

FIELD EXPERIMENT HISTORY

Year: 2005

Expt. Number: 2490
Title: Corn and Soybean Rotation Study **Est. 1983**
Personnel: J.G. Lauer, R. Borges, J.M. Gaska, K.D. Kohn, and T.F. Stanger
Organization: UW Madsion, Dept. of Agronomy
Location: Arlington Agricultural Research Station, Arlington, WI

FIELD INFORMATION

Field: 334W
Soil Type: Plano Silt Loam
Soil Test Results: pH: 6.4 O.M.(%): 3.6 P(ppm): 27 K(ppm): 172 Date: 4/19/03
Fertilizer Applied: Soybean: None
 Corn: 210 lb/a N preemerge
Tillage Operations: No-till and fall chisel plowed
 Spring field cultivated and cultimulched
Previous Crop: Corn and soybean
Previous Herbicide: Roundup
Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split Plot
Replicates: 4
Variables: A: Tillage, B: Rotation Sequence, C: Insecticide Seed Treatment

	<u>Corn</u>	<u>Soybean</u>
Area Planted:	10' x 35'	10' x 35'
Area Harvested:	5' x 31'	5' x 31'
Row Spacing:	30"	30"
Seeding Rate (spa)	1.8 viable seeds per foot of row	7.4 viable seeds per foot of row
Hybrid/Variety:	Trelay 7693 RR2	NK S24-K4
Planting Date:	27-Apr-05	2-May-05
Planting Equip:	Kinze 2000 Interplant planter	Kinze 2000 Interplant planter
Harvesting Date:	13-Oct-05	3-Oct-05
Harvesting Equip:	Kincaid plot combine	Almaco plot combine #1

Aphid rating scale:	<u>Rating</u>	<u>Description</u>
	0	no aphids present
	1	few aphids present, none on stems
	2	new trifoliolate has many aphids, few on stems and petioles (no leaf cupping)
	3	many aphids present on stems and petioles, leaves may or may not have cupping
	4	many aphids and extreme leaf cupping present
	5	many aphids, extreme leaf cupping, and sooty mold present

Herbicides:	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Notes</u>
	4/25/2005	2,4-D Ester	0.67 pt/A	no till plots only
	5/2/2005	Dual	2 pts/A	Corn
	5/3/2005	Dual	2 pts/A	Soybeans
	6/17/2005	Round-Up Weathermax	21 oz/A	all plots

Seed Applied Insecticides:	<u>Corn</u>	<u>Rate</u>	<u>Soybean</u>	<u>Rate</u>	<u>Fungicide</u>	<u>Rate</u>
	Force 3G	4.4 lbs/A	Gaucho	2 fl oz/cwt	SoyGard	0.32 oz/cwt
	Prescribe		Cruiser	1 oz/cwt	SoyGard	0.32 oz/cwt
	Poncho		Untreated check		SoyGard	0.32 oz/cwt

Rodenticides:	4/27/2005	Prozap	10 lbs/A	All Corn
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Results: Table C-61 and C-62.

**Table C-61. Corn/Soybean Rotation and Tillage Study - Corn.
Arlington, WI - 2005.**

Tillage	Rotation	Insecticide	Yield bu/A	Moisture %	Test Weight lbs/bu	Grower return \$/A	Lodged			Barren %	Ears		Harvest	
							Total %	Stalk %	Root %		Dropped %	plants/A	ears/A	
		Force	183	23.3	54	298	6	5	1	3	0	32536	31429	
		Poncho	178	23.1	54	289	10	10	0	4	0	33804	32589	
		Prescribe	177	23.6	53	289	6	4	2	4	0	32839	31661	
	1st Year Corn		217	21.2	55	354	6	6	0	2	0	34250	33667	
	2nd Year Corn		160	22.4	54	260	9	7	2	4	0	32583	31250	
	3rd Year Corn		160	24.0	53	261	8	5	3	4	0	31625	30417	
	4th Year Corn		178	25.2	53	290	5	5	1	3	0	32833	31750	
	5th Year Corn		173	23.5	53	282	7	6	1	4	0	33167	31792	
	Continuous Corn		165	24.4	53	269	8	8	0	5	0	33417	31875	
	Rotated Corn		201	22.6	54	328	7	7	0	3	0	33542	32500	
	1st Year Corn	Force	219	21.3	55	357	4	4	0	2	0	34000	33250	
	1st Year Corn	Poncho	216	21.1	56	352	9	9	0	2	0	35125	34250	
	1st Year Corn	Prescribe	216	21.1	55	352	4	4	0	0	0	33625	33500	
	2nd Year Corn	Force	174	22.1	54	283	7	6	1	5	0	32125	30375	
	2nd Year Corn	Poncho	156	22.0	54	255	12	12	0	4	0	34625	33250	
	2nd Year Corn	Prescribe	149	23.2	54	243	8	4	4	3	0	31000	30125	
	3rd Year Corn	Force	160	23.9	53	261	6	6	1	3	0	30250	29375	
	3rd Year Corn	Poncho	161	24.2	53	262	8	7	1	4	0	31375	30250	
	3rd Year Corn	Prescribe	160	23.8	53	260	9	2	7	5	0	33250	31625	
	4th Year Corn	Force	177	25.7	52	288	3	2	1	2	0	31750	31125	
	4th Year Corn	Poncho	176	24.5	53	287	8	8	0	4	0	33500	32000	
	4th Year Corn	Prescribe	181	25.6	52	294	4	4	0	3	0	33250	32125	
	5th Year Corn	Force	176	23.3	54	286	5	5	1	4	0	33000	31750	
	5th Year Corn	Poncho	173	23.4	53	281	11	10	1	3	0	34625	33500	
	5th Year Corn	Prescribe	171	24.0	53	279	3	3	0	5	0	31875	30125	
	Continuous Corn	Force	169	24.6	53	275	4	4	0	4	0	33375	32000	
	Continuous Corn	Poncho	162	24.0	53	265	15	15	0	5	0	34000	32250	
	Continuous Corn	Prescribe	164	24.5	53	268	5	5	0	5	0	32875	31375	
	Rotated Corn	Force	205	22.2	54	333	9	9	0	3	0	33250	32125	
	Rotated Corn	Poncho	198	22.6	54	323	8	8	0	2	0	33375	32625	
	Rotated Corn	Prescribe	201	23.1	54	328	5	5	0	4	0	34000	32750	
Conv			175	22.0	54	286	9	7	2	4	0	33488	32274	
NoTill			183	24.7	53	298	6	6	0	3	0	32631	31512	
Conv		Force	178	22.0	54	290	6	5	1	3	0	32643	31500	
Conv		Poncho	175	21.8	54	286	13	12	1	3	0	34321	33143	
Conv		Prescribe	173	22.2	54	281	7	4	3	4	0	33500	32179	
NoTill		Force	187	24.5	53	306	5	5	0	3	0	32429	31357	
NoTill		Poncho	180	24.5	53	293	8	8	0	4	0	33286	32036	
NoTill		Prescribe	182	25.0	53	297	4	4	0	3	0	32179	31143	

(continued)

Table C-61. Corn/Soybean Rotation and Tillage Study - Corn.

(continued) **Arlington, WI - 2005.**

Tillage	Rotation	Insecticide	Yield bu/A	Moisture %	Test Wt. lbs/bu	Grower return \$/A	Lodged			Barren %	Ears		Harvest	
							Total %	Stalk %	Root %		Dropped %	plants/A	ears/A	
Conv	1st Year Corn		203	21.1	55	332	7	7	0	2	0	34000	33250	
Conv	2nd Year Corn		168	21.7	54	274	10	7	3	4	0	33833	32500	
Conv	3rd Year Corn		161	21.8	54	263	10	5	6	4	0	33250	32000	
Conv	4th Year Corn		182	23.4	53	297	7	6	1	5	0	33250	31667	
Conv	5th Year Corn		167	21.5	54	272	9	7	1	4	0	33500	32333	
Conv	Continuous Corn		153	22.6	53	250	11	11	0	4	0	33333	32000	
Conv	Rotated Corn		191	21.8	54	312	7	7	0	3	0	33250	32167	
NoTill	1st Year Corn		231	21.2	55	376	6	6	0	1	0	34500	34083	
NoTill	2nd Year Corn		151	23.1	53	246	8	8	0	5	0	31333	30000	
NoTill	3rd Year Corn		159	26.1	52	259	6	5	0	4	0	30000	28833	
NoTill	4th Year Corn		174	27.1	52	283	4	3	1	2	0	32417	31833	
NoTill	5th Year Corn		180	25.6	52	293	5	4	0	5	0	32833	31250	
NoTill	Continuous Corn		177	26.2	52	288	5	5	0	5	0	33500	31750	
NoTill	Rotated Corn		211	23.5	53	344	8	8	0	3	0	33833	32833	
Conv	1st Year Corn	Force	202	21.3	55	328	5	5	0	2	0	33500	32750	
Conv	1st Year Corn	Poncho	207	20.7	56	338	11	11	0	4	0	35250	34000	
Conv	1st Year Corn	Prescribe	201	21.4	55	328	4	4	0	1	0	33250	33000	
Conv	2nd Year Corn	Force	187	21.6	54	304	10	8	3	5	0	32500	30750	
Conv	2nd Year Corn	Poncho	164	21.5	55	267	10	10	0	4	0	35000	33500	
Conv	2nd Year Corn	Prescribe	155	22.0	54	252	11	4	7	2	0	34000	33250	
Conv	3rd Year Corn	Force	163	22.3	54	266	3	1	2	4	0	32750	31500	
Conv	3rd Year Corn	Poncho	165	21.7	55	269	11	9	2	2	0	33500	32750	
Conv	3rd Year Corn	Prescribe	156	21.5	54	255	17	4	13	5	0	33500	31750	
Conv	4th Year Corn	Force	179	23.5	53	292	4	2	2	2	0	31500	31000	
Conv	4th Year Corn	Poncho	182	23.0	54	297	10	10	0	6	0	34500	32250	
Conv	4th Year Corn	Prescribe	185	23.6	53	302	7	7	0	6	0	33750	31750	
Conv	5th Year Corn	Force	169	21.3	54	276	7	5	2	2	0	33000	32250	
Conv	5th Year Corn	Poncho	164	21.4	54	267	14	13	2	3	0	34000	33000	
Conv	5th Year Corn	Prescribe	167	22.0	55	272	4	4	0	5	0	33500	31750	
Conv	Continuous Corn	Force	152	22.8	53	248	5	5	0	5	0	32750	31250	
Conv	Continuous Corn	Poncho	155	22.4	54	253	22	22	0	3	0	35000	34000	
Conv	Continuous Corn	Prescribe	153	22.6	54	249	7	6	1	5	0	32250	30750	
Conv	Rotated Corn	Force	193	21.7	55	314	9	9	0	4	0	32500	31000	
Conv	Rotated Corn	Poncho	190	21.8	54	310	11	11	0	2	0	33000	32500	
Conv	Rotated Corn	Prescribe	191	22.1	54	312	1	1	0	4	0	34250	33000	

(continued)

Table C-61. Corn/Soybean Rotation and Tillage Study - Corn.

(continued) **Arlington, WI - 2005.**

Tillage	Rotation	Insecticide	Yield bu/A	Moisture %	Test Wt. lbs/bu	Grower return \$/A	Lodged			Barren %	Ears		Harvest	
							Total %	Stalk %	Root %		Dropped %	plants plants/A	ears ears/A	
NoTill	1st Year Corn	Force	236	21.3	55	385	4	4	0	2	1	34500	33750	
NoTill	1st Year Corn	Poncho	225	21.5	55	367	8	8	0	1	0	35000	34500	
NoTill	1st Year Corn	Prescribe	231	20.8	56	377	5	5	0	0	0	34000	34000	
NoTill	2nd Year Corn	Force	160	22.6	53	261	4	4	0	6	0	31750	30000	
NoTill	2nd Year Corn	Poncho	149	22.5	53	243	14	14	0	3	0	34250	33000	
NoTill	2nd Year Corn	Prescribe	143	24.3	53	233	5	5	0	5	0	28000	27000	
NoTill	3rd Year Corn	Force	157	25.5	52	256	10	10	0	3	0	27750	27250	
NoTill	3rd Year Corn	Poncho	157	26.7	52	256	6	6	0	5	0	29250	27750	
NoTill	3rd Year Corn	Prescribe	163	26.2	52	265	1	1	1	4	0	33000	31500	
NoTill	4th Year Corn	Force	175	27.9	52	285	2	1	1	2	0	32000	31250	
NoTill	4th Year Corn	Poncho	170	26.0	52	277	7	7	0	2	0	32500	31750	
NoTill	4th Year Corn	Prescribe	176	27.5	51	287	2	1	1	1	0	32750	32500	
NoTill	5th Year Corn	Force	182	25.3	53	297	4	4	0	5	0	33000	31250	
NoTill	5th Year Corn	Poncho	181	25.4	52	296	8	7	1	3	0	35250	34000	
NoTill	5th Year Corn	Prescribe	175	26.0	52	286	2	2	0	6	0	30250	28500	
NoTill	Continuous Corn	Force	185	26.4	52	301	4	4	0	4	0	34000	32750	
NoTill	Continuous Corn	Poncho	169	25.7	52	276	8	8	0	8	0	33000	30500	
NoTill	Continuous Corn	Prescribe	176	26.5	52	287	4	4	0	4	0	33500	32000	
NoTill	Rotated Corn	Force	216	22.8	53	352	9	9	0	2	1	34000	33250	
NoTill	Rotated Corn	Poncho	206	23.5	54	336	6	6	0	3	0	33750	32750	
NoTill	Rotated Corn	Prescribe	211	24.1	53	344	8	8	0	4	0	33750	32500	
Mean			179	23.3	54	292	7	6	1	4	0	33060	31893	
Probability(%)														
Tillage (T)			1.2	0.2	0.3	1.2	2.8	5.4	8.6	75.9	35.6	3.8	7.0	
Rotation (R)			0.0	0.1	0.0	0.0	55.7	54.8	2.1	1.2	44.0	14.8	1.4	
T x R			2.7	16.1	40.9	2.7	77.9	62.3	2.5	14.9	44.0	24.7	11.3	
Insecticide (I)			6.9	7.2	25.3	6.9	0.0	0.0	3.5	94.6	14.2	3.0	5.6	
T x I			49.5	70.4	28.4	49.5	25.0	8.6	5.6	74.2	14.2	50.5	56.6	
R x I			48.7	55.3	84.1	48.7	31.4	29.6	1.4	57.4	61.6	23.2	44.0	
T x R x I			90.3	83.5	50.1	90.3	2.3	19.2	5.3	32.7	61.6	28.1	17.4	
LSD(0.10)														
Tillage (T)			4	1.0	1	7	2	1	1	NS	NS	628	671	
Rotation (R)			13	1.5	1	20	NS	NS	2	1	NS	NS	1362	
T x R			18	2.1	NS	29	NS	NS	2	NS	NS	NS	NS	
Insecticide (I)			4	0.4	NS	7	2	2	1	NS	NS	814	835	
T x I			NS	NS	NS	NS	NS	2	1	NS	NS	NS	NS	
R x I			NS	NS	NS	NS	NS	NS	2	NS	NS	NS	NS	
T x R x I			NS	NS	NS	NS	7	NS	3	NS	NS	NS	NS	
CV(%)														
			8	5	1	8	82	83	324	88	917	8	8	

**Table C-62. Corn/Soybean Rotation and Tillage Study - Soybean.
Arlington, WI - 2005.**

Tillage	Rotation	Insecticide	Yield bu/A	Moisture %	Grower	Height inches	Lodging 1 to 5	Soybean	SCN eggs/100cc	Seed Composition			Protein +		
					return \$/A			Aphids 0 to 5		Protein %	Oil %	Fiber %	Protein lbs/A	Oil lbs/A	Oil lbs/A
		Crusier	39	13.6	209	29	1	2	-	34.7	19.5	4.8	816	464	1279
		Gaucho	39	13.5	208	29	1	2	-	34.8	19.5	4.8	812	461	1273
		Untreated	39	13.6	205	29	1	2	-	34.8	19.6	4.8	800	455	1255
	1st Year Soybean		57	13.7	304	32	1	2	4400	34.7	19.5	4.8	1194	668	1861
	2nd Year Soybean		45	13.8	241	31	1	2	3758	34.9	19.7	4.8	947	537	1484
	3rd Year Soybean		41	13.7	218	29	1	2	1792	34.5	19.6	4.8	841	485	1326
	4th Year Soybean		36	13.6	194	28	1	2	4522	34.4	19.7	4.8	743	435	1179
	5th Year Soybean		27	13.5	141	25	1	2	5310	34.9	19.6	4.8	551	315	866
	Continuous Soybean		19	13.0	103	24	1	2	2890	35.3	19.2	4.8	409	223	632
	Rotated Soybean		48	13.9	252	32	1	2	4612	34.6	19.5	4.8	979	557	1535
	1st Year Soybean	Crusier	58	13.7	306	31	1	2	-	34.8	19.4	4.8	1204	670	1874
	1st Year Soybean	Gaucho	59	13.6	312	32	1	2	-	34.6	19.4	4.8	1220	684	1904
	1st Year Soybean	Untreated	56	13.7	295	34	1	2	-	34.8	19.5	4.8	1158	649	1807
	2nd Year Soybean	Crusier	43	13.8	231	30	1	2	-	34.8	19.6	4.8	902	513	1415
	2nd Year Soybean	Gaucho	46	13.7	244	31	1	2	-	34.9	19.7	4.8	957	543	1500
	2nd Year Soybean	Untreated	47	13.8	249	32	1	2	-	35.0	19.7	4.7	982	554	1536
	3rd Year Soybean	Crusier	43	13.9	227	29	1	2	-	34.3	19.7	4.8	873	507	1380
	3rd Year Soybean	Gaucho	39	13.6	209	28	1	2	-	34.6	19.5	4.8	814	464	1277
	3rd Year Soybean	Untreated	41	13.5	217	29	1	2	-	34.4	19.7	4.8	837	483	1321
	4th Year Soybean	Crusier	38	13.5	201	28	1	2	-	34.2	19.7	4.8	769	454	1222
	4th Year Soybean	Gaucho	38	13.6	199	28	1	2	-	34.5	19.6	4.8	764	447	1210
	4th Year Soybean	Untreated	34	13.6	181	27	1	2	-	34.5	19.7	4.8	698	406	1104
	5th Year Soybean	Crusier	27	13.3	141	26	1	2	-	34.9	19.6	4.8	551	314	865
	5th Year Soybean	Gaucho	26	13.4	140	25	1	2	-	35.0	19.5	4.8	549	312	860
	5th Year Soybean	Untreated	27	13.7	142	25	1	2	-	34.8	19.7	4.8	553	319	873
	Continuous Soybean	Crusier	18	13.0	97	24	1	2	-	35.5	19.1	4.8	389	210	599
	Continuous Soybean	Gaucho	20	13.0	105	25	1	2	-	35.2	19.2	4.8	417	230	647
	Continuous Soybean	Untreated	20	13.2	105	23	1	2	-	35.3	19.3	4.8	419	229	649
	Rotated Soybean	Crusier	50	14.1	263	33	1	2	-	34.6	19.4	4.8	1022	578	1600
	Rotated Soybean	Gaucho	47	13.7	248	32	1	2	-	34.6	19.5	4.8	964	549	1513
	Rotated Soybean	Untreated	46	13.9	246	30	1	2	-	34.6	19.5	4.8	950	543	1493
Conv			27	13.6	142	26	1	2	5387	35.1	19.4	4.7	561	313	874
NoTill			51	13.5	273	32	1	2	2408	34.4	19.6	4.8	1057	606	1664
Conv		Crusier	26	13.6	140	25	1	2	-	35.1	19.4	4.8	552	308	861
Conv		Gaucho	27	13.6	144	26	1	2	-	35.1	19.4	4.8	568	317	885
Conv		Untreated	27	13.7	142	26	1	2	-	35.1	19.5	4.7	562	314	877
NoTill		Crusier	53	13.6	279	32	1	2	-	34.4	19.6	4.8	1079	619	1698
NoTill		Gaucho	51	13.5	273	31	1	2	-	34.4	19.6	4.8	1056	605	1661
NoTill		Untreated	50	13.5	268	31	1	2	-	34.4	19.7	4.8	1037	596	1632

(continued)

Table C-62. Corn/Soybean Rotation and Tillage Study - Soybean.
 (continued) **Arlington, WI - 2005.**

Tillage	Rotation	Insecticide	Yield bu/A	Moisture %	Grower	Height inches	Lodging 1 to 5	Soybean		Seed Composition			Protein +		
					return \$/A			Aphids 0 to 5	SCN eggs/100cc	Protein %	Oil %	Fiber %	Protein lbs/A	Oil lbs/A	Oil lbs/A
Conv	1st Year Soybean		45	13.8	236	30	1	2	4974	34.8	19.6	4.8	930	522	1452
Conv	2nd Year Soybean		32	13.9	172	28	1	2	4653	35.1	19.7	4.7	681	384	1065
Conv	3rd Year Soybean		24	13.6	126	25	1	2	3440	34.8	19.5	4.8	495	278	773
Conv	4th Year Soybean		19	13.5	101	23	1	2	6347	35.3	19.3	4.7	405	221	626
Conv	5th Year Soybean		17	13.4	91	22	1	2	6880	35.4	19.3	4.7	364	200	564
Conv	Continuous Soybean		17	13.3	88	23	1	2	3800	35.2	19.2	4.8	350	192	542
Conv	Rotated Soybean		34	13.9	179	29	1	2	7613	35.0	19.5	4.7	703	395	1098
NoTill	1st Year Soybean		70	13.5	372	35	1	2	3827	34.7	19.3	4.8	1458	813	2271
NoTill	2nd Year Soybean		58	13.7	310	34	1	2	2862	34.6	19.7	4.8	1213	689	1903
NoTill	3rd Year Soybean		58	13.7	309	32	1	2	144	34.1	19.7	4.8	1188	691	1879
NoTill	4th Year Soybean		54	13.6	286	32	1	2	2697	33.5	20.1	4.8	1082	650	1731
NoTill	5th Year Soybean		36	13.5	191	29	1	2	3740	34.4	19.9	4.8	738	430	1168
NoTill	Continuous Soybean		22	12.8	117	25	1	2	1980	35.4	19.2	4.8	467	254	722
NoTill	Rotated Soybean		61	13.8	326	34	1	2	1610	34.1	19.5	4.9	1255	718	1973
Conv	1st Year Soybean	Crusier	45	13.8	236	27	1	2	-	34.9	19.6	4.8	933	523	1455
Conv	1st Year Soybean	Gaucho	47	13.8	248	29	1	2	-	34.7	19.6	4.8	971	549	1519
Conv	1st Year Soybean	Untreated	42	14.0	225	33	1	2	-	34.9	19.6	4.7	886	496	1382
Conv	2nd Year Soybean	Crusier	29	13.9	154	27	1	2	-	35.0	19.6	4.8	607	342	950
Conv	2nd Year Soybean	Gaucho	33	13.8	175	29	1	2	-	35.3	19.7	4.7	695	390	1085
Conv	2nd Year Soybean	Untreated	35	14.0	188	30	1	2	-	35.1	19.7	4.7	740	419	1159
Conv	3rd Year Soybean	Crusier	24	13.9	128	25	1	2	-	34.8	19.6	4.8	503	284	786
Conv	3rd Year Soybean	Gaucho	23	13.5	124	25	1	2	-	34.9	19.4	4.8	485	273	757
Conv	3rd Year Soybean	Untreated	24	13.5	126	25	1	2	-	34.9	19.5	4.8	496	278	775
Conv	4th Year Soybean	Crusier	19	13.5	100	23	1	2	-	35.1	19.4	4.8	398	220	618
Conv	4th Year Soybean	Gaucho	18	13.5	98	24	1	2	-	35.5	19.0	4.8	393	212	605
Conv	4th Year Soybean	Untreated	20	13.5	106	23	1	2	-	35.3	19.4	4.7	423	233	656
Conv	5th Year Soybean	Crusier	16	13.1	88	22	1	2	-	35.4	19.2	4.8	348	191	539
Conv	5th Year Soybean	Gaucho	16	13.3	87	21	1	2	-	35.4	19.3	4.8	348	190	538
Conv	5th Year Soybean	Untreated	19	13.8	99	22	1	2	-	35.4	19.4	4.7	398	218	616
Conv	Continuous Soybean	Crusier	15	13.1	82	22	1	2	-	35.4	19.1	4.8	328	176	503
Conv	Continuous Soybean	Gaucho	19	13.3	101	25	1	2	-	35.0	19.4	4.8	396	222	618
Conv	Continuous Soybean	Untreated	15	13.4	82	22	1	2	-	35.3	19.3	4.7	325	178	503
Conv	Rotated Soybean	Crusier	36	14.1	192	31	1	2	-	34.9	19.5	4.8	750	423	1173
Conv	Rotated Soybean	Gaucho	33	13.8	174	29	1	2	-	35.2	19.5	4.7	689	385	1074
Conv	Rotated Soybean	Untreated	32	14.0	171	28	1	2	-	35.1	19.5	4.7	668	378	1046

(continued)

Table C-62. Corn/Soybean Rotation and Tillage Study - Soybean.
 (continued) **Arlington, WI - 2005.**

Tillage	Rotation	Insecticide	Yield bu/A	Moisture %	Grower	Height inches	Lodging 1 to 5	Soybean		Seed Composition			Protein +		
					return \$/A			Aphids 0 to 5	SCN eggs/100cc	Protein %	Oil %	Fiber %	Protein lbs/A	Oil lbs/A	Oil lbs/A
NoTill	1st Year Soybean	Crusier	71	13.7	376	35	1	2	-	34.7	19.3	4.8	1475	818	2293
NoTill	1st Year Soybean	Gaicho	71	13.4	376	34	1	2	-	34.6	19.3	4.8	1469	819	2288
NoTill	1st Year Soybean	Untreated	69	13.5	365	36	1	2	-	34.7	19.5	4.8	1429	802	2231
NoTill	2nd Year Soybean	Crusier	58	13.7	307	33	1	2	-	34.5	19.7	4.8	1197	683	1880
NoTill	2nd Year Soybean	Gaicho	59	13.7	313	34	1	2	-	34.5	19.7	4.8	1219	697	1915
NoTill	2nd Year Soybean	Untreated	58	13.6	310	34	1	2	-	34.9	19.7	4.7	1224	689	1913
NoTill	3rd Year Soybean	Crusier	61	13.9	325	33	1	2	-	33.9	19.9	4.8	1243	729	1973
NoTill	3rd Year Soybean	Gaicho	56	13.7	295	31	1	2	-	34.4	19.6	4.8	1143	655	1798
NoTill	3rd Year Soybean	Untreated	58	13.6	308	34	1	2	-	34.0	19.8	4.8	1179	688	1867
NoTill	4th Year Soybean	Crusier	57	13.6	303	32	1	2	-	33.4	20.1	4.9	1140	687	1827
NoTill	4th Year Soybean	Gaicho	57	13.7	300	33	1	2	-	33.5	20.1	4.8	1134	682	1816
NoTill	4th Year Soybean	Untreated	48	13.6	256	32	1	2	-	33.7	20.1	4.8	972	579	1551
NoTill	5th Year Soybean	Crusier	37	13.4	194	30	1	2	-	34.5	19.9	4.8	755	437	1192
NoTill	5th Year Soybean	Gaicho	36	13.5	193	30	1	2	-	34.6	19.8	4.8	750	433	1183
NoTill	5th Year Soybean	Untreated	35	13.6	185	28	1	2	-	34.2	20.0	4.8	709	420	1129
NoTill	Continuous Soybean	Crusier	21	12.8	113	26	1	2	-	35.5	19.2	4.8	451	244	695
NoTill	Continuous Soybean	Gaicho	21	12.7	110	25	1	2	-	35.3	19.1	4.8	438	237	676
NoTill	Continuous Soybean	Untreated	24	13.0	129	24	1	2	-	35.3	19.3	4.8	513	281	794
NoTill	Rotated Soybean	Crusier	63	14.0	335	36	1	2	-	34.3	19.4	4.9	1293	733	2026
NoTill	Rotated Soybean	Gaicho	61	13.6	322	34	1	2	-	34.1	19.6	4.9	1239	712	1952
NoTill	Rotated Soybean	Untreated	60	13.8	321	33	1	2	-	34.0	19.6	4.9	1231	709	1940
Mean			39	13.6	208	29	1	2	3897	34.7	19.5	4.8	809	460	1269
Probability(%)															
Tillage (T)			0.0	7.5	0.0	0.0	-	51.3	7.4	0.2	3.8	0.0	0.0	0.0	0.0
Rotation (R)			0.0	0.0	0.0	0.0	-	92.2	44.5	17.0	1.3	49.9	0.0	0.0	0.0
T x R			0.9	23.9	0.9	5.6	-	88.6	83.6	16.6	0.3	56.7	0.9	0.8	0.9
Insecticide (I)			57.5	9.3	57.5	89.8	-	0.0	-	83.8	4.8	1.8	61.6	68.6	64.1
T x I			29.1	43.6	29.1	6.0	-	45.3	-	94.9	81.0	62.6	28.9	32.0	29.9
R x I			39.4	2.8	39.4	0.0	-	41.9	-	57.9	49.1	36.1	42.0	43.3	42.6
T x R x I			52.3	90.1	52.3	5.3	-	76.7	-	70.7	35.7	25.8	60.7	46.5	55.4
LSD(0.10)															
Tillage (T)			4	0.1	22	1	-	NS	1548	0.3	0.1	0.0	80	48	128
Rotation (R)			7	0.2	35	2	-	NS	NS	NS	0.2	NS	128	79	206
T x R			9	NS	49	2	-	NS	NS	NS	0.3	NS	181	111	292
Insecticide (I)			NS	0.1	NS	NS	-	0	-	NS	0.1	0.0	NS	NS	NS
T x I			NS	NS	NS	1	-	NS	-	NS	NS	NS	NS	NS	NS
R x I			NS	0.2	NS	1	-	NS	-	NS	NS	NS	NS	NS	NS
T x R x I			NS	NS	NS	2	-	NS	-	NS	NS	NS	NS	NS	NS
CV(%)			11	2	11	6	-	16	87	1	1	1	11	12	11