

FIELD EXPERIMENT HISTORY

Title: Corn - Soybean - Wheat Response to Rotation: Nrate
Experiment: 09CSW **Trial ID:** 5950 **Year:** 2015
Personnel: Joe Lauer, Thierno Diallo, Kent Kohn,
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS:335 **Previous Crop:** See factors **Soil Type:** Plano Silt Loam
Soil Test Date: 11/1 /15 **pH:** 6.3 **OM (%)** 3.1 **P (ppm)** 15 **K (ppm)** 124

Plot Management

<u>Tillage Operations:</u>	<u>No-Till</u>	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:	Preplant :	N/A	N/A	N/A
	Starter :	N/A	N/A	N/A
	Post plant :	28-0-0	See N rates	6 /16/15
	Manure:	N/A	N/A	N/A
Herbicide:	C,S:Medal II 24 fl oz/a, RoundUp PowerMax 22 oz/a Radar LV16 oz/a 4/28/15; Durango DMA 22 oz/a 6/17/15 W: Huskie 15 oz/a; Powerflex 2 oz/a 5/14/15		Insecticide:	N/A
			Hybrid:	C: Pioneer 9917AMX S: Pioneer P16T04R W: Pioneer 25R40
Irrigation:	None			
Planting Date:	C: 5/8/15 S: 5/8/15 W:10/15/14		Row Width:	C: 30"
Target Plant Density:	Corn: 32500 Plants/A Soybean: 160000 Plants/A		Planting Depth:	C: 1.5" S,W: 1"
Harvest Date:	C: 10/23/15, CS: 9/25/15		Planting Method:	C,S: JD1700 with RTK W: JD750 No-Till Drill
Notes:	S: 10/28/15, W: 7/29/15		Harvest Method:	C:MF 8XP combine CS: NH 707 S,W: Almaco Plot combine

Experimental Design

Design: RCB split-split-block **Replications:** 3
Plot Size Seeded: MP: 60' x 60'; SP: 10' x 30' **Experiment Size:** 3.47 A
Harvest Plot Size: 5' x 26'

Factors/Treatments:

<u>Rotation: 2014</u>	<u>N rate (lb N/A)</u>	<u>Fungicide:</u>
<u>Treatments</u>		
1) CC	1) 0	1) UTC
2) SS	2) 40	2) Priaxor
3) WW	3) 80	
4) CS- C	4) 120	
5) SC- S	5) 160	
6) GS1: CSW- C	6) 200	
7) GS1: CSW- S (early)		
8) GS1: CSW- W		
9) GS2: CWS- C (early)		
10) GS2: CWS- S		
11) GS2: CWS- W		
12) Flex: CWS- C (silage)		
13) Flex: CWS- S		
14) Flex: CWS- W (straw)		

Results: Tables 1509-10 to 1509-15

**Table: 1509 - 10 . Corn, Soybean and Wheat Rotation - Corn
Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	Test weight lbs/bu	Lodged			Harvest plants plants/A	AGI \$3.44/bu \$/A
						Total %	Stalk %	Root %		
CC			148	17.9	58.5	0	0	0	31944	468
CSW			205	17.8	58.0	0	0	0	33389	648
CWS			163	25.3	53.5	0	0	0	28611	490
CS			158	17.4	58.8	0	0	0	32306	502
	0		105	18.3	57.8	0	0	0	32000	332
	40		143	19.5	57.3	0	0	0	30375	448
	80		175	19.2	56.1	0	0	0	31417	547
	120		190	19.8	57.6	0	0	0	32958	593
	160		196	20.7	57.4	0	0	0	31208	609
	200		203	20.1	56.9	0	0	0	31417	631
		Priaxor	170	19.6	57.0	0	0	0	31806	530
		UTC	167	19.6	57.5	0	0	0	31319	523
CC	0		84	15.9	59.6	0	0	0	31000	272
CC	40		115	17.6	58.3	0	0	0	32500	364
CC	80		136	17.2	58.1	0	0	0	32333	431
CC	120		181	18.9	58.9	0	0	0	32833	568
CC	160		188	19.0	58.8	0	0	0	31833	590
CC	200		186	19.1	57.4	1	0	1	31167	583
CSW	0		136	16.9	59.0	0	0	0	33500	434
CSW	40		192	17.3	59.2	1	1	0	32167	609
CSW	80		220	17.2	53.2	0	0	0	34000	698
CSW	120		230	18.1	59.3	0	0	0	33833	725
CSW	160		225	18.6	58.7	0	0	0	34167	707
CSW	200		227	18.4	58.6	0	0	0	32667	714
CWS	0		104	23.9	54.0	0	0	0	32667	316
CWS	40		134	26.2	52.8	0	0	0	24667	400
CWS	80		177	24.7	54.0	0	0	0	27833	535
CWS	120		181	24.7	53.7	0	0	0	32500	547
CWS	160		177	27.5	53.2	0	0	0	25667	526
CWS	200		203	25.0	53.2	0	0	0	28333	613
CS	0		96	16.6	58.8	0	0	0	30833	306
CS	40		132	16.8	58.9	0	0	0	32167	421
CS	80		165	17.7	59.2	0	0	0	31500	523
CS	120		168	17.4	58.6	0	0	0	32667	531
CS	160		194	17.9	58.9	0	0	0	33167	614
CS	200		195	17.9	58.6	0	0	0	33500	616
CC		Priaxor	149	18.2	58.5	0	0	0	31833	470
CC		UTC	147	17.7	58.5	0	0	0	32056	466
CSW		Priaxor	208	17.7	57.0	1	1	0	33333	659
CSW		UTC	201	17.8	59.0	0	0	0	33444	637
CWS		Priaxor	165	25.2	53.5	0	0	0	29222	495
CWS		UTC	161	25.5	53.5	0	0	0	28000	484
CS		Priaxor	157	17.4	58.8	0	0	0	32833	497
CS		UTC	160	17.4	58.8	0	0	0	31778	507

continue

Table: 1509 - 10 . Corn, Soybean and Wheat Rotation - Corn(continued) **Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	Test weight lbs/bu	Lodged			Harvest plants plants/A	AGI* \$3.44/bu \$/A
						Total %	Stalk %	Root %		
	0	Priaxor	104	18.3	57.8	0	0	0	33250	328
	0	UTC	107	18.3	57.9	0	0	0	30750	336
	40	Priaxor	147	19.6	57.0	1	1	0	30917	459
	40	UTC	140	19.4	57.6	0	0	0	29833	438
	80	Priaxor	176	19.3	54.5	0	0	0	31250	549
	80	UTC	174	19.1	57.7	0	0	0	31583	544
	120	Priaxor	193	19.8	57.8	0	0	0	32583	603
	120	UTC	187	19.8	57.5	0	0	0	33333	582
	160	Priaxor	196	20.5	57.5	0	0	0	31000	612
	160	UTC	195	21.0	57.3	0	0	0	31417	607
	200	Priaxor	202	20.1	57.1	0	0	0	31833	629
	200	UTC	203	20.1	56.8	0	0	0	31000	633
CC	0	Priaxor	82	16.1	59.8	0	0	0	31667	263
CC	0	UTC	87	15.6	59.4	0	0	0	30333	281
CC	40	Priaxor	115	17.8	58.0	0	0	0	32667	364
CC	40	UTC	115	17.4	58.5	0	0	0	32333	364
CC	80	Priaxor	133	17.3	57.8	0	0	0	32667	420
CC	80	UTC	139	17.1	58.4	0	0	0	32000	441
CC	120	Priaxor	189	19.2	58.6	0	0	0	33000	591
CC	120	UTC	173	18.5	59.1	0	0	0	32667	544
CC	160	Priaxor	198	19.1	59.2	0	0	0	32000	621
CC	160	UTC	178	18.8	58.4	0	0	0	31667	560
CC	200	Priaxor	179	19.3	57.7	1	0	1	29000	561
CC	200	UTC	192	18.9	57.1	0	0	0	33333	604
CSW	0	Priaxor	130	16.9	58.7	0	0	0	33333	414
CSW	0	UTC	142	16.8	59.2	0	0	0	33667	453
CSW	40	Priaxor	208	17.6	58.8	2	2	0	32333	661
CSW	40	UTC	175	17.1	59.6	0	0	0	32000	557
CSW	80	Priaxor	222	16.5	47.5	0	0	0	34667	704
CSW	80	UTC	219	17.8	58.9	0	0	0	33333	692
CSW	120	Priaxor	237	18.1	59.4	0	0	0	33333	749
CSW	120	UTC	222	18.2	59.2	0	0	0	34333	702
CSW	160	Priaxor	225	18.5	58.6	1	1	0	34000	707
CSW	160	UTC	224	18.6	58.7	0	0	0	34333	706
CSW	200	Priaxor	228	18.4	58.7	0	0	0	32333	718
CSW	200	UTC	225	18.4	58.5	0	0	0	33000	710
CWS	0	Priaxor	108	23.8	54.1	0	0	0	33333	325
CWS	0	UTC	101	23.9	53.8	0	0	0	32000	308
CWS	40	Priaxor	134	26.1	52.4	0	0	0	27333	401
CWS	40	UTC	133	26.2	53.2	0	0	0	22000	400
CWS	80	Priaxor	192	25.3	53.7	0	0	0	26667	578
CWS	80	UTC	163	24.0	54.3	0	0	0	29000	493
CWS	120	Priaxor	176	24.1	54.3	0	0	0	32000	534
CWS	120	UTC	187	25.3	53.1	0	0	0	33000	560
CWS	160	Priaxor	167	26.4	53.1	0	0	0	24333	498
CWS	160	UTC	187	28.7	53.3	0	0	0	27000	554
CWS	200	Priaxor	211	25.2	53.3	0	0	0	31667	635
CWS	200	UTC	196	24.9	53.1	0	0	0	25000	591

continue

Table: 1509 - 10 . Corn, Soybean and Wheat Rotation - Corn(continued) **Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	Test weight lbs/bu	Lodged			Harvest plants plants/A	AGI \$3.44/bu \$/A
						Total %	Stalk %	Root %		
CS	0	Priaxor	97	16.3	59	0	0	0	34667	309
CS	0	UTC	95	17.0	59	0	0	0	27000	303
CS	40	Priaxor	129	16.8	59	0	0	0	31333	411
CS	40	UTC	135	16.9	59	0	0	0	33000	431
CS	80	Priaxor	157	17.9	59	0	0	0	31000	496
CS	80	UTC	174	17.4	59	0	0	0	32000	551
CS	120	Priaxor	170	17.8	59	0	0	0	32000	539
CS	120	UTC	165	17.0	58	0	0	0	33333	523
CS	160	Priaxor	196	17.9	59	0	0	0	33667	621
CS	160	UTC	192	17.8	59	0	0	0	32667	607
CS	200	Priaxor	191	17.5	59	0	0	0	34333	604
CS	200	UTC	199	18.2	59	0	0	0	32667	628
Mean			169	19.6	57.2	0	0	0	31563	527
Probability(%)										
Rotation (R)			17.0	0.0	0.3	35.6	25.8	45.5	53.9	12.6
Nitrogen (N)			0.0	0.0	51.2	63.9	52.2	43.0	57.3	0.0
Fungicide (F)			41.6	90.3	35.1	11.5	19.3	32.2	46.3	43.7
R x N			12.3	38.1	43.4	53.2	61.8	47.4	55.3	8.9
R x F			57.4	60.7	37.9	28.3	17.1	40.1	80.1	55.9
N x F			89.6	91.2	33.2	63.8	52.0	42.8	71.2	89.1
R x N x F			16.0	66.6	69.5	53.0	61.8	47.1	59.9	20.8
LSD(0.10)										
Rotation (R)			NS	1.2	2	NS	NS	NS	NS	NS
Nitrogen (N)			10	0.8	NS	NS	NS	NS	NS	32
Fungicide (F)			NS	NS	NS	NS	NS	NS	NS	NS
R x N			NS	NS	NS	NS	NS	NS	NS	115
R x F			NS	NS	NS	NS	NS	NS	NS	NS
N x F			NS	NS	NS	NS	NS	NS	NS	NS
R x N x F			NS	NS	NS	NS	NS	NS	NS	NS

AGI*: Adjusted Gross Income.

**Table: 1509 - 12 . Corn, Soybean and Wheat Rotation -Soybean
Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	AGI \$3.44/bu \$/A
CS			55	12.4	457
CSW			58	12.3	475
CWS			52	12.3	433
CWS(L)			55	12.4	450
SS			40	12.2	330
	0		54	12.4	442
	40		51	12.3	424
	80		53	12.3	437
	120		50	12.3	413
	160		52	12.4	426
	200		52	12.3	431
		Priaxor	53	12.4	440
		UTC	51	12.3	418
CS	0		61	12.2	502
CS	40		54	12.4	447
CS	80		56	12.4	464
CS	120		52	12.5	426
CS	160		55	12.5	454
CS	200		55	12.6	450
CSW	0		55	12.6	451
CSW	40		57	12.3	473
CSW	80		61	12.5	504
CSW	120		58	12.1	475
CSW	160		56	12.2	461
CSW	200		59	12.3	487
CWS	0		52	12.3	428
CWS	40		51	12.3	423
CWS	80		51	12.3	419
CWS	120		54	12.4	449
CWS	160		53	12.3	439
CWS	200		53	12.3	437
CWS(L)	0		55	12.6	453
CWS(L)	40		55	12.5	450
CWS(L)	80		60	12.4	495
CWS(L)	120		48	12.3	399
CWS(L)	160		54	12.5	443
CWS(L)	200		55	12.4	457

continue

Table: 1509 - 12 . Corn, Soybean and Wheat Rotation -Soybean**(continued) Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	AGI \$3.44/bu \$/A
SS	0		46	12.3	377
SS	40		39	12.2	326
SS	80		37	12.1	304
SS	120		38	12.0	315
SS	160		40	12.2	331
SS	200		39	12.2	325
CS		Priaxor	57	12.6	471
CS		UTC	54	12.3	444
CSW		Priaxor	58	12.4	481
CSW		UTC	57	12.2	469
CWS		Priaxor	54	12.4	446
CWS		UTC	51	12.3	419
CWS(L)		Priaxor	56	12.5	460
CWS(L)		UTC	53	12.4	439
SS		Priaxor	42	12.2	343
SS		UTC	38	12.1	316
	0	Priaxor	55	12.4	457
	0	UTC	52	12.3	428
	40	Priaxor	53	12.4	434
	40	UTC	50	12.3	413
	80	Priaxor	53	12.4	436
	80	UTC	53	12.2	439
	120	Priaxor	52	12.3	431
	120	UTC	48	12.2	395
	160	Priaxor	52	12.4	432
	160	UTC	51	12.3	419
	200	Priaxor	55	12.4	451
	200	UTC	50	12.3	411
CS	0	Priaxor	61	12.3	505
CS	0	UTC	60	12.1	499
CS	40	Priaxor	56	12.4	463
CS	40	UTC	52	12.3	431
CS	80	Priaxor	56	12.5	464
CS	80	UTC	56	12.3	464
CS	120	Priaxor	55	12.7	450
CS	120	UTC	49	12.4	403
CS	160	Priaxor	56	12.6	465
CS	160	UTC	54	12.4	443
CS	200	Priaxor	58	12.7	476
CS	200	UTC	51	12.4	424

continue

Table: 1509 - 12 . Corn, Soybean and Wheat Rotation -Soybean
 (continued) **Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	AGI \$3.44/bu \$/A
CSW	0	Priaxor	56	12.7	461
CSW	0	UTC	53	12.4	441
CSW	40	Priaxor	60	12.4	495
CSW	40	UTC	55	12.2	452
CSW	80	Priaxor	63	12.6	517
CSW	80	UTC	59	12.4	491
CSW	120	Priaxor	57	12.1	467
CSW	120	UTC	59	12.1	484
CSW	160	Priaxor	55	12.2	453
CSW	160	UTC	57	12.2	468
CSW	200	Priaxor	60	12.3	497
CSW	200	UTC	58	12.2	478
CWS	0	Priaxor	56	12.3	463
CWS	0	UTC	48	12.2	394
CWS	40	Priaxor	51	12.3	423
CWS	40	UTC	51	12.3	424
CWS	80	Priaxor	49	12.4	404
CWS	80	UTC	53	12.2	434
CWS	120	Priaxor	59	12.6	486
CWS	120	UTC	50	12.3	413
CWS	160	Priaxor	53	12.4	439
CWS	160	UTC	53	12.3	440
CWS	200	Priaxor	56	12.3	463
CWS	200	UTC	50	12.2	412
CWS(L)	0	Priaxor	56	12.7	465
CWS(L)	0	UTC	53	12.5	441
CWS(L)	40	Priaxor	55	12.4	452
CWS(L)	40	UTC	54	12.5	448
CWS(L)	80	Priaxor	59	12.5	487
CWS(L)	80	UTC	61	12.3	504
CWS(L)	120	Priaxor	52	12.4	425
CWS(L)	120	UTC	45	12.3	374
CWS(L)	160	Priaxor	54	12.6	447
CWS(L)	160	UTC	53	12.4	440
CWS(L)	200	Priaxor	59	12.4	484
CWS(L)	200	UTC	52	12.4	430
SS	0	Priaxor	47	12.2	390
SS	0	UTC	44	12.3	365
SS	40	Priaxor	41	12.2	340
SS	40	UTC	38	12.1	312

continue

Table: 1509 - 12 . Corn, Soybean and Wheat Rotation -Soybean
 (continued) **Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	AGI \$3.44/bu \$/A
SS	80	Priaxor	37	12.2	307
SS	80	UTC	36	12.0	301
SS	120	Priaxor	40	12.0	327
SS	120	UTC	37	12.0	303
SS	160	Priaxor	43	12.4	357
SS	160	UTC	37	12.1	305
SS	200	Priaxor	41	12.3	336
SS	200	UTC	38	12.2	313
Mean			52	12.3	429
Probability(%)					
Rotation (R)			0.1	61.4	0.1
Nitrogen (N)			10.4	73.2	10.4
Fungicide (F)			0.0	0.0	0.0
R x N			3.1	18.2	3.1
R x F			87.3	50.2	87.2
N x F			15.9	83.4	15.8
R x N x F			62.8	50.8	63.0
LSD(0.10)					
Rotation (R)			5	NS	38
Nitrogen (N)			NS	NS	NS
Fungicide (F)			1	0.0	8
R x N			6	NS	48
R x F			NS	NS	NS
N x F			NS	NS	NS
R x N x F			NS	NS	NS

AGI*: Adjusted Gross Income.

**Table: 1509 - 13 . Corn, Soybean and Wheat Rotation - Wheat
Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	Test weight lbs/bu	AGI \$3.44/bu \$/A
CSW			42	15.5	51.3	147
CWS			44	15.0	52.6	156
CWS(L)			47	14.5	52.8	167
WW			--	--	--	--
	0		--	--	--	--
	40		43	14.6	51.1	153
	80		43	14.9	51.0	151
	120		44	15.0	50.8	153
	160		44	15.0	51.0	156
	200		44	15.3	51.2	156
CSW	0		30	15.1	51.8	104
CSW	40		42	15.1	50.7	148
CSW	80		41	15.5	50.1	144
CSW	120		46	15.8	51.9	160
CSW	160		46	15.6	51.4	160
CSW	200		47	15.9	52.3	163
CWS	0		29	14.4	54.9	102
CWS	40		45	14.8	52.6	160
CWS	80		52	14.9	52.6	182
CWS	120		48	15.2	51.9	167
CWS	160		44	15.3	51.9	154
CWS	200		49	15.3	51.6	171
CWS(L)	0		32	14.6	54.5	112
CWS(L)	40		52	14.4	52.9	182
CWS(L)	80		53	14.7	53.8	185
CWS(L)	120		49	14.6	51.4	172
CWS(L)	160		53	14.5	52.3	188
CWS(L)	200		45	14.5	51.6	160
WW	0		--	--	--	--
WW	40		34	14.1	48.4	120
WW	80		27	14.5	47.3	95
WW	120		32	14.7	48.1	112
WW	160		35	14.8	48.3	123
WW	200		37	15.3	49.3	130

continue

Table: 1509 - 13 . Corn, Soybean and Wheat Rotation - Wheat
 (continued) **Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	Test weight lbs/bu	AGI \$3.44/bu \$/A
CSW		Priaxor	47	15.8	52.7	163
CSW		UTC	37	15.2	50.0	130
CWS		Priaxor	50	15.5	53.6	175
CWS		UTC	39	14.5	51.6	137
CWS(L)		Priaxor	49	14.7	53.7	172
CWS(L)		UTC	46	14.4	51.9	161
	0		--	--	--	--
	0		--	--	--	--
	40	Priaxor	47	14.6	51.9	165
	40	UTC	40	14.6	50.4	141
	80	Priaxor	45	15.1	51.8	156
	80	UTC	42	14.7	50.2	147
	120	Priaxor	51	15.6	52.3	179
	120	UTC	36	14.5	49.3	127
	160	Priaxor	50	15.4	52.0	174
	160	UTC	39	14.7	49.9	138
	200	Priaxor	47	15.7	51.8	163
	200	UTC	42	14.8	50.6	148
CSW	0	Priaxor	31	15.6	52.3	107
CSW	0	UTC	29	14.7	51.3	101
CSW	40	Priaxor	49	15.1	52.7	171
CSW	40	UTC	36	15.0	48.6	126
CSW	80	Priaxor	45	15.8	52.4	157
CSW	80	UTC	38	15.2	47.8	132
CSW	120	Priaxor	56	16.2	54.0	194
CSW	120	UTC	36	15.3	49.8	125
CSW	160	Priaxor	53	16.1	52.2	183
CSW	160	UTC	39	15.1	50.6	136
CSW	200	Priaxor	48	16.0	52.6	169
CSW	200	UTC	45	15.8	51.9	157
CWS	0	Priaxor	33	14.5	56.0	118
CWS	0	UTC	25	14.2	53.8	87
CWS	40	Priaxor	54	14.7	53.7	190
CWS	40	UTC	37	14.8	51.4	129
CWS	80	Priaxor	58	15.4	54.5	202
CWS	80	UTC	46	14.4	50.7	162
CWS	120	Priaxor	53	15.8	53.2	186
CWS	120	UTC	42	14.5	50.6	147
CWS	160	Priaxor	51	16.2	52.7	179
CWS	160	UTC	37	14.4	51.2	129
CWS	200	Priaxor	50	16.1	51.6	174
CWS	200	UTC	47	14.5	51.7	167

continue

Table: 1509 - 13 . Corn, Soybean and Wheat Rotation - Wheat
 (continued) **Arlington, WI - 2015.**

Rotation	Nitrogen lb N/A	Fungicide	Yield bu/A	Moisture %	Test weight lbs/bu	AGI \$3.44/bu \$/A
CWS(L)	0	Priaxor	31	14.5	55.1	111
CWS(L)	0	UTC	32	14.7	53.8	113
CWS(L)	40	Priaxor	53	14.5	54.0	187
CWS(L)	40	UTC	50	14.3	51.9	178
CWS(L)	80	Priaxor	49	14.8	54.2	172
CWS(L)	80	UTC	56	14.6	53.4	198
CWS(L)	120	Priaxor	56	15.1	53.3	198
CWS(L)	120	UTC	41	14.0	49.5	146
CWS(L)	160	Priaxor	56	14.5	52.9	196
CWS(L)	160	UTC	51	14.4	51.7	180
CWS(L)	200	Priaxor	48	14.9	52.5	169
CWS(L)	200	UTC	43	14.1	50.8	151
WW	0	Priaxor	--	--	--	--
WW	0	UTC	--	--	--	--
WW	40	Priaxor	31	14.0	47.3	111
WW	40	UTC	37	14.2	49.6	130
WW	80	Priaxor	27	14.5	45.9	95
WW	80	UTC	27	14.6	48.7	94
WW	120	Priaxor	39	15.2	48.8	136
WW	120	UTC	25	14.2	47.4	88
WW	160	Priaxor	40	14.7	50.2	140
WW	160	UTC	30	14.8	46.3	106
WW	200	Priaxor	40	15.8	50.6	140
WW	200	UTC	34	14.7	48.0	119
Mean			43	14.9	51.4	149
<u>Probability(%)</u>						
Rotation (R)			2.6	2.5	0.9	2.5
Nitrogen (N)			0.0	0.1	25.8	0.0
Fungicide (F)			0.0	0.0	0.0	0.0
R x N			74.1	40.1	75.3	74.4
R x F			25.4	3.1	8.1	27.0
N x F			23.3	1.4	40.1	24.3
R x N x F			95.1	26.6	3.1	94.9
<u>LSD(0.10)</u>						
Rotation (R)			8	0.5	1.5	27
Nitrogen (N)			5	0.3	NS	17
Fungicide (F)			--	--	--	--
R x N			NS	NS	NS	NS
R x F			NS	0.4	1.3	NS
N x F			NS	0.4	NS	NS
R x N x F			NS	NS	3.1	NS

-- Winter kill treatments.

AGI*: Adjusted Gross Income.

**Table:1509- 14 . Soil Organic and Nitrogen Total content in Corn/Soybean/Wheat Rotation Study.
Arlington, WI - 2015.**

Rotation	Soil organic carbon @ 15 cm %	Soil organic carbon @ 30 cm %	Soil organic carbon @ 60 cm %	Soil total nitrogen @ 15 cm %	Soil total nitrogen @ 30 cm %	Soil total nitrogen @ 60 cm %
CC	2.05	1.89	1.85	0.193	0.183	0.177
SS	1.79	1.86	1.53	0.173	0.177	0.150
CS	1.98	1.91	1.97	0.197	0.183	0.190
SC	1.70	1.80	2.01	0.167	0.173	0.197
CSW	1.87	1.81	1.67	0.185	0.180	0.162
CWS	1.70	1.73	1.73	0.167	0.172	0.173
CWS(L)	1.71	1.69	1.72	0.168	0.168	0.172
Mean	1.83	1.81	1.78	0.179	0.177	0.174
<u>Probability(%)</u>						
Rotation (R)	22.3	85.2	48.5	10.2	92.8	36.3
<u>LSD(0.10)</u>						
Rotation (R)	NS	NS	NS	NS	NS	NS

Table: 1509-15 Corn, Soybean and Wheat Rotation at Arlington - Greenhouse Gases Emission 2015.

DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹	DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹
78			22	12	-2	91	CC		32	15	-1
91			24	8	-2	91	CS-c		21	4	-1
113			18	2	-4	91	CS-s		26	9	-5
133			27	25	-2	91	CSW-c		18	8	-3
150			52	35	0	91	CSW-s		22	7	2
161			53	11	-1	91	CSW-w		25	6	-2
169			77	20	-2						
176			92	58	-4	113	CC		23	5	0
189			95	58	-4	113	CS-c		14	2	-5
196			114	105	-3	113	CS-s		19	3	-8
203			117	65	-6	113	CSW-c		13	1	-10
210			110	24	-4	113	CSW-s		21	-1	3
226			108	15	-7	113	CSW-w		15	4	-3
238			67	24	-5						
256			54	25	-3	133	CC		34	23	-3
282			47	13	-3	133	CS-c		24	73	5
317			29	6	1	133	CS-s		25	7	-3
	CC		78	56	-2	133	CSW-c		28	21	-5
	CS-c		64	32	-1	133	CSW-s		21	5	-2
	CS-s		60	13	-4	133	CSW-w		31	19	-5
	CSW-c		64	55	-3	150	CC		64	42	-2
	CSW-s		57	11	-3	150	CS-c		56	43	2
	CSW-w		67	11	-4	150	CS-s		35	9	-1
		BR	69	45	-2	150	CSW-c		39	55	3
		IR	62	14	-4	150	CSW-s		48	18	-3
						150	CSW-w		68	44	1
78	CC		22	14	0	161	CC		56	14	0
78	CS-c		16	3	-1	161	CS-c		46	8	3
78	CS-s		32	26	-1	161	CS-s		29	9	-2
78	CSW-c		19	9	-6	161	CSW-c		53	17	-1
78	CSW-s		23	13	-3	161	CSW-s		30	6	1
78	CSW-w		21	8	-1	161	CSW-w		107	13	-6

continued

Table: 1509-15 Corn, Soybean and Wheat Rotation at Arlington - Greenhouse Gases Emission 2015.

DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹	DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹
169	CC		91	45	9	210	CC		111	34	4
169	CS-c		86	19	-3	210	CS-c		107	14	-6
169	CS-s		39	8	-8	210	CS-s		148	11	-5
169	CSW-c		101	30	-8	210	CSW-c		103	61	0
169	CSW-s		36	8	1	210	CSW-s		106	10	-7
169	CSW-w		110	8	-3	210	CSW-w		86	10	-11
176	CC		98	183	-3	226	CC		115	23	-6
176	CS-c		92	44	-2	226	CS-c		102	13	-5
176	CS-s		91	13	-7	226	CS-s		116	7	-6
176	CSW-c		98	88	-5	226	CSW-c		87	31	-8
176	CSW-s		74	11	-7	226	CSW-s		95	7	-10
176	CSW-w		97	8	0	226	CSW-w		135	7	-8
189	CC		129	154	-6	238	CC		83	41	-8
189	CS-c		107	47	-1	238	CS-c		65	25	2
189	CS-s		79	7	-7	238	CS-s		77	8	-5
189	CSW-c		106	122	3	238	CSW-c		54	54	-6
189	CSW-s		78	10	-3	238	CSW-s		67	7	-7
189	CSW-w		71	6	-10	238	CSW-w		58	7	-4
196	CC		167	176	-6	256	CC		56	36	-3
196	CS-c		128	136	0	256	CS-c		41	22	-4
196	CS-s		70	30	-5	256	CS-s		50	31	-4
196	CSW-c		133	252	0	256	CSW-c		55	23	3
196	CSW-s		88	20	-2	256	CSW-s		58	31	-5
196	CSW-w		101	19	-3	256	CSW-w		62	7	-8
203	CC		171	111	-1	282	CC		41	19	-4
203	CS-c		128	76	-4	282	CS-c		42	9	-3
203	CS-s		107	19	-8	282	CS-s		52	14	2
203	CSW-c		116	151	-6	282	CSW-c		44	15	-5
203	CSW-s		108	20	-11	282	CSW-s		51	14	-4
203	CSW-w		73	11	-5	282	CSW-w		49	6	-4

continued

Table: 1509-15 Corn, Soybean and Wheat Rotation at Arlington - Greenhouse Gases Emission 2015.

DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹	DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹
317	CC		30	11	6	196		BR	132	183	0
317	CS-c		17	3	4	196		IR	97	27	-5
317	CS-s		22	4	3						
317	CSW-c		21	4	0	203		BR	127	107	-8
317	CSW-s		51	7	-1	203		IR	107	23	-4
317	CSW-w		35	4	-4						
78		BR	24	17	-3	210		BR	126	28	-3
78		IR	21	8	-1	210		IR	94	19	-5
91		BR	25	9	-1	226		BR	109	22	-8
91		IR	23	7	-2	226		IR	107	8	-6
113		BR	18	3	-4	238		BR	69	31	-4
113		IR	17	1	-4	238		IR	65	16	-5
133		BR	26	32	-1	256		BR	55	30	-3
133		IR	29	17	-3	256		IR	52	20	-4
150		BR	52	37	0	282		BR	50	15	0
150		IR	52	33	-1	282		IR	44	10	-6
161		BR	66	13	1	317		BR	25	6	3
161		IR	40	10	-3	317		IR	34	5	0
169		BR	94	30	2		CC	BR	85	96	-1
169		IR	60	9	-6		CC	IR	71	15	-3
176		BR	73	99	-1		CS-c	BR	66	46	-1
176		IR	111	16	-7		CS-c	IR	62	17	-1
189		BR	97	103	-1		CS-s	BR	61	14	-3
189		IR	93	12	-7		CS-s	IR	58	12	-5

continued

Table: 1509-15 Corn, Soybean and Wheat Rotation at Arlington - Greenhouse Gases Emission 2015.

DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹	DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹
	CSW-c	BR	66	91	0	113	CC	BR	20	5	4
	CSW-c	IR	62	19	-6	113	CC	IR	25	5	-5
						113	CS-c	BR	15	2	-11
	CSW-s	BR	60	10	-3	113	CS-c	IR	14	2	1
	CSW-s	IR	55	13	-4	113	CS-s	BR	20	3	-13
						113	CS-s	IR	19	3	-4
	CSW-w	BR	73	13	-3	113	CSW-c	BR	12	1	-6
	CSW-w	IR	61	9	-6	113	CSW-c	IR	13	1	-13
						113	CSW-s	BR	25	5	4
78	CC	BR	22	18	-3	113	CSW-s	IR	17	-6	1
78	CC	IR	22	9	2	113	CSW-w	BR	16	4	-4
78	CS-c	BR	16	4	-3	113	CSW-w	IR	15	4	-2
78	CS-c	IR	17	2	0						
78	CS-s	BR	41	43	1	133	CC	BR	31	28	-3
78	CS-s	IR	24	9	-2	133	CC	IR	37	18	-2
78	CSW-c	BR	17	11	-4	133	CS-c	BR	20	105	9
78	CSW-c	IR	21	7	-8	133	CS-c	IR	28	42	2
78	CSW-s	BR	25	14	-6	133	CS-s	BR	20	8	1
78	CSW-s	IR	22	12	-1	133	CS-s	IR	30	6	-6
78	CSW-w	BR	22	10	-3	133	CSW-c	BR	33	30	-5
78	CSW-w	IR	20	6	1	133	CSW-c	IR	23	13	-4
						133	CSW-s	BR	19	3	-1
91	CC	BR	33	19	0	133	CSW-s	IR	23	8	-3
91	CC	IR	31	10	-3	133	CSW-w	BR	31	22	-3
91	CS-c	BR	21	4	-1	133	CSW-w	IR	31	15	-7
91	CS-c	IR	20	3	-2						
91	CS-s	BR	26	13	-5	150	CC	BR	69	46	-5
91	CS-s	IR	25	5	-4	150	CC	IR	59	38	0
91	CSW-c	BR	19	5	-7	150	CS-c	BR	52	21	4
91	CSW-c	IR	18	10	1	150	CS-c	IR	60	66	-1
91	CSW-s	BR	21	7	5	150	CS-s	BR	33	11	2
91	CSW-s	IR	24	7	0	150	CS-s	IR	38	8	-3
91	CSW-w	BR	27	5	-1	150	CSW-c	BR	45	70	4
91	CSW-w	IR	22	7	-3	150	CSW-c	IR	33	41	2

continued

Table: 1509-15 Corn, Soybean and Wheat Rotation at Arlington - Greenhouse Gases Emission 2015.

DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹	DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹
150	CSW-s	BR	46	13	-5	176	CS-s	BR	60	21	-6
150	CSW-s	IR	51	23	-1	176	CS-s	IR	122	6	-9
150	CSW-w	BR	64	65	2	176	CSW-c	BR	71	152	3
150	CSW-w	IR	72	23	0	176	CSW-c	IR	124	23	-12
						176	CSW-s	BR	51	7	-6
161	CC	BR	69	18	-2	176	CSW-s	IR	97	15	-8
161	CC	IR	43	10	1	176	CSW-w	BR	98	8	2
161	CS-c	BR	58	7	3	176	CSW-w	IR	96	7	-1
161	CS-c	IR	34	9	3						
161	CS-s	BR	40	9	2	189	CC	BR	141	291	-2
161	CS-s	IR	18	9	-7	189	CC	IR	117	17	-9
161	CSW-c	BR	62	21	3	189	CS-c	BR	117	83	-7
161	CSW-c	IR	43	13	-4	189	CS-c	IR	97	11	4
161	CSW-s	BR	48	7	3	189	CS-s	BR	67	7	-6
161	CSW-s	IR	13	5	0	189	CS-s	IR	91	8	-8
161	CSW-w	BR	121	14	-4	189	CSW-c	BR	103	225	20
161	CSW-w	IR	92	12	-9	189	CSW-c	IR	110	20	-15
						189	CSW-s	BR	81	9	-6
169	CC	BR	125	82	18	189	CSW-s	IR	74	11	1
169	CC	IR	57	9	-1	189	CSW-w	BR	71	5	-3
169	CS-c	BR	87	27	1	189	CSW-w	IR	70	7	-16
169	CS-c	IR	85	10	-8						
169	CS-s	BR	62	9	3	196	CC	BR	195	323	-8
169	CS-s	IR	15	7	-18	196	CC	IR	138	28	-4
169	CSW-c	BR	116	43	-9	196	CS-c	BR	140	237	1
169	CSW-c	IR	87	17	-8	196	CS-c	IR	115	35	-2
169	CSW-s	BR	58	13	0	196	CS-s	BR	79	33	-2
169	CSW-s	IR	14	4	3	196	CS-s	IR	61	27	-9
169	CSW-w	BR	118	9	-4	196	CSW-c	BR	148	463	2
169	CSW-w	IR	102	8	-2	196	CSW-c	IR	118	40	-1
						196	CSW-s	BR	113	21	3
176	CC	BR	70	337	-1	196	CSW-s	IR	63	18	-8
176	CC	IR	127	29	-6	196	CSW-w	BR	117	23	3
176	CS-c	BR	85	70	4	196	CSW-w	IR	84	15	-8
176	CS-c	IR	98	18	-8	203	CC	BR	183	187	-7
						203	CC	IR	159	35	5

continued

Table: 1509-15 Corn, Soybean and Wheat Rotation at Arlington - Greenhouse Gases Emission 2015.

DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹	DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux μg N m ⁻² h ⁻¹	CH ₄ flux μg C m ⁻² h ⁻¹
203	CS-c	BR	133	127	-5	238	CC	BR	93	73	-3
203	CS-c	IR	124	25	-4	238	CC	IR	73	9	-14
203	CS-s	BR	126	19	-12	238	CS-c	BR	68	44	-2
203	CS-s	IR	89	20	-4	238	CS-c	IR	61	6	5
203	CSW-c	BR	114	282	-5	238	CS-s	BR	80	5	-6
203	CSW-c	IR	117	20	-7	238	CS-s	IR	73	11	-3
203	CSW-s	BR	127	16	-15	238	CSW-c	BR	55	57	-8
203	CSW-s	IR	88	25	-7	238	CSW-c	IR	53	51	-5
203	CSW-w	BR	80	11	-2	238	CSW-s	BR	64	5	-3
203	CSW-w	IR	65	11	-8	238	CSW-s	IR	69	8	-10
						238	CSW-w	BR	53	4	-2
						238	CSW-w	IR	62	10	-6
210	CC	BR	140	45	4	256	CC	BR	61	74	-1
210	CC	IR	82	24	3	256	CC	IR	52	-1	-5
210	CS-c	BR	103	18	-1	256	CS-c	BR	45	13	-7
210	CS-c	IR	112	10	-11	256	CS-c	IR	36	30	0
210	CS-s	BR	145	6	0	256	CS-s	BR	47	22	-8
210	CS-s	IR	150	17	-10	256	CS-s	IR	53	40	0
210	CSW-c	BR	126	78	7	256	CSW-c	BR	54	41	7
210	CSW-c	IR	79	45	-7	256	CSW-c	IR	55	5	0
210	CSW-s	BR	119	9	-10	256	CSW-s	BR	56	25	-1
210	CSW-s	IR	93	12	-4	256	CSW-s	IR	60	38	-9
210	CSW-w	BR	121	12	-18	256	CSW-w	BR	69	4	-7
210	CSW-w	IR	51	8	-4	256	CSW-w	IR	55	11	-8
226	CC	BR	112	39	-4	282	CC	BR	47	36	-4
226	CC	IR	119	8	-7	282	CC	IR	36	2	-5
226	CS-c	BR	108	21	-6	282	CS-c	BR	41	4	-8
226	CS-c	IR	95	6	-4	282	CS-c	IR	44	14	2
226	CS-s	BR	113	4	-10	282	CS-s	BR	59	20	5
226	CS-s	IR	119	11	-3	282	CS-s	IR	45	9	-1
226	CSW-c	BR	84	55	-8	282	CSW-c	BR	47	13	10
226	CSW-c	IR	89	6	-7	282	CSW-c	IR	42	18	-20
226	CSW-s	BR	102	3	-9	282	CSW-s	BR	44	12	-3
226	CSW-s	IR	88	10	-12	282	CSW-s	IR	57	17	-6
226	CSW-w	BR	135	6	-10						
226	CSW-w	IR	135	9	-5						

continued

Table: 1509-15 Corn, Soybean and Wheat Rotation at Arlington - Greenhouse Gases Emission 2015.

DOY	Rotation	Place	CO ₂ flux mg C m ⁻² h ⁻¹	N ₂ O flux µg N m ⁻² h ⁻¹	CH ₄ flux µg C m ⁻² h ⁻¹
282	CSW-w	BR	60	8	1
282	CSW-w	IR	38	3	-9
317	CC	BR	26	12	6
317	CC	IR	33	10	6
317	CS-c	BR	19	3	3
317	CS-c	IR	16	4	at
317	CS-s	BR	21	4	5
317	CS-s	IR	23	4	2
317	CSW-c	BR	22	6	3
317	CSW-c	IR	20	2	-3
317	CSW-s	BR	21	4	1
317	CSW-s	IR	82	10	-4
317	CSW-w	BR	43	7	-2
317	CSW-w	IR	28	1	-6
Mean			65	30	-3

Probability(%)

DOY (D)	0	0	13
Treatment (T)	0	0	11
Position (P)	0	0	0
D x T	0	0	91
D x P	0	0	45
T x D	22	0	17
D x T x P	44	0	58

LSD(0.10)

DOY (D)	16	21	NS
Treatment (T)	6	12	NS
Position (P)	3	7	1
D x T	26	51	NS
D x P	17	28	NS
T x D	NS	17	NS
D x T x P	NS	69	NS

IR: In Rows BR: Between Rows DOY (D): Day Of Year
 CC: Cont. Corn; CS: Corn-Soybean; CSW: Corn-Soybean-Wheat
 Small letters that follow rotations indicate current crop phase

FIELD EXPERIMENT HISTORY

Title: Corn - Soybean - Wheat Response to Rotation:
Experiment: 09CSW **Trial ID:** 6021 **Year:** 2015
Personnel: J. Cavadini, M. Bertram
Location: Marshfield, WI **County:** Marathon
Supported By: Marshfield Ag Research Station

Site Information

Field: 405 **Previous Crop:** See factors **Soil Type:** Whitee
Soil Test: Date: 11/7 /11 **pH:** 7 **OM (%)** 3.3 **P (ppm)** 49 **K (ppm)** 162

Plot Management

Tillage Operations:

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :			
Starter :	C:9-11-30-6S-Zn	150 lb/A	5 /1 /15
Post plant :	C:32-0-0	27 gal	7/2/15
	CW9-11-30-6S-Zn	150 lb/A	5/14/15
	W-GSI:46-0-0	65 lb/A	5/14/15
	WW:46-0-0	152 lb/A	5/14/15
Manure:	N/A	None	N/A
Herbicide:	C:Medal II 1.67 pt, Hornet 3 oz, Roundup 32 oz S: Roundup 32 oz W: Banvel 3 oz, Affinity Broadspec .04 oz	Hybrid: C: P8906AM1 (89 HXX,LL,RR2) S: P10T02R (1.0) W: PiP 734 (SRW)	Planting Method: C: JD1750 planter S,W: Great Plains 1206 NT drill
Planting Date:	C:5/1/15 S:5/7/15 W:10/10/14	Planting Depth: C:1.5" S,W: 1"	Harvest Method: CS: Hand harvest C,S,W: MF plot combine
Target Plant Density:		Row Width: C:30" S:15" W:7.5"	
Harvest Date:	C: 10/22/15, CS: 9/15/15 S: 10/14/15, W: 8/4/15	Fungicide: none	

Notes:

Experimental Design

Design: RCB split-split-block **Replications:** 3
Plot Size Seeded: 60' x 60'
Harvest Plot Size: C: 60' x 10'; S/W:60' x 13'; CS: 10' x 2.5' **Experiment Size:** 3.09 A
Factors/Treatments:

Rotation: 2014

Treatments

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

Results: Tables 1409-16 to 1409-19

**Table: 1509 - 16 Corn, Soybean, and Wheat Rotation- Corn
Marshfield, WI - 2015.**

Rotation	Yield bu/A	Moisture %	Test Weight in.	Harvest Population ppa	Stalk Lodging %
Continuous	117.6	18.8	57.3	34,535	0.4
Alternating	122.0	19.1	56.6	35,060	2.4
Grain System I	107.7	19.8	56.3	33,496	0.4
Mean	115.8	19.2	56.7	34,364	1.0
Probability (%)					
Treatment	4.5	0.9	10.2	15.1	33.0
LSD 10% Treatment	9.4	0.5	0.8	1,345	NS
CV (%)	10	3	2	5	316

**Table: 1509 - 17 Corn, Soybean, and Wheat Rotation- Corn Silage
Marshfield, WI - 2014.**

Rotation	Yield tn dm/A	Moisture %	Kernel milk %	Harvest Population ppa	CP %	ADF %	NDF %	NDFD %	NFC %	Starch %	TDN %	Milk per	
												Ton lb	Acre lb
Continuous	6.6	62.3	41	32,331	8.0	18.5	34.8	61.2	52.8	36.5	68.6	3,363	22,166
Alternating	6.7	62.1	36	32,912	7.4	19.2	36.2	62.0	52.1	36.5	68.9	3,390	22,590
Grain System I	5.7	66.2	39	32,331	7.8	19.9	37.4	62.7	50.4	34.6	68.8	3,392	19,324
Mean	6.3	63.6	39	32,525	7.7	19.2	36.1	62.0	51.8	35.9	68.7	3,382	21,360
Probability (%)													
Treatment	<0.1	<0.1	57.9	94.8	48.3	43.0	26.6	23.9	29.7	51.0	95.0	91.0	35.9
LSD 10% Treatment	0.9	2.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)	17	4	29	13	7	6	5	1	3	6	2	3	12

**Table: 1509 - 18 Corn, Soybean, and Wheat Rotation- Wheat
Marshfield, WI - 2015.**

Rotation	Yield bu/A	Moisture %	Test		
			Weight lb/bu	Height in.	Lodging 1 to 5
Continuous	47.0	12.3	56.9	31	1.2
Grain System I	61.0	12.5	59.9	33	1.0
Mean	54.0	12.4	58.4	32	1.1
<u>Probability (%)</u>					
Treatment	<0.1	43.0	<0.1	16.4	11.7
<u>LSD 10%</u>					
Treatment	4.4	NS	1.0	NS	NS
CV (%)	10	3	2	5	25

**Table: 1509 - 19 Corn, Soybean, and Wheat Rotation- Soybean
Marshfield, WI - 2015.**

Rotation	Yield bu/A	Moisture %	Test		
			Weight lb/bu	Height in.	Lodging 1 to 5
Continuous	44.9	12.8	58.7	27	1.0
Alternating	54.6	13.5	57.9	27	1.0
Grain System I	53.5	13.5	58.7	28	1.0
Mean	51.0	13.3	58.4	27	1.0
<u>Probability (%)</u>					
Treatment	<0.1	5.3	20.0	44.1	>50
<u>LSD 10%</u>					
Treatment	3.4	0.6	NS	NS	NS
CV (%)	8	5	2	9	0