

Ewing Demonstration Center Report 2019



I ILLINOIS

Extension

COLLEGE OF AGRICULTURAL, CONSUMER
& ENVIRONMENTAL SCIENCES

Most Recent Soil Analysis Results (10/25/16)

Field	WpH	OM%	P lbs/A	K/lbs/A	Ca lbs/A	Mg lbs/A	S lbs/A	CEC
100 Series	5.8	1.52	86	245	2864	113	25	9.94
200 Series	5.8	3.65	88	293	2765	98	25	9.29
300 Series	5.8	1.53	89	302	2923	121	24	9.79
400 Series	6.5	1.51	81	278	3476	116	22	10.72
500 Series	5.8	1.46	59	271	3163	152	19	10.48
600 Series	5.8	1.54	122	313	2832	158	27	10.13
700 Series	6.4	1.71	95	262	4369	304	22	14.12
800 Series	6.3	0.66	89	333	3371	186	55	10.82
900 Series	5.8	1.87	89	317	3431	230	32	11.94
1000 Series	5.7	2.19	54	237	4318	288	40	14.69

Continuous No-Till Soil Analysis – By Depth

Depth (in.)	pH			%OM			P (lbs/A)			K (lbs/A)			Ca (lbs/A)			Mg (lbs/A)			S (lbs/A)
	2018	2006	2003	2018	2006	2003	2018	2006	2003	2018	2006	2003	2018	2006	2003	2018	2006	2003	2018
0-1	6.4	6.9	6.2	4.7	2.9	3.1	218.8	211	175	560.9	364	591	4192.4	5372	4530	228.5	273	290	22.7
1-2	6.3	7	6.4	3.6	2.9	3.1	190.8	189	168	355.2	261	413	3946.7	5167	4390	179.7	223	230	19.2
2-3	6.4	6.9	6.6	3.1	3	3.1	190.4	149	138	269	208	309	4025.2	5000	4320	170.6	174	200	15.2
3-4	6.4	7	6.5	2.1	2.9	3.1	152.3	135	103	223.8	168	252	3596.3	4277	3690	161.6	155	170	16.6
4-5	6.2	6.6	6.2	2	2.8	3.1	110.6	108	70	188.5	171	202	3203.7	4019	3070	140.7	146	150	15.1
5-6	6.1	6.6	5.8	1.8	2.7	3.2	83.4	71	56	170.7	138	163	3038.4	3453	2310	136	131	120	20.2
6-7	5.9	6.2	5.4	1.5	2.7	3.2	65.7	45	48	153.3	123	151	2865.4	2855	1790	132.8	113	120	14.8
7-8	5.8	6.2	5.2	1.5	2.4	2.9	72.2	40	45	151.9	135	147	2757	2907	1550	139.2	118	110	19.4
8-10	5.5	5.5	5	1.9	2.4	2.9	87.5	51	29	173.9	136	133	2785	2663	1200	165.3	123	100	26.6
10-12	5.3	5.4	4.8	1.1	1.9	2.4	29.5	26	17	120.6	135	130	2193.8	2237	1080	136.9	123	110	15.7
12-14	5.6	5	4.7	1.9	1.8	1.7	58.2	12	9	158.2	144	132	2638.2	2184	1020	136.4	143	130	14

The west portion (80') of the 100, 200, 300, and 400 Series has been dedicated as a long term soil fertility demonstration plot for pH, phosphorus (P), and potassium (K) fertility. The map below illustrates the layout of the plots which is the same on each of the Series. These plots have received no fertilizer amendments except those designated by the treatments below.

N↑

PK No Lime (NL)	PK Lime (L)
K No Lime	K Lime
No P or K No Lime	No P or K Lime
P No Lime	P Lime

* Nitrogen is applied uniformly across all areas in when the crop is corn and wheat. No nitrogen is applied when the crop is soybean.

In the fall of 2013 & 2017 soil samples were collected from the 400 Series Soil Fertility Plots. The results are below

400 Series Soil Fertility Plots

Soil Test Date: 12/10/2013

Treatment	WpH	OM %	OM lbs/A	P lbs/A	K lbs/A	Ca lbs/A	Mg lbs/A	CEC
PK	4.5	1.7	34	193	296	921	112	6.5
K	4.5	1.5	31	30	307	705	90	5.9
(No PK)	4.4	1.3	26	38	156	808	228	6.5
P	4.4	1.3	27	64	103	665	96	5.4
L PK	4.5	1.1	23	197	286	732	76	5.9
L K	4.6	0.9	18	36	311	840	126	6.3
L (No PK)	4.6	1.0	19	21	227	893	184	6.5
L P	4.7	1.5	31	94	157	829	125	5.8

100 Series Soil Fertility Plots

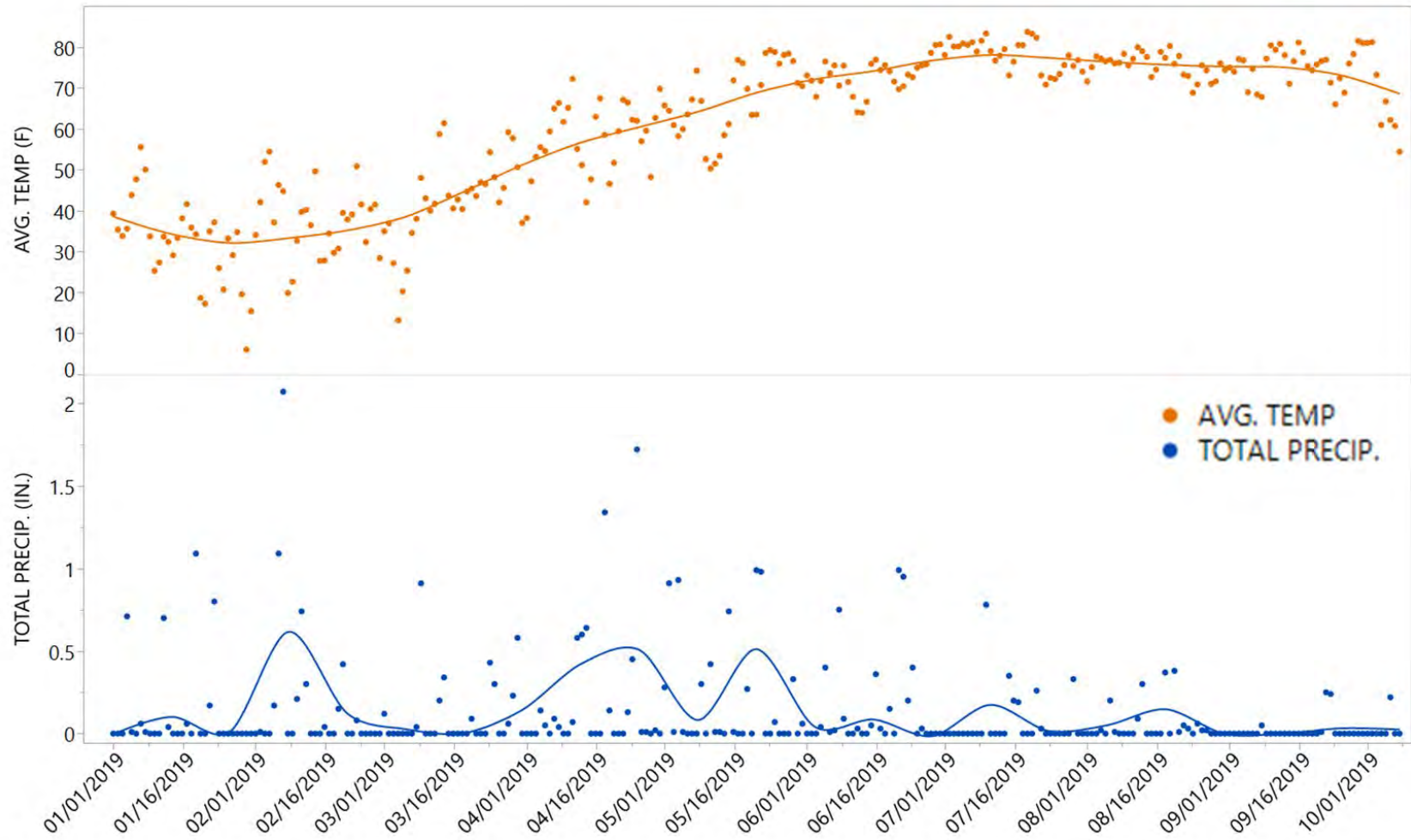
Soil Test Date: 12/13/2017

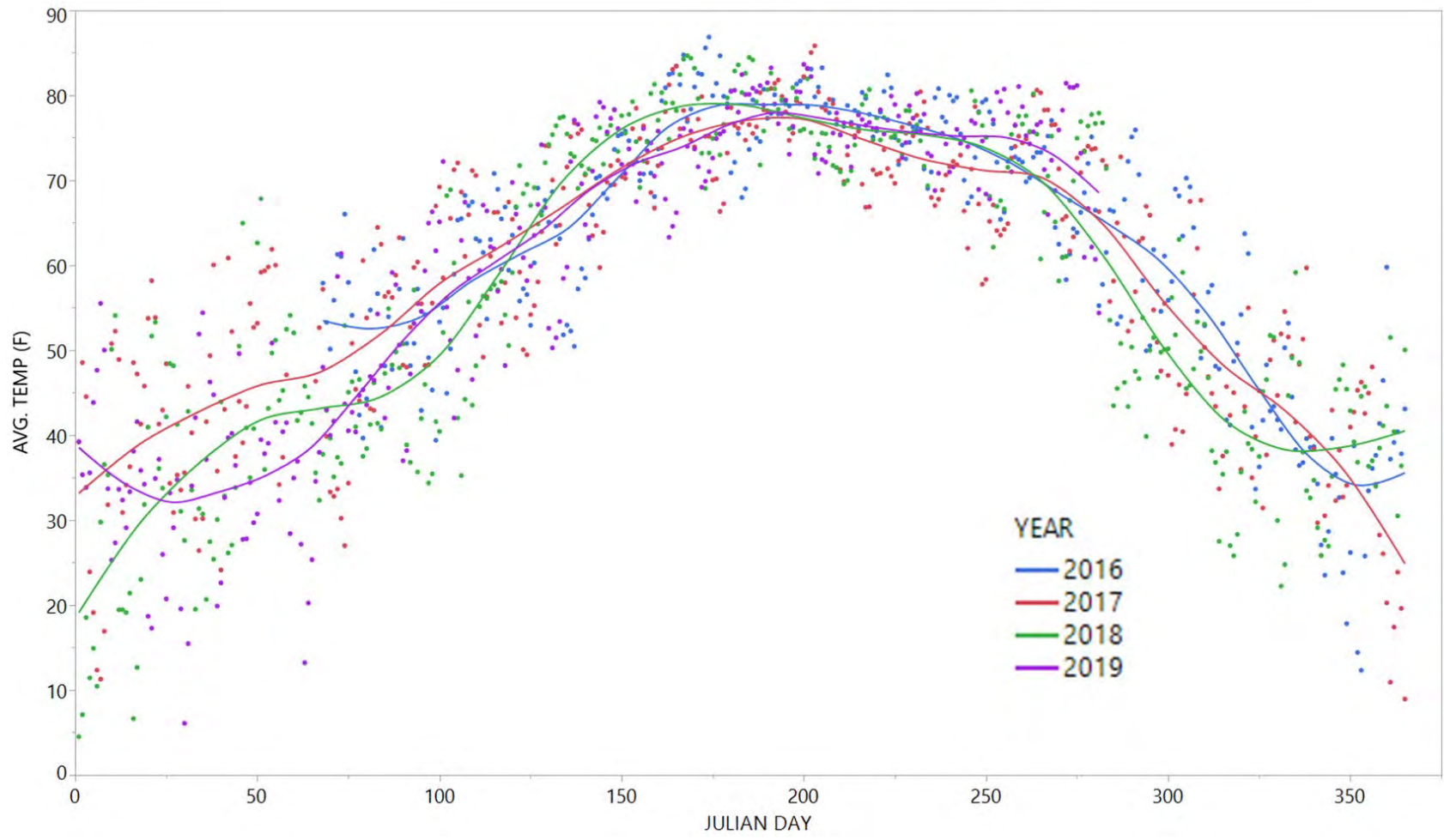
Treatment	pH	OM %	P lbs/A	K lbs/A	Ca lbs/A	Mg lbs/A	S lbs/A	CEC
PK	4.6	1.2	114.0	280.4	598.8	125.4	38.9	5.4
K	4.9	1.2	28.5	290.7	484.7	117.2	51.3	4.8
None	4.8	1	30.2	126.8	516.2	121.6	50.4	4.9
P	4.8	1	107.5	81.9	560.4	91.1	43	4.8
L PK	5.1	1.2	67.6	198.3	1914.9	126.9	20.7	8.1
L K	5.6	1.2	13.5	287.9	2098.5	150.2	16.3	8.3
L None	5.6	1	13.9	81.7	2339.4	137.8	17.6	8.6
L P	5.5	1	72.3	58.1	2271.7	103.3	19.3	8.3

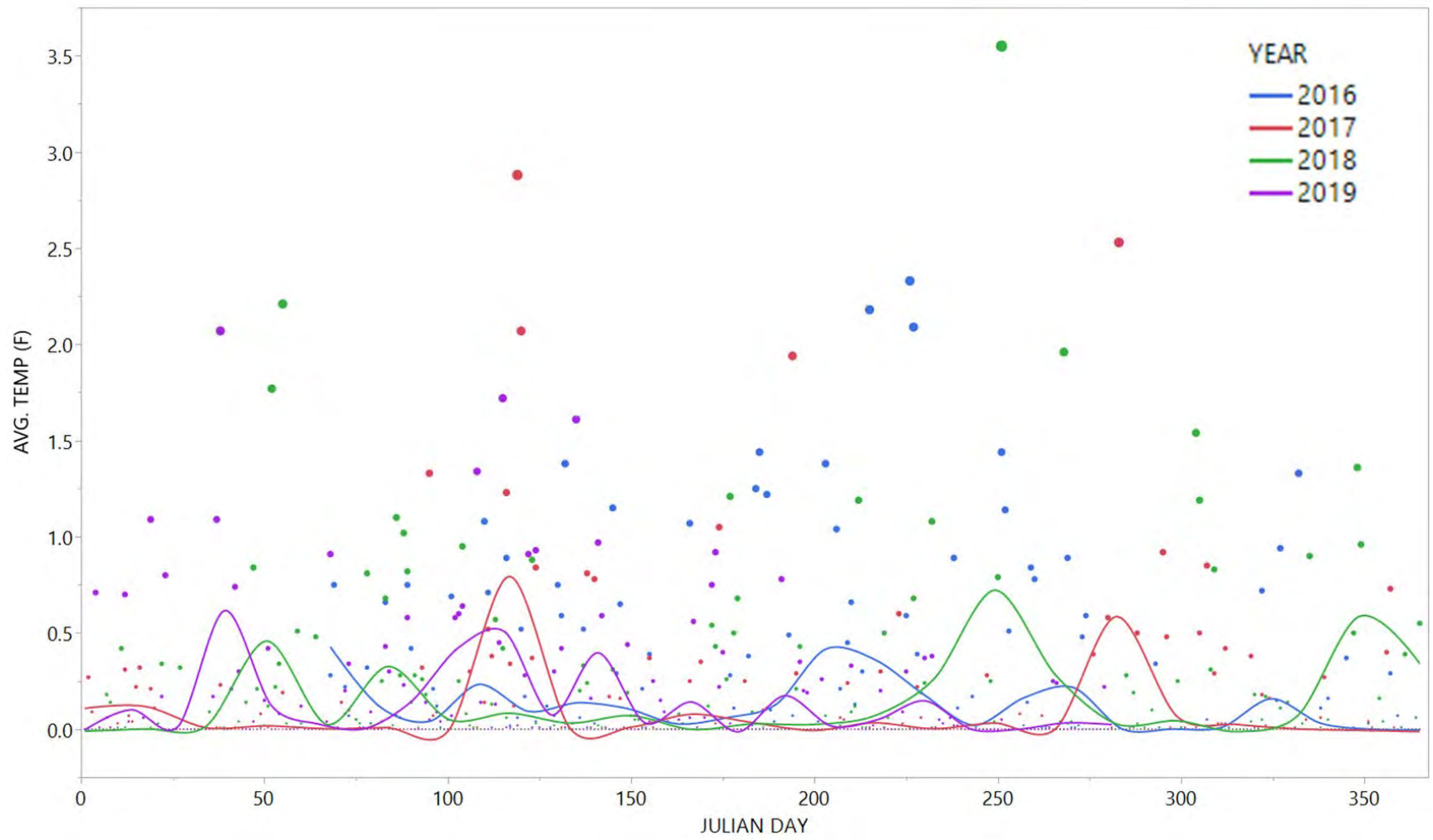
200 Series Soil Fertility Plots

Soil Test Date: 12/13/2017

Treatment	pH	OM %	P lbs/A	K lbs/A	Ca lbs/A	Mg lbs/A	S lbs/A	CEC
PK	4.3	1.0	205.2	183.0	458.4	78.4	44.0	5.0
K	4.7	1.0	35.9	220.8	355.0	66.8	52.2	4.4
None	4.5	1.0	39.6	115.1	445.8	94.8	57.6	4.9
P	4.3	1.2	95.6	71.7	433.6	80.6	41.8	4.9
L PK	4.9	1.4	90.1	136.7	1660.3	101.7	20.3	7.5
L K	5.3	1.2	13.9	171.3	2033.8	115.5	13.4	8.2
L None	5.6	1.2	12.4	64.2	2302.1	120.3	22.2	8.5
L P	5.2	1.0	57.0	62.0	2295.0	116.2	17.9	8.8







Corn v. Sorghum N Rate Trial

Location: EDC 100

Investigators: Talon Becker, Nathan Johanning, & Marc Lamczyk

Plot Size: 10ft x 270ft

Reps: 3

CROP INFORMATION

Cover Crop: Cereal Rye (Thin Stand)

Crop: Corn | Sorghum

Variety/Hybrid: DKC62-53RIB | DKS38-16

Seed Treatment: FALH1BQN & FALH2VBQN | Concep III & Poncho

Planting Date: 6/3/2019

Planting Method: No-till Planter - 30" rows / 1" deep | 0.5" deep

Seeding Rate: Corn - approx. 30,000 s/A | Sorghum - approx. 80,000 s/A

Soil Conditions @ Planting: Slightly Wet

Previous Crop: Winter Wheat / Pumpkins

Harvest Date: Corn - 11/5/19 | Sorghum - 11/15/19

Harvest Area: 675 ft²

FIELD INFORMATION

Soil Type: Cisne silt loam (60%); Hoyleton Silt Loam (40%)

pH: 5.8

OM%: 1.52

P (lbs/ac): 86

K (lbs/ac): 245

Ca (lbs/ac): 2864

Mg (lbs/ac): 113

S (lbs/ac): 25

CEC: 9.94

Corn v. Sorghum N Rate Trial

TREATMENTS

Treatment	Plot Numbers					
	Corn	Sorghum	Corn	Sorghum	Corn	Sorghum
0 lbs N/ac	110	103	206	210	301	301
50 lbs N/ac @emerge	108	109	210	202	302	302
100 lbs N/ac @emerge	101	104	205	207	303	303
150 lbs N/ac @emerge	106	108	209	204	304	304
200 lbs N/ac @emerge	104	107	201	203	305	305
250 lbs N/ac @emerge	109	101	203	209	306	306
50 lbs N/ac @emerge + 50 SD	103	110	208	206	307	307
50 lbs N/ac @emerge + 100 SD	107	106	204	208	308	308
100 lbs N/ac @emerge + 50 SD	105	102	202	205	309	309
0 lbs N/ac @emerge + 150 SD	102	105	207	201	310	310

PEST MANAGEMENT

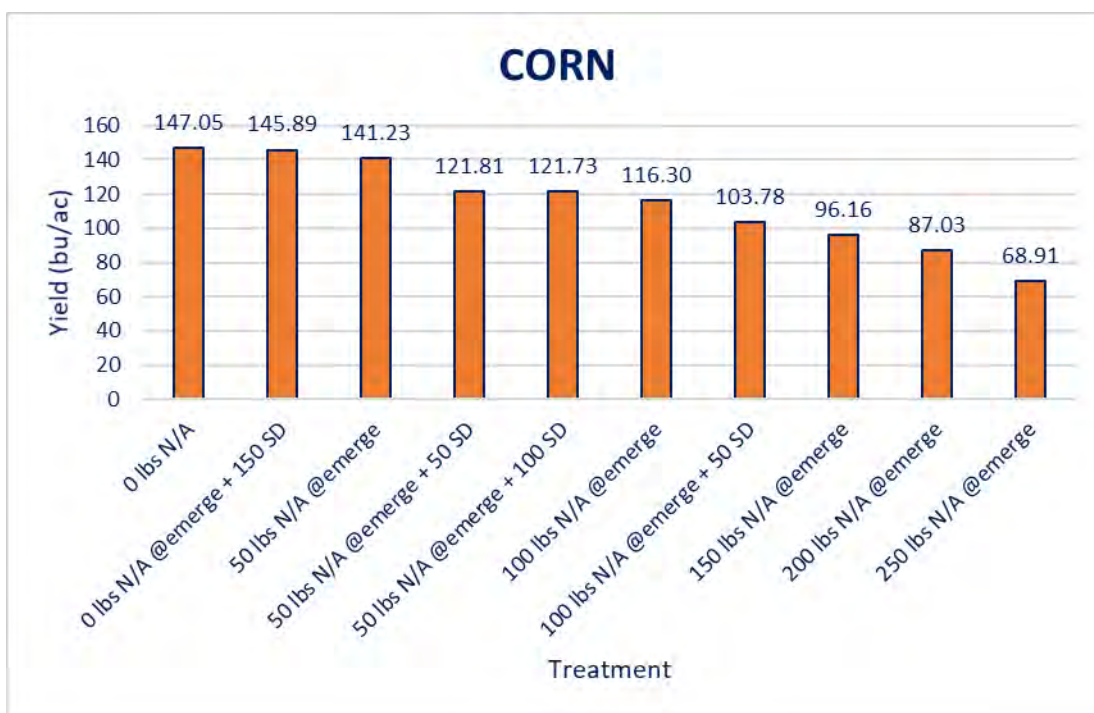
Date	Application Timing	Product(s)	Rate
5/20/19	Pre-Plant Burndown	Roundup PowerMAX	40 oz/ac
		XtendiMax	22 oz/ac
6/3/19	Pre-Emergence	Gramoxone 25L	48 oz/ac
		Aatrex 4L	64 oz/ac
		Dual II Magnum	32 oz/ac
		COC	1% v/v

SOIL FERTILITY

Date	Application Timing	Product(s)	Rate
5/28/19	Pre-Plant	KCI (0-0-60)	120 lbs K ₂ O/ac
6/18/19	V1 Sidedress	UAN 32%	See Treatment List
7/9/19	V6/7 Sidedress	UAN 32%	See Treatment List

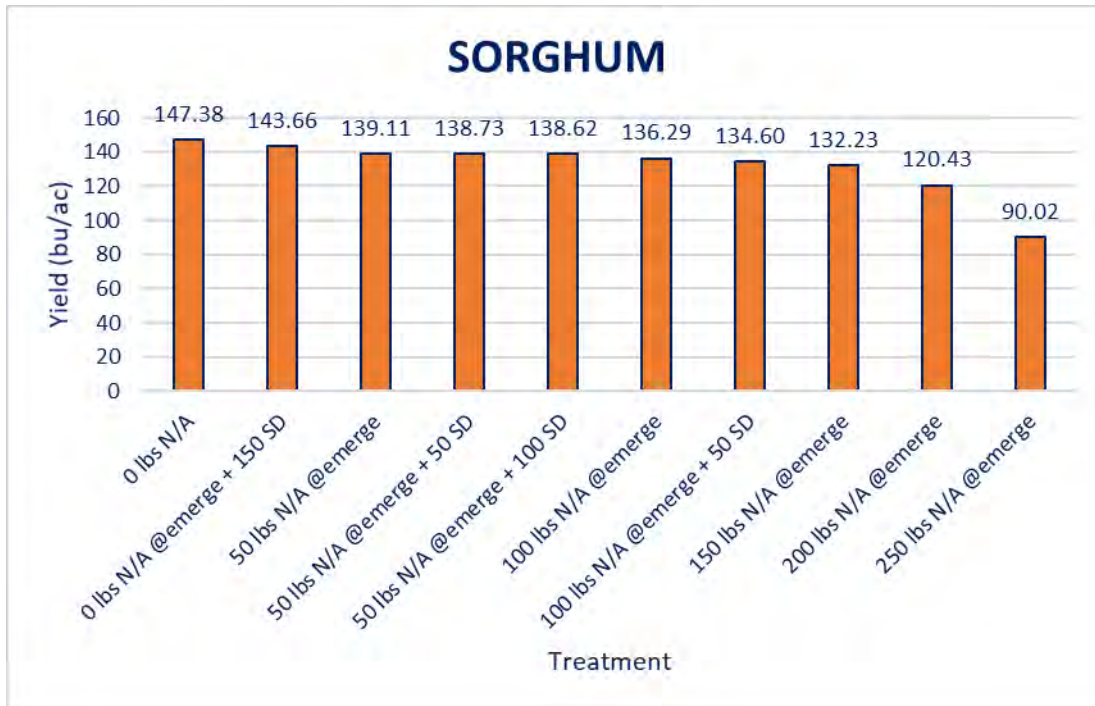
CORN

TREATMENT	YIELD (15.5%)	MST%	EST. POPULATION
200 lbs N/A @emerge	147.05 A	13.4 A	31000 A
250 lbs N/A @emerge	145.89 A	13.7 A	30833 A
100 lbs N/A @emerge	141.23 A	13.3 A	32000 A
150 lbs N/A @emerge	121.81 A	13.5 A	31000 A
50 lbs N/A @emerge + 100 SD	121.73 A	13.7 A	31833 A
100 lbs N/A @emerge + 50 SD	116.30 A	13.7 A	33000 A
50 lbs N/A @emerge + 50 SD	103.78 A	13.5 A	31833 A
50 lbs N/A @emerge	96.16 A	13.2 A	31167 A
0 lbs N/A @emerge + 150 SD	87.03 A	13.5 A	30333 A
0 lbs N/A	68.91 A	13.0 A	30333 A



SORGHUM

TREATMENT	YIELD (13%)	MST%	EST. POPULATION
150 lbs N/A @emerge	147.38 A	16.3 A	46833 A
200 lbs N/A @emerge	143.66 AB	16.4 A	47333 A
250 lbs N/A @emerge	139.11 AB	16.1 A	53333 A
100 lbs N/A @emerge + 50 SD	138.73 AB	16.5 A	54500 A
50 lbs N/A @emerge + 100 SD	138.62 AB	16.0 A	60833 A
0 lbs N/A @emerge + 150 SD	136.29 AB	16.0 A	48833 A
50 lbs N/A @emerge + 50 SD	134.60 AB	16.2 A	51000 A
100 lbs N/A @emerge	132.23 AB	16.3 A	46167 A
50 lbs N/A @emerge	120.43 B	16.5 A	52000 A
0 lbs N/A	90.02 C	16.3 A	45000 A



Wheat Variety Trial

Location: EDC 200
Investigators: Talon Becker, Nathan Johanning, Marc Lamczyk
Plot Size: 10ft x 270ft
Reps: 2

CROP INFORMATION

Cover Crop: N/A
Crop: Wheat
Variety/Hybrid: *See Treatment List*
Seed Treatment: Variety Dependent
Relative Maturity: Variety Dependent
Planting Date: 10/25/2018
Planting Method: No-till Drill 8" rows 3/4" deep
Seeding Rate: 1.4 million s/ac
Soil Conditions @ Planting: Ideal
Previous Crop: Soybean
Harvest Date: 7/3/2019
Harvest Area: 150 ft²

FIELD INFORMATION

Soil Type: Cisne silt loam (100%)
pH: 5.8
OM%: 3.65
P (lbs/ac): 88
K (lbs/ac): 293
Ca (lbs/ac): 2765
Mg (lbs/ac): 98
S (lbs/ac): 25
CEC: 9.29

Wheat Variety Trial

TREATMENTS

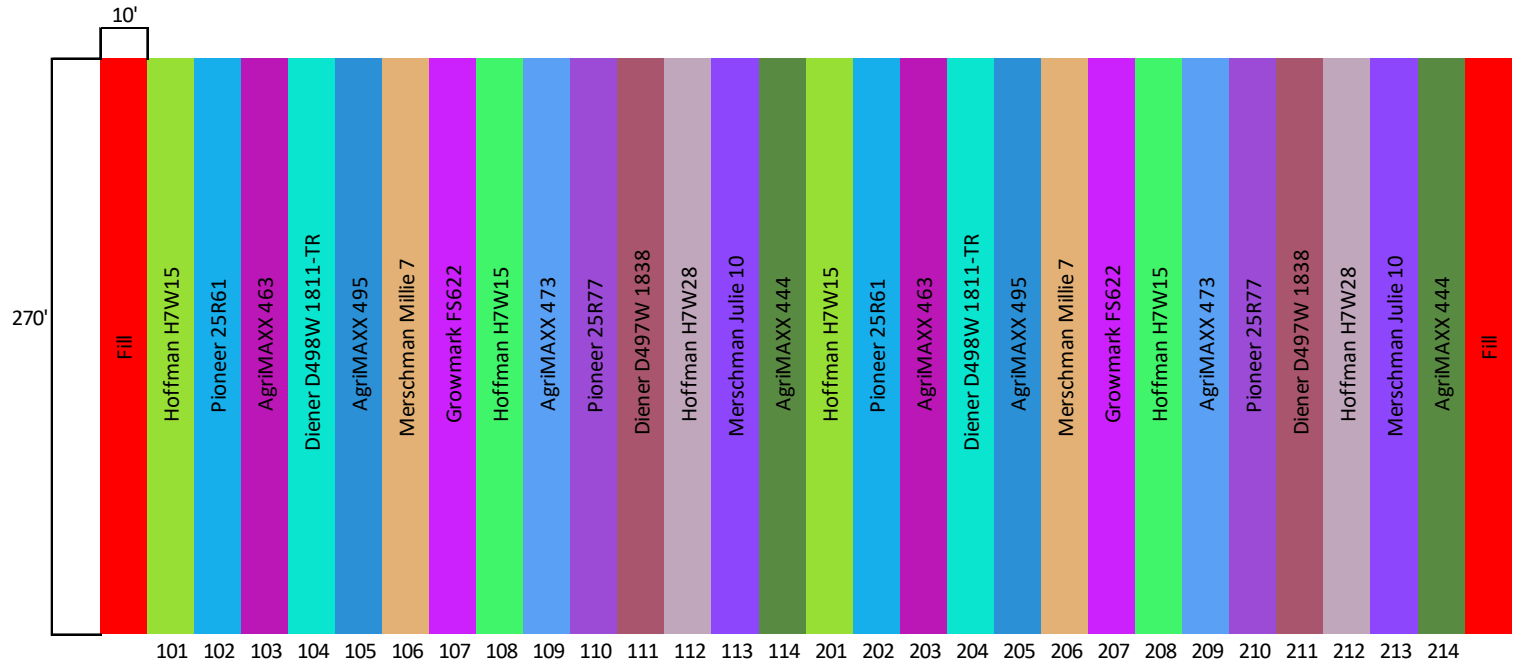
Variety	Plot Numbers	
Hoffman H7W15	101	201
Pioneer 25R61	102	202
AgriMAXX 463	103	203
Diener D498W 1811-TR	104	204
AgriMAXX 495	105	205
Merschman Millie 7	106	206
Growmark FS622	107	207
Hoffman H7W15	108	208
AgriMAXX 473	109	209
Pioneer 25R77	110	210
Diener D497W 1838	111	211
Hoffman H7W28	112	212
Merschman Julie 10	113	213
AgriMAXX 444	114	214

PEST MANAGEMENT

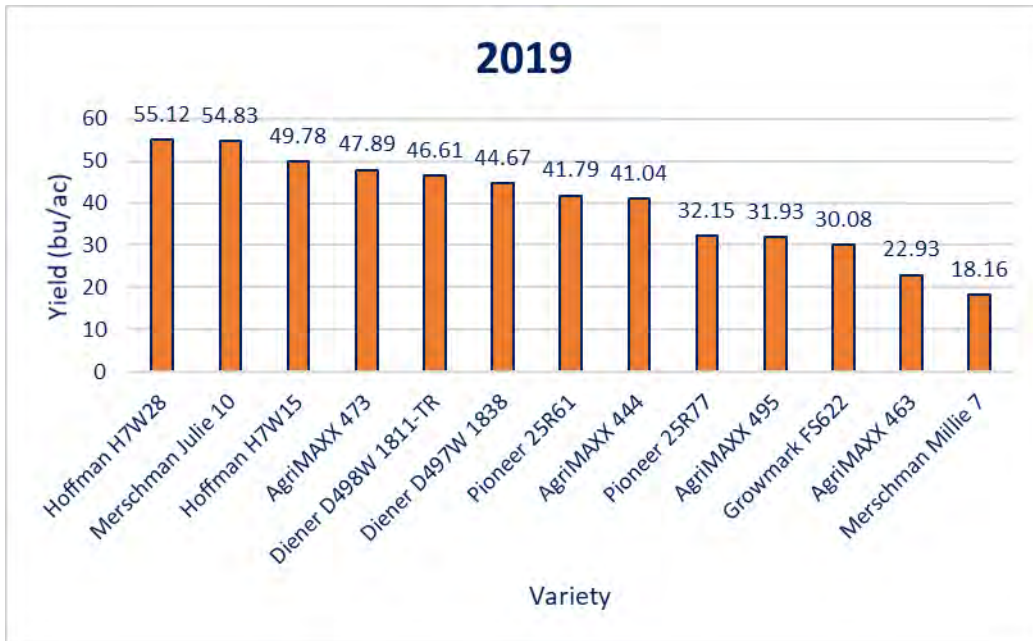
Date	Application Timing	Product	Rate
10/24/2018	Pre-Plant Burndown	Roundup WeatherMax AMS (21-0-0-24S)	32 oz/ac 17 lbs/100 gal

SOIL FERTILITY

Date	Application Timing	Product	Rate
4/10/2019	Feekes 3-4	Urea	100 lbs N/ac



VARIETY	YIELD (13.5%)	MST%
Hoffman H7W28	55.12 A	11.6 B
Merschman Julie 10	54.83 A	11.3 B
Hoffman H7W15	49.78 AB	12.1 AB
AgriMAXX 473	47.89 ABC	11.7 B
Diener D498W 1811-TR	46.61 ABC	12.0 AB
Diener D497W 1838	44.67 ABC	11.8 AB
Pioneer 25R61	41.79 ABC	12.1 AB
AgriMAXX 444	41.04 ABC	11.7 B
Pioneer 25R77	32.15 ABC	12.8 AB
AgriMAXX 495	31.93 ABC	12.5 AB
Growmark FS622	30.08 ABC	14.1 A
AgriMAXX 463	22.93 BC	12.4 AB
Merschman Millie 7	18.16 C	13.0 AB



Double-Crop Soybean Maturity Trial

Investigators: Talon Becker, Nathan Johannig, Marc Lamczyk
Location: EDC 200
Plot Size: 10ft x 270ft
Replications: 3

CROP INFORMATION

Cover Crop: N/A
Crop: Wheat
Variety/Hybrid: *See Treatment List*
Seed Treatment: Variety Dependent (Unknown)
Relative Maturity: *See Treatment List*
Planting Date: 7/9/2019
Planting Method: No-till Planter - 15" rows / 3/4" deep
Seeding Rate: approx. 143,000 s/A
Soil Conditions @ Planting: Ideal
Previous Crop: Wheat
Harvest Date: 12/5/2019
Harvest Area: 2700 ft²

FIELD INFORMATION

Soil Type: Cisne silt loam (100%)
pH: 5.8
OM%: 3.65
P (lbs/ac): 88
K (lbs/ac): 293
Ca (lbs/ac): 2765
Mg (lbs/ac): 98
S (lbs/ac): 25
CEC: 9.29

Double-Crop Soybean Maturity Trial

TREATMENTS

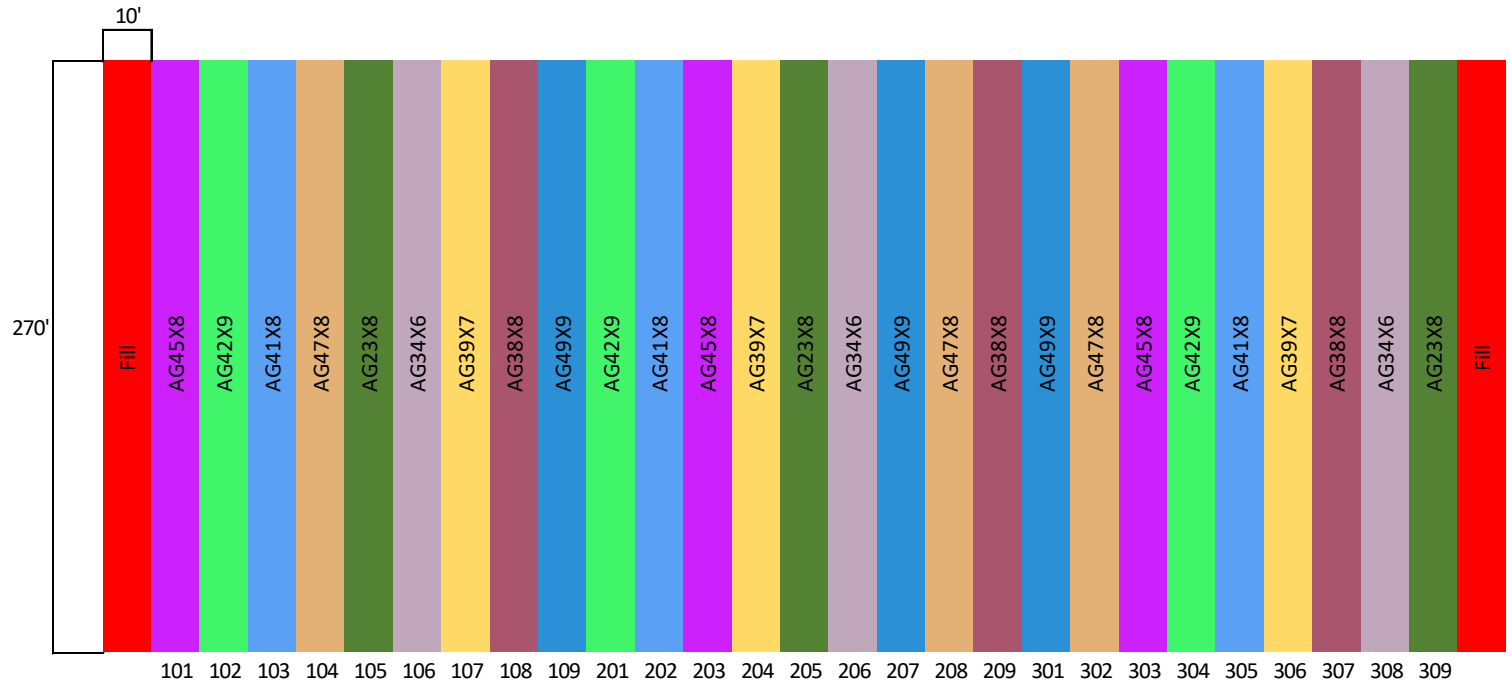
Variety	Relative Maturity	Plot Numbers		
AG49X9	4.9	109	207	301
AG47X8	4.7	104	208	302
AG45X8	4.5	101	203	303
AG42X9	4.2	102	201	304
AG41X8	4.1	103	202	305
AG39X7	3.9	107	204	306
AG38X8	3.8	108	209	307
AG34X6	3.4	106	206	308
AG23X8	2.3	105	205	309

PEST MANAGEMENT

Date	Application Timing	Product	Rate
7/8/2019	Pre-Plant Burndown	Roundup PowerMax	40 oz/ac
		Boundary 6.5 EC	44 oz/ac
		Sharpen	1 oz/ac
		AMS (21-0-0-24S)	17 lbs/100 gal
		MSO	1% v/v

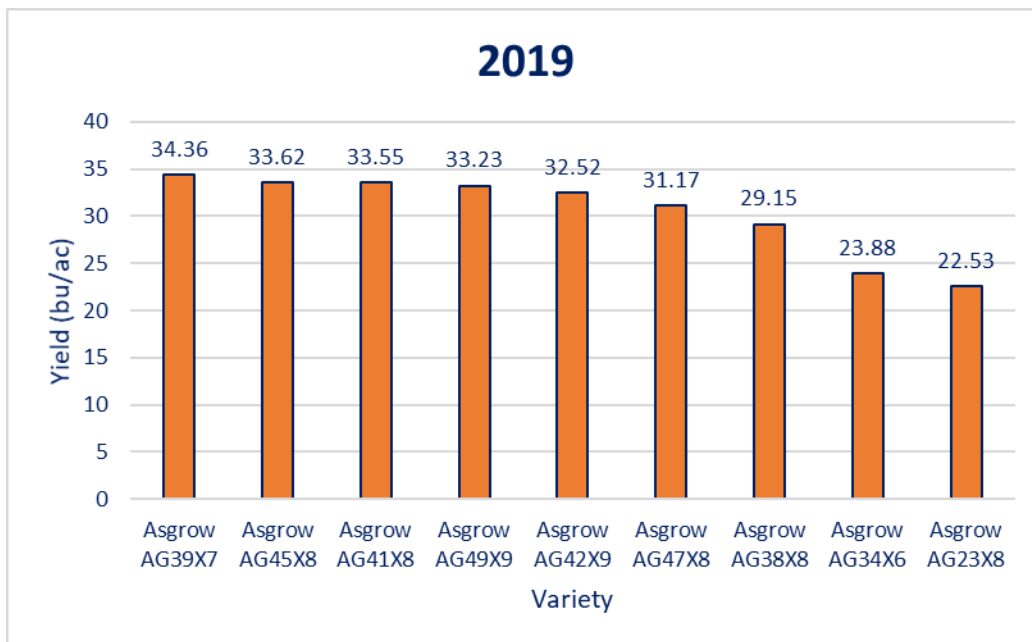
SOIL FERTILITY

Date	Application Timing	Product	Rate
------	--------------------	---------	------



2019

VARIETY	MATURITY	YIELD (13%)	MST%
Asgrow AG39X7	3.9	34.36 A	16.2 A
Asgrow AG45X8	4.5	33.62 A	17.2 A
Asgrow AG41X8	4.1	33.55 A	15.6 A
Asgrow AG49X9	4.9	33.23 A	16.5 A
Asgrow AG42X9	4.2	32.52 A	15.6 A
Asgrow AG47X8	4.7	31.17 A	16.4 A
Asgrow AG38X8	3.8	29.15 AB	16.8 A
Asgrow AG34X6	3.4	23.88 B	16.4 A
Asgrow AG23X8	2.3	22.53 B	16.4 A



2017

VARIETY	MATURITY	YIELD (13%)	MST%
Stone 2RX4527-SR	4.5	48.16 A	12.3 A
Stone 2RX4927-SR	4.9	47.73 A	13.3 A
Stone 2RS4116	4.1	45.45 AB	11.6 A
Stone 2RX2347-SR	2.3	43.82 AB	12.0 A
Stone 2RX4716-SR	4.7	42.41 AB	11.7 A
Stone 2RX3426	3.4	39.46 AB	12.4 A
Asgrow AG39X7	3.9	39.43 AB	12.1 A
Stone 2RX3816-SR	3.8	38.03 B	12.8 A



COMBINED

MATURITY	YIELD (13%)	MST%
4.5	41.01 A	14.7 A
4.9	40.60 AB	15.0 A
4.1	39.43 ABC	13.6 A
4.7	36.67 ABCD	14.0 A
3.9	36.34 ABCD	14.1 A
2.3	33.78 BCD	14.2 A
3.8	33.31 CD	14.8 A
3.4	31.87 D	14.4 A



Drilled Soybean Population Trial

Location: EDC 300

Investigators: Talon Becker, Nathan Johanning, & Marc Lamczyk

Plot Size: 10ft x 270ft

Reps: 4

CROP INFORMATION

Cover Crop: Cereal Rye (70 lbs/A; intermediate stand)

Crop: Soybean

Variety/Hybrid: AG32X8

Seed Treatment: ELITE-FINB w/ B-200 SAT Coating

Planting Date: 6/3/2019

Planting Method: No-till Drill - 8" rows / 3/4" depth

Seeding Rate: *See Treatment List*

Soil Conditions (planting): Slightly wet | Planted into green cereal rye

Previous Crop: Corn

Harvest Date: 10/16/2019

Harvest Area: 2700 ft²

FIELD INFORMATION

Soil Type: Cisne silt loam (88%); Hoyleton Silt Loam (12%)

pH: 5.8

OM%: 1.53

P (lbs/ac): 89

K (lbs/ac): 302

Ca (lbs/ac): 2923

Mg (lbs/ac): 121

S (lbs/ac): 24

CEC: 9.79

Drilled Soybean Population Trial

TREATMENTS

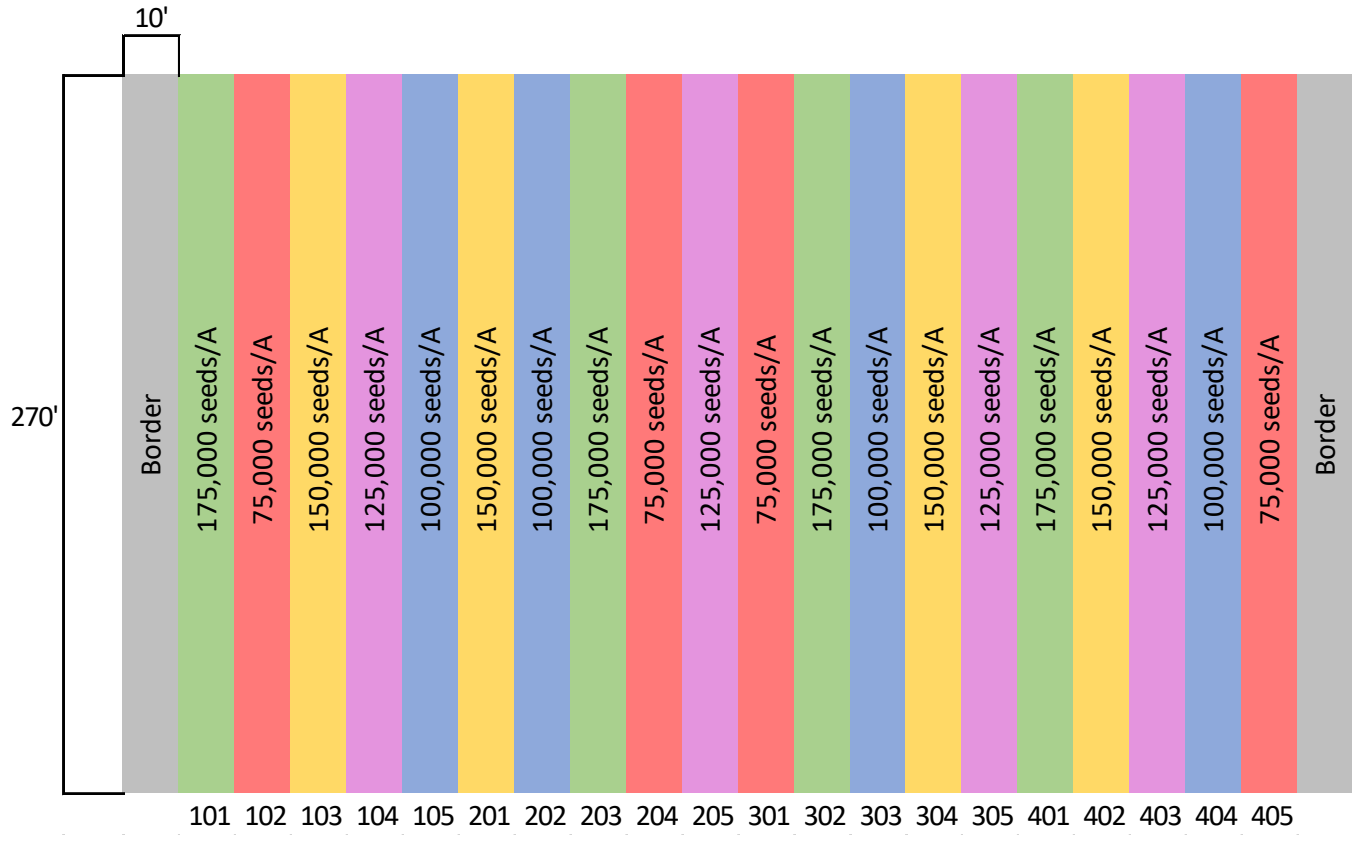
Treatment #	Treatment	Plot Numbers			
1	75,000 s/A	102	204	301	405
2	100,000 s/A	105	202	303	404
3	125,000 s/A	104	205	305	403
4	150,000 s/A	103	201	304	402
5	175,000 s/A	101	203	302	401

PEST MANAGEMENT

Date	Application Timing	Product(s)	Rate
6/4/19	Pre-Emergence	Gramoxone	64 oz/ac
		Authority First	6 oz/ac
		COC	1% v/v
7/10/19	Post-Emergence	Cobra	12.5 oz/ac
		Roundup PowerMax	40 oz/ac
		AMS (21-0-0-24S)	17 lbs/100 gal
		MSO	1% v/v

SOIL FERTILITY

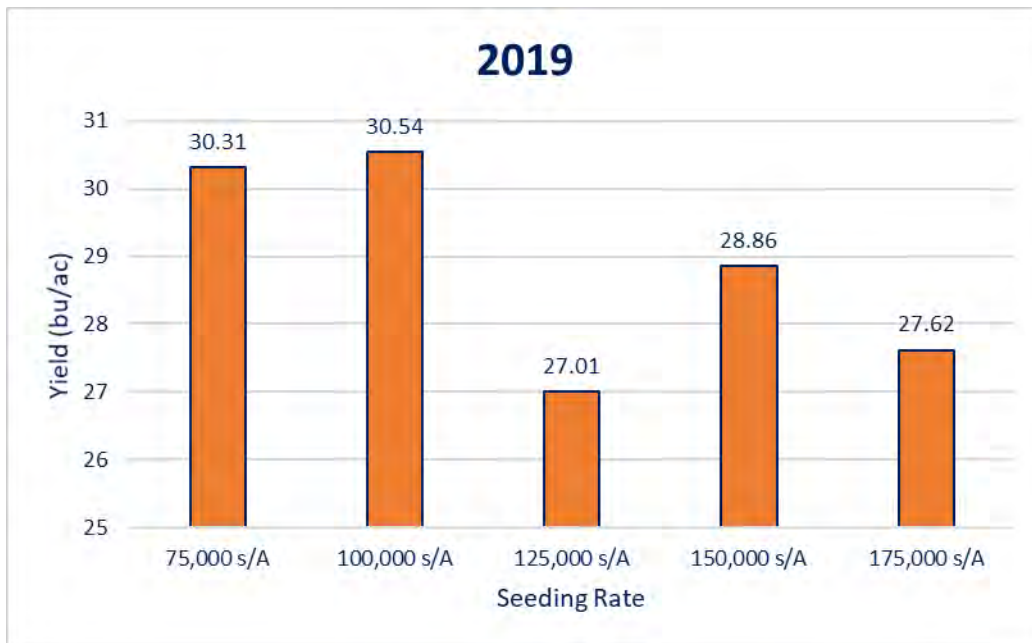
Date	Application Timing	Product(s)	Rate
5/28/19	Pre-Plant	KCI (0-0-60)	120 lbs K ₂ O/ac



2019

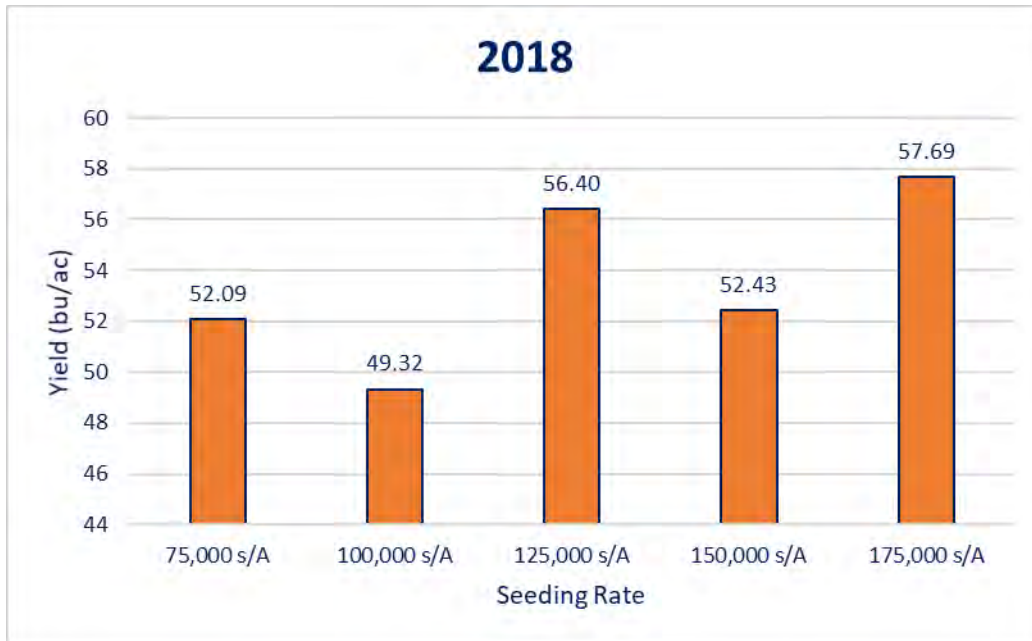
PLANTED POP.	EST. POP.	YIELD (13%)	MST%
75,000 s/A	103,150 A	30.31 A	13.2 A
100,000 s/A	119,100 A	30.54 A	16.0 A
125,000 s/A	99,400 A	27.01 A	14.9 A
150,000 s/A	98,450 A	28.86 A	16.0 A
175,000 s/A	111,600 A	27.62 A	13.9 A

* Conducted two stand counts per plot instead of four, as was done in 2018, due to time constraints. It appears four may be necessary for an accurate population estimate



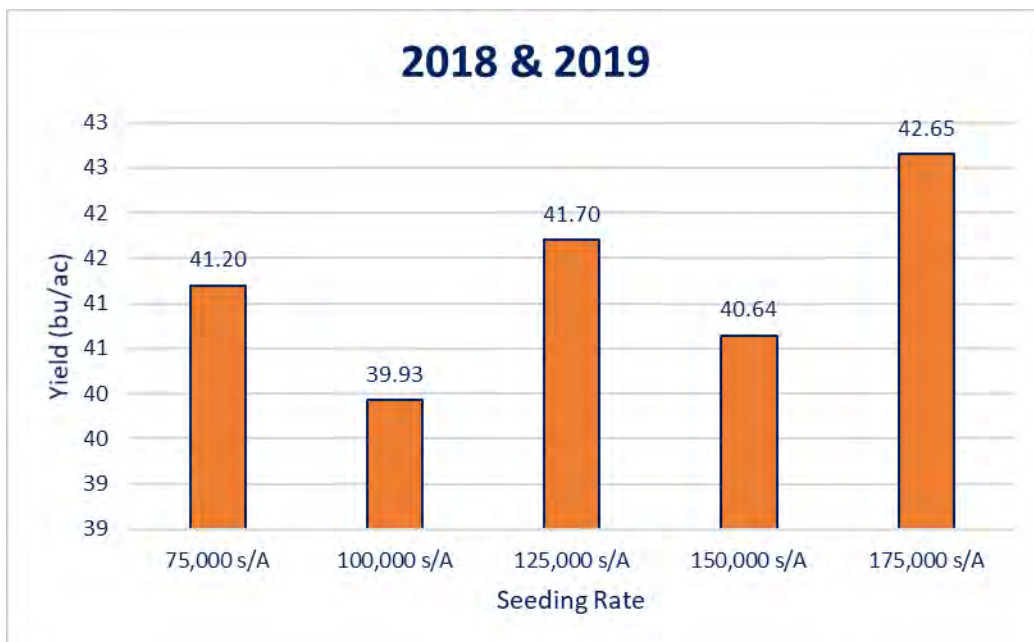
2018

PLANTED POP.	EST. POP.	YIELD (13%)	MST%
75,000 s/A	55,000 C	52.09 A	12.1 A
100,000 s/A	85,750 B	49.32 A	12.5 A
125,000 s/A	102,750 B	56.40 A	12.2 A
150,000 s/A	101,250 B	52.43 A	12.2 A
175,000 s/A	122,500 A	57.69 A	12.4 A



COMBINED

PLANTED POP.	EST. POP.	YIELD (13%)	MST%
75,000 s/A	79,100 A	41.20 A	12.6 A
100,000 s/A	102,400 A	39.93 A	14.2 A
125,000 s/A	101,100 A	41.70 A	13.6 A
150,000 s/A	99,850 A	40.64 A	14.1 A
175,000 s/A	117,050 A	42.65 A	13.2 A



Nitrogen Rate Trial for No-Till Corn

Location: EDC 400W
Investigators: Nathan Johannng, Talon Becker, & Marc Lamczyk
Plot Size: 10ft x 275ft
Reps: 3

CROP INFORMATION

Cover Crop: (None) Wild Barley
Crop: Corn
Variety/Hybrid: DKC62-53RIB
Seed Treatment: FALH1BQN & FALH2VBQN
Planting Date: 5/28/2019
Planting Method: No-till Planter - 30" rows/ 1" deep
Seeding Rate: 29,000 s/A
Soil Conditions (planting): Slightly wet
Previous Crop: Soybean
Harvest Date: 11/5/2019
Harvest Area: 1350 ft²

FIELD INFORMATION

Soil Type: Cisne silt loam (64%); Hoyleton Silt Loam (36%)
pH: 6.5
OM%: 1.51
P (lbs/ac): 81
K (lbs/ac): 278
Ca (lbs/ac): 3476
Mg (lbs/ac): 116
S (lbs/ac): 22
CEC: 10.72

Nitrogen Rate Trial for No-Till Corn

TREATMENTS

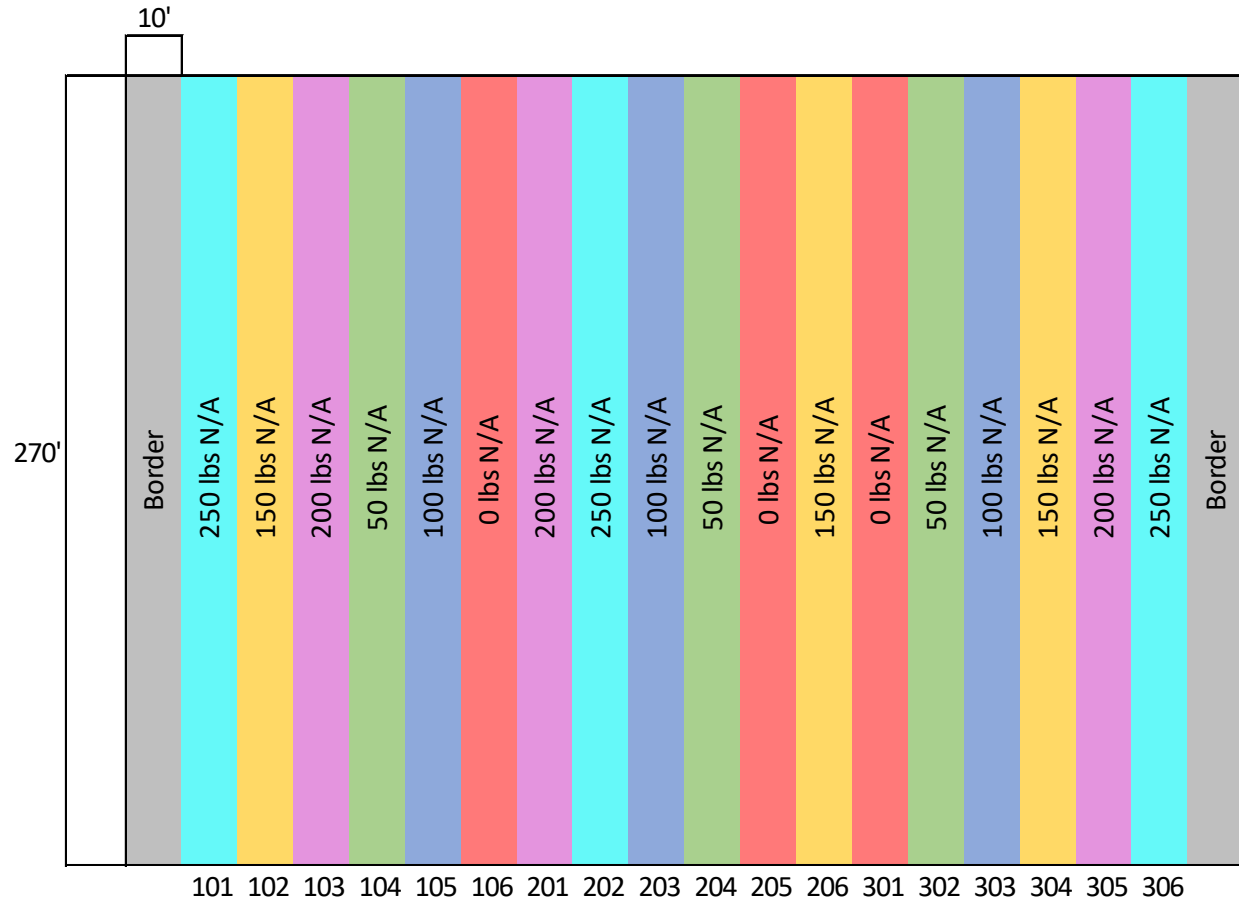
Treatment	Plot Numbers		
0 lbs N/ac	106	205	301
50 lbs N/ac	104	204	302
100 lbs N/ac	105	203	303
150 lbs N/ac	102	206	304
200 lbs N/ac	103	201	305
250 lbs N/ac	101	202	306

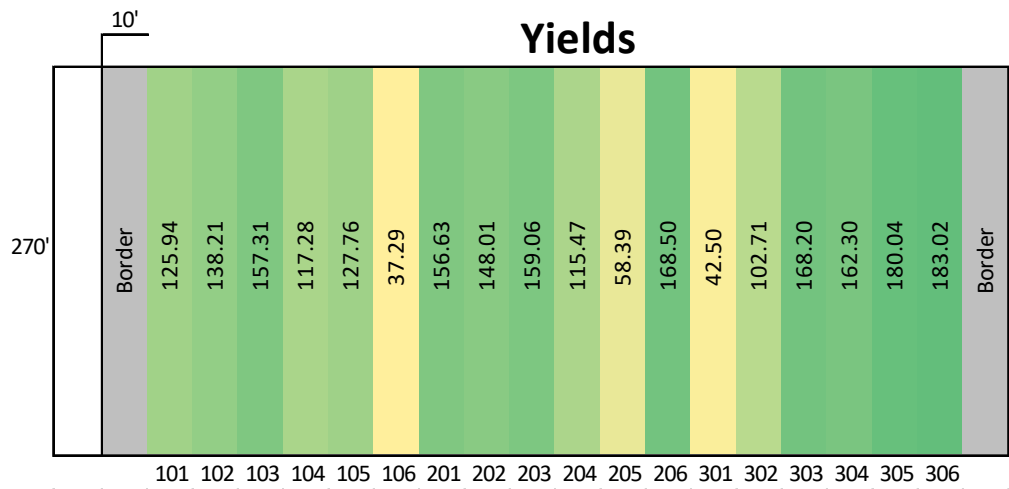
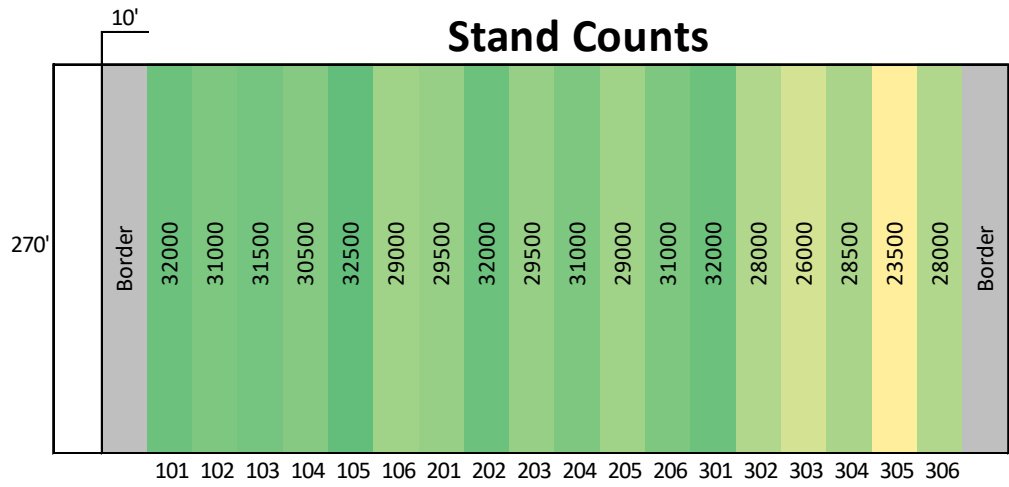
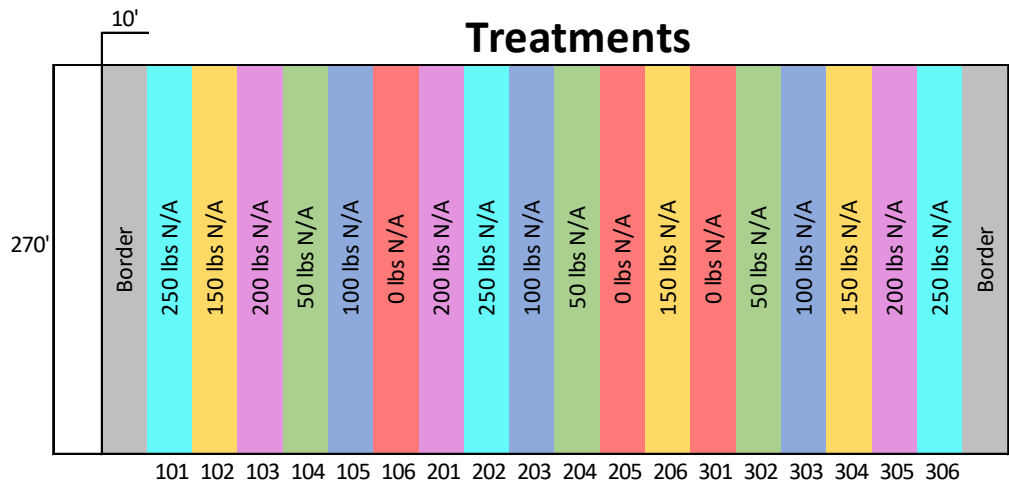
PEST MANAGEMENT

Date	Application Timing	Product(s)	Rate
5/20/2019	Pre-Plant Burndown	Roundup PowerMAX	40 oz/ac
		XtendiMax	22 oz/ac
6/14/2019	Post-Emergence	Roundup PowerMAX	32 oz/ac
		Acuron	80 oz/ac
		Aatrex 4L	32 oz/ac
		AMS (21-0-0-24S)	17 lbs/100 gal
		NIS	0.25% v/v

SOIL FERTILITY

Date	Application Timing	Product(s)	Rate
5/28/19	Pre-Plant	KCI (0-0-60)	120 lbs K ₂ O/ac
6/14/2019	V4-5	UAN 32%	See Treatment List





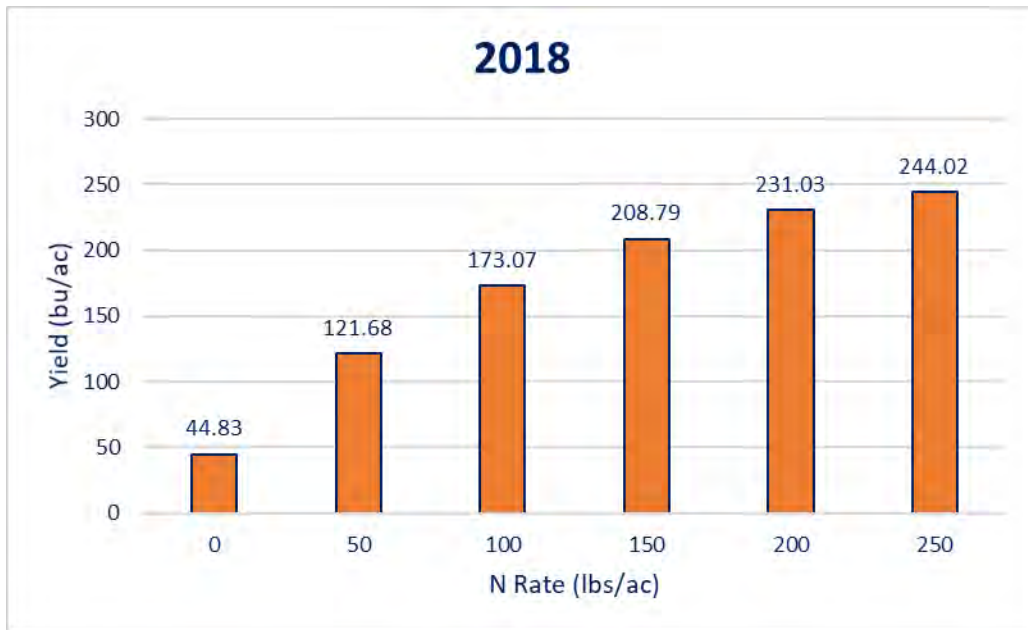
2019

TREATMENT	EST. POP.	YIELD (15.5%)	MST%
0 lbs N/ac	30000 A	46.06 C	16.2 B
50 lbs N/ac	29850 A	111.82 B	16.3 AB
100 lbs N/ac	29350 A	151.67 AB	16.6 AB
150 lbs N/ac	30150 A	156.34 A	16.4 AB
200 lbs N/ac	28150 A	164.66 A	16.6 AB
250 lbs N/ac	30650 A	152.32 AB	16.7 A



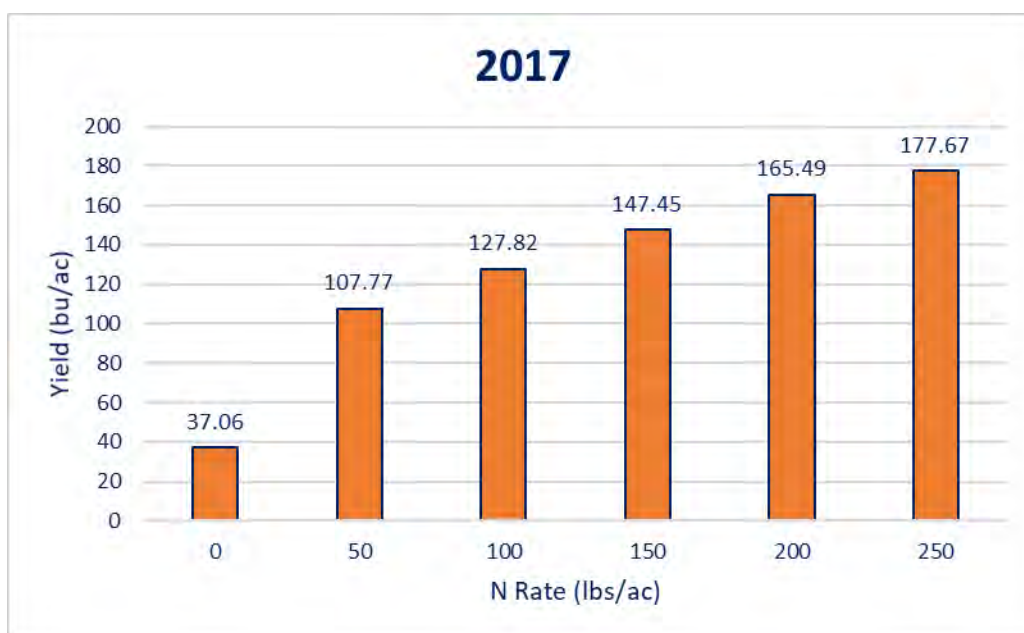
2018

TREATMENT	YIELD (15.5%)	MST%
0 lbs N/ac	44.83 A	15.4 B
50 lbs N/ac	121.68 AB	15.2 B
100 lbs N/ac	173.07 B	15.4 B
150 lbs N/ac	208.79 C	15.9 AB
200 lbs N/ac	231.03 D	15.7 AB
250 lbs N/ac	244.02 E	16.4 A



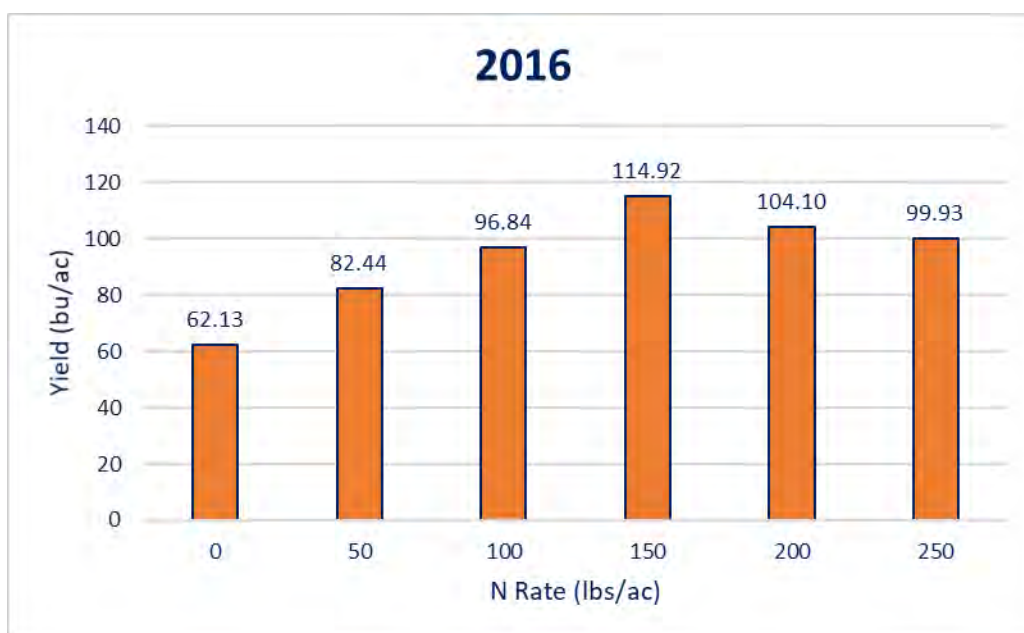
2017

TREATMENT	YIELD (15.5%)	MST%
0 lbs N/ac	37.06 E	15.7 B
50 lbs N/ac	107.77 D	15.7 B
100 lbs N/ac	127.82 CD	15.8 B
150 lbs N/ac	147.45 BC	16.2 AB
200 lbs N/ac	165.49 AB	17.0 A
250 lbs N/ac	177.67 A	16.8 A



2016

TREATMENT	YIELD (15.5%)	MST%
0 lbs N/ac	62.13 C	17.0 A
50 lbs N/ac	82.44 B	17.0 A
100 lbs N/ac	96.84 AB	16.8 A
150 lbs N/ac	114.92 A	16.7 A
200 lbs N/ac	104.10 A	17.0 A
250 lbs N/ac	99.93 AB	16.5 A



Early N Management for No-till Corn

Location: EDC 300E

Investigators: Nathan Johannng, Talon Becker, & Marc Lamczyk

Plot Size: 10 ft x 135 ft

Reps: 4

CROP INFORMATION

Cover Crop: Volunteer wild barley

Crop: Corn

Variety/Hybrid: DKC62-53RIB

Seed Treatment: FALH1BQN & FALH2VBQN

Planting Date: 5/28/2019

Planting Method: No-till Planter - 30" rows/ 1" deep

Seeding Rate: 29,000 s/A

Soil Conditions (planting): Slightly wet

Previous Crop: Soybean

Harvest Date: 11/5/2019

Harvest Area: 650 ft²

FIELD INFORMATION

Soil Type: Cisne silt loam (64%); Hoyleton Silt Loam (36%)

pH: 6.5

OM%: 1.51

P (lbs/ac): 81

K (lbs/ac): 278

Ca (lbs/ac): 3476

Mg (lbs/ac): 116

S (lbs/ac): 22

CEC: 10.72

Early N Management for No-till Corn

TREATMENTS

Treatment	Rate	Plot Numbers			
No Starter Fertilizer		101	202	301	405
Urea	50 lbs N/ac	102	205	302	404
AMS (21-0-0-24S)	50 lbs N/ac	103	204	305	403
UAN 32% Sprayed OTP	50 lbs N/ac	104	203	304	402
UAN 32% Banded Beside Row	50 lbs N/ac	105	201	303	401

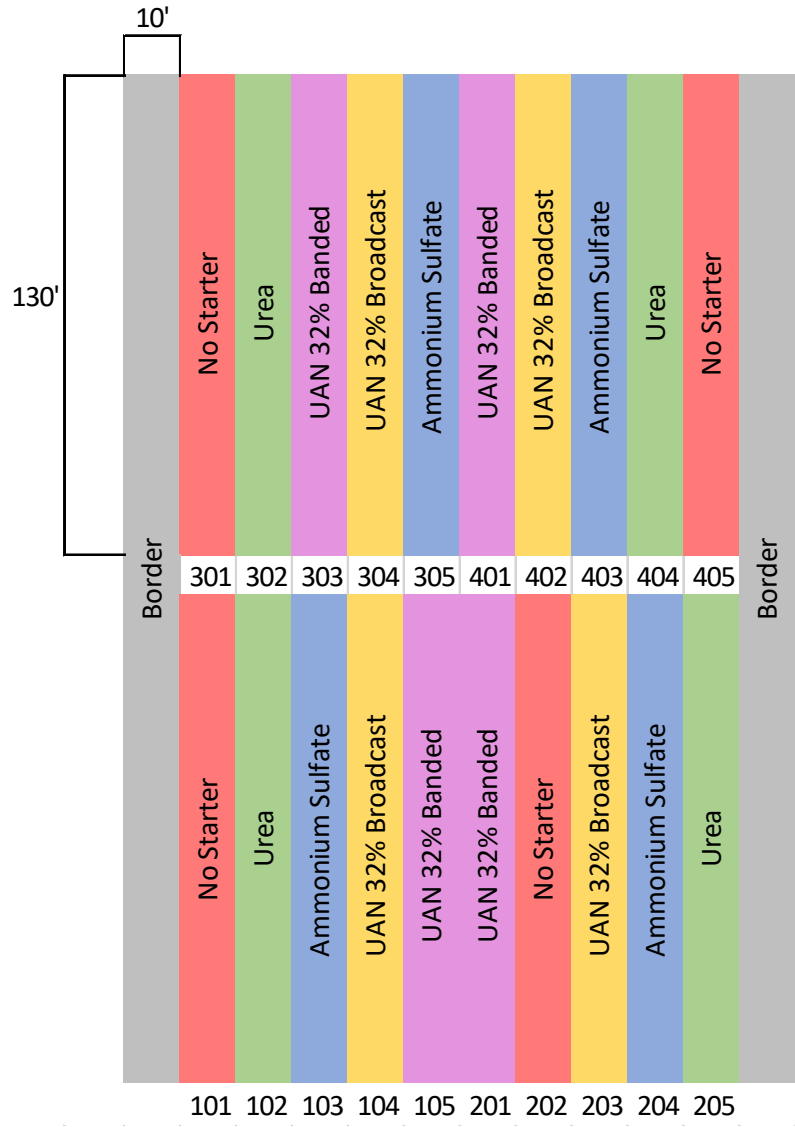
PEST MANAGEMENT

Date	Application Timing	Product(s)	Rate
5/20/19	Pre-Plant Burndown	Roundup PowerMAX	40 oz/ac
		XtendiMax	22 oz/ac
6/14/2019	Post-Emergence	Roundup PowerMAX	32 oz/ac
		Acuron	80 oz/ac
		Aatrex 4L	32 oz/ac
		AMS (21-0-0-24S)	17 lbs/100 gal
		NIS	0.25% v/v

SOIL FERTILITY

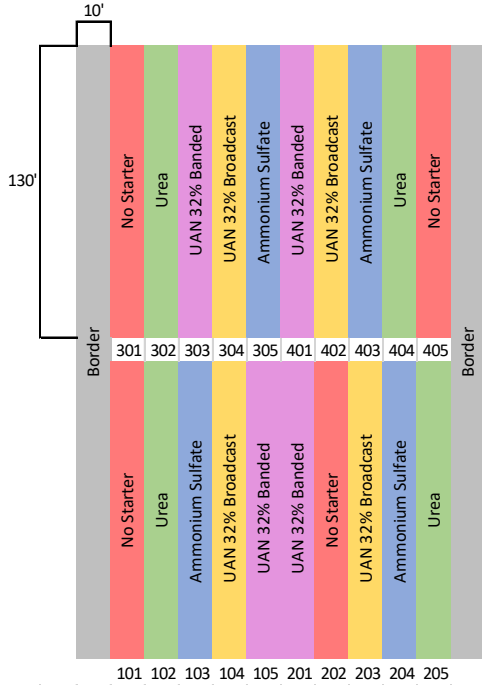
Date	Application Timing	Product(s)	Rate
5/28/19	Pre-Plant	KCI (0-0-60)	120 lbs K ₂ O/ac
6/5/2019	VE	See Treatment List	
6/14/2019	V4-5	UAN 32%	180 lbs N/ac*

* The total N applied per plot was 180 lbs/A. Plots that received starter only received 130 lbs N/A at the sidedress application.

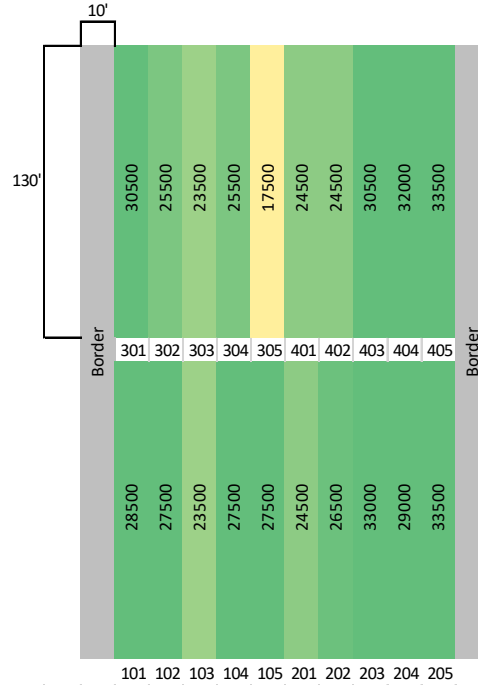




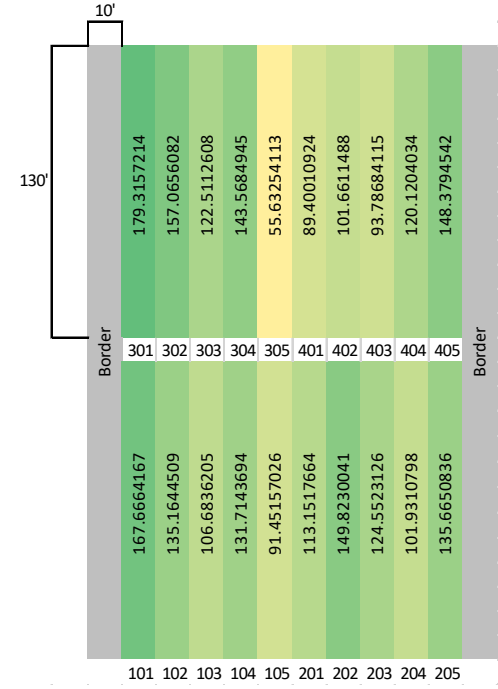
Treatments



Stand Counts



Yields



2019

TREATMENT	EST. POP.	YIELD (15.5%)	MST%
No Starter	29750 A	161.30 A	16.6 A
AMS (24-0-0-21S)	25125 A	89.51 C	16.7 A
Urea (46-0-0)	29625 A	137.00 AB	16.3 A
UAN 32% Dribble	25000 A	104.13 BC	16.5 A
UAN 32% OTT	27625 A	125.37 ABC	16.5 A



2019

TREATMENT	EST. POP.	YIELD (15.5%)	MST%
No Starter	29750 A	161.30 A	16.6 A
AMS (24-0-0-21S)	25125 A	107.02 C	16.7 A
Urea (46-0-0)	29625 A	137.00 B	16.3 A
UAN 32% Dribble	25000 A	104.13 C	16.5 A
UAN 32% OTT	27625 A	125.37 B	16.5 A

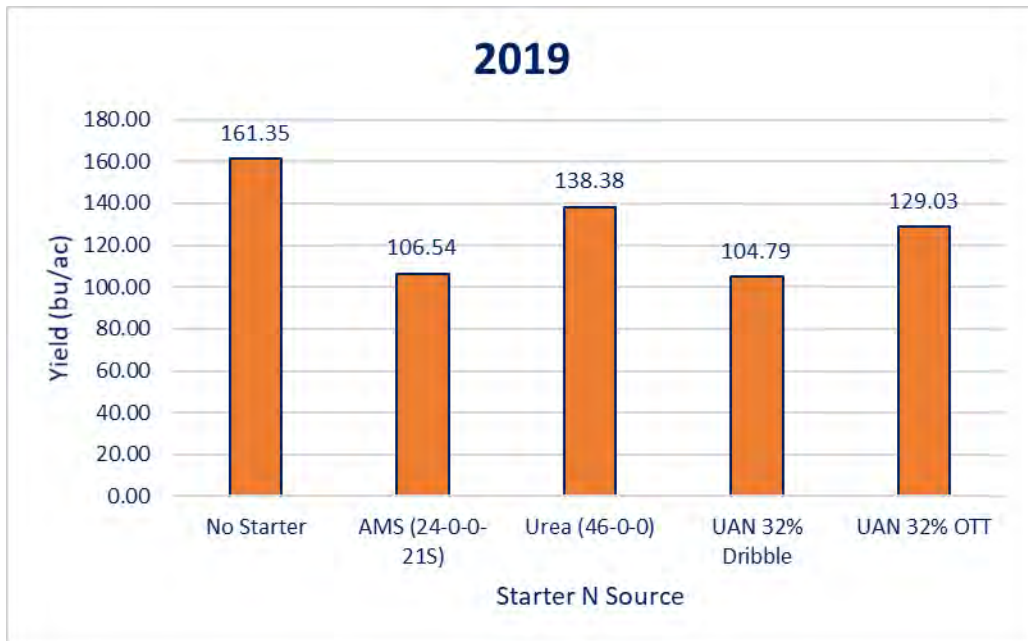
*Plot 305 Removed



2019

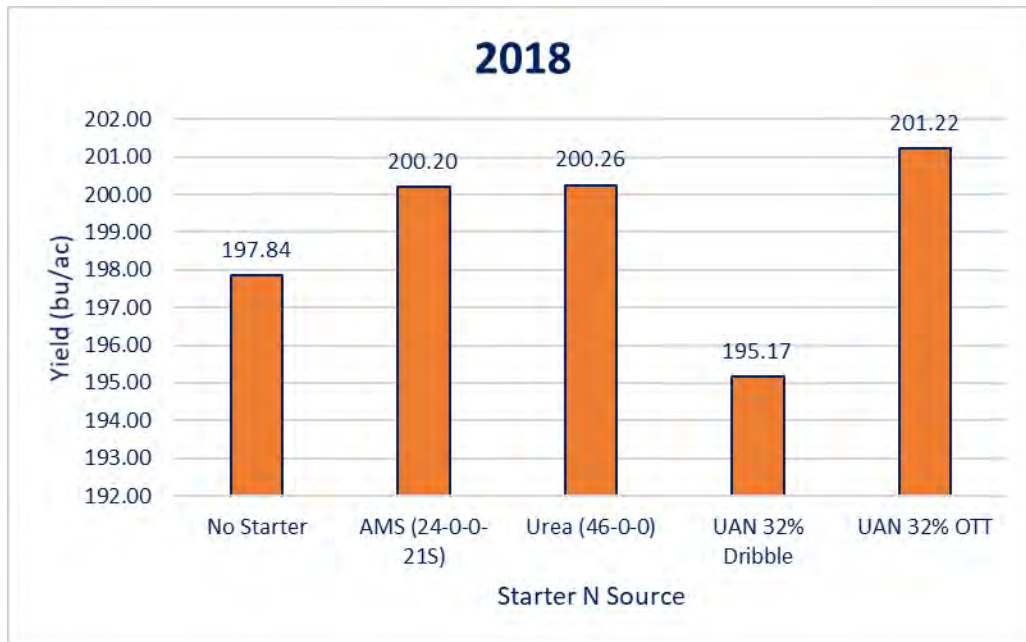
TREATMENT	EST. POP.	YIELD (15.5%)	MST%
No Starter	29750 A	161.35 A	16.6 A
AMS (24-0-0-21S)	25125 A	106.54 CD	16.7 A
Urea (46-0-0)	29625 A	138.38 AB	16.3 A
UAN 32% Dribble	25000 A	104.79 D	16.5 A
UAN 32% OTT	27625 A	129.03 BC	16.5 A

*Lowest Yielding Plot/Treatment Removed



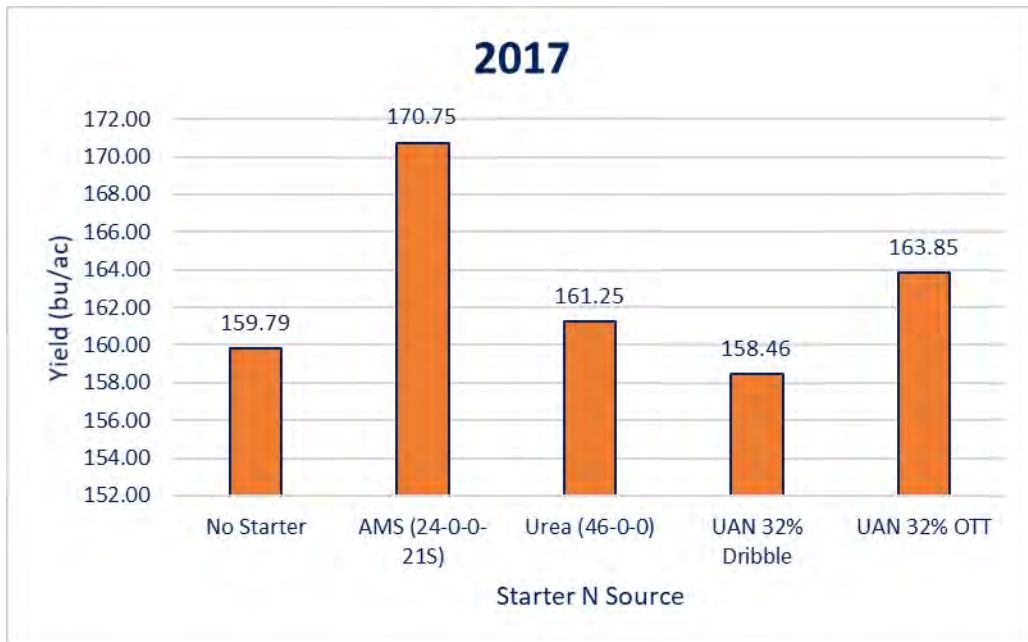
2018

TREATMENT	YIELD (15.5%)	MST%
No Starter	197.84 A	16.1 A
AMS (24-0-0-21S)	200.20 A	16.2 A
Urea (46-0-0)	200.26 A	16.3 A
UAN 32% Dribble	195.17 A	15.8 A
UAN 32% OTT	201.22 A	16.1 A



2017

TREATMENT	YIELD (15.5%)	MST%
No Starter	159.79 A	15.9 A
AMS (24-0-0-21S)	170.75 A	15.6 A
Urea (46-0-0)	161.25 A	16.0 A
UAN 32% Dribble	158.46 A	15.8 A
UAN 32% OTT	163.85 A	15.8 A



Spring Oat Forage Trial

Location: EDC 500

Investigators: Talon Becker, Nathan Johannig, & Marc Lamczyk

Plot Size: 10ft x 180ft

Reps: 3

CROP INFORMATION

Cover Crop: None (winter annuals)

Crop: Oats & Oat/Forage Mix

Variety/Hybrid: Multiple

Planting Date: 6/4/2019

Planting Method: No-till Drill - 8" rows / 3/4" depth

Seeding Rate: 3 bu.(96lbs)/A solo (D1-100) | 1.5 bu/A mix (D1-50)

Soil Conditions (planting): Slightly wet

Previous Crop: Forage

Harvest Date: 8/12/2019

Harvest Area: 38.5"x18.5" = 712.25 in² = 4.946 ft² = 0.000135 ac

FIELD INFORMATION

Soil Type: Cisne silt loam (78%); Hoyleton Silt Loam (22%)

pH: 5.8

OM%: 1.46

P (lbs/ac): 59

K (lbs/ac): 271

Ca (lbs/ac): 3163

Mg (lbs/ac): 152

S (lbs/ac): 19

CEC: 10.48

Comments:

Mix w/ peas in approx. 3:1 ratio oat:peas by seed number - attempting 4 pea plants for 15-20 oat plants

Oats planted into 2nd year alfalfa. Alfalfa stand was spotty, but areas with good stand for sampling existed at planting

Spring Oat Forage Trial

TREATMENTS

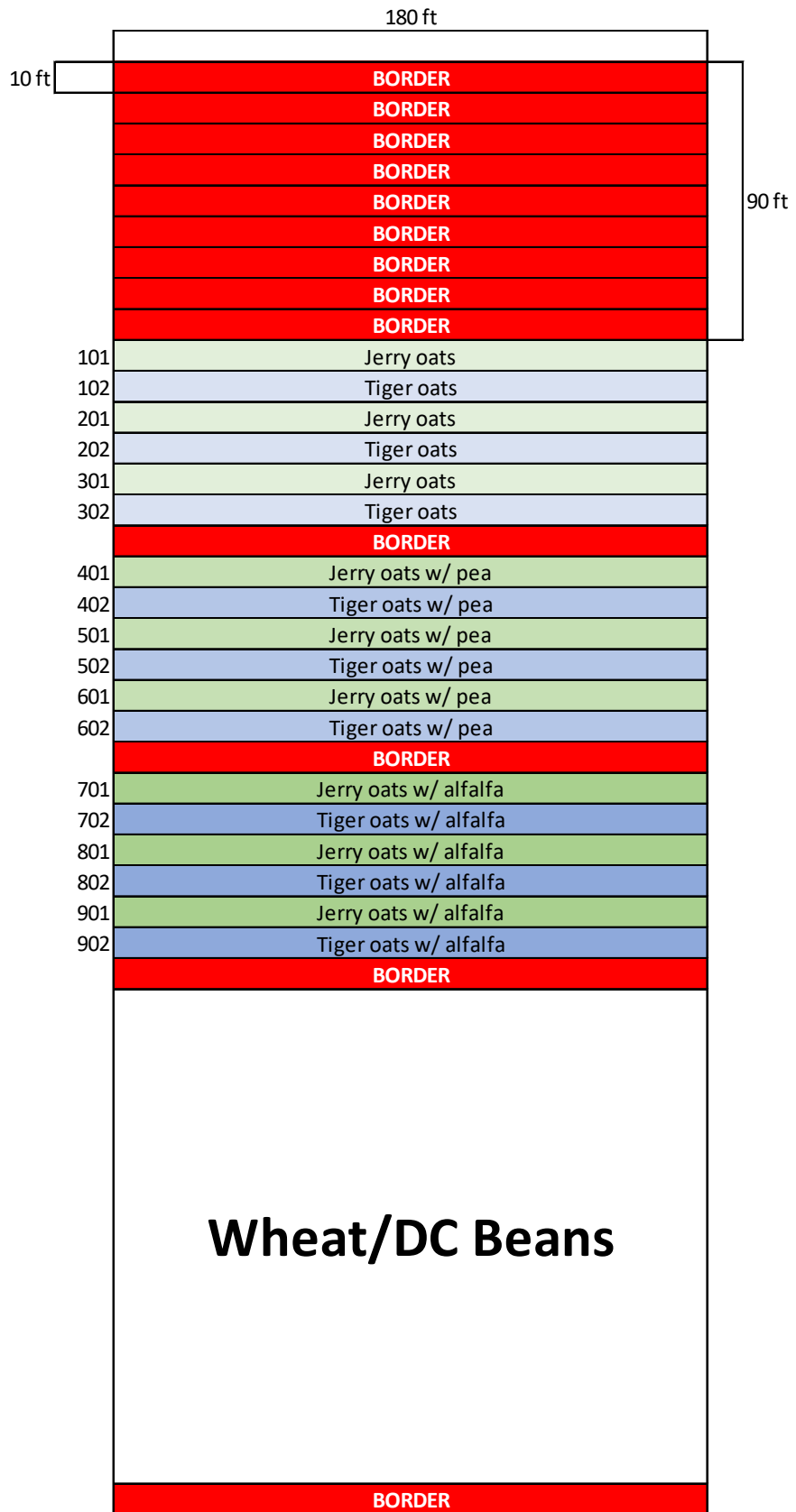
Treatment	Plot Numbers		
Jerry Oats	101	201	301
Tiger Oats	102	202	302
Jerry Oats & Field Peas	401	501	601
Tiger Oats & Field Peas	402	502	602
Jerry Oats & Alfalfa	701	801	901
Tiger Oats & Alfalfa	702	802	902

PEST MANAGEMENT

Date	Application Timing	Product(s)	Rate
5/7/2019	Alfalfa Green-up	Warrior	3 oz/ac
5/30/2019	Pre-Plant Burndown (Not in alfalfa)	Roundup PowerMAX 2,4-D LV4 AMS (21-0-0-24S)	40 oz/ac 16 oz/ac 17 lbs/100 gal

SOIL FERTILITY

Date	Application Timing	Product(s)	Rate
5/28/19	Pre-Plant	KCl (0-0-60)	120 lbs K ₂ O/ac
6/5/2019	Pre-Emergence	Urea	50 lbs N/ac



2019

TREATMENT	YIELD (lb DW/ac)
Jerry oats w/ alfalfa	2965.8 A
Tiger oats w/ alfalfa	2910.9 A
Tiger oats w/ pea	1963.8 AB
Jerry oats w/ pea	1770.0 AB
Jerry oats	1470.1 B
Tiger oats	1404.3 B

2019

TREATMENT	YIELD (lb DW/ac)
Tiger oats w/ pea	1963.8 A
Jerry oats w/ pea	1770.0 A
Jerry oats	1470.1 A
Tiger oats	1404.3 A

* Oats w/ alfalfa removed due to poor alfalfa stand and heavy weed contamination

2018

TREATMENT	YIELD (lb DW/ac)
Forage Plus oats w/ pea	2053.2 A
Forage Plus oats w/ alfalfa	1682.5 AB
Forage Plus oats	1625.5 AB
Jerry oats	1625.5 AB
Jerry oats w/ pea	1525.6 AB
Jerry oats w/ alfalfa	1183.4 B

YEAR	SPECIES	YIELD (lb DW/ac)
2018		1707.4 A
2019		1652.0 A
	Oats	1531.3 B
	Oats & Peas	1828.2 A
2018	Oats	1625.5 A
	Oats & Peas	1789.4 A
2019	Oats	1437.2 A
	Oats & Peas	1866.9 A

Phosphorus Run-off Trial

Location: EDC 700

Investigators: Talon Becker, Nathan Johannig, & Marc Lamczyk

Plot Size: 20 ft x 150 ft

Reps: 3

CROP INFORMATION

Cover Crop: *See Treatment List*

Crop: Soybeans

Variety/Hybrid: AG32X8

Seed Treatment: ELITE-FINB w/ B-200 SAT Coating

Planting Date: 6/4/2019

Planting Method: No-till Planter - 30" rows / 1" depth

Seeding Rate: approx. 143,000 s/ac

Soil Conditions (planting): Slightly wet | Planted into green cereal rye

Previous Crop: Corn

Harvest Date: 10/15/2019

Harvest Area: 3000 ft²

FIELD INFORMATION

Soil Type: Hoyleton Silt Loam (76%); Bluford Silt Loam (24%)

pH: 6.4

OM%: 1.71

P (lbs/ac): 95

K (lbs/ac): 262

Ca (lbs/ac): 4369

Mg (lbs/ac): 304

S (lbs/ac): 22

CEC: 14.12

Phosphorus Run-off Trial

TREATMENTS

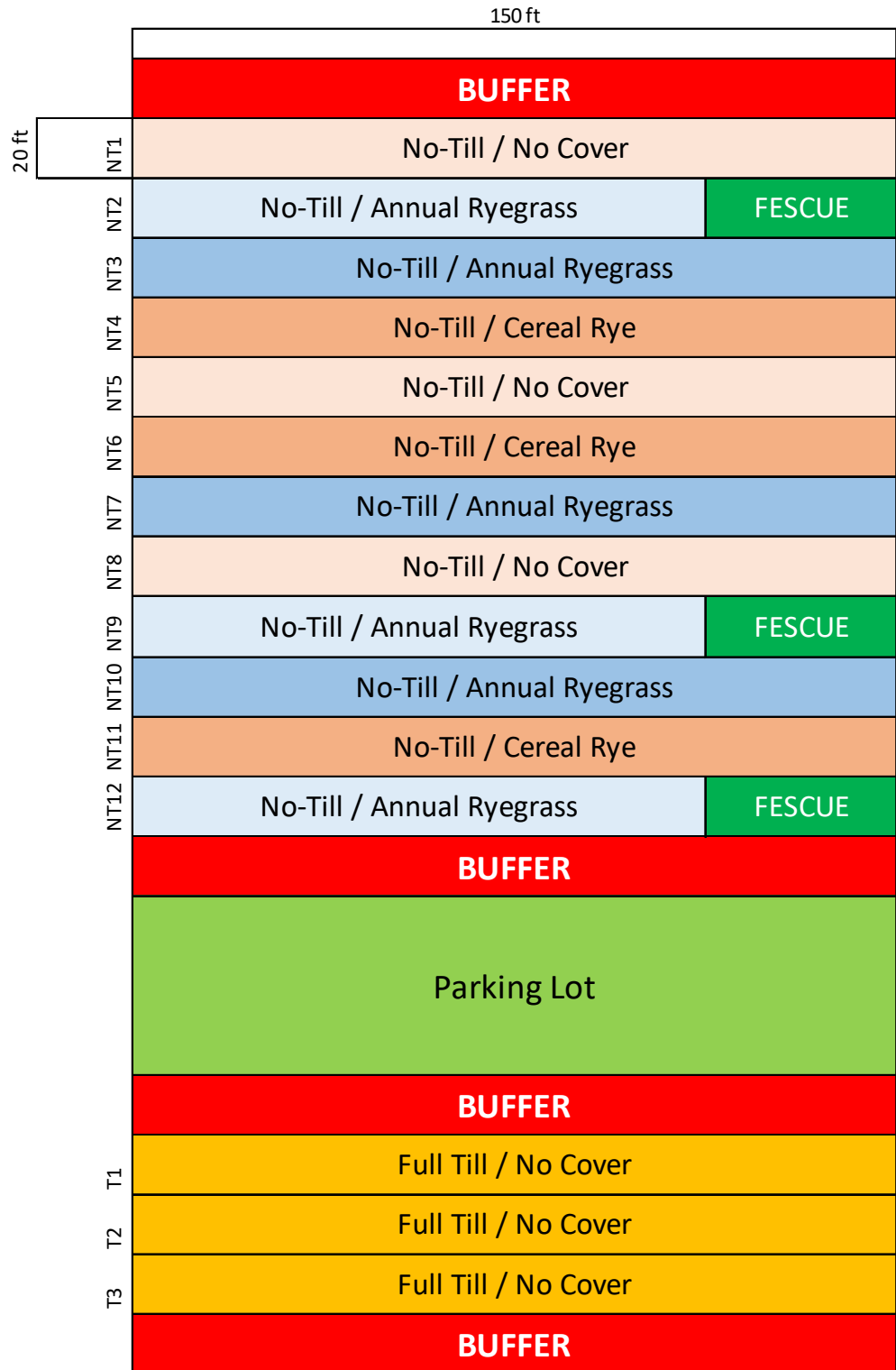
Treatment	Plot Numbers		
No-till/No Cover	NT1	NT5	NT8
No-till/Cereal Rye	NT4	NT6	NT11
No-till/Annual Ryegrass	NT3	NT7	NT10
No-till/Annual Ryegrass + Fescue Buffer	NT2	NT9	NT12
Full till(disc)/No Cover	T1	T2	T3

PEST MANAGEMENT

Date	Application Timing	Product(s)	Rate
5/28/19	Pre-Plant Burndown	Roundup PowerMAX	40 oz/ac
		2,4-D LV4	16 oz/ac
		AMS (21-0-0-24S)	17 lbs/100 gal
6/4/19	Pre-Emergence	Gramoxone	64 oz/ac
		Authority First	6 oz/ac
		COC	1% v/v
7/10/19	Post-Emergence	Flexstar	24 oz/ac
		Roundup PowerMAX	40 oz/ac
		AMS (21-0-0-24S)	17 lbs/100 gal
		MSO	1% v/v

SOIL FERTILITY

Date	Application Timing	Product(s)	Rate
5/28/19	Pre-Plant	KCl (0-0-60)	120 lbs K ₂ O/ac



TREATMENT	EST. POP.	YIELD (15.5%)	MST%
No-till/No Cover	88350 A	44.90 A	13.8 A
No-till/Cereal Rye	87500 A	44.19 A	13.0 A
No-till/Annual Ryegrass	89850 A	44.61 A	13.5 A
No-till/Annual Ryegrass + Fescue Buffer	89150 A	44.90 A	13.5 A
Full till(disc)/No Cover	100000 A	35.96 B	14.2 A

