

FIELD EXPERIMENT HISTORY

Title: Corn - Soybean - Wheat - Alfalfa (Meadow) Response to Rotation
Experiment: 09ACOSW **Trial ID:** 5938 **Year:** 2014
Personnel: J. G. Lauer, B. Meyer, T. H. Diallo, K. D. Kohn, M. K. Kazula
Location: Lancaster, WI **County:** Grant
Supported By: HATCH

Site Information

Field: 300 B **Previous Crop:** See Factors **Soil Type:** Fayette Silt Loam
Soil Test: **Date:** 11/15/12 **pH:** 6.41 **OM (%)** 2.56 **P (ppm)** 18.7 **K (ppm)** 118

Plot Management

Tillage Operations: Chisel, Disk, Mulch on all except C/S

Fertilizer:	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Preplant :	N/A	N/A	N/A
Starter :	C: 5-23-30 S/O/W: 0-18-36	195 86	N/A 7/18/14
Post plant :	C/W: 34-0-0	see N rates	C/W:6/4/14
Manure:	N/A	N/A	N/A

Herbicide: C:Instigage 5/22/14 **Planting Depth:** C: 1.5" **Hybrid:** A: Legacy L449 R2
 Halex GT 6/27/14 C:Legacy L5522-VT3 pro
 S:Outlook/Firstrate 5/28/14 O: Std. Ogle
 Sequence 6/25/14 S: O'Soy245NR2y
 O/W: Harmony SG 0.6 W: PIP 25R47
 oz/ac 6/9/14
Planting Date: C:5/22/14 **Row Width:** C:30" S:15"
 S:5/28/14 O/A/W:7.5"
 A:5/5/14 **Planting Method:** White 6100 no-till corn planter
 O:5/18/14
Target Plant Density: C:33500 **Harvest Method:** C:Massey 8XP
Harvest Date: C:11/4/14 **Fungicide:** N/A
 S:10/27/14
 O:7/24/14
 A:6/11/14 & 7/7/14
 W:7/30/14
Notes:

Experimental Design

Design: RCB split-plot **Replications:** 2
Plot Size Seeded: 20' x 50' **Experiment Size:** Total blocks/plots= 42/168
Harvest Plot Size: 5' x 50'
Factors/Treatments:

Rotation:

1) CC- 1C	12) CCOMM- M1
2) CSCM- O	13) CCOMM- M2
3) CSCM- M	14) CCOMM- C1
4) CSCM- C1	15) CCOMM- C2
5) CSCM- S	16) CCOMM- O
6) CSCM- C2	17) CSW- S
7) CCMM- M1	18) CSW- C
8) CCMM- M2	19) CS- S
9) CCMM- C2	20) CSW- W
10) CCMM- C1	21) CS- C
11) CCCMM- C3	

N rate for corn (lb/A):

1) 0
 2) 50 (1967 to 1976 = 75)
 3) 100 (1967 to 1976 = 150)
 4) 200 (1967 to 1976 = 300)

Tillage:

1) Conventional Tillage (Fall chisel,
 Spring disc and Cultimulching)
 All, except Corn after Soybean
 2) No-Till

Results: Tables 1409-21 to 1409-27

**Table:1409-21. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow) Rotation - Corn
Lancaster, WI - 2014.**

Rotation	Nitrogen rate N lb/A	Yield bu/A	Moisture %	Test weight lbs/bu	AGI \$3.67/bu \$/A
CC-C		103	16.1	48.5	348
CCCMM-C1		200	18.8	57.0	675
CCCMM-C2		152	18.6	55.4	513
CCCMM-C3		142	17.0	54.9	482
CCOMM-C1		220	18.3	60.4	743
CCOMM-C2		142	17.9	55.4	481
CS-C		174	19.2	55.0	584
CSCOM-C1		182	18.9	55.5	615
CSCOM-C2		197	18.6	54.9	665
CSW-C		202	19.1	55.0	680
	0	126	16.8	52.8	428
	50	163	18.3	57.3	550
	100	187	18.7	55.4	632
	200	209	19.2	55.4	705
CC-C	0	45	8.6	28.3	153
CC-C	50	70	17.4	55.6	238
CC-C	100	114	18.0	54.9	387
CC-C	200	184	20.5	55.3	615
CCCMM-C1	0	174	18.7	56.8	588
CCCMM-C1	50	197	18.8	56.3	664
CCCMM-C1	100	196	18.8	54.9	663
CCCMM-C1	200	233	19.1	60.1	783
CCCMM-C2	0	84	17.4	55.9	284
CCCMM-C2	50	142	18.3	55.6	481
CCCMM-C2	100	173	18.9	55.9	583
CCCMM-C2	200	210	19.8	54.4	705
CCCMM-C3	0	76	15.6	53.9	260
CCCMM-C3	50	130	16.4	54.7	444
CCCMM-C3	100	156	17.2	55.7	533
CCCMM-C3	200	204	18.7	55.4	689
CCOMM-C1	0	199	18.0	56.4	673
CCOMM-C1	50	252	18.4	73.8	852
CCOMM-C1	100	219	18.6	56.0	741
CCOMM-C1	200	208	18.2	55.3	705

continued

Table:1409-21. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow) Rotation - Corn

(continued)

Lancaster, WI - 2014.

Rotation	Nitrogen rate N lb/A	Yield bu/A	Moisture %	Test weight lbs/bu	AGI \$3.67/bu \$/A
CComm-C2	0	104	16.8	55.2	356
CComm-C2	50	109	17.7	55.8	369
CComm-C2	100	164	18.4	56.0	556
CComm-C2	200	191	18.6	54.8	645
CS-C	0	110	18.1	55.2	372
CS-C	50	156	19.7	55.4	525
CS-C	100	203	19.4	54.8	682
CS-C	200	226	19.7	54.5	758
CSCOM-C1	0	153	18.4	56.1	519
CSCOM-C1	50	197	18.9	55.8	663
CSCOM-C1	100	196	19.0	55.2	662
CSCOM-C1	200	183	19.3	55.0	616
CSCOM-C2	0	145	18.3	54.8	491
CSCOM-C2	50	189	18.4	54.7	640
CSCOM-C2	100	224	18.9	55.2	757
CSCOM-C2	200	229	18.7	55.0	773
CSW-C	0	172	18.3	55.1	584
CSW-C	50	185	19.1	55.3	623
CSW-C	100	224	19.3	55.0	754
CSW-C	200	225	19.7	54.6	756
Mean		171	18.3	55.2	579
Probability(%)					
Rotation (R)		2.0	20.2	40.6	2.0
Nitrogen (N)		0.0	0.5	31.8	0.0
R x N		1.3	33.2	58.8	1.6
LSD (0.10)					
Rotation (R)		45	NS	NS	151
Nitrogen (N)		12	1.1	NS	40
R x N		51	NS	NS	173

**Table:1409-22. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow)
Rotation - Soybean . Lancaster, WI - 2014.**

Rotation	Nitrogen rate N lb/A	Yield bu/A	Moisture %	AGI \$3.67/bu \$/A
CS-S		88	10.5	908
CSCOM-S		83	10.5	850
CSW-S		81	10.5	829
	0	82	10.5	842
	50	82	10.5	842
	100	83	10.5	856
	200	89	10.5	910
CS-S	0	83	10.5	855
CS-S	50	100	10.5	1023
CS-S	100	83	10.5	852
CS-S	200	88	10.5	901
CSCOM-S	0	80	10.5	823
CSCOM-S	50	74	10.5	761
CSCOM-S	100	83	10.5	855
CSCOM-S	200	94	10.5	961
CSW-S	0	82	10.5	847
CSW-S	50	72	10.5	741
CSW-S	100	84	10.5	862
CSW-S	200	84	10.5	867
Mean		84	10.5	862
Probability(%)				
Rotation (R)		41.2	-	41.2
Nitrogen (N)		46.7	-	46.7
R x N		16.4	-	16.4
LSD (0.10)				
Rotation (R)		14	-	140
Nitrogen (N)		9	-	87
R x N		15	-	156

**Table:1409-23. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow)
Rotation - Wheat. Lancaster, WI - 2014.**

Rotation	Nitrogen rate N lb/A	Yield bu/A	Moisture %	AGI \$5.50/bu \$/A
CSW-W	0	43	13.0	228
CSW-W	50	40	13.0	208
CSW-W	100	50	13.0	265
CSW-W	200	51	13.0	268
Mean		46	13.0	242
<u>Probability(%)</u>				
Nitrogen (N)		21.1	-	21.1
<u>LSD (0.10)</u>				
Nitrogen (N)		NS	-	NS

**Table:1409-24. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow)
Rotation - Alfalfa. Lancaster, WI - 2014.**

Rotation	Nitrogen	Harvest Date				Total
	rate N lb/A	11-Jun T dm/A	7-Jul T dm/A	13-Aug T dm/A	5-Sep T dm/A	
CCCMM-M2		2.3	1.1	0.8	0.7	4.8
CCOMM-M1		1.5	0.9	0.7	0.7	3.8
CCOMM-M2		2.2	1.0	0.6	0.6	4.4
CSCOM-M		1.5	0.9	0.7	0.7	3.8
	0	1.9	1.0	0.7	0.7	4.3
	50	2.0	1.0	0.7	0.6	4.3
	100	1.8	1.0	0.7	0.7	4.2
	200	1.8	0.9	0.7	0.7	4.0
CCCMM-M2	0	2.2	1.1	0.7	0.6	4.7
CCCMM-M2	50	2.3	1.1	0.8	0.6	4.9
CCCMM-M2	100	2.2	1.0	0.8	0.7	4.7
CCCMM-M2	200	2.3	1.1	0.8	0.7	4.9
CCOMM-M1	0	1.5	1.0	0.7	0.7	4.0
CCOMM-M1	50	1.6	1.0	0.7	0.7	4.0
CCOMM-M1	100	1.5	0.9	0.7	0.8	3.8
CCOMM-M1	200	1.3	1.0	0.6	0.7	3.6
CCOMM-M2	0	2.3	1.1	0.7	0.6	4.6
CCOMM-M2	50	2.3	1.1	0.6	0.6	4.5
CCOMM-M2	100	2.3	1.0	0.6	0.5	4.4
CCOMM-M2	200	2.1	0.9	0.6	0.6	4.2
CSCOM-M	0	1.6	0.8	0.7	0.7	3.8
CSCOM-M	50	1.6	0.9	0.8	0.7	4.0
CSCOM-M	100	1.4	1.0	0.8	0.7	3.9
CSCOM-M	200	1.3	0.8	0.7	0.6	3.4
Mean		1.9	1.0	0.7	0.7	4.2
Probability(%)						
Rotation (R)		0.3	24.1	19.1	6.2	0.6
Nitrogen (N)		8.1	36.7	66.2	95.8	7.3
R x N		71.0	42.9	68.6	44.4	35.8
LSD (0.10)						
Rotation (R)		0.2	NS	NS	0.1	0.2
Nitrogen (N)		0.1	NS	NS	NS	0.2
R x N		NS	NS	NS	NS	NS

**Table:1409-25. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow)
Rotation - Alfalfa-New Seeding. Lancaster, WI - 2014.**

Rotation	Nitrogen	Harvest Date				Total
	rate N lb/A	11-Jun T dm/A	7-Jul T dm/A	13-Aug T dm/A	5-Sep T dm/A	
CCCMM-M1	0	-	0.8	-	-	0.8
CCCMM-M1	50	-	0.8	-	-	0.8
CCCMM-M1	100	-	0.8	-	-	0.8
CCCMM-M1	200	-	0.9	-	-	0.9
Mean		-	0.8	-	-	0.8
Probability(%)						
Nitrogen (N)		-	62.0	-	-	62.0
LSD (0.10)						
Nitrogen (N)		-	NS	-	-	NS

**Table:1409-26. Corn, Soybean, Wheat, Oats and Alfalfa (Meadow)
Rotation - Oats. Lancaster, WI - 2014.**

Rotation	Nitrogen rate N lb/A	Yield bu/A	Moisture %	AGI \$2.00/bu \$/A
CCOMM-O		53	14	94
CSCOM-O		55	14	97
	0	43	14	76
	50	56	14	99
	100	61	14	109
	200	55	14	98
CCOMM-O	0	38	14	67
CCOMM-O	50	47	14	83
CCOMM-O	100	63	14	112
CCOMM-O	200	64	14	113
CSCOM-O	0	48	14	85
CSCOM-O	50	65	14	116
CSCOM-O	100	59	14	105
CSCOM-O	200	47	14	82
Mean		54	14	95
<u>Probability(%)</u>				
Rotation (R)		83.1	-	83.1
Nitrogen (N)		17.4	-	17.4
R x N		16.0	-	16.0
<u>LSD (0.10)</u>				
Rotation (R)		NS	-	NS
Nitrogen (N)		NS	-	NS
R x N		NS	-	NS

Table: 1409 - 27 . Corn, Soybean and Wheat Rotation at Lancaster - Greenhouse gases emission 2014.

DOY	Rotation Position	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 Position	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
108		16	11	5	121	C-C	21	11	3
121		17	10	-1	121	CS-C	26	18	-3
135		29	23	0	121	CS-S	21	16	0
149		75	16	-2	121	CSW-C	1	1	0
162		64	20	-1	121	CSW-S	18	7	-1
169		121	240	1	121	CSW-W	18	5	-5
176		169	360	9					
190		111	55	-4	135	C-C	30	20	-6
204		107	31	0	135	CS-C	28	26	2
218		125	34	-6	135	CS-S	35	42	2
232		112	16	-9	135	CSW-C	15	8	2
248		113	27	-4	135	CSW-S	40	27	-2
260		48	5	-3	135	CSW-W	26	18	3
281		37	5	-3					
300		43	6	2	149	C-C	85	27	-1
310		19	3	-7	149	CS-C	83	17	-2
					149	CS-S	74	11	1
	C-C	91	146	-1	149	CSW-C	79	15	-10
	CS-C	80	40	-1	149	CSW-S	75	14	1
	CS-S	61	18	2	149	CSW-W	54	14	-1
	CSW-C	80	54	-4					
	CSW-S	69	26	-2	162	C-C	81	32	6
	CSW-W	71	39	-2	162	CS-C	66	19	1
					162	CS-S	50	12	2
	BR	74	64	-1	162	CSW-C	71	18	-10
	IR	76	43	-1	162	CSW-S	58	16	3
					162	CSW-W	61	22	-8
108	C-C	21	18	5	169	C-C	142	685	2
108	CS-C	20	6	8	169	CS-C	122	115	1
108	CS-S	19	16	9	169	CS-S	82	26	5
108	CSW-C	-1	5	-1	169	CSW-C	146	195	-3
108	CSW-S	19	10	7	169	CSW-S	87	101	3
108	CSW-W	20	9	2	169	CSW-W	148	320	-3

continued

Table: 1409 - 27 . Corn, Soybean and Wheat Rotation at Lancaster - Greenhouse gases emission 2014.

DOY	Rotation Position	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 Position	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
176	C-C	235	1263	8	248	C C	137	24	-1
176	CS-C	200	212	10	248	CS C	98	49	-1
176	CS-S	100	44	9	248	CS S	115	27	-3
176	CSW-C	236	428	9	248	CSWC	112	19	-10
176	CSW-S	95	58	8	248	CSWS	131	33	-3
176	CSW-W	147	153	8	248	CSWW	82	8	-6
190	C-C	165	128	-3	260	C-C	56	2	-1
190	CS-C	130	53	1	260	CS-C	58	-4	-7
190	CS-S	74	26	1	260	CS-S	54	10	-1
190	CSW-C	132	93	-5	260	CSW-C	68	10	-7
190	CSW-S	82	14	-7	260	CSW-S	49	6	-4
190	CSW-W	81	16	-13	260	CSW-W	2	4	3
204	C-C	128	63	-8	281	C-C	53	7	2
204	CS-C	142	44	-5	281	CS-C	38	3	-8
204	CS-S	59	7	8	281	CS-S	38	10	-2
204	CSW-C	112	19	1	281	CSW-C	36	3	1
204	CSW-S	113	16	-3	281	CSW-S	39	9	-3
204	CSW-W	88	35	6	281	CSW-W	17	2	-9
218	C-C	120	40	-5	300	C-C	43	4	0
218	CS-C	118	13	-6	300	CS-C	46	5	11
218	CS-S	103	18	-8	300	CS-S	32	7	13
218	CSW-C	109	35	-7	300	CSW-C	43	4	-7
218	CSW-S	135	89	-4	300	CSW-S	39	10	-8
218	CSW-W	165	8	-4	300	CSW-W	53	5	4
232	C-C	120	10	-4	310	C-C	17	4	-8
232	CS-C	88	60	-13	310	CS-C	18	3	-5
232	CS-S	98	8	-6	310	CS-S	27	1	-5
232	CSW-C	100	7	-10	310	CSW-C	15	4	-8
232	CSW-S	109	6	-7	310	CSW-S	15	1	-13
232	CSW-W	160	2	-11	310	CSW-W	20	8	-2

continued

Table: 1409 - 27 . Corn, Soybean and Wheat Rotation at Lancaster - Greenhouse gases emission 2014.

DOY	Rotation Position	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 Position	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
108	BR	14	11	7	281	BR	37	5	0
108	IR	19	11	3	281	IR	37	5	-6
121	BR	14	9	-1	300	BR	43	5	0
121	IR	21	10	-1	300	IR	43	6	4
135	BR	29	25	0	310	BR	20	4	-7
135	IR	29	21	0	310	IR	18	3	-6
149	BR	81	17	-3					
149	IR	69	15	-1		C-C BR	90	214	0
						C-C IR	92	79	-1
162	BR	74	21	-2		CS-C BR	73	41	-2
162	IR	55	19	0		CS-C IR	88	39	-1
						CS-S BR	66	18	-1
169	BR	112	278	1		CS-S IR	57	17	4
169	IR	131	202	1		CSW-C BR	78	56	-4
						CSW-C IR	81	52	-4
176	BR	161	484	8		CSW-S BR	66	29	0
176	IR	176	235	9		CSW-S IR	72	23	-4
						CSW-W BR	74	28	-1
190	BR	104	56	-1		CSW-W IR	69	50	-3
190	IR	118	54	-8					
					108	C-C BR	17	17	7
204	BR	110	22	1	108	C-C IR	24	20	3
204	IR	104	39	-1	108	CS-C BR	19	5	17
					108	CS-C IR	21	8	-1
218	BR	115	44	-8	108	CS-S BR	17	18	12
218	IR	135	23	-3	108	CS-S IR	21	15	6
					108	CSW-C BR	-4	4	-7
232	BR	116	21	-8	108	CSW-C IR	2	6	5
232	IR	109	10	-9	108	CSW-S BR	16	13	15
					108	CSW-S IR	21	8	-1
248	BR	116	26	-7	108	CSW-W BR	17	7	-1
248	IR	109	27	-1	108	CSW-W IR	24	11	4
260	BR	47	0	-4					
260	IR	49	9	-2					

continued

Table: 1409 - 27 . Corn, Soybean and Wheat Rotation at Lancaster - Greenhouse gases emission 2014.

DOY	Rotation	Position	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	Position	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
121	C-C	BR	18	11	14	149	CSW-S	BR	87	16	2
121	C-C	IR	24	11	-7	149	CSW-S	IR	64	12	0
121	CS-C	BR	17	18	-9	149	CSW-W	BR	72	18	1
121	CS-C	IR	36	19	3	149	CSW-W	IR	35	9	-3
121	CS-S	BR	14	12	-2						
121	CS-S	IR	27	20	2	162	C-C	BR	92	38	0
121	CSW-C	BR	0	1	3	162	C-C	IR	69	26	12
121	CSW-C	IR	2	1	-4	162	CS-C	BR	78	19	-3
121	CSW-S	BR	19	5	-3	162	CS-C	IR	55	19	5
121	CSW-S	IR	16	9	2	162	CS-S	BR	64	10	6
121	CSW-W	BR	16	9	-10	162	CS-S	IR	36	14	-1
121	CSW-W	IR	20	2	1	162	CSW-C	BR	78	18	-7
						162	CSW-C	IR	64	18	-13
135	C-C	BR	20	19	-5	162	CSW-S	BR	53	16	3
135	C-C	IR	40	21	-7	162	CSW-S	IR	62	17	3
135	CS-C	BR	21	27	-6	162	CSW-W	BR	76	25	-10
135	CS-C	IR	35	25	11	162	CSW-W	IR	45	19	-7
135	CS-S	BR	35	58	6						
135	CS-S	IR	35	26	-2	169	C-C	BR	102	975	1
135	CSW-C	BR	29	12	-10	169	C-C	IR	181	394	2
135	CSW-C	IR	1	3	14	169	CS-C	BR	109	158	0
135	CSW-S	BR	33	25	8	169	CS-C	IR	136	72	1
135	CSW-S	IR	46	29	-12	169	CS-S	BR	98	25	5
135	CSW-W	BR	36	11	9	169	CS-S	IR	65	28	5
135	CSW-W	IR	16	24	-3	169	CSW-C	BR	141	194	0
						169	CSW-C	IR	151	195	-5
149	C-C	BR	83	29	0	169	CSW-S	BR	80	80	4
149	C-C	IR	86	24	-3	169	CSW-S	IR	93	122	3
149	CS-C	BR	75	10	-4	169	CSW-W	BR	140	237	-4
149	CS-C	IR	91	24	0	169	CSW-W	IR	156	402	-1
149	CS-S	BR	67	10	-3	176	C-C	BR	210	2040	7
149	CS-S	IR	81	11	5	176	C-C	IR	259	487	9
149	CSW-C	BR	99	19	-15	176	CS-C	BR	161	228	5
149	CSW-C	IR	59	11	-5	176	CS-C	IR	239	196	15

continued

Table: 1409 - 27 . Corn, Soybean and Wheat Rotation at Lancaster - Greenhouse gases emission 2014.

DOY	Rotation	Position	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	Position	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
176	CS-S	BR	118	50	-1	218	C-C	BR	111	58	-7
176	CS-S	IR	81	39	19	218	C-C	IR	128	23	-3
176	CSW-C	BR	190	445	9	218	CS-C	BR	113	12	-9
176	CSW-C	IR	282	412	9	218	CS-C	IR	122	15	-3
176	CSW-S	BR	110	70	17	218	CS-S	BR	92	26	-15
176	CSW-S	IR	80	46	-1	218	CS-S	IR	115	10	-1
176	CSW-W	BR	178	73	13	218	CSW-C	BR	92	27	-5
176	CSW-W	IR	117	233	3	218	CSW-C	IR	125	42	-9
						218	CSW-S	BR	117	137	-5
190	C-C	BR	206	147	-5	218	CSW-S	IR	153	41	-4
190	C-C	IR	125	110	-1	218	CSW-W	BR	162	7	-8
190	CS-C	BR	106	46	4	218	CSW-W	IR	167	8	0
190	CS-C	IR	153	61	-3						
190	CS-S	BR	72	11	4	232	C-C	BR	119	11	1
190	CS-S	IR	77	40	-2	232	C-C	IR	121	9	-9
190	CSW-C	BR	126	112	-1	232	CS-C	BR	78	83	-18
190	CSW-C	IR	138	75	-8	232	CS-C	IR	97	37	-8
190	CSW-S	BR	65	13	-2	232	CS-S	BR	116	10	-6
190	CSW-S	IR	98	16	-11	232	CS-S	IR	79	5	-7
190	CSW-W	BR	47	10	-3	232	CSW-C	BR	83	6	-6
190	CSW-W	IR	116	21	-22	232	CSW-C	IR	116	9	-13
						232	CSW-S	BR	126	6	-9
204	C-C	BR	122	20	-9	232	CSW-S	IR	92	6	-5
204	C-C	IR	134	107	-8	232	CSW-W	BR	175	11	-9
204	CS-C	BR	134	44	-2	232	CSW-W	IR	146	-7	-14
204	CS-C	IR	149	44	-8	248	C-C	BR	162	36	-3
204	CS-S	BR	84	8	6	248	C-C	IR	113	12	2
204	CS-S	IR	34	6	9	248	CS-C	BR	101	17	-6
204	CSW-C	BR	130	21	-1	248	CS-C	IR	95	80	3
204	CSW-C	IR	93	16	4	248	CS-S	BR	126	25	-6
204	CSW-S	BR	94	23	-2	248	CS-S	IR	104	29	0
204	CSW-S	IR	133	9	-5	248	CSW-C	BR	112	24	-17
204	CSW-W	BR	96	17	11	248	CSW-C	IR	112	15	-2
204	CSW-W	IR	81	54	1	248	CSW-S	BR	118	46	-2
						248	CSW-S	IR	144	21	-5

continued

Table: 1409 - 27 . Corn, Soybean and Wheat Rotation at Lancaster - Greenhouse gases emission 2014.

DOY	Rotation	Position	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	Position	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
248	CSW-W	BR	79	9	-8	300	CSW-C	IR	42	5	-8
248	CSW-W	IR	85	8	-5	300	CSW-S	BR	34	9	-14
260	C-C	BR	64	2	3	300	CSW-S	IR	44	10	-3
260	C-C	IR	47	3	-6	300	CSW-W	BR	54	6	4
260	CS-C	BR	50	-15	-8	300	CSW-W	IR	51	4	4
260	CS-C	IR	67	7	-6						
260	CS-S	BR	54	6	-6	310	C-C	BR	19	6	-9
260	CS-S	IR	55	14	4	310	C-C	IR	15	3	-6
260	CSW-C	BR	74	10	-8	310	CS-C	BR	19	4	-1
260	CSW-C	IR	63	9	-5	310	CS-C	IR	16	2	-9
260	CSW-S	BR	45	-4	-5	310	CS-S	BR	27	1	-13
260	CSW-S	IR	53	17	-3	310	CS-S	IR	27	1	2
260	CSW-W	BR	-3	2	-2	310	CSW-C	BR	16	4	-7
260	CSW-W	IR	6	7	7	310	CSW-C	IR	15	4	-9
						310	CSW-S	BR	16	1	-15
281	C-C	BR	51	9	-1	310	CSW-S	IR	14	1	-10
281	C-C	IR	56	4	5	310	CSW-W	BR	20	9	2
281	CS-C	BR	36	3	1	310	CSW-W	IR	20	7	-7
281	CS-C	IR	39	3	-16	Mean			75	54	-1
281	CS-S	BR	37	10	-2	Probability(%)					
281	CS-S	IR	39	9	-1	DOY (D)	0	0	0		
281	CSW-C	BR	38	2	8	Rotation (R)	0	0	4		
281	CSW-C	IR	35	3	-7	Position (P)	51	0	86		
281	CSW-S	BR	36	7	4	D x T	0	0	85		
281	CSW-S	IR	43	11	-10	D x P	56	0	52		
281	CSW-W	BR	22	2	-9	T x D	20	0	16		
281	CSW-W	IR	13	2	-8	D x T x P	59	0	47		
						LSD(0.10)					
300	C-C	BR	46	5	3	DOY (D)	21	84	5		
300	C-C	IR	39	4	-2	Rotation (R)	8	35	3		
300	CS-C	BR	44	4	13	Position (P)	NS	7	NS		
300	CS-C	IR	48	6	8	D x T	36	150	NS		
300	CS-S	BR	35	6	-2	D x P	NS	80	NS		
300	CS-S	IR	30	8	27	T x D	NS	35	NS		
300	CSW-C	BR	45	3	-7	D x T x P	NS	157	NS		

IR: In Rows BR: Between Rows DOY (D): Day Of Year