5	72.6	70.0	3.5	3.3	6.9	8.2	20.7	40.1	85.9	64.8	26.0	3239	24260
Jung 49DP441	26000	29798	8.9	72.0	85.0	4.3	3.2	7.5	8.1	20.6	39.5	85.8	64.2	27.5	3304	29474
Jung 49DP441	32000	36363	9.3	71.1	70.0	3.5	3.1	6.7	8.0	20.4	39.2	85.8	63.7	27.8	3300	30849
Jung 49DP441	38000	37121	8.9	73.2	80.0	4.0	2.8	6.8	7.7	21.5	40.5	84.6	62.0	26.9	3238	28859
Jung 49DP441	44000	38131	10.1	72.0	67.5	3.4	2.7	6.0	7.9	20.6	39.3	85.9	64.1	27.9	3315	33414
Jung 49DP441	50000	40656	9.4	73.5	62.5	3.1	2.4	5.5	7.7	23.0	42.5	83.7	61.6	25.3	3194	30112
Mean		33417	8.8	71.2	67.3	3.4	2.8	6.2	7.7	20.5	39.5	85.5	63.3	28.3	3319	29288
Probability(%)																
Hybrid (H)		24.7	4.9	0.0	0.3	0.3	0.1	0.1	0.0	1.7	3.4	15.4	80.8	0.2	1.1	64.0
Plant Density (D)		0.5	0.1	1.1	54.7	54.7	0.0	6.3	0.1	1.8	11.5	0.5	0.0	76.6	78.9	3.4
Hybrid x Density (H x D)		64.4	5.3	1.1	2.8	2.8	19.5	0.6	11.4	8.2	8.5	1.1	0.2	35.5	31.8	6.2
LSD (0.10)																
Hybrid (H)		NS	0.3	0.6	5.0	0.2	0.1	0.3	0.1	0.8	1.1	NS	NS	1.4	66	NS
Plant Density (D)		7372	0.6	1.1	NS	NS	0.2	0.4	0.2	1.3	NS	1.0	1.0	NS	NS	2588
Hybrid x Density (H x D)		NS	0.8	1.5	12	0.6	NS	0.6	NS	1.9	2.6	1.3	1.4	NS	NS	3661

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6668 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Montfort, WI **County:** Iowa

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Dodgeville Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.3 **OM (%)** 2.5 **P (ppm)** 64 **K (ppm)** 215

Plot Management

Tillage Operations: Disk Chisel Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	32-0-0 12-0-0-26S	71 lbs/A 7 lbs/A	N/A N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	4 /29/22
	Post plant :	N/A	N/A	N/A
	Manure:	Dairy	10000 gal/A	N/A

Herbicide: Atrazine 4L 32.0 oz/A
Explorer 3.2 oz/A
Roundup 25.6 oz/A
Zidua 3.25 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 4/29/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/10/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 25873

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 49DP441 99RM
2) 26000	2) Dairyland DS-4510Q 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-11.

Table: 2202-11. Plant Density and Hybrid Influence on Corn Grain. Montfort, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dairyland DS-4510Q		25357	252	27.9	63	0.4	0.4	0.1	1417
Jung 49DP441		26389	251	20.5	55	0.0	0.0	0.0	1447
	20000	15846	195	24.2	54	0.0	0.0	0.0	1109
	26000	20770	231	24.9	78	0.0	0.0	0.0	1309
	32000	22979	242	25.1	54	0.0	0.0	0.0	1373
	38000	27841	266	23.5	54	1.3	1.3	0.0	1519
	44000	35101	289	22.9	54	0.0	0.0	0.0	1651
	50000	32702	287	24.6	61	0.2	0.0	0.2	1628
Dairyland DS-4510Q	20000	15278	184	27.5	53	0.0	0.0	0.0	1034
Dairyland DS-4510Q	26000	20202	226	28.3	101	0.0	0.0	0.0	1263
Dairyland DS-4510Q	32000	22979	241	29.3	53	0.0	0.0	0.0	1344
Dairyland DS-4510Q	38000	27146	262	26.7	53	2.5	2.5	0.0	1474
Dairyland DS-4510Q	44000	33838	308	26.6	54	0.0	0.0	0.0	1737
Dairyland DS-4510Q	50000	32702	295	29.0	67	0.4	0.0	0.4	1647
Jung 49DP441	20000	16414	206	20.8	55	0.0	0.0	0.0	1184
Jung 49DP441	26000	21338	236	21.4	55	0.0	0.0	0.0	1354
Jung 49DP441	32000	22979	244	20.8	55	0.0	0.0	0.0	1402
Jung 49DP441	38000	28535	271	20.3	56	0.0	0.0	0.0	1563
Jung 49DP441	44000	36363	271	19.2	55	0.0	0.0	0.0	1566
Jung 49DP441	50000	32702	279	20.1	56	0.0	0.0	0.0	1609
Mean		25873	252	24.2	59	0.2	0.2	0.0	1432
Probability(%)									
Hybrid (H)		35.1	74.9	0.0	34.8	34.8	34.8	32.8	20.5
Plant Density (D)		0.0	0.0	16.9	50.8	46.9	46.9	44.1	0.0
Hybrid x Plant Density		98.4	0.7	66.6	48.8	46.9	46.9	44.1	0.7
LSD (0.10)									
Hybrid (H)		NS	NS	0.9	NS	NS	NS	NS	NS
Plant Density (D)		3221	13	NS	NS	NS	NS	NS	68
Hybrid x Plant Density		NS	18	NS	NS	NS	NS	NS	96

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6669 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Seymour, WI **County:** Outagamie

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Onaway Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 7.1 **OM (%)** 2.1 **P (ppm)** 63 **K (ppm)** 112

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	18-46-0	27 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /11/22
	Post plant :	32-0-0	124 lbs/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Atrazine 0.75 lbs/A
Dual II Mag 1.0 pt/A
Explorer 3.0 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/11/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/27/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 35195

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 49DP441 99RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-12.

Table: 2202-12. Plant Density and Hybrid Influence on Corn Grain. Seymour, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		35585	243	22.6	54	0.5	0.5	0.0	1388
Jung 49DP441		34806	241	27.5	51	0.4	0.4	0.0	1353
	20000	20139	208	27.0	52	0.0	0.0	0.0	1172
	26000	28282	233	24.7	52	0.0	0.0	0.0	1325
	32000	33080	239	24.5	53	0.2	0.2	0.0	1359
	38000	38257	255	24.6	52	0.2	0.2	0.0	1450
	44000	43118	260	24.6	52	0.5	0.5	0.0	1475
	50000	48295	255	24.9	52	1.9	1.7	0.1	1443
Dekalb DKC43-75RIB	20000	20202	212	25.5	54	0.0	0.0	0.0	1201
Dekalb DKC43-75RIB	26000	29293	235	22.1	54	0.0	0.0	0.0	1346
Dekalb DKC43-75RIB	32000	33712	238	21.5	55	0.4	0.4	0.0	1366
Dekalb DKC43-75RIB	38000	38762	258	22.0	54	0.0	0.0	0.0	1481
Dekalb DKC43-75RIB	44000	43939	261	21.8	53	0.0	0.0	0.0	1499
Dekalb DKC43-75RIB	50000	47600	251	22.8	53	2.7	2.4	0.3	1437
Jung 49DP441	20000	20075	204	28.5	50	0.0	0.0	0.0	1143
Jung 49DP441	26000	27272	232	27.3	50	0.0	0.0	0.0	1304
Jung 49DP441	32000	32449	240	27.5	51	0.0	0.0	0.0	1351
Jung 49DP441	38000	37752	252	27.2	51	0.3	0.3	0.0	1419
Jung 49DP441	44000	42297	258	27.3	51	0.9	0.9	0.0	1451
Jung 49DP441	50000	48989	258	27.1	51	1.1	1.1	0.0	1450
Mean		35195	242	25.0	52	0.5	0.4	0.0	1371
Probability(%)									
Hybrid (H)		11.1	70.9	0.0	0.0	61.9	73.2	32.8	26.6
Plant Density (D)		0.0	0.0	6.6	31.4	0.2	0.2	44.1	0.0
Hybrid x Plant Density		35.7	97.5	59.7	29.4	13.8	16.7	44.1	97.9
LSD (0.10)									
Hybrid (H)		NS	NS	0.9	1	NS	NS	NS	NS
Plant Density (D)		1395	16	1.5	NS	0.8	0.7	NS	92
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6670 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Valders, WI **County:** Manitowoc

Supported By: HATCH

Site Information

Field: **Previous Crop:** Wheat **Soil Type:** Kewaunee Clay Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.6 **OM (%)** 2.7 **P (ppm)** 77 **K (ppm)** 128

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /13/22
	Post plant :	28-0-0-5S	61 lbs/A	N/A
	Manure:	Dairy	5000 gal/A	N/A

Herbicide: Atrazine 1.0 lb/A
Realm Q 3.0oz/A
TripleFlex 3.0 qt/A
Yukon 4.0 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/13/22 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/26/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33146

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 49DP441 99RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2202-13.

Table: 2202-13. Plant Density and Hybrid Influence on Corn Grain. Valders, WI - 2022.

Hybrid	Target density	Harvest density	Yield	Moisture	Test weight	Lodged			AGR
						Total	Stalk	Root	$6.09
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		34200	206	23.0	54	0.1	0.1	0.0	1175
Jung 49DP441		32091	226	29.4	51	0.5	0.5	0.1	1261
	20000	21297	197	26.6	52	0.0	0.0	0.0	1110
	26000	26316	216	26.9	53	0.0	0.0	0.0	1216
	32000	32323	226	26.4	53	0.2	0.2	0.0	1277
	38000	35669	217	25.9	53	0.4	0.4	0.0	1227
	44000	41224	219	27.0	53	0.0	0.0	0.0	1234
	50000	42045	219	24.5	53	1.4	1.4	0.2	1245
Dekalb DKC43-75RIB	20000	20751	188	23.7	53	0.0	0.0	0.0	1070
Dekalb DKC43-75RIB	26000	25864	205	24.1	53	0.0	0.0	0.0	1168
Dekalb DKC43-75RIB	32000	33712	211	23.8	54	0.4	0.4	0.0	1202
Dekalb DKC43-75RIB	38000	36363	212	21.0	55	0.4	0.4	0.0	1220
Dekalb DKC43-75RIB	44000	40909	214	24.1	54	0.0	0.0	0.0	1216
Dekalb DKC43-75RIB	50000	47600	205	21.5	54	0.0	0.0	0.0	1175
Jung 49DP441	20000	21843	206	29.5	52	0.0	0.0	0.0	1151
Jung 49DP441	26000	26767	227	29.8	52	0.0	0.0	0.0	1263
Jung 49DP441	32000	30934	242	29.0	52	0.0	0.0	0.0	1352
Jung 49DP441	38000	34974	222	30.8	50	0.4	0.4	0.0	1235
Jung 49DP441	44000	41540	225	29.9	52	0.0	0.0	0.0	1252
Jung 49DP441	50000	36489	234	27.6	51	2.9	2.9	0.4	1316
Mean		33146	216	26.2	53	0.3	0.3	0.0	1218
Probability(%)									
Hybrid (H)		7.7	0.0	0.0	0.0	23.0	23.0	36.9	0.1
Plant Density (D)		0.0	1.6	50.9	99.8	18.1	18.1	49.8	1.7
Hybrid x Plant Density		3.7	53.2	58.2	24.4	12.2	12.2	49.8	46.4
LSD (0.10)									
Hybrid (H)		1949	7.0	1.4	1	NS	NS	NS	40
Plant Density (D)		3372	12.1	NS	NS	NS	NS	NS	70
Hybrid x Plant Density		4764	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Date of Planting and Hybrid Influence on Corn Forage and Corn Grain Yield**

Experiment: 03DOP **Trial ID:** 6672 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

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

Supported By: HATCH

Site Information

Field: ARS372 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.4 **OM (%)** 2.5 **P (ppm)** 24 **K (ppm)** 134

Plot Management

Tillage Operations: Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	46-0-0	325 lbs/A	N/A
	Starter :	N/A	N/A	N/A
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Dual II 1.5 pt/A
Hornet 4.0 oz/A

Insecticide: None

Hybrid: Factor

Irrigation: None

Planting Date: See Factors **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 34000 **plants per acre** **Planting Method:** JD1700 w RTK

Harvest Date: S: See Factors
G:11/3/22

Harvest Method: S: New Holland 707
G: Massey Ferguson 8XP

Experimental Design

Design: RCB split-plot (2 x 4 Factorial for split) **Replications:** 4

Plot Size Seeded: 10' x 33' **Experiment Size:** 1.7 A

Harvest Plot Size: S: 30' x 2.5'
G: 30' x 5'

Harvest Plant Density: 29377 **plants per acre**

Factors/Treatments:

Planting Date:
1) April 26
2) May 10
3) May 20
4) May 31
5) June 15

Hybrid:
1) Dekalb DKC51-98RIB
2) Jung549SS581

Harvest Date:
1) September 07
2) September 22

Results: Tables 2203-01, 2203-02 & 2203-03.

Table: 2203-01. Planting Date Influence on Corn Grain Performance. Arlington, WI - 2022.

Planting date	Hybrid	Yield	Moisture	Test weight	Lodged			AGI	Silking	Early	Kernel Milk			Black
					Total	Stalk	Root	$6.06	date	dent	75%	50%	25%	layer
		bu/A	%	lbs/bu	%	%	%	$/A	doy	doy	doy	doy	doy	doy
	Dekalb DKC51-98RIB	207	19.5	55	2	2	1	1201	209	246	255	263	271	281
	Jung 59SS581	216	26.5	53	3	2	1	1223	211	247	257	268	278	287
Apr 26		251	17.3	58	2	2	0	1459	200	231	244	252	261	270
May 10		237	18.5	56	2	2	0	1374	202	238	246	256	265	272
May 20		223	22.5	54	2	2	0	1274	208	247	257	266	276	288
May 31		206	25.4	53	5	1	4	1164	214	251	260	269	279	294
Jun 15		142	31.2	50	2	1	1	789	225	266	274	283	291	299
Apr 26	Dekalb DKC51-98RIB	239	14.8	58	3	3	0	1397	197	231	244	251	258	265
May 10	Dekalb DKC51-98RIB	226	15.6	58	2	2	0	1321	201	238	245	253	260	266
May 20	Dekalb DKC51-98RIB	216	19.3	56	2	2	0	1252	207	247	256	264	272	284
May 31	Dekalb DKC51-98RIB	206	20.7	55	3	0	3	1187	214	251	259	268	276	291
Jun 15	Dekalb DKC51-98RIB	150	27.0	50	3	1	2	846	225	264	272	280	288	299
Apr 26	Jung 59SS581	263	19.8	57	1	1	0	1521	202	232	244	252	265	274
May 10	Jung 59SS581	248	21.4	55	1	1	0	1427	204	238	247	259	270	278
May 20	Jung 59SS581	229	25.8	53	2	2	0	1296	209	246	258	269	280	291
May 31	Jung 59SS581	205	30.2	51	8	3	6	1141	215	251	261	271	281	296
Jun 15	Jung 59SS581	134	35.3	49	1	1	0	731	225	267	277	287	295	299
Mean		212	23.0	54	3	2	1	1212	210	246	256	265	274	284
Probability(%)														
Hybrid(H)		18.1	0.0	0.2	65.5	76.9	79.8	49.1	0.8	37.4	7.9	1.8	1.2	1.5
PlantDate(P)		0.0	0.0	0.0	15.2	94.6	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HxP		6.9	1.6	0.1	17.5	65.6	49.7	7.2	0.2	29.5	47.0	21.7	75.6	14.2
LSD (0.10)														
Hybrid(H)		NS	1.0	1	NS	NS	NS	NS	1	NS	2	2	3	3
PlantDate(P)		13	1.2	1	NS	NS	2	78	1	1	2	2	3	3
HxP		19	1.6	1	NS	NS	NS	110	1	NS	NS	NS	NS	NS

Table: 2203-02. Planting Date and Harvest Timing Influence on Corn Silage Performance.
Arlington, WI - 2022.

				Whole Plant													
Planting		Harvest	Plant	Dry Matter		Kernel	KMR	SMR	VMR	Crude			*In Vitro*			Milk per	
date	Hybrid	date	density	yield	Moisture	milk	0-5	0-5	0-10	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre
			plants/A	tons/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
	Dekalb DKC51-98RIB		29753	8.7	64.0	55	2.8	2.5	5.2	7.9	19.4	37.7	85.6	61.8	30.8	3299	28995
	Jung 59SS581		29000	9.3	68.3	71	3.5	2.7	6.2	8.1	20.4	39.6	84.4	60.7	26.4	3089	29256
Apr 26			30393	10.4	58.2	34	1.7	1.4	3.1	7.5	17.0	34.6	86.3	60.5	35.7	3396	35317
May 10			30228	9.9	62.2	40	2.0	1.9	4.0	7.7	18.0	36.1	85.9	61.0	32.5	3339	33006
May 20			26862	9.5	65.0	66	3.3	2.6	5.9	7.8	18.9	37.1	85.8	61.9	31.4	3333	31382
May 31			30690	8.7	69.9	79	4.0	3.1	7.0	8.1	20.7	39.4	84.8	61.4	27.5	3210	28265
Jun 15			28710	6.4	75.5	95	4.8	3.9	8.6	9.1	25.0	46.1	82.2	61.5	15.7	2691	17660
		Sept 07	29885	8.5	70.5	75	3.8	3.4	7.2	8.5	21.3	40.9	84.4	62.1	25.1	3140	27385
		Sept 22	28868	9.5	61.8	51	2.5	1.7	4.3	7.6	18.5	36.4	85.6	60.3	32.0	3248	30867
Apr 26	Dekalb DKC51-98RIB		31152	9.9	54.4	22	1.1	1.3	2.4	7.4	16.7	33.9	86.8	61.2	37.4	3431	33847
May 10	Dekalb DKC51-98RIB		30294	9.4	60.2	26	1.3	2.0	3.2	7.7	17.8	35.7	86.0	60.9	33.7	3374	31874
May 20	Dekalb DKC51-98RIB		26268	9.0	63.4	58	2.9	2.5	5.4	7.6	18.5	36.3	86.3	62.2	33.3	3424	30608
May 31	Dekalb DKC51-98RIB		31284	8.8	67.5	76	3.8	2.8	6.6	7.8	19.7	37.8	85.7	62.3	30.8	3374	29866
Jun 15	Dekalb DKC51-98RIB		29766	6.4	74.6	94	4.7	3.7	8.4	9.2	24.3	44.9	83.0	62.2	18.6	2891	18779
Apr 26	Jung 59SS581		29634	10.9	62.0	46	2.3	1.6	3.9	7.6	17.3	35.2	85.9	59.8	34.0	3361	36786
May 10	Jung 59SS581		30162	10.3	64.1	55	2.8	1.9	4.7	7.8	18.1	36.4	85.8	61.0	31.4	3304	34138
May 20	Jung 59SS581		27456	10.0	66.6	74	3.7	2.6	6.3	7.9	19.3	37.9	85.4	61.5	29.5	3241	32155
May 31	Jung 59SS581		30096	8.7	72.3	82	4.1	3.3	7.4	8.4	21.8	41.0	83.8	60.5	24.3	3047	26663
Jun 15	Jung 59SS581		27654	6.5	76.4	97	4.8	4.1	8.9	9.0	25.7	47.3	81.4	60.8	12.8	2491	16540
	Dekalb DKC51-98RIB	Sept 07	29964	8.2	69.1	71	3.6	3.4	6.9	8.4	20.7	39.8	85.3	63.1	27.7	3294	27648
	Dekalb DKC51-98RIB	Sept 22	29542	9.2	59.0	39	2.0	1.5	3.5	7.4	18.1	35.7	85.9	60.4	33.9	3303	30342
	Jung 59SS581	Sept 07	29806	8.8	71.9	80	4.0	3.5	7.4	8.5	22.0	42.1	83.6	61.1	22.6	2986	27121
	Jung 59SS581	Sept 22	28195	9.8	64.7	62	3.1	1.9	5.1	7.8	18.9	37.1	85.3	60.3	30.2	3192	31391
Apr 26		Sept 07	30360	10.3	64.3	50	2.5	2.3	4.8	7.8	17.5	35.3	86.6	62.1	34.2	3500	35919
Apr 26		Sept 22	30426	10.5	52.1	18	0.9	0.5	1.4	7.3	16.5	33.8	86.1	58.9	37.3	3291	34714
May 10		Sept 07	30954	10.0	65.4	55	2.8	3.0	5.7	8.0	18.5	37.0	86.2	62.7	31.1	3400	34059
May 10		Sept 22	29502	9.7	58.9	26	1.3	0.9	2.2	7.5	17.4	35.1	85.7	59.2	33.9	3279	31952
May 20		Sept 07	28446	8.9	69.8	81	4.0	3.5	7.5	8.1	19.6	38.4	86.0	63.6	29.0	3340	29743
May 20		Sept 22	25278	10.0	60.2	51	2.6	1.7	4.2	7.5	18.2	35.9	85.7	60.1	33.8	3325	33020
May 31		Sept 07	30822	7.9	73.7	91	4.5	3.9	8.4	8.5	22.5	42.2	84.0	62.3	23.3	3073	24345
May 31		Sept 22	30558	9.6	66.1	68	3.4	2.2	5.6	7.7	18.9	36.7	85.5	60.4	31.8	3348	32185
Jun 15		Sept 07	28842	5.4	79.3	100	5.0	4.3	9.4	10.0	28.5	51.6	79.4	60.0	8.0	2387	12857
Jun 15		Sept 22	28578	7.5	71.8	91	4.5	3.4	7.9	8.2	21.5	40.5	85.0	63.0	23.4	2995	22462

continued

Table: 2203-02. Planting Date and Harvest Timing Influence on Corn Silage Performance.

continued. **Arlington, WI - 2022.**

				Whole Plant													
Planting		Harvest	Plant	Dry Matter		Kernel	KMR	SMR	VMR	Crude	*In Vitro*					Milk per	
date	Hybrid	date	density	yield	Moisture	milk	0-5	0-5	0-10	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre
			plants/A	tons/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
Apr 26	Dekalb DKC51-98RIB	Sept 07	31416	9.7	62.0	44	2.2	2.3	4.5	7.8	16.6	33.9	87.7	63.9	36.5	3613	35015
Apr 26	Dekalb DKC51-98RIB	Sept 22	30888	10.1	46.7	0	0.0	0.2	0.3	7.0	16.8	34.0	85.9	58.5	38.4	3249	32680
May 10	Dekalb DKC51-98RIB	Sept 07	31152	9.7	63.9	45	2.3	3.2	5.5	8.0	18.3	36.5	86.4	62.8	32.9	3490	33915
May 10	Dekalb DKC51-98RIB	Sept 22	29436	9.2	56.6	6	0.3	0.7	1.0	7.4	17.3	34.9	85.7	59.1	34.5	3258	29832
May 20	Dekalb DKC51-98RIB	Sept 07	26928	8.4	68.6	76	3.8	3.5	7.3	8.0	19.3	37.7	86.5	64.2	31.2	3482	29038
May 20	Dekalb DKC51-98RIB	Sept 22	25608	9.5	58.2	40	2.0	1.5	3.5	7.2	17.6	35.0	86.1	60.3	35.5	3366	32179
May 31	Dekalb DKC51-98RIB	Sept 07	30492	8.0	72.1	90	4.5	3.7	8.2	8.1	21.3	40.3	85.3	63.6	27.0	3282	26362
May 31	Dekalb DKC51-98RIB	Sept 22	32076	9.6	62.9	63	3.1	1.9	5.1	7.4	18.1	35.4	86.1	60.9	34.5	3467	33370
Jun 15	Dekalb DKC51-98RIB	Sept 07	29832	5.3	78.7	100	5.0	4.0	9.1	10.3	27.8	50.4	80.5	61.3	10.7	2605	13909
Jun 15	Dekalb DKC51-98RIB	Sept 22	29700	7.4	70.6	88	4.4	3.3	7.7	8.2	20.8	39.3	85.5	63.0	26.5	3176	23649
Apr 26	Jung 59SS581	Sept 07	29304	10.9	66.5	56	2.8	2.4	5.2	7.7	18.4	36.8	85.4	60.3	31.9	3388	36824
Apr 26	Jung 59SS581	Sept 22	29964	11.0	57.5	36	1.8	0.8	2.6	7.5	16.2	33.6	86.3	59.3	36.2	3334	36749
May 10	Jung 59SS581	Sept 07	30756	10.3	66.9	65	3.3	2.7	6.0	8.0	18.7	37.6	86.0	62.7	29.4	3309	34204
May 10	Jung 59SS581	Sept 22	29568	10.3	61.2	45	2.3	1.1	3.4	7.5	17.4	35.3	85.7	59.4	33.4	3299	34071
May 20	Jung 59SS581	Sept 07	29964	9.5	71.0	85	4.3	3.5	7.8	8.2	19.9	39.0	85.6	63.0	26.9	3198	30448
May 20	Jung 59SS581	Sept 22	24948	10.4	62.2	63	3.1	1.8	4.9	7.7	18.8	36.8	85.2	59.9	32.0	3285	33862
May 31	Jung 59SS581	Sept 07	31152	7.8	75.3	91	4.6	4.1	8.6	8.8	23.8	44.1	82.7	60.9	19.5	2865	22327
May 31	Jung 59SS581	Sept 22	29040	9.6	69.4	73	3.6	2.5	6.2	7.9	19.8	37.9	84.8	60.0	29.0	3228	31000
Jun 15	Jung 59SS581	Sept 07	27852	5.4	79.8	100	5.0	4.6	9.7	9.7	29.1	52.8	78.2	58.8	5.3	2169	11805
Jun 15	Jung 59SS581	Sept 22	27456	7.6	73.0	94	4.7	3.5	8.2	8.3	22.2	41.7	84.5	62.9	20.3	2814	21276
Mean			29377	9.0	66.2	63	3.1	2.6	5.7	8.0	19.9	38.6	85.0	61.2	28.6	3194	29126
Probability(%)																	
Hybrid (H)			34.8	7.5	0.8	0.2	0.2	12.1	0.4	7.2	3.9	2.0	2.0	7.3	0.4	0.5	74.2
PlantDate(P)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	0.0	0.0	0.0
HxP			24.6	29.4	11.3	0.0	0.0	51.0	11.0	2.0	36.5	34.9	25.4	58.4	13.6	0.2	4.0
HarvDate(D)			4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
HxD			22.7	92.9	2.3	0.0	0.0	14.3	0.0	1.7	37.8	23.7	2.9	1.4	23.0	0.1	25.0
PxD			21.8	0.4	3.9	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HxPxD			33.8	96.6	66.3	32.2	32.2	39.2	15.4	13.8	59.5	59.9	45.1	48.7	88.8	75.3	86.9
LSD(0.10)																	
Hybrid (H)			NS	0.5	1.6	3	0.2	NS	0.3	0.2	0.7	0.9	0.6	0.9	1.3	65	NS
PlantDate(P)			1304	0.6	1.8	4	0.2	0.3	0.3	0.2	0.8	1.1	0.7	NS	1.5	75	1960
HxP			NS	NS	NS	6	0.3	NS	NS	0.3	NS	NS	NS	NS	NS	105	2772
HarvDate(D)			818	0.3	1.0	2	0.1	0.2	0.2	0.1	0.5	0.7	0.4	0.6	1.0	47	1141
HxD			NS	NS	1.5	3	0.2	NS	0.3	0.2	NS	NS	0.6	0.9	NS	66	NS
PxD			NS	0.8	2.4	5	0.3	0.4	0.5	0.3	1.1	1.5	0.9	1.4	2.1	105	2641
HxPxD			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table: 2203-03. Planting Date and Hybrid Influence on Corn Leaf Development. Arlington, WI - 2022.

Hybrid	Date of planting	Observation date	Leaf Development: Leaf collars	Leaf Development: Hail adjusters method	Leaf Development: Total leaves	Plant height
		day of year	no./plant	no./plant	no./plant	inches
		151	3.3	4.5	4.1	5.2
		165	2.8	5.2	6.4	9.0
		179	7.0	9.4	10.8	26.9
		193	10.8	12.8	14.3	55.3
		207	15.7	16.5	17.2	83.1
		221	18.1	18.2	18.5	100.3
	Apr 26		11.2	12.7	13.6	55.9
	May 10		10.9	12.5	13.4	54.0
	May 20		10.9	12.3	11.4	48.6
	May 31		9.7	10.9	12.0	48.6
	Jun 15		10.7	12.3	13.6	53.1
	Apr 26	151	3.6	4.9	5.9	7.4
	Apr 26	165	4.0	7.8	9.2	14.8
	Apr 26	179	8.8	11.5	12.9	39.4
	Apr 26	193	14.4	15.4	16.4	79.6
	Apr 26	207	18.2	18.3	18.4	93.6
	Apr 26	221	18.4	18.6	18.8	100.5
	May 10	151	3.0	4.2	5.1	6.1
	May 10	165	3.4	7.1	8.4	12.1
	May 10	179	8.3	11.1	12.6	34.9
	May 10	193	13.8	15.3	16.4	73.4
	May 10	207	19.0	19.0	19.3	95.8
	May 10	221	19.1	19.1	19.4	101.6
	May 20	151	-	-	1.4	2.2
	May 20	165	2.6	4.0	5.2	6.1
	May 20	179	5.9	8.4	9.8	20.0
	May 20	193	10.3	13.1	15.2	59.1
	May 20	207	16.7	16.8	17.8	96.9
	May 20	221	18.9	18.9	18.9	107.4
	May 31	151	-	-	-	-
	May 31	165	1.0	1.7	2.9	3.2
	May 31	179	5.0	6.7	7.9	13.4
	May 31	193	9.6	12.1	13.9	43.5
	May 31	207	14.2	15.4	16.4	79.1
	May 31	221	18.5	18.5	18.6	103.8

Continued

Table: 2203-03. Planting Date and Hybrid Influence on Corn Leaf Development.

(continued) **Arlington, WI - 2022.**

Hybrid	Date of planting	Observation date	Leaf Development: Leaf collars	Leaf Development: Hail adjusters method	Leaf Development: Total leaves	Plant height
		day of year	no./plant	no./plant	no./plant	inches
	Jun 15	151	-	-	-	-
	Jun 15	165	-	-	-	-
	Jun 15	179	-	-	-	-
	Jun 15	193	6.1	8.3	9.6	20.8
	Jun 15	207	10.6	12.8	14.1	49.9
	Jun 15	221	15.5	15.9	17.1	88.4
Dekalb DKC51-98RIB			10.6	12.0	12.6	50.8
Jung 59SS581			10.8	12.3	12.9	53.3
Dekalb DKC51-98RIB		151	3.4	4.4	4.1	5.3
Dekalb DKC51-98RIB		165	2.8	5.0	6.3	9.1
Dekalb DKC51-98RIB		179	6.8	9.3	10.7	26.0
Dekalb DKC51-98RIB		193	10.9	12.7	14.1	54.4
Dekalb DKC51-98RIB		207	15.5	16.1	17.0	81.1
Dekalb DKC51-98RIB		221	17.8	17.9	18.2	97.3
Jung 59SS581		151	3.3	4.6	4.1	5.1
Jung 59SS581		165	2.8	5.3	6.5	8.9
Jung 59SS581		179	7.1	9.6	10.9	27.9
Jung 59SS581		193	10.7	13.0	14.5	56.1
Jung 59SS581		207	16.0	16.8	17.5	85.0
Jung 59SS581		221	18.4	18.6	18.9	103.4
Dekalb DKC51-98RIB	Apr 26		11.0	12.3	13.3	53.2
Dekalb DKC51-98RIB	Jun 15		10.9	12.4	13.7	52.7
Dekalb DKC51-98RIB	May 10		10.9	12.4	13.3	52.9
Dekalb DKC51-98RIB	May 20		10.7	11.9	11.1	47.4
Dekalb DKC51-98RIB	May 31		9.7	10.9	11.9	48.3
Jung 59SS581	Apr 26		11.5	13.1	13.9	58.6
Jung 59SS581	Jun 15		10.6	12.3	13.5	53.4
Jung 59SS581	May 10		10.9	12.7	13.5	55.0
Jung 59SS581	May 20		11.1	12.6	11.6	49.8
Jung 59SS581	May 31		9.6	10.9	12.0	48.9
Dekalb DKC51-98RIB	Apr 26	151	3.8	4.9	5.9	7.4
Dekalb DKC51-98RIB	Apr 26	165	4.0	7.3	8.9	14.8
Dekalb DKC51-98RIB	Apr 26	179	8.5	11.3	12.8	36.6
Dekalb DKC51-98RIB	Apr 26	193	14.1	15.0	16.0	76.9
Dekalb DKC51-98RIB	Apr 26	207	17.4	17.5	17.9	88.8
Dekalb DKC51-98RIB	Apr 26	221	18.1	18.1	18.3	94.5

Continued

Table: 2203-03. Planting Date and Hybrid Influence on Corn Leaf Development.

(continued) **Arlington, WI - 2022.**

Hybrid	Date of planting	Observation date	Leaf Development: Leaf collars	Leaf Development: Hail adjusters method	Leaf Development: Total leaves	Plant height
		day of year	no./plant	no./plant	no./plant	inches
Dekalb DKC51-98RIB	May 10	151	3.0	4.0	5.0	6.0
Dekalb DKC51-98RIB	May 10	165	3.4	7.1	8.4	12.3
Dekalb DKC51-98RIB	May 10	179	8.1	11.0	12.5	34.5
Dekalb DKC51-98RIB	May 10	193	14.4	15.3	16.3	73.8
Dekalb DKC51-98RIB	May 10	207	18.1	18.1	18.6	92.1
Dekalb DKC51-98RIB	May 10	221	18.6	18.6	19.0	99.0
Dekalb DKC51-98RIB	May 20	151	-	-	1.5	2.6
Dekalb DKC51-98RIB	May 20	165	2.6	3.9	5.3	6.2
Dekalb DKC51-98RIB	May 20	179	5.8	8.3	9.8	18.9
Dekalb DKC51-98RIB	May 20	193	10.4	12.8	14.8	57.3
Dekalb DKC51-98RIB	May 20	207	16.8	16.8	17.6	95.8
Dekalb DKC51-98RIB	May 20	221	18.0	18.0	18.0	103.8
Dekalb DKC51-98RIB	May 31	151				
Dekalb DKC51-98RIB	May 31	165	1.0	1.6	2.9	3.3
Dekalb DKC51-98RIB	May 31	179	5.0	6.6	7.9	14.1
Dekalb DKC51-98RIB	May 31	193	9.6	12.3	14.1	43.0
Dekalb DKC51-98RIB	May 31	207	14.4	15.4	16.4	79.9
Dekalb DKC51-98RIB	May 31	221	18.4	18.4	18.4	101.3
Dekalb DKC51-98RIB	Jun 15	151	-	-	-	-
Dekalb DKC51-98RIB	Jun 15	165	-	-	-	-
Dekalb DKC51-98RIB	Jun 15	179	-	-	-	-
Dekalb DKC51-98RIB	Jun 15	193	6.1	8.1	9.5	21.3
Dekalb DKC51-98RIB	Jun 15	207	10.8	12.9	14.3	49.0
Dekalb DKC51-98RIB	Jun 15	221	15.8	16.1	17.3	87.9
Jung 59SS581	Apr 26	151	3.5	4.9	5.9	7.4
Jung 59SS581	Apr 26	165	4.0	8.4	9.5	14.8
Jung 59SS581	Apr 26	179	9.0	11.8	13.1	42.3
Jung 59SS581	Apr 26	193	14.6	15.8	16.9	82.3
Jung 59SS581	Apr 26	207	19.0	19.0	19.0	98.5
Jung 59SS581	Apr 26	221	18.8	19.0	19.3	106.5
Jung 59SS581	May 10	151	3.0	4.4	5.1	6.3
Jung 59SS581	May 10	165	3.5	7.1	8.4	11.8
Jung 59SS581	May 10	179	8.4	11.1	12.6	35.4
Jung 59SS581	May 10	193	13.3	15.4	16.6	73.1
Jung 59SS581	May 10	207	19.9	19.9	19.9	99.4
Jung 59SS581	May 10	221	19.8	19.8	19.8	104.1

Continued

Table: 2203-03. Planting Date and Hybrid Influence on Corn Leaf Development.

(continued) **Arlington, WI - 2022.**

Hybrid	Date of planting	Observation date	Leaf Development: Leaf collars	Leaf Development: Hail adjusters method	Leaf Development: Total leaves	Plant height
		day of year	no./plant	no./plant	no./plant	inches
Jung 59SS581	May 20	151	-	-	1.3	1.8
Jung 59SS581	May 20	165	2.6	4.1	5.1	5.9
Jung 59SS581	May 20	179	6.0	8.6	9.9	21.2
Jung 59SS581	May 20	193	10.1	13.4	15.6	60.9
Jung 59SS581	May 20	207	16.6	16.9	17.9	98.0
Jung 59SS581	May 20	221	19.9	19.9	19.9	110.9
Jung 59SS581	May 31	151	-	-	-	-
Jung 59SS581	May 31	165	1.0	1.8	3.0	3.1
Jung 59SS581	May 31	179	5.0	6.8	7.9	12.6
Jung 59SS581	May 31	193	9.5	11.9	13.8	44.0
Jung 59SS581	May 31	207	14.0	15.5	16.5	78.3
Jung 59SS581	May 31	221	18.6	18.6	18.8	106.3
Jung 59SS581	Jun 15	151	-	-	-	-
Jung 59SS581	Jun 15	165	-	-	-	-
Jung 59SS581	Jun 15	179	-	-	-	-
Jung 59SS581	Jun 15	193	6.1	8.4	9.6	20.4
Jung 59SS581	Jun 15	207	10.4	12.6	14.0	50.9
Jung 59SS581	Jun 15	221	15.3	15.8	17.0	88.9
			10.7	12.2	12.7	52.0
Probability(%)						
Hybrid(H)			0.2	0.5	0.5	89.8
Date of Planting (D)			0.0	0.0	0.0	0.0
HxD			0.3	0.0	0.0	0.9
Sample DOY (S)			0.0	0.0	0.0	0.0
H x S			0.1	2.1	0.1	0.3
DxS			0.0	0.0	0.0	0.0
HxDxS			0.0	3.5	32.1	91.6
LSD(0.10)						
Hybrid(H)			0.3	0.3	0.3	NS
Date of Planting (D)			0.1	0.1	0.1	1.1
HxD			0.2	0.2	0.2	1.6
Sample DOY (S)			0.2	0.2	0.2	1.2
H x S			0.2	0.2	0.2	1.7
DxS			0.4	0.4	0.3	2.7
HxDxS			0.5	0.5	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Alfalfa - Corn Response to Rotation**

Experiment: 09AC **Trial ID** 6673 **Year** 2022

Personnel: Joe Lauer, Thierno Diallo,Kent Kohn

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

Supported By: HATCH

Site Information

Field: ARS333 **Previous Crop:** See Factors **Soil Type:** Plano Silt Loam

Soil Test Date 11/12/18 **pH** 6.4 **OM (%)** 3.3 **P (ppm)** 11 **K (ppm)** 93

Plot Management

Tillage Operations: NT

	Analysis:	Rate lbs/A:	Date:
Preplant :	N/A	N/A	N/A
Fertilizer: **Starter :**	N/A	N/A	N/A
Post plant :	32-0-0	CC: 593 CA: 500	6/21/22 6/21/22
Herbicide: **Manure:**	N/A	N/A	N/A

C:Rdup PrMAX @ 20 oz/acre 5/17/22 6/22
Detonate @ 8 oz/acre 5/17/22
Medal II EC @ 24 oz/acre 5/17/22
Bellum @ 6 oz/acre 5/17/22
A: Rdup PrMAX @ 40 oz/acre 6/2 - 9/22
Rdup PrMAX @ 20 oz/acre + Lambda T-2 @ 1.6 oz/acre 6/29/22

Insecticide:

Hybrid: C: Jung 56SS538
A: DK 40-51 RR

Irrigation: None

Planting Date: C:5/12/22
A:5/7/22

Planting Depth: C:1.5"
A: 0.25"

Row Width: 30"

Planting Method: JD1700 w RTK
A: JD750 No-Till Drill

Target Plant Density: 35000 plants/A

Harvest Date: C: 10/31/22
S: 9/20/22

Harvest Method: C: MF 8XP
S: Hagee harvester
Al: Almaco Harvester

Notes: A: 6/1; 6/29; 7/29; 8/26/22

Experimental Design

Design: RCB split-split-block

Replications: 3

Plot Size Seeded: 75' x 60

Experiment Size: 3.47 A

Harvest Plot Size: G:5' x 71'
S: 5' x 71'
A:4.33' x 71'

Factors/Treatments:

Rotation - 2022 Treatments:

1) AAACC-3A
2) AAACC-1C
3) AAACC-2C
4) AAACC-1A
5) AAACC-2A
6) AACC-1A
7) AACC- 2A
8) AACC- 1C
9) AACC- 2C
10) AACC- 1A (Silage)
11) AACC- 2A
12) AACC- 1C
13) AACC- 2C (Silage)
14) CC- Grain & Silage (S/S,S/G,G/S,G/G)

Results: Tables 2209-01, 2209-02 & 2209-03

Table:2209-01. Alfalfa-Corn Rotation Study - Corn.
Arlington, WI - 2022.

Rotation	Density	Yield	Moisture	Test weight	Lodged			Harvest density	*AGI $6.09/bu
					Total	Stalk	Root		
		bu/A	%	lbs/bu	%	%	%	plants/A	$/A
AAACC-1C		235	24.7	52.3	1.3	1.3	0.0	36000	1332
AAACC-2C		184	27.2	50.8	2.2	1.1	1.1	35056	1033
AACC-1C		233	25.5	51.8	1.5	1.1	0.4	37444	1321
AACC-2C		179	26.2	51.8	5.3	1.3	4.0	34889	1008
CC-CC		182	27.6	50.8	2.7	2.4	0.4	36778	1024
	25000	192	24.6	52.6	3.3	2.5	0.8	25867	1091
	30000	201	25.4	51.9	4.1	2.1	2.0	29400	1141
	35000	210	26.0	51.6	2.8	2.0	0.8	34133	1190
	40000	207	26.6	51.3	1.5	1.5	0.0	37600	1170
	45000	205	27.0	51.2	1.6	0.3	1.3	41933	1153
	50000	199	27.8	50.5	2.3	0.1	2.2	47267	1116
AAACC-1C	25000	218	23.5	52.7	0.0	0.0	0.0	26000	1241
AAACC-1C	30000	237	24.3	52.4	0.0	0.0	0.0	30667	1346
AAACC-1C	35000	241	23.5	53.0	2.0	2.0	0.0	33333	1372
AAACC-1C	40000	244	24.7	52.5	5.7	5.7	0.0	36333	1386
AAACC-1C	45000	231	25.8	52.0	0.0	0.0	0.0	41667	1306
AAACC-1C	50000	237	26.5	51.3	0.0	0.0	0.0	48000	1339
AAACC-2C	25000	169	25.3	52.1	1.4	1.4	0.0	22667	955
AAACC-2C	30000	179	26.2	50.8	7.5	5.3	2.2	30667	1012
AAACC-2C	35000	185	27.6	50.8	0.0	0.0	0.0	34333	1042
AAACC-2C	40000	195	27.6	50.5	0.0	0.0	0.0	38000	1094
AAACC-2C	45000	189	28.2	50.2	0.0	0.0	0.0	40000	1057
AAACC-2C	50000	185	28.1	50.3	4.3	0.0	4.3	44667	1038
AACC-1C	25000	227	23.4	53.4	7.5	4.9	2.6	26667	1297
AACC-1C	30000	229	25.0	52.3	0.0	0.0	0.0	30667	1298
AACC-1C	35000	245	25.5	51.3	0.0	0.0	0.0	35333	1388
AACC-1C	40000	233	25.5	51.8	0.0	0.0	0.0	38000	1319
AACC-1C	45000	231	26.0	51.8	1.5	1.5	0.0	44333	1307
AACC-1C	50000	234	27.3	50.5	0.0	0.0	0.0	49667	1316
AACC-2C	25000	168	24.3	53.4	5.1	3.8	1.3	26000	957
AACC-2C	30000	176	24.7	52.7	10.0	2.2	7.8	26000	1000
AACC-2C	35000	182	26.5	51.4	4.0	0.0	4.0	32667	1027
AACC-2C	40000	180	27.1	51.0	1.8	1.8	0.0	37667	1013
AACC-2C	45000	193	26.6	51.6	6.3	0.0	6.3	40667	1088
AACC-2C	50000	172	28.0	50.8	4.3	0.0	4.3	46333	963
CC-CC	25000	178	26.4	51.5	2.4	2.4	0.0	28000	1004
CC-CC	30000	186	27.0	51.2	3.2	3.2	0.0	29000	1048
CC-CC	35000	199	26.7	51.3	7.8	7.8	0.0	35000	1119
CC-CC	40000	185	28.3	50.5	0.0	0.0	0.0	38000	1037
CC-CC	45000	180	28.2	50.5	0.0	0.0	0.0	43000	1009
CC-CC	50000	166	29.3	49.7	2.9	0.7	2.2	47667	925
Mean		202	26.2	51.5	2.6	1.4	1.2	36033	1144
Probability(%)									
Rotation (R)		0.0	0.0	0.0	25.6	86.7	0.9	3.8	0.0
Density (D)		5.0	0.0	0.0	79.5	47.8	55.6	0.0	6.9
R x D		95.2	53.5	41.3	73.6	53.8	88.0	81.9	95.2
LSD(0.10)									
Rotation (R)		9	0.5	0	NS	NS	2	1572	52
Density (D)		10	1	0	NS	NS	NS	1723	57
R x D		NS	NS	NS	NS	NS	NS	NS	NS

*AGI - Adjusted Gross Income.

Table:2209-02. Alfalfa-Corn Rotation Study -Alfalfa.
Arlington, WI - 2022.

Rotation	Harvest Date				Total
	1-Jun	29-Jun	29-Jul	26-Aug	
	T Dm/A	T Dm/A	T Dm/A	T Dm/A	T Dm/A
AAACC-1A	0.0	0.0	0.5	0.5	1.0
AAACC-2A	0.9	0.2	0.2	0.2	1.5
AAACC-3A	0.7	0.3	0.2	0.2	1.3
AACC(S)-1A	0.0	0.0	0.5	0.4	0.9
AACC(S)-2A	0.9	0.4	0.2	0.2	1.7
AACC-1A	0.0	0.0	0.6	0.5	1.1
AACC-2A	0.8	0.3	0.2	0.2	1.4
Mean	0.5	0.2	0.3	0.3	1.3
Probability (%)					
Rotation (R)	0.0	0.0	0.0	0.0	0.0
LSD 10%					
Rotation (R)	0.1	0.1	0.1	0.1	0.2

Table:2209-03. Alfalfa-Corn Rotation Study - Silage.
Arlington, WI 2022

		Whole Plant											
		Dry Matter		Kernel	Crude			*In Vitro*			Milk per		Harvest
Rotation	Density	Yield	Moisture	milk	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre	density
		T/A	%	%	%	%	%	%	%	%	lb	lb	plants/A
AACC-1Cs		9.6	59.0	32.2	7.0	15.6	32.4	87.1	60.3	37.8	3410	32613	37111
AACC-2Cs		7.9	59.1	38.3	7.2	15.3	32.4	86.9	59.7	37.3	3384	26665	36222
	25000	8.2	59.3	36.7	7.2	15.0	32.0	87.3	60.3	38.1	3442	28342	27500
	30000	8.3	58.8	35.0	7.1	14.9	31.8	87.2	59.8	38.3	3413	28544	30333
	35000	9.2	58.9	37.5	7.2	14.7	31.2	87.8	61.0	38.4	3424	31620	35667
	40000	8.2	59.1	30.0	7.0	15.5	32.5	86.9	59.8	37.6	3397	28028	38167
	45000	9.1	59.3	35.8	7.1	16.1	33.3	86.6	59.9	36.8	3386	31054	40833
	50000	9.1	59.1	36.7	6.9	16.5	33.7	86.2	59.2	36.1	3323	30245	47500
AACC(S)-1C	25000	9.3	59.2	36.7	7.0	15.4	32.3	86.9	59.5	38.2	3427	31814	29000
AACC(S)-1C	30000	9.2	58.2	30.0	7.1	14.5	31.0	87.9	60.9	39.6	3470	32023	30667
AACC(S)-1C	35000	10.1	58.6	36.7	7.0	14.5	30.8	88.0	61.3	38.5	3403	34462	35333
AACC(S)-1C	40000	9.6	58.9	33.3	6.9	15.6	32.6	87.2	60.7	38.1	3437	33095	41667
AACC(S)-1C	45000	9.3	59.8	25.0	7.1	16.2	33.4	86.8	60.3	37.2	3440	32131	37667
AACC(S)-1C	50000	9.8	59.6	31.7	6.7	17.2	34.6	85.8	59.0	35.2	3285	32150	48333
AACC(S)-2C	25000	7.2	59.4	36.7	7.4	14.7	31.7	87.6	61.0	38.1	3457	24869	26000
AACC(S)-2C	30000	7.5	59.4	40.0	7.2	15.4	32.5	86.6	58.8	36.9	3355	25065	30000
AACC(S)-2C	35000	8.3	59.3	38.3	7.3	14.8	31.5	87.6	60.7	38.3	3446	28778	36000
AACC(S)-2C	40000	6.9	59.3	26.7	7.1	15.3	32.5	86.7	58.9	37.1	3357	22961	34667
AACC(S)-2C	45000	8.9	58.8	46.7	7.0	16.0	33.3	86.5	59.6	36.4	3332	29976	44000
AACC(S)-2C	50000	8.4	58.6	41.7	7.1	15.7	32.8	86.6	59.4	37.1	3360	28341	46667
Mean		8.7	59.1	35.3	7.1	15.4	32.4	87.0	60.0	37.5	3397	29639	36667
Probability(%)													
Rotation (R)		0.0	89.1	12.8	0.3	57.4	95.8	66.9	31.7	56.8	41.1	0.0	51.8
Density (D)		42.6	99.1	88.8	15.2	14.4	17.5	25.0	54.5	51.2	33.6	56.3	0.0
R x D		64.3	73.3	38.7	48.8	66.0	71.7	58.9	41.2	72.3	32.0	66.2	16.1
LSD(0.10)													
Rotation (R)		0.7	NS	NS	0.1	NS	NS	NS	NS	NS	NS	2408	NS
Density (D)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4020
R x D		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn - Soybean Response to Tillage and Rotation**

Experiment: 09CS **Trial ID:** 6675 **Year:** 2022

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn,

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

Supported By: HATCH

Site Information

Field: 334 **Previous Crop:** See factors **Soil Type:**

Soil Test Date: 12/7 /22 **pH** 6.5 **OM (%)** 3.1 **P (ppm)** 11 **K (ppm)** 77

Plot Management

Tillage Operations: Field Cultivator 2x

Fertilizer:		**Analysis:**	**Rate lbs/A:**	**Date:**
	Preplant :	N/A	N/A	N/A
	Starter :	N/A	N/A	N/A
	Post plant :	32-0-0	CC: 593 CS: 500	6/20/22 6/20/22
	Manure:	N/A	N/A	N/A

Herbicide: 06-May-22 Medal II EC @ 24 oz/acre
22-Jun-22 Roundup PowerMAX @ 30 oz/acre

Insecticide: See Seed Treatments

Hybrid: C: Jung 53DP511
S: NK22C4E3

Irrigation: No

Planting Date: C: 5/17/22
S: 5/17/22

Row Width: 30"

Planting Depth: 1.5"

Target Plant Density: Corn: 32500 Plants/A
Soybean: 140000 Plants/A

Planting Method: JD 1700 with RTK

Harvest Date: C: 10/31/22
S: 10/4 & 10/18/22

Harvest Method: MF 8XP plot combine

Notes:

Experimental Design

Design: RCB split-split-plot

Replications: 4

Plot Size Seeded: MP: 30' x 70'

Experiment Size: 2.7 A

Harvest Plot Size: 5' x 31'

Factors/Treatments:

Tillage:

1) NT
2) CT

Rotation: 2022 Treatments

1) CCCCCSSSSS-5S
2) CCCCCSSSSS-4S
3) CCCCCSSSSS-3S
4) CCCCCSSSSS-2S
5) CCCCCSSSSS-1S
6) CCCCCSSSSS-5C
7) CCCCCSSSSS-4C
8) CCCCCSSSSS-3C
9) CCCCCSSSSS-2C
10) CCCCCSSSSS-1C
11) CC
12) CS-S
13) CS-C
14) SS-S

Density:

1) 25000
2) 35000
3) 45000

Results: Table 2209-07 & 2209-08

Table2209-07. Corn/Soybean Rotation and Tillage Study - Corn.
Arlington, WI - 2022.

Tillage	Rotation	Density	Yield	Moisture	Test weight	Lodged			Harvest density	AGI $6.09/bu
						Total	Stalk	Root		
			bu/A	%	lbs/bu	%	%	%	plants/A	$/A
Conv			212	20.9	55.4	7.4	1.9	5.6	33595	1220
Notill			173	22.1	54.0	1.4	0.7	0.7	31429	992
	1C		241	21.0	55.4	0.5	0.3	0.1	35000	1384
	2C		191	21.4	54.8	5.8	1.6	4.3	31667	1097
	3C		176	21.9	54.7	6.7	1.7	5.0	33500	1012
	4C		168	21.8	54.4	6.0	3.0	3.1	30833	966
	5C		177	22.2	54.2	4.6	0.9	3.6	32375	1012
	CS		228	21.1	54.3	1.9	1.0	1.0	34375	1309
	CC		167	21.1	55.0	5.4	0.5	4.9	29833	961
		25K	183	21.4	54.9	2.8	0.7	2.1	23857	1050
		35K	196	21.7	54.5	4.8	1.5	3.3	32554	1123
		45K	199	21.4	54.7	5.6	1.6	4.0	41125	1146
Conv	1C		245	20.8	55.9	0.5	0.2	0.2	34583	1407
Conv	2C		209	20.7	55.4	10.4	2.5	7.9	33083	1206
Conv	3C		199	21.0	55.6	11.1	2.8	8.4	33917	1144
Conv	4C		203	21.4	55.5	10.7	4.5	6.1	33000	1164
Conv	5C		198	21.3	54.7	8.7	1.4	7.3	32167	1136
Conv	CS		235	20.6	55.2	2.2	0.8	1.3	34250	1354
Conv	CC		196	20.6	55.3	8.4	0.7	7.7	34167	1128
Notill	1C		237	21.3	54.9	0.4	0.4	0.0	35417	1361
Notill	2C		173	22.1	54.2	1.3	0.6	0.6	30250	989
Notill	3C		154	22.8	53.9	2.3	0.6	1.7	33083	879
Notill	4C		134	22.2	53.3	1.4	1.4	0.0	28667	767
Notill	5C		155	23.1	53.7	0.4	0.4	0.0	32583	888
Notill	CS		221	21.7	53.5	1.6	1.1	0.6	34500	1265
Notill	CC		139	21.6	54.7	2.4	0.3	2.1	25500	795
Conv		25K	200	20.9	55.7	5.2	1.3	3.9	24571	1153
Conv		35K	213	21.1	54.7	7.6	1.8	5.8	33786	1225
Conv		45K	223	20.7	55.6	9.5	2.5	7.1	42429	1282
Notill		25K	165	22.0	54.1	0.5	0.1	0.4	23143	947
Notill		35K	178	22.3	54.2	2.1	1.2	0.9	31321	1020
Notill		45K	176	22.1	53.8	1.6	0.7	0.9	39821	1009
	1C	25K	224	21.1	55.8	0.0	0.0	0.0	26000	1289
	1C	35K	245	21.4	55.0	1.1	0.7	0.4	35375	1407
	1C	45K	253	20.7	55.4	0.3	0.3	0.0	43625	1456
	2C	25K	181	21.7	54.8	2.5	0.0	2.5	24375	1040
	2C	35K	196	21.3	55.0	8.4	2.9	5.6	31500	1127
	2C	45K	196	21.2	54.7	6.5	1.8	4.8	39125	1125
	3C	25K	178	21.0	55.2	5.4	1.0	4.4	25875	1023
	3C	35K	177	22.6	54.1	2.4	0.0	2.4	33375	1012
	3C	45K	174	22.0	54.9	12.3	4.0	8.3	41250	1000

continue

Table 2209-07. Corn/Soybean Rotation and Tillage Study - Corn.
(continued) **Arlington, WI - 2022.**

Tillage	Rotation	Density	Yield	Moisture	Test weight	Lodged			Harvest density	AGI $6.09/bu
						Total	Stalk	Root		
			bu/A	%	lbs/bu	%	%	%	plants/A	$/A
	4C	25K	157	22.0	55.0	4.8	2.5	2.3	22750	900
	4C	35K	172	22.2	54.2	8.7	4.6	4.0	30125	988
	4C	45K	175	21.1	53.9	4.6	1.7	2.9	39625	1009
	5C	25K	170	21.9	53.9	2.2	0.5	1.7	22000	972
	5C	35K	177	22.4	53.8	6.2	1.1	5.0	32500	1013
	5C	45K	183	22.3	55.1	5.3	1.1	4.2	42625	1051
	CS	25K	216	21.4	54.3	1.5	1.0	0.5	25750	1242
	CS	35K	231	20.7	54.6	2.2	0.7	1.5	34750	1330
	CS	45K	236	21.4	54.1	2.0	1.2	0.8	42625	1357
	CC	25K	153	21.0	55.3	3.5	0.0	3.5	20250	881
	CC	35K	171	21.3	54.7	4.8	0.4	4.4	30250	981
	CC	45K	178	21.1	55.0	7.8	1.1	6.8	39000	1022
Conv	1C	25K	227	20.9	56.0	0.0	0.0	0.0	25750	1306
Conv	1C	35K	248	20.7	55.0	1.5	0.7	0.7	35500	1429
Conv	1C	45K	258	20.7	56.8	0.0	0.0	0.0	42500	1487
Conv	2C	25K	199	20.9	55.5	5.0	0.0	5.0	25000	1144
Conv	2C	35K	211	20.5	55.4	13.1	3.9	9.2	33500	1214
Conv	2C	45K	219	20.6	55.3	13.1	3.6	9.5	40750	1260
Conv	3C	25K	192	20.4	57.0	10.9	2.0	8.9	26250	1106
Conv	3C	35K	200	21.8	54.4	1.4	0.0	1.4	33500	1146
Conv	3C	45K	205	20.7	55.4	21.2	6.3	14.9	42000	1180
Conv	4C	25K	188	21.7	55.6	9.6	5.0	4.6	22250	1078
Conv	4C	35K	204	21.9	54.9	13.2	5.1	8.0	35000	1169
Conv	4C	45K	216	20.5	55.9	9.3	3.4	5.8	41750	1244
Conv	5C	25K	194	21.4	55.0	4.5	1.0	3.4	24750	1111
Conv	5C	35K	193	21.6	53.6	11.6	1.5	10.1	30250	1107
Conv	5C	45K	207	21.1	55.7	10.1	1.7	8.4	41500	1191
Conv	CS	25K	221	20.5	54.8	2.0	1.0	1.0	25500	1273
Conv	CS	35K	239	20.5	55.9	4.5	1.4	3.0	34000	1379
Conv	CS	45K	245	20.9	55.0	0.0	0.0	0.0	43250	1409
Conv	CC	25K	183	20.7	56.3	4.2	0.0	4.2	22500	1052
Conv	CC	35K	196	20.7	54.1	7.9	0.0	7.9	34750	1129
Conv	CC	45K	209	20.5	55.3	13.1	2.2	10.9	45250	1203
Notill	1C	25K	222	21.3	55.7	0.0	0.0	0.0	26250	1272
Notill	1C	35K	242	22.1	55.1	0.7	0.7	0.0	35250	1386
Notill	1C	45K	247	20.7	54.1	0.6	0.6	0.0	44750	1424
Notill	2C	25K	164	22.5	54.1	0.0	0.0	0.0	23750	937
Notill	2C	35K	181	22.1	54.5	3.8	1.9	1.9	29500	1039
Notill	2C	45K	173	21.7	54.1	0.0	0.0	0.0	37500	991
Notill	3C	25K	164	21.7	53.5	0.0	0.0	0.0	25500	940
Notill	3C	35K	154	23.5	53.8	3.4	0.0	3.4	33250	879
Notill	3C	45K	144	23.2	54.4	3.4	1.7	1.7	40500	820
Notill	4C	25K	126	22.3	54.5	0.0	0.0	0.0	23250	722
Notill	4C	35K	141	22.4	53.4	4.2	4.2	0.0	25250	807
Notill	4C	45K	135	21.8	52.0	0.0	0.0	0.0	37500	773

continue

Table 2209-07. Corn/Soybean Rotation and Tillage Study - Corn.
(continued) **Arlington, WI - 2022.**

Tillage	Rotation	Density	Yield	Moisture	Test weight	Lodged			Harvest density	AGI $6.09/bu
						Total	Stalk	Root		
			bu/A	%	lbs/bu	%	%	%	plants/A	$/A
Notill	5C	25K	146	22.5	52.8	0.0	0.0	0.0	19250	833
Notill	5C	35K	161	23.2	54.0	0.8	0.8	0.0	34750	919
Notill	5C	45K	160	23.6	54.5	0.6	0.6	0.0	43750	911
Notill	CS	25K	211	22.2	53.9	1.0	1.0	0.0	26000	1211
Notill	CS	35K	223	20.9	53.4	0.0	0.0	0.0	35500	1280
Notill	CS	45K	228	22.0	53.2	4.0	2.3	1.7	42000	1304
Notill	CC	25K	124	21.3	54.2	2.8	0.0	2.8	18000	711
Notill	CC	35K	145	21.9	55.4	1.7	0.8	0.8	25750	832
Notill	CC	45K	147	21.7	54.6	2.6	0.0	2.6	32750	841
Mean			193	21.5	54.7	4.4	1.3	3.1	32512	1106
Probability(%)										
Tillage (T)			0.2	1.6	1.9	3.5	9.0	3.2	3.8	0.2
Rotation (R)			0.0	6.4	14.6	5.5	8.3	4.3	0.0	0.0
Density (D)			0.0	37.4	33.3	6.3	24.8	15.4	0.0	0.0
T x R			0.0	73.6	62.3	14.0	40.6	19.5	0.1	0.0
T x D			2.8	71.5	6.6	34.9	62.6	35.8	66.0	2.6
R x D			18.6	26.7	75.3	26.2	36.3	78.8	79.8	16.2
T x R x D			84.0	89.7	23.1	25.3	83.6	32.9	5.8	84.4
LSD(0.10)										
Tillage (T)			8	0.6	1	3.9	1	3	1431	48
Rotation (R)			11	0.7	NS	4	1	3	1868	64
Density (D)			4	NS	NS	2	NS	NS	1171	24
T x R			16	NS	NS	NS	NS	NS	2647	91
T x D			7	NS	1	NS	NS	NS	NS	39
R x D			NS	NS	NS	NS	NS	NS	NS	NS
T x R x D			NS	NS	NS	NS	NS	NS	4424	NS

Table 2209-08. Corn/Soybean Rotation and Tillage Study - Soybean.
Arlington, WI - 2022

Tillage	Rotation	Yield	Moisture	AGI $13.85/bu
		bu/A	%	$/A
Conv		70.2	12.2	956
Notill		64.9	13.6	882
	1S	75.4	12.5	1027
	2S	68.3	12.2	930
	3S	67.2	12.5	915
	4S	63.9	12.7	870
	5S	64.4	12.4	878
	SC	67.4	15.8	914
	SS	66.0	12.0	900
Conv	1S	78.6	12.4	1070
Conv	2S	72.2	11.9	983
Conv	3S	68.0	11.9	926
Conv	4S	68.3	12.2	930
Conv	5S	66.8	12.1	910
Conv	SC	68.3	12.6	931
Conv	SS	69.0	12.0	940
Notill	1S	72.3	12.6	984
Notill	2S	64.4	12.6	876
Notill	3S	66.3	13.0	903
Notill	4S	59.5	13.1	810
Notill	5S	62.1	12.8	845
Notill	SC	66.4	18.9	897
Notill	SS	63.1	11.9	859
Mean		67.5	12.9	919
Probability(%)				
Tillage (T)		0.8	0.2	0.8
Rotation (R)		0.0	0.0	0.0
T x R		21.3	0.0	25.5
LSD(0.10)				
Tillage (T)		2.0	0.3	27
Rotation (R)		2.7	0.5	36
T x R		NS	0.7	NS

FIELD EXPERIMENT HISTORY

Title: **Corn - Soybean - Wheat Response to Rotation: Cover Crops**

Experiment: 09CSW **Trial ID** 6676 **Year** 2022

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn

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

Supported By: HATCH

Site Information

Field: 335 **Previous Crop:** See factors **Soil Type:** Plano Silt

Soil Test: Date 12/7 /22 **pH** 6.3 **OM (%)** 3.4 **P (ppm)** 12 **K (ppm)** 88

Plot Management

Tillage Operations:

Fertilizer:	**Analysis:**	**Rate lbs/A:**	**Date:**
Preplant :	N/A	N/A	N/A
Starter :	N/A	N/A	N/A
Post plant :	C: 32-0-0 W: 46-0-0	C: 593 S: 0 lb/A W: 163 lb/A	6//2022 4/11/22
Manure:	N/A	N/A	N/A

Herbicide C,S: 22-Jun-22 Roundup PowerMAX @ 30 oz/acre
W: 18-Aug-22 Roundup PowerMAX @ 30 oz/acre

Hybrid: C: Jung 53DP511
S: NK14-W6E3
W: FS624

Planting Date: C: 5/17/22
S: 5/162/22
W: 09/30 & 10/07/21

Planting Depth: C: 1.5"
S,W: 1"

Planting Method: C,S: JD1700 with RTK

Harvest Method: C:MF 8XP combine
CS: NH 707

Target Plant Density: 35000

Harvest Date: C: 10/20/22, CS: 09/20/22
S: 09/28/22, W: 7/22/21

Row Width: C,S: 30"
W: 0.5"

Fungicide: N/A

Notes: 2020 Even out year, no cover crop/N treatment. Rotation and Density for corn.First year for continuous Wheat after 5-year-break.

Experimental Design

Design: RCB split-split-block **Replications:** 3

Plot Size Seeded: MP: 60' x 60'; SP: 10' x 30'

Harvest Plot Size: 5' x 26 **Experiment Size:** 3.47 A

Factors/Treatments:

Rotation:

1) CC
2) SS
3) WW
4) CS-C
5) CS-S
6) GS1: CSW-W
7) GS1: CSW-C
8) GS1: CSW-S(e)
9) GS2: CWS-S
10) GS2: CWS-C(e)
11) GS2: CWS-W
12) Flex: CWS-S
13) Flex: CWS-C(s)
14) Flex: CWS-W(s)

Plant Density:

1) 25000 ppa
2) 30000 ppa
3) 35000 ppa
4) 40000 ppa
5) 45000 ppa
6) 50000 ppa

Results: Table 2209-09 to 2209-12

Table: 2209 - 09 . Corn, Soybean and Wheat Rotation - Corn
Arlington, WI - 2022.

Rotation	Density	Yield	Moisture	Test weight	Lodged			Harvest plants	AGI $5.22/bu
					Total	Stalk	Root		
		bu/A	%	lbs/bu	%	%	%	plants/A	$/A
CC-C		184	30.8	52.5	0.7	0.2	0.5	30722	1023
CS-C		217	28.8	52.5	0.4	0.1	0.3	35417	1211
CSW-C		243	28.2	52.8	0.1	0.1	0.0	34278	1361
CWS-C(e)		228	27.0	52.2	0.0	0.0	0.0	36583	1283
	25K	204	28.4	52.9	0.8	0.4	0.5	24417	1145
	30K	217	28.6	53.1	0.1	0.1	0.0	27667	1216
	35K	215	28.7	52.7	0.0	0.0	0.0	32917	1206
	40K	223	28.6	52.7	0.6	0.0	0.6	36750	1251
	45K	222	29.1	51.2	0.0	0.0	0.0	39125	1241
	50K	225	28.7	52.3	0.2	0.2	0.0	44625	1258
CC-C	25K	177	29.8	53.0	2.2	1.4	0.7	23333	989
CC-C	30K	181	30.9	52.9	0.0	0.0	0.0	28333	1005
CC-C	35K	184	30.9	52.4	0.0	0.0	0.0	27667	1020
CC-C	40K	184	31.4	52.6	2.0	0.0	2.0	30167	1018
CC-C	45K	181	30.3	51.5	0.0	0.0	0.0	33833	1009
CC-C	50K	198	31.4	52.5	0.0	0.0	0.0	41000	1099
CS-C	25K	208	28.5	52.5	1.1	0.0	1.1	25333	1162
CS-C	30K	212	28.9	52.7	0.5	0.5	0.0	29167	1185
CS-C	35K	216	28.8	53.2	0.0	0.0	0.0	35000	1206
CS-C	40K	222	28.2	53.0	0.4	0.0	0.4	37500	1247
CS-C	45K	220	30.2	52.0	0.0	0.0	0.0	39833	1226
CS-C	50K	222	28.4	51.6	0.4	0.4	0.0	45667	1242
CSW-C	25K	225	28.2	52.5	0.0	0.0	0.0	24500	1264
CSW-C	30K	246	27.9	53.8	0.0	0.0	0.0	24500	1382
CSW-C	35K	235	28.0	52.6	0.0	0.0	0.0	34333	1317
CSW-C	40K	249	28.2	52.2	0.0	0.0	0.0	39500	1397
CSW-C	45K	251	28.6	52.6	0.0	0.0	0.0	39500	1403
CSW-C	50K	251	28.2	52.8	0.4	0.4	0.0	43333	1405
CWS-C(e)	25K	207	27.3	53.5	0.0	0.0	0.0	24500	1166
CWS-C(e)	30K	230	26.9	52.9	0.0	0.0	0.0	28667	1294
CWS-C(e)	35K	228	27.1	52.8	0.0	0.0	0.0	34667	1282
CWS-C(e)	40K	238	26.7	53.0	0.0	0.0	0.0	39833	1343
CWS-C(e)	45K	236	27.1	48.8	0.0	0.0	0.0	43333	1327
CWS-C(e)	50K	228	26.8	52.3	0.0	0.0	0.0	48500	1284

continue

Table: 2209 - 09 . Corn, Soybean and Wheat Rotation - Corn

(continued) Arlington, WI - 2022.

Rotation	Density	Yield	Moisture	Test weight	Lodged			Harvest	AGI
					Total	Stalk	Root	plants	$5.22/bu
		bu/A	%	lbs/bu	%	%	%	plants/A	$/A
Mean		218	28.7	52.5	0.3	0.1	0.2	34250	1220
Probability(%)									
Rotation (R)		0.1	0.0	78.1	54.5	65.8	52.7	13.5	0.1
Density (D)		0.0	76.2	4.5	36.5	57.3	28.0	0.0	0.0
R x D		69.5	50.2	52.4	78.2	43.3	71.9	5.5	71.3
LSD(0.10)									
Rotation (R)		15	1	NS	NS	NS	NS	NS	79
Density (D)		7	NS	1	NS	NS	NS	2001	42
R x D		NS	NS	NS	NS	NS	NS	4874	NS

AGI*: Adjusted Gross Income.

Table: 2209-10. Corn, Soybean and Wheat Rotation - Corn Silage
Arlington, WI 2022

		Whole Plant										
	Dry Matter		Kernel	Crude			*In Vitro*			Milk per		Plant
Density	Yield	Moisture	milk	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre	population
	tons/A	%	%	%	%	%	%	%	%	lbs/T	lbs/T	plants/A
25K	7.8	63.6	42.5	7.6	16.2	32.9	87.6	62.3	37.6	3631	28206	24333
30K	8.2	62.3	46.7	7.2	14.7	30.9	88.6	63.2	40.6	3717	30585	30167
35K	9.0	62.6	49.2	7.2	15.5	32.1	88.0	62.7	38.6	3619	32565	33833
40K	9.3	63.0	44.2	7.1	15.8	32.5	87.9	62.7	37.9	3609	33699	38000
45K	8.8	62.7	45.8	6.9	15.5	31.9	87.9	62.2	39.1	3644	32168	41667
50K	9.2	62.9	50.8	7.1	14.9	31.4	88.4	62.9	39.6	3677	33805	45000
Mean	8.7	62.9	46.5	7.2	15.5	31.9	88.1	62.7	38.9	3649	31838	35500
Probability(%)												
Density(D)	5.4	72.5	76.0	0.2	61.0	63.3	76.9	93.9	53.0	62.4	16.9	0.0
LSD(0.10)												
Density(D)	0.9	NS	NS	0.2	NS	NS	NS	NS	NS	NS	NS	3503

Table: 2209 - 11 . Corn, Soybean and Wheat Rotation - Soybean
Arlington, WI - 2022.

Rotation	Yield	Moisture	AGI $13.85/bu
	bu/A	%	$/A
CS-S	60.2	14.8	818
CSW-S(e)	72.0	15.4	977
CWS(L)-S	70.8	14.7	962
CWS-S	71.5	15.1	971
SS-S	58.0	14.5	788
Mean	66.5	14.9	903
Probability(%)			
Rotation (R)	0.3	18.3	0.3
LSD(0.10)			
Rotation (R)	5.5	NS	75

AGI*: Adjusted Gross Income.

Table: 2209 - 12 . Corn, Soybean and Wheat Rotation -Wheat.
Arlington, WI - 2022.

Rotation	Yield	Moisture	Test weight	AGI $8.02/bu
	bu/A	%	lbs/bu	$/A
CSW-W	33	13.6	50.6	260
CWS(L)-W(s)	55	13.9	55.7	426
CWS-W	56	13.9	54.2	437
WW-1W*	89	14	58	689
Mean	58	13.8	54.7	453
Probability(%)				
Rotation (R)	1.6	20.5	10.6	1.6
LSD(0.10)				
Rotation (R)	22	NS	NS	171

AGI*: Adjusted Gross Income.

WW-1W*: First year Wheat after a 5- year-break

FIELD EXPERIMENT HISTORY

Title: **Corn - Soybean - Wheat Response to Rotation**

Experiment: 09CSW **Trial ID** 6677 **Year** 2022

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn, Jason Cavadini

Location: Marshfield, WI **County:** Marathon

Supported By: HATCH

Site Information

Field: 405 **Previous Crop:** See factors **Soil Type:** Withee Sil

Soil Test: Date 20/19/ **pH** 7.2 **OM (%)** 3.1 **P (ppm)** 54 **K (ppm)** 126

Plot Management

Tillage Operations:

Fertilizer:

	Analysis:	Rate lbs/A:	Date:
Preplant :	C,S: 18-10-21-6s	100 lbs	6/3/22 ; 6/7/22
Starter :	W: 0-0-60	300 lbs	5/18/22
Post plant :	C:46-0-0	225 lbs	NA
	W: 46-0-0	50 lbs	5/18/22
Manure:	N/A	N/A	N/A

Herbicide C: Roundup Ultra 1qt/a 6/9/22
Verdict 1pt/a 6/9/22
S: Roundup Ultra 1qt/a 6/9/22
Pursuit 4 oz/a 6/9/22
W: Affinity 1 oz/a 6/17/22
Roundup Ultra 1qt/a 8/10/22

Hybrid: C: Pioneer 9188
S: Stine 09EA02
W: PIP 721 (SRW)

Planting Method:

Planting Date: C: 6/3/22
S: 5/30/22
W:5/18/22

Planting Depth: C: 1.5"
S,W: 1"

C: JD 1750 planter

Harvest Method: CS: Hand Harvest
C,S,W: Almaco plot combine

Target Plant Density: 35000

Harvest Date: C: 11/22/22, CS: 9/21/22
S: 10/20/22, W:8/24/22

Row Width: C: 30"
S: 15"

Fungicide: N/A

Notes:

Experimental Design

Design: RCB split-split-block

Replications: 3

Plot Size Seeded: 60' x 60'

Harvest Plot Size: C: 60' x 5'; S,W: 60' x 5'; CS: 10' x 2.5'

Experiment Size: 3.09 A

Factors/Treatments:

Rotation: 2021Treatments

1) CC
2) SS
3) WW
4) CS- C
5) SC- S
6) GS1: CSW- S
7) GS1: CSW- W
8) GS1: CSW- C

Results: Table 2109-13 to 2109-16

Table: 2209-13 Corn, Soybean, and Wheat Rotation- Corn
Marshfield, WI - 2022.

Rotation	Yield	Moisture	Test Weight	Harvest Population	Stalk Lodging	AGI $6.09/bu
	bu/A	%	in.	ppa	%	$/A
Continuous	121	19.2	51.2	32,525	1.9	701
Alternating	133	19.8	52.2	36,010	0.0	766
Grain System I	99	23.6	50.2	33,686	0.0	566
Mean	118	20.9	51.2	34,074	0.6	678
Probability (%)						
Treatment	37.6	34.1	32.2	9.0	44.4	38.4
LSD 10%						
Treatment	NS	NS	NS	2476	NS	NS

Table:2209 - 14. Corn, Soybean, and Wheat Rotation- Corn Silage
Marshfield, WI - 2022.

Rotation	Yield	Moisture	Kernel milk	Harvest Population	CP	ADF	NDF	NDFD	TDN	IVD	Starch	Milk per Ton	Milk per Acre
	tn dm/A	%	%	ppa	%	%	%	%	%	%	%	lb	lb
Continuous	6.54	71.7	50	33,493	5.3	27.1	44.9	56.0	61.7	80.0	20.5	2,548	16,942
Alternating	8.05	72.3	50	36,590	7.1	20.8	37.8	58.8	69.8	84.3	30.0	3,173	25,486
Grain System I	6.37	72.0	50	34,074	5.5	23.4	41.4	57.9	65.4	82.6	25.0	2,817	17,978
Mean	7.0	72.0	50	34,719	6.0	23.8	41.4	57.6	65.6	82.3	25.2	2,846	20,135
Probability (%)													
Treatment	22.7	81.9	-	12.4	19.1	26.6	25.9	38.1	28.9	30.4	24.4	27.8	15.4
LSD 10%													
Treatment	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table: 2209 - 15 . Corn, Soybean and Wheat Rotation -Soybean
Marshfield, WI - 2022.

Rotation	Yield	Moisture	Test Weight	AGI $13.85/bu
	bu/A	%	lb/bu	$/A
Continuous	39	11.5	57.7	528
Alternating	47	11.2	58.2	642
Grain System I	47	11.1	57.8	635
Mean	44	11.3	57.9	602
Probability (%)				
Treatment	9.8	67.2	34.4	9.8
LSD 10%				
Treatment	6.7	NS	NS	92

AGI*: Adjusted Gross Income.

Table: 2209 - 16 . Corn, Soybean and Wheat Rotation -Wheat.
Marshfield, WI - 2022.

Rotation	Yield	Moisture	Test Weight	Height	Lodging	AGI $8.02/bu
	bu/A	%	lb/bu	in.	1 to 5	$/A
Continuous	-	-	-	-	-	-
Grain System I	25	11.3	50.3	24	1.0	201
Mean	25	11.3	50.3	24	1.0	201
Probability (%)						
Treatment	-	-	-	-	-	-
LSD 10%						
Treatment	-	-	-	-	-	-

AGI*: Adjusted Gross Income.

- Not enough harvest data for continuous wheat plots.

FIELD EXPERIMENT HISTORY

Title: **Crop Rotation Response to Nrate**

Experiment: 09ACOSW **Trial ID:** 6674 **Year:** 2022

Personnel: Carrie Laboski, Joe Lauer, Thierno Diallo

Location: Lancaster, WI **County:** Grant

Supported By: HATCH

Site Information

Field: 300 B **Previous Crop:** See factors **Soil Type:** Fayett

Soil Test: Date: N/A **pH** 6.8 **OM (%)** 2.3 **P (ppm)** 18 **K (ppm)** 124

Plot Management

Tillage Operations: C: Fall chisel

Fertilizer:	**Analysis:**	**Rate lbs/A:**	**Date:**
Preplant :	S,O,W :0-13.6-42.2	301	4 /20/22
Starter :	C: 6-20-30	195	5 /9 /22
Post plant :	C: 34-0-0	See rates	6/1/22
	W: 34-0-0	30	4/19/22
	A:0-8.2-38.3-2.75-0.4B	460	6/03, 8/2/22
Manure:	N/A	N/A	N/A

Herbicide C: Resicore 1.25 qt/ac 5/17/22
Cornerstone 5 plus 28 oz/a 5/17/22
Halex GT 3.6 pt/a 6/13/22
A: Raptor 5 oz/a 6/10/22
S: Cornerstone 5 plus 32 oz/a 6/3/22
Warrant 48 oz/a 6/29/22
Flexstar GT 3 pt/a 6/29/22

Hybrid: C: Wyffles 4198 SSX
S: Syngenta NK 24-G7E3
W:Legacy LW 2023
A: Legacy 451SPH2+
O: Esker

Planting Method: White6100 No till planter

Planting Date: C: 5/9/22 W: 10/20/22
S: 5/27/22 A: 4/29/22
O: 4/29/22

Planting Depth: C:1.5"

Harvest Method: C: MF 8XP Combine.

Target Plant Density: 34000

Harvest Date: C:10/26/22 S:10/18/22
O: 7/26/22 W: 7/26/22
A: 6/1;6/29;7/29;8/29/22

Row Width: C:30" S:15"
O/A/W: 7.5"

Fungicide: N/A

Notes:

Experimental Design

Design: RCB split-split-plot

Replications: 2

Plot Size Seeded: MP: 30' x 70'

Harvest Plot Size: 5' x 25'

Experiment Size: 2.7 A

Factors/Treatments:

Rotation

1) CC
2) CSCOA-2C
3) CSCOA- O
4) CSCOA- A
5) CSCOA-1C
6) CSCOA-1S
7) CCCAA-3C
8) CCCAA-1A
9) CCCAA-1C
10) CCCAA-2A
11) CCCAA-2C
12) CCOAA- O
13) CCOAA-1A
14) CCOAA-2A
15) CCOAA-1C
16) CCOAA-2C
17) CSW- S
18) CSW- C
19) CS- C
20) CSW- W
21) CS- S

Corn N-rate (lbs/A)

1) 0
2) 50
3) 100
4) 200

Results: Table 2209-17 to 2209-21

Table:2209-17. Corn, Soybean, Wheat, Oats and Alfalfa Rotation - Corn
Lancaster, WI - 2022.

Rotation	Nitrogen rate	Yield	Moisture	Test weight	AGI $6.09/bu
	N lb/A	bu/A	%	lbs/bu	$/A
CC-C		164	17.1	60.1	954
CCCMM-C1		237	17.1	61.0	1379
CCCMM-C2		199	16.9	60.7	1161
CCCMM-C3		195	17.0	60.4	1138
CCOMM-C1		243	17.1	60.7	1418
CCOMM-C2		218	16.9	60.6	1272
CSb-C		182	18.0	60.2	1056
CSbCOM-C1		238	17.7	60.8	1385
CSbCOM-C2		211	17.7	60.7	1226
CSbW-C		195	18.4	59.9	1131
	0	153	17.0	60.0	893
	50	206	17.3	60.3	1201
	100	236	17.7	60.8	1372
	200	238	17.7	60.8	1382
CC-C	0	79	16.0	59.4	461
CC-C	50	160	16.4	59.7	935
CC-C	100	201	17.7	60.3	1168
CC-C	200	216	18.2	60.9	1253
CCCMM-C1	0	214	17.2	60.7	1248
CCCMM-C1	50	242	17.1	61.2	1413
CCCMM-C1	100	247	17.2	61.2	1438
CCCMM-C1	200	243	16.9	60.8	1417
CCCMM-C2	0	134	16.2	60.4	786
CCCMM-C2	50	203	16.9	60.5	1186
CCCMM-C2	100	239	17.5	61.3	1389
CCCMM-C2	200	220	17.2	60.7	1282
CCCMM-C3	0	129	16.9	60.3	750
CCCMM-C3	50	191	17.0	59.9	1112
CCCMM-C3	100	223	16.8	60.4	1298
CCCMM-C3	200	239	17.4	61.1	1392
CCOMM-C1	0	237	17.2	60.1	1380
CCOMM-C1	50	237	17.6	60.9	1377
CCOMM-C1	100	252	17.0	60.9	1470
CCOMM-C1	200	248	16.9	61.1	1445

continue

Table:2209-17. Corn, Soybean, Wheat, Oats and Alfalfa Rotation - Corn
(continued) **Lancaster, WI - 2022**

Rotation	Nitrogen rate	Yield	Moisture	Test weight	AGI $6.09/bu
	N lb/A	bu/A	%	lbs/bu	$/A
CCOMM-C2	0	147	16.4	60.1	861
CCOMM-C2	50	233	16.6	60.4	1357
CCOMM-C2	100	248	17.5	60.9	1442
CCOMM-C2	200	245	17.0	61.0	1429
CS-C	0	119	17.2	59.8	695
CS-C	50	180	17.4	60.1	1046
CS-C	100	202	19.0	60.1	1168
CS-C	200	227	18.6	60.7	1314
CSCOM-C1	0	210	17.6	60.5	1220
CSCOM-C1	50	234	18.2	60.8	1359
CSCOM-C1	100	262	17.8	61.2	1524
CSCOM-C1	200	247	17.3	60.9	1439
CSCOM-C2	0	157	17.9	60.0	913
CSCOM-C2	50	205	17.3	60.4	1194
CSCOM-C2	100	244	17.7	61.3	1416
CSCOM-C2	200	238	18.1	61.1	1380
CSW-C	0	106	17.2	59.2	618
CSW-C	50	177	18.3	59.8	1027
CSW-C	100	243	18.6	60.3	1408
CSW-C	200	255	19.7	60.2	1471
Mean		208	17.4	60.5	1212
Probability(%)					
Rotation (R)		0.0	31.9	0.5	0.0
Nitrogen (N)		0.0	0.0	0.0	0.0
R x N		0.0	3.5	38.0	0.0
LSD (0.10)					
Rotation (R)		17	NS	0.4	96
Nitrogen (N)		6	0.3	0.2	33
R x N		22	1.3	NS	125

*AGI: Adjusted Gross Income

Table:2209-18. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow) Rotation - Soybean Lancaster, WI - 2022.

Rotation	Nitrogen rate	Yield	Moisture	AGI $13.85/bu
	N lb/A	bu/A	%	$/A
CS-S		56	0.1	762
CSCOM-S		64	0.1	873
CSW-S		60	0.1	824
	0	61	0.1	829
	50	61	0.1	833
	100	59	0.1	800
	200	60	0.1	816
CS-S	0	58	0.1	783
CS-S	50	58	0.1	783
CS-S	100	53	0.1	723
CS-S	200	56	0.1	759
CSCOM-S	0	63	0.1	859
CSCOM-S	50	62	0.1	850
CSCOM-S	100	64	0.1	868
CSCOM-S	200	67	0.1	914
CSW-S	0	62	0.1	845
CSW-S	50	64	0.1	867
CSW-S	100	59	0.1	810
CSW-S	200	57	0.1	775
Mean		60	0.1	820
Probability(%)				
Rotation (R)		11	5.4	11
Nitrogen (N)		52	66.6	52
R x N		27	27.3	27
LSD (0.10)				
Rotation (R)		NS	NS	NS
Nitrogen (N)		NS	NS	NS
R x N		NS	NS	NS

*AGI: Adjusted Gross Income

Table:2209-19. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow) Rotation - Wheat. Lancaster, WI - 2022.

Rotation	Nitrogen rate	Yield	Moisture	AGI $8.02/bu
	N lb/A	bu/A	%	
CSW-W	0	57	13	443
CSW-W	50	61	13	473
CSW-W	100	57	13	443
CSW-W	200	62	13	487
Mean		59	13	461
Probability(%)				
Nitrogen (N)		68.0	-	68.0
LSD (0.10)				
Nitrogen (N)		NS	-	NS

*AGI: Adjusted Gross Income

-- Average moisture for the trial: 13.0%

Table:2209-20. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow) Rotation - Oats. Lancaster, WI - 2022.

Rotation	Nitrogen rate	Yield	Moisture	AGI $2.00/bu
	N lb/A	bu/A	%	$/A
CCOAA-O		47	14.8	83
CSCOA-O		44	14.8	78
	0	44	14.8	78
	50	42	14.8	74
	100	42	14.8	75
	200	53	14.8	94
CCOAA-O	0	46	14.8	81
CCOAA-O	50	49	14.8	86
CCOAA-O	100	41	14.8	73
CCOAA-O	200	52	14.8	91
CSCOA-O	0	43	14.8	76
CSCOA-O	50	35	14.8	62
CSCOA-O	100	43	14.8	76
CSCOA-O	200	54	14.8	96
Mean		45	14.8	80
Probability(%)				
Rotation (R)		64	-	64
Nitrogen (N)		21	-	21
R x N		45	-	45
LSD (0.10)				
Rotation (R)		NS	-	NS
Nitrogen (N)		NS	-	NS
R x N		NS	-	NS

*AGI: Adjusted Gross Income

Table:2209-21. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow) Rotation - Alfalfa. Lancaster, WI - 2022.

	Nitrogen	Harvest Date				
Rotation	rate	1-Jun	29-Jun	29-Jul	29-Aug	Total
	N lb/A	T dm/A	T dm/A	T dm/A		T dm/A
CCCMM-M1		1.2	1.6	-	-	2.8
CCCMM-M2		1.9	1.4	1.6	1.3	6.2
CCOMM-M1		1.8	1.2	1.8	1.3	6.1
CCOMM-M2		2.1	1.3	1.8	1.2	6.4
CSCOM-M		1.7	1.1	1.6	1.3	5.8
	0	1.8	1.3	1.7	1.3	5.5
	50	1.8	1.3	1.7	1.3	5.5
	100	1.8	1.3	1.7	1.3	5.4
	200	1.6	1.3	1.7	1.3	5.4
CCCMM-M1	0	1.4	1.5	-	-	2.9
CCCMM-M1	50	1.1	1.7	-	-	2.8
CCCMM-M1	100	1.2	1.5	-	-	2.7
CCCMM-M1	200	1.3	1.6	-	-	2.8
CCCMM-M2	0	1.8	1.5	1.7	1.3	6.3
CCCMM-M2	50	1.8	1.3	1.6	1.3	6.1
CCCMM-M2	100	1.9	1.5	1.6	1.3	6.2
CCCMM-M2	200	1.9	1.3	1.6	1.3	6.1
CCOMM-M1	0	2.0	1.2	1.8	1.4	6.4
CCOMM-M1	50	1.9	1.1	1.8	1.3	6.0
CCOMM-M1	100	1.9	1.1	1.8	1.3	6.1
CCOMM-M1	200	1.6	1.2	1.8	1.4	6.1
CCOMM-M2	0	2.0	1.3	1.8	1.2	6.2
CCOMM-M2	50	2.1	1.4	1.8	1.4	6.7
CCOMM-M2	100	2.1	1.4	1.7	1.1	6.3
CCOMM-M2	200	2.0	1.2	1.8	1.2	6.2
CSCOM-M	0	1.9	1.2	1.6	1.3	5.9
CSCOM-M	50	1.9	1.2	1.7	1.3	6.0
CSCOM-M	100	1.7	1.2	1.6	1.4	5.9
CSCOM-M	200	1.4	1.0	1.7	1.3	5.5
Mean		1.7	1.3	1.7	1.3	5.5
Probability(%)						
Rotation (R)		3.2	0.6	18.1	27.6	0.0
Nitrogen (N)		5.9	58.5	40.4	45.3	10.6
R x N		12.0	56.9	62.8	41.6	18.7
LSD (0.10)						
Rotation (R)		0.3	0.1	NS	NS	0.4
Nitrogen (N)		0.1	NS	NS	NS	NS
R x N		NS	NS	NS	NS	NS

- No harvest data

FIELD EXPERIMENT HISTORY

Title: **Corn response to Xyway fungicide**

Experiment: 10Pest **Trial ID:** 6683 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo, Bill Verbeten

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

Supported By: FMC

Site Information

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

Soil Test: **Date:** 9 /1 /22 **pH:** 6.1 **OM (%)** 2.8 **P (ppm)** 40 **K (ppm)** 127

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:

Preplant Analysis:	32-0-0	**Rate lbs/A:**	43 lbs/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:**	18 lbs/A	**Date:**	5 /9 /22
Post plant Analysis:	N/A	**Rate lbs/A:**	N/A	**Date:**	N/A

Manure: N/A

Herbicide: Bellum 6.0 oz/A
Medal II EC 24 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Jung 56SS538

Irrigation: None

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: S: 9/15/22
G:10/17/22

Harvest Method: S: New Holland 707

Experimental Design

Design: RCB **Replications:** 5

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: S: 2.5' x 23' **Harvest Plant Density:** 31666 plants per acre

Factors/Treatments:

Treatments:

1. UTC
2. Xyway at 15.2 fl oz applied with Y-splitter (0.5 inch off of the seed)

Results: Table 2210-01 & 2210-02.

Table: 2210-01. Evaluation of Xyway fungicide on Corn Grain. Arlington, WI - 2022.

Treatment	density	Yield	Moisture	Test weight	Lodged			AGR
					Total	Stalk	Root	$5.22
	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
UTC	31060	247	21.4	58	0	0	-	1203
Xyway	32272	263	22.5	57	0	0	-	1275
Mean	31666	255	22.0	57	0	0	-	1239
Probability(%)								
Treatment	43.2	0.7	14.9	3.7	66.2	66.2	-	1.4
LSD (0.10)								
Treatment	NS	7	NS	0	NS	NS	-	36

Table: 2210-02. Evaluation of Xyway fungicide on Silage Preformance.

Arlington, WI - 2022.

Treatment	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
UTC	32878	10.9	59.6	29.0	1.5	1.2	2.7	6.9	16.6	33.1	86.2	58.4	38.2	3433	37450
Xyway	31818	10.8	61.2	38.0	1.9	1.7	3.6	7.2	16.3	33.1	86.5	59.1	37.4	3457	37270
	32348	10.8	60.4	33.5	1.7	1.5	3.1	7.0	16.5	33.1	86.3	58.8	37.8	3445	37360
Probability(%)															
Treatment	53.0	78.8	20.2	19.0	19.0	18.0	13.3	5.4	65.4	96.1	72.6	45.4	47.4	52.4	92.8
LSD (0.10)															
Treatment	NS	NS	NS	NS	NS	NS	NS	0.2	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn response to Xyway fungicide**

Experiment: 10Pest **Trial ID:** 6688 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo, Bill Verbeten

Location: Chippewa Falls, WI **County:** Chippewa

Supported By: FMC

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Sattre Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 1.4 **P (ppm)** 40 **K (ppm)** 92

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

Fertilizer:

Preplant Analysis:	21-0-0-24S	**Rate lbs/A:**	11 lbs/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:**	18 lbs/A	**Date:**	5 /5 /22
Post plant Analysis:	32-0-0	**Rate lbs/A:**	64 lbs/A	**Date:**	N/A

Manure: 10000 gal/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Dekalb DKC47-55RIB

Planting Date: 5/5/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: S: 9/12/22
G: 10/18/22 **Harvest Method:** S: New Holland 707

Experimental Design

Design: RCB **Replications:** 5

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: S: 2.5' x 23' **Harvest Plant Density:** 36477 plants per acre

Factors/Treatments:

Treatments:

1. UTC
2. Xyway at 15.2 fl oz applied with Y-splitter (0.5 inch off of the seed)

Results: Table 2210-03 and 2210-04.

Table: 2202-03. Evaluation of Xyway fungicide on Corn Grain. Chippewa Falls, WI - 2022.

Treatment	density	Yield	Moisture	Test weight	Lodged			AGR
					Total	Stalk	Root	$5.22
	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
UTC	35757	228	21.9	58	0.4	0.4	-	1107
Xyway	37196	240	23.1	57	0.2	0.2	-	1162
Mean	36477	234	22.5	58	0.3	0.3	-	1134
Probability(%)								
Treatment	50.5	16.7	4.9	79.2	67.4	67.4	-	18.5
LSD (0.10)								
Treatment	NS	NS	0.9	NS	NS	NS	-	NS

Table: 2202-04. Evaluation of Xyway fungicide on Silage Preformance.

Chippewa Falls, WI - 2022.

Treatment	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
UTC	37200	9.1	60.9	32.0	1.6	2.8	4.4	6.9	16.0	32.4	88.1	63.4	37.0	3477	31839
Xyway	34696	8.7	62.9	44.0	2.2	2.6	5.0	6.9	18.3	35.5	86.4	61.9	33.0	3341	29110
	35948	8.9	61.9	38.0	1.9	2.7	4.7	6.9	17.1	33.9	87.3	62.6	35.0	3409	30474
Probability(%)															
Treatment	53.4	65.0	0.6	8.4	8.4	19.8	8.4	95.4	14.7	13.8	16.7	29.9	7.1	12.2	51.3
LSD (0.10)															
Treatment	NS	NS	0.8	11.2	0.6	0.3	0.6	NS	NS	NS	NS	NS	3.5	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn response to Xyway fungicide**

Experiment: 10Pest **Trial ID:** 6686 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo, Bill Verbeten

Location: Fond du Lac, WI **County:** Fond du Lac

Supported By: FMC

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.2 **OM (%)** 2.8 **P (ppm)** 36 **K (ppm)** 136

Plot Management

Tillage Operations: Strip-Till

Fertilizer:

Preplant Analysis:	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:** 18 lbs/A	**Date:**	5 /9 /22
Post plant Analysis:	28-0-0 32-0-0	**Rate lbs/A:** 30 lbs/A 128 lbs/A	**Date:**	N/A N/A

Manure: N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Jung 56SS538

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: 10/28/22 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 5

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 33409 plants per acre

Factors/Treatments:

Treatments:

1. UTC
2. Xyway at 15.2 fl oz applied with Y-splitter (0.5 inch off of the seed)

Results: Table 2210-05

Table: 2210-05. Evaluation of Xyway fungicide on Silage Preformance.

Fond du Lac, WI - 2022.

Treatment	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
UTC	33181	10.0	64.9	36.0	1.8	2.3	4.1	6.3	18.8	36.5	85.3	59.6	32.1	3249	32587
Xyway	33636	10.3	63.6	32.0	1.6	1.7	3.3	6.1	18.1	35.6	85.6	59.5	33.1	3243	33461
	33409	10.2	64.3	34.0	1.7	2.0	3.7	6.2	18.5	36.0	85.4	59.6	32.6	3246	33024
Probability(%)															
Treatment	42.6	32.2	14.9	17.8	17.8	2.9	1.6	32.8	46.4	52.0	70.2	94.6	55.2	94.3	55.1
LSD (0.10)															
Treatment	NS	NS	NS	NS	NS	0.3	0.4	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn response to Xyway fungicide**

Experiment: 10Pest **Trial ID:** 6690 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo, Bill Verbeten

Location: Hancock, WI **County:** Waushara

Supported By: FMC

Site Information

Field: **Previous Crop:** Cucumber **Soil Type:** Plainfield Sand

Soil Test: **Date:** 9 /1 /22 **pH:** 5.8 **OM (%)** 0.9 **P (ppm)** 61 **K (ppm)** 108

Plot Management

Tillage Operations: Soil Finisher

Fertilizer:

Preplant Analysis:	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:** 18 lbs/A	**Date:**	5 /4 /22
Post plant Analysis:	21-0-024S 32-0-0 34-0-0	**Rate lbs/A:** 32 lbs/A 106 lbs/A	**Date:**	N/A N/A

Manure: N/A

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

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Jung 56SS538

Irrigation: None

Planting Date: 5/4/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: 10/19/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 5

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 34053 plants per acre

Factors/Treatments:

Treatments:

1. UTC
2. Xyway at 15.2 fl oz applied with Y-splitter (0.5 inch off of the seed)

Results: Table 2210-06.

Table: 2210-06. Evaluation of Xyway fungicide on Corn Grain. Hancock, WI - 2022.

Treatment	density	Yield	Moisture	Test weight	Lodged			AGR
					Total	Stalk	Root	$5.22
	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
UTC	33787	193	24.7	55	0.0	0.0	0.0	930
Xyway	34318	189	25.4	54	0.4	0.2	0.2	907
Mean	34053	191	25.0	54	0.2	0.1	0.1	919
Probability(%)								
Treatment	30.2	36.3	15.4	14.3	17.8	37.4	37.4	33.8
LSD (0.10)								
Treatment	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn response to Xyway fungicide**

Experiment: 10Pest **Trial ID:** 6689 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo, Bill Verbeten

Location: Janesville, WI **County:** Rock

Supported By: FMC

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 5.9 **OM (%)** 2.6 **P (ppm)** 59 **K (ppm)** 190

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

Fertilizer:

Preplant Analysis:	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:** 18 lbs/A	**Date:**	5 /10/22
Post plant Analysis:	21-0-0-24S 32-0-0 46-0-0	**Rate lbs/A:** 11 lbs/A 88 lbs/A	**Date:**	N/A N/A

Manure: N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Jung 56SS538

Planting Date: 5/10/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: 10/21/22 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 5

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 34204 plants per acre

Factors/Treatments:

Treatments:

1. UTC
2. Xyway at 15.2 fl oz applied with Y-splitter (0.5 inch off of the seed)

Results: Table 2210-07

Table: 2210-07. Evaluation of Xyway fungicide on Corn Grain. Janesville, WI - 2022.

Treatment	density	Yield	Moisture	Test weight	Lodged			AGR
					Total	Stalk	Root	$5.22
	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
UTC	34545	247	26.5	56	0.5	0.0	0.5	1178
Xyway	33863	252	26.7	57	0.2	0.2	0.0	1200
Mean	34204	249	26.6	56	0.3	0.1	0.2	1189
Probability(%)								
Treatment	46.6	44.1	39.0	43.9	37.4	37.4	37.4	45.3
LSD (0.10)								
Treatment	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn response to Xyway fungicide**

Experiment: 10Pest **Trial ID:** 6687 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo, Bill Verbeten

Location: Marshfield, WI **County:** Marathon

Supported By: FMC

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Fenwood Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.6 **OM (%)** 2.7 **P (ppm)** 31 **K (ppm)** 113

Plot Management

Tillage Operations: Strip-Till Vertical-Till

Fertilizer:

Preplant Analysis:	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:** 18 lbs/A	**Date:**	5 /16/22
Post plant Analysis:	32-0-0	**Rate lbs/A:** 170 lbs/A	**Date:**	N/A

Manure: N/A

Herbicide: Resicore 2.5 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Dekalb DKC47-55RIB

Planting Date: 5/16/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: S: 9/23/22
G: 11/1/22 **Harvest Method:** S: New Holland 707

Experimental Design

Design: RCB **Replications:** 5

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: S: 2.5' x 23' **Harvest Plant Density:** 32689 plants per acre

Factors/Treatments:

Treatments:

1. UTC
2. Xyway at 15.2 fl oz applied with Y-splitter (0.5 inch off of the seed)

Results: Table 2210-08 and 2210-09

Table: 2202-08. Evaluation of Xyway fungicide on Corn Grain. Marshfield, WI - 2022.

Treatment	density	Yield	Moisture	Test weight	Lodged			AGR
					Total	Stalk	Root	$5.22
	plants/A	bu/A	%	lbs/bu	%	%	%	$/A
UTC	33333	193	24.7	52	0.2	0.2	-	929
Xyway	32045	185	25.6	52	0.2	0.2	-	884
Mean	32689	189	25.2	52	0.2	0.2	-	906
Probability(%)								
Treatment	14.2	9.0	3.7	93.7	100.0	100.0	-	8.4
LSD (0.10)								
Treatment	NS	8	0.6	NS	NS	NS	-	42

Table: 2202-09. Evaluation of Xyway fungicide on Silage Preformance.

Marshfield, WI - 2022.

Treatment	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
UTC	33636	9.0	70.3	69.0	3.5	2.3	5.8	7.5	20.3	37.9	86.4	64.1	27.9	3222	28988
Xyway	32424	8.9	69.7	62.0	3.1	2.7	5.8	7.4	20.1	37.9	86.7	65.1	27.8	3229	28622
	33030	8.9	70.0	65.5	3.3	2.5	5.8	7.5	20.2	37.9	86.6	64.6	27.9	3225	28805
Probability(%)															
Treatment	17.8	45.9	30.5	0.5	0.5	18.4	83.6	64.5	84.6	99.5	65.9	46.1	94.3	90.5	56.3
LSD (0.10)															
Treatment	NS	NS	NS	2.6	0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn response to Xyway fungicide**

Experiment: 10Pest **Trial ID:** 6685 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo, Bill Verbeten

Location: Montfort, WI **County:** Iowa

Supported By: FMC

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Dodgeville Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.3 **OM (%)** 2.5 **P (ppm)** 64 **K (ppm)** 215

Plot Management

Tillage Operations: Disk Chisel Field Cultivator

Fertilizer:

Preplant Analysis:	32-0-0 12-0-0-26S	**Rate lbs/A:**	71 lbs/A 7 lbs/A	**Date:**	N/A N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:**	18 lbs/A	**Date:**	4 /29/22
Post plant Analysis:	N/A	**Rate lbs/A:**	N/A	**Date:**	N/A

Manure: 10000 gal/A

Herbicide: Atrazine 4L 32.0 oz/A
Explorer 3.2 oz/A
Roundup 25.6 oz/A
Zidua 3.25 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Jung 56SS538

Irrigation: None

Planting Date: 4/29/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: 9/8/22 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 5

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 29242 plants per acre

Factors/Treatments:

Treatments:

1. UTC
2. Xyway at 15.2 fl oz applied with Y-splitter (0.5 inch off of the seed)

Results: Table 2210-10

Table: 2210-10. Evaluation of Xyway fungicide on Silage Preformance.

Montfort, WI - 2022.

Treatment	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
UTC	29091	10.2	65.8	48.0	2.4	3.0	5.4	7.4	17.5	35.0	86.9	62.6	33.0	3407	34723
Xyway	29394	10.1	66.8	48.0	2.4	3.0	5.4	7.5	17.1	34.3	87.1	62.3	33.9	3461	35179
	29242	10.2	66.3	48.0	2.4	3.0	5.4	7.5	17.3	34.6	87.0	62.4	33.5	3434	34951
Probability(%)															
Treatment	88.2	97.0	37.8	100.0	100.0	100.0	100.0	44.0	68.7	65.2	82.1	59.2	63.8	55.6	87.8
LSD (0.10)															
Treatment	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn grain response to Best-a (biostimulant-phytosterol) from Elicit Plant (France)**

Experiment: 14Biologicals **Trial ID:** 6684 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

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

Supported By: Elicit Plant

Site Information

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

Soil Test: **Date:** 9 /1 /22 **pH:** 6.1 **OM (%)** 2.8 **P (ppm)** 40 **K (ppm)** 127

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:						
	Preplant Analysis:	32-0-0	**Rate lbs/A:**	43 lbs/A	**Date:**	N/A
	Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:**	18 lbs/A	**Date:**	5 /9 /22
	Post plant Analysis:	N/A	**Rate lbs/A:**	N/A	**Date:**	N/A

Herbicide: Bellum 6.0 oz/A
Medal II EC 24 oz/A

Insecticide: Force 6.5G 2.0 lbs/A

Hybrid: Dekalb DKC51-98RIB

Irrigation: None

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: 10/17/22 **Harvest Method:** Massey 8XP

Notes: Application: 6/10/22 13.7 oz/A @ V5 growth stage

Experimental Design

Design: RCB **Replications:** 4

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33428 plants per acre

Treatment:

1) UTC
2) Best-a (biostimulant-phytosterol)

Results: Table 2210-01.

Table: 2214-01. Evaluation of BEST-a biostimulant.
Arlington, WI - 2022.

Treatment	Harvest population	Grain yield	Grain moisture	Test wt	Lodged			AGI	Plant Height
					Total	Stalk	Root	$5.22	
		bu/A	%	lb/bu	%	%	%	$/A	inches
Untreated Check	33143	263	18.2	58	0	0	0	1300	113
BEST-a	33712	268	17.9	57	1	1	0	1324	112
Mean	33428	266	18.1	57	1	0	0	1312	113
Probability(%)									
Treatment	80.5	48.6	69.9	41.7	44.2	14.3	48.7	74.5	42.6
LSD(0.10)									
Treatment	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn grain response to Best-a (biostimulant-phytosterol) from Elicit Plant (France)**

Experiment: 14Biologicals **Trial ID:** 6694 **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Chippewa Falls, WI **County:** Chippewa

Supported By: Elicit Plant

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Sattre Silt Loam

Soil Test: **Date:** 9 /15/22 **pH:** 5.2 **OM (%)** 1.6 **P (ppm)** 77 **K (ppm)** 93

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

Fertilizer:

Preplant Analysis:	21-0-0-24S	**Rate lbs/A:**	11 lbs/A	**Date:** N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:**	18 lbs/A	**Date:** 5 /5 /22
Post plant Analysis:	32-0-0	**Rate lbs/A:**	64	**Date:** N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 6.5G 2.0 lbs/A

Irrigation: None **Hybrid:** Dekalb DKC51-98RIB

Planting Date: 5/5/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 plants per acre **Planting Method:** Almaco Plot Planter

Harvest Date: 10/18/22 **Harvest Method:** Massey 8XP

Notes: Application: 6/20/22 13.7 oz/A @ V6 growth stage

Experimental Design

Design: RCB **Replications:** 4

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 35808 plants per acre

Treatment:

1) UTC
2) Best-a (biostimulant-phytosterol)

Results: Table 2210-02.

Table: 2214-02. Evaluation of BEST-a biostimulant.
Chippewa Falls, WI - 2022.

Treatment	Harvest population	Grain yield	Grain moisture	Test wt	Lodged			AGI
					Total	Stalk	Root	$5.22
		bu/A	%	lb/bu	%	%	%	$/A
Untreated Check	35443	218	23.9	53	1	1	0	1053
BEST-a	36174	225	22.6	53	0	0	0	1093
Mean	35808	222	23.2	53	1	0	0	1073
Probability(%)								
Treatment	29.8	45.6	3.9	74.3	38.2	67.4	39.1	38.3
LSD(0.10)								
Treatment	NS	NS	1	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn silage response to Envita**

Experiment: 14Biologicals **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo **Trial ID:** 6671

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

Supported By: Azotic Technologies

Site Information

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

Soil Test: **Date:** 9 /1 /22 **pH:** 6.1 **OM (%)** 2.8 **P (ppm)** 40 **K (ppm)** 127

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:

Preplant Analysis:	32-0-0	**Rate lbs/A:**	43 lbs/A	**Date:**	N/A
Starter Analysis:	9-11-30-6S-1Zn	**Rate lbs/A:**	18 lbs/A	**Date:**	5 /10/22
Post plant Analysis:	N/A	**Rate lbs/A:**	N/A	**Date:**	N/A
Manure:	N/A				

Herbicide: Bellum @ 6 oz/acre 5/24/22
Medal II EC @ 24 oz/acre 5/24/22

Insecticide: Force 3G 6.5 lbs/A

Hybrid: See Factors

Irrigation: None

Planting Date: 5/9/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** Almaco Plot Planter

Harvest Date: 9/15/22 **Harvest Method:** New Holland 707

Notes: Envita applied at 3.2 oz/A on May 24. Growth stage V3.

Experimental Design

Design: RCB **Replications:** 6

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.45 A

Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33526 **plants per acre**

Factors/Treatments:

Treatment	Hybrid
1. Dry reconstituted Envita applied foliar at V2-V3 growth stage	1) NK Brand NK0748-5122
2. Liquid Envita applied foliar at V2-V3 growth stage	2) Pioneer P07720Q
3. Control (untreated check)	

Results: Table 2214-01.

Table: 2214-01. Envita Corn Silage Evaluation Study.

Arlington, WI- 2022.

Hybrid	Treatment	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	In Vitro ADF	In Vitro NDF	In Vitro Digest	In Vitro NDFD	In Vitro Starch	Milk per Ton	Milk per Acre	Plant height
		plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A	inches
NK Brand NK0748-5122		33114	11.2	66.0	47.0	2.3	3.1	5.4	7.3	20.0	37.9	84.4	58.9	31.7	3349	37470	121
Pioneer P0720Q		33939	11.3	65.8	50.3	2.5	2.7	5.2	7.2	18.5	35.8	86.4	62.0	33.9	3479	39340	119
	Dry Envita	33737	11.2	66.1	44.2	2.2	2.9	5.1	7.3	18.9	36.5	85.6	60.5	32.8	3410	38373	119
	Liquid Envita	33270	11.4	65.9	51.7	2.6	2.9	5.5	7.3	19.5	37.0	85.3	60.4	32.9	3432	39064	120
	UTC	33573	11.1	65.9	50.0	2.5	2.8	5.3	7.2	19.4	37.0	85.3	60.3	32.6	3400	37778	120
NK Brand NK0748-5122	Dry Envita	33080	11.2	65.5	45.0	2.3	3.2	5.5	7.3	18.7	36.3	85.3	59.5	33.4	3425	38532	121
NK Brand NK0748-5122	Liquid Envita	33080	11.2	66.4	47.5	2.4	2.9	5.3	7.2	21.2	39.3	83.6	58.3	30.2	3282	36833	120
NK Brand NK0748-5122	UTC	33181	11.1	66.2	48.4	2.4	3.0	5.4	7.2	20.1	38.1	84.3	58.9	31.4	3338	37043	122
Pioneer P0720Q	Dry Envita	34393	11.2	66.7	43.4	2.2	2.6	4.7	7.2	19.2	36.8	85.9	61.5	32.3	3395	38213	118
Pioneer P0720Q	Liquid Envita	33459	11.5	65.3	55.8	2.8	2.8	5.6	7.3	17.7	34.7	87.0	62.5	35.6	3581	41294	119
Pioneer P0720Q	UTC	33964	11.1	65.6	51.7	2.6	2.6	5.2	7.2	18.7	35.8	86.3	61.8	33.8	3461	38513	118
Mean		33526	11.2	65.9	48.6	2.4	2.9	5.3	7.2	19.2	36.8	85.4	60.4	32.8	3414	38405	120
Probability (%)																	
Hybrid (H)		2.4	64.1	77.1	28.4	28.4	1.0	24.6	72.8	2.0	0.7	0.0	0.0	2.2	0.6	13.7	1.7
Treatment (T)		53.0	64.4	94.5	13.1	13.1	92.3	33.3	72.5	71.8	83.1	83.7	97.6	96.6	82.1	68.7	85.2
H x T		54.1	84.1	24.7	41.7	41.7	37.8	12.9	72.7	3.3	2.7	6.2	28.6	2.6	1.5	27.9	55.7
LSD (0.10)																	
Hybrid (H)		587	NS	NS	NS	NS	0.2	NS	NS	1.0	1.2	0.8	1.0	1.6	73.43	NS	2
Treatment (T)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
H x T		NS	NS	NS	NS	NS	NS	NS	NS	NS	2.2	1.4	NS	2.7	127.1	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Corn silage response to Envita**

Experiment: 14Biologicals **Year:** 2022

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo **Trial ID:** 6711

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

Supported By: Azotic Technologies

Site Information

Field: ARS449 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 9 /1 /22 **pH:** 6.2 **OM (%)** 2.6 **P (ppm)** 10.2 **K (ppm)** 119.5

Plot Management

Tillage Operations: Field Cultivator

Fertilizer:

Preplant Analysis:	32-0-0	**Rate lbs/A:**	149 lbs/A	**Date:**	N/A
Starter Analysis:	N/A	**Rate lbs/A:**	N/A	**Date:**	N/A
Post plant Analysis:	N/A	**Rate lbs/A:**	N/A	**Date:**	N/A
Manure:	N/A				

Herbicide: Bellum @ 6 oz/acre 5/24/22
Medal II EC @ 24 oz/acre 5/24/22

Insecticide: None

Hybrid: Jung 53DP511

Irrigation: None

Planting Date: 5/24/22 **Planting Depth:** 1.5" **Row Width** 30"

Target Plant Density: 35000 **plants per acre** **Planting Method:** JD1700 with RTK

Harvest Date: 9/22/22 **Harvest Method:** New Holland 707

Notes: Envita applied at 3.2 oz/A on June 16. Growth stage V3.

Experimental Design

Design: RCB **Replications:** 6

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.23 A

Harvest Plot Size: 5' x 22' **Harvest Plant Density:** 36300 **plants per acre**

Factors/Treatments:

Treatment

1. Dry reconstituted Envita applied foliar at V2-V3 growth stage
2. Liquid Envita applied foliar at V2-V3 growth stage
3. Control (untreated check)

Results: Table 2214-02.

Table: 2214-02. Envita Corn Silage Evaluation Study.

Arlington, WI - 2022.

Treatment	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	In Vitro ADF	In Vitro NDF	In Vitro Digest	In Vitro NDFD	In Vitro Starch	Milk per Ton	Milk per Acre	Plant height
	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A	inches
Dry Envita	35244	7.1	66.7	67.5	3.4	2.6	6.0	7.2	17.5	35.3	86.0	60.3	29.1	3045	21760	91.0
Liquid Envita	34452	7.6	66.2	68.3	3.4	2.9	6.3	7.2	16.8	34.2	86.7	61.3	30.7	3138	23915	91.3
UTC	39204	7.0	66.2	61.7	3.1	2.9	5.9	7.1	18.4	36.7	85.4	60.3	28.3	3045	21350	94.0
Mean	36300	7.2	66.4	65.8	3.3	2.8	6.1	7.1	17.6	35.4	86.0	60.6	29.4	3076	22342	92.1
Probability (%)																
Treatment (T)	8.5	44.1	86.4	12.6	12.6	31.4	27.9	67.7	13.6	13.8	19.5	40.1	43.4	51.1	37.8	12.7
LSD (0.10)																
Treatment (T)	3660	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Sweet Corn Leaf Area Reduction**

Experiment: 16Variability **Trial ID** 6679 **Year** 2022

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn.

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

Supported By: HATCH, National Crop Insurance Services.

Site Information

Field: ARS 374 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date** 11/12/18 **pH** 6.7 **OM (%)** 2.6 **P (ppm)** 32 **K (ppm)** 106

Plot Management

Tillage Operations: Field Cultivator 2x

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	32-0-0	40 lbs	5 /11/22
	Starter :	N/A	N/A	N/A
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Bellum @ 6 oz/acre 5/24/22
Medal II EC @ 24 oz/acre 5/24/22
Roundup PowerMax @ 40 oz/acre 6/13/2022
Medal II EC @ 24 oz/acre 6/13/22

Insecticide: N/A

Hybrid: Syngenta - Overland

Irrigation: N/A

Planting Depth: 1.5" **Row Width:** 30"

Planting Date: 5/23/22

Planting Method: JD1700 w RTK

Harvest Date: 8/29/2022

Harvest Method: Hand Harvest

Experimental Design

Design: RCB 5 x 4 Factorial **Replications:** 4

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.7 A

Harvest Plot Size: 5' x 17.5'

Factors/Treatments:

Percent leaf area reduction @ stages:

1 - 0% Control 1
2 - 0% Control 2
3 - 0% Control 3
4 - 100% reduction @ V5
5 - 25% reduction @ V8
6 - 50% reduction @ V8
7 - 75% reduction @ V8
8 - 100% reduction @ V8
9 - 25% reduction @ V13
10 - 50% reduction @ V13
11 - 75% reduction @ V13
12 - 100% reduction @ V13
13 - 25% reduction @ Tassel
14 - 50% reduction @ Tassel
15 - 75% reduction @ Tassel
16 - 100% reduction @ Tassel
17 - 25% reduction @ Blister
18 - 50% reduction @ Blister
19 - 75% reduction @ Blister
20 - 100% reduction@ Blister

Results: Table 2216-01

Table:2216-01. Influence of Sweet Corn Leaf Area Reduction on Yield.
Arlington, WI - 2022

Thin time	Reduction percent	Main Unhusked ear yield	Secondary Unhusked ear yield	Total Unhusked yield	5-ear Unhusked yield	5-ear Husked yield	Cut grain moisture	Fresh grain yield	Dry grain yield	Average Leaf/plant	Average Ear/plant	Harvest density	Tiller propensity
	%	T/A	T/A	T/A	T/A	T/A	%	T/A	T/A	no.	no.	plants/A	0 - 6
Control 1	0	7.7	0.9	8.6	10.8	8.8	75.8	6.3	1.5	-	1.0	24250	1
Control 2	0	7.5	0.7	8.2	9.9	8.2	75.8	5.7	1.4	-	1.0	23000	2
Control 3	0	7.2	0.7	7.9	9.6	8.0	75.4	5.7	1.4	-	0.9	24000	2
V5	100	7.4	0.5	7.9	10.2	8.0	76.9	5.8	1.4	7	0.9	25250	3
V8	25	7.4	0.8	8.2	10.4	8.4	75.4	6.1	1.5	10	1.0	23750	1
V8	50	8.5	0.4	8.9	10.6	9.0	74.8	6.5	1.6	10	1.0	24500	2
V8	75	7.8	0.9	8.7	10.5	8.7	74.9	6.3	1.6	11	1.0	23750	2
V8	100	7.1	0.6	7.7	9.6	8.1	74.6	5.8	1.5	11	0.9	23500	1
V13	25	7.6	0.8	8.4	9.9	8.3	75.5	5.8	1.4	11	1.0	23750	1
V13	50	6.6	1.1	7.7	10.1	8.6	75.1	6.1	1.5	12	0.9	25500	2
V13	75	5.7	1.1	6.9	8.5	7.1	75.5	5.0	1.2	12	1.0	24000	1
V13	100	0.2	1.4	1.6	0.7	0.6	72.7	0.4	0.4	12	0.3	23250	1
Tassel	25	8.1	0.4	8.5	9.8	8.0	74.0	6.0	1.5	12	1.1	23000	1
Tassel	50	7.6	0.7	8.3	10.1	8.6	75.0	6.3	1.6	12	0.9	24250	2
Tassel	75	5.5	1.6	7.1	9.1	7.7	74.9	5.5	1.4	12	1.0	23500	1
Tassel	100	0.2	1.3	1.5	0.8	0.6	75.2	0.5	0.3	12	0.4	22250	1
Blister	25	7.8	0.8	8.6	10.1	8.6	75.6	6.1	1.5	12	1.0	23500	2
Blister	50	6.7	1.0	7.7	10.0	8.3	74.6	4.7	1.2	12	0.9	24000	1
Blister	75	6.5	1.4	7.9	9.3	7.9	74.7	5.7	1.4	12	1.0	24750	2
Blister	100	2.7	2.0	4.7	5.9	4.5	75.1	2.9	0.7	12	1.0	22750	0
Mean		6.3	1.0	7.2	8.8	7.3	75.1	5.2	1.3	11	0.9	23825	1
Probability(%)													
Reduction time (T)		0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	29.9	3.4
Reduction percent (P)		0.0	0.2	0.0	0.0	0.0	27.6	0.0	0.0	26.5	0.0	10.8	7.3
T x P		0.0	23.2	0.0	0.0	0.0	10.2	0.0	0.0	95.8	0.0	99.0	84.0
LSD (0.10)													
Reduction time (T)		0.9	0.4	0.7	0.8	0.6	0.7	0.7	0.2	1	0.1	NS	1
Reduction percent (P)		0.7	0.3	0.5	0.6	0.5	NS	0.5	0.1	NS	0.1	NS	1
T x P		1.3	NS	1.0	1.2	1.0	NS	1.0	0.3	NS	0.1	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Tillage in Corn and Soybean Production Systems**

Experiment: 17Tillage **Trial ID** 6680 **Year** 2022

Personnel: J. G. Lauer, T. H. Diallo, K. D. Kohn

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

Supported By: HATCH

Site Information

Field: 396 **Previous Crop:** Corn / Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date** 12/7/2022 **pH** 5.9 **OM (%)** 3.4 **P (ppm)** 8 **K (ppm)** 84

Plot Management

Tillage Operations: See Factors

		Analysis:	Product Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	N/A	N/A	N/A
	Post plant :	32-0-0	CC:593 CS: 500	6/20/22 6/20/22
	Manure:	N/A	N/A	N/A

Herbicide: 22 Jun-22 Roundup PowerMAX @ 30 oz/acre

Irrigation: NO

Planting Date: C: 5/10/22
S: 5/25/22

Planting Method: JD1700 w RTK

Target Plant Density: 35000 **Plants/Acre**

Notes:

Hybrid/Variety: C: Jung 56SS538
S: Asgrow 1243R2X

Row Width: 30"

Planting Depth: C: 1.5"
S: 1"

Harvest Method: C: MF 8XP plot combine
S: Almaco plot combine

Harvest Date: C: 10/24/22
S: 10/18/22

Experimental Design

Design: RCB Split-plot

Replications: 4

Plot Size Seeded: 10' x 50'

Experiment Size: 3.6 A

Harvest Plot Size: 5' x 46'

Factors/Treatments:

Rotation

1) CC
2) CS

Tillage:

1) Rotational tillage: NT since 2016.
2) T1: Fall Strip-Till, Knife 9in Full berm.
3) T2: Fall Strip-Till, Knife 9in no berm.
4) T3: Fall Strip-Till, Knife 6in Full berm.
5) T4: Fall Strip-Till, Knife 6in no berm.
6) NT: Spring 1-13-wave coulter with trash whippers on planter.

Density:

1) S1 - 35000 ppa
2) S2 - 45000 ppa

Results: Tables 2217-01 & 2217-02

Table:2217- 01 .Tillage in Corn and Soybean Production Systems - Corn
Arlington, WI - 2022.

Rotation	Tillage	Fungicide	Yield	Moisture	Test weight	Lodged			Harvest density	AGI $6.09/bu
						Total	Stalk	Root		
			bu/A	%	lbs/bu	%	%	%	plants/A	$/A
CC			179	27.9	51.2	13.4	1.1	12.2	38188	848
CS			197	27.2	51.1	1.6	0.9	0.7	39167	936
	NT		174	27.8	50.6	0.0	0.0	0.0	38563	827
	RT		186	27.6	51.0	27.9	2.3	25.6	39125	883
	T1		188	27.6	51.6	0.7	0.0	0.7	38000	891
	T2		198	27.3	51.3	11.0	1.9	9.1	39750	940
	T3		193	27.5	51.3	2.2	0.4	1.8	37750	920
	T4		188	27.4	51.0	3.1	1.4	1.7	38875	893
		35000	190	27.2	51.3	8.3	0.9	7.5	34396	902
		45000	186	27.9	51.0	6.6	1.1	5.4	42958	882
CC	NT		169	27.8	50.8	0.0	0.0	0.0	38250	803
CC	RT		172	28.7	51.2	53.0	2.8	50.2	37250	812
CC	T1		185	28.2	51.4	1.4	0.0	1.4	37250	878
CC	T2		191	26.5	51.6	20.0	2.6	17.4	39750	911
CC	T3		181	28.3	51.0	2.0	0.0	2.0	37500	854
CC	T4		175	27.7	51.1	3.7	1.4	2.3	39125	830
CS	NT		180	27.8	50.4	0.0	0.0	0.0	38875	851
CS	RT		200	26.5	50.9	2.7	1.8	0.9	41000	954
CS	T1		190	27.0	51.8	0.0	0.0	0.0	38750	904
CS	T2		204	28.2	51.0	2.0	1.2	0.8	39750	968
CS	T3		206	26.6	51.6	2.3	0.7	1.6	38000	985
CS	T4		201	27.1	50.9	2.4	1.4	1.0	38625	955
CC		35000	184	27.2	51.5	15.4	0.5	14.9	33917	874
CC		45000	174	28.6	50.9	11.4	1.8	9.6	42458	823
CS		35000	196	27.2	51.1	1.3	1.2	0.1	34875	930
CS		45000	198	27.2	51.1	1.8	0.5	1.3	43458	941
	NT	35000	183	27.6	50.9	0.0	0.0	0.0	34500	867
	NT	45000	166	28.1	50.4	0.0	0.0	0.0	42625	788
	RT	35000	188	26.9	51.0	31.6	3.0	28.7	34250	895
	RT	45000	184	28.4	51.1	24.1	1.7	22.4	44000	871
	T1	35000	188	27.1	52.3	1.0	0.0	1.0	34375	896
	T1	45000	187	28.1	50.9	0.4	0.0	0.4	41625	886
	T2	35000	199	27.5	51.4	13.4	1.1	12.3	35125	946
	T2	45000	196	27.2	51.2	8.6	2.8	5.8	44375	933
	T3	35000	188	27.6	51.4	2.2	0.7	1.4	34250	892
	T3	45000	199	27.3	51.2	2.2	0.0	2.2	41250	947
	T4	35000	192	26.5	51.0	1.8	0.3	1.5	33875	916
	T4	45000	184	28.4	51.0	4.3	2.4	1.8	43875	869
CC	NT	35000	173	26.9	51.3	0.0	0.0	0.0	35000	826
CC	NT	45000	165	28.8	50.4	0.0	0.0	0.0	41500	781
CC	RT	35000	181	27.3	51.2	59.6	2.3	57.3	31500	858
CC	RT	45000	163	30.2	51.2	46.5	3.3	43.1	43000	767

continue

Table:2217- 01 .Tillage in Corn and Soybean Production Systems - Corn
(continued) **Arlington, WI - 2022.**

Rotation	Tillage	Fungicide	Yield	Moisture	Test weight	Lodged			Harvest density	AGI $6.09/bu
						Total	Root	Stalk		
			bu/A	%	lbs/bu	%	%	%	plants/A	$/A
CC	T1	35000	191	27.0	52.3	2.1	0.0	2.1	34500	911
CC	T1	45000	179	29.4	50.4	0.8	0.0	0.8	40000	846
CC	T2	35000	194	26.9	52.0	25.5	0.8	24.7	34500	923
CC	T2	45000	189	26.0	51.3	14.5	4.5	10.0	45000	900
CC	T3	35000	181	28.2	51.3	2.1	0.0	2.1	34500	857
CC	T3	45000	180	28.5	50.7	1.9	0.0	1.9	40500	852
CC	T4	35000	183	26.7	51.0	2.9	0.0	2.9	33500	870
CC	T4	45000	168	28.8	51.3	4.5	2.9	1.7	44750	791
CS	NT	35000	192	28.4	50.5	0.0	0.0	0.0	34000	907
CS	NT	45000	167	27.3	50.4	0.0	0.0	0.0	43750	794
CS	RT	35000	196	26.4	50.8	3.6	3.6	0.0	37000	933
CS	RT	45000	204	26.6	51.0	1.7	0.0	1.7	45000	975
CS	T1	35000	186	27.2	52.3	0.0	0.0	0.0	34250	882
CS	T1	45000	194	26.9	51.4	0.0	0.0	0.0	43250	925
CS	T2	35000	205	28.1	50.8	1.4	1.4	0.0	35750	970
CS	T2	45000	204	28.3	51.2	2.7	1.1	1.6	43750	966
CS	T3	35000	195	27.1	51.5	2.2	1.5	0.7	34000	928
CS	T3	45000	218	26.1	51.8	2.4	0.0	2.4	42000	1042
CS	T4	35000	202	26.3	51.1	0.7	0.7	0.0	34250	963
CS	T4	45000	200	28.0	50.7	4.1	2.0	2.0	43000	947
Mean			183	28.3	50.1	5.9	4.4	1.5	37500	867
Probability(%)										
Rotation (R)			45.7	22.8	76.4	8.0	71.9	9.1	31.6	44.2
Tillage (T)			6.1	98.0	12.4	0.8	11.3	2.7	66.5	6.0
Density (D)			31.4	4.7	5.5	45.2	50.5	36.7	0.0	26.7
R x T			47.9	6.1	33.2	1.6	91.4	3.0	64.1	41.5
R X D			11.4	3.4	12.2	33.7	3.2	15.9	97.8	8.9
T x D			44.3	29.4	19.9	83.1	18.9	86.0	77.8	41.0
R x T x D			58.7	49.4	69.0	93.6	51.7	79.3	58.0	58.3
LSD(0.10)										
Rotation (R)			NS	NS	NS	11	NS	11	NS	NS
Tillage (T)			12	NS	NS	13	NS	14	NS	59
Density (D)			NS	1	0	NS	NS	NS	1264	NS
R x T			NS	2	NS	19	NS	20	NS	NS
R X D			NS	1	NS	NS	1	NS	NS	128
T x D			NS	NS	NS	NS	NS	NS	NS	NS
R x T x D			NS	NS	NS	NS	NS	NS	NS	NS

Table:2217- 02 .Tillage, Rotation and Planting Density in Corn and Soybean - Soybean . Arlington, WI - 2022

Tillage treatment	Yield	Moisture	*AGI $13.85/bu
	bu/A	%	$/A
NT	58	11.8	790
RT	57	11.6	776
T1	58	11.7	785
T2	60	11.7	817
T3	59	11.5	797
T4	58	11.5	789
Mean	58	11.6	792
Probability(%)			
Tillage (T)	86.6	41.2	86.6
LSD(0.10)			
Tillage (T)	NS	NS	NS

*AGI - Adjusted Gross Income

FIELD EXPERIMENT HISTORY

Title: **Multi-factor effects for continuous corn**

Experiment: 19Systems **Trial ID** 6681 **Year** 2022

Personnel: J.G. Lauer, T. Diallo and K.D. Kohn

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

Supported By: HATCH

Site Information

Field: ARS336 **Previous Crop:** See factors **Soil Type:** Plano Silt Loam

Soil Test: **Date** 12/7/2022 **pH** 5.8 **OM (%)** 3.1 **P (ppm)** 15 **K (ppm)** 125

Plot Management

Tillage Operations: CT & NT Field cultivator 2x (CT only)

Fertilizer:

	Analysis:	Rate lbs/A:	Date:
Preplant :	N/A	N/A	N/A
Starter :	N/A	N/A	N/A
Post plant :	32-0-0	See factors	6 /20/22
Manure:	N/A	N/A	N/A

Herbicide: 06-May-22 Medal II EC @ 24 oz/acre
22-Jun-22 Roundup PowerMAX @ 30 oz/acre

Irrigation: None

Planting Date: C: 5/23/22
S: 5/23/22

Target Plant Density: See Factors

Harvest Date: C: 11/3/22
S: 10/18/22

Notes:

Insecticide: N/A

Hybrid: 1) C: RR Jung 53DP511
2) C: SS DKC54-64RIB
3) Soybean: Asgrow 1243R2X

Planting Depth: 1.5"

Row Width: 30"

Planting Method: JD1700 w RTK

Harvest Method: MF 8XP combine

Experimental Design

Design: FracRep: split-split-plot **Replications:** 1

Plot Size Seeded: MP: 10' x 35' **Experiment Size:** 0.5 Ac

Harvest Plot Size: 5' x 31 **Harvest Plant Density:** See Factors

Factors/Treatments:

Tillage:
1) No-Till
2) Conventional

Nitrogen Rate:
1)- 160 lbs/A
2) - 210 lbs/A

Fungicide:
1) - UTC
2) - Headline

Micro Nutrients:
1) - UTC
2) - Quatro

Plant Density:
1-35000 Plants/A
2-45000 Plants/A

Genotype:
1) RR: 53DP511
2) SS: DKC54-64RIB

Results: Table 2219-02

Table: 2219-02. Multi-factor effects on continuous corn.
Arlington, WI - 2022

Tillage	Genotype	Plant Density	N rate	Micro Mix	Fungicide	Grain yield	Grain moisture	Test weight	Lodged			Harvest density	AGI $6.09/bu
									Total	Stalk	Root		
		plants/A	lbs/A			bu/A	%	lbs	%	%	%	plants/A	$
					Headline	170	23.1	53.8	3.9	1.7	2.2	35130	969
					UTC	177	22.3	53.1	4.2	3.0	1.3	35901	1015
				Quatro		172	22.8	53.4	2.7	0.3	2.4	35875	985
				Quatro	Headline	171	22.6	54.0	3.3	0.6	2.8	33979	980
				Quatro	UTC	173	23.0	52.8	2.0	0.0	2.0	37771	990
				UTC		175	22.6	53.5	5.4	4.3	1.1	35156	998
				UTC	Headline	168	23.6	53.7	4.4	2.8	1.6	36281	958
				UTC	UTC	181	21.6	53.4	6.5	5.9	0.6	34031	1039
			160			169	22.8	53.6	3.2	0.8	2.4	35344	969
			160		Headline	165	23.1	53.7	3.3	0.7	2.6	34031	943
			160		UTC	174	22.5	53.5	3.1	0.9	2.2	36656	996
			160	Quatro		164	22.8	53.6	4.7	0.6	4.1	34750	937
			160	UTC		175	22.8	53.6	1.7	1.1	0.6	35938	1001
			210			177	22.6	53.3	4.9	3.8	1.1	35688	1015
			210		Headline	174	23.2	54.0	4.4	2.6	1.8	36229	995
			210		UTC	181	22.1	52.6	5.4	5.0	0.4	35146	1034
			210	Quatro		181	22.8	53.2	0.6	0.0	0.6	37000	1033
			210	UTC		174	22.4	53.5	9.1	7.6	1.6	34375	996
		35000				174	22.4	53.5	3.5	1.3	2.2	34031	997
		35000			Headline	171	22.8	54.1	3.6	0.8	2.8	34281	980
		35000			UTC	177	22.1	52.9	3.5	1.9	1.6	33781	1014
		35000		Quatro		168	22.8	53.5	3.5	0.0	3.5	34125	964
		35000		UTC		180	22.0	53.5	3.5	2.6	0.9	33938	1031
		35000	160			169	22.8	53.4	3.7	0.5	3.2	33813	966
		35000	210			179	22.0	53.6	3.3	2.2	1.2	34250	1028
		45000				173	23.0	53.4	4.6	3.3	1.3	37000	987
		45000			Headline	168	23.5	53.6	4.2	2.6	1.6	35979	958
		45000			UTC	178	22.5	53.3	5.0	4.1	1.0	38021	1016
		45000		Quatro		176	22.8	53.3	1.8	0.6	1.2	37625	1007
		45000		UTC		169	23.2	53.5	7.4	6.0	1.3	36375	966
		45000	160			170	22.8	53.8	2.8	1.2	1.5	36875	972
		45000	210			175	23.2	53.1	6.4	5.4	1.0	37125	1001
	53DP511					169	23.8	53.3	5.0	2.5	2.5	34094	962
	53DP511				Headline	166	24.3	53.9	5.9	2.1	3.8	33031	941
	53DP511				UTC	172	23.2	52.7	4.1	2.9	1.2	35156	982
	53DP511			Quatro		167	24.3	53.0	3.3	0.6	2.7	34000	950
	53DP511			UTC		171	23.3	53.6	6.6	4.4	2.2	34188	974
	53DP511		160			160	23.7	53.5	5.1	1.7	3.4	33688	910
	53DP511		210			178	23.8	53.1	4.9	3.3	1.6	34500	1013
	53DP511	35000				168	23.0	53.6	4.3	1.3	3.0	32313	959
	53DP511	45000				170	24.5	53.0	5.7	3.7	1.9	35875	965

conitnue

Table: 2219-02. Multi-factor effects on continuous corn.

(continued) **Arlington, WI - 2021**

Tillage	Genotype	Plant Density	N rate	Micro Mix	Fungicide	Grain yield	Grain moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	Harvest density	AGI $6.09/bu
		plants/A	lbs/A			bu/A	%	lbs	%	%	%	plants/A	$
	DKC54-64SSRIB					178	21.6	53.6	3.1	2.1	1.0	36938	1022
	DKC54-64SSRIB				Headline	174	21.9	53.8	1.8	1.2	0.6	37229	997
	DKC54-64SSRIB				UTC	182	21.3	53.5	4.4	3.0	1.4	36646	1047
	DKC54-64SSRIB			Quatro		178	21.3	53.8	2.0	0.0	2.0	37750	1021
	DKC54-64SSRIB			UTC		178	22.0	53.4	4.2	4.2	0.0	36125	1023
	DKC54-64SSRIB		160			179	21.9	53.7	1.4	0.0	1.4	37000	1028
	DKC54-64SSRIB		210			177	21.4	53.5	4.9	4.2	0.6	36875	1016
	DKC54-64SSRIB	35000				181	21.9	53.4	2.7	1.4	1.4	35750	1036
	DKC54-64SSRIB	45000				176	21.4	53.9	3.5	2.9	0.6	38125	1008
CT						191	21.9	54.4	5.3	1.9	3.4	37068	1098
CT					Headline	192	21.9	54.9	5.7	1.3	4.4	37135	1101
CT					UTC	191	21.8	53.8	4.8	2.4	2.4	37000	1094
CT				Quatro		195	21.8	54.5	5.9	1.2	4.8	37729	1118
CT				UTC		188	21.9	54.3	4.6	2.6	2.0	36406	1077
CT			160			188	21.3	54.9	5.9	1.3	4.6	37281	1078
CT			210			195	22.4	53.8	4.6	2.4	2.2	36854	1117
CT		35000				192	21.4	54.6	5.0	0.8	4.2	34406	1102
CT		45000				191	22.4	54.1	5.5	2.9	2.5	39729	1093
CT	53DP511					190	22.7	53.8	7.2	2.5	4.7	35781	1085
CT	DKC54-64SSRIB					193	21.0	54.9	3.3	1.3	2.0	38354	1110
NT						155	23.5	52.6	2.9	2.7	0.1	33964	886
NT					Headline	147	24.4	52.7	2.0	2.0	0.0	33125	837
NT					UTC	164	22.7	52.4	3.7	3.5	0.2	34802	935
NT				Quatro		150	23.8	52.3	-0.5	-0.6	0.0	34021	852
NT				UTC		161	23.3	52.8	6.3	6.1	0.2	33906	920
NT			160			151	24.2	52.3	0.5	0.3	0.2	33406	860
NT			210			160	22.9	52.8	5.2	5.2	0.0	34521	912
NT		35000				156	23.5	52.4	2.0	1.8	0.2	33656	893
NT		45000				154	23.6	52.7	3.7	3.7	0.0	34271	880
NT	53DP511					148	24.8	52.8	2.7	2.5	0.2	32406	838
NT	DKC54-64SSRIB					163	22.3	52.4	3.0	3.0	0.0	35521	934
Mean						173	22.7	53.5	4.1	2.3	1.7	35516	992
Probability(%)													
Fungicide						4.3	13.9	17.8	79.4	28.3	46.3	58.0	3.3
Genotype						1.8	0.1	55.7	22.9	75.4	25.5	5.8	0.8
Genotype*Fungicide						77.6	65.0	46.3	15.8	65.8	20.4	35.8	82.0
Genotype*Micro						69.6	17.8	35.9	72.5	86.6	56.3	53.6	61.6
Genotype*NRate						1.1	64.8	88.2	23.7	30.2	67.2	74.8	1.2
Genotype*PD						33.2	10.5	31.7	85.0	70.2	88.6	68.4	42.3
Micro						53.2	75.7	81.8	7.9	0.3	31.3	61.5	53.0
Micro*Fungicide						14.1	5.3	42.9	27.6	15.4	92.5	5.0	10.3
NRate						3.9	77.7	65.2	27.4	2.3	31.0	80.9	3.9
NRate*Fungicide						71.3	67.1	29.8	70.0	37.7	69.0	21.3	73.8
NRate*Micro						2.3	68.9	72.7	0.1	0.9	10.0	20.1	2.6

continue

Table: 2219-02 . Multi-factor effects on continuous corn.(continued) **Arlington, WI - 2020**

Tillage	Genotype	Plant Density	N rate	Micro Mix	Fungicide	Grain yield	Grain moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	Harvest density	AGI $6.09/bu
		plants/A	lbs/A			bu/A	%	lbs	%	%	%	plants/A	$
Mean						197	31.6	51.7	0.5	0.4	0.0	37531	589
Probability(%)													
PD						68.2	33.9	88.8	47.2	10.8	46.2	4.8	60.9
PD*Fungicide						57.1	81.6	45.0	73.9	87.6	80.5	38.8	56.2
PD*Micro						2.1	32.7	92.8	8.2	26.3	29.6	71.6	1.8
PD*NRate						48.9	30.3	41.3	19.5	32.0	54.6	94.9	43.2
Tillage						0.0	0.6	0.4	11.2	46.4	1.4	3.6	0.0
Tillage*Fungicide						2.9	18.5	48.0	40.9	90.3	38.7	53.6	2.2
Tillage*Genotype						10.5	44.6	22.8	18.6	51.0	33.5	85.2	10.3
Tillage*Micro						1.8	63.5	54.9	1.5	4.8	25.7	67.9	1.7
Tillage*NRate						89.3	4.9	16.3	6.4	14.1	40.0	59.8	75.1
Tillage*PD						85.8	44.6	46.3	66.9	95.1	57.1	11.8	92.1
LSD(0.10)													
Fungicide						6	NS	NS	NS	NS	NS	NS	29
Genotype						6	1.0	NS	NS	NS	NS	2432	30
Genotype*Fungicide						NS	NS	NS	NS	NS	NS	NS	NS
Genotype*Micro						NS	NS	NS	NS	NS	NS	NS	NS
Genotype*NRate						9	NS	NS	NS	NS	NS	NS	43
Genotype*PD						NS	NS	NS	NS	NS	NS	NS	NS
Micro						NS	NS	NS	3	2	NS	NS	NS
Micro*Fungicide						NS	1	NS	NS	NS	NS	3439	NS
NRate						6	NS	NS	NS	2	NS	NS	30
NRate*Fungicide						NS	NS	NS	NS	NS	NS	NS	NS
NRate*Micro						9	NS	NS	4	3	NS	NS	43
PD						NS	NS	NS	NS	NS	NS	2432	NS
PD*Fungicide						NS	NS	NS	NS	NS	NS	NS	NS
PD*Micro						9	NS	NS	4	NS	NS	NS	43
PD*NRate						NS	NS	NS	NS	NS	NS	NS	NS
Tillage						6	0.9	1	NS	NS	2	2373	29
Tillage*Fungicide						9	NS	NS	NS	NS	NS	NS	42
Tillage*Genotype						NS	NS	NS	NS	NS	NS	NS	NS
Tillage*Micro						9	NS	NS	4	3	NS	NS	42
Tillage*NRate						NS	1	NS	NS	NS	NS	NS	NS
Tillage*PD						NS	NS	NS	NS	NS	NS	NS	NS

*AGI: Adjusted Gross Income

FIELD EXPERIMENT HISTORY

Title: **Multi-factor effects for continuous and rotated corn**

Experiment: 19Systems **Trial ID** 6682 **Year** 2022

Personnel: J.G. Lauer, T. Diallo and K.D. Kohn

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

Supported By: HATCH

Site Information

Field: ARS:336 **Previous Crop:** See factors **Soil Type:** Plano Silt Loam

Soil Test: **Date** 12/7/2022 **pH** 5.8 **OM (%)** 3.1 **P (ppm)** 15 **K (ppm)** 125

Plot Management

Tillage Operations: CT & NT Field cultivator 2x (CT only)

Fertilizer:

	Analysis:	Rate lbs/A:	Date:
Preplant :	N/A	N/A	N/A
Starter :	N/A	N/A	N/A
Post plant :	32-0-0	See factors	6 /20/22
Manure:	N/A	N/A	N/A

Herbicide: 06-May-22 Medal II EC @ 24 oz/acre
22-Jun-22 Roundup PowerMAX @ 30 oz/acre

Insecticide: N/A

Hybrid: 1) C: RR Jung 53DP511
2) C: SS DKC54-64RIB
3) Soybean: Asgrow 1243R2X

Irrigation: None

Planting Date: C: 5/23/22
S: 5/23/22

Planting Depth: 1.5"

Row Width: 30"

Target Plant Density: See Factors

Harvest Date: C: 11/3/22
S: 10/18/22

Planting Method: JD1700 w RTK

Harvest Method: C: MF 8XP Combine
S: Almaco combine

Notes:

Experimental Design

Design: FracRep: split-split-plot

Replications: 1

Plot Size Seeded: MP: 10' x 35'

Experiment Size: 1.2

Harvest Plot Size: C & S : 5' x 31

Harvest Plant Density: See Factors

Factors/Treatments:

Tillage:
1) No-Till
2) Conventional

Nitrogen Rate:
1)- 160 lbs/A
2) - 210 lbs/A

Fungicide:
1) - UTC
2) - Headline

Rotation:
1) - CC
2) - CS

Plant Density:
1-35000 Plants/A
2-45000 Plants/A

Genotype:
1) RR: 53DP511
2) SS: DKC54-64RIB

Results: Table 2219-01

Table: 2219-01: Multi-factor effects on continuous and rotated corn.
Arlington, WI - 2022.

Tillage	Rotation	Genotype	Plant Density	N rate	Fungicide	Grain yield	Grain moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	Harvest density	*AGI
			plants/A	lbs/A		bu/A	%	lbs	%	%	%	plants/A	$6.09/bu $
					Headline	197	21.7	54.5	14.4	8.4	6.0	36742	1132
					UTC	198	21.3	54.9	17.8	1.2	16.6	36002	1137
				160		197	21.5	54.9	15.3	5.7	9.5	37064	1130
				160	Headline	196	22.1	54.2	15.4	9.9	5.6	38000	1122
				160	UTC	198	20.9	55.5	15.1	1.6	13.5	36128	1137
				210		198	21.4	54.5	16.9	3.8	13.1	35679	1140
				210	Headline	199	21.2	54.8	13.3	6.9	6.4	35484	1143
				210	UTC	198	21.6	54.2	20.5	0.8	19.8	35875	1137
			35000			195	21.2	54.1	13.9	3.6	10.3	33095	1122
			35000		Headline	195	21.6	54.4	11.6	6.3	5.3	33313	1118
			35000		UTC	196	20.9	53.8	16.1	0.8	15.3	32878	1127
			35000	160		195	21.4	53.7	11.8	0.6	11.2	33316	1122
			35000	210		195	21.1	54.5	15.9	6.5	9.4	32875	1123
			45000			200	21.7	55.3	18.3	6.0	12.4	39648	1147
			45000		Headline	200	21.8	54.6	17.2	10.4	6.7	40171	1147
			45000		UTC	200	21.6	55.9	19.5	1.5	18.0	39125	1146
			45000	160		198	21.6	56.0	18.7	10.8	7.9	40813	1137
			45000	210		202	21.8	54.5	18.0	1.1	16.8	38484	1157
		53DP511				192	22.1	54.6	30.5	8.3	22.2	35095	1100
		53DP511			Headline	191	22.5	54.3	27.2	15.4	11.8	35750	1095
		53DP511			UTC	193	21.8	55.0	33.7	1.1	32.6	34441	1105
		53DP511		160		189	22.5	55.3	29.2	10.7	18.5	35378	1083
		53DP511		210		195	21.8	53.9	31.8	5.8	25.9	34813	1117
		53DP511	35000			191	21.4	53.9	26.7	6.5	20.2	32378	1097
		53DP511	45000			193	22.9	55.3	34.2	10.0	24.2	37813	1103
		DKC54-64SSRIB				203	20.8	54.8	1.7	1.3	0.4	37648	1169
		DKC54-64SSRIB			Headline	203	20.9	54.8	1.6	1.4	0.2	37734	1170
		DKC54-64SSRIB			UTC	203	20.7	54.8	1.9	1.2	0.6	37563	1169
		DKC54-64SSRIB		160		204	20.5	54.4	1.4	0.8	0.6	38750	1176
		DKC54-64SSRIB		210		202	21.1	55.1	2.1	1.8	0.3	36546	1163
		DKC54-64SSRIB	35000			200	21.0	54.3	1.0	0.7	0.4	33813	1148
		DKC54-64SSRIB	45000			207	20.5	55.2	2.4	1.9	0.5	41484	1190
	CC					179	22.4	54.2	13.8	3.2	10.6	35064	1023
	CC				Headline	178	22.6	54.0	10.2	4.6	5.6	35375	1021
	CC				UTC	179	22.3	54.4	17.3	1.7	15.6	34753	1026
	CC			160		179	22.4	54.7	13.7	5.4	8.3	36003	1027
	CC			210		178	22.4	53.7	13.9	1.0	12.9	34125	1020
	CC		35000			177	21.9	53.6	10.9	1.0	9.9	31816	1013
	CC		45000			181	23.0	54.8	16.7	5.4	11.4	38313	1034
	CC	53DP511				175	23.2	54.2	25.6	5.1	20.6	34378	996
	CC	DKC54-64SSRIB				183	21.6	54.2	1.9	1.3	0.7	35750	1051

continue

Table: 2219-01 . Multi-factor effects on continuous and rotated corn.

(continued) **Arlington, WI - 2022.**

Tillage	Rotation	Genotype	Plant Density	N rate	Fungicide	Grain yield	Grain moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	Harvest density	*AGI $6.09/bu
			plants/A	lbs/A		bu/A	%	lbs	%	%	%	plants/A	$
	CS					216	20.5	55.2	18.4	6.4	12.0	37679	1246
	CS				Headline	216	20.8	55.1	18.5	12.2	6.4	38109	1244
	CS				UTC	216	20.2	55.3	18.3	0.6	17.7	37250	1248
	CS			160		214	20.6	55.1	16.9	6.1	10.8	38125	1232
	CS			210		219	20.5	55.3	19.9	6.7	13.3	37234	1260
	CS		35000			214	20.6	54.7	16.9	6.2	10.7	34375	1232
	CS		45000			219	20.4	55.7	20.0	6.6	13.3	40984	1260
	CS	53DP511				209	21.0	55.0	35.3	11.4	23.8	35813	1204
	CS	DKC54-64SSRIB				223	20.0	55.3	1.5	1.3	0.2	39546	1288
CT						210	20.8	55.7	30.7	7.8	22.8	37344	1207
CT					Headline	211	20.8	55.3	26.7	14.5	12.2	36940	1217
CT					UTC	208	20.7	56.1	34.7	1.2	33.5	37748	1198
CT				160		210	20.7	56.2	29.7	10.5	19.3	37623	1206
CT				210		210	20.8	55.3	31.6	5.2	26.4	37065	1208
CT			35000			205	20.7	54.9	25.7	4.9	20.7	33310	1181
CT			45000			214	20.9	56.5	35.6	10.8	24.9	41378	1234
CT		53DP511				205	21.4	56.2	59.6	15.0	44.6	36310	1175
CT		DKC54-64SSRIB				215	20.2	55.3	1.8	0.7	1.0	38378	1240
CT	CC					201	21.5	55.3	26.4	5.0	21.4	36998	1152
CT	CS					219	20.1	56.2	34.9	10.7	24.2	37690	1262
NT						185	22.2	53.7	1.5	1.7	-0.2	35399	1062
NT					Headline	183	22.5	53.7	2.1	2.3	-0.2	36544	1048
NT					UTC	188	21.8	53.6	1.0	1.2	-0.2	34255	1076
NT				160		184	22.3	53.6	0.8	1.0	-0.2	36505	1053
NT				210		187	22.0	53.7	2.3	2.4	-0.2	34294	1071
NT			35000			186	21.8	53.3	2.0	2.2	-0.2	32880	1064
NT			45000			185	22.5	54.0	1.0	1.2	-0.2	37919	1060
NT		53DP511				179	22.9	53.0	1.3	1.5	-0.2	33880	1025
NT		DKC54-64SSRIB				191	21.4	54.3	1.7	1.9	-0.2	36919	1099
NT	CC					157	23.4	53.1	1.1	1.3	-0.2	33130	895
NT	CS					214	21.0	54.2	1.9	2.1	-0.2	37669	1229
Mean						198	21.5	54.7	16.1	4.8	11.3	36372	1135

continue

Table: 2219-01 . Multi-factor effects on continuous and rotated corn.
(continued) **Arlington, WI - 2022.**

Tillage	Rotation	Genotype	Plant Density	N rate	Fungicide	Grain yield	Grain moisture	Test weight	Lodged			Harvest density	*AGI $6.09/bu
									Total	Stalk	Root		
			plants/A	lbs/A		bu/A	%	lbs	%	%	%	plants/A	$
Probability(%)													
Fungicide						84.6	17.4	59.7	53.6	4.3	6.9	43.5	78.9
Genotype						0.0	0.0	80.8	0.0	5.1	0.0	0.9	0.0
Genotype*Fungicide						79.3	37.8	60.4	58.0	4.9	8.5	55.3	75.6
Genotype*NRate						21.3	4.8	12.9	86.5	40.8	50.6	39.5	16.8
Genotype*PD						41.2	0.3	68.6	58.1	74.4	74.1	24.6	29.9
NRate						54.8	79.4	57.1	76.4	58.5	53.7	14.8	53.8
NRate*Fungicide						65.5	1.3	13.6	50.1	76.1	64.4	24.1	53.4
PD						12.4	13.9	8.6	42.0	49.4	71.9	0.0	14.4
PD*Fungicide						79.2	41.1	16.8	84.5	63.0	91.6	75.0	74.0
PD*NRate						51.3	48.1	9.8	66.8	3.2	35.9	32.7	54.5
Rotation						0.0	0.0	13.3	40.5	35.9	80.9	0.8	0.0
Rotation*Fungicide						91.1	65.7	88.7	51.0	22.3	91.1	90.2	95.5
Rotation*Genotype						37.0	28.8	85.0	37.3	37.4	75.1	22.1	38.9
Rotation*NRate						28.7	90.5	35.3	79.8	48.2	85.6	60.7	28.3
Rotation*PD						92.5	4.0	90.3	80.6	57.8	91.9	95.3	81.1
Tillage						0.0	0.0	0.2	0.0	7.8	0.0	4.0	0.0
Tillage*Fungicide						18.2	26.9	44.5	41.3	8.5	6.9	10.6	16.6
Tillage*Genotype						78.0	70.5	10.3	0.0	4.1	0.0	60.8	78.6
Tillage*NRate						63.8	63.1	44.5	97.3	33.5	53.7	38.4	62.1
Tillage*PD						9.4	43.4	48.3	32.3	33.1	71.9	11.4	8.6
Tillage*Rotation						0.0	9.7	92.9	49.0	48.9	80.9	4.6	0.0
LSD(0.10)													
Fungicide						NS	NS	NS	NS	6	10	NS	NS
Genotype						5	0.5	NS	9	6	10	1578	27
Genotype*Fungicide						NS	NS	NS	NS	8	14	NS	NS
Genotype*NRate						NS	1	NS	NS	NS	NS	NS	NS
Genotype*PD						NS	1	NS	NS	NS	NS	NS	NS
NRate						NS	NS	NS	NS	NS	NS	NS	NS
NRate*Fungicide						NS	1	NS	NS	NS	NS	NS	NS
PD						NS	NS	1	NS	NS	NS	1578	NS
PD*Fungicide						NS	NS	NS	NS	NS	NS	NS	NS
PD*NRate						NS	NS	2	NS	8	NS	NS	NS
Rotation						5	0.5	NS	NS	NS	NS	1578	27
Rotation*Fungicide						NS	NS	NS	NS	NS	NS	NS	NS
Rotation*Genotype						NS	NS	NS	NS	NS	NS	NS	NS
Rotation*NRate						NS	NS	NS	NS	NS	NS	NS	NS
Rotation*PD						NS	1	NS	NS	NS	NS	NS	NS
Tillage						5	0.5	1	9	6	9	1548	23
Tillage*Fungicide						NS	NS	NS	NS	8	14	NS	NS
Tillage*Genotype						NS	NS	NS	13	8	14	NS	NS
Tillage*NRate						NS	NS	NS	NS	NS	NS	NS	NS
Tillage*PD						7	NS	NS	NS	NS	NS	NS	39
Tillage*Rotation						7	1	NS	NS	NS	NS	2217	39

*AGI: Adjusted Gross Income

Printing for Spine of Book

2022 Annual Research Report – Lauer, Kohn, and Diallo