

FIELD EXPERIMENT HISTORY

Title: Corn and Soybean Rotation Study **Est.1983**
Experiment: 09CS **Trial ID:** 3056 **Year:** 2007
Personnel: J. G. Lauer, J.M. Gaska, K. D. Kohn, J.T. Hopf
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: 334W **Previous Crop:** Corn/Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 4 /27/07 **pH** 6.7 **OM (%)** 2.8 **P (ppm)** 13 **K (ppm)** 91

Plot Management

Tillage Operations: See Factors

	<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	210	5 /7 /07
Manure:	N/A	N/A	
Herbicide:	Credit Systemic Extra 32 oz/a 6/11/07 Dual II Mag 24 oz/a 5/7/07 Gramoxone Iteon 32 oz/a 5/7/07	Insecticide:	Force 3G 4.4 lbs/A 5/4/07 Prozap 10 lb/a 5/4/07
Irrigation:	None	Hybrid:	See Factors
Planting Date:	Corn: 5/4/07 Planting Depth: Soybean: 5/7/07	C: 1.5" S: 1"	Row Width: 30"
Target Plant Density:	Corn: 32500 Soybean: 150000	Planting Method:	Kinze 2000 Interplant planter
Harvest Date:	Corn: 10/8/07 Soybean: 10/8/07	Harvest Method:	C: Kincaid plot combine S: Almaco plot combine #2
Notes:	The ISU 0 to 3 node-injury root rating scale was used. A rating of 0.50 or below is considered acceptable economic root protection. 5 roots per replicate were evaluated.		

Experimental Design

Design: RCB split-split plot **Replications:** 4
Plot Size Seeded: 10' x35' **Experiment Size:** 2.7 acres
Harvest Plot Size: Corn: 5' x 31'
Factors/Treatments:

Tillage:

No-Till
Conventional

Rotation

Continuous Corn or Soybean
Alternating Corn - Soybean
Corn 5yrs. / Soybean 5 yrs.

Hybrids/Varieties:

C: DekalbDKC5139
Dekalb DKC5020
Pioneer P38B87
S: Latham L2412RX
Pioneer 91M90
Asgrow AG2107

Results: Table C-32 and C-33.

Table C-32. Corn/Soybean Rotation and Tillage Study - Corn.
Arlington, WI - 2007.

Tillage	Rotation	CRW Control	Yield Moisture		Test Grower		Lodged		Harvest plants/A	Root Rating	Grain Composition			Ethanol per bu gallons		
			bu/A	%	lbs/bu	\$/A	Total	Stalk			Root	Oil %	Starch %		Protein %	
		DKC5020	218	17.2	56.3	745	2.7	1.0	1.7	33070	0.03	3.3	61.2	6.9	2.93	639
		DKC5139	227	17.7	56.3	770	2.7	0.0	2.7	33080	0.02	3.3	61.2	7.0	2.93	662
		P38B87	213	19.1	58.1	721	1.3	0.1	1.2	32700	0.01	3.3	60.7	7.5	2.93	625
	1st Year Corn		239	17.4	57.3	814	1.9	0.6	1.3	33864	-	3.3	60.9	7.3	2.92	697
	2nd Year Corn		220	17.5	57.6	751	1.8	1.1	0.7	32764	-	3.3	61.0	7.1	2.93	645
	3rd Year Corn		205	17.9	56.9	697	6.3	0.2	6.1	32412	-	3.3	61.2	6.9	2.94	602
	4th Year Corn		217	18.3	56.7	736	1.5	0.0	1.5	32600	-	3.3	61.1	7.0	2.93	635
	5th Year Corn		218	18.3	56.8	741	2.2	0.2	2.0	33045	-	3.3	61.1	7.1	2.94	641
	Continuous Corn		198	19.0	56.0	670	1.8	0.5	1.2	32906	0.02	3.3	61.0	7.2	2.93	580
	Rotated Corn		237	17.6	57.1	807	0.1	0.0	0.1	33045	-	3.3	60.9	7.3	2.92	692
	1st Year Corn	DKC5020	241	16.7	56.4	827	1.8	1.6	0.2	34567	-	3.2	61.0	7.2	2.92	705
	1st Year Corn	DKC5139	243	17.0	56.7	830	1.8	0.0	1.8	33935	-	3.3	61.2	7.0	2.92	708
	1st Year Corn	P38B87	232	18.7	58.8	786	2.0	0.2	1.8	33092	-	3.3	60.6	7.7	2.92	678
	2nd Year Corn	DKC5020	213	16.8	56.7	729	4.3	3.4	0.9	32178	-	3.3	61.1	7.0	2.93	623
	2nd Year Corn	DKC5139	226	17.0	57.2	774	0.2	0.0	0.2	33373	-	3.3	61.2	6.9	2.93	663
	2nd Year Corn	P38B87	222	18.9	58.8	750	0.9	0.0	0.9	32740	-	3.3	60.7	7.5	2.93	650
	3rd Year Corn	DKC5020	200	17.1	56.4	684	7.5	0.4	7.0	32811	-	3.3	61.4	6.6	2.95	589
	3rd Year Corn	DKC5139	212	17.9	56.5	721	8.4	0.0	8.4	31757	-	3.3	61.3	6.6	2.94	623
	3rd Year Corn	P38B87	203	18.7	57.7	686	3.0	0.2	2.8	32670	-	3.3	60.7	7.4	2.94	594
	4th Year Corn	DKC5020	214	17.4	56.2	731	0.8	0.0	0.8	32600	-	3.3	61.4	6.7	2.93	627
	4th Year Corn	DKC5139	226	18.3	55.7	767	3.3	0.0	3.3	33162	-	3.3	61.2	6.9	2.93	660
	4th Year Corn	P38B87	210	19.3	58.0	710	0.4	0.0	0.4	32038	-	3.3	60.8	7.4	2.93	617
	5th Year Corn	DKC5020	223	17.5	56.3	760	1.2	0.4	0.8	32951	-	3.3	61.3	6.8	2.94	656
	5th Year Corn	DKC5139	221	17.8	56.4	753	2.9	0.2	2.7	32881	-	3.3	61.3	6.9	2.93	649
	5th Year Corn	P38B87	210	19.5	57.6	709	2.5	0.0	2.5	33302	-	3.3	60.7	7.5	2.94	618
	Continuous Corn	DKC5020	191	18.5	55.7	648	3.0	1.2	1.7	33001	0.03	3.3	61.2	6.9	2.92	558
	Continuous Corn	DKC5139	215	19.0	54.8	722	1.9	0.0	1.9	33563	0.02	3.3	61.1	7.2	2.92	624
	Continuous Corn	P38B87	190	19.6	57.4	641	0.7	0.4	0.2	32248	0.01	3.3	60.7	7.5	2.93	557

(continued)

Table C-32. Corn/Soybean Rotation and Tillage Study - Corn.
(continued) **Arlington, WI - 2007.**

Tillage	Rotation	Insecticide	Yield Moisture		Test Grower		Lodged		Harvest plants/A	Root Rating	Grain Composition			Ethanol per bu gallons	
			bu/A	%	lbs/bu	\$/A	Total	Stalk			Oil %	Starch %	Protein %		
	Rotated Corn	DKC5020	244	16.8	56.3	835	0.0	0.0	33373	-	3.3	61.1	7.0	2.92	712
	Rotated Corn	DKC5139	242	17.2	56.6	826	0.2	0.0	32951	-	3.3	61.0	7.2	2.93	707
	Rotated Corn	P38B87	225	18.9	58.3	761	0.0	0.0	32811	-	3.3	60.6	7.6	2.92	658
Conv			233	17.9	57.6	792	2.9	0.1	33744		3.3	61.0	7.2	2.93	681
No-Till			206	18.2	56.2	698	1.5	0.6	32134	0.02	3.3	61.1	7.0	2.93	603
Conv		DKC5020	229	17.0	57.1	784	2.3	0.3	33804	-	3.3	61.1	7.0	2.93	671
Conv		DKC5139	243	17.5	57.1	828	4.3	0.0	34065	-	3.3	61.1	7.1	2.92	710
Conv		P38B87	226	19.0	58.6	764	2.1	0.1	33363	-	3.3	60.6	7.6	2.93	661
No-Till		DKC5020	207	17.4	55.4	705	3.0	1.8	32308	0.03	3.3	61.3	6.8	2.94	606
No-Till		DKC5139	210	17.9	55.5	713	1.0	0.1	32058	0.02	3.3	61.3	6.8	2.93	614
No-Till		P38B87	200	19.1	57.5	677	0.6	0.1	32038	0.01	3.3	60.7	7.5	2.93	588
Conv	1st Year Corn		252	17.4	58.1	861	2.6	0.4	34520	-	3.3	60.8	7.4	2.92	738
Conv	2nd Year Corn		241	17.4	58.3	823	0.4	0.0	34005	-	3.3	61.0	7.3	2.92	705
Conv	3rd Year Corn		212	17.5	57.9	724	10.2	0.4	32834	-	3.3	61.2	6.8	2.95	624
Conv	4th Year Corn		244	18.0	57.7	831	2.1	0.0	33771	-	3.3	61.0	7.2	2.92	713
Conv	5th Year Corn		230	17.9	57.8	782	3.6	0.1	33537	-	3.3	61.0	7.2	2.93	675
Conv	Continuous Corn		200	19.1	56.1	677	1.3	0.0	33818	-	3.3	60.8	7.4	2.91	583
Conv	Rotated Corn		248	17.7	57.6	846	0.1	0.0	33724	-	3.3	60.8	7.3	2.92	726
No-Till	1st Year Corn		225	17.5	56.6	767	1.1	0.8	33209	-	3.3	61.0	7.3	2.92	657
No-Till	2nd Year Corn		199	17.7	56.9	680	3.1	2.2	31522	-	3.3	61.0	7.0	2.93	585
No-Till	3rd Year Corn		197	18.3	55.8	670	2.4	0.0	31991	-	3.3	61.1	7.0	2.94	580
No-Till	4th Year Corn		189	18.7	55.6	640	0.9	0.0	31429	-	3.3	61.3	6.9	2.94	556
No-Till	5th Year Corn		206	18.7	55.8	699	0.8	0.3	32553	-	3.3	61.2	6.9	2.94	607
No-Till	Continuous Corn		196	18.9	56.0	663	2.4	1.2	31813	0.02	3.3	61.2	7.0	2.94	576
No-Till	Rotated Corn		225	17.5	56.6	768	0.0	0.0	32366	-	3.3	61.0	7.2	2.92	659
Conv	1st Year Corn	DKC5020	248	16.5	57.3	851	1.1	0.8	34989	-	3.2	60.8	7.4	2.93	729

(continued)

Table C-32. Corn/Soybean Rotation and Tillage Study - Corn.
(continued) **Arlington, WI - 2007.**

Tillage	Rotation	Insecticide	Yield		Moisture		Test		Grower		Lodged		Harvest plants/ plants/A	Root Rating	Grain Composition			Ethanol per bu gallons
			bu/A	%	%	lbs/bu	\$/A	return	Total	Stalk	Root	Oil			Starch	Protein	%	
Conv	1st Year Corn	DKC5139	257	17.0	57.8	881	3.6	0.0	3.6	34426	-	3.3	61.0	7.2	2.92	751		
Conv	1st Year Corn	P38B87	251	18.7	59.2	851	3.2	0.4	2.8	34145	-	3.3	60.6	7.6	2.92	734		
Conv	2nd Year Corn	DKC5020	235	16.4	57.7	806	0.0	0.0	0.0	33864	-	3.3	61.2	7.1	2.93	687		
Conv	2nd Year Corn	DKC5139	248	17.0	57.8	848	0.0	0.0	0.0	34286	-	3.3	61.2	7.1	2.92	724		
Conv	2nd Year Corn	P38B87	241	18.9	59.4	815	1.3	0.0	1.3	33864	-	3.3	60.7	7.6	2.93	705		
Conv	3rd Year Corn	DKC5020	204	16.7	57.3	700	10.6	0.9	9.7	33443	-	3.4	61.5	6.5	2.95	602		
Conv	3rd Year Corn	DKC5139	221	17.4	57.7	754	14.0	0.0	14.0	31897	-	3.4	61.3	6.6	2.94	649		
Conv	3rd Year Corn	P38B87	211	18.4	58.7	716	6.0	0.4	5.6	33162	-	3.3	60.8	7.2	2.95	621		
Conv	4th Year Corn	DKC5020	240	16.9	57.4	822	1.7	0.0	1.7	33162	-	3.3	61.1	6.9	2.92	700		
Conv	4th Year Corn	DKC5139	260	17.7	57.1	885	4.3	0.0	4.3	34848	-	3.3	61.2	7.0	2.92	757		
Conv	4th Year Corn	P38B87	234	19.3	58.8	788	0.4	0.0	0.4	33302	-	3.3	60.7	7.5	2.92	682		
Conv	5th Year Corn	DKC5020	231	17.0	57.4	790	2.0	0.4	1.6	32740	-	3.3	61.3	6.9	2.93	678		
Conv	5th Year Corn	DKC5139	236	17.4	57.4	805	5.0	0.0	5.0	34145	-	3.3	61.1	7.1	2.93	692		
Conv	5th Year Corn	P38B87	223	19.3	58.5	752	3.7	0.0	3.7	33724	-	3.3	60.7	7.6	2.93	654		
Conv	Continuous Corn	DKC5020	192	18.9	56.2	648	0.9	0.0	0.9	34145	-	3.3	60.9	7.1	2.91	557		
Conv	Continuous Corn	DKC5139	224	19.0	55.0	756	2.9	0.0	2.9	34426	-	3.3	60.9	7.4	2.91	651		
Conv	Continuous Corn	P38B87	186	19.6	57.0	626	0.0	0.0	0.0	32881	-	3.3	60.6	7.7	2.92	542		
Conv	Rotated Corn	DKC5020	254	17.0	56.8	871	0.0	0.0	0.0	34286	-	3.4	61.0	7.1	2.91	741		
Conv	Rotated Corn	DKC5139	253	17.1	57.0	866	0.4	0.0	0.4	34426	-	3.2	61.0	7.2	2.93	744		
Conv	Rotated Corn	P38B87	237	19.0	58.9	802	0.0	0.0	0.0	32459	-	3.3	60.5	7.6	2.92	693		
No-Till	1st Year Corn	DKC5020	234	16.9	55.6	802	2.5	2.5	0.0	34145	-	3.3	61.1	7.1	2.91	682		
No-Till	1st Year Corn	DKC5139	228	17.0	55.7	778	0.0	0.0	0.0	33443	-	3.3	61.3	6.9	2.92	665		
No-Till	1st Year Corn	P38B87	213	18.7	58.5	721	0.9	0.0	0.9	32038	-	3.3	60.5	7.8	2.93	623		
No-Till	2nd Year Corn	DKC5020	191	17.1	55.7	652	8.6	6.7	1.9	30492	-	3.3	61.1	6.9	2.93	559		
No-Till	2nd Year Corn	DKC5139	205	17.0	56.7	700	0.4	0.0	0.4	32459	-	3.3	61.2	6.7	2.94	602		
No-Till	2nd Year Corn	P38B87	203	18.9	58.2	686	0.5	0.0	0.5	31616	-	3.3	60.7	7.4	2.93	595		
No-Till	3rd Year Corn	DKC5020	196	17.5	55.5	667	4.4	0.0	4.4	32178	-	3.3	61.3	6.7	2.94	575		
No-Till	3rd Year Corn	DKC5139	203	18.3	55.4	688	2.9	0.0	2.9	31616	-	3.3	61.4	6.6	2.94	596		
No-Till	3rd Year Corn	P38B87	194	19.0	56.7	656	0.0	0.0	0.0	32178	-	3.3	60.5	7.6	2.93	568		
No-Till	4th Year Corn	DKC5020	188	17.9	55.1	639	0.0	0.0	0.0	32038	-	3.3	61.7	6.6	2.95	554		

(continued)

Table C-32. Corn/Soybean Rotation and Tillage Study - Corn.
(continued) **Arlington, WI - 2007.**

Tillage	Rotation	Insecticide	Yield		Moisture		Test Grower		Lodged		Harvest plants/ plants/A	Root Rating	Grain Composition			Ethanol per bu gallons		
			bu/A	%	%	%	\$/A	return	Total	Stalk			Root	Oil	Starch		Protein	per bu gallons
No-Till	4th Year Corn	DKC5139	192	18.9	54.4	649	2.3	0.0	2.3	0.0	2.3	31476	-	3.3	61.3	6.8	2.94	563
No-Till	4th Year Corn	P38B87	187	19.2	57.2	633	0.5	0.0	0.5	0.0	0.5	30773	-	3.3	61.0	7.2	2.95	552
No-Till	5th Year Corn	DKC5020	214	18.1	55.3	729	0.4	0.4	0.0	0.4	0.0	33162	-	3.2	61.4	6.7	2.96	634
No-Till	5th Year Corn	DKC5139	206	18.2	55.4	701	0.9	0.4	0.4	0.4	0.4	31616	-	3.3	61.6	6.7	2.93	606
No-Till	5th Year Corn	P38B87	198	19.8	56.7	667	1.2	0.0	1.2	0.0	1.2	32881	-	3.3	60.8	7.4	2.94	582
No-Till	Continuous Corn	DKC5020	190	18.0	55.0	647	5.7	2.9	2.9	2.9	2.9	31476	0.03	3.3	61.4	6.7	2.94	559
No-Till	Continuous Corn	DKC5139	204	19.0	54.5	688	0.6	0.0	0.6	0.0	0.6	32412	0.02	3.3	61.4	6.9	2.94	598
No-Till	Continuous Corn	P38B87	195	19.6	57.8	655	1.3	0.9	0.4	0.4	0.4	31616	0.01	3.3	60.9	7.4	2.94	572
No-Till	Rotated Corn	DKC5020	233	16.6	55.9	800	0.0	0.0	0.0	0.0	0.0	32459	-	3.3	61.2	7.0	2.93	683
No-Till	Rotated Corn	DKC5139	230	17.2	56.1	785	0.0	0.0	0.0	0.0	0.0	31476	-	3.3	61.1	7.1	2.92	670
No-Till	Rotated Corn	P38B87	213	18.7	57.7	720	0.0	0.0	0.0	0.0	0.0	33162	-	3.3	60.8	7.6	2.93	623
Probability(%)																		
Tillage (T)			0.2	40.4	0.3	0.0	3.1	14.6	0.6	0.6	0.6	3.2	-	10.5	0.6	0.4	1.0	0.0
Rotation (R)			0.6	0.0	0.0	0.0	0.2	31.7	0.1	68.4	0.1	68.4	-	37.1	4.7	0.2	1.6	0.0
T x R			36.5	24.8	5.8	1.1	0.9	19.5	5.1	92.6	5.1	92.6	-	95.5	12.0	9.5	2.7	1.3
CRW (C)			0.0	0.0	0.0	1.9	9.4	0.8	7.3	50.1	7.3	50.1	29.9	60.4	0.0	0.0	81.8	2.0
T x C			13.7	19.9	6.6	49.3	1.9	5.9	9.3	64.6	9.3	64.6	-	21.3	61.8	36.2	99.3	49.0
R x C			21.2	2.7	10.2	92.5	18.8	32.8	19.8	78.4	19.8	78.4	-	29.1	92.4	82.1	99.6	92.1
T x R x C			83.0	38.8	66.1	99.8	77.0	21.9	98.1	69.4	98.1	69.4	-	29.7	92.7	99.7	63.5	99.8
LSD(0.05)																		
Tillage (T)			10.2	NS	0.6	25	0.9	NS	NS	0.9	1089.2	-	NS	0.1	0.1	0.1	0.01	21.5
Rotation (R)			18.0	0.4	0.5	47	2.1	NS	2.1	NS	NS	-	NS	0.2	0.2	0.2	0.01	40.2
T x R			NS	NS	0.7	66	3.0	NS	2.9	NS	NS	-	NS	NS	NS	NS	0.02	56.9
CRW (C)			4.5	0.2	0.2	31	1.2	0.6	1.0	NS	NS	NS	NS	0.1	0.1	0.1	NS	26.3
T x C			NS	NS	0.3	NS	1.6	0.8	1.4	NS	NS	-	NS	NS	NS	NS	NS	NS
R x C			NS	0.4	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS
T x R x C			NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS

**Table C-33 Corn/Soybean Rotation Study - Soybean⁹¹
Expt. 2790 Arlington, WI**

Tillage	Rotation	Variety	Grain			Seed Composition		Total			Spring	Fall
			Yield bu/a	BSR 1 to 11	Lodg. 1-5	Protein ---- % ----	Oil	Protein	Oil	Pro+oil	eggs/100cc	SCN
Notill Conventional			51.8	4.3	1.1	35.6	19.0	1107	591	1698	254	
			53.3	4.4	2.3	35.7	19.1	1143	611	1754	319	
	5th year SB		52.4	5.2	1.8	35.8	19.0	1126	598	1724		
	4th year SB		46.4	4.7	1.4	35.6	19.3	991	535	1526		
	3rd year SB		50.6	5.7	1.7	35.5	19.1	1079	580	1659	263	
	2nd year SB		53.7	4.5	1.6	35.7	19.0	1150	613	1763	103	
	1st year SB		60.5	2.9	2.2	35.5	18.9	1288	687	1975	72	
	S/C rotation		56.0	3.3	2.0	35.4	19.0	1189	640	1828	415	
	Continuous SB		48.7	4.1	1.6	36.0	19.0	1051	556	1607	578	
Notill	5th year SB		52.4	5.4	1.3	35.7	19.0	1124	598	1722		
Notill	4th year SB		42.3	4.4	1.0	35.5	19.3	903	488	1391		
Notill	3rd year SB		51.1	5.9	1.2	35.4	19.2	1085	588	1673	198	
Notill	2nd year SB		55.1	4.4	1.3	35.5	19.1	1173	631	1804	72	
Notill	1st year SB		62.3	2.3	1.1	35.5	18.8	1326	702	2029	89	
Notill	S/C rotation		55.1	3.3	1.2	35.1	19.0	1160	630	1790	249	
Notill	Continuous SB		44.5	4.2	1.0	36.5	18.7	977	500	1477	659	
Conventional	5th year SB		52.4	5.0	2.3	35.9	19.0	1129	597	1726		
Conventional	4th year SB		50.4	5.0	1.8	35.6	19.2	1079	581	1660		
Conventional	3rd year SB		50.0	5.5	2.2	35.7	19.1	1073	573	1646	327	
Conventional	2nd year SB		52.3	4.5	1.8	35.8	19.0	1127	595	1722	133	
Conventional	1st year SB		58.7	3.6	3.3	35.5	19.1	1250	672	1922	54	
Conventional	S/C rotation		56.8	3.3	2.8	35.7	19.0	1218	649	1867	581	
Conventional	Continuous SB		52.8	4.0	2.2	35.5	19.3	1125	612	1738	498	
		Latham L2412RX	53.1	3.2	1.8	36.5	18.2	1161	578	1739	270	
		Pioneer 91M90	48.9	4.4	2.1	34.8	19.4	1022	569	1590	355	
		Asgrow AG2107	55.8	5.4	1.4	35.6	19.6	1192	657	1849	234	
Notill		Latham L2412RX	52.0	2.8	1.3	36.4	18.0	1134	563	1697	191	
Notill		Pioneer 91M90	48.7	4.4	1.2	34.9	19.3	1018	563	1581	356	
Notill		Asgrow AG2107	54.8	5.6	1.0	35.6	19.7	1169	647	1815	214	
Conventional		Latham L2412RX	54.1	3.6	2.3	36.6	18.3	1188	593	1781	349	
Conventional		Pioneer 91M90	49.2	4.5	3.0	34.8	19.5	1026	574	1600	354	
Conventional		Asgrow AG2107	56.8	5.2	1.8	35.7	19.6	1215	668	1883	253	
	5th year SB	Latham L2412RX	53.2	3.9	1.9	36.6	18.2	1170	581	1751		
	5th year SB	Pioneer 91M90	48.6	5.0	2.0	35.3	19.3	1029	562	1591		
	5th year SB	Asgrow AG2107	55.3	6.8	1.4	35.5	19.6	1180	651	1830		
	4th year SB	Latham L2412RX	48.4	4.8	1.4	36.6	18.2	1062	529	1591		
	4th year SB	Pioneer 91M90	41.3	3.9	1.8	34.5	19.8	856	490	1346		
	4th year SB	Asgrow AG2107	49.3	5.5	1.1	35.7	19.8	1055	585	1640		
	3rd year SB	Latham L2412RX	52.0	4.4	1.8	36.4	18.1	1135	565	1700	288	
	3rd year SB	Pioneer 91M90	46.5	5.1	2.0	34.8	19.5	971	543	1514	350	
	3rd year SB	Asgrow AG2107	53.1	7.6	1.3	35.5	19.9	1130	633	1763	150	
	2nd year SB	Latham L2412RX	53.6	3.5	1.8	36.5	18.2	1174	584	1759	86	
	2nd year SB	Pioneer 91M90	49.6	4.8	2.0	34.7	19.4	1034	577	1612	100	
	2nd year SB	Asgrow AG2107	57.9	5.1	1.0	35.8	19.5	1242	677	1919	123	
	1st year SB	Latham L2412RX	58.8	1.6	1.9	36.0	18.3	1269	643	1913	94	
	1st year SB	Pioneer 91M90	57.8	3.3	2.6	35.0	19.0	1214	658	1872	21	
	1st year SB	Asgrow AG2107	65.0	3.9	2.0	35.4	19.5	1380	761	2142	101	
	S/C rotation	Latham L2412RX	54.8	1.5	2.1	36.1	18.1	1188	595	1783	556	
	S/C rotation	Pioneer 91M90	55.7	4.1	2.3	34.5	19.4	1154	650	1804	464	
	S/C rotation	Asgrow AG2107	57.3	4.4	1.6	35.6	19.6	1224	673	1897	226	
	Continuous SB	Latham L2412RX	50.6	2.6	1.6	37.2	18.0	1128	548	1675	327	
	Continuous SB	Pioneer 91M90	42.8	5.0	1.9	35.0	19.4	895	500	1394	839	
	Continuous SB	Asgrow AG2107	52.6	4.6	1.3	35.9	19.7	1131	621	1752	569	

Continued

**Table C-33 Corn/Soybean Rotation Study - Soybean⁹²
Expt. 2790 Arlington, WI**

Tillage	Rotation	Variety	Grain			Seed Composition		Total			Spring	Fall
			Yield bu/a	BSR 1 to 11	Lodg. 1-5	Protein ---- % ----	Oil ---- % ----	Protein ---- lbs/acre ----	Oil ---- lbs/acre ----	Pro+oil ---- lbs/acre ----	SCN eggs/100cc	SCN eggs/100cc
Notill	5th year SB	Latham L2412RX	52.5	3.8	1.5	36.4	18.2	1146	574	1721		
Notill	5th year SB	Pioneer 91M90	49.6	5.0	1.3	35.1	19.3	1045	575	1620		
Notill	5th year SB	Asgrow AG2107	55.2	7.5	1.0	35.7	19.5	1180	646	1826		
Notill	4th year SB	Latham L2412RX	45.2	4.0	1.0	36.5	18.2	989	495	1483		
Notill	4th year SB	Pioneer 91M90	37.4	3.8	1.0	34.3	19.9	769	447	1216		
Notill	4th year SB	Asgrow AG2107	44.3	5.5	1.0	35.8	19.7	951	524	1475		
Notill	3rd year SB	Latham L2412RX	50.6	4.3	1.5	36.1	18.2	1098	552	1650	253	
Notill	3rd year SB	Pioneer 91M90	48.4	5.5	1.0	34.8	19.3	1013	562	1574	322	
Notill	3rd year SB	Asgrow AG2107	54.1	8.0	1.0	35.3	20.0	1146	649	1794	19	
Notill	2nd year SB	Latham L2412RX	53.4	2.8	1.3	36.3	18.2	1164	584	1747	24	
Notill	2nd year SB	Pioneer 91M90	52.7	5.0	1.8	34.9	19.4	1102	612	1715	11	
Notill	2nd year SB	Asgrow AG2107	59.1	5.5	1.0	35.3	19.7	1252	698	1950	182	
Notill	1st year SB	Latham L2412RX	60.5	1.0	1.0	36.0	18.0	1304	652	1956	108	
Notill	1st year SB	Pioneer 91M90	59.8	2.5	1.3	35.2	18.8	1264	673	1936	34	
Notill	1st year SB	Asgrow AG2107	66.6	3.3	1.0	35.3	19.6	1411	783	2194	126	
Notill	S/C rotation	Latham L2412RX	52.8	1.5	1.5	35.9	17.9	1137	568	1705	326	
Notill	S/C rotation	Pioneer 91M90	56.3	4.0	1.0	34.2	19.5	1155	658	1812	258	
Notill	S/C rotation	Asgrow AG2107	56.2	4.5	1.0	35.2	19.7	1188	664	1852	164	
Notill	Continuous SB	Latham L2412RX	48.9	2.0	1.0	37.5	17.6	1101	517	1618	243	
Notill	Continuous SB	Pioneer 91M90	36.4	5.3	1.0	35.6	19.1	778	417	1195	1153	
Notill	Continuous SB	Asgrow AG2107	48.3	5.3	1.0	36.3	19.5	1052	566	1617	580	
Conventional	5th year SB	Latham L2412RX	53.9	4.0	2.3	36.9	18.2	1194	588	1781		
Conventional	5th year SB	Pioneer 91M90	47.6	5.0	2.8	35.5	19.3	1013	550	1563		
Conventional	5th year SB	Asgrow AG2107	55.5	6.0	1.8	35.4	19.7	1179	655	1834		
Conventional	4th year SB	Latham L2412RX	51.6	5.5	1.8	36.7	18.2	1135	564	1699		
Conventional	4th year SB	Pioneer 91M90	45.3	4.0	2.5	34.7	19.7	943	534	1477		
Conventional	4th year SB	Asgrow AG2107	54.3	5.5	1.3	35.6	19.8	1159	645	1805		
Conventional	3rd year SB	Latham L2412RX	53.3	4.5	2.0	36.7	18.1	1172	578	1750	323	
Conventional	3rd year SB	Pioneer 91M90	44.6	4.8	3.0	34.8	19.6	930	524	1455	378	
Conventional	3rd year SB	Asgrow AG2107	52.1	7.3	1.5	35.7	19.7	1115	618	1733	280	
Conventional	2nd year SB	Latham L2412RX	53.7	4.3	2.3	36.8	18.2	1185	585	1770	147	
Conventional	2nd year SB	Pioneer 91M90	46.5	4.5	2.3	34.6	19.5	966	543	1509	189	
Conventional	2nd year SB	Asgrow AG2107	56.7	4.8	1.0	36.2	19.3	1231	657	1889	64	
Conventional	1st year SB	Latham L2412RX	57.0	2.3	2.8	36.1	18.6	1234	635	1869	79	
Conventional	1st year SB	Pioneer 91M90	55.8	4.0	4.0	34.8	19.2	1165	642	1807	7	
Conventional	1st year SB	Asgrow AG2107	63.4	4.5	3.0	35.5	19.5	1350	740	2089	76	
Conventional	S/C rotation	Latham L2412RX	56.9	1.5	2.8	36.3	18.2	1240	623	1862	786	
Conventional	S/C rotation	Pioneer 91M90	55.1	4.3	3.5	34.9	19.4	1153	643	1796	670	
Conventional	S/C rotation	Asgrow AG2107	58.4	4.3	2.3	36.0	19.5	1261	682	1943	287	
Conventional	Continuous SB	Latham L2412RX	52.3	3.3	2.3	36.8	18.4	1155	578	1733	410	
Conventional	Continuous SB	Pioneer 91M90	49.2	4.8	2.8	34.3	19.7	1011	582	1593	525	
Conventional	Continuous SB	Asgrow AG2107	56.9	4.0	1.5	35.5	19.8	1210	677	1887	558	
Means			52.6	4.3	1.7	35.6	19.1	1125	601	1726	286	
Probability %												
Tillage (T)			23.6	22.3	0.2	35.8	14.9	<0.1	<0.1	<0.1	>50	
Rotation (R)			<0.1	<0.1	6.0	15.8	18.8	<0.1	<0.1	<0.1	<0.1	
T x R			0.2	>50	3.6	3.5	7.7	<0.1	<0.1	<0.1	25.0	
Variety (V)			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	32.4	
T x V			26.4	4.9	<0.1	32.2	21.9	12.1	38.8	17.4	>50	
R x V			<0.1	2.7	>50	14.2	36.6	<0.1	0.5	<0.1	25.5	
T x R x V			2.3	>50	43.5	>50	>50	4.1	6.5	3.4	>50	
LSD 10%												
Tillage (T)			NS	NS	0.3	NS	NS	58	24	81	NS	
Rotation (R)			2.8	0.8	0.4	NS	NS	58	32	89	186	
T x R			4.3	NS	0.6	0.5	0.2	94	48	141	NS	
Variety (V)			0.9	0.4	0.2	0.2	0.1	20	11	30	NS	
T x V			NS	0.6	0.3	NS	NS	NS	NS	NS	NS	
R x V			3.4	1.3	NS	NS	NS	72	41	110	NS	
CV %			5	33	29	2	2	6	6	5	128	