

TECHNOLOGY EVALUATION AND DEVELOPMENT SUB-PROGRAM

APPENDIX

THE EFFECT OF CONSERVATION TILLAGE PRACTICES ON THE LOSSES OF PHOSPHORUS AND HERBICIDES IN SURFACE AND SUBSURFACE DRAINAGE WATERS

FINAL REPORT

May, 1992

Prepared by: J. Gaynor and D. Bissonnette
for,
SOUTHWESTERN ONTARIO AGRICULTURAL RESEARCH
CORPORATION (SWOARC)
Harrow, Ontario

Under the Direction of: ECOLOGICAL SERVICES FOR PLANNING LIMITED, Guelph,
Ontario - Subprogram Manager For TED

On Behalf of: AGRICULTURE CANADA
RESEARCH STATION,
HARROW, ONTARIO N0R 1G0

Disclaimer: The views contained herein do not necessarily reflect the views of the
Government of Canada or the SWEEP Management Committee.

LIST OF APPENDICES - PART A

	Page
Appendix 1A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988	1
Appendix 2A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988	6
Appendix 3A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988	12
Appendix 4A Samples taken and analyzed, event volumes, sediment and orthophosphate losses for zero tillage, 1988	17
Appendix 5A Samples taken and analyzed, event volumes, sediment and orthophosphate losses for ridge tillage, 1988	20
Appendix 6A Samples taken and analyzed, event volumes, sediment and orthophosphate losses for conventional tillage 1988	22
Appendix 7A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1989	24
Appendix 8A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989	29
Appendix 9A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1989	34
Appendix 10A Events volume, sediment and orthophosphate losses for zero tillage, 1989	42
Appendix 11A Events volume, sediment and orthophosphate losses for ridge tillage, 1989	44
Appendix 12A Events volume, sediment and orthophosphate losses for conventional tillage, 1989	46
Appendix 13A Samples taken and analyzed, event volumes, sediment concentration and losses for zero tillage, 1990	48
Appendix 14A Samples taken and analyzed, event volumes, sediment concentrations and losses for ridge tillage, 1990	55
Appendix 15A Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990	62

	Page
Appendix 16A Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990	69
Appendix 17A Sample and event concentration for ortho P, soluble P and sediment P ^a for zero tillage, 1990	76
Appendix 18A Sample and event concentration for ortho P, soluble P and sediment P ^a for ridge tillage, 1990	83
Appendix 19A Sample and event concentration for ortho P, soluble P and sediment P ^a for conventional tillage, 1990	90
Appendix 20A Sample and event concentration for ortho P, soluble P and sediment P ^a for sod treatment, 1990	97
Appendix 21A Event losses for ortho P, soluble P and sediment P in g/ha for zero tillage, 1990	102
Appendix 22A Event losses for ortho P, soluble P and sediment P in g/ha for ridge tillage, 1990	105
Appendix 23A Event losses for ortho P, soluble P and sediment P in g/ha for conventional tillage, 1990	108
Appendix 24A Event losses for ortho P, soluble P and sediment P in g/ha for the sod treatment, 1990	111

LIST OF APPENDICES - PART B

	Page
Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988	114
Appendix 2B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988	118
Appendix 3B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988	126
Appendix 4B Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1988	130
Appendix 5B Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1988	132
Appendix 6B Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1988	134
Appendix 7B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989	136
Appendix 8B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989	140
Appendix 9B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989	144
Appendix 10B Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1989	148
Appendix 11B Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1989	150
Appendix 12B Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1989	152
Appendix 13B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990	154

	Page
Appendix 14B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990	159
Appendix 15B Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990	164
Appendix 16B Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1990	169
Appendix 17B Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1990	172
Appendix 18B Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1990	175
Appendix 19B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988	178
Appendix 20B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988	182
Appendix 21B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1988	186
Appendix 22B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989	190
Appendix 23B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1989	194
Appendix 24B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989	198
Appendix 25B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990	202
Appendix 26B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990	207
Appendix 27B Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1990	212

PART A

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc. g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
17.40	1	Surface	1	1	2	0.1980	0.2423	0.162	0.162	11475.9
19.00	1	Surface	1	0	1	0.2866		0.161		
32.56	2	Surface	1	1	0	0.2423	0.2423	0.161	0.161	4913.6
48.00	3	Surface	1	0	0	0.2423	0.2423	0.161	0.161	1971.9
50.00	4	Surface	1	0	0	0.2423	0.2423	0.161	0.161	10732.3
275.00	5	Surface	1	0	0					0.0
291.96	6	Surface	1	0	1	0.1584	0.1992	0.775	0.913	2424.5
292.06	6	Surface	1	1	1	0.2628		0.943		
292.08	6	Surface	1	1	1	0.1926		0.991		
292.10	6	Surface	1	1	1	0.1828		0.942		
297.00	7	Surface	1	0	0					
310.00	8	Surface	1	0	2	0.2395	0.1604	0.476	0.800	3814.5
310.46	8	Surface	1	1	1	0.1841		0.735		
310.56	8	Surface	1	1	1	0.1420		0.790		
310.65	8	Surface	1	1	1	0.0994		1.000		
310.83	8	Surface	1	1	1	0.1368		1.000		
312.00	9	Surface	1	0	0	0.2748	0.2748	0.734	0.734	614.2
315.20	10	Surface	1	1	1	0.1702	0.2196	0.960	0.751	1777.9
315.25	10	Surface	1	1	1	0.2690		0.542		
318.19	11	Surface	1	1	1	0.1832	0.1832	0.986	0.986	2877.0
321.57	12	Surface	1	1	1	0.2231	0.2746	0.726	0.734	1390.0
321.61	12	Surface	1	1	1	0.3260		0.742		
325.61	13	Surface	1	1	1	0.2806	0.4167	0.790	0.724	4525.7
325.65	13	Surface	1	1	1	0.3468		0.823		
325.81	13	Surface	1	1	1	0.2262		0.850		
325.85	13	Surface	1	0	1	0.8132		0.434		
363.38	14	Surface	1	1	1	0.2065	0.2065	1.000	1.000	1390.0
17.40	1	Tile	1	0	0					0.0
32.56	2	Tile	1	1	0	0.2151	0.2151	0.691	0.691	1329.0
72.66	3	Tile	1	1	0	0.2965	0.2965	0.217	0.217	1735.0
84.39	4	Tile	1	1	1	0.0144	0.0087	0.190	0.143	8651.0
84.66	4	Tile	1	1	1	0.0026		0.095		
85.42	4	Tile	1	1	1	0.0090		0.145		
94.88	5	Tile	1	0	0	0.1593	0.1593	0.818	0.818	3034.0

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
97.92	6	Tile	1	1	1	0.1380	0.1380	0.845	0.845	7232.0
114.31	7	Tile	1	0	0	0.0831	0.0831	0.321	0.321	39.0
136.85	8	Tile	1	0	0	0.3582	0.3582	1.031	1.031	48.0
154.27	9	Tile	1	1	1	0.0070	0.0070	0.086	0.086	117.0
192.96	10	Tile	1	1	1	0.0072	0.0072	0.136	0.136	270.0
267.10	11	Tile	1	1	1	0.1778	0.1778	0.465	0.465	151.0
267.13	11	Tile	1	0	0					
267.38	11	Tile	1	0	0					
276.41	12	Tile	1	1	1	0.0751	0.0576	0.345	0.290	2830.0
276.43	12	Tile	1	1	1	0.0656		0.305		
276.44	12	Tile	1	1	1	0.0711		0.305		
276.60	12	Tile	1	1	1	0.0187		0.203		
277.44	12	Tile	1	0	0					
291.92	13	Tile	1	1	1	0.1760	0.0898	0.611	0.759	14323.0
291.96	13	Tile	1	1	1	0.1424		0.606		
292.10	13	Tile	1	1	1	0.1078		0.745		
292.15	13	Tile	1	1	1	0.0799		0.916		
292.38	13	Tile	1	1	1	0.0278		1.000		
292.67	13	Tile	1	1	1	0.0048		0.675		
297.74	14	Tile	1	1	1	0.0799	0.0604	0.495	0.565	4590.0
297.77	14	Tile	1	1	1	0.0409		0.635		
310.38	15	Tile	1	1	1	0.0708	0.0838	0.535	0.757	18406.0
310.44	15	Tile	1	1	1	0.0765		0.685		
310.56	15	Tile	1	1	1	0.1057		1.000		
310.65	15	Tile	1	1	1	0.1024		1.000		
310.83	15	Tile	1	1	1	0.1362		0.891		
311.33	15	Tile	1	1	1	0.0486		0.720		
312.40	15	Tile	1	1	1	0.0464		0.465		
315.20	16	Tile	1	1	1	0.2205	0.1890	0.586	0.560	6282.0
315.24	16	Tile	1	1	1	0.2331		0.579		
315.28	16	Tile	1	1	1	0.1921		0.546		
315.46	16	Tile	1	1	1	0.1103		0.529		
318.19	17	Tile	1	1	1	0.1024	0.1024	0.290	0.290	9131.0
321.58	18	Tile	1	1	1	0.3076	0.3076	0.541	0.541	5646.0

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., L	Event Volume L/plot
325.63	19	Tile	1	1	1	0.2143	0.1572	0.350	0.379	8789.0
325.83	19	Tile	1	1	1	0.1852		0.331		
326.40	19	Tile	1	1	1	0.0723		0.455		
359.68	20	Tile	1	1	1	0.0128	0.0730	0.354	0.698	12926.0
362.46	20	Tile	1	1	1	0.0546		0.852		
363.38	20	Tile	1	1	1	0.1516		0.889		
17.40	1	Surface	2	1	1	0.2588	0.1958	0.225	0.403	17100.6
19.00	1	Surface	2	0	1	0.1329		0.580		
32.56	2	Surface	2	1	0					0.0
48.00	3	Surface	2	0	0	0.2461	0.2461	0.265	0.265	4784.3
50.00	4	Surface	2	0	0	0.5621	0.5621	2.836	2.836	12704.2
275.00	5	Surface	2	0	0	0.5119	0.5119	1.830	1.830	517.2
291.96	6	Surface	2	0	3	0.4164	0.3003	0.298	0.770	4558.0
292.06	6	Surface	2	1	1	0.2638		0.916		
292.08	6	Surface	2	1	1	0.1794		0.904		
292.10	6	Surface	2	1	1	0.3415		0.963		
297.00	7	Surface	2	0	0	0.3003	0.3003	0.770	0.770	517.2
310.00	8	Surface	2	0	3	0.0498	0.1628	0.300	0.745	4040.8
310.46	8	Surface	2	1	1	0.1649		0.715		
310.56	8	Surface	2	1	1	0.1914		0.710		
310.65	8	Surface	2	1	1	0.1946		1.000		
310.83	8	Surface	2	1	1	0.2130		1.000		
312.00	9	Surface	2	0	0	0.2849	0.2849	0.304	0.304	678.9
315.20	10	Surface	2	1	2	0.3173	0.2903	0.895	0.751	1487.0
315.25	10	Surface	2	1	1	0.2633		0.606		
318.19	11	Surface	2	1	1	0.1542	0.1542	0.802	0.802	3652.9
321.57	12	Surface	2	1	1	0.3358	0.3877	0.710	0.733	2230.5
321.61	12	Surface	2	1	1	0.4395		0.756		
325.61	13	Surface	2	1	1	0.1630	0.2401	0.355	0.697	5398.5
325.65	13	Surface	2	1	1	0.2806		0.800		
325.81	13	Surface	2	1	1	0.3189		0.632		
325.85	13	Surface	2	0	1	0.1980		1.000		
363.38	14	Surface	2	1	1	0.0736	0.0736	0.756	0.756	4202.4
17.40	1	Tile	2	0	0	0.0262	0.0262	0.060	0.060	342.0

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
32.56	2	Tile	2	1	0	0.0262	0.0262	0.060	0.060	285.0
72.66	3	Tile	2	1	0	0.0448	0.0448	0.176	0.176	1533.0
84.39	4	Tile	2	1	1	0.0287	0.0324	0.065	0.099	8658.0
84.66	4	Tile	2	1	1	0.0236		0.055		
85.42	4	Tile	2	1	1	0.0448		0.176		
94.88	5	Tile	2	0	0	0.0037	0.0037	0.142	0.142	2439.0
97.92	6	Tile	2	1	1	0.0968	0.0968	0.115	0.115	5245.0
114.31	7	Tile	2	0	0	0.0797	0.0797	0.336	0.336	117.0
136.85	8	Tile	2	0	0	0.0540	0.0540	0.319	0.319	114.0
154.27	9	Tile	2	1	1	0.0037	0.0037	0.142	0.142	1126.0
192.96	10	Tile	2	1	1	0.0182	0.0182	0.185	0.185	343.0
267.10	11	Tile	2	0	0		0.0797		0.336	211.0
267.13	11	Tile	2	0	0					
267.38	11	Tile	2	1	1	0.0797		0.336		
276.41	12	Tile	2	1	1	0.0896	0.0539	0.345	0.320	4273.0
276.43	12	Tile	2	1	1	0.0796		0.315		
276.44	12	Tile	2	1	1	0.0743		0.364		
276.60	12	Tile	2	1	1	0.0250		0.290		
277.44	12	Tile	2	1	1	0.0012		0.285		
291.92	13	Tile	2	1	1	0.2460	0.1045	0.395	0.596	11545.0
291.96	13	Tile	2	1	1	0.1776		0.625		
292.10	13	Tile	2	1	1	0.1127		0.500		
292.15	13	Tile	2	1	1	0.0753		0.702		
292.38	13	Tile	2	1	1	0.0150		0.495		
292.67	13	Tile	2	1	1	0.0004		0.856		
297.74	14	Tile	2	1	1	0.0610	0.0605	0.595	0.580	7719.0
297.77	14	Tile	2	1	1	0.0600		0.565		
310.38	15	Tile	2	1	1	0.0604	0.2373	0.545	0.709	9563.0
310.44	15	Tile	2	1	1	1.0350		0.581		
310.56	15	Tile	2	1	1	0.1407		0.845		
310.65	15	Tile	2	1	1	0.2248		1.000		
310.83	15	Tile	2	1	1	0.1100		1.000		
311.33	15	Tile	2	1	1	0.0424		0.465		
312.40	15	Tile	2	1	1	0.0475		0.525		

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
315.20	16	Tile	2	1	1	0.1809	0.1799	0.871	0.626	3671.0
315.24	16	Tile	2	1	1	0.2180		0.606		
315.28	16	Tile	2	1	1	0.2176		0.595		
315.46	16	Tile	2	1	1	0.1031		0.430		
318.19	17	Tile	2	1	1	0.0958	0.0958	0.784	0.784	6547.0
321.58	18	Tile	2	1	1	0.3816	0.3816	0.512	0.512	3947.0
325.63	19	Tile	2	1	1	0.1460	0.1205	0.506	0.479	6419.0
325.83	19	Tile	2	1	1	0.1707		0.585		
326.40	19	Tile	2	1	1	0.0448		0.345		
359.68	20	Tile	2	1	1	0.0554	0.1255	0.470	0.814	8554.0
362.46	20	Tile	2	1	1	0.0879		0.971		
363.38	20	Tile	2	1	1	0.2332		1.000		

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
17.40	1	Surface	1	1	1	0.2562	0.2434	0.145	0.125	8889.7
19.00	1	Surface	1	0	3	0.2306		0.105		
32.56	2	Surface	1	1	0	0.2434	0.2434	0.105	0.105	2909.4
48.00	3	Surface	1	0	0	0.2434	0.2434	0.105	0.105	2327.5
50.00	4	Surface	1	0	0	0.2434	0.2434	0.105	0.105	14837.8
275.00	5	Surface	1	0	2	0.9968	0.9968	0.323	0.323	0.0
291.96	6	Surface	1	0	2	0.2936	0.3585	0.365	0.801	4.655.0
292.06	6	Surface	1	1	1	0.4508		0.902		
292.08	6	Surface	1	1	1	0.3586		0.956		
292.10	6	Surface	1	1	1	0.3310		0.981		
297.00	7	Surface	1	0	0					
310.00	8	Surface	1	0	2	0.2492	0.1344	0.671	0.726	2780.1
310.46	8	Surface	1	1	1	0.0418		0.395		
310.56	8	Surface	1	1	1	0.1470		0.985		
310.65	8	Surface	1	1	1	0.1121		0.802		
310.83	8	Surface	1	1	1	0.1221		0.775		
312.00	9	Surface	1	0	0	1.0496	1.0496	0.430	0.430	323.3
315.20	10	Surface	1	1	3	0.4218	0.3169	0.608	0.662	1260.7
315.25	10	Surface	1	1	1	0.2120		0.715		
318.19	11	Surface	1	1	1	0.1440	0.1440	0.586	0.586	2650.8
321.57	12	Surface	1	1	1	1.3158	1.0493	0.406	0.430	743.5
321.61	12	Surface	1	1	1	0.7828		0.453		
325.61	13	Surface	1	1	1	0.4138	0.4379	0.351	0.452	4428.7
325.65	13	Surface	1	1	3	0.6108		0.388		
325.81	13	Surface	1	1	1	0.2853		0.862		
325.85	13	Surface	1	0	1	0.4417		0.205		
363.38	14	Surface	1	1	1	0.2438	0.2438	0.572	0.572	1519.3
17.40	1	Tile	1	0	0	0.4989	0.4989	0.328	0.328	498.0

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

-2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
32.56	2	Tile	1	1	0	0.3555	0.3555	0.895	0.895	2363.0
72.66	3	Tile	1	1	0	0.2637	0.2637	0.080	0.080	1967.0
84.39	4	Tile	1	1	1	0.0278	0.0266	0.010	0.056	8725.0
84.66	4	Tile	1	1	1	0.0260		0.043		
85.42	4	Tile	1	1	1	0.0260		0.116		
94.88	5	Tile	1	0	0	0.2870	0.2870	0.293	0.293	2898.0
97.92	6	Tile	1	1	1	0.2017	0.2017	0.210	0.210	6755.0
114.31	7	Tile	1	0	0	0.0970	0.0970	0.330	0.330	156.0
136.85	8	Tile	1	0	0	0.3155	0.3155	0.517	0.517	62.0
154.27	9	Tile	1	1	1	0.0014	0.0014	0.150	0.150	478.0
192.96	10	Tile	1	1	1	0.0096	0.0096	0.135	0.135	36.0
266.94	11	Tile	1	0	0		0.0783		0.216	181.0
267.10	11	Tile	1	1	1	0.1026		0.215		
267.13	11	Tile	1	0	0					
267.38	11	Tile	1	1	1	0.0540		0.216		
276.41	12	Tile	1	1	1	0.0937	0.0687	0.400	0.272	2104.0
276.43	12	Tile	1	1	1	0.0761		0.212		
276.44	12	Tile	1	1	1	0.0800		0.215		
276.60	12	Tile	1	1	1	0.0249		0.259		
291.92	13	Tile	1	1	1	0.2535	0.1201	0.490	0.543	13155.0
291.96	13	Tile	1	1	1	0.1777		0.701		
292.10	13	Tile	1	1	1	0.1521		0.149		
292.15	13	Tile	1	1	1	0.0898		0.180		
292.38	13	Tile	1	1	1	0.0371		1.000		
292.67	13	Tile	1	1	1	0.0105		0.735		
297.74	14	Tile	1	1	1	0.0963	0.0803	0.250	0.396	7500.0
297.77	14	Tile	1	1	1	0.0642		0.541		
310.38	15	Tile	1	1	1	0.0323	0.0559	0.202	0.321	17766.0

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1968

-3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., g/L	Event Ortho P. mg/L	Event Volume L/plot
310.44	15	Tile	1	1	1	0.0625		0.285		
310.56	15	Tile	1	1	1	0.0989		0.515		
310.65	15	Tile	1	1	1	0.0739		0.435		
310.83	15	Tile	1	1	1	0.0860		0.262		
311.33	15	Tile	1	1	1	0.0217		0.260		
312.40	15	Tile	1	1	1	0.0160		0.291		
315.20	16	Tile	1	1	1	0.3849	0.2897	0.421	0.486	6742.0
315.24	16	Tile	1	1	1	0.3463		0.375		
315.28	16	Tile	1	1	1	0.3224		0.566		
315.46	16	Tile	1	1	1	0.1051		0.581		
318.19	17	Tile	1	1	1	0.2153	0.2153	0.190	0.190	12614.0
321.58	18	Tile	1	1	1	0.8778	0.8778	0.435	0.435	6706.0
325.63	19	Tile	1	1	1	0.3650	0.2686	0.461	0.494	13074.0
325.83	19	Tile	1	1	1	0.3080		0.460		
326.40	19	Tile	1	1	1	0.1328		0.560		
359.68	20	Tile	1	1	1	0.0584	0.0834	0.245	0.648	13081.0
362.46	20	Tile	1	1	1	0.0932		1.000		
363.38	20	Tile	1	1	1	0.0985		0.700		
17.40	1	Surface	2	1	2	0.0930	0.1221	0.355	0.373	14870.1
19.00	1	Surface	2	0	2	0.1511		0.390		
32.56	2	Surface	2	1	0	0.3301	0.3301	0.690	0.690	13900.3
48.00	3	Surface	2	0	0	0.2461	0.2461	0.265	0.265	6659.2
50.00	4	Surface	2	0	0	0.5621	0.5621	2.836	2.836	16712.7
275.00	5	Surface	2	0	2	2.4096	2.4096	0.236	0.236	937.5
291.96	6	Surface	2	0	3	0.3663	0.3709	0.289	0.779	13253.8
292.06	6	Surface	2	1	1	0.5822		0.971		
292.08	6	Surface	2	1	0	0.4120		0.907		
292.10	6	Surface	2	1	1	0.1230		0.950		

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

-4

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc. g/L	Event Sediment Conc., g/L	Ortho P Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
297.00	7	Surface	2	0	0	0.7786	0.7786	0.671	0.671	3620.5
310.00	8	Surface	2	0	2	0.1427	0.1442	0.290	0.777	5786.4
310.46	8	Surface	2	1	1	0.1789		0.906		
310.56	8	Surface	2	1	1	0.1960		0.870		
310.65	8	Surface	2	1	1	0.1080		1.000		
310.83	8	Surface	2	1	1	0.0956		0.820		
312.00	9	Surface	2	0	0	0.2849	0.2849	0.304	0.304	1099.1
315.20	10	Surface	2	1	1	0.2462	0.2868	0.605	0.516	1131.4
315.25	10	Surface	2	1	1	0.3274		0.426		
318.19	11	Surface	2	1	1	0.1628	0.1628	0.510	0.510	3588.2
321.57	12	Surface	2	1	1	1.0177	0.9561	0.496	0.423	6626.9
321.61	12	Surface	2	1	1	0.8944		0.350		
325.61	13	Surface	2	1	1	0.6976	0.5596	0.471	0.553	8113.9
325.65	13	Surface	2	1	1	0.5654		0.554		
325.81	13	Surface	2	1	1	0.6934		0.472		
325.85	13	Surface	2	0	1	0.2818		0.716		
363.38	14	Surface	2	1	1	0.1010	0.1010	0.360	0.360	9180.7
17.40	1	Tile	2	0	0	0.1175	0.1175	0.050	0.050	565.0
32.56	2	Tile	2	1	0	0.1175	0.1175	0.050	0.050	1101.0
72.66	3	Tile	2	1	0	0.1381	0.1381	0.180	0.180	2169.0
84.39	4	Tile	2	1	1	0.1175	0.1278	0.050	0.115	8327.0
84.66	4	Tile	2	1	0					
85.42	4	Tile	2	1	1	0.1381		0.180		
94.88	5	Tile	2	0	0	0.0082	0.0082	0.182	0.182	2095.0
97.92	6	Tile	2	1	1	0.2271	0.2271	0.306	0.306	4896.0
114.31	7	Tile	2	0	0	0.1659	0.1659	0.343	0.343	156.0
136.85	8	Tile	2	0	0	0.0916	0.0916	0.311	0.311	74.0
154.27	9	Tile	2	1	1	0.0066	0.0066	0.146	0.146	759.0

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

-5

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc. g/L	Event Sediment Conc. g/L	Ortho P Conc. g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
192.96	10	Tile	2	1	1	0.0026	0.0026	0.149	0.149	305.0
266.94	11	Tile	2	1	0		0.1659		0.344	2298.0
267.10	11	Tile	2	1	0	0.2485		0.342		
267.13	11	Tile	2	0	0					
267.38	11	Tile	2	1	1	0.0833		0.345		
276.41	12	Tile	2	1	1	0.1337	0.0916	0.360	0.311	6064.0
276.43	12	Tile	2	1	1	0.1110		0.285		
276.44	12	Tile	2	1	1	0.1163		0.330		
276.60	12	Tile	2	1	0					
277.44	12	Tile	2	1	1	0.0052		0.270		
291.92	13	Tile	2	1	1	0.2708	0.1332	0.866	0.772	11490.0
291.96	13	Tile	2	1	1	0.2105		0.590		
292.10	13	Tile	2	1	1	0.1441		0.426		
292.15	13	Tile	2	1	1	0.1073		0.995		
292.38	13	Tile	2	1	1	0.0427		0.931		
292.67	13	Tile	2	1	1	0.0236		0.824		
297.74	14	Tile	2	1	1	0.0682	0.0654	0.474	0.452	8170.0
297.77	14	Tile	2	1	1	0.0626		0.430		
310.38	15	Tile	2	1	1	0.0217	0.0778	0.175	0.462	10271.0
310.44	15	Tile	2	1	1	0.0675		0.335		
310.56	15	Tile	2	1	1	0.1715		0.555		
310.65	15	Tile	2	1	1	0.1400		0.720		
310.83	15	Tile	2	1	1	0.1131		0.550		
311.33	15	Tile	2	1	1	0.0169		0.344		
312.40	15	Tile	2	1	1	0.0139		0.552		
315.20	16	Tile	2	1	1	0.1656	0.2016	0.407	0.291	4516.0
315.24	16	Tile	2	1	1	0.2959		0.295		
315.28	16	Tile	2	1	1	0.2399		0.282		

Appendix 2A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

-6

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
315.46	16	Tile	2	1	0	0.1051		0.181		
318.19	17	Tile	2	1	1	0.1134	0.1134	0.475	0.475	7974.0
321.58	18	Tile	2	1	1	0.6167	0.6167	0.130	0.130	4886.0
325.63	19	Tile	2	1	1	0.2760	0.1956	0.560	0.378	8299.0
325.83	19	Tile	2	1	1	0.2551		0.255		
326.40	19	Tile	2	1	1	0.0558		0.320		
359.68	20	Tile	2	1	1	0.0730	0.1256	0.825	0.788	8176.0
362.46	20	Tile	2	1	1	0.0583		0.770		
363.38	20	Tile	2	1	1	0.2455		0.770		

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
17.40	1	Surface	1	1	0	0.8822	0.8822	0.243	0.243	4719.6
19.00	1	Surface	1	0	0					
32.56	2	Surface	1	1	0	0.8822	0.8822	0.243	0.243	3200.3
48.00	3	Surface	1	0	0					0.0
50.00	4	Surface	1	0	2	0.8824	0.8824	0.243	0.243	7629.0
275.00	5	Surface	1	0	0					0.0
291.96	6	Surface	1	0	0	0.8824	0.8824	0.243	0.243	258.6
292.06	6	Surface	1	1	0					
292.08	6	Surface	1	1	0					
292.10	6	Surface	1	1	0					
297.00	7	Surface	1	0	0					0.0
310.46	8	Surface	1	0	0	1.4568	1.4568	0.370	0.370	549.5
310.56	8	Surface	1	1	0					
310.65	8	Surface	1	1	0					
310.83	8	Surface	1	1	0					
312.00	9	Surface	1	0	0					0.0
315.20	10	Surface	1	0	0					0.0
315.25	10	Surface	1	1	0					
318.19	11	Surface	1	0	0	0.1934	0.1934	0.364	0.364	678.9
321.57	12	Surface	1	0	0	0.1934	0.1934	0.364	0.364	226.3
321.61	12	Surface	1	0	0					
325.65	13	Surface	1	0	0					
325.81	13	Surface	1	1	1	1.9334	1.9334	0.360	0.360	1777.9
325.85	13	Surface	1	0	0					
363.38	14	Surface	1	1	0	1.0632	1.0632	0.362	0.362	1519.3
17.40	1	Tile	1	0	0	0.0407	0.0407	0.048	0.048	662.0
32.56	2	Tile	1	1	0	0.0315	0.0315	0.039	0.039	1709.0
72.66	3	Tile	1	1	4	0.0408	0.0408	0.048	0.048	1967.0

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., g/L	Event Ortho P. Conc., g/L	Event Volume L/plot
84.39	4	Tile	1	1	1	0.0138	0.0324	0.046	0.097	11904.0
84.66	4	Tile	1	1	1	0.0492		0.031		
85.42	4	Tile	1	1	1	0.0341		0.215		
94.88	5	Tile	1	0	0	0.0345	0.0345	0.085	0.085	2187.0
97.92	6	Tile	1	1	1	0.0857	0.0857	0.260	0.260	5829.0
114.31	7	Tile	1	0	0	0.1042	0.1042	0.265	0.265	104.0
136.85	8	Tile	1	0	0	0.1042	0.1042	0.265	0.265	74.0
154.27	9	Tile	1	1	1	0.0004	0.0004	0.140	0.140	855.0
192.96	10	Tile	1	1	1	0.0053	0.0053	0.115	0.115	59.0
267.13	11	Tile	1	0	0					0.0
276.41	12	Tile	1	1	1	0.1574	0.1042	0.245	0.265	396.0
276.43	12	Tile	1	1	1	0.1321		0.265		
276.44	12	Tile	1	1	1	0.1080		0.265		
276.60	12	Tile	1	1	1	0.0193		0.286		
291.92	13	Tile	1	1	1	0.4950	0.1630	0.266	0.433	10903.0
291.96	13	Tile	1	1	1	0.2005		0.441		
292.10	13	Tile	1	1	1	0.1342		0.252		
292.15	13	Tile	1	1	1	0.1238		0.440		
292.38	13	Tile	1	1	1	0.0208		0.325		
292.67	13	Tile	1	1	1	0.0035		0.874		
297.74	14	Tile	1	1	1	0.1062	0.0838	0.310	0.360	6267.0
297.77	14	Tile	1	1	1	0.0615		0.410		
310.38	15	Tile	1	1	1	0.1822	0.1889	0.212	0.276	13888.0
310.44	15	Tile	1	1	1	0.2080		0.209		
310.56	15	Tile	1	1	1	0.5507		0.315		
310.65	15	Tile	1	1	1	0.2270		0.382		
310.83	15	Tile	1	1	1	0.1360		0.222		
311.33	15	Tile	1	1	1	0.0078		0.305		

Appendix 3A . Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988_

-3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
312.40	15	Tile	1	1	1	0.0109		0.290		
315.20	16	Tile	1	1	1	1.7600	0.8995	0.280	0.354	8362.0
315.24	16	Tile	1	1	1	0.1938		0.410		
315.28	16	Tile	1	1	1	1.4012		0.370		
315.46	16	Tile	1	1	1	0.2429		0.354		
318.19	17	Tile	1	1	1	0.9610	0.9610	0.440	0.440	17218.0
321.58	18	Tile	1	1	1	4.5152	4.5152	0.106	0.106	10156.0
325.63	19	Tile	1	1	1	2.5865	1.8861	0.621	0.521	19335.0
325.83	19	Tile	1	1	1	2.4310		0.540		
326.40	19	Tile	1	1	1	0.6409		0.401		
359.68	20	Tile	1	1	1	0.0958	0.0998	0.636	0.627	18810.0
362.46	20	Tile	1	1	1	0.0216		0.820		
363.38	20	Tile	1	1	1	0.1821		0.425		
17.40	1	Surface	2	1	0					
19.00	1	Surface	2	0	1	0.2957	0.2957	0.282	0.282	9697.9
32.56	2	Surface	2	1	0	0.6572	0.6572	0.396	0.396	4784.3
48.00	3	Surface	2	0	0	0.1735	0.1735	0.145	0.145	4687.3
50.00	4	Surface	2	0	0	1.6164	1.6164	0.883	0.883	9019.0
275.00	5	Surface	2	0	0	1.2305	1.2305	0.120	0.120	549.5
291.96	6	Surface	2	0	3	0.3782	0.3782	0.296	0.296	2812.4
292.06	6	Surface	2	1	0					
292.08	6	Surface	2	1	0					
292.10	6	Surface	2	1	0					
297.00	7	Surface	2	0	0	0.2631	0.2631	0.356	0.356	517.2
310.46	8	Surface	2	0	0					0.0
310.56	8	Surface	2	1	0					
310.65	8	Surface	2	1	0					
310.83	8	Surface	2	1	0					

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage. 1988

-4

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
312.00	9	Surface	2	0	0					0.0
315.20	10	Surface	2	1	2	1.1232	0.8916	0.930	0.703	7435.0
315.25	10	Surface	2	1	1	0.6600		0.475		
318.19	11	Surface	2	1	1	0.7707	0.7707	0.246	0.246	3135.7
321.57	12	Surface	2	1	1	1.7054	1.7727	0.214	0.198	3168.0
321.61	12	Surface	2	1	1	1.8400		0.182		
325.61	13	Surface	2	1	1	1.7157	1.4038	0.503	0.442	6562.2
325.65	13	Surface	2	1	1	1.4996		0.230		
325.81	13	Surface	2	1	1	2.1110		0.236		
325.85	13	Surface	2	0	1	0.2888		0.800		
363.38	14	Surface	2	1	0	1.3016	1.3016	0.424	0.424	3620.5
17.40	1	Tile	2	0	0	0.5900	0.5900	0.132	0.132	347.0
32.56	2	Tile	2	1	0	0.5900	0.5900	0.132	0.132	359.0
72.66	3	Tile	2	1	0	0.0968	0.0968	0.265	0.265	781.0
84.39	4	Tile	2	1	1	0.0398	0.0716	0.070	0.176	8099.0
84.66	4	Tile	2	1	1	0.0781		0.194		
85.42	4	Tile	2	1	1	0.0968		0.265		
94.88	5	Tile	2	0	0	0.2486	0.2486	0.176	0.176	1515.0
97.92	6	Tile	2	1	1	0.1153	0.1153	0.181	0.181	3477.0
114.31	7	Tile	2	0	0	0.1153	0.1153	0.181	0.181	65.0
136.85	8	Tile	2	0	0	0.2216	0.2216	0.269	0.269	74.0
154.27	9	Tile	2	1	1	0.0011	0.0011	0.166	0.166	464.0
192.96	10	Tile	2	0	0	0.0751	0.0751	0.260	0.260	33.0
267.13	11	Tile	2	0	0					0.0
276.41	12	Tile	2	1	1	0.3220	0.2216	0.280	0.269	144.0
276.43	12	Tile	2	1	1	0.2075		0.236		
276.44	12	Tile	2	1	1	0.2663		0.250		
276.60	12	Tile	2	1	1	0.0907		0.310		

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988

- 5

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
291.92	13	Tile	2	0	0		0.1237		0.374	8411.0
291.96	13	Tile	2	1	1	0.2302		0.486		
292.10	13	Tile	2	1	1	0.2040		0.140		
292.15	13	Tile	2	1	1	0.1283		0.115		
292.38	13	Tile	2	1	1	0.0508		0.306		
292.67	13	Tile	2	1	1	0.0053		0.825		
297.74	14	Tile	2	1	1	0.0792	0.0751	0.315	0.260	6466.0
297.77	14	Tile	2	1	1	0.0710		0.205		
310.38	15	Tile	2	1	1	0.0030	0.1129	0.159	0.268	10634.0
310.44	15	Tile	2	1	1	0.0691		0.170		
310.56	15	Tile	2	1	1	0.0954		0.315		
310.65	15	Tile	2	1	1	0.2692		0.400		
310.83	15	Tile	2	1	1	0.2898		0.260		
311.33	15	Tile	2	1	1	0.0165		0.290		
312.40	15	Tile	2	1	1	0.0474		0.282		
315.20	16	Tile	2	1	1	1.5662	1.4026	0.235	0.218	6103.0
315.24	16	Tile	2	1	1	1.6109		0.214		
315.28	16	Tile	2	1	1	1.6716		0.254		
315.46	16	Tile	2	1	1	0.7616		0.170		
318.19	17	Tile	2	1	1	1.1268	1.1268	0.785	0.785	8574.0
321.58	18	Tile	2	1	1	2.8556	2.8556	1.000	1.000	5487.0
325.63	19	Tile	2	1	1	1.7848	1.6035	1.000	0.768	8460.0
325.83	19	Tile	2	1	1	2.1589		1.000		
326.40	19	Tile	2	1	1	0.8668		0.305		
359.68	20	Tile	2	1	1	0.1081	0.1282	0.431	0.680	10183.0
362.46	20	Tile	2	1	1	0.0467		0.610		
363.38	20	Tile	2	1	1	0.2297		1.000		

Appendix 4A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for zero tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
17.40	1	Surface	1	1	2	11475.9	27.80	18.53
32.56	2	Surface	1	1	0	4913.6	11.91	7.91
48.00	3	Surface	1	0	0	1971.9	4.78	3.17
50.00	4	Surface	1	0	0	10732.3	26.00	17.28
275.00	5	Surface	1	0	0	0.0		
291.96	6	Surface	1	0	1	2424.5	4.83	22.13
310.00	8	Surface	1	0	2	3814.5	6.12	30.52
312.00	9	Surface	1	0	0	614.2	1.69	4.51
315.20	10	Surface	1	1	1	1777.9	3.90	13.35
318.19	11	Surface	1	1	1	2877.0	5.27	28.37
321.57	12	Surface	1	1	1	1390.0	3.82	10.20
325.61	13	Surface	1	1	1	4525.7	18.86	32.77
363.38	14	Surface	1	1	1	1390.0	2.87	13.90
17.40	1	Tile	1	0	0	0.0		
32.56	2	Tile	1	1	0	1329.0	2.86	9.18
72.66	3	Tile	1	1	0	1735.0	5.14	3.76
84.39	4	Tile	1	1	1	8651.0	0.75	12.40
94.88	5	Tile	1	0	0	3034.0	4.83	24.82
97.92	6	Tile	1	1	1	7232.0	9.98	61.11
114.31	7	Tile	1	0	0	39.0	0.03	0.13
136.85	8	Tile	1	0	0	48.0	0.17	0.49
154.27	9	Tile	1	1	1	117.0	0.01	0.10
192.96	10	Tile	1	1	1	270.0	0.02	0.37
267.10	11	Tile	1	1	1	151.0	0.27	0.70
276.41	12	Tile	1	1	1	2830.0	1.63	8.19
291.92	13	Tile	1	1	1	14323.0	12.86	108.69
297.74	14	Tile	1	1	1	4590.0	2.77	25.93
310.38	15	Tile	1	1	1	18406.0	15.42	139.25
315.20	16	Tile	1	1	1	6282.0	11.87	35.18

Appendix 4A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for zero tillage, 1988

-2

Julian Time/88	Event	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
318.19	17	Tile	1	1	1	9131.0	9.35	26.48
321.58	18	Tile	1	1	1	5646.0	17.36	30.54
325.63	19	Tile	1	1	1	8789.0	13.82	33.28
359.68	20	Tile	1	1	1	12926.0	9.44	90.27
17.40	1	Surface	2	1	1	17100.6	33.49	68.83
32.56	2	Surface	2	1	0	0.0		
48.00	3	Surface	2	0	0	4784.3	11.77	12.68
50.00	4	Surface	2	0	0	12704.2	71.41	360.32
275.00	5	Surface	2	0	0	517.2	2.65	9.46
291.96	6	Surface	2	0	3	4558.0	13.69	35.11
297.00	7	Surface	2	0	0	517.2	1.55	3.98
310.00	8	Surface	2	0	3	4040.8	6.58	30.10
312.00	9	Surface	2	0	0	678.9	1.93	2.06
315.20	10	Surface	2	1	2	1487.0	4.32	11.16
318.19	11	Surface	2	1	1	3652.9	5.63	29.30
321.57	12	Surface	2	1	1	2230.5	8.65	16.35
325.61	13	Surface	2	1	1	5398.5	12.96	37.61
363.38	14	Surface	2	1	1	4202.4	3.09	31.77
17.40	1	Tile	2	0	0	342.0	0.09	0.21
32.56	2	Tile	2	1	0	285.0	0.07	0.17
72.66	3	Tile	2	1	0	1533.0	0.69	2.70
84.39	4	Tile	2	1	1	8658.0	2.80	8.54
94.88	5	Tile	2	0	0	2439.0	0.09	3.46
97.92	6	Tile	2	1	1	5245.0	5.08	6.03
114.31	7	Tile	2	0	0	117.0	0.09	0.39
136.85	8	Tile	2	0	0	114.0	0.06	0.36
154.27	9	Tile	2	1	1	1126.0	0.04	1.60
192.96	10	Tile	2	1	1	343.0	0.06	0.63
267.10	11	Tile	2	0	0	211.0	0.17	0.71

Appendix 4A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for zero tillage, 1988

-3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
276.41	12	Tile	2	1	1	4273.0	2.30	13.67
291.92	13	Tile	2	1	1	11545.0	12.07	68.75
297.74	14	Tile	2	1	1	7719.0	4.67	44.77
310.38	15	Tile	2	1	1	9563.0	22.69	67.77
315.20	16	Tile	2	1	1	3671.0	6.60	22.96
318.19	17	Tile	2	1	1	6547.0	6.27	51.33
321.58	18	Tile	2	1	1	3947.0	15.06	20.21
325.63	19	Tile	2	1	1	6419.0	7.74	30.73
359.68	20	Tile	2	1	1	8554.0	10.74	69.60

Appendix 5A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for ridge tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
17.40	1	Surface	1	1	1	8889.7	21.64	11.11
32.56	2	Surface	1	1	0	2909.4	7.08	3.05
48.00	3	Surface	1	0	0	2327.5	5.67	2.44
50.00	4	Surface	1	0	0	14837.8	36.12	15.58
275.00	5	Surface	1	0	2	0.0		
291.96	6	Surface	1	0	2	4655.0	16.69	37.29
310.00	8	Surface	1	0	2	2780.1	3.74	20.17
312.00	9	Surface	1	0	0	323.3	3.39	1.39
315.20	10	Surface	1	1	3	1260.7	3.99	8.34
318.19	11	Surface	1	1	1	2650.8	3.82	15.53
321.57	12	Surface	1	1	1	743.5	7.80	3.19
325.61	13	Surface	1	1	1	4428.7	19.39	20.00
363.38	14	Surface	1	1	1	1519.3	3.70	8.69
17.40	1	Tile	1	0	0	498.0	2.48	1.63
32.56	2	Tile	1	1	0	2363.0	8.40	21.15
72.66	3	Tile	1	1	0	1967.0	5.19	1.57
84.39	4	Tile	1	1	1	8725.0	2.32	4.92
94.88	5	Tile	1	0	0	2898.0	8.32	8.48
97.92	6	Tile	1	1	1	6755.0	13.63	14.19
114.31	7	Tile	1	0	0	156.0	0.15	0.52
136.85	8	Tile	1	0	0	62.0	0.20	0.32
154.27	9	Tile	1	1	1	478.0	0.01	0.72
192.96	10	Tile	1	1	1	36.0	0.00	0.05
266.94	11	Tile	1	0	0	181.0	0.14	0.39
276.41	12	Tile	1	1	1	2104.0	1.44	5.71
291.92	13	Tile	1	1	1	13155.0	15.80	71.37
297.74	14	Tile	1	1	1	7500.0	6.02	29.66
310.38	15	Tile	1	1	1	17766.0	9.93	57.11
315.20	16	Tile	1	1	1	6742.0	19.53	32.75
318.19	17	Tile	1	1	1	12614.0	27.16	23.97
321.58	18	Tile	1	1	1	6706.0	58.87	29.17
325.63	19	Tile	1	1	1	13074.0	35.12	64.54
359.68	20	Tile	1	1	1	13081.0	10.90	84.81
17.40	1	Surface	2	1	2	14870.1	18.15	55.39
32.56	2	Surface	2	1	0	13900.3	45.88	95.91
48.00	3	Surface	2	0	0	6659.2	16.39	17.65
50.00	4	Surface	2	0	0	16712.7	93.94	473.97
275.00	5	Surface	2	0	2	937.5	22.59	2.21
291.96	6	Surface	2	0	3	13253.8	49.16	103.28
297.00	7	Surface	2	0	0	3620.5	28.19	24.28
310.00	8	Surface	2	0	2	5786.4	8.35	44.97
312.00	9	Surface	2	0	0	1099.1	3.13	3.34

Appendix 5A Samples taken and analyzed, event volumes, sediment and orthophosphate losses for ridge tillage, 1988

-2

Julian Time/88	Event #	Source	Rep	Taken	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
315.20	10	Surface	2	1	1	1131.4	3.24	5.83
318.19	11	Surface	2	1	1	3588.2	5.84	18.30
321.57	12	Surface	2	1	1	6626.9	63.36	28.03
325.61	13	Surface	2	1	1	8113.9	45.40	44.89
363.38	14	Surface	2	1	1	9180.7	9.28	33.05
17.40	1	Tile	2	0	0	565.0	0.66	0.28
32.56	2	Tile	2	1	0	1101.0	1.29	0.55
72.66	3	Tile	2	1	0	2169.0	3.00	3.90
84.39	4	Tile	2	1	1	8327.0	10.64	9.58
94.88	5	Tile	2	0	0	2095.0	0.17	3.81
97.92	6	Tile	2	1	1	4896.0	11.12	14.98
114.31	7	Tile	2	0	0	156.0	0.26	0.54
136.85	8	Tile	2	0	0	74.0	0.07	0.23
154.27	9	Tile	2	1	1	759.0	0.05	1.11
192.96	10	Tile	2	1	1	305.0	0.01	0.45
266.94	11	Tile	2	1	0	2298.0	3.81	7.89
276.41	12	Tile	2	1	1	6084.0	5.57	18.94
291.92	13	Tile	2	1	1	11490.0	15.30	88.70
297.74	14	Tile	2	1	1	8170.0	5.34	36.93
310.38	15	Tile	2	1	1	10271.0	7.99	47.41
315.20	16	Tile	2	1	1	4516.0	9.11	13.15
318.19	17	Tile	2	1	1	7974.0	9.05	37.88
321.58	18	Tile	2	1	1	4886.0	30.13	6.35
325.63	19	Tile	2	1	1	8299.0	16.24	31.40
359.68	20	Tile	2	1	1	8176.0	10.27	64.45

Appendix 6A Samples taken and analyzed, event volumes, sediment and orthophosphate losses for conventional tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
17.40	1	Surface	1	1	0	4719.6	41.64	11.45
32.56	2	Surface	1	1	0	3200.3	28.23	7.76
48.00	3	Surface	1	0	0	0.0		
50.00	4	Surface	1	0	2	7629.0	67.32	18.54
275.00	5	Surface	1	0	0	0.0		
291.96	6	Surface	1	0	0	258.6	2.28	0.63
297.00	7	Surface	1	0	0	0.0		
310.46	8	Surface	1	0	0	549.5	8.01	2.03
312.00	9	Surface	1	0	0	0.0		
315.20	10	Surface	1	0	0	0.0		
318.19	11	Surface	1	0	0	678.9	1.31	2.47
321.57	12	Surface	1	0	0	226.3	0.44	0.82
325.81	13	Surface	1	1	1	1777.9	34.37	6.40
363.38	14	Surface	1	1	0	1519.3	16.15	5.50
17.40	1	Tile	1	0	0	662.0	0.27	0.31
32.56	2	Tile	1	1	0	1709.0	0.54	0.66
72.66	3	Tile	1	1	4	1967.0	0.80	0.93
84.39	4	Tile	1	1	1	11904.0	3.86	11.59
94.88	5	Tile	1	0	0	2187.0	0.75	1.86
97.92	6	Tile	1	1	1	5829.0	5.00	15.16
114.31	7	Tile	1	0	0	104.0	0.11	0.28
136.85	8	Tile	1	0	0	74.0	0.08	0.20
154.27	9	Tile	1	1	1	855.0	0.00	1.20
192.96	10	Tile	1	1	1	59.0	0.00	0.07
267.13	11	Tile	1	0	0	0.0		
276.41	12	Tile	1	1	1	396.0	0.41	1.05
291.92	13	Tile	1	1	1	10903.0	17.77	47.21
297.74	14	Tile	1	1	1	6267.0	5.25	22.56
310.38	15	Tile	1	1	1	13888.0	26.24	38.39
315.20	16	Tile	1	1	1	8362.0	75.22	29.56
318.19	17	Tile	1	1	1	17218.0	165.46	75.76
321.58	18	Tile	1	1	1	10156.0	458.56	10.77
325.63	19	Tile	1	1	1	19335.0	364.68	100.67
359.68	20	Tile	1	1	1	18810.0	18.77	117.94
19.00	1	Surface	2	0	1	9697.9	28.68	27.35
32.56	2	Surface	2	1	0	4784.3	31.44	18.95
48.00	3	Surface	2	0	0	4687.3	8.13	6.80
50.00	4	Surface	2	0	0	9019.0	145.78	79.66
275.00	5	Surface	2	0	0	549.5	6.76	0.66
291.96	6	Surface	2	0	3	2812.4	10.64	8.32
297.00	7	Surface	2	0	0	517.2	1.36	1.84

Appendix 6A Samples taken and analyzed, event volumes, sediment and orthophosphate losses for conventional tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
310.46	8	Surface	2	0	0	0.0		
31200	9	Surface	2	0	0	0.0		
315.20	10	Surface	2	1	2	7435.0	66.29	52.23
318.19	11	Surface	2	1	1	3135.7	24.17	7.71
321.57	12	Surface	2	1	1	3168.0	56.16	6.27
325.61	13	Surface	2	1	1	6562.2	92.12	29.02
363.38	14	Surface	2	1	0	3620.5	47.12	15.35
17.40	1	Tile	2	0	0	347.0	2.05	0.46
32.56	2	Tile	2	1	0	359.0	2.12	0.47
72.66	3	Tile	2	1	0	781.0	0.76	2.07
84.39	4	Tile	2	1	1	8099.0	5.80	14.28
94.88	5	Tile	2	0	0	1515.0	3.77	2.67
97.92	6	Tile	2	1	1	3477.0	4.01	6.29
114.31	7	Tile	2	0	0	65.0	0.07	0.12
136.85	8	Tile	2	0	0	74.0	0.16	0.20
154.27	9	Tile	2	1	1	464.0	0.01	0.77
192.96	10	Tile	2	0	0	33.0	0.02	0.09
267.13	11	Tile	2	0	0	0.0		
276.41	12	Tile	2	1	1	144.0	0.32	0.39
291.92	13	Tile	2	0	0	8411.0	10.41	31.49
297.74	14	Tile	2	1	1	6466.0	4.86	16.81
310.38	15	Tile	2	1	1	10634.0	12.01	28.50
315.20	16	Tile	2	1	1	6103.0	85.60	13.32
318.19	17	Tile	2	1	1	8574.0	96.61	67.31
321.58	18	Tile	2	1	1	5487.0	156.69	54.87
325.63	19	Tile	2	1	1	8460.0	135.66	65.00
359.68	20	Tile	2	1	1	10183.0	13.05	69.28

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1989

-1

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event volume L/plot
8	1	Surface	1	1	1	0.1801	0.1801	0.905	0.905	43446.6
26	2	Surface	1	1	1	0.6919	0.6919	1.000	1.000	0.0
93	3	Surface	1	1	1	0.3878	0.3878	0.600	0.600	4419.0
108	4	Surface	1	1	0					0.0
146	5	Surface	1	1	1	2.1486	1.2000	2.950	3.137	1839.4
146	5	Surface	1	1	1	0.9612		3.150		
146	5	Surface	1	1	1	0.4901		3.310		
146	5	Surface	1	0	0					
151	6	Surface	1	1	1	1.1239	0.4690	0.789	1.941	12135.3
151	6	Surface	1	1	1	0.5328		1.400		
151	6	Surface	1	1	1	0.2069		0.345		
152	6	Surface	1	1	1	0.2744		3.760		
153	6	Surface	1	1	1	0.2069		3.410		
155	7	Surface	1	1	1	0.6908	0.4122	0.960	2.140	2240.2
155	7	Surface	1	1	1	0.3830		2.550		
155	7	Surface	1	1	1	0.1627		2.910		
169	8	Surface	1	0	0		0.4406		2.040	2405.1
171	9	Surface	1	1	1	0.2329	0.1366	9.750	9.600	3539.7
171	9	Surface	1	1	1	0.0404		9.450		
201	10	Surface	1	0	0					
201	10	Surface	1	1	1	0.1412	0.1412	1.000	1.000	4842.5
320	11	Surface	1	1	1	0.1973	0.5472	0.330	0.248	4790.8
320	11	Surface	1	1	1	0.8971		0.166		
8	1	Tile	1	1	1	0.1566	0.1566	0.826	0.826	3987.0
26	2	Tile	1	1	1	0.2151	0.2151	0.691	0.691	1430.0
87	3	Tile	1	1	1	0.4210	0.4210	0.260	0.260	15214.0
93	4	Tile	1	1	1	0.1720	0.1720	0.175	0.175	17203.0
108	5	Tile	1	1	0		0.2965		0.218	17197.0

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
145	6	Tile	1	1	1	0.2712	0.2912	0.510	1.344	15100.0
145	6	Tile	1	1	1	0.0249		0.045		
146	6	Tile	1	1	1	0.8087		3.850		
146	6	Tile	1	1	1	0.4242		2.000		
146	6	Tile	1	1	1	0.3676		0.250		
146	6	Tile	1	1	1	0.0978		2.470		
147	6	Tile	1	1	1	0.0438		0.280		
151	7	Tile	1	1	1	0.4732	0.1593	1.500	0.987	20421.0
151	7	Tile	1	1	1	0.1000		0.150		
151	7	Tile	1	1	1	0.1782		2.150		
152	7	Tile	1	1	1	0.0510		0.530		
152	7	Tile	1	1	1	0.1432		0.575		
153	7	Tile	1	1	1	0.0280		0.199		
153	7	Tile	1	1	1	0.2342		2.300		
153	7	Tile	1	1	1	0.0662		0.490		
155	8	Tile	1	1	1	0.3007	0.2225	0.885	0.919	14564.0
155	8	Tile	1	1	1	0.1443		0.953		
167	9	Tile	1	1	1	0.0991	0.1019	0.480	0.381	10389.0
167	9	Tile	1	1	1	0.0457		0.202		
169	9	Tile	1	1	1	0.1046		0.282		
171	10	Tile	1	1	1	0.3675	0.2779	1.500	1.073	6446.0
171	10	Tile	1	1	1	0.2786		0.255		
171	10	Tile	1	1	1	0.1884		0.645		
201	11	Tile	1	1	1	0.3204	0.2023	0.125	0.078	12157.0
201	11	Tile	1	1	1	0.1009		0.090		
201	11	Tile	1	1	1	0.0020		0.100		
201	11	Tile	1	1	1	0.0842		0.030		
320	12	Tile	1	1	1	0.1933	0.1369	0.181	0.178	12165.0

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
320	12	Tile	1	1	1	0.0805		0.175		
8	1	Surface	2	1	1	0.1927	0.1927	0.965	0.965	57702.5
26	2	Surface	2	1	1	0.3301	0.3301	0.690	0.690	2886.7
93	3	Surface	2	1	1	0.2461	0.2461	0.265	0.265	4709.9
108	4	Surface	2	1	0		0.4041		1.551	1548.4
146	5	Surface	2	1	1	1.1434	0.5621	0.095	2.836	1852.3
146	5	Surface	2	1	1	0.6232		2.750		
146	5	Surface	2	1	1	0.3325		4.050		
146	5	Surface	2	1	1	0.1495		4.450		
151	6	Surface	2	1	1	1.2109	0.4682	0.950	1.844	12494.1
151	6	Surface	2	1	1	0.3246		1.510		
151	6	Surface	2	1	1	0.2132		2.850		
152	6	Surface	2	1	1	0.2989		2.010		
153	6	Surface	2	1	1	0.2936		1.900		
155	7	Surface	2	1	1	0.7069	0.4200	0.990	2.393	2637.8
155	7	Surface	2	1	1	0.3247		2.950		
155	7	Surface	2	1	1	0.2283		3.240		
169	8	Surface	2	0	0		0.4441		2.119	2405.1
171	9	Surface	2	1	0		0.4441		2.119	3539.1
171	9	Surface	2	0	0					
201	10	Surface	2	1	1	0.3275	0.3072	0.581	0.766	4842.5
201	10	Surface	2	1	1	0.2869		0.950		
320	11	Surface	2	1	1	0.2154	0.2849	0.340	0.304	4005.2
320	11	Surface	2	1	1	0.3543		0.268		
8	1	Tile	2	1	1	0.1347	0.1347	0.480	0.480	2030.0
26	2	Tile	2	1	1	0.1604	0.1604	0.810	0.810	650.0
87	3	Tile	2	1	1	0.2006	0.2006	0.170	0.170	13065.0
93	4	Tile	2	1	1	0.1207	0.1207	0.125	0.125	16996.0

Appendix 7A Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc g/L	Ortho P Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
108	5	Tile	2	1	0		0.1606		0.148	24588.0
145	6	Tile	2	1	1	0.2180	0.2678	2.100	1.222	9816.0
145	6	Tile	2	1	1	0.0085		0.250		
146	6	Tile	2	1	1	0.7924		2.600		
146	6	Tile	2	1	1	0.3920		0.205		
146	6	Tile	2	1	1	0.2862		3.050		
146	6	Tile	2	1	1	0.0955		0.210		
147	6	Tile	2	1	1	0.0821		0.140		
151	7	Tile	2	1	1	0.1395	0.1222	2.200	1.329	13274.0
151	7	Tile	2	1	1	0.2560		2.500		
151	7	Tile	2	1	1	0.1984		0.205		
152	7	Tile	2	1	1	0.0469		0.595		
152	7	Tile	2	1	1	0.1353		1.800		
153	7	Tile	2	1	1	0.0270		0.305		
153	7	Tile	2	1	1	0.1285		2.570		
153	7	Tile	2	1	1	0.0462		0.455		
155	8	Tile	2	0	1	0.2578	0.1985	1.000	1.000	5073.0
155	8	Tile	2	1	1	0.1391		1.000		
167	9	Tile	2	1	1	0.1358	0.1119	0.570	0.434	4273.0
167	9	Tile	2	1	1	0.0408		0.235		
169	9	Tile	2	1	1	0.0879		0.298		
171	10	Tile	2	1	1	1.1116	0.7595	1.150	1.054	13297.0
171	10	Tile	2	1	1	0.9206		0.200		
171	10	Tile	2	1	1	0.4074		0.958		
201	11	Tile	2	1	1	0.3696	0.2290	0.275	0.300	14816.0
201	11	Tile	2	1	1	0.1420		0.195		
201	11	Tile	2	1	1	0.0038		0.130		
201	11	Tile	2	1	1	0.0884		0.325		

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
320	12	Tile	2	1	1	0.2034	0.1947	0.375	0.338	4390.0
320	12	Tile	2	1	1	0.1860		0.301		

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
8	1	Surface	1	1	1	0.2464	0.2464	0.395	0.395	3168.0
26	2	Surface	1	1	1	0.9329	0.9329	0.389	0.389	1196.1
93	3	Surface	1	1	1	0.3796	0.3796	0.194	0.194	4965.3
108	4	Surface	1	1	0					1092.6
146	5	Surface	1	1	1	3.4744	1.6580	0.615	1.758	4176.6
146	5	Surface	1	1	1	1.7464		0.656		
146	5	Surface	1	1	1	0.9812		1.310		
146	5	Surface	1	1	1	0.4300		4.450		
151	6	Surface	1	1	1	1.9195	1.1586	0.575	0.650	15671.8
151	6	Surface	1	1	1	2.3050		0.715		
151	6	Surface	1	1	1	0.4918		0.940		
152	6	Surface	1	1	1	0.3747		0.250		
153	6	Surface	1	1	1	0.7019		0.770		
155	7	Surface	1	1	1	1.1690	0.6007	0.505	0.488	2388.9
155	7	Surface	1	1	1	0.3346		0.470		
155	7	Surface	1	1	1	0.2985		0.490		
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	1	1	0.1841	0.1841	0.441	0.441	1693.9
169	8	Surface	1	0	0					
171	9	Surface	1	0	0					
171	9	Surface	1	1	1	1.0815	0.8696	0.220	0.230	8482.4
171	9	Surface	1	1	1	0.6576		0.240		
201	10	Surface	1	0	0					
201	10	Surface	1	1	1	0.2286	0.2286	0.995	0.995	5282.1

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P Conc., mg/L	Event Ortho P Conc., mg/L.	Event Volume L/plot
320	11	Surface	1	1	1	0.2700	0.9545	0.129	0.165	4528.9
320	11	Surface	1	1	1	1.6390		0.200		
8	1	Tile	1	1	1	0.5092	0.5092	0.328	0.328	4867.0
26	2	Tile	1	1	1	0.3555	0.3555	0.895	0.895	2999.0
87	3	Tile	1	1	1	0.3751	0.3751	0.105	0.105	15852.0
93	4	Tile	1	1	1	0.1522	0.1522	0.055	0.055	20744.0
108	5	Tile	1	1	0		0.2637		0.080	17585.0
145	6	Tile	1	1	1	0.2676	0.4909	0.080	0.406	11978.0
145	6	Tile	1	1	1	0.0143		0.270		
146	6	Tile	1	1	1	1.3644		0.590		
146	6	Tile	1	1	1	0.9891		0.055		
146	6	Tile	1	1	1	0.5204		0.925		
146	6	Tile	1	1	1	0.1333		0.880		
147	6	Tile	1	1	1	0.1469		0.045		
151	7	Tile	1	1	1	0.9616	0.2870	0.360	0.293	19201.0
151	7	Tile	1	1	1	0.3087		0.315		
151	7	Tile	1	1	1	0.2564		0.230		
152	7	Tile	1	1	1	0.0683		0.380		
152	7	Tile	1	1	1	0.2369		0.310		
153	7	Tile	1	1	1	0.0357		0.175		
153	7	Tile	1	1	1	0.3610		0.325		
153	7	Tile	1	1	1	0.0672		0.245		
155	8	Tile	1	1	1	0.3681	0.2216	0.220	0.170	11207.0
155	8	Tile	1	1	1	0.0752		0.120		
167	9	Tile	1	1	1	0.1600	0.0970	0.548	0.330	10066.0
167	9	Tile	1	1	1	0.0550		0.095		
169	9	Tile	1	1	1	0.0760		0.348		
171	10	Tile	1	1	1	0.5330	0.3955	0.915	0.748	10645.0

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

-3

Julian Time/89	Event	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
171	10	Tile	1	1	1	0.5187		0.950		
171	10	Tile	1	1	1	0.1348		0.380		
201	11	Tile	1	1	1	0.3103	0.1500	0.100	0.145	12190.0
201	11	Tile	1	1	1	0.1713		0.070		
201	11	Tile	1	1	1	0.0278		0.020		
201	11	Tile	1	1	1	0.0907		0.390		
320	12	Tile	1	1	1	0.1739	0.1166	0.127	0.086	9911.0
320	12	Tile	1	1	1	0.0594		0.045		
8	1	Surface	2	1	1	0.3119	0.3119	0.580	0.580	8925.3
26	2	Surface	2	1	1	0.6878	0.6878	0.408	0.408	2586.1
93	3	Surface	2	1	1	0.7771	0.7771	0.255	0.255	4965.3
108	4	Surface	2	1	0		0.7324		0.332	1432.1
146	5	Surface	2	1	1	2.8046	1.3147	0.574	1.406	1807.0
146	5	Surface	2	1	1	1.3461		0.690		
146	5	Surface	2	1	1	0.8138		1.850		
146	5	Surface	2	1	1	0.2944		2.510		
151	6	Surface	2	1	1	0.7859	0.4523	0.591	0.671	18186.8
151	6	Surface	2	1	1	0.2805		0.735		
151	6	Surface	2	1	1	0.4656		0.880		
152	6	Surface	2	1	1	0.2784		0.531		
153	6	Surface	2	1	1	0.4509		0.619		
155	7	Surface	2	1	1	0.4676	0.4127	0.510	0.547	3213.2
155	7	Surface	2	1	1	0.4842		0.515		
155	7	Surface	2	1	1	0.2862		0.615		

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
168	8	Surface	2	1	1	0.4404		0.474		
168	8	Surface	2	1	1	0.1259		0.201		
168	8	Surface	2	1	1	0.1256		0.709		
168	8	Surface	2	1	1	0.1923		0.510		
168	8	Surface	2	1	1	0.1320		0.565		
168	8	Surface	2	1	1	0.1916		0.561		
169	8	Surface	2	1	1	0.7112		0.449		
171	9	Surface	2	1	1	1.0101	0.5508	1.950	1.050	8482.4
171	9	Surface	2	1	1	0.0915		0.150		
171	9	Surface	2	0	0					
201	10	Surface	2	0	0					
201	10	Surface	2	1	1	0.3309	0.3309	0.715	0.715	5282.1
320	11	Surface	2	1	1	0.1494	0.3145	0.125	0.155	2621.7
320	11	Surface	2	1	1	0.4796		0.184		
8	1	Tile	2	1	1	0.5864	0.5864	0.475	0.475	2259.0
26	2	Tile	2	1	1	0.3256	0.3256	1.000	1.000	1119.0
87	3	Tile	2	1	1	0.4280	0.4280	0.225	0.225	12936.0
93	4	Tile	2	1	1	0.1265	0.1265	0.100	0.100	17588.0
108	5	Tile	2	1	0		0.6500		0.069	12064.0
145	6	Tile	2	1	1	0.1603	0.3776	0.900	0.555	7011.0
145	6	Tile	2	1	1					
146	6	Tile	2	1	1	1.0246		0.550		
146	6	Tile	2	1	1	0.5459		0.465		
146	6	Tile	2	1	1	0.4237		0.695		
146	6	Tile	2	1	1	0.0850		0.555		
147	6	Tile	2	1	1	0.0262		0.165		
151	7	Tile	2	1	1	0.7786	0.2569	0.490	0.291	8617.0
151	7	Tile	2	1	1	0.4203		0.410		

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

- 5

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
151	7	Tile	2	1	1	0.2538		0.380		
152	7	Tile	2	1	1	0.0520		0.225		
152	7	Tile	2	1	1	0.1984		0.225		
153	7	Tile	2	1	1	0.0197		0.135		
153	7	Tile	2	1	1	0.3072		0.305		
153	7	Tile	2	1	1	0.0252		0.155		
155	8	Tile	2	1	1	0.4270	0.2611	0.407	0.314	5705.0
155	8	Tile	2	1	1	0.0951		0.220		
167	9	Tile	2	1	1	0.1886	0.1013	0.191	0.155	5959.0
167	9	Tile	2	1	1	0.0477		0.111		
169	9	Tile	2	1	1	0.0676		0.162		
171	10	Tile	2	1	1	0.2762	0.2873	0.520	1.163	20892.0
171	10	Tile	2	1	1	0.0216		1.520		
171	10	Tile	2	1	1	0.5642		1.450		
201	11	Tile	2	1	1	0.4167	0.1756	0.185	0.246	11767.0
201	11	Tile	2	1	1	0.1776		0.125		
201	11	Tile	2	1	1	0.0084		0.140		
201	11	Tile	2	1	1	0.0995		0.535		
320	12	Tile	2	1	1	0.1118	0.0821	0.140	0.113	12154.0
320	12	Tile	2	1	1	0.0525		0.085		

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/Plot
8	1	Surface	1	0	0					0.0
26	2	Surface	1	0	0					0.0
93	3	Surface	1	0	0					0.0
108	4	Surface	1	0	0					0.0
146	5	Surface	1	1	1	4.3216	2.9142	0.165	0.182	779.1
146	5	Surface	1	1	1	2.4418		0.155		
146	5	Surface	1	1	1	1.9792		0.225		
146	5	Surface	1	0	0					
151	6	Surface	1	1	1	1.8260	0.6312	0.159	1.210	10742.0
151	6	Surface	1	1	1	0.4286		0.335		
151	6	Surface	1	1	1	0.2383		5.100		
152	6	Surface	1	1	1	0.5365		0.210		
153	6	Surface	1	1	1	0.1262		0.245		
155	7	Surface	1	1	1	0.7762	0.4412	0.312	0.213	2185.3
155	7	Surface	1	1	1	0.3616		0.115		
155	7	Surface	1	1	1	0.1857		0.211		
168	8	Surface	1	0	0					
168	8	Surface	1	0	0		0.4412		0.213	2508.5
168	8	Surface	1	0	0					

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P Conc., mg/L	Event Volume L/plot
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
169	8	Surface	1	0	0					
171	9	Surface	1	0	0					
171	9	Surface	1	1	1	0.5397	0.6256	0.285	0.188	4415.8
171	9	Surface	1	0	0					
171	9	Surface	1	1	1	0.7114		0.090		
201	10	Surface	1	0	0					
201	10	Surface	1	1	1	0.2254	0.2254	0.590	0.590	4021.4
320	11	Surface	1	0	0		0.2254		0.590	1871.7
320	11	Surface	1	0	0					
8	1	Tile	1	1	1	0.3495	0.3495	0.495	0.495	5805.0
26	2	Tile	1	1	0		0.3495		0.495	2094.0
87	3	Tile	1	1	1	0.3170	0.3170	0.110	0.110	18908.0
93	4	Tile	1	1	1	0.1493	0.1493	0.075	0.075	24420.0
108	5	Tile	1	0	0		0.2332		0.093	28705.0
145	6	Tile	1	1	1	1.0088	0.7404	0.055	0.249	10896.0

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
145	6	Tile	1	1	1	0.0236		0.215		
146	6	Tile	1	1	1	1.4534		0.190		
146	6	Tile	1	1	1	1.1745		0.285		
146	6	Tile	1	1	1	0.9089		0.515		
146	6	Tile	1	1	1	0.5595		0.380		
147	6	Tile	1	0	1	0.0542		0.100		
151	7	Tile	1	1	1	0.5219	0.3620	0.115	0.209	25869.0
151	7	Tile	1	1	1	0.6862		0.170		
151	7	Tile	1	1	1	0.4067		0.310		
152	7	Tile	1	1	1	0.1795		0.225		
152	7	Tile	1	1	1	0.4293		0.255		
153	7	Tile	1	1	1	0.0251		0.105		
153	7	Tile	1	1	1	0.3055		0.325		
153	7	Tile	1	1	1	0.3414		0.170		
155	8	Tile	1	0	1	0.4760	0.4033	0.185	0.220	11889.0
155	8	Tile	1	1	1	0.3306		0.255		
167	9	Tile	1	1	1	0.4159	0.7377	0.237	0.214	23058.0
167	9	Tile	1	1	1	0.0281		0.060		
169	9	Tile	1	1	1	1.0595		0.190		

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
171	10	Tile	1	1	1	0.6118	0.5282	0.275	0.248	35810.0
171	10	Tile	1	1	1	0.0434		0.795		
171	10	Tile	1	1	1	0.4446		0.220		
201	11	Tile	1	1	1	0.3352	0.2079	0.065	0.148	17984.0
201	11	Tile	1	1	1	0.1284		0.050		
201	11	Tile	1	1	1	0.0065		0.050		
201	11	Tile	1	1	1	0.0807		0.230		
320	12	Tile	1	0	0		0.2079		0.148	555.0
320	12	Tile	1	0	0					
8	1	Surface	2	1	1	0.6572	0.6572	0.396	0.396	37951.1
26	2	Surface	2	0	0					0.0
93	3	Surface	2	1	1	0.1735	0.1735	0.145	0.145	6607.5
108	4	Surface	2	0	0		0.4153		0.271	911.6
146	5	Surface	2	1	1	2.9521	1.6164	2.140	0.883	4625.9
146	5	Surface	2	1	1	1.8360		0.263		
146	5	Surface	2	1	1	1.1838		0.205		
146	5	Surface	2	1	1	0.4936		0.925		
151	6	Surface	2	1	1	2.4686	1.0518	0.079	0.119	15920.7
151	6	Surface	2	1	1	1.4933		0.062		

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
151	6	Surface	2	1	1	0.2886		0.250		
152	6	Surface	2	1	1	0.6716		0.090		
153	6	Surface	2	1	1	0.3368		0.115		
155	7	Surface	2	1	1	1.1579	0.6366	0.136	0.104	3646.4
155	7	Surface	2	1	1	0.3428		0.091		
155	7	Surface	2	1	1	0.4091		0.085		
167	8	Surface	2	1	1	0.2458	3.6000	0.201	0.078	2508.5
168	8	Surface	2	1	1	0.2020		0.600		
168	8	Surface	2	1	1	0.2650		0.500		
168	8	Surface	2	0	0					
168	8	Surface	2	1	1	0.2038		0.535		
168	8	Surface	2	1	1	0.2181		0.185		
168	8	Surface	2	1	1	0.6662		0.220		
168	8	Surface	2	1	1	0.2356		0.265		
168	8	Surface	2	1	1	0.1505		0.570		
168	8	Surface	2	1	1	0.6302		0.201		
169	8	Surface	2	0	0					
171	9	Surface	2	1	1	0.1642	0.2949	0.084	0.246	4415.8
171	9	Surface	2	1	1	0.5784		0.094		

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
171	9	Surface	2	1	1	0.4256		0.407		
171	9	Surface	2	0	0					
201	10	Surface	2	0	0					0.0
201	10	Surface	2	1	1	0.2631	0.2631	0.356	0.356	4021.4
320	11	Surface	2	0	0	0.2631	0.2631	0.356	0.356	1871.7
320	11	Surface	2	0	0					
8	1	Tile	2	1	1	0.4943	0.4943	0.536	0.536	3369.0
26	2	Tile	2	1	1	0.1859	0.1859	0.045	0.045	1765.0
87	3	Tile	2	1	1	1.5773	1.5773	0.141	0.141	7961.0
93	4	Tile	2	1	1	0.4677	0.4677	0.075	0.075	19885.0
108	5	Tile	2	0	0		1.0225		0.108	10950.0
145	6	Tile	2	1	1	0.0137	0.2443	0.050	0.393	5246.0
145	6	Tile	2	1	1	0.0250		0.100		
146	6	Tile	2	1	1	0.3801		0.090		
146	6	Tile	2	1	1	0.3773		1.500		
146	6	Tile	2	1	1	0.4263		0.275		
146	6	Tile	2	1	1	0.4314		0.345		
147	6	Tile	2	0	1	0.0561		0.390		
151	7	Tile	2	1	1	0.4182	0.2218	0.075	0.225	11471.0

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg /L	Event Ortho P. Conc., mg/L	Event Volume L/plot
151	7	Tile	2	1	1	0.3214		0.125		
151	7	Tile	2	1	1	0.2870		0.375		
152	7	Tile	2	1	1	0.1304		0.265		
152	7	Tile	2	1	1	0.1611		0.180		
153	7	Tile	2	1	1	0.0528		0.250		
153	7	Tile	2	1	1	0.2252		0.295		
153	7	Tile	2	1	1	0.1780		0.235		
155	8	Tile	2	0	1	0.1450	0.1637	0.145	0.198	6650.0
155	8	Tile	2	1	1	0.1824		0.250		
167	9	Tile	2	1	1	0.2707	0.2781	0.147	0.134	8712.0
167	9	Tile	2	1	1	0.1075		0.083		
169	9	Tile	2	1	1	0.2856		0.120		
171	10	Tile	2	1	1	0.7315	0.5930	0.730	0.520	10952.0
171	10	Tile	2	1	1	0.5504		0.835		
171	10	Tile	2	1	1	0.4546		0.310		
201	11	Tile	2	1	1	0.4168	0.2456	0.040	0.060	14075.0
201	11	Tile	2	1	1	0.1264		0.030		
201	11	Tile	2	1	1	0.0129		0.060		
201	11	Tile	2	1	1	0.0743		0.080		

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc. mg/L	Event Volume L/plot
320	12	Tile	2	1	0					
320	12	Tile	2	0	1	0.1044	0.1044	0.055	0.055	2313.0

Appendix 10A. Events volumes, sediment and orthophosphate losses from zero tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
8	1	Surface	1	43447	78.26	393.19
26	2	Surface	1	0	0.00	0.00
93	3	Surface	1	4419	17.14	26.51
108	4	Surface	1	0	0.00	0.00
146	5	Surface	1	1839	22.07	57.70
151	6	Surface	1	12135	56.91	235.52
155	7	Surface	1	2240	9.23	47.94
169	8	Surface	1	2405	10.60	49.07
171	9	Surface	1	3540	4.84	339.81
201	10	Surface	1	4843	6.84	48.43
320	11	Surface	1	4791	26.21	11.88
8	1	Tile	1	3987	6.24	32.93
26	2	Tile	1	1430	3.08	9.88
87	3	Tile	1	15214	64.06	39.56
93	4	Tile	1	17203	29.59	30.11
108	5	Tile	1	17197	50.99	37.40
145	6	Tile	1	15100	43.97	202.88
151	7	Tile	1	20421	32.52	201.50
155	8	Tile	1	14564	32.41	133.84
167	9	Tile	1	10389	10.58	39.58
171	10	Tile	1	6446	17.92	69.13
201	11	Tile	1	12157	24.59	9.42
320	12	Tile	1	12165	16.65	21.65
8	1	Surface	2	57703	111.18	556.83
26	2	Surface	2	2887	9.53	19.92
93	3	Surface	2	4710	11.59	12.48
108	4	Surface	2	1548	6.26	24.01
146	5	Surface	2	1852	10.41	52.54
151	6	Surface	2	12494	58.50	230.39
155	7	Surface	2	2638	11.08	63.13
169	8	Surface	2	2405	10.68	50.96
171	9	Surface	2	3539	15.72	74.98
201	10	Surface	2	4843	14.88	37.07
320	11	Surface	2	4005	11.41	12.18
8	1	Tile	2	2030	2.73	9.74
26	2	Tile	2	650	1.04	5.27
87	3	Tile	2	13065	26.21	22.21
93	4	Tile	2	16996	20.51	21.25
108	5	Tile	2	24588	39.50	36.27
145	6	Tile	2	9816	26.29	119.97
151	7	Tile	2	13274	16.22	176.38
155	8	Tile	2	5073	10.07	50.73

Appendix 10A. Events volume, sediment and orthophosphate losses from zero tillage, 1989

-2

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
167	9	Tile	2	4273	4.78	18.54
171	10	Tile	2	13297	100.99	140.15
201	11	Tile	2	14816	33.93	44.45
320	12	Tile	2	4390	8.55	14.84

Appendix 11A. Events volumes, sediment and orthophosphate losses for ridge tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
8	1	Surface	1	3168	7.80	12.51
26	2	Surface	1	1196	11.16	4.65
93	3	Surface	1	4965	18.85	9.63
108	4	Surface	1	1093	0.00	0.00
146	5	Surface	1	4177	69.25	73.41
151	6	Surface	1	15672	181.57	101.87
155	7	Surface	1	2389	14.35	11.67
168	8	Surface	1	1694	3.12	7.47
171	9	Surface	1	8482	73.76	19.51
201	10	Surface	1	5282	12.07	52.56
320	11	Surface	1	4529	43.23	7.45
8	1	Tile	1	4867	24.78	15.96
26	2	Tile	1	2999	10.66	26.84
87	3	Tile	1	15852	59.46	16.64
93	4	Tile	1	20744	31.58	11.41
108	5	Tile	1	17585	46.36	14.07
145	6	Tile	1	11978	58.79	48.68
151	7	Tile	1	19201	55.10	56.16
155	8	Tile	1	11207	24.84	19.05
167	9	Tile	1	10066	9.76	33.25
171	10	Tile	1	10645	42.10	79.66
201	11	Tile	1	12190	18.29	17.68
320	12	Tile	1	9911	11.56	8.52
8	1	Surface	2	8925	27.84	51.77
26	2	Surface	2	2586	17.79	10.55
93	3	Surface	2	4965	38.59	12.66
108	4	Surface	2	1432	10.49	4.75
146	5	Surface	2	1807	23.76	25.41
151	6	Surface	2	18187	82.25	122.07
155	7	Surface	2	3213	13.26	17.57
167	8	Surface	2	1694	4.94	6.88
171	9	Surface	2	8482	46.72	89.07
201	10	Surface	2	5282	17.48	37.77
320	11	Surface	2	2622	8.25	4.05
8	1	Tile	2	2259	13.25	10.73
26	2	Tile	2	1119	3.64	11.19
87	3	Tile	2	12936	55.37	29.11
93	4	Tile	2	17588	22.25	17.59
108	5	Tile	2	12064	33.45	17.59
145	6	Tile	2	7011	26.47	38.91
151	7	Tile	2	8617	22.14	25.04
155	8	Tile	2	5705	14.89	17.89

Appendix 11 A.

Events volumes, sediment and orthophosphate losses for ridge tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
167	9	Tile	2	5959	6.04	9.22
171	10	Tile	2	20892	60.03	243.04
201	11	Tile	2	11767	20.66	28.98
320	12	Tile	2	12154	9.98	13.67

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
8	1	Surface	1	0	0.00	0.00
26	2	Surface	1	0	0.00	0.00
93	3	Surface	1	0	0.00	0.00
108	4	Surface	1	0	0.00	0.00
146	5	Surface	1	779	22.70	1.42
151	6	Surface	1	10742	67.80	129.96
155	7	Surface	1	2185	9.64	4.65
168	8	Surface	1	2509	11.07	5.33
171	9	Surface	1	4416	27.62	8.28
201	10	Surface	1	4021	9.06	23.73
320	11	Surface	1	1872	4.22	11.04
8	1	Tile	1	5805	20.29	28.73
26	2	Tile	1	2094	7.32	10.37
87	3	Tile	1	18908	59.95	20.80
93	4	Tile	1	24420	36.45	18.32
108	5	Tile	1	28705	66.93	26.55
145	6	Tile	1	10896	80.68	27.08
151	7	Tile	1	25869	93.63	54.16
155	8	Tile	1	11889	47.95	26.16
167	9	Tile	1	23058	170.09	49.23
171	10	Tile	1	35810	189.16	88.63
201	11	Tile	1	17984	37.40	26.53
320	12	Tile	1	555	1.15	0.82
8	1	Surface	2	37951	249.40	150.29
26	2	Surface	2	0	0.00	0.00
93	3	Surface	2	6608	11.47	9.58
108	4	Surface	2	912	3.79	2.47
146	5	Surface	2	4626	74.77	40.86
151	6	Surface	2	15921	167.45	18.98
155	7	Surface	2	3646	23.21	3.79
167	8	Surface	2	2509	7.85	1.96
171	9	Surface	2	4416	13.02	10.84
201	10	Surface	2	4021	10.58	14.32
320	11	Surface	2	1872	4.92	6.66
8	1	Tile	2	3369	16.65	18.06
26	2	Tile	2	1765	3.28	0.79
87	3	Tile	2	7961	125.57	11.23
93	4	Tile	2	19885	93.01	14.91
108	5	Tile	2	10950	111.97	11.83
145	6	Tile	2	5246	12.81	20.61
151	7	Tile	2	11471	25.44	25.81
155	8	Tile	2	6650	10.88	13.13

Appendix 12A. Events volumes, sediment and orthophosphate losses for conventional tillage, 1989

-2

Julian Time/89 Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
167	9	Tile	2	8712	24.23	11.63
171	10	Tile	2	10952	64.95	56.95
201	11	Tile	2	14075	34.56	8.45
320	12	Tile	2	2313	2.42	1.27

Appendix 13A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

- 1

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
4	1	Surface	1	1	1	8269.07	0.2063	0.2023	18.73
4	1	Surface	1	1	1		0.1983		
10	2	Surface	1	1	1	10059.94	0.2459	0.2459	24.74
18	3	Surface	1	0	0	0.00			
38	4	Surface	1	0	0	0.00			
39	5	Surface	1	0	0				
39	5	Surface	1	1	1	8585.87	0.0813	0.0920	7.90
39	5	Surface	1	1	1		0.1028		
53	6	Surface	1	1	1	17113.54	0.1514	0.1922	32.89
53	6	Surface	1	1	1		0.2329		
58	7	Surface	1	0	0	0.00			
101	8	Surface	1	1	1	4040.79	0.0909	0.0909	3.67
134	9	Surface	1	0	0	4583.87		0.0800	3.67
136	10	Surface	1	1	1	5521.33	0.1302	0.1183	6.53
137	10	Surface	1	1	1		0.1063		
137	11	Surface	1	1	1	3022.51	0.1622	0.1622	4.90
159	12	Surface	1	0	0	0.00			
159	12	Surface	1	0	0				
195	13	Surface	1	0	0	0.00			
225	14	Surface	1	1	0	0.00			
231	15	Surface	1	0	0	0.00			
250	16	Surface	1	1	1	6940.46	0.3336	0.2701	18.75
250	16	Surface	1	1	1		0.2066		
250	17	Surface	1	1	1	7131.18	0.1416	0.1416	10.09
250	17	Surface	1	0	0				
258	18	Surface	1	1	1	7574.05	0.0746	0.1362	10.32
258	18	Surface	1	1	1		0.1820		
258	18	Surface	1	1	1		0.1520		

Appendix 13A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

-2

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
259	19	Surface	1	1	1	5964.20	0.3442	0.3442	20.53
262	20	Surface	1	1	1	5531.03	0.1670	0.1232	6.81
262	20	Surface	1	1	1		0.1076		
262	20	Surface	1	1	1		0.0950		
265	21	Surface	1	0	1				
265	21	Surface	1	1	1	2641.06	0.1118	0.1118	2.95
4	1	Tile	1	0	0	0.00			
10	2	Tile	1	0	0	166.00		0.0733	0.12
12	2	Tile	1	1	0				
18	3	Tile	1	1	1	12822.00	0.0487	0.0733	9.40
18	3	Tile	1	1	1		0.0979		
24	4	Tile	1	1	0	6783.00		0.0549	3.72
32	5	Tile	1	1	0	8745.00		0.0549	4.80
38	6	Tile	1	1	0	11849.00		0.0823	9.75
38	6	Tile	1	1	1		0.0686		
39	6	Tile	1	1	1		0.0960		
39	6	Tile	1	0	0				
40	6	Tile	1	0	0				
45	7	Tile	1	0	0	2468.00		0.0785	1.94
53	8	Tile	1	1	1	27825.00	0.1112	0.0785	21.84
53	8	Tile	1	1	1		0.0458	0.0785	
70	9	Tile	1	0	0				
71	9	Tile	1	1	0	18227.00	0.0785	0.0785	14.30
92	10	Tile	1	1	1	5811.00	0.0146	0.0146	0.85
101	11	Tile	1	1	1	16813.00	0.0351	0.0430	7.24
101	11	Tile	1	1	1		0.0510		
111	12	Tile	1	1	1	4821.00	0.0403	0.0403	1.94
125	13	Tile	1	1	1	8919.00	0.0081	0.0081	0.72

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

-3

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
134	14	Tile	1	1	1	12876.00	0.0524	0.0300	3.86
135	14	Tile	1	1	1		0.0076		
136	15	Tile	1	1	1	15848.00	0.0598	0.1169	18.63
137	15	Tile	1	1	1		0.0682		
137	15	Tile	1	1	1		0.2228		
159	16	Tile	1	1	1	6302.00	0.1508	0.0825	5.20
159	16	Tile	1	1	1		0.0534		
159	16	Tile	1	1	1		0.0432		
179	16	Tile	1	0	0				
195	17	Tile	1	1	1	1386.00	0.0222	0.0380	0.53
195	17	Tile	1	1	1		0.0817		
196	17	Tile	1	1	1		0.0101		
225	18	Tile	1	0	0	0.00			
225	19	Tile	1	1	1	547.00	0.0860	0.0860	0.47
231	20	Tile	1	1	1	3231.00	0.0281	0.0281	0.91
250	21	Tile	1	1	1	17853.00	0.2172	0.1080	19.29
250	21	Tile	1	1	1		0.1418		
250	21	Tile	1	1	1		0.1203		
250	21	Tile	1	1	1		0.0434		
251	21	Tile	1	1	1		0.0176		
258	22	Tile	1	1	1	8800.00	0.2572	0.1627	14.32
258	22	Tile	1	1	1		0.1574		
258	22	Tile	1	1	1		0.1264		
258	22	Tile	1	1	1		0.1100		
259	23	Tile	1	1	1	6695.00	0.1747	0.1747	11.70
262	24	Tile	1	1	1	5509.00	0.1718	0.0852	4.69
262	24	Tile	1	1	1		0.0412		
262	24	Tile	1	1	1		0.0812		

Appendix 13A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

-4

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
263	24	Tile	1	1	1		0.0664		
263	24	Tile	1	1	1		0.0652		
265	25	Tile	1	1	1	2643.00	0.0500	0.0600	1.32
4	1	Surface	2	1	1	14210.64	0.2205	0.2749	39.06
4	1	Surface	2	1	1		0.3292		
10	2	Surface	2	1	1	5931.88	0.2587	0.2587	15.34
18	3	Surface	2	1	1	2489.13	0.1358	0.1358	3.38
38	4	Surface	2	1	1	3125.95	0.1694	0.1694	5.30
39	5	Surface	2	1	1	3203.54	0.1792	0.1734	5.55
39	5	Surface	2	0	0				
39	5	Surface	2	1	1		0.1676		
53	6	Surface	2	1	1	17912.00	0.2012	0.1558	27.90
53	6	Surface	2	1	1		0.1103		
58	7	Surface	2	0	0	0.00			
101	8	Surface	2	1	1	2938.46	0.0504	0.0504	1.48
134	9	Surface	2	1	1	3423.36	0.0962	0.0962	3.29
136	10	Surface	2	1	1	4273.54	0.1599	0.1397	5.97
137	10	Surface	2	1	1		0.1195		
137	11	Surface	2	1	1	1703.60	0.1326	0.1326	2.26
159	12	Surface	2	1	1	1322.15	0.1979	0.2387	3.16
159	12	Surface	2	1	1		0.2796		
195	13	Surface	2	1	0	0.00			
225	14	Surface	2	1	0	0.00			
231	15	Surface	2	1	1	4186.26	0.1089	0.1089	4.56
250	16	Surface	2	1	1	5863.99	0.3169	0.2414	14.16
250	16	Surface	2	1	1		0.1659		
250	17	Surface	2	1	1	5906.02	0.1316	0.0969	5.73
250	17	Surface	2	1	1		0.0623		

Appendix 13A Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

-5

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
258	18	Surface	2	1	1	5841.36	0.5539	0.3087	18.03
258	18	Surface	2	1	1		0.2331		
258	18	Surface	2	1	1		0.1392		
259	19	Surface	2	1	1	6791.76	0.2942	0.2942	19.98
262	20	Surface	2	1	1	7609.61	0.1024	0.1008	7.67
262	20	Surface	2	1	1		0.0855		
262	20	Surface	2	1	1		0.1146		
265	21	Surface	2	1	1	2673.39	0.2059	0.1568	4.19
265	21	Surface	2	1	1		0.1077		
4	1	Tile	2	0	0	0.00			
10	2	Tile	2	1	1	2126.00	0.0418	0.0418	0.89
12	2	Tile	2	1	0				
18	3	Tile	2	1	1	13559.00	0.0685	0.0876	11.88
18	3	Tile	2	1	1		0.1067		
24	4	Tile	2	0	0	6043.00		0.0876	5.29
32	5	Tile	2	0	0	7237.00		0.0876	6.34
38	6	Tile	2	1	0				
38	6	Tile	2	0	1	11115.00	0.0539	0.1017	11.30
39	6	Tile	2	1	1		0.1036		
39	6	Tile	2	1	1		0.1475		
40	6	Tile	2	0	0				
45	7	Tile	2	0	0	5222.00		0.1151	6.01
53	8	Tile	2	1	1	15878.00	0.0291	0.1151	18.27
53	8	Tile	2	1	1		0.2010		
70	9	Tile	2	0	0	25729.00		0.1151	29.61
71	9	Tile	2	0	0				
92	10	Tile	2	1	1	5744.00	0.0213	0.0213	1.22
101	11	Tile	2	1	1	12052.00	0.0881	0.0664	8.00

Appendix 13A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

-6

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc.,	Sediment loss, kg/ha
101	11	Tile	2	1	1		0.0446		
111	12	Tile	2	1	1	5268.00	0.0694	0.0694	3.66
125	13	Tile	2	1	1	8718.00	0.0721	0.0721	6.29
134	14	Tile	2	1	1	8237.00	0.0588	0.0329	2.71
135	14	Tile	2	1	1		0.0070		
136	15	Tile	2	1	1	11331.00	0.0615	0.0832	9.42
137	15	Tile	2	1	1		0.0716		
137	15	Tile	2	1	1		0.1164		
159	16	Tile	2	1	1	14459.00	0.1196	0.1009	14.59
159	16	Tile	2	1	1		0.1035		
159	16	Tile	2	1	1		0.0916		
179	16	Tile	2	1	1		0.0890		
195	17	Tile	2	1	1	4853.00	0.0212	0.0315	1.53
195	17	Tile	2	1	1		0.0675		
196	17	Tile	2	1	1		0.0058		
225	18	Tile	2	0	0	135.00		0.1480	0.20
225	19	Tile	2	1	1	1770.00	0.1480	0.1480	2.62
231	20	Tile	2	1	1	2531.00	0.1005	0.1005	2.54
250	21	Tile	2	1	1	20840.00	0.2965	0.1540	32.10
250	21	Tile	2	1	1		0.1744		
250	21	Tile	2	1	1		0.1381		
250	21	Tile	2	1	1		0.0858		
251	21	Tile	2	1	1		0.0751		
258	22	Tile	2	1	1	4674.00	0.2882	0.1789	8.36
258	22	Tile	2	1	1		0.1961		
258	22	Tile	2	1	1		0.1726		
258	22	Tile	2	1	1		0.0588		
259	23	Tile	2	1	1	2936.00	0.1514	0.1514	4.44

Appendix 13A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
262	24	Tile	2	1	1	2975.00	0.0984	0.0910	2.71
262	24	Tile	2	1	1		0.1120		
262	24	Tile	2	1	1		0.0699		
263	24	Tile	2	1	1		0.0835		
263	24	Tile	2	0	1				
265	25	Tile	2	1	1	1462.00	0.0688	0.0688	1.01

Appendix 14A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

- 1

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
4	1	Surface	1	1	1	11740.91	0.1652	0.1549	18.19
4	1	Surface	1	1	1		0.1446		
10	2	Surface	1	1	1	6074.11	0.1048	0.1048	6.36
18	3	Surface	1	0	0	0.00			
38	4	Surface	1	0	0	0.00			
39	5	Surface	1	0	0				
39	5	Surface	1	1	1	9245.32	0.1014	0.1038	9.59
39	5	Surface	1	1	1		0.1062		
53	6	Surface	1	1	1	18348.41	0.1666	0.1538	28.21
53	6	Surface	1	1	1		0.1409		
58	7	Surface	1	0	0	0.00			
101	8	Surface	1	1	1	3959.97	0.0968	0.0968	3.83
134	9	Surface	1	1	1	4855.41	0.0923	0.0923	4.48
136	10	Surface	1	1	1	6727.10	0.1053	0.1383	9.30
137	10	Surface	1	1	1		0.1712		
137	11	Surface	1	1	1	3769.25	0.1007	0.1007	3.79
159	12	Surface	1	0	0	0.00			
159	12	Surface	1	0	0				
195	13	Surface	1	0	0	0.00			
225	14	Surface	1	1	0	0.00			
231	15	Surface	1	0	1	4289.70	0.0236	0.0236	1.01
250	16	Surface	1	1	1	7590.22	1.1006	0.9345	70.93
250	16	Surface	1	1	1		0.7683		
250	17	Surface	1	1	1	9720.52	0.2706	0.1825	17.74
250	17	Surface	1	1	1		0.0944		
258	18	Surface	1	1	1	6238.98	1.4742	0.6737	42.03
258	18	Surface	1	1	1		0.3327		
258	18	Surface	1	1	1		0.2143		

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

- 2

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
259	19	Surface	1	1	1	6293.93	0.5118	0.5118	32.21
262	20	Surface	1	1	1	6468.49	0.2441	0.1574	10.18
262	20	Surface	1	1	1		0.1040		
262	20	Surface	1	1	1		0.1240		
265	21	Surface	1	1	1	1241.33	0.0825	0.0877	1.09
265	21	Surface	1	1	1		0.0930		
4	1	Tile	1	0	0	624.00		0.0324	0.20
10	2	Tile	1	1	1	4957.00	0.0649	0.0649	3.22
12	2	Tile	1	1	0				
18	3	Tile	1	1	1	13052.00	0.0364	0.0663	8.65
18	3	Tile	1	1	1		0.0962		
24	4	Tile	1	0	0	5404.00		0.0628	3.39
32	5	Tile	1	0	0	5532.00		0.0628	3.47
38	6	Tile	1	1	0	11738.00		0.0718	8.43
38	6	Tile	1	1	1		0.0910		
39	6	Tile	1	1	1		0.0776		
39	6	Tile	1	1	1		0.0469		
40	6	Tile	1	0	0				
45	7	Tile	1	0	0	1255.00		0.1025	1.29
53	8	Tile	1	1	1	26871.00	0.1453	0.1025	27.54
53	8	Tile	1	1	1		0.0596		
70	9	Tile	1	0	0	20169.00		0.1025	20.67
71	9	Tile	1	0	0				
71	9	Tile	1	0	0				
92	10	Tile	1	1	1	5723.00	0.0247	0.0247	1.41
101	11	Tile	1	1	1	13866.00	0.0294	0.0397	5.50
101	11	Tile	1	1	1		0.0500		
111	12	Tile	1	1	1	4209.00	0.0600	0.0600	2.53

Appendix 14A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

Julian Date/90	Event	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Sediment Conc., g/L	Sediment loss, kg/ha
125	13	Tile	1	1	1	7829.00	0.0594	0.0594	4.65
134	14	Tile	1	1	1	9866.00	0.1026	0.0567	5.59
135	14	Tile	1	1	1		0.0108		
136	15	Tile	1	1	1	14257.00	0.0912	0.0700	9.98
137	15	Tile	1	1	1		0.0538		
137	15	Tile	1	1	1		0.0648		
159	16	Tile	1	1	1	7135.00	0.2016	0.1346	9.60
159	16	Tile	1	1	1		0.1600		
159	16	Tile	1	1	1		0.0420		
179	16	Tile	1	0	0				
195	17	Tile	1	1	1	902.00	0.0202	0.0357	0.32
195	17	Tile	1	1	1		0.0752		
196	17	Tile	1	1	1		0.0117		
225	18	Tile	1	0	0	0.00			
225	19	Tile	1	1	1	990.00	0.1016	0.1016	1.01
231	20	Tile	1	1	1	2472.00	0.0446	0.0446	1.10
250	21	Tile	1	1	1	16113.00	0.2836	0.1511	24.34
250	21	Tile	1	1	1		0.2233		
250	21	Tile	1	1	1		0.1519		
250	21	Tile	1	1	1		0.0630		
251	21	Tile	1	1	1		0.0336		
258	22	Tile	1	1	1	8152.00	0.3835	0.2371	19.33
258	22	Tile	1	1	1		0.2535		
258	22	Tile	1	1	1		0.1966		
258	22	Tile	1	1	1		0.1147		
259	23	Tile	1	1	1	5274.00	0.1954	0.1954	10.31
262	24	Tile	1	1	1	4834.00	0.1912	0.0831	4.02
262	24	Tile	1	1	1		0.0894		

Appendix 14A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

- 4

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
262	24	Tile	1	1	1		0.0352		
263	24	Tile	1	1	1		0.0661		
263	24	Tile	1	1	1		0.0336		
265	25	Tile	1	1	1	2084.00	0.0367	0.0367	0.76
4	1	Surface	2	1	1	15733.21	0.1407	0.2555	40.20
4	1	Surface	2	1	1		0.3703		
10	2	Surface	2	1	1	6491.12	0.1707	0.1707	11.08
18	3	Surface	2	1	1	2941.69	0.3992	0.3992	11.74
38	4	Surface	2	1	1	4021.39	0.1160	0.1160	4.66
39	5	Surface	2	1	1	3620.55	0.0783	0.0685	2.48
39	5	Surface	2	0	0				
39	5	Surface	2	1	1		0.0588		
53	6	Surface	2	1	1	19466.90	0.1507	0.0857	16.68
53	6	Surface	2	1	1		0.0206		
58	7	Surface	2	0	0	0.00			
101	8	Surface	2	1	1	5343.54	0.1104	0.1104	5.90
134	9	Surface	2	1	1	6533.15	0.0809	0.0809	5.28
136	10	Surface	2	1	1	6109.67	0.1788	0.1478	9.03
137	10	Surface	2	1	1		0.1169		
137	11	Surface	2	1	1	4144.23	0.1367	0.1367	5.67
159	12	Surface	2	1	1	2828.55	0.2274	0.2607	7.38
159	12	Surface	2	1	1		0.2940		
195	13	Surface	2	1	1	1305.98	0.3242	0.3242	4.23
225	14	Surface	2	1	1	1900.79	0.2781	0.2781	5.29
231	15	Surface	2	1	1	5094.62	0.0210	0.0210	1.07
250	16	Surface	2	1	1	5398.49	0.5575	0.4014	21.67
250	16	Surface	2	1	1		0.2453		
250	17	Surface	2	1	1	6061.18	0.1976	0.1139	6.90

Appendix 14A.

Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume L/plot	Sediment Conc., g/L	Event Sediment, Conc., g/L	Sediment loss kg/ha
250	17	Surface	2	1	1		0.0721		
250	17	Surface	2	1	1		0.0721		
258	18	Surface	2	1	1	8126.83	1.0390	0.5005	40.67
258	18	Surface	2	1	1		0.2487		
258	18	Surface	2	1	1		0.2137		
259	19	Surface	2	1	1	6345.65	0.3448	0.3448	21.88
262	20	Surface	2	1	1	8967.32	0.1227	0.1048	9.40
262	20	Surface	2	1	1		0.1062		
262	20	Surface	2	1	1		0.0856		
265	21	Surface	2	1	1	2683.08	0.1079	0.1106	2.97
265	21	Surface	2	1	0		0.1133		
4	1	Tile	2	0	0	0.00			
10	2	Tile	2	1	1	3381.00	0.0742	0.0742	2.51
12	2	Tile	2	1	0				
18	3	Tile	2	1	1	13714.00	0.0090	0.0548	7.51
18	3	Tile	2	1	1		0.1006		
24	4	Tile	2	1	0	5813.00		0.0513	2.98
32	5	Tile	2	1	0	7033.00		0.0513	3.61
38	6	Tile	2	1	0	13331.00		0.0684	9.12
38	6	Tile	2	0	1		0.0791		
39	6	Tile	2	1	1		0.0453		
39	6	Tile	2	1	1		0.0808		
40	6	Tile	2	0	0				
45	7	Tile	2	1	1	3303.00		0.1100	3.63
53	8	Tile	2	1	1	20929.00	0.0272	0.1100	23.01
53	8	Tile	2	1	1		0.1928		
70	9	Tile	2	0	0	26822.00		0.1100	29.49
71	9	Tile	2	0	0				

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

- 6

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L ,	Sediment loss, kg/ha
92	10	Tile	2	1	1	5936.00	0.0444	0.0444	2.64
101	11	Tile	2	1	1	10529.00	0.0886	0.2619	27.58
101	11	Tile	2	1	1		0.4352		
111	12	Tile	2	1	1	5061.00	0.0433	0.0433	2.19
125	13	Tile	2	1	1	7163.00	0.1563	0.1563	11.19
134	14	Tile	2	1	1	5144.00	0.0351	0.0224	1.15
135	14	Tile	2	1	1		0.0097		
136	15	Tile	2	1	1	8562.00	0.0376	0.0703	6.02
137	15	Tile	2	1	1		0.1067		
137	15	Tile	2	1	1		0.0665		
159	16	Tile	2	1	1	15285.00	0.1866	0.1259	19.24
159	16	Tile	2	1	1		0.1500		
159	16	Tile	2	1	1		0.1022		
179	16	Tile	2	1	1		0.0646		
195	17	Tile	2	1	1	6879.00	0.0382	0.0514	3.53
195	17	Tile	2	1	1		0.0909		
196	17	Tile	2	1	1		0.0251		
225	18	Tile	2	0	0	0.00			
225	19	Tile	2	1	1	881.00	0.1482	0.1482	1.31
231	20	Tile	2	1	1	2874.00	0.1176	0.1176	3.38
250	21	Tile	2	1	1	14125.00	0.1542	0.1045	14.77
250	21	Tile	2	1	1		0.1706		
250	21	Tile	2	1	1		0.0981		
250	21	Tile	2	1	1		0.0745		
251	21	Tile	2	1	1		0.0253		
258	22	Tile	2	1	1	4041.00	0.2076	0.1600	6.46
258	22	Tile	2	1	1		0.1833		
258	22	Tile	2	1	1		0.1134		

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

-7

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc g/L	Sediment loss, kg/ha
258	22	Tile	2	1	1		0.1355		
259	23	Tile	2	1	1	3265.00	0.1384	0.1384	4.52
262	24	Tile	2	1	1	3002.00	0.0549	0.0581	1.74
262	24	Tile	2	1	1		0.0738		
262	24	Tile	2	1	1		0.0462		
263	24	Tile	2	1	1		0.0574		
263	24	Tile	2	0	1				
265	25	Tile	2	1	1	1236.00	0.0324	0.0324	0.40

Appendix 15A. Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

-1

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
4	1	Surface	1	1	1	13767.77	0.0520	0.0537	7.39
4	1	Surface	1	1	1		0.0553		
10	2	Surface	1	0	0	0.00			
18	3	Surface	1	0	0	0.00			
38	4	Surface	1	0	0	0.00			
39	5	Surface	1	0	0	0.00			
39	5	Surface	1	0	0				
39	5	Surface	1	0	0				
53	6	Surface	1	1	1	22783.58	0.1402	0.1261	28.72
53	6	Surface	1	1	1		0.1119		
58	7	Surface	1	0	0	5262.72		0.1261	6.63
101	8	Surface	1	0	0	0.00			
134	9	Surface	1	0	0	0.00			
136	10	Surface	1	0	0	0.00			
137	10	Surface	1	0	0				
137	11	Surface	1	0	0	0.00			
159	12	Surface	1	1	1	2224.05	0.2728	0.2728	6.07
159	12	Surface	1	0	0				
195	13	Surface	1	0	0	0.00			
225	14	Surface	1	1	0	0.00			
231	15	Surface	1	0	0	0.00			
250	16	Surface	1	1	1	5104.32	1.0009	0.6961	35.53
250	16	Surface	1	1	1		0.3914		
250	17	Surface	1	1	1	6116.14	0.2410	0.2410	14.74
250	17	Surface	1	0	0				
258	18	Surface	1	1	1	4677.62	0.9589	0.5382	25.18
258	18	Surface	1	1	1		0.3814		

Appendix 15A. Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

-2

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc g/L	Sediment loss, kg/ha
258	18	Surface	1	1	1		0.2743		
259	19	Surface	1	1	1	4254.14	0.6540	0.6540	27.82
262	20	Surface	1	1	1	4412.54	0.2284	0.1879	8.29
262	20	Surface	1	1	1		0.1823		
262	20	Surface	1	1	1		0.1529		
265	21	Surface	1	0	0				
265	21	Surface	1	0	0	0.00			
4	1	Tile	1	0	0	525.00		0.0074	0.04
10	2	Tile	1	1	1	3858.00	0.0149	0.0149	0.57
12	2	Tile	1	1	0				
18	3	Tile	1	1	1	25372.00	0.0236	0.0373	9.46
18	3	Tile	1	1	1		0.0510		
24	4	Tile	1	1	0	9560.00		0.0609	5.82
32	5	Tile	1	1	0	11042.00		0.0609	6.72
38	6	Tile	1	1	0	17419.00		0.0609	10.61
38	6	Tile	1	1	1		0.1254		
39	6	Tile	1	1	1		0.0361		
39	6	Tile	1	1	1		0.0461		
40	6	Tile	1	1	1		0.0360		
45	7	Tile	1	0	0	3714.00		0.0931	3.46
53	8	Tile	1	1	1	38982.00	0.0593	0.0931	36.28
53	8	Tile	1	1	1		0.1268		
70	9	Tile	1	0	0				
71	9	Tile	1	1	0	35962.00		0.0117	4.20
71	9	Tile	1	0	0				
92	10	Tile	1	1	1	6792.00	0.0117	0.0117	0.79
101	11	Tile	1	1	1	22835.00	0.0934	0.0766	17.50

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

-3

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
101	11	Tile	1	1	1		0.0598		
111	12	Tile	1	1	1	7104.00	0.0889	0.0889	6.32
125	13	Tile	1	1	1	12494.00	0.1212	0.1212	15.14
134	14	Tile	1	1	1	17945.00	0.1147	0.0771	13.83
135	14	Tile	1	1	1		0.0394		
136	15	Tile	1	1	1	33715.00	0.0460	0.0711	23.96
137	15	Tile	1	1	1		0.0904		
137	15	Tile	1	1	1		0.0768		
159	16	Tile	1	1	1	3540.00	0.0998	0.0730	2.58
159	16	Tile	1	1	1		0.0530		
159	16	Tile	1	1	1		0.0662		
179	16	Tile	1	0	0				
195	17	Tile	1	1	1	2743.00	0.0088	0.0220	0.60
195	17	Tile	1	1	1		0.0513		
196	17	Tile	1	1	1		0.0058		
225	18	Tile	1	1	0	109.00		0.0918	0.10
225	19	Tile	1	1	1	1187.00	0.0918	0.0918	1.09
231	20	Tile	1	1	1	2828.00	0.0472	0.0472	1.33
250	21	Tile	1	1	1	34342.00	0.3950	0.1449	49.78
250	21	Tile	1	1	1		0.1874		
250	21	Tile	1	1	1		0.0909		
250	21	Tile	1	1	1		0.0368		
251	21	Tile	1	1	1		0.0146		
258	22	Tile	1	1	1	14459.00	0.2814	0.1775	25.66
258	22	Tile	1	1	1		0.1795		
258	22	Tile	1	1	1		0.1459		
258	22	Tile	1	1	1		0.1031		

Appendix 15A. Samples taken and analyzed, event volumes; sediment concentrations and losses for conventional tillage, 1990.

-4

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment kg/ha
259	23	Tile	1	1	1	11953.00	0.1678	0.1678	20.06
262	24	Tile	1	1	1	10541.00	0.0928	0.0822	8.66
262	24	Tile	1	1	1		0.0814		
262	24	Tile	1	1	1		0.0993		
263	24	Tile	1	1	1		0.0629		
263	24	Tile	1	1	1		0.0744		
265	25	Tile	1	1	1	4731.00	0.0348	0.0348	1.64
4	1	Surface	2	1	1	15406.71	0.1061	0.2717	41.87
4	1	Surface	2	1	1		0.4374		
10	2	Surface	2	0	0	0.00			
18	3	Surface	2	1	1	2201.42	0.2779	0.2779	6.12
38	4	Surface	2	1	1	2353.35	0.0762	0.0762	1.79
39	5	Surface	2	1	1	2013.93	0.0555	0.0550	1.11
39	5	Surface	2	0	0				
39	5	Surface	2	1	1		0.0544		
53	6	Surface	2	1	1	22256.66	0.1673	0.1912	42.55
53	6	Surface	2	1	1		0.2151		
58	7	Surface	2	0	0	0.00			
101	8	Surface	2	1	1	3895.32	0.0640	0.0640	2.49
134	9	Surface	2	1	1	5944.81	0.1606	0.1606	9.55
136	10	Surface	2	1	1	5925.41	0.1391	0.1817	10.77
137	10	Surface	2	1	1		0.2243		
137	11	Surface	2	1	1	3358.70	0.2604	0.2604	8.75
159	12	Surface	2	1	1	921.30	0.3827	0.3827	3.53
159	12	Surface	2	0	0				
195	13	Surface	2	1	0	0.00			
225	14	Surface	2	1	0	0.00			

Appendix 15A. Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

-5

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
231	15	Surface	2	1	1	2721.87	0.0173	0.0173	0.47
250	16	Surface	2	1	1	5243.33	0.7146	0.5805	30.44
250	16	Surface	2	1	1		0.4464		
250	17	Surface	2	1	1	5802.57	0.2604	0.1847	10.72
250	17	Surface	2	1	1		0.1091		
258	18	Surface	2	1	1	5201.30	1.9892	0.9052	47.08
258	18	Surface	2	1	1		0.4546		
258	18	Surface	2	1	1		0.2717		
259	19	Surface	2	1	1	6633.36	0.6412	0.6412	42.53
262	20	Surface	2	1	1	5556.89	0.2335	0.1789	9.94
262	20	Surface	2	1	1		0.1546		
262	20	Surface	2	1	1		0.1487		
265	21	Surface	2	1	1	1984.83	0.1128	0.1200	2.38
265	21	Surface	2	1	1		0.1271		
4	1	Tile	2	0	0	730.00		0.0103	0.08
10	2	Tile	2	1	1	4501.00	0.0206	0.0206	0.93
12	2	Tile	2	1	0				
18	3	Tile	2	1	1	15256.00	0.1067	0.1802	27.50
18	3	Tile	2	1	1		0.2538		
24	4	Tile	2	1	0	8857.00		0.0396	3.51
32	5	Tile	2	1	0	7666.00		0.0396	3.04
38	6	Tile	2	1	0	18335.00		0.0496	9.09
38	6	Tile	2	0	1		0.0769		
39	6	Tile	2	1	1		0.0316		
39	6	Tile	2	1	1		0.0457		
40	6	Tile	2	1	1		0.0441		
45	7	Tile	2	0	0	7550.00		0.1441	10.88

Appendix 15A. Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

- 6

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
53	8	Tile	2	1	1	15497.00	0.0312	0.1441	22.33
53	8	Tile	2	1	1		0.2570		
70	9	Tile	2	0	0	26640.00		0.1441	38.39
71	9	Tile	2	1	0				
92	10	Tile	2	1	1	4570.00	0.0626	0.0626	286
101	11	Tile	2	1	1	10314.00	0.0725	0.0672	8.99
101	11	Tile	2	1	1		0.1019		
111	12	Tile	2	1	1	4339.00	0.0822	0.0822	3.57
125	13	Tile	2	1	1	7175.00	0.0513	0.0513	3.68
134	14	Tile	2	1	1	8251.00	0.1700	0.1061	8.76
135	14	Tile	2	1	1		0.0423		
136	15	Tile	2	1	1	15879.00	0.1827	0.1747	27.74
137	15	Tile	2	1	1		0.1554		
137	15	Tile	2	1	1		0.1861		
159	16	Tile	2	1	1	4154.00	0.0527	0.0516	2.14
159	16	Tile	2	1	1		0.0596		
159	16	Tile	2	1	1		0.0424		
179	16	Tile	2	0	0				
195	17	Tile	2	1	1	3653.00	0.0650	0.0468	1.71
195	17	Tile	2	1	1		0.0678		
196	17	Tile	2	1	1		0.0076		
225	18	Tile	2	1	0	261.00		0.1761	0.46
225	19	Tile	2	1	1	2303.00	0.1761	0.1761	4.06
231	20	Tile	2	1	1	3161.00	0.1256	0.1256	3.97
250	21	Tile	2	1	1	26348.00	0.0106	0.1196	31.52
250	21	Tile	2	1	1		0.2748		
250	21	Tile	2	1	1		0.1716		

Appendix 15A. Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

- 7

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
250	21	Tile	2	1	1		0.0720		
251	21	Tile	2	1	1		0.0693		
258	22	Tile	2	1	1	5887.00	0.0380	02139	12.59
258	22	Tile	2	1	1		0.3123		
258	22	Tile	2	1	1		0.2503		
258	22	Tile	2	1	1		0.2548		
259	23	Tile	2	1	1	3753.00	0.2551	0.2551	9.57
262	24	Tile	2	1	1	3887.00	0.1104	0.0997	3.87
262	24	Tile	2	1	1		0.0226		
262	24	Tile	2	1	1		0.1046		
263	24	Tile	2	1	1		0.1280		
263	24	Tile	2	1	1		0.1327		
265	25	Tile	2	1	1	2547.00	0.1552	0.1552	3.95

Appendix 16A. Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

- 1

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss kg/ha
4	1	Surface	1	0	0	0.00			
4	1	Surface	1	0	0				
10	2	Surface	1	0	0	0.00			
18	3	Surface	1	0		0.00			
38	4	Surface	1	0	0	0.00			
39	5	Surface	1	0	0	0.00			
39	5	Surface	1	0	0				
39	5	Surface	1	0	0				
53	6	Surface	1	1	1	17194.36	0.0145	0.0225	3.88
53	6	Surface	1	1	1		0.0306		
58	7	Surface	1	0	0	0.00			
101	8	Surface	1	0	0	0.00			
134	9	Surface	1	0	0	0.00			
136	10	Surface	1	0	0	0.00			
137	10	Surface	1	0	0				
137	11	Surface	1	0	0	0.00			
159	12	Surface	1	0	0	0.00			
159	12	Surface	1	0	0				
195	13	Surface	1	0	0	0.00			
225	14	Surface	1	0	0	0.00			
231	15	Surface	1	0	0	0.00			
250	16	Surface	1	0	0	0.00			
250	16	Surface	1	0	0				
250	17	Surface	1	0	0	0.00			
250	17	Surface	1	0	0				
258	18	Surface	1	0	0	0.00			
258	18	Surface	1	0	0				
258	18	Surface	1	0	0				

Appendix 16A. Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

-2

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
259	19	Surface	1	0	0	0.00			
262	20	Surface	1	0	0	0.00			
262	20	Surface	1	0	0				
262	20	Surface	1	0	0				
265	21	Surface	1	0	0	0.00			
265	21	Surface	1	0	0				
4	1	Tile	1	1	1	3030.00	0.0146	0.0146	0.44
10	2	Tile	1	1	1	373.00	0.0332	0.0332	0.12
12	2	Tile	1	1	0				
18	3	Tile	1	1	1	7024.00	0.0154	0.0217	1.53
18	3	Tile	1	1	1		0.0280		
24	4	Tile	1	0	0	1111.00		0.0450	0.50
32	5	Tile	1	0	0	4231.00		0.0450	1.91
38	6	Tile	1	0	0				
38	6	Tile	1	1	1	5959.00	0.0090	0.0180	1.07
39	6	Tile	1	1	1		0.0278		
39	6	Tile	1	1	1		0.0173		
40	6	Tile	1	0	0				
45	7	Tile	1	0	0	627.00		0.0422	0.26
53	8	Tile	1	1	1	53980.00	0.0350	0.0422	22.76
53	8	Tile	1	1	1		0.0493		
70	9	Tile	1	0	0	8137.00		0.0103	0.84
71	9	Tile	1	0	0				
71	9	Tile	1	0	0				
92	10	Tile	1	1	1	2801.00	0.0103	0.0103	0.29
101	11	Tile	1	1	1	14630.00	0.0444	0.0367	5.36
101	11	Tile	1	1	1		0.0290		
111	12	Tile	1	1	1	2090.00	0.0307	0.0307	0.64

Appendix 16A Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

-3

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
125	13	Tile	1	0	0	127.00		0.0133	0.02
134	14	Tile	1	1	1	1826.00	0.0192	0.0133	0.24
135	14	Tile	1	1	1		0.0073		
136	15	Tile	1	1	1	11942.00	0.0170	0.0391	4.67
137	15	Tile	1	1	1		0.0466		
137	15	Tile	1	1	1		0.0536		
159	16	Tile	1	0	0	28.00	0.0391	0.0402	0.01
159	16	Tile	1	0	0				
159	16	Tile	1	0	0				
179	16	Tile	1	0	0				
195	17	Tile	1	0	0	0.00			
195	17	Tile	1	0	0				
196	17	Tile	1	0	0				
225	18	Tile	1	0	0	0.00			
225	19	Tile	1	0	0	0.00			
231	20	Tile	1	1	1	1639.00	0.0402	0.0402	0.66
250	21	Tile	1	1	1	43500.00	0.0057	0.0111	4.83
250	21	Tile	1	1	1		0.0085		
250	21	Tile	1	1	1		0.0060		
250	21	Tile	1	1	1		0.0190		
251	21	Tile	1	1	1		0.0162		
258	22	Tile	1	1	1	21276.00	0.0233	0.0292	6.21
258	22	Tile	1	1	1		0.0270		
258	22	Tile	1	1	1		0.0349		
258	22	Tile	1	1	1		0.0316		
259	23	Tile	1	1	1	13493.00	0.0230	0.0230	3.10
262	24	Tile	1	1	1	11266.00	0.0436	0.0673	7.58
262	24	Tile	1	1	1		0.1626		

Appendix 16A. Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

-4

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/l.	Event Sediment Conc., g/L	Sediment loss, kg/ha
262	24	Tile	1	1	1		0.0524		
263	24	Tile	1	1	1		0.0418		
263	24	Tile	1	1	1		0.0358		
265	25	Tile	1	1	1	2007.00	0.0202	0.0202	0.41
4	1	Surface	2	1	1	7079.00	0.0057	0.0040	0.28
4	1	Surface	2	1	1		0.0023		
10	2	Surface	2	0	0	0.00			
18	3	Surface	2	0	0	0.00			
38	4	Surface	2	0	0	0.00			
39	5	Surface	2	0	0	0.00			
39	5	Surface	2	0	0				
39	5	Surface	2	0	0				
53	6	Surface	2	1	1	10315.32	0.0126	0.0449	4.63
53	6	Surface	2	1	1		0.0772		
58	7	Surface	2	0	0	0.00			
101	8	Surface	2	0	0	0.00			
134	9	Surface	2	0	0	0.00			
136	10	Surface	2	0	0	0.00			
137	10	Surface	2	0	0				
137	11	Surface	2	0	0	0.00			
159	12	Surface	2	0	0	0.00			
159	12	Surface	2	0	0				
195	13	Surface	2	0	0	0.00			
225	14	Surface	2	0	0	0.00			
231	15	Surface	2	0	0	0.00			
250	16	Surface	2	0	0	0.00			
250	16	Surface	2	0	0				
250	17	Surface	2	0	0	0.00			

Appendix 16A. Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

-5

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
250	17	Surface	2	0	0				
258	18	Surface	2	1	1	1735.62	0.0617	0.0458	0.79
258	18	Surface	2	1	1		0.0298		
258	18	Surface	2	0	0				
259	19	Surface	2	0	0	0.00			
262	20	Surface	2	0	0				
262	20	Surface	2	1	1	1053.84	0.0765	0.0765	0.81
262	20	Surface	2	0	0				
265	21	Surface	2	0	0	0.00			
265	21	Surface	2	0	0				
4	1	Tile	2	1	1	6030.00	0.0119	0.0119	0.72
10	2	Tile	2	1	1	2776.00	0.0234	0.0234	0.65
12	2	Tile	2	1	0				
18	3	Tile	2	1	1	6516.00	0.0303	0.0675	4.40
18	3	Tile	2	1	1		0.1046		
24	4	Tile	2	0	0	3089.00		0.0606	1.87
32	5	Tile	2	0	0	5885.00		0.0606	3.57
38	6	Tile	2	1	1	10999.00	0.0500	0.0606	6.67
38	6	Tile	2	1	1		0.0294		
39	6	Tile	2	1	1		0.0782		
39	6	Tile	2	1	1		0.0848		
40	6	Tile	2	0	0				
45	7	Tile	2	0	0	3318.00		0.1321	4.38
53	8	Tile	2	1	1	51800.00	0.0312	0.1321	68.43
53	8	Tile	2	1	1		0.2330		
70	9	Tile	2	0	0	15127.00		0.0378	5.72
71	9	Tile	2	0	0				
92	10	Tile	2	1	1	3341.00	0.0378	0.0378	1.26

Appendix 16A. Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

-6

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
101	11	Tile	2	1	1	14585.00	0.0486	0.0492	7.18
101	11	Tile	2	1	1		0.0499		
111	12	Tile	2	1	1	2891.00	0.0871	0.0871	2.62
125	13	Tile	2	1	1	1221.00	0.0245	0.0245	0.30
134	14	Tile	2	1	1	1808.00	0.0389	0.0263	0.48
135	14	Tile	2	1	1		0.0138		
136	15	Tile	2	1	1	12143.00	0.0517	0.0538	6.53
137	15	Tile	2	1	1		0.0529		
137	15	Tile	2	1	1		0.0568		
159	16	Tile	2	1	1	551.00	0.0329	0.0329	0.18
159	16	Tile	2	1	0				
159	16	Tile	2	0	0				
179	16	Tile	2	0	0				
195	17	Tile	2	0	0	0.00			
195	17	Tile	2	0	0				
196	17	Tile	2	0	0				
225	18	Tile	2	0	0	0.00			
225	19	Tile	2	1	1	1536.00	0.1446	0.1446	2.22
231	20	Tile	2	1	1	2099.00	0.1333	0.1333	2.80
250	21	Tile	2	1	1	80071.00	0.1699	0.0467	37.42
250	21	Tile	2	1	1		0.0507		
250	21	Tile	2	1	1		0.0041		
250	21	Tile	2	1	1		0.0078		
250	21	Tile	2	1	1		0.0209		
250	21	Tile	2	1	1		0.0260		
251	21	Tile	2	1	1		0.0477		
258	22	Tile	2	1	1	17052.00	0.0470	0.0362	6.16
258	22	Tile	2	1	1		0.0373		

Appendix 16A. Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

-7

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc. g/L	Sediment loss, kg/ha
258	22	Tile	2	1	1		0.0260		
258	22	Tile	2	1	1		0.0343		
259	23	Tile	2	1	1	11262.00	0.0835	0.0835	9.40
262	24	Tile	2	1	1	10806.00	0.0609	0.0835	9.02
262	24	Tile	2	1	1		0.1573		
262	24	Tile	2	1	1		0.0728		
263	24	Tile	2	1	1		0.0644		
263	24	Tile	2	1	1		0.0620		
265	25	Tile	2	1	1	2294.00	0.0757	0.0757	1.74

Appendix 17A.

Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1	0.4150	0.7350	0.0260	0.4645	0.6525	0.0205
4	1	Surface	1	0.5140	0.5700	0.0150			
10	2	Surface	1	0.4100	0.3950	0.1800	0.4100	0.3950	0.1800
18	3	Surface	1						
38	4	Surface	1						
39	5	Surface	1						
39	5	Surface	1	0.4200	0.1300	0.1200	0.4800	0.1700	0.1025
39	5	Surface	1	0.5400	0.2100	0.0850			
53	6	Surface	1	0.4750	0.2650	0.1850	0.3510	0.2535	0.1180
53	6	Surface	1	0.2270	0.2420	0.0510			
58	7	Surface	1						
101	8	Surface	1	0.3150	0.3940	0.1300	0.3150	0.3940	0.1300
134	9	Surface	1				0.3200	0.3900	0.1300
136	10	Surface	1	0.1450	0.3510	0.0300	0.3430	0.4310	0.0225
137	10	Surface	1	0.5410	0.5110	0.0150			
137	11	Surface	1	0.3600	0.1820	0.0600	0.3600	0.1820	0.0600
159	12	Surface	1						
159	12	Surface	1						
195	13	Surface	1						
225	14	Surface	1				0.0000	0.0000	0.0000
231	15	Surface	1						
250	16	Surface	1	0.4250	0.5750	0.7540	0.4715	0.6010	0.8170
250	16	Surface	1	0.5180	0.6270	0.8800			
250	17	Surface	1	0.6520	0.6780	0.5100	0.6520	0.6780	0.5100
250	17	Surface	1						
258	18	Surface	1	0.4950	0.6020	0.4000	0.3233	0.6267	0.3267
258	18	Surface	1	0.2500	0.8000	0.5010			
258	18	Surface	1	0.2250	0.4780	0.0790			

Appendix 17A.

Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

-2

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
259	19	Surface	1	0.5150	0.4000	0.5610	0.5150	0.4000	0.5610
262	20	Surface	1	0.4240	0.5100	0.6410	0.4783	0.5940	0.3077
262	20	Surface	1	0.4860	0.5820	0.2220			
262	20	Surface	1	0.5250	0.6900	0.0600			
265	21	Surface	1						
265	21	Surface	1	0.7700	0.8500	0.0550	0.7700	0.8500	0.0550
4	1	Tile	1						
10	2	Tile	1				0.1000	0.1405	0.0595
12	2	Tile	1						
18	3	Tile	1	0.1100	0.1910	0.0540	0.1000 -	0.1405	0.0595
18	3	Tile	1	0.0900	0.0900	0.0650			
24	4	Tile	1				0.0747	0.1187	0.1433
32	5	Tile	1				0.0747	0.1187	0.1433
38	6	Tile	1				0.1120	0.1780	0.2150
38	6	Tile	1	0.0750	0.1400	0.3850			
39	6	Tile	1	0.1490	0.2160	0.0450			
39	6	Tile	1						
40	6	Tile	1						
45	7	Tile	1				0.2900	0.2705	0.0975
53	8	Tile	1	0.0750	0.1610	0.1600	0.2900	0.2705	0.0975
53	8	Tile	1	0.5050	0.3800	0.0350	0.2900	0.2705	0.0975
70	9	Tile	1						
71	9	Tile	1	0.2900	0.2705	0.0975	0.2900	0.2705	0.0975
92	10	Tile	1	0.0360	0.1060	5.0000	0.0360	0.1060	5.0000
101	11	Tile	1	0.3510	0.4400	0.3400	0.2285	0.2925	0.1900
101	11	Tile	1	0.1060	0.1450	0.0400			
111	12	Tile	1	0.0550	0.1100	0.0950	0.0550	0.1100	0.0950
125	13	Tile	1	0.1110	0.1460	0.0310	0.1110	0.1460	0.0310

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
134	14	Tile	1	0.4110	0.7000	0.0350	0.2255	0.3875	0.4900
135	14	Tile	1	0.0400	0.0750	0.9450			
136	15	Tile	1	0.2510	0.2490	0.0250	0.2887	0.3333	1.7533
137	15	Tile	1	0.4300	0.4350	5.0600			
137	15	Tile	1	0.1850	0.3160	0.1750			
159	16	Tile	1	9.4500	10.0000	0.0350	8.7533	9.5067	0.0350
159	16	Tile	1	7.7100	9.1200	0.0600			
159	16	Tile	1	9.1000	9.4000	0.0100			
179	16	Tile	1						
195	17	Tile	1	0.1120	0.1200	4.0200	0.0913	0.1197	2.3650.
195	17	Tile	1	0.1100	0.1600	0.0550			
196	17	Tile	1	0.0520	0.0790	3.0200			
225	18	Tile	1						
225	19	Tile	1	0.1320	4.8100	0.1010	0.1320	4.8100	0.1010
231	20	Tile	1	0.1340	4.2000	2.6100	0.1340	4.2000	2.6100
250	21	Tile	1	0.2650	0.3940	0.1920	0.2402	0.3016	0.2128
250	21	Tile	1	0.3000	0.2700	0.0600			
250	21	Tile	1	0.3280	0.4170	0.2120			
250	21	Tile	1	0.2280	0.2500	0.0450			
251	21	Tile	1	0.0800	0.1770	0.5550			
258	22	Tile	1	0.2800	0.3850	0.5400	0.3508	0.3910	0.2748
258	22	Tile	1	0.3880	0.4120	0.1100			
258	22	Tile	1	0.3860	0.3950	0.3640			
258	22	Tile	1	0.3490	0.3720	0.0850			
259	23	Tile	1	0.2750	0.3860	0.1250	0.2750	0.3860	0.1250
262	24	Tile	1	0.2750	0.3500	0.6585	1.0182	0.3918	0.5617
262	24	Tile	1	3.3000	0.4950	0.9700			
262	24	Tile	1	0.9700	0.3900	1.0000			

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
263	24	Tile	1	0.2860	0.3470	0.0100			
263	24	Tile	1	0.2600	0.3770	0.1700			
265	25	Tile	1	0.1870	0.2220	0.0620	0.1870	0.2220	0.0620
4	1	Surface	2	0.4050	0.4450	0.0300	0.2225	0.2575	0.0220
4	1	Surface	2	0.0400	0.0700	0.0140			
10	2	Surface	2	0.2700	0.3170	0.1720	0.2700	0.3170	0.1720
18	3	Surface	2	0.0310	0.0750	0.0150	0.0310	0.0750	0.0150
38	4	Surface	2	0.0720	0.1900	0.0710	0.0720	0.1900	0.0710
39	5	Surface	2	0.1700	0.1000	0.2410	0.2010	0.0900	0.1255
39	5	Surface	2						
39	5	Surface	2	0.2320	0.0800	0.0100			
53	6	Surface	2	0.1920	0.1250	0.2900	0.1655	0.1505	0.2275
53	6	Surface	2	0.1390	0.1760	0.1650			
58	7	Surface	2						
101	8	Surface	2	0.0360	0.6050	0.0150	0.0360	0.6050	0.0150
134	9	Surface	2	0.4850	0.5900	0.0650	0.4850	0.5900	0.0650
136	10	Surface	2	0.2910	0.5010	0.0160	0.2880	0.4305	0.0580
137	10	Surface	2	0.2850	0.3600	0.1000			
137	11	Surface	2	0.2190	0.2750	0.1010	0.2190	0.2750	0.1010
159	12	Surface	2	2.6500	9.6000	0.2150	1.8750	9.4750	0.2175
159	12	Surface	2	1.1000	9.3500	0.2200			
195	13	Surface	2				0.0000	0.0000	0.0000
225	14	Surface	2				0.0000	0.0000	0.0000
231	15	Surface	2	0.1300	3.3000	4.6500	0.1300	3.3000	4.6500
250	16	Surface	2	0.3370	0.4650	0.6800	0.4135	0.5220	0.7390
250	16	Surface	2	0.4900	0.5790	0.7980			
250	17	Surface	2	0.5660	0.7780	0.3250	0.6005	0.7265	0.2995
250	17	Surface	2	0.6350	0.6750	0.2740			

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
258	18	Surface	2	0.0800	0.4480	0.4000	0.4017	0.6493	0.5153
258	18	Surface	2	0.5500	0.7950	0.6500			
258	18	Surface	2	0.5750	0.7050	0.4960			
259	19	Surface	2	0.3720	0.4500	0.6010	0.3720	0.4500	0.6010
262	20	Surface	2	0.4230	0.4860	0.4160	0.4510	0.5497	0.4659
262	20	Surface	2	0.4300	0.5430	0.5850			
262	20	Surface	2	0.5000	0.6200	0.3968			
265	21	Surface	2	0.3600	0.4150	0.2800	0.4900	0.4775	0.1450
265	21	Surface	2	0.6200	0.5400	0.0100			
4	1	Tile	2						
10	2	Tile	2	0.0450	0.0660	0.0400	0.0450	0.0660	0.0400
12	2	Tile	2						
18	3	Tile	2	0.0800	0.1210	0.3060	0.2030	0.2860	0.1840
18	3	Tile	2	0.3260	0.4510	0.0620			
24	4	Tile	2				0.2030	0.2860	0.1840
32	5	Tile	2				0.2030	0.2860	0.1840
38	6	Tile	2						
38	6	Tile	2	0.2100	0.1850	0.0320	0.1300	0.2100	0.0660
39	6	Tile	2	0.1250	0.2600	0.0560			
39	6	Tile	2	0.0550	0.1850	0.1100			
40	6	Tile	2						
45	7	Tile	2				0.5730	0.4640	0.2505
53	8	Tile	2	0.2920	0.2860	0.0310	0.5730	0.4640	0.2505
53	8	Tile	2	0.8540	0.6420	0.4700			
70	9	Tile	2				0.5730	0.4640	0.2505
71	9	Tile	2						
92	10	Tile	2	0.0590	0.1000	0.5410	0.0590	0.1000	0.5410
101	11	Tile	2	0.5160	0.6780	0.0350	0.3335	0.4195	0.1000

Appendix 17A.

Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

-6

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
101	11	Tile	2	0.1510	0.1610	0.1650			
111	12	Tile	2	0.0950	0.2350	0.1210	0.0950	0.2350	0.1210
125	13	Tile	2	0.1420	0.1920	0.0300	0.1420	0.1920	0.0300
134	14	Tile	2	0.4300	0.4400	0.2450	0.2325	0.2700	2.1275
135	14	Tile	2	0.0350	0.1000	4.0100			
136	15	Tile	2	0.4000	0.5810	2.9500	0.3853	0.5073	2.3317
137	15	Tile	2	0.4300	0.5000	4.0100			
137	15	Tile	2	0.3260	0.4410	0.0350			
159	16	Tile	2	10.0000	10.0000	0.0600	7.2075	7.4725	0.0613
159	16	Tile	2	10.0000	10.0000	0.0550			
159	16	Tile	2	8.7200	9.7000	0.1050			
179	16	Tile	2	0.1100	0.1900	0.0250			
195	17	Tile	2	0.0710	0.0900	0.1170	0.1440	0.1687	1.7327
195	17	Tile	2	0.2270	0.2460	0.0410			
196	17	Tile	2	0.1340	0.1700	5.0400			
225	18	Tile	2				0.1410	4.0000	0.1010
225	19	Tile	2	0.1410	4.0000	0.1010	0.1410	4.0000	0.1010
231	20	Tile	2	0.1810	4.3100	4.5200	0.1810	4.3100	4.5200
250	21	Tile	2	0.3700	0.6350	0.6690	0.3850	0.5576	0.3982
250	21	Tile	2	0.4950	0.6000	0.6250			
250	21	Tile	2	0.4050	0.6930	0.5220			
250	21	Tile	2	0.4650	0.5900	0.1000			
251	21	Tile	2	0.1900	0.2700	0.0750			
258	22	Tile	2	0.7700	0.4600	0.7200	0.5488	0.4473	0.4523
258	22	Tile	2	0.4990	0.5240	0.3700			
258	22	Tile	2	0.5200	0.6050	0.2850			
258	22	Tile	2	0.4060	0.2000	0.4340			
259	23	Tile	2	0.3460	0.4320	0.6170	0.3460	0.4320	0.6170

Appendix 17A.

Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
262	24	Tile	2	0.9700	0.6300	0.6856	0.6183	0.5958	0.4289
262	24	Tile	2	0.5040	0.5400	1.0000			
262	24	Tile	2	0.5320	0.7130	0.0100			
263	24	Tile	2	0.4670	0.5000	0.0200			
263	24	Tile	2						
265	25	Tile	2	0.4430	0.6200	0.0350	0.4430	0.6200	0.0350

^a Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 18A.

Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1	0.2120	0.3200	0.0320	0.2555	0.3170	0.0240
4	1	Surface	1	0.2990	0.3140	0.0160			
10	2	Surface	1	0.2250	0.2000	0.0200	0.2250	0.2000	0.0200
18	3	Surface	1						
38	4	Surface	1						
39	5	Surface	1						
39	5	Surface	1	0.1350	0.1750	0.0150	0.1685	0.3630	0.0825
39	5	Surface	1	0.2020	0.5510	0.1500			
53	6	Surface	1	0.4350	0.4720	0.2950	0.3530	0.2965	0.2700
53	6	Surface	1	0.2710	0.1210	0.2450			
58	7	Surface	1						
101	8	Surface	1	0.2700	0.4500	0.0750	0.2700	0.4500	0.0750
134	9	Surface	1	0.2800	0.2410	0.0350	0.2800	0.2410	0.0350
136	10	Surface	1	0.3750	0.1900	0.0400	0.2705	0.1495	0.0275
137	10	Surface	1	0.1660	0.1090	0.0150			
137	11	Surface	1	0.1110	0.1660	0.0400	0.1110	0.1660	0.04.00
159	12	Surface	1						
159	12	Surface	1						
195	13	Surface	1						
225	14	Surface	1				0.0000	0.0000	0.0000
231	15	Surface	1	0.1410	5.5500	2.9500	0.1410	5.5500	2.9500
250	16	Surface	1	0.2200	0.4000	0.4550	0.2425	0.3420	0.5285
250	16	Surface	1	0.2650	0.2840	0.6020			
250	17	Surface	1	0.3160	0.5300	0.7230	0.3000	0.4200	0.6800
250	17	Surface	1	0.2840	0.3100	0.6370			
258	18	Surface	1	0.1000	0.2300	0.4750	0.3333	0.4817	0.5233
258	18	Surface	1	0.3000	0.4480	0.7550			
258	18	Surface	1	0.6000	0.7670	0.3400			

Appendix 18A.

Sample-and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

-2

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
259	19	Surface	1	0.2180	0.2750	0.5760	0.2180	0.2750	0.5760
262	20	Surface	1	0.2150	0.2550	0.4850	0.2367	0.3397	0.4073
262	20	Surface	1	0.2400	0.3260	0.3860			
262	20	Surface	1	0.2550	0.4380	0.3510			
265	21	Surface	1	0.2020	0.2100	0.2020	0.2010	0.2375	0.1335
265	21	Surface	1	0.2000	0.2650	0.0650			
4	1	Tile	1				0.0885	0.1120	0.0200
10	2	Tile	1	0.1770	0.2240	0.0400	0.1770	0.2240	0.0400
12	2	Tile	1						
18	3	Tile	1	0.0750	0.0980	0.5850	0.0655	0.1035	0.3745
18	3	Tile	1	0.0560	0.1090	0.1640			
24	4	Tile	1				0.5377	0.8876	0.3781
32	5	Tile	1				0.5377	0.8876	0.3781
38	6	Tile	1				0.0977	0.1360	0.0570
38	6	Tile	1	0.1100	0.1310	0.0500			
39	6	Tile	1	0.1020	0.1070	0.0850			
39	6	Tile	1	0.0810	0.1700	0.0360			
40	6	Tile	1						
45	7	Tile	1				0.4300	0.4360	0.1275
53	8	Tile	1	0.3800	0.4120	0.2350	0.4300	0.4360	0.1275
53	8	Tile	1	0.4800	0.4600	0.0200			
70	9	Tile	1				0.4300	0.4360	0.1275
71	9	Tile	1						
71	9	Tile	1						
92	10	Tile	1	0.0350	0.0800	0.6020	0.0350	0.0800	0.6020
101	11	Tile	1	0.1800	0.2250	0.9700	0.1470	0.2175	0.5005
101	11	Tile	1	0.1140	0.2100	0.0310			
111	12	Tile	1	0.0500	0.1000	0.0900	0.0500	0.1000	0.0900

Appendix 18A.

Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

-3

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
125	13	Tile	1	0.0850	0.0650	0.0610	0.0850	0.0650	0.0610
134	14	Tile	1	0.1850	0.2350	0.0750	0.1125	0.1585	0.4375
135	14	Tile	1	0.0400	0.0820	0.8000			
136	15	Tile	1	0.1350	0.4550	0.0450	0.1387	0.2300	0.0637
137	15	Tile	1	0.1650	0.1750	0.1060			
137	15	Tile	1	0.1160	0.0600	0.0400			
159	16	Tile	1	5.6300	9.0000	0.3500	2.3633	4.4317	0.1603
159	16	Tile	1	0.8800	0.8750	0.0500			
159	16	Tile	1	0.5800	3.4200	0.0810			
179	16	Tile	1						
195	17	Tile	1	0.0700	0.0700	0.9250	0.0637	0.0833	1.1750
195	17	Tile	1	0.0710	0.1250	0.0100			
196	17	Tile	1	0.0500	0.0550	2.5900			
225	18	Tile	1						
225	19	Tile	1	0.1750	5.7100	0.1000	0.1750	5.7100	0.1000
231	20	Tile	1	0.1500	4.3000	2.5100	0.1500	4.3000	2.5100
250	21	Tile	1	0.1850	0.2130	0.7060	0.2720	0.1996	0.3982
250	21	Tile	1	0.9200	0.4100	0.5250			
250	21	Tile	1	0.1750	0.1800	0.1900			
250	21	Tile	1	0.0100	0.0750	0.3450			
251	21	Tile	1	0.0700	0.1200	0.2250			
258	22	Tile	1	0.1580	0.2200	0.3480	0.1910	0.2323	0.1608
258	22	Tile	1	0.2450	0.1620	0.1700			
258	22	Tile	1	0.2000	0.3000	0.0400			
258	22	Tile	1	0.1610	0.2470	0.0850			
259	23	Tile	1	0.1700	0.2600	0.5500	0.1700	0.2600	0.5500
262	24	Tile	1	0.1750	0.2360	0.3847	0.3282	0.2832	0.5009
262	24	Tile	1	0.1990	0.2150	0.9500			

Appendix 18A.

Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

- 4

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
262	24	Tile	1	0.9820	0.5950	1.0000			
263	24	Tile	1	0.1430	0.1950	0.0100			
263	24	Tile	1	0.1420	0.1750	0.1600			
265	25	Tile	1	0.1420	0.1450	0.2020	0.1420	0.1450	0.2020
4	1	Surface	2	0.2410	0.3010	0.0150	0.1505	0.1905	0.0950
4	1	Surface	2	0.0600	0.0800	0.1750			
10	2	Surface	2	0.1210	0.1560	0.0200	0.1210	0.1560	0.0200
18	3	Surface	2	0.1610	0.1790	0.0150	0.1610	0.1790	0.0150
38	4	Surface	2	0.0900	0.1060	0.0200	0.0900	0.1060	0.0200
39	5	Surface	2	0.1600	0.2060	0.0400	0.1600	0.2155	0.0300
39	5	Surface	2						
39	5	Surface	2	0.1600	0.2250	0.0200			
53	6	Surface	2	0.2020	0.0660	0.0500	0.1165	0.4255	0.0300
53	6	Surface	2	0.0310	0.7850	0.0100			
58	7	Surface	2						
101	8	Surface	2	0.0490	0.6100	0.0100	0.0490	0.6100	0.0100
134	9	Surface	2	0.3350	0.3600	0.1100	0.3350	0.3600	0.1100
136	10	Surface	2	9.2060	0.2860	0.0700	0.2380	0.3335	0.0650
137	10	Surface	2	9.2700	0.3810	0.0600			
137	11	Surface	2	0.2260	0.2910	0.0220	0.2260	0.2910	0.0220
159	12	Surface	2	9.3100	7.9500	0.2060	9.6550	8.9750	0.2685
159	12	Surface	2	10.0000	10.0000	0.3310			
195	13	Surface	2	0.2350	0.2750	0.2250	0.2350	0.2750	0.2250
225	14	Surface	2	0.1560	4.3200	0.1000	0.1560	4.3200	0.1000
231	15	Surface	2	0.1150	7.3100	4.9300	0.1150	7.3100	4.9300
250	16	Surface	2	0.3950	0.3980	0.7010	0.4575	0.4905	0.7325
250	16	Surface	2	0.5200	0.5830	0.7640			
250	17	Surface	2	0.5920	0.8300	0.8200	0.5827	0.6120	0.7000

Julian Date/90	Event	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
250	17	Surface	2	0.5780	0.5030	0.6400			
250	17	Surface	2	0.5780	0.5030	0.6400			
258	18	Surface	2	0.3100	0.4490	0.5870	0.4150	0.5503	0.5003
258	18	Surface	2	0.4000	0.5150	0.2630			
258	18	Surface	2	0.5350	0.6870	0.6510			
259	19	Surface	2	0.4220	0.5100	0.3490	0.4220	0.5100	0.3490
262	20	Surface	2	0.4190	0.4150	0.2330	0.4270	0.4550	0.4189
262	20	Surface	2	0.4190	0.4400	0.6400			
262	20	Surface	2	0.4430	0.5100	0.3838			
265	21	Surface	2	0.4070	0.4960	0.0650	0.4435	0.5035	0.0400
265	21	Surface	2	0.4800	0.5110	0.0150			
4	1	Tile	2						
10	2	Tile	2	0.5850	0.5410	0.0650	0.5850	0.5410	0.0650
12	2	Tile	2						
18	3	Tile	2	0.0950	0.1220	0.8310	0.0975	0.2220	0.4235
18	3	Tile	2	0.1000	0.3220	0.0160			
24	4	Tile	2				0.0900	0.1455	0.0343
32	5	Tile	2				0.0900	0.1455	0.0343
38	6	Tile	2				0.1200	0.1940	0.0457
38	6	Tile	2	0.1060	0.1260	0.0320			
39	6	Tile	2	0.1140	0.2010	0.0500			
39	6	Tile	2	0.1400	0.2550	0.0550			
40	6	Tile	2						
45	7	Tile	2				0.3175	1.6110	0.0775
53	8	Tile	2	0.4100	2.8500	0.0750	0.3175	1.6110	0.0775
53	8	Tile	2	0.2250	0.3720	0.0800			
70	9	Tile	2				0.3175	1.6110	0.0775
71	9	Tile	2						

Appendix 18A.

Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

-6

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
92	10	Tile	2	0.0610	0.1110	0.3400	0.0610	0.1110	0.3400
101	11	Tile	2	0.2200	0.3240	0.0400	0.1475	0.2095	0.0455
101	11	Tile	2	0.0750	0.0950	0.0510			
111	12	Tile	2	0.0650	9.0500	0.0460	0.0650	9.0500	0.0460
125	13	Tile	2	0.1150	0.1330	0.0260	0.1150	0.1330	0.0260
134	14	Tile	2	0.1920	0.1930	0.0750	0.1210	0.1275	2.2975
135	14	Tile	2	0.0500	0.0620	4.5200			
136	15	Tile	2	0.2100	0.2700	0.0650	0.1547	0.2287	0.0537
137	15	Tile	2	0.1300	0.2200	0.0610			
137	15	Tile	2	0.1240	0.1960	0.0350			
159	16	Tile	2	5.8500	7.2000	0.1250	3.2503	3.6035	0.0650
159	16	Tile	2	6.3000	6.2000	0.0800			
159	16	Tile	2	0.7500	0.8150	0.0300			
179	16	Tile	2	0.1010	0.1990	0.0250			
195	17	Tile	2	0.0750	0.1060	0.0400	0.1377	0.1723	1.0197
195	17	Tile	2	0.1740	0.1950	0.0290			
196	17	Tile	2	0.1640	0.2160	2.9900			
225	18	Tile	2						
225	19	Tile	2	0.1850	4.5500	0.1000	0.1850	4.5500	0.1000
231	20	Tile	2	0.1100	3.7600	5.2100	0.1100	3.7600	5.2100
250	21	Tile	2	0.6150	0.7000	0.0500	0.4000	0.5114	0.1500
250	21	Tile	2	0.4230	0.5650	0.3050			
250	21	Tile	2	0.3360	0.4400	0.2130			
250	21	Tile	2	0.4160	0.5020	0.1490			
251	21	Tile	2	0.2100	0.3500	0.0330			
258	22	Tile	2	0.7950	0.3400	0.1800	0.4575	0.4293	0.3840
258	22	Tile	2	0.4950	0.6720	0.4500			
258	22	Tile	2	0.4350	0.5550	0.2260			

Appendix 18A.

Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

-7

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
258	22	Tile	2	0.1050	0.1500	0.6800			
259	23	Tile	2	0.3400	0.3630	0.4960	0.3400	0.3630	0.4960
262	24	Tile	2	0.1900	0.6200	1.0000	0.4653	0.5158	0.5230
262	24	Tile	2	0.8340	0.2800	1.0000			
262	24	Tile	2	0.4300	0.5830	0.0100			
263	24	Tile	2	0.4070	0.5800	0.0820			
263	24	Tile	2						
265	25	Tile	2	0.3370	0.4300	0.0150	0.3370	0.4300	0.0150

^a Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 19A.

Sample and event concentration for ortho P, soluble P and sediment P^a for conventional tillage, 1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1	0.3050	0.3050	0.0320	0.2530	0.2480	0.0235
4	1	Surface	1	0.2010	0.1910	0.0150			
10	2	Surface	1						
18	3	Surface	1						
38	4	Surface	1						
39	5	Surface	1						
39	5	Surface	1						
39	5	Surface	1						
53	6	Surface	1	0.1820	0.0950	0.1560	0.1535	0.1775	0.0856
53	6	Surface	1	0.1250	0.2600	0.0150			
58	7	Surface	1				0.1535	0.1775	0.0855
101	8	Surface	1						
134	9	Surface	1						
136	10	Surface	1						
137	10	Surface	1						
137	11	Surface	1						
159	12	Surface	1	0.3300	0.4200	0.2810	0.3300	0.4200	0.2810
159	12	Surface	1						
195	13	Surface	1						
225	14	Surface	1				0.0000	0.0000	0.0000
231	15	Surface	1						
250	16	Surface	1	0.1380	0.1500	0.5150	0.1515	0.1975	0.4725
250	16	Surface	1	0.1650	0.2450	0.4300			
250	17	Surface	1	0.2220	0.2840	0.5650	0.2220	0.2840	0.5650
250	17	Surface	1						
258	18	Surface	1	0.2000	0.2880	0.7000	0.2790	0.2443	0.4840
258	18	Surface	1	0.5020	0.2950	0.1340			

Appendix 19A.

Sample and event concentration for ortho P, soluble P and Sediment P^a for conventional tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
258	18	Surface	1	0.1350	0.1500	0.6180			
259	19	Surface	1	0.1250	0.1700	0.3250	0.1250	0.1700	0.3250
262	20	Surface	1	0.1500	0.1860	0.4720	0.1490	0.1937	0.3853
262	20	Surface	1	0.1530	0.1050	0.3750			
262	20	Surface	1	0.1440	0.2900	0.3089			
265	21	Surface	1						
265	21	Surface	1						
4	1	Tile	1				0.0130	0.0410	0.1250
10	2	Tile	1	0.0260	0.0820	0.2500	0.0260	0.0820	0.2500
12	2	Tile	1						
18	3	Tile	1	0.1260	0.1600	0.6050	0.0935	0.1255	0.3730
18	3	Tile	1	0.0610	0.0910	0.1410			
24	4	Tile	1				0.2398	0.2575	0.1265
32	5	Tile	1				0.2398	0.2575	0.1265
38	6	Tile	1				0.2398	0.2575	0.0680
38	6	Tile	1	0.0500	0.1100	0.1560			
39	6	Tile	1	0.8100	0.6300	0.0350			
39	6	Tile	1	0.0590	0.1240	0.0260			
40	6	Tile	1	0.0400	0.1660	0.0550			
45	7	Tile	1				0.1125	0.1850	0.2130
53	8	Tile	1	0.0950	0.1700	0.1810	0.1125	0.1850	0.2130
53	8	Tile	1	0.1300	0.2000	0.2450			
70	9	Tile	1						
71	9	Tile	1				0.0490	0.1020	0.2910
71	9	Tile	1						
92	10	Tile	1	0.0490	0.1020	0.2910	0.0490	0.1020	0.2910
101	11	Tile	1	0.4210	0.5150	0.1450	0.2505	0.3225	0.0880

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
101	11	Tile	1	0.0800	0.1300	0.0310			
111	12	Tile	1	0.0500	0.1200	0.1300	0.0500	0.1200	0.1300
125	13	Tile	1	0.0950	0.0900	0.0560	0.0950	0.0900	0.0560
134	14	Tile	1	0.1490	0.1560	0.0150	0.0950	0.1155	0.2275
135	14	Tile	1	0.0410	0.0750	0.4400			
136	15	Tile	1	0.0900	0.1310	0.7200	0.1720	0.1607	0.2937
137	15	Tile	1	0.1600	0.2350	0.1510			
137	15	Tile	1	0.2660	0.1160	0.0100			
159	16	Tile	1	0.4350	0.4850	0.0300	0.7297	2.4400	0.0267
159	16	Tile	1	0.8420	5.9100	0.0300			
159	16	Tile	1	0.9120	0.9250	0.0200			
179	16	Tile	1						
195	17	Tile	1	0.3450	0.3100	5.6300	0.2370	0.2383	3.4067
195	17	Tile	1	0.3000	0.3150	0.0300			
196	17	Tile	1	0.0660	0.0900	4.5600			
225	18	Tile	1				0.1300	4.1500	0.1090
225	19	Tile	1	0.1300	4.1500	0.1090	0.1300	4.1500	0.1090
231	20	Tile	1	0.1250	4.1100	2.9200	0.1250	4.1100	2.9200
250	21	Tile	1	0.0880	0.1340	0.3250	0.0896	0.1458	0.3688
250	21	Tile	1	0.1080	0.1650	0.5250			
250	21	Tile	1	0.0910	0.1900	0.3150			
250	21	Tile	1	0.0990	0.1350	0.1790			
251	21	Tile	1	0.0620	0.1050	0.5000			
258	22	Tile	1	0.1180	0.1600	0.3720	0.1375	0.1713	0.1565
258	22	Tile	1	0.1400	0.1550	0.1100			
258	22	Tile	1	0.1550	0.1800	0.0650			
258	22	Tile	1	0.1370	0.1900	0.0790			

Appendix 19A.

Sample and event concentration for ortho P, soluble P and sediment P^a for conventional tillage, 1990

- 4

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
259	23	Tile	1	0.1100	0.1630	0.4550	0.1100	0.1630	0.4560
262	24	Tile	1	0.5400	0.2700	0.5227	0.4330	0.2126	0.5565
262	24	Tile	1	1.2500	0.2150	1.0000			
262	24	Tile	1	0.1100	0.2230	1.0000			
263	24	Tile	1	0.1450	0.2000	0.0100			
263	24	Tile	1	0.1200	0.1550	0.2500			
265	25	Tile	1	0.1170	0.1520	0.2800	0.1170	0.1520	0.2800
4	1	Surface	2	0.2310	0.2660	0.0200	0.3930	0.3580	0.0195
4	1	Surface	2	0.5550	0.4500	0.0190			
10	2	Surface	2				0.0000	0.0000	0.0000
18	3	Surface	2	0.0460	0.0800	0.0650	0.0460	0.0600	0.0650
38	4	Surface	2	0.1510	0.1600	0.0250	0.1510	0.1600	0.0250
39	5	Surface	2	0.0620	0.3060	0.0600	0.0610	0.4206	0.0425
39	5	Surface	2						
39	5	Surface	2	0.0600	0.5350	0.0250			
53	6	Surface	2	0.0950	0.1150	0.2700	0.1580	0.1525	0.1850
53	6	Surface	2	0.2210	0.1900	0.1000			
58	7	Surface	2						
101	8	Surface	2	0.0900	0.1350	0.1660	0.0900	0.1350	0.1660
134	9	Surface	2	0.0850	0.3290	0.0150	0.0850	0.3290	0.0150
136	10	Surface	2	0.0630	0.1360	0.0310	0.0690	0.1255	0.0905
137	10	Surface	2	0.0750	0.1150	0.1500			
137	11	Surface	2	0.0700	0.3250	0.0740	0.0700	0.3250	0.0740
159	12	Surface	2	0.1340	0.1160	0.6420	0.1340	0.1160	0.6420
159	12	Surface	2						
195	13	Surface	2				0.0000	0.0000	0.0000
225	14	Surface	2				0.0000	0.0000	0.0000

Appendix 19A.

Sample and event concentration for ortho P, soluble P and sediment P^a for conventional tillage, 1990

-5

Julian Date/90	Event	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
231	15	Surface	2	0.1240	4.3500	5.0200	0.1240	4.3500	5.0200
250	16	Surface	2	0.0450	0.0900	0.5800	0.0650	0.1150	0.5200
250	16	Surface	2	0.0850	0.1400	0.4600			
250	17	Surface	2	0.0860	0.1570	0.5300	0.1180	0.1920	0.3930
250	17	Surface	2	0.1500	0.2270	0.2560			
258	18	Surface	2	0.5500	0.1300	0.5030	0.5250	0.6593	0.4670
258	18	Surface	2	0.8000	1.5500	0.6730			
258	18	Surface	2	0.2250	0.2980	0.2250			
259	19	Surface	2	0.0680	0.1000	0.4150	0.0680	0.1000	0.4150
262	20	Surface	2	0.0770	0.1320	0.4800	0.1050	0.2367	0.4679
262	20	Surface	2	0.1300	0.3530	0.5160			
262	20	Surface	2	0.1080	0.2250	0.4077			
265	21	Surface	2	0.0700	0.1370	0.0600	0.1300	0.1560	0.0475
265	21	Surface	2	0.1900	0.1750	0.0350			
4	1	Tile	2				0.0325	0.0500	0.2075
10	2	Tile	2	0.0650	0.1000	0.4150	0.0650	0.1000	0.4150
12	2	Tile	2						
18	3	Tile	2	0.1590	0.1650	0.0750	0.1395	0.1775	0.0625
18	3	Tile	2	0.1200	0.1900	0.0500			
24	4	Tile	2				0.0370	0.0858	0.1064
32	5	Tile	2				0.0370	0.0858	0.1064
38	6	Tile	2				0.0463	0.1073	0.1330
38	6	Tile	2	0.0550	0.1040	0.0350			
39	6	Tile	2	0.0500	0.1150	0.0210			
39	6	Tile	2	0.0460	0.1310	0.1510			
40	6	Tile	2	0.0340	0.0790	0.3250			
45	7	Tile	2				0.2330	0.2580	0.1325

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
53	8	Tile	2	0.0920	0.1400	0.0300	0.2330	0.2580	0.1325
53	8	Tile	2	0.3740	0.3760	0.2350			
70	9	Tile	2				0.2330	0.2580	0.1325
71	9	Tile	2						
92	10	Tile	2	0.0450	0.1060	0.0900	0.0450	0.1060	0.0900
101	11	Tile	2	0.0710	0.1240	0.0500	0.0625	0.1115	0.0375
101	11	Tile	2	0.0540	0.0990	0.0250			
111	12	Tile	2	0.0450	0.1100	0.0810	0.0450	0.1100	0.0810
125	13	Tile	2	0.0620	0.0900	0.0200	0.0620	0.0900	0.0200
134	14	Tile	2	0.0610	0.1150	0.1050	0.0605	0.1050	0.1880
135	14	Tile	2	0.0600	0.0950	0.2710			
136	15	Tile	2	0.0650	0.2610	0.1300	0.0667	0.1817	0.0957
137	15	Tile	2	0.0650	0.1700	0.0610			
137	15	Tile	2	0.0700	0.1140	0.0960			
159	16	Tile	2	0.1400	0.1750	0.0150	2.4383	2.8917	0.1220
159	16	Tile	2	6.7000	7.9500	0.0310			
159	16	Tile	2	0.4750	0.5500	0.3200			
179	16	Tile	2						
195	17	Tile	2	0.0740	0.0750	0.0600	0.1220	0.1373	1.7633
195	17	Tile	2	0.2210	0.2450	0.0200			
196	17	Tile	2	0.0710	0.0920	5.2100			
225	18	Tile	2				0.2010	4.7500	0.1000
225	19	Tile	2	0.2010	4.7500	0.1000	0.2010	4.7500	0.1000
231	20	Tile	2	0.1560	5.7100	4.0100	0.1560	5.7100	4.0100
250	21	Tile	2	0.4400	0.5950	0.3000	0.1604	0.2384	0.2754
250	21	Tile	2	0.0950	0.1230	0.2430			
250	21	Tile	2	0.0980	0.1250	0.7120			

Appendix 19A.

Sample and event concentration for ortho P, soluble P and Sediment P^a for conventional tillage, 1990

-7

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
250	21	Tile	2	0.1190	0.2090	0.0550			
251	21	Tile	2	0.0500	0.1400	0.0670			
258	22	Tile	2	0.1190	0.1970	0.6000	0.1273	0.1730	0.2745
258	22	Tile	2	0.1300	0.1480	0.2230			
258	22	Tile	2	0.1400	0.1950	0.1550			
258	22	Tile	2	0.1200	0.1520	0.1200			
259	23	Tile	2	0.6920	0.4630	0.5200	0.6920	0.4630	0.5200
262	24	Tile	2	0.1370	0.1600	0.0250	0.1448	0.2320	0.2604
262	24	Tile	2	0.1320	0.4000	0.9250			
262	24	Tile	2	0.1450	0.1750	0.0150			
263	24	Tile	2	0.1650	0.2500	0.0120			
263	24	Tile	2	0.1450	0.1750	0.3250			
265	25	Tile	2	0.1500	0.2450	0.0550	0.1500	0.2450	0.0550

^a Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 20A.

Sample and event concentration for ortho P, soluble P and sediment P^a for sod treatment, 1990_

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1						
4	1	Surface	1						
10	2	Surface	1						
18	3	Surface	1						
38	4	Surface	1						
39	5	Surface	1						
39	5	Surface	1						
39	5	Surface	1						
53	6	Surface	1	5.6000	0.0560	0.1720	5.6250	5.0280	0.1410
53	6	Surface	1	5.6500	10.0000	0.1100			
58	7	Surface	1						
101	8	Surface	1						
134	9	Surface	1						
136	10	Surface	1						
137	10	Surface	1						
137	11	Surface	1						
159	12	Surface	1						
159	12	Surface	1						
195	13	Surface	1						
225	14	Surface	1						
231	15	Surface	1						
250	16	Surface	1						
250	16	Surface	1						
250	17	Surface	1						
250	17	Surface	1						
258	18	Surface	1						
258	18	Surface	1						
258	18	Surface	1						

Appendix 20A.

Sample and event concentration for ortho P, soluble P and sediment P^a for sod treatment, 1990

- 2

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
259	19	Surface	1						
262	20	Surface	1						
262	20	Surface	1						
262	20	Surface	1						
265	21	Surface	1						
265	21	Surface	1						
4	1	Tile	1	0.2660	0.1850	0.0260	0.2660	0.1850	0.0260
10	2	Tile	1	0.0360	0.0900	0.1500	0.0360	0.0900	0.1500
12	2	Tile	1						
18	3	Tile	1	0.0800	0.0900	0.4410	0.0580	0.0875	0.5660
18	3	Tile	1	0.0360	0.0850	0.6910			
24	4	Tile	1				0.2000	0.2150	0.1050
32	5	Tile	1				0.2000	0.2150	0.1050
38	6	Tile	1						
38	6	Tile	1	0.3290	0.2600	0.2660	0.2000	0.2150	0.1050
39	6	Tile	1	0.1300	0.1900	0.0290			
39	6	Tile	1	0.1410	0.1950	0.0200			
40	6	Tile	1						
45	7	Tile	1				0.7860	5.2750	0.2425
53	8	Tile	1	0.7800	4.9300	0.1850	0.7860	5.2750	0.2425
53	8	Tile	1	0.7920	5.6200	0.3000			
70	9	Tile	1				0.1160	0.2000	0.2690
71	9	Tile	1						
71	9	Tile	1						
92	10	Tile	1	0.1160	0.2000	0.2690	0.1160	0.2000	0.2690
101	11	Tile	1	0.4850	0.9500	0.0700	0.4075	0.6870	0.0475
101	11	Tile	1	0.3300	0.4240	0.0250			
111	12	Tile	1	0.1450	0.1650	0.0710	0.1450	0.1650	0.0710

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
125	13	Tile	1				0.1350	0.2105	3.0565
134	14	Tile	1	0.2000	0.3060	0.5010	0.1350	0.2105	3.0555
135	14	Tile	1	0.0700	0.1150	5.6100			
136	15	Tile	1	0.1510	0.1900	0.2210	0.2900	0.3703	0.1460
137	15	Tile	1	0.6120	0.7400	0.1520			
137	15	Tile	1	0.1070	0.1810	0.0650			
159	16	Tile	1	0.2900	0.3703	0.1460	0.1460	6.1000	3.0100
159	16	Tile	1						
159	16	Tile	1						
179	16	Tile	1						
195	17	Tile	1						
195	17	Tile	1						
196	17	Tile	1						
225	18	Tile	1						
225	19	Tile	1						
231	20	Tile	1	0.1460	6.1000	3.0100	0.1460	6.1000	3.0100
250	21	Tile	1	0.5900	0.7700	0.1150	0.8226	2.2942	0.2416
250	21	Tile	1	1.0000	1.4500	0.2430			
250	21	Tile	1	1.1500	6.5000	0.5300			
250	21	Tile	1	1.1000	2.3500	0.1050			
251	21	Tile	1	0.2730	0.4010	0.2150			
258	22	Tile	1	0.3270	0.5260	0.3150	1.0768	1.4940	0.2525
258	22	Tile	1	1.2800	2.1000	0.1000			
258	22	Tile	1	1.3500	1.9500	0.0850			
258	22	Tile	1	1.3500	1.4000	0.5100			
259	23	Tile	1	0.2490	0.1000	0.1800	0.2490	0.1000	0.1800
262	24	Tile	1	0.5770	0.7900	0.4600	0.6602	0.8730	0.4610
262	24	Tile	1	0.6950	0.7600	1.0000			

Appendix 20A.

Sample and event concentration for ortho P, soluble P and sediment P⁻ for sod treatment, 1990

- 4

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
262	24	Tile	1	0.8800	1.5500	0.0350			
263	24	Tile	1	0.6070	0.6650	0.0350			
263	24	Tile	1	0.5420	0.6000	0.7750			
265	25	Tile	1	0.1670	0.2120	0.0700	0.1670	0.2120	0.0700
4	1	Surface	2	6.5700	6.6000	0.2050	6.8350	6.5000	0.1295
4	1	Surface	2	7.1000	6.4000	0.0540			
10	2	Surface	2						
18	3	Surface	2						
38	4	Surface	2						
39	5	Surface	2						
39	5	Surface	2						
39	5	Surface	2						
53	6	Surface	2	0.8700	0.0750	0.7500	0.7625	0.1750	0.5025
53	6	Surface	2	0.6550	0.2750	0.2550			
58	7	Surface	2						
101	8	Surface	2						
134	9	Surface	2						
136	10	Surface	2						
137	10	Surface	2						
137	11	Surface	2						
159	12	Surface	2						
159	12	Surface	2						
195	13	Surface	2						
225	14	Surface	2						
231	15	Surface	2						
250	16	Surface	2						
250	16	Surface	2						
250	17	Surface	2						

Appendix 20A.

Sample and event concentration for ortho P, soluble P and sediment P^a for sod treatment, 1990

- 6

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
250	17	Surface	2						
258	18	Surface	2	1.3500	2.4500	0.0600	0.7500	1.3550	0.3100
258	18	Surface	2	0.1500	0.2600	0.5600			
258	18	Surface	2						
259	19	Surface	2						
262	20	Surface	2						
262	20	Surface	2	1.5000	0.8500	0.6250	1.5000	0.8500	0.6250
262	20	Surface	2						
265	21	Surface	2						
265	21	Surface	2						

^a Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 21A. Event losses for ortho P, soluble P and sediment P in g/ha for zero tillage, 1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	38.41	53.96	0.34
10	2	Surface	1	41.25	39.74	3.62
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	41.21	14.60	1.76
53	6	Surface	1	60.07	43.38	4.04
58	7	Surface	1	0.00	0.00	0.00
101	8	Surface	1	12.73	15.92	1.05
134	9	Surface	1	14.67	17.88	1.19
136	10	Surface	1	18.94	23.80	0.25
137	11	Surface	1	10.88	5.50	0.36
159	12	Surface	1	0.00	0.00	0.00
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00
250	16	Surface	1	32.72	41.71	11.34
250	17	Surface	1	46.50	48.35	7.27
258	18	Surface	1	24.49	47.46	4.95
259	19	Surface	1	30.72	23.86	6.69
262	20	Surface	1	26.46	32.85	3.40
265	21	Surface	1	20.34	22.45	0.29
4	1	Tile	1	0.00	0.00	0.00
10	2	Tile	1	0.17	0.23	0.02
18	3	Tile	1	12.82	18.01	1.53
24	4	Tile	1	5.06	8.05	1.94
32	5	Tile	1	6.53	10.38	2.51
38	6	Tile	1	13.27	21.09	5.10
45	7	Tile	1	7.16	6.68	0.48
53	8	Tile	1	80.69	75.27	5.43
71	9	Tile	1	52.86	49.30	3.55
92	10	Tile	1	2.09	6.16	58.11
101	11	Tile	1	38.42	49.18	6.39
111	12	Tile	1	2.65	5.30	0.92
125	13	Tile	1	9.90	13.02	0.55
134	14	Tile	1	29.04	49.89	12.62
136	15	Tile	1	45.75	52.83	55.57
159	16	Tile	1	551.64	599.11	0.44
195	17	Tile	1	1.27	1.66	6.56
225	18	Tile	1	0.00	0.00	0.00
225	19	Tile	1	0.72	26.31	0.11
231	20	Tile	1	4.33	135.70	16.87

Appendix 21A.

Event losses for ortho P, soluble P and sediment P in g/ha for zero tillage 1990

-2

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P loss, g/ha
250	21	Tile	1	42.88	53.84	7.60
258	22	Tile	1	30.87	34.41	4.84
259	23	Tile	1	18.41	25.84	1.67
262	24	Tile	1	56.09	21.58	6.19
265	25	Tile	1	4.94	5.87	0.33
4	1	Surface	2	31.62	36.59	0.63
10	2	Surface	2	16.02	18.80	2.04
18	3	Surface	2	0.77	1.87	0.07
38	4	Surface	2	2.25	5.94	0.44
39	5	Surface	2	6.44	2.88	0.80
53	6	Surface	2	29.64	26.96	8.15
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	1.06	17.78	0.09
134	9	Surface	2	16.60	20.20	n/a
136	10	Surface	2	12.31	18.40	n/a
137	11	Surface	2	3.73	4.68	n/a
159	12	Surface	2	24.79	125.27	0.58
195	13	Surface	2	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00
231	15	Surface	2	5.44	138.15	38.93
250	16	Surface	2	24.25	30.61	8.67
250	17	Surface	2	35.47	42.91	3.54
258	18	Surface	2	23.46	37.93	6.02
259	19	Surface	2	25.27	30.56	8.16
262	20	Surface	2	34.32	41.83	7.09
265	21	Surface	2	13.10	12.77	0.78
4	1	Tile	2	0.00	0.00	0.00
10	2	Tile	2	0.96	1.40	0.17
18	3	Tile	2	27.52	38.78	4.99
24	4	Tile	2	12.27	17.28	2.22
32	5	Tile	2	14.69	20.70	2.66
38	6	Tile	2	14.45	23.34	1.47
45	7	Tile	2	29.92	24.23	2.62
53	8	Tile	2	90.98	73.67	7.95
70	9	Tile	2	147.43	119.38	12.89
92	10	Tile	2	3.39	5.74	6.22
101	11	Tile	2	40.19	50.56	2.41
111	12	Tile	2	5.00	12.38	1.27
125	13	Tile	2	12.38	16.74	0.52
134	14	Tile	2	19.15	22.24	35.05
136	15	Tile	2	43.66	57.49	52.84

Appendix 21A. Event losses for ortho P, soluble P and sediment P in g/ha for zero tillage, 1990

-3

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	1042.13	1080.45	1.77
195	17	Tile	2	6.99	8.19	16.82
225	18	Tile	2	0.19	5.40	0.03
225	19	Tile	2	2.50	70.80	0.36
231	20	Tile	2	4.58	109.09	22.88
250	21	Tile	2	80.23	116.20	16.60
258	22	Tile	2	25.65	20.90	4.23
259	23	Tile	2	10.16	12.68	3.62
262	24	Tile	2	18.39	17.72	2.55
265	25	Tile	2	6.48	9.06	0.10

Appendix 22A. Event losses for ortho P, soluble P and sediment P in g/ha for ridge tillage, 1990

- 1

Julian Date /90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	30.00	37.22	0.56
10	2	Surface	1	13.67	12.15	0.24
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	15.58	33.56	1.53
53	6	Surface	1	64.77	54.40	9.91
58	7	Surface	1	0.00	0.00	0.00
101	8	Surface	1	10.69	17.82	0.59
134	9	Surface	1	13.60	11.70	0.34
136	10	Surface	1	18.20	10.06	0.37
137	11	Surface	1	4.18	6.26	0.30
159	12	Surface	1	0.00	0.00	0.00
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	6.05	238.08	25.31
250	16	Surface	1	18.41	25.96	8.02
250	17	Surface	1	29.16	40.83	13.22
258	18	Surface	1	20.80	30.05	6.53
259	19	Surface	1	13.72	17.31	7.25
262	20	Surface	1	15.31	21.97	5.27
265	21	Surface	1	2.50	2.95	0.33
4	1	Tile	1	0.55	0.70	0.02
10	2	Tile	1	8.77	11.10	0.40
18	3	Tile	1	8.55	13.51	9.78
24	4	Tile	1	29.06	47.96	4.09
32	5	Tile	1	29.75	49.10	4.18
38	6	Tile	1	11.46	15.96	1.34
45	7	Tile	1	5.40	5.47	0.32
53	8	Tile	1	115.55	117.16	6.85
70	9	Tile	1	86.73	87.94	5.14
92	10	Tile	1	2.00	4.58	6.89
101	11	Tile	1	20.38	30.16	13.88
111	12	Tile	1	2.10	4.21	0.76
125	13	Tile	1	6.65	5.09	0.96
134	14	Tile	1	11.10	15.64	8.63
136	15	Tile	1	19.77	32.79	1.82
159	16	Tile	1	168.62	316.20	2.29
195	17	Tile	1	0.57	0.75	2.12
225	18	Tile	1	0.00	0.00	0.00
225	19	Tile	1	1.73	56.53	0.20
231	20	Tile	1	3.71	106.30	12.41

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
250	21	Tile	1	43.83	32.16	12.83
258	22	Tile	1	15.57	18.93	2.62
259	23	Tile	1	8.97	13.71	5.80
262	24	Tile	1	15.87	13.69	4.84
265	25	Tile	1	2.96	3.02	0.84
4	1	Surface	2	23.68	29.97	2.99
10	2	Surface	2	7.85	10.13	0.26
18	3	Surface	2	4.74	5.27	0.09
38	4	Surface	2	3.62	4.26	0.16
39	5	Surface	2	5.79	7.80	0.22
53	6	Surface	2	22.68	82.83	1.17
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	2.62	32.60	0.11
134	9	Surface	2	21.89	23.52	1.44
136	10	Surface	2	14.54	20.38	0.79
137	11	Surface	2	9.37	12.06	0.18
159	12	Surface	2	273.10	253.86	1.52
195	13	Surface	2	3.07	3.59	0.59
225	14	Surface	2	2.97	82.11	0.38
231	15	Surface	2	5.86	372.42	50.23
250	16	Surface	2	24.70	26.48	7.91
250	17	Surface	2	35.32	37.09	8.49
258	18	Surface	2	33.73	44.72	8.13
259	19	Surface	2	26.78	32.36	4.43
262	20	Surface	2	38.29	40.80	7.51
265	21	Surface	2	11.90	13.51	0.21
4	1	Tile	2	0.00	0.00	0.00
10	2	Tile	2	19.78	18.29	0.44
18	3	Tile	2	13.37	30.45	11.62
24	4	Tile	2	5.23	8.46	0.40
32	5	Tile	2	6.33	10.23	0.48
38	6	Tile	2	16.00	25.86	1.22
45	7	Tile	2	10.49	53.21	0.51
53	8	Tile	2	66.45	337.17	3.24
70	9	Tile	2	85.16	432.10	4.16
92	10	Tile	2	3.62	6.59	4.04
101	11	Tile	2	15.53	22.06	0.96
111	12	Tile	2	3.29	458.02	0.47
125	13	Tile	2	8.24	9.53	0.37
134	14	Tile	2	6.22	6.56	23.64
136	15	Tile	2	13.24	19.58	0.92

Appendix 22A.

Event losses for ortho P, soluble P and sediment P in g/ha for ridge tillage, 1990

- 3

Julian Date/90	Event #	Source	Rep	Ortho P, loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	496.80	550.79	1.99
195	17	Tile	2	9.47	11.85	14.03
225	18	Tile	2	0.00	0.00	0.00
225	19	Tile	2	1.63	40.09	0.18
231	20	Tile	2	3.16	108.06	29.95
250	21	Tile	2	56.50	72.24	4.24
258	22	Tile	2	18.49	17.35	3.10
259	23	Tile	2	11.10	11.85	3.24
262	24	Tile	2	13.97	15.48	3.14
265	25	Tile	2	4.17	5.31	0.04

Appendix 23A. Event losses for ortho P, soluble P and sediment P in g/ha for conventional tillage, 1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	34.83	34.14	0.65
10	2	Surface	1	0.00	0.00	0.00
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	0.00	0.00	0.00
53	6	Surface	1	34.97	40.44	3.90
58	7	Surface	1	8.08	9.34	0.90
101	8	Surface	1	0.00	0.00	0.00
134	9	Surface	1	0.00	0.00	0.00
136	10	Surface	1	0.00	0.00	0.00
137	11	Surface	1	0.00	0.00	0.00
159	12	Surface	1	7.34	9.34	1.25
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00
250	16	Surface	1	7.73	10.08	4.82
250	17	Surface	1	13.58	17.37	6.91
258	18	Surface	1	13.05	11.43	4.53
259	19	Surface	1	5.32	7.23	2.77
262	20	Surface	1	6.57	8.55	3.40
265	21	Surface	1	0.00	0.00	0.00
4	1	Tile	1	0.07	0.22	0.13
10	2	Tile	1	1.00	3.16	1.93
18	3	Tile	1	23.72	31.84	18.93
24	4	Tile	1	22.92	24.62	2.42
32	5	Tile	1	26.47	28.43	2.79
38	6	Tile	1	41.76	44.85	2.37
45	7	Tile	1	4.18	6.87	1.58
53	8	Tile	1	43.85	72.12	16.61
71	9	Tile	1	17.62	36.68	20.93
92	10	Tile	1	3.33	6.93	3.95
101	11	Tile	1	57.20	73.64	4.02
111	12	Tile	1	3.55	8.52	1.85
125	13	Tile	1	11.87	11.24	1.40
134	14	Tile	1	17.05	20.73	8.16
136	15	Tile	1	57.99	54.17	19.80
159	16	Tile	1	25.83	86.38	0.19
195	17	Tile	1	6.50	6.54	18.69
225	18	Tile	1	0.14	4.52	0.02
225	19	Tile	1	1.54	49.26	0.26
231	20	Tile	1	3.54	116.23	16.52

Appendix 23A. Event losses for ortho P, soluble P and sediment P in g/ha for conventional tillage, 1990

- 2

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
250	21	Tile	1	30.77	50.07	25.33
258	22	Tile	1	19.88	24.76	4.53
259	23	Tile	1	13.15	19.48	10.88
262	24	Tile	1	45.64	22.41	11.73
265	25	Tile	1	5.54	7.19	2.65
4	1	Surface	2	60.55	55.16	0.60
10	2	Surface	2	0.00	0.00	0.00
18	3	Surface	2	1.01	1.76	0.29
38	4	Surface	2	3.55	3.77	0.12
39	5	Surface	2	1.23	8.47	0.17
53	6	Surface	2	35.17	33.94	8.23
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	3.51	5.26	1.29
134	9	Surface	2	5.05	19.56	0.18
136	10	Surface	2	4.09	7.44	1.07
137	11	Surface	2	2.35	10.92	0.50
159	12	Surface	2	1.23	1.07	1.18
195	13	Surface	2	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00
231	15	Surface	2	3.38	118.40	27.33
250	16	Surface	2	3.41	6.03	5.45
250	17	Surface	2	6.85	11.14	4.56
258	18	Surface	2	27.31	34.29	4.86
259	19	Surface	2	4.51	6.63	5.51
262	20	Surface	2	5.83	13.15	5.20
265	21	Surface	2	2.58	3.10	0.19
4	1	Tile	2	0.24	0.37	0.30
10	2	Tile	2	2.93	4.50	3.74
18	3	Tile	2	21.28	27.08	1.91
24	4	Tile	2	3.28	7.60	1.88
32	5	Tile	2	2.84	6.58	1.63
38	6	Tile	2	8.48	19.66	4.88
45	7	Tile	2	17.59	19.48	2.00
53	8	Tile	2	36.11	39.98	4.11
70	9	Tile	2	62.07	68.73	7.06
92	10	Tile	2	2.06	4.84	0.82
101	11	Tile	2	6.45	11.50	0.77
111	12	Tile	2	1.95	4.77	0.70
125	13	Tile	2	4.45	6.46	0.29
134	14	Tile	2	4.99	8.66	3.10
136	15	Tile	2	10.59	28.85	3.04

Appendix 23A. Event losses for ortho P, soluble P and sediment P In g/ha for conventional tillage, 1990

- 3

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	101.29	120.12	1.01
195	17	Tile	2	4.46	5.02	12.88
225	18	Tile	2	0.52	12.40	0.05
225	19	Tile	2	4.63	109.39	0.46
231	20	Tile	2	4.93	180.49	25.35
250	21	Tile	2	42.26	62.81	14.51
258	22	Tile	2	7.49	10.18	3.23
259	23	Tile	2	25.97	17.38	3.90
262	24	Tile	2	5.63	9.02	2.02
265	25	Tile	2	3.82	6.24	0.28

Appendix 24A. Event losses for ortho P, soluble P and sediment P in g/ha for the sod treatment, 1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	0.00	0.00	0.00
10	2	Surface	1	0.00	0.00	0.00
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	0.00	0.00	0.00
53	6	Surface	1	967.18	864.53	4.85
58	7	Surface	1	0.00	0.00	0.00
101	8	Surface	1	0.00	0.00	0.00
134	9	Surface	1	0.00	0.00	0.00
136	10	Surface	1	0.00	0.00	0.00
137	11	Surface	1	0.00	0.00	0.00
159	12	Surface	1	0.00	0.00	0.00
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00
250	16	Surface	1	0.00	0.00	0.00
250	17	Surface	1	0.00	0.00	0.00
258	18	Surface	1	0.00	0.00	0.00
259	19	Surface	1	0.00	0.00	0.00
262	20	Surface	1	0.00	0.00	0.00
265	21	Surface	1	0.00	0.00	0.00
4	1	Tile	1	8.06	5.61	0.16
10	2	Tile	1	0.13	0.34	0.11
18	3	Tile	1	4.07	6.15	7.95
24	4	Tile	1	2.22	2.39	0.23
32	5	Tile	1	8.46	9.10	0.89
38	6	Tile	1	11.92	12.81	1.25
45	7	Tile	1	4.93	33.07	0.30
53	8	Tile	1	424.28	2847.45	26.18
70	9	Tile	1	9.44	16.27	4.38
92	10	Tile	1	3.25	5.60	1.51
101	11	Tile	1	59.62	100.51	1.39
111	12	Tile	1	3.03	3.45	0.30
125	13	Tile	1	0.17	0.27	0.78
134	14	Tile	1	2.47	3.84	11.16
136	15	Tile	1	34.63	44.23	3.49
159	16	Tile	1	0.04	1.71	0.17
195	17	Tile	1	0.00	0.00	0.00
225	18	Tile	1	0.00	0.00	0.00
225	19	Tile	1	0.00	0.00	0.00
231	20	Tile	1	2.39	99.98	9.87

Appendix 24A. Event losses for ortho P, soluble P and sediment P in g/ha for the sod treatment, 1990

- 2

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
250	21	Tile	1	357.83	997.98	21.02
258	22	Tile	1	229.09	317.86	10.74
259	23	Tile	1	33.60	13.49	4.86
262	24	Tile	1	74.38	98.35	10.39
265	25	Tile	1	3.35	4.25	0.28
4	1	Surface	2	483.85	460.14	1.83
10	2	Surface	2	0.00	0.00	0.00
18	3	Surface	2	0.00	0.00	0.00
38	4	Surface	2	0.00	0.00	0.00
39	5	Surface	2	0.00	0.00	0.00
53	6	Surface	2	78.65	18.05	10.37
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	0.00	0.00	0.00
134	9	Surface	2	0.00	0.00	0.00
136	10	Surface	2	0.00	0.00	0.00
137	11	Surface	2	0.00	0.00	0.00
159	12	Surface	2	0.00	0.00	0.00
195	13	Surface	2	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00
231	15	Surface	2	0.00	0.00	0.00
250	16	Surface	2	0.00	0.00	0.00
250	17	Surface	2	0.00	0.00	0.00
258	18	Surface	2	13.02	23.52	1.08
259	19	Surface	2	0.00	0.00	0.00
262	20	Surface	2	15.81	8.96	1.32
265	21	Surface	2	0.00	0.00	0.00
4	1	Tile	2	49.14	25.63	0.80
10	2	Tile	2	5.00	4.30	2.44
18	3	Tile	2	15.80	16.09	2.81
24	4	Tile	2	12.90	29.89	0.28
32	5	Tile	2	24.57	56.95	0.53
38	6	Tile	2	45.92	106.44	0.98
45	7	Tile	2	18.08	58.07	1.21
53	8	Tile	2	282.31	906.50	18.91
70	9	Tile	2	33.28	45.38	3.03
92	10	Tile	2	7.35	10.02	0.67
101	11	Tile	2	67.53	121.78	1.33
111	12	Tile	2	10.70	7.23	0.52
125	13	Tile	2	5.26	6.90	0.07
134	14	Tile	2	3.90	5.84	2.00
136	15	Tile	2	51.08	59.50	3.04

Appendix 24A. Event losses for ortho P, soluble P and sediment P in g/ha for the sod treatment, 1990

- 3

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	52.62	46.56	0.07
195	17	Tile	2	0.00	0.00	0.00
225	18	Tile	2	0.00	0.00	0.00
225	19	Tile	2	4.16	62.21	0.30
231	20	Tile	2	4.85	118.80	15.20
250	21	Tile	2	849.90	1799.08	35.39
258	22	Tile	2	259.92	347.43	10.92
259	23	Tile	2	33.11	43.36	8.04
262	24	Tile	2	78.00	98.98	5.69
265	25	Tile	2	10.02	13.31	0.32

PART B

Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
17.40	1	Surface	1	0.88	0.88	0.39	0.39	11475.90
32.56	2	Surface	1	2.85	2.85	1.21	1.21	4913.60
48.00	3	Surface	1		2.85		1.21	1971.90
50.00	4	Surface	1		2.85		1.21	10732.30
276.00	5	Surface	1		0.00		0.00	0.00
291.96	6	Surface	1		3.27		0.21	2424.50
292.06	6	Surface	1	3.62		0.31		
292.08	6	Surface	1	5.11		0.26		
292.10	6	Surface	1	1.09		0.06		
297.00	7	Surface	1		0.00		0.00	0.00
310.00	8	Surface	1		3.35		0.39	3814.50
310.46	8	Surface	1	3.08		0.26		
310.56	8	Surface	1	2.14		0.16		
310.65	8	Surface	1	3.14		0.46		
310.83	8	Surface	1	5.06		0.69		
312.00	9	Surface	1		3.35		0.39	614.20
315.20	10	Surface	1	1.79	2.45	0.33	0.39	1777.90
315.25	10	Surface	1	3.10		0.44		
318.57	11	Surface	1	2.06	2.06	0.72	0.72	2877.00
321.61	12	Surface	1	1.84	1.58	0.85	0.70	1390.00
321.61	12	Surface	1	1.31		0.54		
325.61	13	Surface	1	2.45	2.28	0.45	0.47	4525.70
325.65	13	Surface	1	2.83		0.57		
325.81	13	Surface	1	1.57		0.40		
363.38	14	Surface	1	4.15	4.15	0.45	0.45	1390.00
17.35	1	Tile	1		0.00		0.00	0.00
32.56	2	Tile	1	0.87	0.87	0.84	0.84	1329.00
72.66	3	Tile	1	0.24	0.24	0.44	0.44	1735.00
84.39	4	Tile	1	0.35	0.33	0.51	0.52	8651.00
84.66	4	Tile	1	0.33		0.53		
85.42	4	Tile	1	0.30		0.52		
94.88	5	Tile	1		0.33		0.52	3034.00
97.92	6	Tile	1	0.60	0.60	1.03	1.03	7232.00
114.31	7	Tile	1		0.60		1.03	39.00
136.85	8	Tile	1		0.60		1.03	48.00
154.27	9	Tile	1	14.43	14.43	1.65	1.65	117.00
192.96	10	Tile	1	18.39	18.39	2.50	2.5	270.00
267.10	11	Tile	1	1.20	1.20	1.04	1.04	151.00
267.13	11	Tile	1					
267.38	11	Tile	1					

Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
276.41	12	Tile	1	1.45	1.64	1.09	1.03	2830.00
276.43	12	Tile	1	2.10		1.05		
276.44	12	Tile	1	2.17		0.99		
276.60	12	Tile	1	0.83		1.00		
277.44	12	Tile	1					
291.92	13	Tile	1	3.54	3.07	1.86	1.02	14323.00
291.96	13	Tile	1	2.23		0.89		
292.06	13	Tile	1	4.27		0.80		
292.10	13	Tile	1	4.12		0.88		
292.15	13	Tile	1	4.02		1.65		
292.38	13	Tile	1	2.23		0.51		
292.67	13	Tile	1	1.10		0.56		
297.74	14	Tile	1	2.03	1.88	0.54	0.42	4590.00
297.77	14	Tile	1	1.73		0.30		
310.38	15	Tile	1	3.54	3.15	1.35	0.87	18406.00
310.44	15	Tile	1	3.26		1.47		
310.56	15	Tile	1	4.09		1.32		
310.65	15	Tile	1	3.00		0.79		
310.83	15	Tile	1	4.60		0.73		
311.33	15	Tile	1	1.95		0.23		
312.40	15	Tile	1	1.64		0.23		
315.20	16	Tile	1	1.39	1.17	0.61	0.63	6282.00
315.24	16	Tile	1	1.64		0.65		
315.28	16	Tile	1					
315.46	16	Tile	1	1.64		0.63		
318.19	17	Tile	1	1.45	1.45	0.81	0.81	9131.00
321.58	18	Tile	1	1.76	1.76	0.43	0.43	5646.00
325.63	19	Tile	1	1.61	1.23	0.48	0.43	8789.00
325.83	19	Tile	1	1.19		0.45		
326.40	19	Tile	1	0.88		0.35		
359.68	20	Tile	1	0.69	0.97	0.47	0.46	12926.00
362.46	20	Tile	1	0.47		0.25		
363.38	20	Tile	1	1.76		0.65		
17.40	1	Surface	2	0.42	0.42	0.09	0.09	17100.60
32.56	2	Surface	2	1.35	1.35	0.40	0.40	0.00
48.00	3	Surface	2		1.35		0.40	4784.30
50.00	4	Surface	2		1.35		0.40	12704.20
276.00	5	Surface	2		2.85		0.39	517.20
291.96	6	Surface	2		2.85		0.39	4558.00
292.06	6	Surface	2	4.89		0.47		

Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

-3

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
292.08	6	Surface	2	3.09		0.31		
292.10	6	Surface	2	0.57		0.39		
297.00	7	Surface	2		3.93		0.39	517.20
310.00	8	Surface	2		3.93		0.39	4040.80
310.46	8	Surface	2	5.16		0.31		
310.56	8	Surface	2	3.92		0.56		
310.65	8	Surface	2	1.91		0.11		
310.83	8	Surface	2	4.74		0.58		
312.00	9	Surface	2		3.93		0.39	678.90
315.20	10	Surface	2	2.59	3.12	0.73	0.72	1487.00
315.25	10	Surface	2	3.64		0.70		
318.19	11	Surface	2	3.10	3.10	0.55	0.55	3652.90
321.57	12	Surface	2	2.14	1.89	1.55	1.02	2230.50
321.61	12	Surface	2	1.64		0.49		
325.61	13	Surface	2	1.62	1.66	0.39	0.40	5398.50
325.65	13	Surface	2	1.57		0.36		
325.81	13	Surface	2	1.79		0.46		
363.38	14	Surface	2	1.60	1.60	0.59	0.59	4202.40
17.35	1	Tile	2		0.93		0.89	342.00
32.56	2	Tile	2	0.93	0.93	0.89	0.89	285.00
72.66	3	Tile	2	0.33	0.33	0.81	0.81	1533.00
84.39	4	Tile	2	0.34	0.33	0.71	0.63	8658.00
84.66	4	Tile	2	0.30		0.56		
85.42	4	Tile	2	0.36		0.63		
94.88	5	Tile	2		0.33		0.63	2439.00
97.92	6	Tile	2	0.60	0.60	1.25	1.25	5245.00
114.31	7	Tile	2		0.60		1.25	117.00
136.85	8	Tile	2		0.60		1.25	114.00
154.27	9	Tile	2	0.25	0.25	0.18	0.18	1126.00
192.96	10	Tile	2	16.96	16.96	2.16	2.16	343.00
267.10	11	Tile	2		1.88		1.60	211.00
267.13	11	Tile	2					
267.38	11	Tile	2	1.88		1.60		
276.41	12	Tile	2	2.52	1.96	0.91	0.84	4273.00
276.43	12	Tile	2	2.74		0.59		
276.44	12	Tile	2	1.11		1.28		
276.60	12	Tile	2	2.78		1.10		
277.44	12	Tile	2	0.64		0.32		
291.92	13	Tile	2	2.38	3.19	1.41	1.04	11545.00
291.96	13	Tile	2	1.81		1.15		

Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

-4

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Atrazine Conc., µg/L	Metabolite Conc., µg/L	Metabolite Conc., µg/L	Event Volume, L/plot
292.06	13	Tile	2	3.56		0.66		
292.10	13	Tile	2	3.79		1.27		
292.15	13	Tile	2	4.20		0.76		
292.38	13	Tile	2	4.26		1.46		
292.67	13	Tile	2	2.33		0.56		
297.74	14	Tile	2	1.28	1.78	0.79	0.63	7719.00
297.77	14	Tile	2	2.27		0.46		
310.38	15	Tile	2	3.77	3.31	1.56	1.05	9563.00
310.44	15	Tile	2	2.72		0.54		
310.56	15	Tile	2	3.53		1.16		
310.65	15	Tile	2	3.56		1.12		
310.83	15	Tile	2	4.88		1.08		
311.33	15	Tile	2	2.11		1.63		
312.40	15	Tile	2	2.57		0.23		
315.20	16	Tile	2		2.44		0.51	3671.00
315.24	16	Tile	2	1.39		0.27		
315.28	16	Tile	2	2.93		0.46		
315.46	16	Tile	2	3.00		0.79		
318.19	17	Tile	2	2.42	2.42	0.62	0.62	6547.00
321.58	18	Tile	2	2.37	2.37	0.26	0.26	3947.00
325.63	19	Tile	2	2.30	1.60	1.79	0.74	6419.00
325.83	19	Tile	2	1.76		0.21		
326.40	19	Tile	2	0.73		0.23		
359.68	20	Tile	2	0.82	1.94	0.45	0.66	8554.00
362.46	20	Tile	2	0.48		0.36		
363.38	20	Tile	2	4.51		1.17		

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
17.40	1	Surface	1	1.02	1.02	0.22	0.22	8889.70
32.56	2	Surface	1	1.75	1.75	0.51	0.51	2909.40
48.00	3	Surface	1		1.75		0.51	2327.50
50.00	4	Surface	1		1.75		0.51	14837.80
276	5	Surface	1	1.35	1.35		0.00	0.00
291	6	Surface	1	0.65		0.21		
291	6	Surface	1	1.34	1.75	0.31	0.32	4655.00
292	6	Surface	1					
292	6	Surface	1	3.21		0.82		
292	6	Surface	1	2.07		0.26		
292	6	Surface	1	3.29		0.04		
297	7	Surface	1		0.00		0.00	0.00
310	8	Surface	1		2.77		0.43	2780.10
310	8	Surface	1	0.68		0.15		
311	8	Surface	1	3.11		0.30		
311	8	Surface	1	3.04		0.56		
311	8	Surface	1	4.26		0.72		
312	9	Surface	1		2.77		0.43	323.30
315	10	Surface	1	2.87	2.91	0.33	0.38	1260.70
315	10	Surface	1	2.94		0.42		
318	11	Surface	1	1.53	1.53	0.59	0.59	2650.80
322	12	Surface	1	1.87	1.87	1.39	1.02	743.50
322	12	Surface	1	1.87		0.65		
325	13	Surface	1	0.61		0.40	0.41	
325	13	Surface	1	1.52	1.11	0.38		4428.70
326	13	Surface	1	0.64		0.25		
326	13	Surface	1	1.58		0.50		
326	13	Surface	1	1.18		0.53		
363	14	Surface	1	1.85	1.85	0.30	0.30	1519.30
17.35	1	Tile	1		2.34		0.49	498.00
32.56	2	Tile	1	2.34	2.34	0.49	0.49	2363.00
73	3	Tile	1	0.05	0.05	0.19	0.19	1967.00
84	4	Tile	1	0.59	0.58	0.87	0.75	8725.00
85	4	Tile	1	0.41		0.66		
85	4	Tile	1	0.75		0.72		
95	5	Tile	1		0.58		0.75	2898.00
98	6	Tile	1	0.84	0.84	1.52	1.52	6755.00
114	7	Tile	1		0.84		1.52	156.00
137	8	Tile	1		0.84		1.52	62.00
154	9	Tile	1	26.39	26.39	3.04	3.04	478.00

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

-2

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/Plot
193	10	Tile	1	5.49	5.49	1.02	1.02	36.00
267	11	Tile	1		1.60		2.15	184.00
267	11	Tile	1	2.00		2.75		
267	11	Tile	1					
267	11	Tile	1	1.20		1.55		
276	12	Tile	1	1.65	1.44	0.51	1.11	2104.00
276	12	Tile	1	1.31		0.73		
276	12	Tile	1	1.72		1.10		
277	12	Tile	1	1.06		2.10		
277	12	Tile	1					
292	13	Tile	1	2.50	2.08	1.54	1.01	13155.00
292	13	Tile	1	1.33		0.26		
292	13	Tile	1	2.70		1.13		
292	13	Tile	1	1.19		0.93		
292	13	Tile	1	2.86		1.48		
292	13	Tile	1	2.59		1.20		
293	13	Tile	1	1.37		0.50		
298	14	Tile	1	1.55	1.68	1.01	1.03	7500.00
298	14	Tile	1	1.80		1.04		
310	15	Tile	1	1.54	2.44	1.23	1.04	17766.00
310	15	Tile	1	2.64		1.49		
311	15	Tile	1	2.69		1.46		
311	15	Tile	1	2.85		1.11		
311	15	Tile	1	3.49		1.29		
311	15	Tile	1	2.20		0.26		
312	15	Tile	1	1.64		0.41		
315	16	Tile	1	0.93	1.55	0.81	0.84	6742.00
315	16	Tile	1	1.84		1.38		
315	16	Tile	1	2.13		0.62		
315	16	Tile	1	1.29		0.53		
318	17	Tile	1	1.43	1.43	1.00	1.00	12614.00
322	18	Tile	1	2.65	2.65	0.59	0.59	6706.00
326	19	Tile	1	2.38	1.98	0.71	0.60	13074.00
326	19	Tile	1	2.17		0.72		
326	19	Tile	1	1.40		0.36		
360	20	Tile	1	0.76	0.88	0.70	0.67	13081.00
362	20	Tile	1	0.52		0.61		
363	20	Tile	1	1.35		0.70		
17.40	1	Surface	2	0.31	0.31	0.01	0.01	14870.10
32.56	2	Surface	2	1.13	1.13	0.38	0.38	13900.30

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

-3

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
48.00	3	Surface	2		1.13		0.38	6659.20
50.00	4	Surface	2		1.13		0.38	16712.70
276	5	Surface	2	0.62	0.62		0.46	937.50
291	6	Surface	2	2.17	1.75	0.07	0.46	13253.80
291	6	Surface	2	0.13		0.98		
292	6	Surface	2					
292	6	Surface	2	1.49		0.16		
292	6	Surface	2	1.97		0.10		
292	6	Surface	2	2.99		0.98		
297	7	Surface	2		1.75		0.46	3620.50
310	8	Surface	2		2.72		0.28	5786.40
310	8	Surface	2	3.09		0.27		
311	8	Surface	2	1.98		0.16		
311	8	Surface	2	2.39		0.39		
311	8	Surface	2	3.42		0.29		
312	9	Surface	2		2.72		0.28	1099.10
315	10	Surface	2	1.27	1.99	0.21	0.29	1131.40
315	10	Surface	2	2.71		0.37		
318	11	Surface	2	2.66	2.66	0.39	0.39	3588.20
322	12	Surface	2	0.69	1.28	0.27	0.33	6626.90
322	12	Surface	2	1.87		0.39		
326	13	Surface	2	0.87	0.70	0.21	0.22	8113.90
326	13	Surface	2	0.67		0.20		
326	13	Surface	2	0.57		0.25		
363	14	Surface	2	1.61	1.61	0.26	0.26	9180.70
17.35	1	Tile	2		0.86		0.47	565.00
32.56	2	Tile	2	0.86	0.86	0.47	0.47	1101.00
73	3	Tile	2	0.40	0.40	0.69	0.69	2169.00
84	4	Tile	2	0.18	0.29	0.31	0.38	8327.00
85	4	Tile	2	0.38		0.39		
85	4	Tile	2	0.30		0.44		
95	5	Tile	2		0.29		0.75	2095.00
98	6	Tile	2	0.65	0.65	0.75	0.75	4896.00
114	7	Tile	2		0.65		0.75	156.00
137	8	Tile	2		0.65		0.75	74.00
154	9	Tile	2	18.84	18.84	6.41	6.41	759.00
193	10	Tile	2	13.21	13.21	1.02	1.02	305.00
267	11	Tile	2	1.67	1.39	0.69	0.88	2298.00
267	11	Tile	2	1.38		0.99		
267	11	Tile	2					

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

-4

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
267	11	Tile	2	1.13		0.96		
276	12	Tile	2	1.54	1.48	0.36	0.43	6084.00
276	12	Tile	2	2.08		0.45		
276	12	Tile	2	1.59		0.68		
277	12	Tile	2	1.61		0.35		
277	12	Tile	2	0.56		0.30		
292	13	Tile	2	2.20	1.52	0.64	0.44	11490.00
292	13	Tile	2	0.96		0.26		
292	13	Tile	2	1.85		0.45		
292	13	Tile	2	1.07		0.55		
292	13	Tile	2	1.88		0.51		
292	13	Tile	2	1.48		0.28		
293	13	Tile	2	1.19		0.38		
298	14	Tile	2	0.97	1.63	0.20	0.20	8170.00
298	14	Tile	2	2.29		0.19		
310	15	Tile	2	7.54	2.72	0.80	0.36	10271.00
310	15	Tile	2	2.40		0.26		
311	15	Tile	2	1.93		0.48		
311	15	Tile	2	2.56		0.39		
311	15	Tile	2	2.37		0.36		
311	15	Tile	2	1.28		0.05		
312	15	Tile	2	0.93		0.14		
315	16	Tile	2	1.82	1.82	0.25	0.35	4516.00
315	16	Tile	2	2.20		0.68		
315	16	Tile	2	1.87		0.25		
315	16	Tile	2	1.39		0.22		
318	17	Tile	2	1.32	1.32	0.22	0.22	7974.00
322	18	Tile	2	0.77	0.77	0.22	0.22	4886.00
326	19	Tile	2	1.56	1.53	1.14	0.51	8299.00
326	19	Tile	2	2.42		0.21		
326	19	Tile	2	0.61		0.18		
360	20	Tile	2	0.51	0.60	0.15	0.20	8176.00
362	20	Tile	2	0.37		0.21		
363	20	Tile	2	0.93		0.24		
17.40	1	Surface	1	0.22	0.22			8889.70
32.56	2	Surface	1	0.51	0.51			2909.40
48.00	3	Surface	1		0.51			2327.50
50.00	4	Surface	1		0.51			14837.80
276	5	Surface	1		0.00			0.00
291	6	Surface	1	0.21				

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

-5

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc.,	Metabolite	Event Metabolite Conc., µg/L	Event Volume, L/plot
291	6	Surface	1	0.31	0.32			4655.00
292	6	Surface	1					
292	6	Surface	1	0.82				
292	6	Surface	1	0.26				
292	6	Surface	1	0.04				
297	7	Surface	1		0.00			0.00
310	8	Surface	1		0.43			2780.10
310	8	Surface	1	0.15				
311	8	Surface	1	0.30				
311	8	Surface	1	0.56				
311	8	Surface	1	0.72				
312	9	Surface	1		0.43			323.30
315	10	Surface	1	0.33	0.38			1260.70
315	10	Surface	1	0.42				
318	11	Surface	1	0.59	0.59			2650.80
322	12	Surface	1	1.39	1.02			743.50
322	12	Surface	1	0.65				
325	13	Surface	1	0.40	0.41			4428.70
325	13	Surface	1	0.38				
326	13	Surface	1	0.25				
326	13	Surface	1	0.50				
326	13	Surface	1	0.53				
363	14	Surface	1	0.30	0.30			1519.30
17.35	1	Tile	1		0.49			498.00
32.56	2	Tile	1	0.49	0.49			2363.00
73	3	Tile	1	0.19	0.19			1967.00
84	4	Tile	1	0.87	0.75			8725.00
85	4	Tile	1	0.66				
85	4	Tile	1	0.72				
95	5	Tile	1		0.75			2898.00
98	6	Tile	1	1.52	1.52			6755.00
114	7	Tile	1		1.52			156.00
137	8	Tile	1		1.52			62.00
154	9	Tile	1	3.04	3.04			478.00
193	10	Tile	1	1.02	1.02			36.00
267	11	Tile	1		2.15			184.00
267	11	Tile	1	2.75				
267	11	Tile	1					
267	11	Tile	1	1.55				
276	12	Tile	1	0.51	1.11			2104.00

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

-6

Julian Time/88	Event #	Source	Rep	Atrazine Conc. µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume,
276	12	Tile	1	0.73				
276	12	Tile	1	1.10				
277	12	Tile	1	2.10				
277	12	Tile	1					
292	13	Tile	1	1.54	1.01			13155.00
292	13	Tile	1	0.26				
292	13	Tile	1	1.13				
292	13	Tile	1	0.93				
292	13	Tile	1	1.48				
292	13	Tile	1	1.20				
293	13	Tile	1	0.50				
298	14	Tile	1	1.01	1.03			7500.00
298	14	Tile	1	1.04				
310	15	Tile	1	1.23	1.04			17766.00
310	15	Tile	1	1.49				
311	15	Tile	1	1.46				
311	15	Tile	1	1.11				
311	15	Tile	1	1.29				
311	15	Tile	1	0.26				
312	15	Tile	1	0.41				
315	16	Tile	1	0.81	0.84			6742.00
315	16	Tile	1	1.38				
315	16	Tile	1	0.62				
315	16	Tile	1	0.53				
318	17	Tile	1	1.00	1.00			12614.00
322	18	Tile	1	0.59	0.59			6706.00
326	19	Tile	1	0.71	0.60			13074.00
326	19	Tile	1	0.72				
326	19	Tile	1	0.36				
360	20	Tile	1	0.70	0.67			13081.00
362	20	Tile	1	0.61				
363	20	Tile	1	0.70				
17.40	1	Surface	2	0.01	0.01			14870.10
32.56	2	Surface	2	0.38	0.38			13900.30
48.00	3	Surface	2		0.38			6659.20
50.00	4	Surface	2		0.38			16712.70
276	5	Surface	2		0.46			937.50
291	6	Surface	2	0.07	0.46			13253.80
291	6	Surface	2	0.98				

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

- 7

Julian Time/88	Event #	Source	Rep	Atrazine µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
292	6	Surface	2					
292	6	Surface	2	0.16				
292	6	Surface	2	0.10				
292	6	Surface	2	0.98				
297	7	Surface	2		0.46			3620.50
310	8	Surface	2		0.28			5786.40
310	8	Surface	2	0.27				
311	8	Surface	2	0.16				
311	8	Surface	2	0.39				
311	8	Surface	2	0.29				
312	9	Surface	2		0.28			1099.10
315	10	Surface	2	0.21	0.29			1131.40
315	10	Surface	2	0.37				
318	11	Surface	2	0.39	0.39			3588.20
322	12	Surface	2	0.27	0.33			6626.90
322	12	Surface	2	0.39				
326	13	Surface	2	0.21	0.22			8113.90
326	13	Surface	2	0.20				
326	13	Surface	2	0.25				
363	14	Surface	2	0.26	0.26			9180.70
17.35	1	Tile	2		0.47			565.00
32.56	2	Tile	2	0.47	0.47			1101.00
73	3	Tile	2	0.69	0.69			2169.00
84	4	Tile	2	0.31	0.38			8327.00
85	4	Tile	2	0.39				
85	4	Tile	2	0.44				
95	5	Tile	2		0.75			2095.00
98	6	Tile	2	0.75	0.75			4896.00
114	7	Tile	2		0.75			156.00
137	8	Tile	2		0.75			74.00
154	9	Tile	2	6.41	6.41			759.00
193	10	Tile	2	1.02	1.02			305.00
267	11	Tile	2	0.69	0.88			2298.00
267	11	Tile	2	0.99				
267	11	Tile	2					
267	11	Tile	2	0.96				
276	12	Tile	2	0.36	0.43			6084.00
276	12	Tile	2	0.45				
276	12	Tile	2	0.68				
277	12	Tile	2	0.35				

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

- 8

Julian Time/88	Event	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite µg/L	Event Volume, L/plot
277	12	Tile	2	0.30				
292	13	Tile	2	0.64	0.44			11490.00
292	13	Tile	2	0.26				
292	13	Tile	2	0.45				
292	13	Tile	2	0.55				
292	13	Tile	2	0.51				
292	13	Tile	2	0.28				
293	13	Tile	2	0.38				
298	14	Tile	2	0.20	0.20			8170.00
298	14	Tile	2	0.19				
310	15	Tile	2	0.80	0.36			10271.00
310	15	Tile	2	0.26				
311	15	Tile	2	0.48				
311	15	Tile	2	0.39				
311	15	Tile	2	0.36				
311	15	Tile	2	0.05				
312	15	Tile	2	0.14				
315	16	Tile	2	0.25	0.35			4516.00
315	16	Tile	2	0.68				
315	16	Tile	2	0.25				
315	16	Tile	2	0.22				
318	17	Tile	2	0.22	0.22			7974.00
322	18	Tile	2	0.22	0.22			4886.00
326	19	Tile	2	1.14	0.51			8299.00
326	19	Tile	2	0.21				
326	19	Tile	2	0.18				
360	20	Tile	2	0.15	0.20			8176.00
362	20	Tile	2	0.21				
363	20	Tile	2	0.24				

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
17.40	1	Surface	1	0.13	0.13	0.02	0.02	4719.60
32.56	2	Surface	1	7.36	7.36	3.28	3.28	3200.30
48.00	3	Surface	1		0.00		0.00	0.00
50.00	4	Surface	1		7.36		3.28	7629.00
276.00	5	Surface	1		0.00		0.00	0.00
291.96	6	Surface	1		2.76		1.19	258.60
292.06	6	Surface	1	2.51				
292.08	6	Surface	1					
29210	6	Surface	1	3.01		1.19		
297.00	7	Surface	1		0.00		0.00	0.00
310.46	8	Surface	1		2.76		1.19	549.50
310.56	8	Surface	1					
310.65	8	Surface	1					
310.83	8	Surface	1					
312.00	9	Surface	1		0.00		0.00	0.00
315.20	10	Surface	1		0.00		0.00	0.00
315.25	10	Surface	1					
318.19	11	Surface	1		2.76		1.19	678.90
321.57	12	Surface	1		6.45		1.19	226.30
321.61	12	Surface	1					
325.61	13	Surface	1		6.45		1.68	1777.90
325.65	13	Surface	1					
325.81	13	Surface	1	6.45		1.68		
363.38	14	Surface	1	0.27	0.27	0.15	0.15	1519.30
17.35	1	Tile	1		1.36		0.62	662.00
32.56	2	Tile	1	1.36	1.36	0.62	0.62	1709.00
72.66	3	Tile	1	1.32	1.32	1.41	1.41	1967.00
84.39	4	Tile	1	0.60	1.35	0.73	1.21	11904.00
84.66	4	Tile	1	1.30		1.36		
85.42	4	Tile	1	2.15		1.53		
94.88	5	Tile	1		1.35		1.21	2187.00
97.92	6	Tile	1	1.09	1.09	1.33	1.33	5829.00
114.31	7	Tile	1		1.09		1.33	104.00
136.85	8	Tile	1		1.09		1.33	74.00
154.27	9	Tile	1	0.31	0.31	0.41	0.41	855.00
192.96	10	Tile	1	8.93	8.93	1.36	1.36	59.00
267.13	11	Tile	1		0.00		0.00	0.00
276.41	12	Tile	1	1.50	1.19	0.68	0.53	396.00
276.43	12	Tile	1	1.21		0.50		
276.44	12	Tile	1	1.28		0.52		

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
276.60	12	Tile	1	0.78		0.41		
291.92	13	Tile	1	5.73	2.47	0.77	0.82	10903.00
291.96	13	Tile	1	1.60		0.21		
292.06	13	Tile	1	2.31		0.78		
292.10	13	Tile	1	2.73		1.19		
292.15	13	Tile	1	2.86		1.95		
292.38	13	Tile	1	1.41		0.39		
292.67	13	Tile	1	0.68		0.46		
297.74	14	Tile	1	1.66	1.63	0.73	0.66	6267.00
297.77	14	Tile	1	1.59		0.58		
310.38	15	Tile	1	5.22	4.30	1.63	1.33	13888.00
310.44	15	Tile	1	5.90		2.36		
310.56	15	Tile	1	4.12		1.61		
310.65	15	Tile	1	4.33		1.13		
310.83	15	Tile	1	5.44		1.44		
311.33	15	Tile	1	2.94		0.41		
312.40	15	Tile	1	2.17		0.72		
315.20	16	Tile	1	3.82	4.54	1.39	1.53	8362.00
315.24	16	Tile	1	3.96		1.85		
315.28	16	Tile	1	4.92		1.20		
315.46	16	Tile	1	5.45		1.66		
318.19	17	Tile	1	4.45	4.45	1.54	1.54	17218.00
321.58	18	Tile	1	3.24	3.24	0.68	0.68	10156.00
325.63	19	Tile	1	3.97	3.95	1.31	1.05	19335.00
325.83	19	Tile	1	4.87		1.35		
326.40	19	Tile	1	3.02		0.49		
359.68	20	Tile	1	1.45	1.67	0.48	0.58	18810.00
362.46	20	Tile	1	0.81		0.41		
363.38	20	Tile	1	2.75		0.84		
17.40	1	Surface	2	0.21	0.21	0.07	0.07	9697.90
32.56	2	Surface	2	0.60	0.60	0.51	0.51	4784.30
48.00	3	Surface	2		0.60		0.51	4687.30
50.00	4	Surface	2		0.60		0.51	9019.00
276.00	5	Surface	2	1.60	1.60		0.00	549.50
291.96	6	Surface	2		3.86		1.45	2812.40
292.06	6	Surface	2					
292.08	6	Surface	2	2.73		0.82		
292.10	6	Surface	2	4.99		2.07		
297.00	7	Surface	2		3.86		1.45	517.20
310.46	8	Surface	2		0.00		0.00	0.00

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988

- 3

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
310.56	8	Surface	2					
310.65	8	Surface	2					
310.83	8	Surface	2					
312.00	9	Surface	2		0.00		0.00	0.00
315.20	10	Surface	2	4.65	5.22	0.73	0.62	7435.00
315.25	10	Surface	2	5.79		0.50		
318.19	11	Surface	2	2.14	2.14	0.53	0.53	3135.70
321.57	12	Surface	2	2.52	2.26	0.84	0.67	3168.00
321.61	12	Surface	2	2.00		0.49		
325.61	13	Surface	2	1.35	2.25	0.27	0.37	6562.20
325.65	13	Surface	2	2.59		0.47		
325.81	13	Surface	2	2.82		0.36		
363.38	14	Surface	2	2.88		0.52		
363.38	14	Surface	2	1.08	1.98	0.38	0.45	3620.50
17.35	1	Tile	2		0.16		0.10	347.00
32.56	2	Tile	2	0.16	0.16	0.10	0.10	359.00
72.66	3	Tile	2	0.69	0.69	0.34	0.34	781.00
84.39	4	Tile	2	0.59	0.88	0.36	0.44	8099.00
84.66	4	Tile	2	0.97		0.49		
85.42	4	Tile	2	1.08		0.46		
94.88	5	Tile	2		0.88		0.44	1515.00
97.92	6	Tile	2	0.43	0.43	0.27	0.27	3477.00
114.31	7	Tile	2		0.43		0.27	65.00
136.85	8	Tile	2		0.43		0.27	74.00
154.27	9	Tile	2	0.19	0.19	0.11	0.11	464.00
192.96	10	Tile	2		0.19		0.11	33.00
267.13	11	Tile	2		0.00		0.00	0.00
276.41	12	Tile	2	1.68	1.23	0.32	0.33	144.00
276.43	12	Tile	2	0.99		0.36		
276.44	12	Tile	2	1.06		0.47		
276.60	12	Tile	2	1.17		0.17		
291.92	13	Tile	2		0.83		0.34	8411.00
291.96	13	Tile	2	0.64		0.10		
292.06	13	Tile	2	1.21		0.34		
292.10	13	Tile	2	0.67		0.46		
292.15	13	Tile	2	1.25		0.47		
292.38	13	Tile	2	0.88		0.40		
292.67	13	Tile	2	0.34		0.26		
297.74	14	Tile	2	0.80	0.92	0.30	0.31	6466.00
297.77	14	Tile	2	1.03		0.31		

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988

- 4

Julian Time/88	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
310.38	15	Tile	2	0.36	2.84	0.31	0.87	10634.00
310.44	15	Tile	2	0.94		0.17		
310.56	15	Tile	2	2.86		0.39		
310.65	15	Tile	2	2.41		0.13		
310.83	15	Tile	2	5.09		0.54		
311.33	15	Tile	2	3.63		0.14		
312.40	15	Tile	2	4.56		4.41		
315.20	16	Tile	2	2.34	3.13	0.54	0.54	6103.00
315.24	16	Tile	2	2.31		0.70		
315.28	16	Tile	2	3.49		0.36		
315.46	16	Tile	2	4.36		0.57		
318.19	17	Tile	2	2.73	2.73	0.43	0.43	8574.00
321.58	18	Tile	2	2.49	2.49	0.29	0.29	5487.00
325.63	19	Tile	2	2.49	1.90	1.86	0.78	8460.00
325.83	19	Tile	2	1.37		0.26		
326.40	19	Tile	2	1.83		0.23		
359.68	20	Tile	2	1.56	1.23	0.38	0.30	10183.00
362.46	20	Tile	2	0.46		0.12		
363.38	20	Tile	2	1.67		0.39		

Appendix 4B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
17.40	1	Surface	1	11475.90	100.99	145.74	30.71
32.56	2	Surface	1	4913.60	140.04	199.49	29.80
48.00	3	Surface	1	1971.90	56.20	80.06	29.80
50.00	4	Surface	1	10732.30	305.87	435.73	29.80
276.00	5	Surface	1	0.00	0.00	0.00	
291.96	6	Surface	1	2424.50	79.36	84.45	6.03
297.00	7	Surface	1	0.00	0.00	0.00	
310.00	8	Surface	1	3814.50	127.97	142.91	10.45
312.00	9	Surface	1	614.20	20.61	23.01	10.45
315.20	10	Surface	1	1777.90	43.47	50.31	13.60
318.19	11	Surface	1	2877.00	59.27	79.98	25.90
321.57	12	Surface	1	1390.00	21.89	31.55	30.62
325.61	13	Surface	1	4525.70	103.34	124.76	17.17
363.38	14	Surface	1	1390.00	57.69	63.94	9.78
17.35	1	Tile	1	0.00	0.00	0.00	
32.56	2	Tile	1	1329.00	11.56	22.73	49.12
72.66	3	Tile	1	1735.00	4.16	11.80	64.71
84.39	4	Tile	1	8651.00	28.26	73.25	61.42
94.88	5	Tile	1	3034.00	9.91	25.69	61.42
97.92	6	Tile	1	7232.00	43.39	117.88	63.19
114.31	7	Tile	1	39.00	0.23	0.64	63.19
136.85	8	Tile	1	48.00	0.29	0.78	63.19
154.27	9	Tile	1	117.00	16.88	18.81	10.26
192.96	10	Tile	1	270.00	49.65	56.40	11.97
267.10	11	Tile	1	151.00	1.81	3.38	46.43
276.41	12	Tile	1	2830.00	46.34	75.56	38.67
291.92	13	Tile	1	14323.00	440.13	586.42	24.95
297.74	14	Tile	1	4590.00	86.29	105.57	18.26
310.38	15	Tile	1	18406.00	580.38	741.15	21.69
315.20	16	Tile	1	6282.00	73.34	112.92	35.05
318.19	17	Tile	1	9131.00	132.40	206.36	35.84
321.58	18	Tile	1	5646.00	99.37	123.65	19.63
325.63	19	Tile	1	8789.00	107.81	145.31	25.81
359.68	20	Tile	1	12926.00	125.86	184.89	31.93
17.40	1	Surface	2	17100.60	71.82	87.21	17.65
32.56	2	Surface	2	0.00	0.00	0.00	
48.00	3	Surface	2	4784.30	64.59	83.73	22.86
50.00	4	Surface	2	12704.20	171.51	222.32	22.86
276.00	5	Surface	2	517.20	14.74	16.76	12.04
291.96	6	Surface	2	4558.00	129.90	147.68	12.04
297.00	7	Surface	2	517.20	20.34	22.36	9.02

Appendix 4B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
310.00	8	Surface	2	4040.80	158.90	174.66	9.02
312.00	9	Surface	2	678.90	26.70	29.35	9.02
315.20	10	Surface	2	1487.00	46.32	56.95	18.67
318.19	11	Surface	2	3652.90	113.24	133.33	15.07
321.57	12	Surface	2	2230.50	42.16	64.91	35.05
325.61	13	Surface	2	5398.50	89.62	111.39	19.55
363.38	14	Surface	2	4202.40	67.24	92.03	26.94
17.35	1	Tile	2	342.00	3.18	6.22	48.90
32.56	2	Tile	2	285.00	2.65	5.19	48.90
72.66	3	Tile	2	1533.00	5.06	17.48	71.05
84.39	4	Tile	2	8658.00	28.86	83.69	65.52
94.88	5	Tile	2	2439.00	8.13	23.58	65.52
97.92	6	Tile	2	5245.00	31.47	97.03	67.57
114.31	7	Tile	2	117.00	0.70	2.16	67.57
136.85	8	Tile	2	114.00	0.68	2.11	67.57
154.27	9	Tile	2	1126.00	2.82	4.84	41.86
192.96	10	Tile	2	343.00	58.17	65.58	11.30
267.10	11	Tile	2	211.00	3.97	7.34	45.98
276.41	12	Tile	2	4273.00	83.67	119.56	30.02
291.92	13	Tile	2	11545.00	368.29	488.19	24.56
297.74	14	Tile	2	7719.00	137.01	185.26	26.04
310.38	15	Tile	2	9563.00	316.07	416.06	24.03
315.20	16	Tile	2	3671.00	89.57	108.17	17.19
318.19	17	Tile	2	6547.00	158.44	199.03	20.39
321.58	18	Tile	2	3947.00	93.54	103.81	9.89
325.63	19	Tile	2	6419.00	102.45	150.13	31.76
359.68	20	Tile	2	8554.00	165.75	222.08	25.36

Appendix 5B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
17.40	1	Surface	1	8889.70	90.67	110.23	17.74
32.56	2	Surface	1	2909.40	50.91	65.75	22.57
48.00	3	Surface	1	2327.50	40.73	52.60	22.57
50.00	4	Surface	1	14837.80	259.66	335.33	22.57
276	5	Surface	1	0.00	0.00	0.00	
291	6	Surface	1	4655.00	81.56	96.45	15.44
297	7	Surface	1	0.00	0.00	0.00	
310	8	Surface	1	2780.10	77.08	89.10	13.49
312	9	Surface	1	323.30	8.96	10.36	13.49
315	10	Surface	1	1260.70	36.62	41.35	11.43
318	11	Surface	1	2650.80	40.56	56.20	27.83
322	12	Surface	1	743.50	13.90	21.49	35.29
325	13	Surface	1	4428.70	48.98	67.23	27.14
363	14	Surface	1	1519.30	28.11	32.66	13.95
17.35	1	Tile	1	498.00	11.65	14.09	17.31
32.56	2	Tile	1	2363.00	55.29	66.87	17.31
73	3	Tile	1	1967.00	0.98	4.72	79.17
84	4	Tile	1	8725.00	50.90	116.33	56.25
95	5	Tile	1	2898.00	16.91	38.64	56.25
98	6	Tile	1	6755.00	56.74	159.42	64.41
114	7	Tile	1	156.00	1.31	3.68	64.41
137	8	Tile	1	62.00	0.52	1.46	64.41
154	9	Tile	1	478.00	126.14	140.68	10.33
193	10	Tile	1	36.00	1.98	2.34	15.67
267	11	Tile	1	184.00	2.94	6.90	57.33
276	12	Tile	1	2104.00	30.19	53.55	43.61
292	13	Tile	1	13155.00	273.25	405.55	32.62
298	14	Tile	1	7500.00	125.63	202.50	37.96
310	15	Tile	1	17766.00	432.75	616.85	29.84
315	16	Tile	1	6742.00	104.33	160.63	35.05
318	17	Tile	1	12614.00	180.38	306.52	41.15
322	18	Tile	1	6706.00	177.71	217.27	18.21
326	19	Tile	1	13074.00	259.30	337.31	23.13
360	20	Tile	1	13081.00	114.64	202.43	43.37
17.40	1	Surface	2	14870.10	46.10	47.58	3.13
32.56	2	Surface	2	13900.30	157.07	209.89	25.17
48.00	3	Surface	2	6659.20	75.25	100.55	25.17
50.00	4	Surface	2	16712.70	188.85	252.36	25.17
276	5	Surface	2	937.50	5.81	10.11	42.49
291	6	Surface	2	13253.80	231.94	292.64	20.74
297	7	Surface	2	3620.50	63.36	79.94	20.74

Appendix 5B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
310	8	Surface	2	5786.40	157.36	173.36	9.23
312	9	Surface	2	1099.10	29.89	32.93	9.23
315	10	Surface	2	1131.40	22.51	25.80	12.72
318	11	Surface	2	3588.20	95.45	109.44	12.79
322	12	Surface	2	6626.90	84.82	106.69	20.50
326	13	Surface	2	8113.90	57.07	74.92	23.83
363	14	Surface	2	9180.70	147.81	171.68	13.90
17.35	1	Tile	2	565.00	4.86	7.51	35.34
32.56	2	Tile	2	1101.00	9.47	14.64	35.34
73	3	Tile	2	2169.00	8.68	23.64	63.30
84	4	Tile	2	8327.00	23.87	55.51	57.00
95	5	Tile	2	2095.00	6.01	21.72	72.35
98	6	Tile	2	4896.00	31.82	68.54	53.57
114	7	Tile	2	156.00	1.01	2.18	53.57
137	8	Tile	2	74.00	0.48	1.04	53.57
154	9	Tile	2	759.00	143.00	191.65	25.39
193	10	Tile	2	305.00	40.29	43.40	7.17
267	11	Tile	2	2298.00	32.02	52.24	38.71
276	12	Tile	2	6084.00	89.80	115.84	22.48
292	13	Tile	2	11490.00	174.48	224.88	22.41
298	14	Tile	2	8170.00	133.17	149.10	10.68
310	15	Tile	2	10271.00	278.91	315.42	11.58
315	16	Tile	2	4516.00	82.19	98.00	16.13
318	17	Tile	2	7974.00	105.26	122.80	14.29
322	18	Tile	2	4886.00	37.62	48.37	22.22
326	19	Tile	2	8299.00	126.91	169.19	24.99
360	20	Tile	2	8176.00	49.35	65.73	4.92

Appendix 6B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
17.40	1	Surface	1	4719.60	6.14	7.08	13.33
32.56	2	Surface	1	3200.30	235.54	340.51	30.83
48.00	3	Surface	1	0.00	0.00	0.00	
50.00	4	Surface	1	7629.00	561.49	811.73	30.83
276.00	5	Surface	1	0.00	0.00	0.00	
291.96	6	Surface	1	258.60	7.14	10.21	30.13
297.00	7	Surface	1	0.00	0.00	0.00	
310.46	8	Surface	1	549.50	15.17	21.71	30.13
312.00	9	Surface	1	0.00	0.00	0.00	
315.20	10	Surface	1	0.00	0.00	0.00	
318.19	11	Surface	1	678.90	18.74	26.82	30.13
321.57	12	Surface	1	226.30	14.60	17.29	15.58
325.61	13	Surface	1	1777.90	114.67	144.54	20.66
363.38	14	Surface	1	1519.30	4.10	6.38	35.71
17.35	1	Tile	1	662.00	9.00	13.11	31.31
32.56	2	Tile	1	1709.00	23.24	33.84	31.31
72.66	3	Tile	1	1967.00	25.96	53.70	51.65
84.39	4	Tile	1	11904.00	160.70	304.35	47.20
94.88	5	Tile	1	2187.00	29.52	55.91	47.20
97.92	6	Tile	1	5829.00	63.54	141.06	54.96
114.31	7	Tile	1	104.00	1.13	2.52	54.96
136.85	8	Tile	1	74.00	0.81	1.79	54.96
154.27	9	Tile	1	855.00	2.65	6.16	56.94
192.96	10	Tile	1	59.00	5.27	6.07	13.22
267.13	11	Tile	1	0.00	0.00	0.00	
276.41	12	Tile	1	396.00	4.72	6.81	30.67
291.92	13	Tile	1	10903.00	269.77	359.33	24.92
297.74	14	Tile	1	6267.00	101.84	142.89	28.73
310.38	15	Tile	1	13888.00	597.48	781.93	23.59
315.20	16	Tile	1	8362.00	379.43	506.95	25.15
318.19	17	Tile	1	17218.00	766.20	1031.36	25.71
321.58	18	Tile	1	10156.00	329.05	398.12	17.35
325.63	19	Tile	1	19335.00	764.38	967.39	20.99
359.68	20	Tile	1	18810.00	313.98	422.18	25.63
17.40	1	Surface	2	9697.90	20.37	27.15	25.00
32.56	2	Surface	2	4784.30	28.71	53.11	45.95
48.00	3	Surface	2	4687.30	28.12	52.03	45.95
50.00	4	Surface	2	9019.00	54.11	100.11	45.95
276.00	5	Surface	2	549.50	8.79	8.79	0.00
291.96	6	Surface	2	2812.40	108.56	149.20	27.24
297.00	7	Surface	2	517.20	19.96	27.44	27.24

Appendix 6B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1988

-2

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
310.46	8	Surface	2	0.00	0.00	0.00	
312.00	9	Surface	2	0.00	0.00	0.00	
315.20	10	Surface	2	7435.00	388.11	433.83	10.54
318.19	11	Surface	2	3135.70	67.10	83.72	19.85
321.57	12	Surface	2	3168.00	71.60	92.66	22.74
325.61	13	Surface	2	6562.20	147.87	171.93	13.99
363.38	14	Surface	2	3620.50	71.69	87.98	18.52
17.35	1	Tile	2	347.00	0.56	0.90	38.46
32.56	2	Tile	2	359.00	0.57	0.93	38.46
72.66	3	Tile	2	781.00	5.39	8.04	33.01
84.39	4	Tile	2	8099.00	71.27	106.64	33.16
94.88	5	Tile	2	1515.00	13.33	19.95	33.16
97.92	6	Tile	2	3477.00	14.95	24.34	38.57
114.31	7	Tile	2	65.00	0.28	0.46	38.57
136.85	8	Tile	2	74.00	0.32	0.52	38.57
154.27	9	Tile	2	464.00	0.88	1.39	36.67
192.96	10	Tile	2	33.00	0.06	0.10	36.67
267.13	11	Tile	2	0.00	0.00	0.00	
276.41	12	Tile	2	144.00	1.76	2.24	21.22
291.92	13	Tile	2	8411.00	69.95	98.41	28.92
297.74	14	Tile	2	6466.00	59.16	78.89	25.00
310.38	15	Tile	2	10634.00	301.62	394.04	23.46
315.20	16	Tile	2	6103.00	190.72	223.83	14.79
318.19	17	Tile	2	8574.00	234.07	270.94	13.61
321.58	18	Tile	2	5487.00	136.63	152.54	10.43
325.63	19	Tile	2	8460.00	160.56	226.84	29.22
359.68	20	Tile	2	10183.00	125.30	155.60	19.47

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

-1

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
8	1	Surface	1	27.10	27.10	3.81	3.81	43446.60
26	2	Surface	1	1.96	1.96	0.75	0.75	0.00
93	3	Surface	1	1.72	1.72	0.54	0.54	4419.00
108	4	Surface	1	0.00	0.00	0.00	0.00	0.00
146	5	Surface	1	552.00	456.86	41.30	29.07	1839.40
146	5	Surface	1	390.00		20.40		
146	5	Surface	1	428.57		25.50		
146	5	Surface	1	0.00		0.00		
151	6	Surface	1	295.67	245.50	23.47	18.62	12135.30
151	6	Surface	1	445.81		29.34		
151	6	Surface	1	104.00		11.70		
152	6	Surface	1	252.00		16.50		
153	6	Surface	1	130.00		12.10		
155	7	Surface	1	131.00	156.32	4.65	7.87	2240.20
155	7	Surface	1	140.39		6.98		
155	7	Surface	1	197.58		11.99		
168	8	Surface	1	0.00	156.32	0.00	7.87	2405.10
169	8	Surface	1	0.00		0.00		
171	9	Surface	1	37.63	39.48	7.69	5.84	3539.70
171	9	Surface	1	41.33		3.98		
201	10	Surface	1	0.00	9.34	0.00	1.60	4842.50
201	10	Surface	1	9.34		1.60		
320	11	Surface	1	1.68	1.50	7.74	6.36	4790.80
320	11	Surface	1	1.32		4.97		
8	1	Tile	1	1.99	1.99	0.51	0.51	3987.00
26	2	Tile	1	2.43	2.43	0.90	0.90	1430.00
87	3	Tile	1	1.67	1.67	1.14	1.14	15214.00
93	4	Tile	1	2.30	2.30	0.77	0.77	17203.00
108	5	Tile	1	0.00	2.30	0.00	0.77	17197.00
145	6	Tile	1	266.67	221.31	23.53	14.48	15100.00
145	6	Tile	1	89.89		5.34		
146	6	Tile	1	284.71		26.10		
146	6	Tile	1	62.60		2.62		
146	6	Tile	1	376.00		18.60		
146	6	Tile	1	248.00		10.70		
147	6	Tile	1	0.00		0.00		
151	7	Tile	1	137.00	92.67	9.30	8.80	20421.00
151	7	Tile	1	168.00		15.30		
151	7	Tile	1	133.00		12.30		
152	7	Tile	1	62.20		8.16		

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

-2

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
152	7	Tile	1	60.80		7.18		
153	7	Tile	1	47.43		4.59		
153	7	Tile	1	84.44		8.07		
153	7	Tile	1	48.51		5.53		
154	8	Tile	1	0.00	78.75	0.00	7.70	14564.00
155	8	Tile	1	68.20		7.53		
155	8	Tile	1	89.30		7.87		
167	9	Tile	1	39.10	31.28	4.87	6.44	10389.00
167	9	Tile	1	20.80		5.74		
168	9	Tile	1	0.00		0.00		
169	9	Tile	1	33.94		8.72		
171	10	Tile	1	43.46	40.77	8.82	8.98	6446.00
171	10	Tile	1	54.85		11.85		
171	10	Tile	1	24.00		6.28		
201	11	Tile	1	7.30	9.44	3.13	3.24	12157.00
201	11	Tile	1	6.46		2.16		
201	11	Tile	1	0.00		0.00		
201	11	Tile	1	15.06		3.16		
202	11	Tile	1	8.95		4.49		
320	12	Tile	1	1.84	1.74	3.73	2.87	12165.00
320	12	Tile	1	1.64		2.01		
8	1	Surface	2	3.23	3.23	0.40	0.40	57702.50
26	2	Surface	2	3.19	3.19	0.75	0.75	2886.70
93	3	Surface	2	0.90	0.90	0.30	0.30	4709.90
108	4	Surface	2	0.00	0.90	0.00	0.30	1548.40
146	5	Surface	2	544.00	550.28	33.80	32.22	1852.30
146	5	Surface	2	669.00		40.70		
146	5	Surface	2	293.00		19.50		
146	5	Surface	2	695.12		34.88		
151	6	Surface	2	322.12	257.24	21.13	18.09	12494.10
151	6	Surface	2	394.09		27.00		
151	6	Surface	2	190.00		14.50		
152	6	Surface	2	267.00		17.90		
153	6	Surface	2	113.00		9.91		
155	7	Surface	2	97.81	130.03	11.89	9.70	2637.80
155	7	Surface	2	155.17		9.30		
155	7	Surface	2	137.10		7.92		
168	8	Surface	2	0.00	130.03	0.00	9.70	2405.10
169	8	Surface	2	0.00		0.00		
171	9	Surface	2	0.00	130.03	0.00	9.70	3539.70

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

-3

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
171	9	Surface	2	0.00		0.00		
201	10	Surface	2	20.83	13.63	4.93	2.90	4842.50
201	10	Surface	2	6.42		0.86		
320	11	Surface	2	1.06	1.18	5.92	4.52	4005.20
320	11	Surface	2	1.29		3.11		
8	1	Tile	2	1.53	1.53	0.30	0.30	2030.00
26	2	Tile	2	0.38	0.38	0.28	0.28	650.00
87	3	Tile	2	1.03	1.03	0.93	0.93	13065.00
93	4	Tile	2	1.09	1.09	0.94	0.94	16996.00
108	5	Tile	2	0.00	1.09	0.00	0.94	24588.00
145	6	Tile	2	216.67	219.09	22.06	16.31	9816.00
145	6	Tile	2	112.36		13.14		
146	6	Tile	2	247.51		21.90		
146	6	Tile	2	192.00		7.85		
146	6	Tile	2	332.00		18.60		
146	6	Tile	2	214.00		14.30		
147	6	Tile	2	0.00		0.00		
151	7	Tile	2	156.00	98.63	15.00	9.22	13274.00
151	7	Tile	2	157.00		8.59		
151	7	Tile	2	127.00		14.60		
152	7	Tile	2	66.30		13.10		
152	7	Tile	2	64.80		9.69		
153	7	Tile	2	32.89		3.59		
153	7	Tile	2	150.19		5.82		
153	7	Tile	2	34.89		3.40		
154	8	Tile	2	48.13	49.27	7.25	6.77	5073.00
155	8	Tile	2	50.40		6.28		
155	8	Tile	2	0.00		0.00		
167	9	Tile	2	48.88	31.94	13.46	9.22	4273.00
167	9	Tile	2	24.53		8.24		
168	9	Tile	2	0.00		0.00		
169	9	Tile	2	22.42		5.97		
171	10	Tile	2	33.73	37.06	7.90	8.40	13297.00
171	10	Tile	2	48.66		11.85		
171	10	Tile	2	28.80		5.44		
201	11	Tile	2	8.77	9.86	3.97	3.66	14816.00
201	11	Tile	2	11.30		4.09		
201	11	Tile	2	0.00		0.00		
201	11	Tile	2	9.66		1.94		
202	11	Tile	2	9.69		4.64		

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

-4

Julian Time/89	Event #	Source	Rep	Atrazine Conc.,	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
320	12	Tile	2	1.47	1.41	6.04	4.32	4390.00
320	12	Tile	2	1.35		2.59		

Appendix 8B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

-1

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
8	1	Surface	1	0	2.46	0	1.13	3168
26	2	Surface	1	2	2.46	1	1.13	1196
93	3	Surface	1	2	2.25	1	0.59	4965
108	4	Surface	1	0	2.25	0	0.59	1093
146	5	Surface	1	437	553.20	39	35.26	4177
146	5	Surface	1	431		29		
146	5	Surface	1	564		44		
146	5	Surface	1	780		30		
151	6	Surface	1	385	263.02	38	26.46	15672
151	6	Surface	1	401		38		
151	6	Surface	1	133		19		
152	6	Surface	1	257		22		
153	6	Surface	1	139		17		
155	7	Surface	1	43	128.22	18	14.03	2389
155	7	Surface	1	123		11		
155	7	Surface	1	219		13		
167	8	Surface	1	0	128.22	0	14.03	1694
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
168	8	Surface	1	0		0		
168	8	Surface	1	0		0		
169	8	Surface	1	0		0		
171	9	Surface	1	0	9.05	0	1.47	8482
171	9	Surface	1	9		2		
171	9	Surface	1	9		1		
201	10	Surface	1	0	9.85	0	1.80	5282
201	10	Surface	1	10		2		
320	11	Surface	1	2	1.65	6	5.45	4529
320	11	Surface	1	1		5		
8	1	Tile	1	3	2.72	1	0.83	4867
26	2	Tile	1	3	3.29	1	1.24	2999
87	3	Tile	1	1	1.00	1	1.10	15852
93	4	Tile	1	0	0.46	1	0.59	20744
108	5	Tile	1	0	0.46	0	0.59	17585

Appendix 8B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
145	6	Tile	1	153	156.06	18	15.60	11978
145	6	Tile	1	185		7		
146	6	Tile	1	315		29		
146	6	Tile	1	35		4		
146	6	Tile	1	205		18		
146	6	Tile	1	157		17		
147	6	Tile	1	42		0		
151	7	Tile	1	158	91.98	24	13.11	19201
151	7	Tile	1	105		15		
151	7	Tile	1	104		11		
152	7	Tile	1	75		11		
152	7	Tile	1	69		17		
153	7	Tile	1	79		7		
153	7	Tile	1	86		13		
153	7	Tile	1	60		7		
154	8	Tile	1	0	44.35	0	6.21	11207
155	8	Tile	1	51		9		
155	8	Tile	1	37		3		
167	9	Tile	1	28	24.45	9	7.50	10066
167	9	Tile	1	23		6		
168	9	Tile	1	0		0		
169	9	Tile	1	23		7		
171	10	Tile	1	49	24.95	11	5.80	10645
171	10	Tile	1	3		2		
171	10	Tile	1	23	11.73	5	5.14	12190
201	11	Tile	1	10		5		
201	11	Tile	1	6		2		
201	11	Tile	1	0		0		
201	11	Tile	1	18		6		
202	11	Tile	1	13		7		
320	12	Tile	1	2	1.80	4	3.13	9911
320	12	Tile	1	2		2		
8	1	Surface	2	0	1.96	0	0.47	8925
26	2	Surface	2	2	1.96	0	0.47	2586
93	3	Surface	2	1	1.37	0	0.28	4965
108	4	Surface	2	0	1.37	0	0.28	1432
146	5	Surface	2	450	579.99	31	30.16	1807
146	5	Surface	2	598		39		
146	5	Surface	2	650		21		
146	5	Surface	2	622		30		

Appendix 8B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

-3

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., ug/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
151	6	Surface	2	221	171.99	18	14.28	18187
151	6	Surface	2	328		23		
151	6	Surface	2	65		7		
152	6	Surface	2	136		14		
153	6	Surface	2	110		9		
155	7	Surface	2	74	81.19	4	3.85	3213
155	7	Surface	2	101		5		
155	7	Surface	2	69		3		
167	8	Surface	2	55	55.14	13	12.08	1694
167	8	Surface	2	30		10		
167	8	Surface	2	39		13		
167	8	Surface	2	49		11		
167	8	Surface	2	42		13		
167	8	Surface	2	60		11		
167	8	Surface	2	112		15		
167	8	Surface	2	49		9		
167	8	Surface	2	62		14		
168	8	Surface	2	54		10		
168	8	Surface	2	0		0		
169	8	Surface	2	0		0		
171	9	Surface	2	68	34.32	0	1.12	8482
171	9	Surface	2	1		1		
171	9	Surface	2	0		0		
201	10	Surface	2	0	3.96	0	0.54	5282
201	10	Surface	2	4		1		
320	11	Surface	2	0	0.76	0	7.11	2622
320	11	Surface	2	1		7		
8	1	Tile	2	1	0.76	0	0.22	2259
26	2	Tile	2	1	1.09	0	0.30	1119
87	3	Tile	2	1	0.67	0	0.47	12936
93	4	Tile	2	0	0.49	0	0.42	17588
108	5	Tile	2	0	0.49	0	0.42	12064
145	6	Tile	2	103	136.68	10	8.87	7011
145	6	Tile	2	126		11		
146	6	Tile	2	219		13		
146	6	Tile	2	177		14		
146	6	Tile	2	249		12		
146	6	Tile	2	81		2		
147	6	Tile	2	2		0		
151	7	Tile	2	144	69.65	13	5.40	8617

Appendix 8B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
151	7	Tile	2	135		9		
151	7	Tile	2	72		9		
152	7	Tile	2	26		2		
152	7	Tile	2	47		5		
153	7	Tile	2	10		1		
153	7	Tile	2	110		4		
153	7	Tile	2	14		1		
154	8	Tile	2	0	40.30	4	5.14	5705
155	8	Tile	2	56		4		
155	8	Tile	2	25		6		
167	9	Tile	2	37	25.30	11	7.03	5959
167	9	Tile	2	14		4		
168	9	Tile	2	0		0		
169	9	Tile	2	25		6		
171	10	Tile	2	21	29.14	3	4.81	20892
171	10	Tile	2	40		7		
171	10	Tile	2	26		5		
201	11	Tile	2	7	8.69	3	2.90	11767
201	11	Tile	2	10		4		
201	11	Tile	2	0		0		
201	11	Tile	2	10		3		
202	11	Tile	2	7		3		
320	12	Tile	2	1	0.51	4	2.60	12154
320	12	Tile	2	0		2		

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

-1

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
8	1	Surface	1	0.00	0.00	0.00	0.00	0.00
26	2	Surface	1	0.00	0.00	0.00	0.00	0.00
93	3	Surface	1	0.00	0.00	0.00	0.00	0.00
108	4	Surface	1	0.00	0.00	0.00	0.00	0.00
146	5	Surface	1	222.00	255.00	18.20	14.67	779.10
146	5	Surface	1	300.00		12.30		
146	5	Surface	1	243.00		13.50		
146	5	Surface	1	0.00		0.00		
151	6	Surface	1	155.05	123.94	11.74	10.42	10742.00
151	6	Surface	1	177.34		14.08		
151	6	Surface	1	79.20		7.50		
152	6	Surface	1	119.00		13.70		
153	6	Surface	1	89.10		5.07		
155	7	Surface	1	91.20	98.86	13.30	6.72	2185.30
155	7	Surface	1	76.35		2.33		
155	7	Surface	1	129.03		4.52		
167	8*	Surface	1	0.00	98.86	0.00	6.72	2508.50
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
168	8*	Surface	1	0.00		0.00		
168	8	Surface	1	0.00		0.00		
168	8*	Surface	1	0.00		0.00		
169	8	Surface	1	0.00		0.00		
171	9*	Surface	1	0.00	20.08	0.00	3.65	4415.80
171	9	Surface	1	27.93		4.26		
171	9*	Surface	1	0.00		0.00		
171	9	Surface	1	12.22		3.04		
201	10	Surface	1	0.00	38.07	0.00	5.70	4021.40
201	10	Surface	1	38.07		5.70		
320	11	Surface	1	0.00	38.07	0.00	5.70	1871.70
320	11	Surface	1	0.00		0.00		
8	1	Tile	1	2.11	2.11	0.72	0.72	5805.00
26	2	Tile	1	1.86	1.86	0.34	0.34	2094.00
87	3	Tile	1	2.10	2.10	1.06	1.06	18908.00
93	4	Tile	1	2.41	2.41	1.21	1.21	24420.00
108	5	Tile	1	0.00	2.41	0.00	1.21	28705.00

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

- 21

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc.,	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
145	6	Tile	1	250.00	213.00	33.82	18.99	10896.00
145	6	Tile	1	148.31		11.50		
146	6	Tile	1	183.70		17.52		
146	6	Tile	1	168.00		12.20		
146	6	Tile	1	280.00		22.20		
146	6	Tile	1	248.00		16.70		
147	6	Tile	1	0.00		0.00		
151	7	Tile	1	59.20	111.68	3.49	12.39	
151	7	Tile	1	192.00		22.00		
151	7	Tile	1	112.00		14.10		
152	7	Tile	1	91.90		12.20		
152	7	Tile	1	78.00		14.80		
153	7	Tile	1	55.31		6.35		
153	7	Tile	1	182.51		13.84		
153	7	Tile	1	122.55		12.34		
154	8	Tile	1	0.00	103.98	7.77	5.75	11889.00
155	8	Tile	1	78.00		11.50		
155	8	Tile	1	129.96		0.00		
167	9	Tile	1	464.36	168.60	18.63	9.75	23058.00
167	9	Tile	1	18.40		5.59		
168	9	Tile	1	0.00		0.00		
169	9	Tile	1	23.03		5.03		
171	10	Tile	1	56.87	46.06	16.30	13.48	35810.00
171	10	Tile	1	50.41		14.52		
171	10	Tile	1	30.90		9.63		
201	11	Tile	1	21.81	25.94	8.21	5.64	17984.00
201	11	Tile	1	13.74		5.15		
201	11	Tile	1	10.63		0.00		
201	11	Tile	1	57.58		9.18		
202	11	Tile	1	0.00		0.43		
320	12	Tile	1	0.00	25.94	0.00	5.64	
320	12	Tile	1	0.00		0.00		
8	1	Surface	2	1.63	1.63	0.76	0.76	37951.10
26	2	Surface	2	0.00	0.00	0.00	0.00	0.00
93	3	Surface	2	0.50	0.50	2.23	2.23	6607.50
108	4	Surface	2	0.00	0.50	0.00	2.23	911.60
146	5	Surface	2	232.00	342.43	16.80	19.55	4625.90
146	5	Surface	2	410.00		27.80		
146	5	Surface	2	307.00		15.00		
146	5	Surface	2	420.73		18.60		

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

-3

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
151	6	Surface	2	189.90	145.49	11.74	11.62	15920.70
151	6	Surface	2	197.04		14.08		
151	6	Surface	2	86.50		9.50		
152	6	Surface	2	138.00		13.30		
153	6	Surface	2	116.00		9.47		
155	7	Surface	2	67.67	89.97	8.49	4.89	3646.40
155	7	Surface	2	81.28		2.33		
155	7	Surface	2	120.97		3.85		
167	8*	Surface	2	83.33	53.21	14.15	13.09	2508.50
167	8*	Surface	2	49.49		21.30		
167	8*	Surface	2	77.08		16.04		
167	8*	Surface	2	58.33		13.21		
167	8*	Surface	2	42.71		9.43		
167	8*	Surface	2	34.32		17.94		
167	8*	Surface	2	53.65		11.79		
168	8*	Surface	2	36.98		5.66		
168	8	Surface	2	43.03		8.30		
168	8*	Surface	2	0.00		0.00		
169	8	Surface	2	0.00		0.00		
171	9*	Surface	2	79.92	89.59	49.33	34.05	4415.80
171	9*	Surface	2	16.94		5.15		
171	9*	Surface	2	171.92		47.68		
171	9	Surface	2	0.00		0.00		
201	10	Surface	2	21.39	21.39	2.37	2.37	4021.40
201	10	Surface	2					
320	11	Surface	2	21.39	21.39	2.37	2.37	1871.70
320	11	Surface	2			0.00		
8	1	Tile	2	1.45	1.45	0.35	0.35	3369.00
26	2	Tile	2	2.05	2.05	0.46	0.46	1765.00
87	3	Tile	2	1.37	1.37	0.45	0.45	7961.00
93	4	Tile	2	1.55	1.55	0.75	0.75	19885.00
108	5	Tile	2	0.00	1.55	0.00	0.75	10950.00
145	6	Tile	2	0.00	122.69	0.47	7.14	5246.00
145	6	Tile	2	83.90		7.80		
146	6	Tile	2	56.17		5.05		
146	6	Tile	2	87.40		8.37		
146	6	Tile	2	207.00		11.60		
146	6	Tile	2	179.00		9.52		
147	6	Tile	2	0.00		0.00		
151	7	Tile	2	29.60	110.36	1.94	10.30	11471.00

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
151	7	Tile	2	82.00		9.32		
151	7	Tile	2	113.00		11.20		
152	7	Tile	2	164.00		15.70		
152	7	Tile	2	78.00		13.30		
153	7	Tile	2	105.62		8.51		
153	7	Tile	2	171.10		9.27		
153	7	Tile	2	139.57		13.19		
154	8	Tile	2	0.00	62.05	0.00	9.93	6650.00
155	8	Tile	2	54.10		7.53		
155	8	Tile	2	70.00		12.32		
167	9	Tile	2	427.70	186.51	13.46	12.34	8712.00
167	9	Tile	2	50.00		9.41		
168	9	Tile	2	81.82		0.00		
169	9	Tile	2	0.00		14.14		
171	10	Tile	2	51.77	51.17	10.76	9.92	10952.00
171	10	Tile	2	74.74		12.49		
171	10	Tile	2	27.00		6.51		
201	11	Tile	2	15.40	18.63	4.18	5.15	14075.00
201	11	Tile	2	21.01		5.98		
201	11	Tile	2	0.00		0.00		
201	11	Tile	2	20.45		5.31		
202	11	Tile	2	17.64		5.14		
320	12	Tile	2	3.93	3.93	0.00	4.12	2313.00
320	12	Tile	2	0.00		0.00		

Appendix 10B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
8	1	Surface	1	43446.60	11774.03	13429.34	12.33
26	2	Surface	1	0.00	0.00	0.00	
93	3	Surface	1	4419.00	76.01	99.87	23.89
108	4	Surface	1	0.00	0.00	0.00	
148	5	Surface	1	1839.40	8403.42	8938.07	5.98
151	6	Surface	1	12135.30	29791.68	32051.51	7.05
155	7	Surface	1	2240.20	3501.96	3678.33	4.80
168	8	Surface	1	2405.10	3759.73	3949.09	4.80
171	9	Surface	1	3539.70	1397.47	1604.02	12.88
201	10	Surface	1	4842.50	452.29	529.77	14.63
320	11	Surface	1	4790.80	71.86	376.32	80.90
8	1	Tile	1	3987.00	79.34	99.68	20.40
26	2	Tile	1	1430.00	34.75	47.62	27.03
87	3	Tile	1	15214.00	254.07	427.51	40.57
93	4	Tile	1	17203.00	395.67	528.13	25.08
108	5	Tile	1	17197.00	395.53	527.95	25.08
145	6	Tile	1	15100.00	33418.06	35604.79	6.14
151	7	Tile	1	20421.00	18924.65	20722.47	8.68
154	8	Tile	1	14564.00	11469.15	12590.58	8.91
167	9	Tile	1	10389.00	3249.68	3919.08	17.08
171	10	Tile	1	6446.00	2628.03	3207.10	18.06
201	11	Tile	1	12157.00	1147.92	1541.20	25.52
320	12	Tile	1	12165.00	211.67	560.81	62.26
8	1	Surface	2	57702.50	1863.79	2094.60	11.02
26	2	Surface	2	2886.70	92.09	113.74	19.04
93	3	Surface	2	4709.90	42.39	56.52	25.00
108	4	Surface	2	1548.40	13.94	18.58	25.00
146	5	Surface	2	1852.30	10192.84	10789.65	5.53
151	6	Surface	2	12494.10	32140.07	34400.01	6.57
155	7	Surface	2	2637.80	3429.84	3685.80	6.94
168	8	Surface	2	2405.10	3127.27	3360.65	6.94
171	9	Surface	2	3539.70	4602.55	4946.02	6.94
201	10	Surface	2	4842.50	659.79	799.98	17.52
320	11	Surface	2	4005.20	47.06	227.90	79.35
8	1	Tile	2	2030.00	31.06	37.15	16.39
26	2	Tile	2	650.00	2.47	4.29	42.42
87	3	Tile	2	13065.00	134.57	256.07	47.45
93	4	Tile	2	16996.00	185.26	345.02	46.31
108	5	Tile	2	24588.00	268.01	499.14	46.31
145	6	Tile	2	9816.00	21505.87	23106.70	6.93
151	7	Tile	2	13274.00	13092.64	14317.00	8.55

Appendix 10B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite
154	8	Tile	2	5073.00	2499.21	2842.40	12.07
167	9	Tile	2	4273.00	1364.94	1759.05	22.40
171	10	Tile	2	13297.00	4928.31	6044.82	18.47
201	11	Tile	2	14816.00	1460.12	2002.38	27.08
320	12	Tile	2	4390.00	61.90	251.33	75.37

Appendix 11B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
8	1	Surface	1	3168	77.93	113.73	68.52
26	2	Surface	1	1196	29.42	42.94	68.52
93	3	Surface	1	4965	111.72	141.01	79.23
108	4	Surface	1	1093	24.58	31.03	79.23
146	5	Surface	1	4177	23104.74	24577.31	94.01
151	6	Surface	1	15672	41219.97	45367.35	90.86
155	7	Surface	1	2389	3063.05	3398.21	90.14
167	8	Surface	1	1694	2171.92	2409.57	90.14
171	9	Surface	1	8482	767.23	892.09	86.00
201	10	Surface	1	5282	520.29	615.36	84.55
320	11	Surface	1	4529	74.50	321.33	23.19
8	1	Tile	1	4867	132.38	172.78	76.62
26	2	Tile	1	2999	98.67	135.85	72.63
87	3	Tile	1	15852	158.52	332.89	47.62
93	4	Tile	1	20744	95.42	217.81	43.81
108	5	Tile	1	17585	80.89	184.64	43.81
145	6	Tile	1	11978	18692.70	20561.66	90.91
151	7	Tile	1	19201	17661.32	20179.29	87.52
154	8	Tile	1	11207	4970.30	5665.70	87.73
167	9	Tile	1	10066	2461.47	3216.09	76.54
171	10	Tile	1	10645	2655.93	3272.98	81.15
201	11	Tile	1	12190	1429.58	2056.45	69.52
320	12	Tile	1	9911	177.90	488.12	36.45
8	1	Surface	2	8925	174.94	216.88	80.66
26	2	Surface	2	2586	50.69	62.84	80.66
93	3	Surface	2	4965	68.02	81.93	83.03
108	4	Surface	2	1432	19.62	23.63	83.03
146	5	Surface	2	1807	10480.37	11025.32	95.06
151	6	Surface	2	18187	31279.11	33876.92	92.33
155	7	Surface	2	3213	2608.69	2732.40	95.47
167	8	Surface	2	1694	934.02	1138.64	82.03
171	9	Surface	2	8482	2911.16	3006.16	96.84
201	10	Surface	2	5282	209.17	237.69	88.00
320	11	Surface	2	2622	19.92	206.33	9.66
8	1	Tile	2	2259	17.17	22.14	77.55
26	2	Tile	2	1119	12.20	15.55	78.42
87	3	Tile	2	12936	86.67	147.47	58.77
93	4	Tile	2	17588	86.18	160.05	53.85
108	5	Tile	2	12064	59.11	109.78	53.85
145	6	Tile	2	7011	9582.84	10204.91	93.90
151	7	Tile	2	8617	6001.42	6466.84	92.80

Appendix 11B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
154	8	Tile	2	5705	2299.12	2592.35	88.69
167	9	Tile	2	5959	1507.83	1926.94	78.25
171	10	Tile	2	20892	6087.23	7091.44	85.84
201	11	Tile	2	11767	1022.85	1364.38	74.97
320	12	Tile	2	12154	61.38	377.38	16.26

Appendix 12B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
8	1	Surface	1	0.00	0.00	0.00	
26	2	Surface	1	0.00	0.00	0.00	
93	3	Surface	1	0.00	0.00	0.00	
108	4	Surface	1	0.00	0.00	0.00	
146	5	Surface	1	779.10	1986.71	2100.97	5.44
151	6	Surface	1	10742.00	13313.42	14432.52	7.75
155	7	Surface	1	2185.30	2160.39	2307.17	6.36
167	8	Surface	1	2508.50	2479.90	2648.39	6.36
171	9	Surface	1	4415.80	886.47	1047.65	15.38
201	10	Surface	1	4021.40	1530.95	1760.17	13.02
320	11	Surface	1	1871.70	712.56	819.24	13.02
8	1	Tile	1	5805.00	122.49	164.28	25.44
26	2	Tile	1	2094.00	38.95	46.07	15.45
87	3	Tile	1	18908.00	397.07	597.49	33.54
93	4	Tile	1	24420.00	588.52	884.00	33.43
108	5	Tile	1	28705.00	691.79	1039.12	33.43
145	6	Tile	1	10896.00	23208.66	25277.81	8.19
151	7	Tile	1	25869.00	28891.47	32096.64	9.99
154	8	Tile	1	11889.00	12362.18	13045.80	5.24
167	9	Tile	1	23058.00	38875.02	41123.17	5.47
171	10	Tile	1	35810.00	16494.09	21322.47	22.64
201	11	Tile	1	17984.00	4665.05	5678.45	17.85
320	12	Tile	1	555.00	143.97	175.24	17.85
8	1	Surface	2	37951.10	618.60	907.03	31.80
26	2	Surface	2	0.00	0.00	0.00	
93	3	Surface	2	6607.50	33.04	180.38	81.68
108	4	Surface	2	911.60	4.56	24.89	81.68
146	5	Surface	2	4625.90	15840.59	16744.95	5.40
151	6	Surface	2	15920.70	23162.71	25012.37	7.40
155	7	Surface	2	3646.40	3280.79	3459.10	5.15
167	8	Surface	2	2508.50	1334.86	1663.25	19.74
171	9	Surface	2	4415.80	3956.26	5459.99	27.54
201	10	Surface	2	4021.40	860.18	955.49	10.00
320	11	Surface	2	1871.70	400.36	444.72	10.00
8	1	Tile	2	3369.00	48.85	60.64	19.44
26	2	Tile	2	1765.00	36.18	44.30	18.33
87	3	Tile	2	7961.00	109.07	144.89	24.73
93	4	Tile	2	19885.00	308.22	457.36	32.61
108	5	Tile	2	10950.00	169.73	251.85	32.61
145	6	Tile	2	5246.00	6436.53	6810.83	5.50
151	7	Tile	2	11471.00	12659.54	13841.48	8.54

Appendix 12B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
154	8	Tile	2	6660.00	4126.33	4786.34	13.79
167	9	Tile	2	8712.00	16248.46	17323.23	6.20
171	10	Tile	2	10952.00	5604.14	6690.58	16.24
201	11	Tile	2	14075.00	2621.47	3346.68	21.67
320	12	Tile	2	2313.00	90.90	186.24	51.19

Appendix 13B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990-

1

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
4	1	Surface	1	1.81	2.24	9.50	5.07	8269.07
4	1	Surface	1	2.66		0.63		
10	2	Surface	1	1.97	1.97	0.92	0.92	10059.94
18	3	Surface	1	0.00	0.00	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00	0.00	0.00
39	5	Surface	1	2.15	2.15	3.68	3.68	8585.87
39	5	Surface	1	2.15		3.68		
39	5	Surface	1	2.15		3.68		
53	6	Surface	1	2.15	1.20	3.68	3.68	17113.54
53	6	Surface	1	1.20		3.68		
58	7	Surface	1	0.00	0.00	0.00	0.00	0.00
101	8	Surface	1	2.20	2.20	0.72	0.72	4040.79
134	9	Surface	1	2.15	2.15	3.68	3.68	4583.87
136	10	Surface	1	2.15	2.15	3.68	3.68	5521.33
137	10	Surface	1	2.15		3.68		
137	11	Surface	1	2.15	2.15	3.68	3.68	3022.51
159	12	Surface	1	0.00	0.00	0.00	0.00	0.00
159	12	Surface	1	0.00		0.00		
195	13	Surface	1	0.00	0.00	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00	0.00	0.00
250	16	Surface	1	11.62	13.72	2.77	3.05	6940.46
250	16	Surface	1	15.82		3.33		
250	17	Surface	1	19.28	19.28	3.94	3.94	7131.18
250	17	Surface	1	0.00		0.00		
258	18	Surface	1	6.47	8.89	2.00	2.66	7574.05
258	18	Surface	1	11.82		3.02		
258	18	Surface	1	8.39		2.97		
259	19	Surface	1	9.95	9.95	2.33	2.33	5964.20
262	20	Surface	1	5.09	6.92	2.53	2.15	5531.03
262	20	Surface	1	7.64		1.79		
262	20	Surface	1	8.04		2.13		
265	21	Surface	1	0.00	9.64	0.00	2.96	2641.06
265	21	Surface	1	9.64		2.96		
4	1	Tile	1	0.00	0.00	0.00	0.00	0.00
10	1	Tile	1	0.00		0.79		
12	2	Tile	1	0.85	0.85	0.79	0.79	166.00
18	3	Tile	1	0.87	0.76	1.08	1.08	12822.00
18	3	Tile	1	0.64		0.88		
24	4	Tile	1	0.85	0.85	0.79	0.79	6783

Appendix 13B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
32	5	Tile	1	0.85	0.85	0.79	0.79	8745.00
38	6	Tile	1	0.00	0.70	0.79	0.79	11849.00
38	6	Tile	1	0.70		0.79		
39	6	Tile	1	0.00		0.79		
39	6	Tile	1	0.00		0.79		
40	6	Tile	1	0.00		0.79		
45	7	Tile	1	0.85	0.85	0.79	0.79	2468.00
53	8	Tile	1	0.85	0.85	0.79	0.79	27825.00
53	8	Tile	1	0.85		0.79		
70	9	Tile	1	0.89	0.89	0.56	0.56	18227.00
71	9	Tile	1	0.50		0.66		
92	10	Tile	1	0.85	0.85	0.79	0.79	5811.00
101	11	Tile	1	0.85	0.85	0.79	0.79	16813.00
101	11	Tile	1	0.85		0.79		
111	12	Tile	1	0.85	0.85	0.79	0.79	4821.00
125	13	Tile	1	0.85	0.85	0.79	0.79	8919.00
134	14	Tile	1	0.85	0.85	0.79	0.79	12876.00
135	14	Tile	1	0.85		0.79		
136	15	Tile	1	0.85	1.67	0.79	1.19	15848.00
137	15	Tile	1	0.85		0.79		
137	15	Tile	1	1.67		1.19		
159	16	Tile	1	234.09	219.09	23.18	19.36	6302.00
159	16	Tile	1	256.78		21.25		
159	16	Tile	1	166.39		13.64		
179	16	Tile	1	0.00		0.00		
195	17	Tile	1	25.00	20.79	12.96	9.46	1386.00
195	17	Tile	1	25.69		10.01		
196	17	Tile	1	11.67		5.42		
225	18	Tile	1	0.00	0.00	0.00	0.00	0.00
225	19	Tile	1	3.04	3.04	1.63	1.63	547.00
231	20	Tile	1	3.96	3.96	2.92	2.92	3231.00
250	21	Tile	1	0.00	9.70	0.00	4.83	17853.00
250	21	Tile	1	11.90		5.09		
250	21	Tile	1	14.81		4.88		
250	21	Tile	1	13.76		4.81		
250	21	Tile	1	11.79		5.32		
251	21	Tile	1	5.95		4.04		
258	22	Tile	1	9.12	8.61	4.67	4.07	8800.00
258	22	Tile	1	9.29		3.83		
258	22	Tile	1	6.00		2.86		

Appendix 13B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite µg/L	Event, Volume, L/plot
258	22	Tile	1	10.03		4.94		
259	23	Tile	1	6.58	6.58	3.27	3.27	6695.00
262	24	Tile	1	6.83	6.77	3.29	3.20	5509.00
262	24	Tile	1	7.47		4.07		
262	24	Tile	1	6.19		2.55		
263	24	Tile	1	7.12		3.12		
263	24	Tile	1	6.23		2.98		
265	25	Tile	1	5.88	5.88	3.03	3.03	2643.00
4	1	Surface	2	1.71	0.93	4.31	2.45	14210.64
4	1	Surface	2	0.15		0.59		
10	2	Surface	2	3.46	3.46	1.22	1.22	5931.88
18	3	Surface	2	2.32	2.32	0.70	0.70	2489.13
38	4	Surface	2	1.91	1.91	1.70	1.70	3125.95
39	5	Surface	2	1.91	1.91	1.70	1.70	3203.54
39	5	Surface	2	1.91		1.70		
39	5	Surface	2	1.91		1.70		
53	6	Surface	2	1.91	1.02	1.70	0.43	17912.00
53	6	Surface	2	1.02		0.43		
58	7	Surface	2	0.00	0.00	0.00	0.00	0.00
101	8	Surface	2	2.80	2.80	0.86	0.86	2938.46
134	9	Surface	2	1.91	1.91	1.70	1.70	3423.36
136	10	Surface	2	1.91	1.91	1.70	1.70	4273.54
137	10	Surface	2	1.91		1.70		
137	11	Surface	2	1.91	1.91	1.70	1.70	1703.60
159	12	Surface	2	654.55	762.62	42.93	56.62	1322.15
159	12	Surface	2	870.69		70.31		
195	13	Surface	2	0.00	0.00	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00	0.00	0.00
231	15	Surface	2	0.38	0.38	0.51	0.51	4186.26
250	16	Surface	2	14.03	14.34	3.39	3.03	5863.99
250	16	Surface	2	14.65		2.66		
250	17	Surface	2	20.11	21.04	5.67	5.50	5906.02
250	17	Surface	2	21.97		5.32		
258	18	Surface	2	11.53	11.81	3.22	2.89	5841.36
258	18	Surface	2	11.57		2.33		
258	18	Surface	2	12.34		3.13		
259	19	Surface	2	9.78	9.78	2.11	2.11	6791.76
262	20	Surface	2	6.51	8.45	1.72	2.26	7609.61
262	20	Surface	2	10.73		3.10		
262	20	Surface	2	8.12		1.95		

Appendix 13B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990

-4

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume L/plot
265	21	Surface	2	9.45	9.68	3.54	2.94	2673.39
265	21	Surface	2	9.91		2.34		
4	1	Tile	2	0.00	0.00	0.00	0.00	0.00
10	2	Tile	2	0.56	0.56	0.70	0.70	
12	2	Tile	2	0.99		1.16		2126.00
18	3	Tile	2	2.74	1.85	3.41	3.41	13559.00
18	3	Tile	2	0.96		1.52		
24	4	Tile	2	0.99	0.99	1.16	1.16	6043.00
32	5	Tile	2	0.99	0.99	1.16	1.16	7237.00
38	6	Tile	2	0.99	0.99	1.16	1.06	
38	6	Tile	2	0.99		1.06		11115.00
39	6	Tile	2	0.99		1.16		
39	6	Tile	2	0.99		1.16		
40	6	Tile	2	0.99		1.16		
45	7	Tile	2	0.99	0.99	1.16	1.16	5222.00
53	8	Tile	2	0.99	0.99	1.16	1.16	15878.00
53	8	Tile	2	0.99		1.16		
70	9	Tile	2	0.99	0.99	0.56	0.61	25729.00
71	9	Tile	2	0.99		0.66		
92	10	Tile	2	0.99	0.99	1.16	1.16	5744.00
101	11	Tile	2	0.99	0.99	1.16	1.16	12052.00
101	11	Tile	2	0.99		1.16		
111	12	Tile	2	0.99	0.99	1.16	1.16	5268.00
125	13	Tile	2	0.99	0.99	1.16	1.16	8718.00
134	14	Tile	2	0.99	0.99	1.16	1.16	8237.00
135	14	Tile	2	0.99		1.16		
136	15	Tile	2	0.99	0.99	1.16	1.16	11331.00
137	15	Tile	2	0.99		1.16		
137	15	Tile	2	0.99		1.16		
159	16	Tile	2	345.59	347.99	28.02	24.44	14459.00
159	16	Tile	2	386.49		34.59		
159	16	Tile	2	311.90		29.72		
179	16	Tile	2	25.42		5.41		
195	17	Tile	2	9.93	23.24	4.04	8.69	4853.00
195	17	Tile	2	28.68		10.64		
196	17	Tile	2	31.11		11.40		
225	18	Tile	2	3.13	3.13	1.63	1.63	135.00
225	19	Tile	2	3.13	3.13	1.63	1.63	1770.00
231	20	Tile	2	4.36	4.36	3.21	3.21	2531.00
250	21	Tile	2	0.00	19.80	0.00	6.90	20840.00

Appendix 13B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990

- 5

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
250	21	Tile	2	21.77		6.11		
250	21	Tile	2	14.82		4.49		
250	21	Tile	2	23.95		8.70		
250	21	Tile	2	22.62		8.40		
251	21	Tile	2	15.85		6.78		
258	22	Tile	2	9.62	10.19	4.78	4.83	4674.00
258	22	Tile	2	14.43		5.47		
258	22	Tile	2	7.01		4.71		
258	22	Tile	2	9.72		4.35		
259	23	Tile	2	9.29	9.29	4.07	4.07	2936.00
262	24	Tile	2	5.97	7.43	3.29	3.36	2975.00
262	24	Tile	2	10.24		3.18		
262	24	Tile	2	4.92		3.03		
263	24	Tile	2	8.60		3.94		
263	24	Tile	2	0.00		0.00		
265	25	Tile	2	13.73	13.73	6.31	6.31	1462.00

Appendix 14B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Evert Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
4	1	Surface	1	1.28	1.21	9.19	5.10	11740.91
4	1	Surface	1	1.13		1.01		
10	2	Surface	1	1.49	1.49	0.25	0.25	6074.11
18	3	Surface	1	1.30	1.30	3.48	3.48	0.00
38	4	Surface	1	1.30	1.30	3.48	3.48	0.00
39	5	Surface	1	1.30	1.30	3.48	3.48	9245.32
39	5	Surface	1	1.30		3.48		
39	5	Surface	1	1.30		3.48		
53	6	Surface	1	1.30	1.40	3.48	0.86	18348.41
53	6	Surface	1	1.40		0.86		
58	7	Surface	1	1.30	1.30	3.48	3.48	0.00
101	8	Surface	1	1.30	1.30	1.67	1.67	3959.97
134	9	Surface	1	1.30	1.30	3.48	3.48	4855.41
136	10	Surface	1	1.30	1.30	3.48	3.48	6727.10
137	10	Surface	1	1.30		3.48		
137	11	Surface	1	1.30	1.30	3.48	3.48	3769.25
159	12	Surface	1		0.00		0.00	0.00
159	12	Surface	1					
195	13	Surface	1		0.00		0.00	0.00
225	14	Surface	1		0.00		0.00	0.00
231	15	Surface	1	0.29	0.29	0.05	0.05	4289.70
250	16	Surface	1	6.82	6.61	2.22	1.77	7590.22
250	16	Surface	1	6.40		1.33		
250	17	Surface	1	15.62	13.50	3.78	3.49	9720.52
250	17	Surface	1	11.39		3.19		
258	18	Surface	1	7.71	10.74	2.67	3.05	6238.98
258	18	Surface	1	11.94		3.12		
258	18	Surface	1	12.58		3.36		
259	19	Surface	1	8.62	8.62	2.44	2.44	6293.93
262	20	Surface	1	4.67	5.87	1.38	2.10	6468.49
262	20	Surface	1	7.82		3.08		
262	20	Surface	1	5.11		1.84		
265	21	Surface	1	16.36	13.50	7.69	5.73	1241.33
265	21	Surface	1	10.64		3.77		
4	1	Tile	1	1.34	1.49	2.09	1.78	624.00
10	2	Tile	1	1.64	1.64	1.46	1.46	4957.00
12	2	Tile	1	1.34		2.09		
18	3	Tile	1	1.18	1.20	1.63	2.40	13052.00
18	3	Tile	1	1.21		3.17		
24	4	Tile	1	1.34	1.34	2.09	2.09	5404.00

Appendix 14B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
32	5	Tile	1	1.34	1.34	2.09	2.09	5532.00
38	6	Tile	1	1.34	1.34	2.09	0.51	11738.00
38	6	Tile	1	1.34		0.51		
39	6	Tile	1	1.34		2.09		
39	6	Tile	1	1.34		2.09		
40	6	Tile	1	1.34		2.09		
46	7	Tile	1	1.34	1.34	2.09	2.09	1255.00
53	8	Tile	1	1.34	1.34	2.09	2.09	26871.00
53	8	Tile	1	1.34		2.09		
71	9	Tile	1	1.34	1.34	2.09	2.09	20169.00
92	10	Tile	1	1.34	1.34	2.09	2.09	5723.00
101	11	Tile	1	1.34	1.34	2.09	2.09	13866.00
101	11	Tile	1	1.34		2.09		
111	12	Tile	1	1.34	1.34	2.09	2.09	4209.00
125	13	Tile	1	1.34	1.34	2.09	2.09	7829.00
134	14	Tile	1	1.34	1.34	2.09	2.09	9866.00
135	14	Tile	1	1.34		2.09		
136	15	Tile	1	1.34	1.36	2.09	1.16	14257.00
137	15	Tile	1	1.34		2.09		
137	15	Tile	1	1.36		1.16		
159	16	Tile	1	293.48	251.33	30.00	23.00	7135.00
159	16	Tile	1	276.19		21.70		
159	16	Tile	1	184.32		17.31		
179	16	Tile	1					
195	17	Tile	1	8.55	11.41	4.42	5.54	902.00
195	17	Tile	1	12.80		5.78		
196	17	Tile	1	12.89		6.43		
225	18	Tile	1		0.00	1.74	1.74	0.00
225	19	Tile	1	2.95	2.95	1.74	1.74	990.00
231	20	Tile	1	1.91	1.91	1.41	1.41	2472.00
250	21	Tile	1		12.21		6.54	16113.00
250	21	Tile	1	13.18		6.50		
250	21	Tile	1	13.97		7.10		
250	21	Tile	1	13.60		6.91		
250	21	Tile	1	10.82		6.66		
251	21	Tile	1	9.48		5.53		
258	22	Tile	1	7.55	8.92	5.78	5.83	8152.00
258	22	Tile	1	7.96		5.03		
258	22	Tile	1	11.02		6.37		
258	22	Tile	1	9.17		6.12		

Appendix 14B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
259	23	Tile	1	6.50	6.50	4.29	4.29	5274.00
262	24	Tie	1	5.97	6.27	3.65	3.85	4834.00
262	24	Tile	1	7.75		4.27		
262	24	Tile	1	6.78		4.13		
263	24	Tile	1	5.47		3.51		
263	24	Tile	1	5.39		3.67		
265	25	Tile	1	6.78	6.78	4.25	4.25	2084.00
4	1	Surface	2	0.44	0.35	9.71	5.13	15733.21
4	1	Surface	2	0.25		0.55		
10	2	Surface	2	0.40	0.40	0.08	0.08	6491.12
18	3	Surface	2	1.07	1.07	0.61	0.61	2941.69
38	4	Surface	2	0.54	0.54	2.74	2.74	4021.39
39	5	Surface	2	0.54	0.54	2.74	2.74	3620.55
39	5	Surface	2	0.54		2.74		
39	5	Surface	2	0.54		2.74		
53	6	Surface	2	0.54	0.50	2.74	0.14	19466.90
53	6	Surface	2	0.50		0.14		
58	7	Surface	2		0.00		0.00	0.00
101	8	Surface	2	1.66	1.66	0.29	0.29	5343.54
134	9	Surface	2	0.54	0.54	2.74	2.74	6533.15
136	10	Surface	2	0.54	0.54	2.74	2.74	6109.67
137	10	Surface	2	0.54		2.74		
137	11	Surface	2	0.54	0.54	2.74	2.74	4144.23
159	12	Surface	2	487.50	576.38	38.27	41.74	2828.55
159	12	Surface	2	665.25		45.21		
195	13	Surface	2	83.08	83.08	14.61	14.61	1305.98
225	14	Surface	2	14.31	14.31	1.93	1.93	1900.79
231	15	Surface	2	0.15	0.15	0.20	0.20	5094.62
250	16	Surface	2	11.90	13.91	2.26	2.30	5398.49
250	16	Surface	2	15.91		2.33		
250	17	Surface	2	12.30	20.53	2.65	3.45	6061.18
250	17	Surface	2	28.76		4.26		
258	18	Surface	2	8.46	11.14	2.00	2.58	8126.83
258	18	Surface	2	13.68		3.67		
258	18	Surface	2	11.27		2.09		
259	19	Surface	2	8.19	8.19	1.73	1.73	6345.65
262	20	Surface	2	5.68	5.96	1.10	1.30	8967.32
262	20	Surface	2	4.91		1.41		
262	20	Surface	2	7.29		1.38		
265	21	Surface	2	9.45	10.55	2.36	2.88	2683.08

Appendix 14B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

- 4

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
265	21	Surface	2	11.64		3.39		
4	1	Tile	2	0.83	0.83	0.51	0.51	0.00
10	2	Tile	2	0.42	0.63	0.15	0.33	3381.00
12	2	Tile	2	0.83		0.51		
18	3	Tile	2	0.89	0.81	0.20	0.47	13714.00
18	3	Tile	2	0.72		0.74		
24	4	Tile	2	0.83	0.83	0.51	0.51	5813.00
32	5	Tile	2	0.83	0.83	0.51	0.51	7033.00
38	6	Tile	2	0.83	0.54	0.51	0.32	13331.00
38	6	Tile	2	0.54		0.32		
39	6	Tile	2	0.83		0.51		
39	6	Tile	2	0.83		0.51		
40	6	Tile	2	0.83		0.51		
46	7	Tile	2	0.83	0.83	0.51	0.51	3303.00
53	8	Tile	2	0.83	0.83	0.51	0.51	20929.00
53	8	Tile	2	0.83		0.51		
71	9	Tile	2	0.83	0.83	0.51	0.51	26822.00
92	10	Tile	2	0.83	0.83	0.51	0.51	5936.00
101	11	Tile	2	0.83	0.83	0.51	0.51	10529.00
101	11	Tile	2	0.83		0.51		
111	12	Tile	2	0.83	0.83	0.51	0.51	5061.00
125	13	Tile	2	0.83	0.83	0.51	0.51	7163.00
134	14	Tile	2	0.83	0.83	0.51	0.51	5144.00
135	14	Tile	2	0.83		0.51		
136	15	Tile	2	0.83	0.65	0.51	0.46	8562.00
137	15	Tile	2	0.83		0.51		
137	15	Tile	2	0.65		0.46		
159	16	Tile	2	381.97	321.98	31.98	19.22	15285.00
159	16	Tile	2	340.54		22.96		
159	16	Tile	2	243.44		17.31		
179	16	Tile	2	22.71		4.64		
195	17	Tile	2	2.51	14.95	1.47	4.84	6879.00
195	17	Tile	2	19.56		6.05		
196	17	Tile	2	22.78		7.00		
225	18	Tile	2		0.00	1.11	1.11	0.00
225	19	Tile	2	2.40	2.40	1.11	1.11	881.00
231	20	Tile	2	1.96	1.96	1.25	1.25	2874.00
250	21	Tile	2		14.40		4.56	14125.00
250	21	Tile	2	13.27		4.62		
250	21	Tile	2	11.36		3.33		

Appendix 14B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

- 5

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/ plot
250	21	Tile	2	11.23		4.84		
250	21	Tile	2	23.26		4.68		
251	21	Tile	2	12.89		5.36		
258	22	Tile	2	6.63	11.56	3.22	4.54	4041.00
258	22	Tile	2	10.28		3.72		
258	22	Tile	2	14.45		5.22		
258	22	Tile	2	14.88		6.00		
259	23	Tile	2	5.67	5.67	2.42	2.42	3265.00
262	24	Tile	2	6.66	7.49	2.24	2.44	3002.00
262	24	Tile	2	8.30		2.54		
262	24	Tile	2	8.47		2.79		
263	24	Tile	2	6.51		2.18		
263	24	Tile	2					
265	25	Tile	2	6.27	6.27	2.67	2.67	1236.00

Appendix 15B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
4.38	1	Surface	1	0.17	0.41	5.05	3.32	13767.77
4.46	1	Surface	1	0.65		1.58		
10.42	2	Surface	1	0.00	0.00	0.00	0.00	0.00
18.06	3	Surface	1	0.00	0.00	0.00	0.00	0.00
37.65	4	Surface	1	0.00	0.00	0.00	0.00	0.00
38.55	5	Surface	1	0.00	0.00	0.00	0.00	0.00
38.56	5	Surface	1	0.00		0.00		
38.60	5	Surface	1	0.00		0.00		
53.21	6	Surface	1	0.41	0.41	3.31	3.31	22783.58
53.42	6	Surface	1	0.41		3.31		
58.00	7	Surface	1	0.41	0.41	3.31	3.31	5262.72
100.67	8	Surface	1	0.00	0.00	0.00	0.00	0.00
133.63	9	Surface	1	0.00	0.00	0.00	0.00	0.00
136.35	10	Surface	1	0.00	0.00	0.00	0.00	0.00
136.63	10	Surface	1	0.00		0.00		
137.47	11	Surface	1	0.00	0.00	0.00	0.00	0.00
159.29	12	Surface	1	349.18	349.18	37.50	37.50	2224.05
159.32	12	Surface	1	0.00		0.00		
195.45	13	Surface	1	0.00	0.00	0.00	0.00	0.00
225.29	14	Surface	1	0.00	0.00	0.00	0.00	0.00
231.38	15	Surface	1	0.00	0.00	0.00	0.00	0.00
249.95	16	Surface	1	32.65	36.91	12.90	13.77	5104.32
249.99	16	Surface	1	41.16		14.63		
250.03	17	Surface	1	51.42	51.42	16.18	16.18	6116.14
250.45	17	Surface	1	0.00		0.00		
257.67	18	Surface	1	13.73	23.03	6.03	7.54	4677.62
257.73	18	Surface	1	26.37		7.53		
257.77	18	Surface	1	28.99		9.07		
259.21	19	Surface	1	20.02	20.02	6.67	6.67	4254.14
262.38	20	Surface	1	12.69	15.11	3.79	4.23	4412.54
262.42	20	Surface	1	15.82		4.42		
262.46	20	Surface	1	16.83		4.48		
264.83	21	Surface	1	0.00	0.00	0.00	0.00	0.00
264.99	21	Surface	1	0.00		0.00		
4.46	1	Tile	1	1.40	1.40	0.81	0.81	525.00
10.42	2	Tile	1	0.48	0.48	0.28	0.28	3858.00
11.67	2	Tile	1	1.40		0.81		
17.67	3	Tile	1	1.68	1.75	1.38	1.14	25372.00
18.06	3	Tile	1	1.82		0.89		
24.00	4	Tile	1	1.40	1.40	0.81	0.81	9560.00

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
32.00	5	Tile	1	1.40	1.40	0.81	0.81	11042.00
37.54	6	Tile	1	1.40	0.93	0.81	0.88	17419.00
37.61	8	Tile	1	0.93		0.88		
38.56	6	Tile	1	1.40		0.81		
38.60	6	Tile	1	1.40		0.81		
39.56	6	Tile	1	1.40		0.81		
45.44	7	Tile	1	1.40	1.40	0.81	0.81	3714.00
53.19	8	Tile	1	1.40	1.40	0.81	0.81	38982.00
53.42	8	Tile	1	1.40		0.81		
70.63	9	Tile	1	1.40	1.40	0.81	0.81	35962.00
92.44	10	Tile	1	1.40	1.40	0.81	0.81	6792.00
100.67	11	Tile	1	1.40	1.40	0.81	0.81	22835.00
101.46	11	Tile	1	1.40		0.81		
111.13	12	Tile	1	1.40	1.40	0.81	0.81	7104.00
124.69	13	Tile	1	1.40	1.40	0.81	0.81	12494.00
133.60	14	Tile	1	1.40	1.40	0.81	0.81	17945.00
134.60	14	Tile	1	1.40		0.81		
136.33	15	Tile	1	1.40	2.07	0.81	2.25	33715.00
136.63	15	Tile	1	1.40		0.81		
137.47	15	Tile	1	2.07		2.25		
159.29	16	Tile	1	162.69	143.53	20.64	19.41	3540.00
159.33	16	Tile	1	180.51		23.44		
159.44	16	Tile	1	87.39		14.14		
179.44	16	Tile	1	0.00		0.00		
195.40	17	Tile	1	26.25	16.56	11.62	7.70	2743.00
195.44	17	Tile	1	9.56		5.54		
195.58	17	Tile	1	13.89		5.95		
224.67	18	Tile	1	6.54	6.54	2.07	2.07	109.00
225.29	19	Tile	1	6.54	6.54	2.07	2.07	1187.00
231.38	20	Tile	1	1.89	1.89	1.88	1.88	2828.00
249.81	21	Tile	1	0.00	22.65	0.00	10.90	34342.00
249.95	21	Tile	1	22.96		9.73		
249.99	21	Tile	1	23.23		11.31		
250.03	21	Tile	1	26.50		12.19		
250.44	21	Tile	1	24.23		12.45		
250.69	21	Tile	1	16.32		8.82		
257.67	22	Tile	1	11.94	15.73	7.17	8.27	14459.00
257.73	22	Tile	1	17.41		8.70		
257.77	22	Tile	1	17.30		8.75		
257.83	22	Tile	1	16.26		8.47		

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

-3

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
259.21	23	Tile	1	8.88	8.88	5.44	5.44	11953.00
262.38	24	Tile	1	8.95	11.19	5.47	5.95	10541.00
262.42	24	Tile	1	11.62		5.73		
262.46	24	Tile	1	10.93		5.46		
262.57	24	Tile	1	12.51		6.53		
262.67	24	Tile	1	11.93		6.54		
264.83	25	Tile	1	8.90	8.90	5.46	5.46	4731.00
4.38	1	Surface	2	0.95	0.57	3.64	1.96	15406.71
4.46	1	Surface	2	0.18		0.28		
10.42	2	Surface	2	0.00	0.00	0.00	0.00	0.00
18.06	3	Surface	2	5.96	5.96	2.87	2.87	2201.42
37.65	4	Surface	2	2.36	2.36	2.27	2.27	2353.35
38.55	5	Surface	2	2.36	2.36	2.27	2.27	2013.93
38.56	5	Surface	2	2.36		2.27		
38.60	5	Surface	2	2.36		2.27		
53.21	6	Surface	2	2.36	2.60	2.27	1.44	22256.66
53.42	6	Surface	2	2.60		1.44		
58.00	7	Surface	2	0.00	0.00	0.00	0.00	0.00
100.67	8	Surface	2	4.00	4.00	1.73	1.73	3895.32
133.63	9	Surface	2	2.36	2.36	2.27	2.27	5944.81
136.35	10	Surface	2	2.36	2.36	2.27	2.27	5925.41
136.63	10	Surface	2	2.36		2.27		
137.47	11	Surface	2	2.36	2.36	2.27	2.27	3358.70
159.29	12	Surface	2	468.91	468.91	65.82	65.82	921.30
159.32	12	Surface	2	0.00		0.00		
195.45	13	Surface	2	0.00	0.00	0.00	0.00	0.00
225.29	14	Surface	2	0.00	0.00	0.00	0.00	0.00
231.38	15	Surface	2	0.86	0.86	0.07	0.07	2721.87
249.95	16	Surface	2	26.28	31.32	6.11	7.71	5243.33
249.99	16	Surface	2	36.36		9.31		
250.03	17	Surface	2	44.48	51.32	11.34	12.69	5802.57
250.44	17	Surface	2	58.16		14.04		
257.67	18	Surface	2	16.29	21.38	4.00	6.20	5201.30
257.73	18	Surface	2	17.25		5.60		
257.77	18	Surface	2	30.59		9.01		
259.21	19	Surface	2	17.41	17.41	5.00	5.00	6633.36
262.38	20	Surface	2	7.51	9.82	2.30	3.63	5556.89
262.42	20	Surface	2	13.91		4.81		
262.46	20	Surface	2	8.04		3.79		
264.79	21	Surface	2	7.64	7.09	2.50	2.38	1984.83

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

- 4

Julian Time/90	Event #	Source	Rep	Atrazine Conc. µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume L/plot
264.83	21	Surface	2	6.55		2.26		
4.46	1	Tile	2	1.50	1.50	0.69	0.69	730.00
10.42	2	Tile	2	0.23	0.23	0.20	0.20	4501.00
11.67	2	Tile	2	1.50		0.69		
17.67	3	Tile	2	1.26	1.71	0.19	0.57	15256.00
18.06	3	Tile	2	2.15		0.95		
24.00	4	Tile	2	1.50	1.50	0.69	0.69	8857.00
32.00	5	Tile	2	1.50	1.50	0.69	0.69	7666.00
37.54	6	Tile	2	1.50	1.50	0.69	0.69	18335.00
37.61	6	Tile	2	1.50		0.69		
38.56	6	Tile	2	1.50		0.69		
38.60	6	Tile	2	1.50		0.69		
39.56	6	Tile	2	1.50		0.69		
45.88	7	Tile	2	1.50	1.50	0.69	0.69	7550.00
53.19	8	Tile	2	1.50	1.50	0.69	0.69	15497.00
53.42	8	Tile	2	1.50		0.69		
70.63	9	Tile	2	1.50	1.50	0.69	0.69	26640.00
92.44	10	Tile	2	1.50	1.50	0.69	0.69	4570.00
100.67	11	Tile	2	1.50	1.50	0.69	0.69	10314.00
101.46	11	Tile	2	1.50		0.69		
111.13	12	Tile	2	1.50	1.50	0.69	0.69	4339.00
124.69	13	Tile	2	1.50	1.50	0.69	0.69	7175.00
133.60	14	Tile	2	1.50	1.50	0.69	0.69	8251.00
134.60	14	Tile	2	1.50		0.69		
136.33	15	Tile	2	1.50	2.38	0.69	1.42	15879.00
136.63	15	Tile	2	1.50		0.69		
137.47	15	Tile	2	2.38		1.42		
159.29	16	Tile	2	16.06	69.87	2.43	10.49	4154.00
159.33	16	Tile	2	61.02		10.63		
159.44	16	Tile	2	132.54		18.40		
179.44	16	Tile	2	0.00		0.00		
195.40	17	Tile	2	30.36	20.44	8.97	6.25	3653.00
195.44	17	Tile	2	9.63		3.57		
195.58	17	Tile	2	21.33		6.21		
224.67	18	Tile	2	3.78	3.78	1.35	1.35	261.00
225.29	19	Tile	2	3.78	3.78	1.35	1.35	2303.00
231.38	20	Tile	2	10.76	10.76	3.33	3.33	3161.00
249.81	21	Tile	2	3.61	18.02	2.07	5.75	26348.00
249.95	21	Tile	2	24.83		6.70		
249.99	21	Tile	2	11.78		5.06		

Appendix 15B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

- 5

Julian Time/90	Event #	Source	Rep	Atrazine Conc., µg/L	Event Atrazine Conc., µg/L	Metabolite Conc., µg/L	Event Metabolite Conc., µg/L	Event Volume, L/plot
250.03	21	Tile	2	33.50		7.50		
250.44	21	Tile	2	12.52		5.57		
250.69	21	Tile	2	21.88		7.63		
257.67	22	Tile	2	14.93	18.86	5.70	6.42	5887.00
257.73	22	Tile	2	22.26		6.56		
257.77	22	Tile	2	16.09		5.65		
257.83	22	Tile	2	22.15		7.76		
259.21	23	Tile	2	9.50	9.50	4.29	4.29	3753.00
262.38	24	Tile	2	10.25	16.01	4.94	5.17	3887.00
262.42	24	Tile	2	15.22		4.39		
262.46	24	Tile	2	16.27		4.19		
262.57	24	Tile	2	20.46		5.99		
262.67	24	Tile	2	17.85		6.35		
264.83	25	Tile	2	15.76	15.76	5.46	5.46	2547.00

Appendix 16B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
4	1	Surface	1	8269	184.81	603.64	69.38
10	2	Surface	1	10060	198.18	290.73	31.83
18	3	Surface	1	0	0.00	0.00	
38	4	Surface	1	0	0.00	0.00	
39	5	Surface	1	8586	184.60	500.56	63.12
53	6	Surface	1	17114	205.36	835.14	75.41
58	7	Surface	1	0	0.00	0.00	
101	8	Surface	1	4041	88.90	118.01	24.67
134	9	Surface	1	4584	98.55	267.24	63.12
136	10	Surface	1	5521	118.71	321.89	63.12
137	11	Surface	1	3023	64.98	176.21	63.12
159	12	Surface	1	0	0.00	0.00	
195	13	Surface	1	0	0.00	0.00	
225	14	Surface	1	0	0.00	0.00	
231	15	Surface	1	0	0.00	0.00	
250	16	Surface	1	6940	952.27	1163.87	18.18
250	17	Surface	1	7131	1375.06	1655.96	16.96
258	18	Surface	1	7574	673.38	875.02	23.04
259	19	Surface	1	5964	593.45	732.62	19.00
262	20	Surface	1	5531	382.90	501.98	23.72
265	21	Surface	1	2641	254.50	332.80	23.53
4	1	Tile	1	0	0.00		
12	2	Tile	1	166	1.41	2.72	48.17
18	3	Tile	1	12822	96.81	235.28	58.86
24	4	Tile	1	6783	57.66	111.24	48.17
32	5	Tile	1	8745	74.33	143.42	48.17
38	6	Tile	1	11849	82.72	176.33	53.09
45	7	Tile	1	2468	20.98	40.48	48.17
53	8	Tile	1	27825	236.51	456.33	48.17
70	9	Tile	1	18227	162.22	264.29	38.62
92	10	Tile	1	5811	49.39	95.30	48.17
101	11	Tile	1	16813	142.91	275.73	48.17
111	12	Tile	1	4821	40.98	79.06	48.17
125	13	Tile	1	8919	75.81	146.27	48.17
134	14	Tile	1	12876	109.45	211.17	48.17
136	15	Tile	1	15848	264.13	452.80	41.67
159	16	Tile	1	6302	13806.78	15026.60	8.12
195	17	Tile	1	1386	288.10	419.27	31.29
225	18	Tile	1	0	0.00	0.00	
225	19	Tile	1	547	16.62	25.54	34.92

Appendix 16B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
231	20	Tile	1	3231.00	128.02	222.29	42.41
250	21	Tile	1	17853	1732.62	2594.72	33.22
258	22	Tile	1	8800	757.81	1116.28	32.11
259	23	Tile	1	6695	440.46	659.70	33.23
262	24	Tile	1	5509	372.92	549.41	32.12
265	25	Tile	1	2643	155.44	235.63	34.03
4	1	Surface	2	14211	132.16	480.32	72.49
10	2	Surface	2	5932	205.24	277.61	26.07
18	3	Surface	2	2489	57.75	75.17	23.18
38	4	Surface	2	3126	59.71	112.85	47.09
39	5	Surface	2	3204	61.19	115.65	47.09
53	6	Surface	2	17912	182.70	260.13	29.77
58	7	Surface	2	0	0.00	0.00	
101	8	Surface	2	2938	82.28	107.68	23.59
134	9	Surface	2	3423	65.39	123.58	47.09
136	10	Surface	2	4274	81.62	154.27	47.09
137	11	Surface	2	1704	32.54	61.50	47.09
159	12	Surface	2	1322.15	10082.95	10831.56	6.91
195	13	Surface	2	0	0.00	0.00	
225	14	Surface	2	0	0.00	0.00	
231	15	Surface	2	4186.26	16.10	37.30	56.83
250	16	Surface	2	5864	840.81	1018.33	17.43
250	17	Surface	2	5906	1242.67	1567.24	20.71
258	18	Surface	2	5841	689.83	858.93	19.69
259	19	Surface	2	6792	664.53	807.92	17.75
262	20	Surface	2	7610	643.32	815.25	21.09
265	21	Surface	2	2673	258.83	337.37	23.28
4	1	Tile	2	0	0.00	0.00	
10	2	Tile	2	2126	11.91	26.79	55.56
18	3	Tile	2	13559	250.84	713.20	64.83
24	4	Tile	2	6043	59.83	129.92	53.95
32	5	Tile	2	7237	71.65	155.60	53.95
38	6	Tile	2	11115	110.04	227.86	51.71
45	7	Tile	2	5222	51.70	112.27	53.95
53	8	Tile	2	15878	157.19	341.38	53.95
70	9	Tile	2	25729	254.72	411.66	38.13
92	10	Tile	2	5744	56.87	123.50	53.95
101	11	Tile	2	12052	119.31	259.12	53.95
111	12	Tile	2	5268	52.15	113.26	53.95

Appendix 16B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
125	13	Tile	2	8718	86.31	187.44	53.95
134	14	Tile	2	8237	81.55	177.10	53.95
136	15	Tile	2	11331	112.18	243.62	53.95
159	16	Tile	2	14459	50316.44	53849.50	6.56
195	17	Tile	2	4853	1127.84	1549.67	27.22
225	18	Tile	2	135	4.23	6.43	34.24
225	19	Tile	2	1770	55.41	84.27	34.24
231	20	Tile	2	2531	110.40	191.75	42.43
250	21	Tile	2	20840	4126.86	5564.07	25.83
258	22	Tile	2	4674	476.47	702.08	32.13
259	23	Tile	2	2936	272.84	392.21	30.44
262	24	Tile	2	2975	221.07	321.11	31.15
265	25	Tile	2	1462	200.72	292.98	31.49

Appendix 17B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
4	1	Surface	1	11740.91	141.48	740.26	80.89
10	2	Surface	1	6074.11	90.50	105.69	14.37
18	3	Surface	1	0.00	0.00	0.00	
38	4	Surface	1	0.00	0.00	0.00	
39	5	Surface	1	9245.32	120.19	441.93	72.80
53	6	Surface	1	18348.41	256.88	415.51	38.18
58	7	Surface	1	0.00	0.00	0.00	
101	8	Surface	1	3959.97	51.48	117.67	56.25
134	9	Surface	1	4855.41	63.12	232.09	72.80
136	10	Surface	1	6727.10	87.45	321.56	72.80
137	11	Surface	1	3769.25	49.00	180.17	72.80
159	12	Surface	1	0.00	0.00	0.00	
195	13	Surface	1	0.00	0.00	0.00	
225	14	Surface	1	0.00	0.00	0.00	
231	15	Surface	1	4289.70	12.26	14.37	14.74
250	16	Surface	1	7590.22	501.54	636.18	21.16
250	17	Surface	1	9720.52	1312.49	1651.39	20.52
258	18	Surface	1	6238.98	670.36	860.59	22.11
259	19	Surface	1	6293.93	542.76	696.61	22.09
262	20	Surface	1	6468.49	379.52	515.20	26.34
265	21	Surface	1	1241.33	167.58	238.71	29.80
4	1	Tile	1	624.00	9.30	20.37	54.36
10	2	Tile	1	4957.00	81.29	153.67	47.10
18	3	Tile	1	13052.00	155.97	469.22	66.76
24	4	Tile	1	5404.00	72.41	185.36	60.93
32	5	Tile	1	5532.00	74.13	189.75	60.93
38	6	Tile	1	11738.00	157.29	217.28	27.61
46	7	Tile	1	1255.00	16.82	43.05	60.93
53	8	Tile	1	26871.00	360.07	921.68	60.93
71	9	Tile	1	20169.00	270.26	691.80	60.93
92	10	Tile	1	5723.00	76.69	196.30	60.93
101	11	Tile	1	13866.00	185.80	475.60	60.93
111	12	Tile	1	4209.00	56.40	144.37	60.93
125	13	Tile	1	7829.00	104.91	268.53	60.93
134	14	Tile	1	9866.00	132.20	338.40	60.93
136	15	Tile	1	14257.00	194.41	359.90	45.98
159	16	Tile	1	7135.00	17932.41	19573.60	8.38
195	17	Tile	1	902.00	102.93	152.93	32.70
225	18	Tile	1	0.00	0.00	0.00	
225	19	Tile	1	990.00	29.17	46.39	37.12
231	20	Tile	1	2472.00	47.19	82.03	42.47

Appendix 17B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
250	21	Tile	1	16113.00	1967.47	3021.45	34.88
258	22	Tile	1	8152.00	727.47	1202.36	39.50
259	23	Tile	1	5274.00	342.64	568.67	39.75
262	24	Tile	1	4834.00	303.23	489.12	38.01
265	25	Tile	1	2084.00	141.29	229.81	38.52
4	1	Surface	2	15733.21	54.28	861.39	93.70
10	2	Surface	2	6491.12	25.96	31.16	16.67
18	3	Surface	2	2941.69	31.48	49.42	36.31
38	4	Surface	2	4021.39	21.72	131.90	83.54
39	5	Surface	2	3620.55	19.55	118.75	83.54
53	6	Surface	2	19466.90	97.33	125.38	22.37
58	7	Surface	2	0.00	0.00	0.00	
101	8	Surface	2	5343.54	88.70	104.10	14.79
134	9	Surface	2	6533.15	35.28	214.29	83.54
136	10	Surface	2	6109.67	32.99	200.40	83.54
137	11	Surface	2	4144.23	22.38	135.93	83.54
159	12	Surface	2	2828.55	16303.11	17483.72	6.75
195	13	Surface	2	1305.98	1084.97	1275.78	14.96
225	14	Surface	2	1900.79	272.07	308.79	11.89
231	15	Surface	2	5094.62	7.87	18.19	56.74
250	16	Surface	2	5398.49	750.76	874.68	14.17
250	17	Surface	2	6061.18	1244.33	1453.51	14.39
258	18	Surface	2	8126.83	904.94	1115.01	18.84
259	19	Surface	2	6345.65	519.86	629.85	17.46
262	20	Surface	2	8967.32	534.20	650.51	17.88
265	21	Surface	2	2683.08	282.94	360.09	21.43
4	1	Tile	2	0.00	0.00	0.00	
10	2	Tile	2	3381.00	21.13	32.29	34.55
18	3	Tile	2	13714.00	110.40	174.85	36.86
24	4	Tile	2	5813.00	48.25	77.89	38.06
32	5	Tile	2	7033.00	58.37	94.24	38.06
38	6	Tile	2	13331.00	71.99	114.65	37.21
46	7	Tile	2	3303.00	27.41	44.26	38.06
53	8	Tile	2	20929.00	173.71	280.45	38.06
71	9	Tile	2	26822.00	222.62	359.41	38.06
92	10	Tile	2	5936.00	49.27	79.54	38.06
101	11	Tile	2	10529.00	87.39	141.09	38.06
111	12	Tile	2	5061.00	42.01	67.82	38.06
125	13	Tile	2	7163.00	59.45	95.98	38.06
134	14	Tile	2	5144.00	42.70	68.93	38.06
136	15	Tile	2	8562.00	55.65	95.04	41.44

Appendix 17B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
159	16	Tile	2	15285.00	49215.24	52153.29	5.63
195	17	Tile	2	6879.00	1028.33	1361.37	24.46
225	18	Tile	2	0.00	0.00	0.00	
225	19	Tile	2	881.00	21.18	30.97	31.61
231	20	Tile	2	2874.00	56.37	92.39	38.98
250	21	Tile	2	14125.00	2034.40	2678.92	24.06
258	22	Tile	2	4041.00	467.15	650.67	28.20
259	23	Tile	2	3265.00	185.27	264.20	29.88
262	24	Tile	2	3002.00	224.80	297.95	24.55
265	25	Tile	2	1236.00	77.51	110.51	29.86

Appendix 18B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
4	1	Surface	1	13768	56.45	512.85	88.99
10	2	Surface	1	0	0.00	0.00	
18	3	Surface	1	0	0.00	0.00	
38	4	Surface	1	0	0.00	0.00	
39	5	Surface	1	0	0.00	0.00	
53	6	Surface	1	22784	93.41	847.55	88.98
58	7	Surface	1	5263	21.58	195.77	88.98
101	8	Surface	1	0	0.00	0.00	
134	9	Surface	1	0	0.00	0.00	
136	10	Surface	1	0	0.00	0.00	
137	11	Surface	1	0	0.00	0.00	
159	12	Surface	1	2224	7765.95	8599.96	9.70
195	13	Surface	1	0	0.00	0.00	
225	14	Surface	1	0	0.00	0.00	
231	15	Surface	1	0	0.00	0.00	
250	16	Surface	1	5104	1883.87	2586.48	27.16
250	17	Surface	1	6116	3144.89	4134.27	23.93
258	18	Surface	1	4678	1077.22	1430.02	24.67
259	19	Surface	1	4254	851.89	1135.50	24.98
262	20	Surface	1	4413	666.88	853.58	21.87
265	21	Surface	1	0	0.00	0.00	
4	1	Tile	1	525	7.35	11.60	36.65
10	2	Tile	1	3858	18.52	29.32	36.84
18	3	Tile	1	25372	444.01	731.98	39.34
24	4	Tile	1	9560	133.84	211.28	36.65
32	5	Tile	1	11042	154.59	244.03	36.65
38	6	Tile	1	17419	162.00	315.28	48.62
45	7	Tile	1	3714	52.00	82.08	36.65
53	8	Tile	1	38982	545.75	861.50	36.65
71	9	Tile	1	35962	503.47	794.76	36.65
92	10	Tile	1	6792	95.09	150.10	36.65
101	11	Tile	1	22835	319.69	504.65	36.65
111	12	Tile	1	7104	99.46	157.00	36.65
125	13	Tile	1	12494	174.92	276.12	36.65
134	14	Tile	1	17945	251.23	396.58	36.65
136	15	Tile	1	33715	699.27	1457.86	52.03
159	16	Tile	1	3540	5081.03	5768.04	11.91
195	17	Tile	1	2743	454.37	665.62	31.74
225	18	Tile	1	109	7.13	9.38	24.01
225	19	Tile	1	1187	77.60	102.12	24.01
231	20	Tile	1	2828	53.46	106.69	49.89

Appendix 18B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
250	21	Tile	1	34342	7778.19	11520.97	32.49
258	22	Tile	1	14459	2274.30	3470.36	34.46
259	23	Tile	1	11953	1061.62	1711.81	37.98
262	24	Tile	1	10541	1179.59	1806.34	34.70
265	25	Tile	1	4731	420.98	679.35	38.03
4	1	Surface	2	15407	87.05	389.02	77.62
10	2	Surface	2	0	0.00	0.00	
18	3	Surface	2	2201	131.20	194.39	32.50
38	4	Surface	2	2353	55.54	108.96	49.03
39	5	Surface	2	2014	47.53	93.24	49.03
53	6	Surface	2	22257	578.67	899.37	35.66
58	7	Surface	2	0	0.00	0.00	
101	8	Surface	2	3895	155.81	223.17	30.18
134	9	Surface	2	5945	140.30	275.24	49.03
136	10	Surface	2	5925	139.84	274.35	49.03
137	11	Surface	2	3359	79.27	155.51	49.03
159	12	Surface	2	921	4320.05	4926.41	12.31
195	13	Surface	2	0	0.00	0.00	
225	14	Surface	2	0	0.00	0.00	
231	15	Surface	2	2722	23.33	25.35	7.95
250	16	Surface	2	5243	1642.19	2046.48	19.76
250	17	Surface	2	5803	2977.82	3714.37	19.83
258	18	Surface	2	5201	1111.91	1434.61	22.49
259	19	Surface	2	6633	1155.06	1486.73	22.31
262	20	Surface	2	5557	545.72	747.52	27.00
265	21	Surface	2	1985	140.74	187.99	25.13
4	1	Tile	2	730	10.95	15.99	31.51
10	2	Tile	2	4501	10.35	19.35	46.51
18	3	Tile	2	15256	260.11	347.07	25.05
24	4	Tile	2	8857	132.86	193.97	31.51
32	5	Tile	2	7666	114.99	167.89	31.51
38	6	Tile	2	18335	275.03	401.54	31.51
46	7	Tile	2	7550	113.25	165.35	31.51
53	8	Tile	2	15497	232.46	339.38	31.51
71	9	Tile	2	26640	399.60	583.42	31.51
92	10	Tile	2	4570	68.55	100.08	31.51
101	11	Tile	2	10314	154.71	225.88	31.51
111	12	Tile	2	4339	65.09	95.02	31.51
125	13	Tile	2	7175	107.63	157.13	31.51
134	14	Tile	2	8251	123.77	180.70	31.51
136	15	Tile	2	15879	377.92	603.40	37.37

Appendix 18B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite #
159	16	Tile	2	4154	2902.53	3338.08	13.05
195	17	Tile	2	3653	746.67	975.05	23.42
225	18	Tile	2	261	9.85	13.37	26.31
225	19	Tile	2	2303	86.95	117.99	26.31
231	20	Tile	2	3161	340.18	445.55	23.65
250	21	Tile	2	26348	4748.00	6263.70	24.20
258	22	Tile	2	5887	1110.06	1487.95	25.40
259	23	Tile	2	3753	356.47	517.32	31.09
262	24	Tile	2	3887	622.32	823.29	24.41
265	25	Tile	2	2547	401.48	540.57	25.73

Appendix 19B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume L/plot
17.40	1	Surface	1	1	1	0.47	0.47	53.94	11475.90
32.56	2	Surface	1	1	1	1.25	1.25	61.42	4913.60
48.00	3	Surface	1	0	0		1.25	24.65	1971.90
50.00	4	Surface	1	0	0		1.25	134.15	10732.30
276.00	5	Surface	1	0	0		0.00	0.00	0.00
291.96	6	Surface	1	1	0		5.06	122.60	2424.50
292.06	6	Surface	1	1	1	5.61			
292.08	6	Surface	1	1	1	8.29			
292.10	6	Surface	1	1	1	1.27			
297.00	7	Surface	1	0	0		0.00	0.00	0.00
310.00	8	Surface	1	0	0		6.14	234.08	3814.50
310.46	8	Surface	1	1	1	6.25			
310.56	8	Surface	1	1	1	4.92			
310.65	8	Surface	1	1	1	4.85			
310.83	8	Surface	1	1	1	8.53			
312.00	9	Surface	1	1	0		6.14	37.69	614.20
315.20	10	Surface	1	1	1	2.09	4.01	71.20	1777.90
315.25	10	Surface	1	1	1	5.92			
318.19	11	Surface	1	1	1	5.00	5.00	143.85	2877.00
321.57	12	Surface	1	1	1	2.38	2.19	30.44	1390.00
321.61	12	Surface	1	1	1	2.00			
325.61	13	Surface	1	1	1	5.00	3.94	178.16	4525.70
325.65	13	Surface	1	1	1	3.45			
325.81	13	Surface	1	1	1	3.36			
363.38	14	Surface	1	1	1	6.03	6.03	83.82	1390.00
17.35	1	Tile	1	0	0		0.00	0.00	0.00
32.56	2	Tile	1	1	1	0.05	0.05	0.66	1329.00
72.66	3	Tile	1	1	0		0.05	0.87	1735.00
84.39	4	Tile	1	1	1	0.06	0.05	4.61	8651.00
84.67	4	Tile	1	1	1	0.05			
85.42	4	Tile	1	1	1	0.05			
94.88	5	Tile	1	0	0		0.05	1.62	3034.00
97.92	6	Tile	1	1	0		0.05	3.86	7232.00
114.31	7	Tile	1	0	0		0.00	0.00	39.00
136.85	8	Tile	1	0	0		0.00	0.00	48.00
154.27	9	Tile	1	1	1	8.33	8.33	9.75	117.00
192.96	10	Tile	1	1	1	17.62	17.62	47.57	270.00
267.10	11	Tile	1	1	1	0.77	0.77	1.16	151.00
267.13	11	Tile	1	0	0				
267.38	11	Tile	1	0	0				

Appendix 19B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

-2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
276.41	12	Tile	1	1	1	1.31	1.16	32.83	2830.00
276.43	12	Tile	1	1	1	1.67			
278.44	12	Tile	1	1	1	1.36			
276.60	12	Tile	1	1	1	0.30			
277.44	12	Tile	1	0	0				
291.92	13	Tile	1	1	1	2.81	3.10	443.40	14323.00
291.96	13	Tile	1	1	1	1.34			
292.06	13	Tile	1	1	1	5.59			
292.10	13	Tile	1	1	1	5.56			
292.15	13	Tile	1	1	1	3.57			
292.38	13	Tile	1	1	1	2.12			
292.67	13	Tile	1	1	1	0.68			
297.74	14	Tile	1	1	1	1.93	1.99	91.34	4590.00
297.77	14	Tile	1	1	1	2.05			
310.38	15	Tile	1	1	1	2.50	3.76	691.39	18406.00
310.44	15	Tile	1	1	1	3.96			
310.56	15	Tile	1	1	1	4.90			
310.65	15	Tile	1	1	1	4.30			
310.83	15	Tile	1	1	1	7.01			
311.33	15	Tile	1	1	1	1.81			
312.40	15	Tile	1	1	1	1.81			
315.20	16	Tile	1	1	1	1.84	2.16	135.69	6282.00
315.24	16	Tile	1	1	1	2.56			
315.28	16	Tile	1	1	0				
315.46	16	Tile	1	1	1	2.08			
318.19	17	Tile	1	1	1	4.49	4.49	409.98	9131.00
321.58	18	Tile	1	1	1	2.20	2.20	124.21	5646.00
325.63	19	Tile	1	1	1	2.00	1.95	171.39	8789.00
325.83	19	Tile	1	1	1	1.06			
326.40	19	Tile	1	1	1	2.79			
359.68	20	Tile	1	1	1	3.83	2.30	297.66	12926.00
362.46	20	Tile	1	1	1	0.37			
363.38	20	Tile	1	1	1	2.71			
17.40	1	Surface	2	1	1	0.23	0.23	39.33	17100.60
32.56	2	Surface	2	1	1	0.42	0.42	0.00	0.00
48.00	3	Surface	2	0	0		0.42	20.09	4784.30
50.00	4	Surface	2	0	0		0.42	53.36	12704.20
276.00	5	Surface	2	0	0		4.25	22.00	517.20
291.96	6	Surface	2	0	0		4.25	193.87	4558.00
292.06	6	Surface	2	1	1	7.07			

Appendix 19B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

-3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
292.08	8	Surface	2	1	1	5.00			
292.10	6	Surface	2	1	1	0.69			
297.00	7	Surface	2	0	0		4.86	25.15	517.20
310.00	8	Surface	2	0	0		4.86	196.48	4040.80
310.48	8	Surface	2	1	1	5.62			
310.56	8	Surface	2	1	1	5.71			
310.65	8	Surface	2	1	1	2.39			
310.83	8	Surface	2	1	1	5.73			
312.00	9	Surface	2	1	0		4.86	33.01	678.90
315.20	10	Surface	2	1	1	4.88	5.13	76.28	1487.00
315.25	10	Surface	2	1	1	5.38			
318.19	11	Surface	2	1	1	5.00	5.00	182.65	3652.90
321.57	12	Surface	2	1	1	2.73	2.31	51.41	2230.50
321.61	12	Surface	2	1	1	1.88			
325.61	13	Surface	2	1	1	3.25	3.07	165.73	5398.50
325.65	13	Surface	2	1	1	2.64			
325.81	13	Surface	2	1	1	3.32			
363.38	14	Surface	2	1	1	2.60	2.60	109.26	4202.40
17.35	1	Tile	2	0	0		0.23	0.79	342.00
32.56	2	Tile	2	1	1	0.23	0.23	0.66	285.00
72.66	3	Tile	2	1	0		0.23	3.53	1533.00
84.39	4	Tile	2	1	1	0.05	0.05	4.33	8658.00
84.67	4	Tile	2	1	1	0.05			
85.42	4	Tile	2	1	1	0.05			
94.88	5	Tile	2	0	0		0.05	1.22	2439.00
97.92	6	Tile	2	1	0		0.05	2.62	5245.00
114.31	7	Tile	2	0	0		0.05	0.06	117.00
136.85	8	Tile	2	0	0		0.05	0.06	114.00
154.27	9	Tile	2	1	1	0.12	0.12	1.35	1126.00
192.96	10	Tile	2	1	1	15.71	15.71	53.89	343.00
267.10	11	Tile	2	0	0		0.86	1.81	211.00
267.13	11	Tile	2	0	0				
267.38	11	Tile	2	1	1	0.86			
276.41	12	Tile	2	1	1	1.90	1.23	52.64	4273.00
276.43	12	Tile	2	1	1	1.90			
276.44	12	Tile	2	1	1	0.61			
276.60	12	Tile	2	1	1	1.52			
277.44	12	Tile	2	1	1	0.23			
291.92	13	Tile	2	1	1	1.99	3.17	365.48	11545.00
291.96	13	Tile	2	1	1	1.22			

Appendix 19B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

-4

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss Metol., mg/ha	Event Volume L/plot
292.06	13	Tile	2	1	1	4.88			
292.10	13	Tile	2	1	1	4.17			
292.15	13	Tile	2	1	1	4.29			
292.38	13	Tile	2	1	1	4.27			
292.67	13	Tile	2	1	1	1.34			
297.74	14	Tile	2	1	1	1.09	1.42	109.61	7719.00
297.77	14	Tile	2	1	1	1.75			
310.38	15	Tile	2	1	1	2.85	3.68	351.83	9563.00
310.44	15	Tile	2	1	1	4.36			
310.56	15	Tile	2	1	1	3.65			
310.65	15	Tile	2	1	1	5.36			
310.83	15	Tile	2	1	1	5.06			
311.33	15	Tile	2	1	1	1.82			
312.40	15	Tile	2	1	1	2.66			
315.20	16	Tile	2	1	0		4.25	155.90	3671.00
315.24	16	Tile	2	1	1	2.82			
315.28	16	Tile	2	1	1	3.49			
315.46	16	Tile	2	1	1	6.43			
318.19	17	Tile	2	1	1	4.91	4.91	321.46	6547.00
321.58	18	Tile	2	1	1	2.50	2.50	98.68	3947.00
325.63	19	Tile	2	1	1	3.93	3.11	199.92	6419.00
325.83	19	Tile	2	1	1	2.58			
326.40	19	Tile	2	1	1	2.83			
359.68	20	Tile	2	1	1	0.45	1.62	138.72	8554.00
362.46	20	Tile	2	1	1	0.38			
363.38	20	Tile	2	1	1	4.04			

Appendix 20B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc.,	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
17.40	1	Surface	1	1	1	0.63	0.63	56.01	8889.70
32.56	2	Surface	1	1	1	0.47	0.47	13.67	2909.40
48.00	3	Surface	1	0	0		0.47	10.94	2327.50
50.00	4	Surface	1	0	0		0.47	69.74	14837.80
276	5	Surface	1	1	1	0.42	0.42		0.00
291	6	Surface	1	1	1	0.50	1.36	63.40	4655.00
291	6	Surface	1	1	1	0.42			
292	6	Surface	1	0	0				
292	6	Surface	1	1	1	3.45			
292	6	Surface	1	1	1	2.44			
292	6	Surface	1	1	1	3.08			
297	7	Surface	1	0	0		0.00		0.00
310	8	Surface	1	0	0		3.26	90.70	2780.10
310	8	Surface	1	1	1	0.75			
311	8	Surface	1	1	1	3.90			
311	8	Surface	1	1	1	3.33			
311	8	Surface	1	1	1	5.07			
312	9	Surface	1	0	0		3.26	10.55	323.30
315	10	Surface	1	1	1	1.55	2.22	27.99	1260.70
315	10	Surface	1	1	1	2.89			
318	11	Surface	1	1	1	1.29	1.29	34.20	2650.80
322	12	Surface	1	1	1	4.56	3.78	28.10	743.50
322	12	Surface	1	1	1	3.00			
325	13	Surface	1	1	1	2.40	2.07	91.67	4428.70
325	13	Surface	1	1	1	0.81			
326	13	Surface	1	1	1	1.19			
326	13	Surface	1	1	1	2.36			
326	13	Surface	1	1	1	3.59			
363	14	Surface	1	1	1	2.25	2.25	34.18	1519.30
17.35	1	Tile	1	0	0		0.27	1.34	498.00
32.56	2	Tile	1	1	1	0.27	0.27	6.38	2363.00
73	3	Tile	1	1	1	0.05	0.05	0.98	1967.00
84	4	Tile	1	1	1	0.05	0.30	25.88	8725.00
85	4	Tile	1	1	1	0.05			
85	4	Tile	1	1	1	0.79			
95	5	Tile	1	0	0		0.30	8.60	2898.00
98	6	Tile	1	1	0		0.30	20.04	6755.00
114	7	Tile	1	0	0		0.30	0.46	156.00
137	8	Tile	1	0	0		0.30	0.18	62.00
154	9	Tile	1	1	1	13.19	13.19	63.05	478.00

Appendix 20B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
193	10	Tile	1	1	1	3.33	3.33	1.20	36.00
287	11	Tile	1	1	0		0.78	1.44	184.00
267	11	Tile	1	1	1	0.28			
267	11	Tile	1	0	0				
267	11	Tile	1	1	1	1.28			
276	12	Tile	1	1	1	0.71	0.69	14.41	2104.00
276	12	Tile	1	1	1	0.36			
276	12	Tile	1	1	1	1.52			
277	12	Tile	1	1	1	0.15			
277	12	Tile	1	0	0				
292	13	Tile	1	1	1	2.05	1.33	174.96	13155.00
292	13	Tile	1	1	1	1.46			
292	13	Tile	1	1	1	1.50			
292	13	Tile	1	1	1	1.25			
292	13	Tile	1	1	1	1.31			
292	13	Tile	1	1	1	1.23			
293	13	Tile	1	1	1	0.51			
298	14	Tile	1	1	1	0.63	0.68	51.00	7500.00
298	14	Tile	1	1	1	0.73			
310	15	Tile	1	1	1	2.31	1.83	325.23	17766.00
310	15	Tile	1	1	1	3.08			
311	15	Tile	1	1	1	1.61			
311	15	Tile	1	1	1	1.69			
311	15	Tile	1	1	1	1.95			
311	15	Tile	1	1	1	1.44			
312	15	Tile	1	1	1	0.74			
315	16	Tile	1	1	1	0.84	1.05	70.96	6742.00
315	16	Tile	1	1	1	1.31			
315	16	Tile	1	1	1	1.62			
315	16	Tile	1	1	1	0.44			
318	17	Tile	1	1	1	1.61	1.61	203.09	12614.00
322	18	Tile	1	1	1	1.60	1.60	107.30	6706.00
326	19	Tile	1	1	1	1.37	2.14	279.35	13074.00
326	19	Tile	1	1	1	0.85			
326	19	Tile	1	1	1	4.19			
360	20	Tile	1	1	1	0.33	0.49	63.61	13081.00
362	20	Tile	1	1	1	0.58			
363	20	Tile	1	1	1	0.55			
17.40	1	Surface	2	1	1	0.45	0.45	66.92	14870.10
32.56	2	Surface	2	1	1	0.50	0.50	69.50	13900.30

Appendix 20B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988

- 3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
48.00	3	Surface	2	0	0		0.50	33.30	6659.20
50.00	4	Surface	2	0	0		0.50	83.56	16712.70
276	5	Surface	2	1	1	0.14	0.14	1.31	937.50
291	6	Surface	2	1	1	1.02			
291	6	Surface	2	1	1	0.31	2.42	321.01	13253.80
292	6	Surface	2	0	0				
292	6	Surface	2	1	1	2.68			
292	6	Surface	2	1	1	3.66			
292	6	Surface	2	1	1	4.44			
297	7	Surface	2	0	0		2.42	87.69	3620.50
310	8	Surface	2	0	0		5.29	306.05	5786.40
310	8	Surface	2	1	1	5.52			
311	8	Surface	2	1	1	5.17			
311	8	Surface	2	1	1	4.74			
311	8	Surface	2	1	1	5.73			
312	9	Surface	2	0	0		5.29	58.13	1099.10
315	10	Surface	2	1	1	3.03	3.69	41.69	1131.40
315	10	Surface	2	1	1	4.34			
318	11	Surface	2	1	1	4.43	4.43	158.96	3588.20
322	12	Surface	2	1	1	1.25	3.10	205.10	6626.90
322	12	Surface	2	1	1	4.94			
326	13	Surface	2	1	1	2.00	1.63	132.53	8113.90
326	13	Surface	2	1	1	1.69			
326	13	Surface	2	1	1	1.21			
363	14	Surface	2	1	1	3.67	3.67	336.93	9180.70
17.35	1	Tile	2	0	0		0.78	4.41	565.00
32.56	2	Tile	2	1	1	0.78	0.78	8.59	1101.00
73	3	Tile	2	1	1	0.05	0.05	1.08	2169.00
84	4	Tile	2	1	1	0.05	0.06	5.27	8327.00
85	4	Tile	2	1	1	0.05			
85	4	Tile	2	1	1	0.09			
95	5	Tile	2	0	0		0.09	1.89	2095.00
98	6	Tile	2	1	1	0.09	0.09	4.41	4896.00
114	7	Tile	2	0	0		0.09	0.14	156.00
137	8	Tile	2	0	0		0.09	0.07	74.00
154	9	Tile	2	1	1	7.63	7.63	57.91	759.00
193	10	Tile	2	1	1	1.00	10.00	30.50	305.00
267	11	Tile	2	1	1	0.60	0.76	17.39	2298.00
267	11	Tile	2	1	1	1.11			
267	11	Tile	2	1	0				

Appendix 20B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988

- 4

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
267	11	Tile	2	1	1	0.56			
276	12	Tile	2	1	1	1.79	1.43	86.88	6084.00
276	12	Tile	2	1	1	2.14			
276	12	Tile	2	1	1	1.77			
277	12	Tile	2	1	1	1.21			
277	12	Tile	2	1	1	0.23			
292	13	Tile	2	1	1	1.78	1.89	217.49	11490.00
292	13	Tile	2	1	1	1.22			
292	13	Tile	2	1	1	3.38			
292	13	Tile	2	1	1	1.55			
292	13	Tile	2	1	1	2.14			
292	13	Tile	2	1	1	2.08			
293	13	Tile	2	1	1	1.10			
298	14	Tile	2	1	1	0.84	1.52	124.18	8170.00
298	14	Tile	2	1	1	2.20			
310	15	Tile	2	1	1	2.23	2.70	277.02	10271.00
310	15	Tile	2	1	1	3.31			
311	15	Tile	2	1	1	2.13			
311	15	Tile	2	1	1	4.94			
311	15	Tile	2	1	1	3.51			
311	15	Tile	2	1	1	1.38			
312	15	Tile	2	1	1	1.38			
315	16	Tile	2	1	1	1.67	2.32	104.66	4516.00
315	16	Tile	2	1	1	2.87			
315	16	Tile	2	1	1	2.71			
315	16	Tile	2	1	1	2.02			
318	17	Tile	2	1	1	3.92	3.92	312.58	7974.00
322	18	Tile	2	1	1	1.27	1.27	62.05	4886.00
326	19	Tile	2	1	1	2.13	2.54	211.16	8299.00
326	19	Tile	2	1	1	3.33			
326	19	Tile	2	1	1	2.17			
360	20	Tile	2	1	1	3.31	1.75	143.08	8176.00
362	20	Tile	2	1	1	0.50			
363	20	Tile	2	1	1	1.44			

Appendix 21B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1988

-1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
17.40	1	Surface	1	1	1	0.16	0.16	7.55	4719.60
3256	2	Surface	1	1	1	1.25	1.25	40.00	3200.30
48.00	3	Surface	1	0	0		0.00	0.00	0.00
50.00	4	Surface	1	0	0		125	95.36	7629.00
276.00	5	Surface	1	0	0		0.00	0.00	0.00
291.96	6	Surface	1	0	0	1.07	1.16	3.00	258.60
292.06	6	Surface	1	1	0				
292.08	6	Surface	1	1	0				
292.10	6	Surface	1	1	1	1.25			
297.00	7	Surface	1	0	0		0.00	0.00	0.00
310.46	8	Surface	1	0	0		1.16	6.37	549.50
310.56	8	Surface	1	1	0				
310.65	8	Surface	1	1	0				
310.83	8	Surface	1	1	0				
312.00	9	Surface	1	0	0		0.00	0.00	0.00
315.20	10	Surface	1	0	0		0.00	0.00	0.00
315.25	10	Surface	1	1	0				
318.19	11	Surface	1	0	0		1.16	7.88	678.90
321.57	12	Surface	1	0	0		1.16	2.63	226.30
321.61	12	Surface	1	0	0				
325.61	13	Surface	1	0	0		3.13	55.65	1777.90
325.65	13	Surface	1	0	0				
325.81	13	Surface	1	1	1	3.13			
363.38	14	Surface	1	1	1	0.73	0.73	11.09	1519.30
17.35	1	Tile	1	0	0		0.45	2.98	662.00
32.56	2	Tile	1	1	1	0.45	0.45	7.69	1709.00
72.66	3	Tile	1	1	1	0.18	0.18	3.54	1967.00
84.39	4	Tile	1	1	1	0.16	0.35	41.66	11904.00
84.66	4	Tile	1	1	1	0.09			
85.42	4	Tile	1	1	1	0.80			
94.88	5	Tile	1	0	0		0.35	7.65	2187.00
97.92	6	Tile	1	1	1	0.05	0.05	2.91	5829.00
114.31	7	Tile	1	0	0		0.05	0.05	104.00
136.85	8	Tile	1	0	0		0.05	0.04	74.00
154.27	9	Tile	1	1	1	0.05	0.05	0.43	855.00
192.96	10	Tile	1	1	1	5.12	5.12	3.02	59.00
267.13	11	Tile	1	0	0		0.00	0.00	0.00
276.41	12	Tile	1	1	1	0.95	0.62	2.44	396.00
276.43	12	Tile	1	1	1	0.60			
276.44	12	Tile	1	1	1	0.61			

Appendix 21B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
276.60	12	Tile	1	1	1	0.30			
291.92	13	Tile	1	1	1	1.51	0.90	97.66	10903.00
291.96	13	Tile	1	1	1	0.73			
292.06	13	Tile	1	1	1	0.96			
292.10	13	Tile	1	1	1	1.25			
292.15	13	Tile	1	1	1	1.07			
292.38	13	Tile	1	1	1	0.54			
292.67	13	Tile	1	1	1	0.21			
297.74	14	Tile	1	1	1	0.53	0.41	25.38	6267.00
297.77	14	Tile	1	1	1	0.28			
310.38	15	Tile	1	1	1	3.23	2.26	313.43	13888.00
310.44	15	Tile	1	1	1	3.36			
310.56	15	Tile	1	1	1	2.19			
310.65	15	Tile	1	1	1	1.51			
310.83	15	Tile	1	1	1	3.51			
311.33	15	Tile	1	1	1	1.36			
312.40	15	Tile	1	1	1	0.64			
315.20	16	Tile	1	1	1	1.28	1.91	159.30	8362.00
315.24	16	Tile	1	1	1	2.08			
315.28	16	Tile	1	1	1	2.14			
315.46	16	Tile	1	1	1	2.12			
318.19	17	Tile	1	1	1	4.05	4.05	697.33	17218.00
321.58	18	Tile	1	1	1	1.10	1.10	111.72	10156.00
325.63	19	Tile	1	1	1	3.73	2.86	552.98	19335.00
325.83	19	Tile	1	1	1	2.13			
326.40	19	Tile	1	1	1	2.72			
359.68	20	Tile	1	1	1	0.45	0.68	127.88	18810.00
362.46	20	Tile	1	1	1	0.29			
363.38	20	Tile	1	1	1	1.30			
17.40	1	Surface	2	1	1	0.78	0.78	75.64	9697.90
32.56	2	Surface	2	1	1	0.57	0.57	27.27	4784.30
48.00	3	Surface	2	0	0		0.57	26.72	4687.30
50.00	4	Surface	2	0	0		0.57	51.41	9019.00
276.00	5	Surface	2	0	0		0.57	3.13	549.50
291.96	6	Surface	2	0	0		3.35	94.12	2812.40
292.06	6	Surface	2	1	1	1.07			
292.08	6	Surface	2	1	1	3.45			
292.10	6	Surface	2	1	1	5.52			
297.00	7	Surface	2	0	0		3.35	17.31	517.20
310.46	8	Surface	2	0	0		0.00	0.00	0.00

Appendix 21 B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1988

- 3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
310.56	8	Surface	2	1	0				
310.65	8	Surface	2	1	0				
310.83	8	Surface	2	1	0				
312.00	9	Surface	2	0	0		0.00	0.00	0.00
315.20	10	Surface	2	1	1	4.26	4.76	353.53	7435.00
315.25	10	Surface	2	1	1	5.25			
318.19	11	Surface	2	1	1	2.29	2.29	71.81	3135.70
321.57	12	Surface	2	1	1	2.63	2.44	77.14	3168.00
321.61	12	Surface	2	1	1	2.24			
325.61	13	Surface	2	1	1	1.16	2.41	158.37	6562.20
325.65	13	Surface	2	1	1	4.05			
325.81	13	Surface	2	1	1	2.03			
363.38	14	Surface	2	1	1	3.00			
363.38	14	Surface	2	1	1	0.67	1.84	66.44	3620.50
17.35	1	Tile	2	0	0		0.39	1.35	347.00
32.56	2	Tile	2	1	1	0.39	0.39	1.40	359.00
72.66	3	Tile	2	1	1	0.36	0.36	2.81	781.00
84.39	4	Tile	2	1	1	0.27	0.50	40.23	8099.00
84.66	4	Tile	2	1	1	0.51			
85.42	4	Tile	2	1	1	0.71			
94.88	5	Tile	2	0	0		0.50	7.52	1515.00
97.92	6	Tile	2	1	1	0.05	0.05	1.74	3477.00
114.31	7	Tile	2	0	0		0.05	0.03	65.00
136.85	8	Tile	2	0	0		0.05	0.04	74.00
154.27	9	Tile	2	1	1	0.05	0.05	0.23	464.00
192.96	10	Tile	2	0	0		0.05	0.02	33.00
267.13	11	Tile	2	0	0		0.00	0.00	0.00
276.41	12	Tile	2	1	1	2.26	1.57	2.26	144.00
276.43	12	Tile	2	1	1	1.43			
276.44	12	Tile	2	1	1	1.06			
276.60	12	Tile	2	1	1	1.52			
291.92	11	Tile	2	0	0		0.82	68.69	8411.00
291.96	13	Tile	2	1	1	0.73			
292.06	13	Tile	2	1	1	1.70			
292.10	13	Tile	2	1	1	0.83			
292.15	13	Tile	2	1	1	0.83			
292.38	13	Tile	2	1	1	0.57			
292.67	13	Tile	2	1	1	0.24			
297.74	14	Tile	2	1	1	0.87	0.88	56.90	6466.00
297.77	14	Tile	2	1	1	0.89			

Appendix 21B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1988

- 4

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
310.38	15	Tile	2	1	1	2.23	3.81	405.47	10634.00
310.44	15	Tile	2	1	1	2.50			
310.56	15	Tile	2	1	1	3.75			
310.65	15	Tile	2	1	1	3.73			
310.83	15	Tile	2	1	1	7.14			
311.33	15	Tile	2	1	1	4.15			
312.40	15	Tile	2	1	1	3.19			
315.20	16	Tile	2	1	1	2.10	3.36	205.06	6103.00
315.24	16	Tile	2	1	1	3.03			
315.28	16	Tile	2	1	1	4.37			
315.46	16	Tile	2	1	1	3.94			
318.19	17	Tile	2	1	1	4.94	4.94	423.56	8574.00
321.58	18	Tile	2	1	1	2.23	2.23	122.36	5487.00
325.63	19	Tile	2	1	1	2.47	2.75	232.84	8460.00
325.83	19	Tile	2	1	1	1.67			
326.40	19	Tile	2	1	1	4.12			
359.68	20	Tile	2	1	1	4.79	2.31	234.80	10183.00
362.46	20	Tile	2	1	1	0.45			
363.38	20	Tile	2	1	1	1.68			

Appendix 22B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

-1

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
8	1	Surface	1	1	1	27.50	27.50	11947.82	43446.60
26	2	Surface	1	1	1	2.89	2.89	0.00	0.00
93	3	Surface	1	1	1	3.86	3.86	170.57	4419.00
108	4	Surface	1	0	0	0.00	0.00	0.00	0.00
146	5	Surface	1	1	1	693.00	545.56	10034.97	1839.40
146	5	Surface	1	1	1	452.00			
146	5	Surface	1	1	1	491.67			
146	5	Surface	1	0	0	0.00			
151	6	Surface	1	1	1	305.88	290.92	35303.77	12135.30
151	6	Surface	1	1	1	485.71			
151	6	Surface	1	1	1	151.00			
152	6	Surface	1	1	1	322.00			
153	6	Surface	1	1	1	190.00			
155	7	Surface	1	1	1	143.00	135.77	3041.44	2240.20
155	7	Surface	1	1	1	144.17			
155	7	Surface	1	1	1	120.13			
168	8	Surface	1	0	0	0.00	135.77	3265.32	2405.10
169	8	Surface	1	0	0	0.00			
171	9	Surface	1	1	1	46.04	46.57	1648.26	3539.70
171	9	Surface	1	1	1	47.09			
201	10	Surface	1	0	0	0.00	10.29	498.29	4842.50
201	10	Surface	1	1	1	10.29			
320	11	Surface	1	1	1	3.67	3.53	168.88	4790.80
320	11	Surface	1	1	1	3.38			
8	1	Tile	1	1	1	2.27	2.27	90.50	3987.00
26	2	Tile	1	1	1	2.68	2.68	38.32	1430.00
87	3	Tile	1	1	1	1.22	1.22	185.61	15214.00
93	4	Tile	1	1	1	0.48	0.48	82.57	17203.00
108	5	Tile	1	0	0	0.00	0.48	82.55	17197.00
145	6	Tile	1	1	1	180.60	191.12	28859.37	15100.00
145	6	Tile	1	1	1	72.00			
146	6	Tile	1	1	1	245.73			
146	6	Tile	1	1	1	96.40			
146	6	Tile	1	1	1	365.00			
146	6	Tile	1	1	1	187.00			
147	6	Tile	1	0	0	0.00			
151	7	Tile	1	1	1	131.00	86.15	17592.44	20421.00
151	7	Tile	1	1	1	144.00			
151	7	Tile	1	1	1	155.00			
152	7	Tile	1	1	1	49.00			

Appendix 22B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L,	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
152	7	Tile	1	1	1	66.70			
153	7	Tile	1	1	1	16.83			
153	7	Tile	1	1	1	91.28			
153	7	Tile	1	1	1	35.38			
154	8	Tile	1	0	0	0.00	76.50	11141.46	14564.00
155	8	Tile	1	1	1	82.30			
155	8	Tile	1	1	1	70.70			
167	9	Tile	1	1	1	25.47	19.50	2025.86	10389.00
167	9	Tile	1	1	1	12.62			
168	9	Tile	1	0	0	0.00			
169	9	Tile	1	1	1	20.41			
171	10	Tile	1	1	1	41.25	36.51	2353.22	6446.00
171	10	Tile	1	1	1	47.07			
171	10	Tile	1	1	1	21.20			
201	11	Tile	1	1	1	6.17	6.99	849.77	12157.00
201	11	Tile	1	1	1	3.27			
201	11	Tile	1	0	0	0.00			
201	11	Tile	1	1	1	13.54			
202	11	Tile	1	1	1	4.98			
320	12	Tile	1	1	1	1.37	1.52	184.91	12165.00
320	12	Tile	1	1	1	1.67			
8	1	Surface	2	1	1	2.89	2.89	1667.60	57702.50
26	2	Surface	2	1	1	2.89	2.89	83.43	2886.70
93	3	Surface	2	1	1	1.25	1.25	58.87	4709.90
108	4	Surface	2	0	0	0.00	1.25	19.36	1548.40
146	5	Surface	2	1	1	738.00	637.49	11808.13	1852.30
146	5	Surface	2	1	1	801.00			
146	5	Surface	2	1	1	283.00			
146	5	Surface	2	1	1	727.94			
151	6	Surface	2	1	1	370.59	289.43	36161.92	12494.10
151	6	Surface	2	1	1	388.57			
151	6	Surface	2	1	1	229.00			
152	6	Surface	2	1	1	309.00			
153	6	Surface	2	1	1	150.00			
155	7	Surface	2	1	1	88.08	114.73	3026.26	2637.80
155	7	Surface	2	1	1	168.71			
155	7	Surface	2	1	1	87.39			
168	8	Surface	2	0	0	0.00	114.73	2759.29	2405.10
169	8	Surface	2	0	0	0.00			
171	9	Surface	2	0	0	0.00	114.73	4060.98	3539.70

Appendix 22B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

-3

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc.,	Event loss, Metol., mg/ha	Event Volume, L/plot
171	9	Surface	2	0	0	0.00			
201	10	Surface	2	1	1	16.67	12.06	584.01	4842.50
201	10	Surface	2	1	1	7.45			
320	11	Surface	2	1	1	1.18	1.16	46.46	4005.20
320	11	Surface	2	1	1	1.14			
8	1	Tile	2	1	1	1.31	1.31	26.59	2030.00
26	2	Tile	2	1	1	1.05	1.05	6.83	650.00
87	3	Tile	2	1	1	0.61	0.61	79.70	13065.00
93	4	Tile	2	1	1	2.00	2.00	339.92	16996.00
108	5	Tile	2	0	0	0.00	2.00	491.76	24588.00
145	6	Tile	2	1	1	176.12	183.33	17995.67	9816.00
145	6	Tile	2	1	1	89.60			
146	6	Tile	2	1	1	207.26			
146	6	Tile	2	1	1	207.00			
146	6	Tile	2	1	1	271.00			
146	6	Tile	2	1	1	149.00			
147	6	Tile	2	0	0	0.00			
151	7	Tile	2	1	1	161.00	87.26	11582.23	13274.00
151	7	Tile	2	1	1	148.00			
151	7	Tile	2	1	1	133.00			
152	7	Tile	2	1	1	61.30			
152	7	Tile	2	1	1	62.60			
153	7	Tile	2	1	1	27.69			
153	7	Tile	2	1	1	75.73			
153	7	Tile	2	1	1	28.72			
154	8	Tile	2	1	1	40.28	48.49	2459.90	5073.00
155	8	Tile	2	1	1	56.70			
155	8	Tile	2	0	0	0.00			
167	9	Tile	2	1	1	36.33	21.57	921.69	4273.00
167	9	Tile	2	1	1	14.77			
168	9	Tile	2	0	0	0.00			
169	9	Tile	2	1	1	13.61			
171	10	Tile	2	1	1	29.74	35.68	4744.81	13297.00
171	10	Tile	2	1	1	44.11			
171	10	Tile	2	1	1	33.20			
201	11	Tile	2	1	1	8.12	7.99	1183.06	14816.00
201	11	Tile	2	1	1	7.22			
201	11	Tile	2	0	0	0.00			
201	11	Tile	2	1	1	9.68			
202	11	Tile	2	1	1	6.92			

Appendix 22B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume , L/plot
320	12	Tile	2	1	1	1.98	1.48	64.75	4390.00
320	12	Tile	2	1	1	0.97			

Appendix 23B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
145	6	Tile	1	1	1	137.31	141.71	16974.02	11978.00
145	6	Tile	1	1	1	169.23			
146	6	Tile	1	1	1	291.13			
146	6	Tile	1	1	1	29.60			
146	6	Tile	1	1	1	188.00			
146	6	Tile	1	1	1	131.00			
147	6	Tile	1	0	1	45.70			
151	7	Tile	1	1	1	184.00	86.64	16636.47	19201.00
151	7	Tile	1	1	1	90.10			
151	7	Tile	1	1	1	103.00			
152	7	Tile	1	1	1	63.20			
152	7	Tile	1	1	1	77.00			
153	7	Tile	1	1	1	33.29			
153	7	Tile	1	1	1	89.23			
153	7	Tile	1	1	1	53.33			
154	8	Tile	1	0	0	0.00	41.50	4650.91	11207.00
155	8	Tile	1	1	1	52.60			
155	8	Tile	1	1	1	30.40			
167	9	Tile	1	1	1	17.85	16.69	1680.02	10066.00
167	9	Tile	1	1	1	14.90			
168	9	Tile	1	0	0	0.00			
169	9	Tile	1	1	1	17.32			
171	10	Tile	1	1	1	42.25	19.38	2062.65	10645.00
171	10	Tile	1	1	1	1.58			
171	10	Tile	1	1	1	14.30			
201	11	Tile	1	1	1	8.12	7.72	941.37	12190.00
201	11	Tile	1	1	1	4.16			
201	11	Tile	1	0	0	0.00			
201	11	Tile	1	1	1	11.07			
202	11	Tile	1	1	1	7.54			
320	12	Tile	1	1	1	0.71	0.54	53.02	9911.00
320	12	Tile	1	1	1	0.36			
8	1	Surface	2	1	0	0.00	3.68	328.45	8925.30
26	2	Surface	2	1	1	3.68	3.68	95.17	2586.10
93	3	Surface	2	1	1	3.08	3.08	152.93	4965.30
108	4	Surface	2	0	0	0.00	3.08	44.11	1432.10
146	5	Surface	2	1	1	647.00	742.03	13408.48	1807.00
146	5	Surface	2	1	1	827.00			
146	5	Surface	2	1	1	700.00			
146	5	Surface	2	1	1	794.12			

Appendix 23B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1989

- 3

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
151	6	Surface	2	1	1	305.88	233.42	42452.36	18186.80
151	6	Surface	2	1	1	417.14			
151	6	Surface	2	1	1	97.10			
152	6	Surface	2	1	1	196.00			
153	6	Surface	2	1	1	151.00			
155	7	Surface	2	1	1	80.37	78.86	2533.82	3213.20
155	7	Surface	2	1	1	113.50			
155	7	Surface	2	1	1	42.70			
167	8	Surface	2	1	1	63.98	57.00	965.44	1693.90
167	8	Surface	2	1	1	56.19			
167	8	Surface	2	1	1	62.86			
167	8	Surface	2	1	1	48.57			
167	8	Surface	2	1	1	62.37			
167	8	Surface	2	1	1	61.88			
167	8	Surface	2	1	1	73.42			
167	8	Surface	2	1	1	44.05			
167	8	Surface	2	1	1	46.15			
168	8	Surface	2	1	1	50.48			
168	8	Surface	2	0	0	0.00			
169	8	Surface	2	0	0	0.00			
171	9	Surface	2	1	0	0.00	1.65	139.96	8482.40
171	9	Surface	2	1	1	1.65			
171	9	Surface	2	0	0	0.00			
201	10	Surface	2	0	0	0.00	4.89	258.29	5282.10
201	10	Surface	2	1	1	4.89			
320	11	Surface	2	1	0	0.00	0.52	13.63	2621.70
320	11	Surface	2	1	1	0.52			
8	1	Tile	2	1	1	1.31	1.31	29.59	2259.00
26	2	Tile	2	1	1	3.98	3.98	44.54	1119.00
87	3	Tile	2	1	1	0.05	0.05	6.47	12936.00
93	4	Tile	2	1	1	2.00	2.00	351.76	17588.00
108	5	Tile	2	0	0	0.00	2.00	241.28	12064.00
145	6	Tile	2	1	1	105.97	133.78	9379.62	7011.00
145	6	Tile	2	1	1	99.20			
146	6	Tile	2	1	1	193.16			
146	6	Tile	2	1	1	212.00			
146	6	Tile	2	1	1	256.00			
146	6	Tile	2	1	1	68.60			
147	6	Tile	2	1	1	1.56			
151	7	Tile	2	1	1	146.00	60.93	5250.01	8617.00

Appendix 23B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha'	Event Volume,
151	7	Tile	2	1	1	141.00			
151	7	Tile	2	1	1	69.10			
152	7	Tile	2	1	1	19.40			
152	7	Tile	2	1	1	47.80			
153	7	Tile	2	1	1	6.15			
153	7	Tile	2	1	1	46.68			
153	7	Tile	2	1	1	11.28			
154	8	Tile	2	0	0	0.00	43.23	2466.27	5705.00
155	8	Tile	2	1	1	68.40			
155	8	Tile	2	1	1	18.06			
167	9	Tile	2	1	1	27.97	20.17	1202.13	5959.00
167	9	Tile	2	1	1	9.66			
168	9	Tile	2	0	0	0.00			
169	9	Tile	2	1	1	22.89			
171	10	Tile	2	1	1	23.08	31.13	6502.98	20892.00
171	10	Tile	2	1	1	37.60			
171	10	Tile	2	1	1	32.70			
201	11	Tile	2	1	1	9.09	8.09	952.24	11767.00
201	11	Tile	2	1	1	8.01			
201	11	Tile	2	0	0	0.00			
201	11	Tile	2	1	1	9.09			
202	11	Tile	2	1	1	6.18			
320	12	Tile	2	1	1	0.35	0.30	36.46	12154.00
320	12	Tile	2	1	1	0.25			

Appendix 24B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
8	1	Surface	1	0	0	0.00	0.00	0.00	0.00
26	2	Surface	1	0	0	0.00	0.00	0.00	0.00
93	3	Surface	1	0	0	0.00	0.00	0.00	0.00
108	4	Surface	1	0	0	0.00	0.00	0.00	0.00
146	5	Surface	1	1	1	319.00	366.00	2851.51	779.10
146	5	Surface	1	1	1	437.00			
146	5	Surface	1	1	1	342.00			
146	5	Surface	1	0	0	0.00			
151	6	Surface	1	1	1	235.29	188.34	20231.91	10742.00
151	6	Surface	1	1	1	291.43			
151	6	Surface	1	1	1	115.00			
152	6	Surface	1	1	1	176.00			
153	6	Surface	1	1	1	124.00			
155	7	Surface	1	1	1	107.35	98.05	2142.61	2185.30
155	7	Surface	1	1	1	84.36			
155	7	Surface	1	1	1	102.43			
167	8	Surface	1	0	0	0.00	98.05	2459.50	2508.50
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
169	8	Surface	1	0	0	0.00			
171	9	Surface	1	0	0	0.00	32.64	1441.32	4415.80
171	9	Surface	1	1	1	45.28			
171	9	Surface	1	0	0	0.00			
171	9	Surface	1	1	1	20.00			
201	10	Surface	1	0	0	0.00	47.43	1907.35	4021.40
201	10	Surface	1	1	1	47.43			
320	11	Surface	1	0	0	0.00	47.43	887.75	1871.70
320	11	Surface	1	0	0	0.00			
8	1	Tile	1	1	1	1.65	1.65	95.78	5805.00
26	2	Tile	1	1	1	2.05	2.05	42.93	2094.00
87	3	Tile	1	1	1	2.35	2.35	444.34	18908.00
93	4	Tile	1	1	1	2.77	2.77	676.43	24420.00
108	5	Tile	1	0	0	0.00	2.77	795.13	28705.00

Appendix 24B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
145	6	Tile	1	1	1	273.13	200.55	21851.75	10896.00
145	6	Tile	1	1	1	128.00			
146	6	Tile	1	1	1	143.16			
146	6	Tile	1	1	1	164.00			
146	6	Tile	1	1	1	232.00			
146	6	Tile	1	1	1	263.00			
147	6	Tile	1	0	0	0.00			
151	7	Tile	1	1	1	51.50	114.47	29611.92	25869.00
151	7	Tile	1	1	1	219.00			
151	7	Tile	1	1	1	152.00			
152	7	Tile	1	1	1	105.00			
152	7	Tile	1	1	1	81.30			
153	7	Tile	1	1	1	24.52			
153	7	Tile	1	1	1	124.48			
153	7	Tile	1	1	1	157.95			
154	8	Tile	1	1	1	78.91	55.00	6538.95	11889.00
155	8	Tile	1	1	1	110.00			
155	8	Tile	1	0	0	0.00			
167	9	Tile	1	1	1	519.83	183.32	42269.16	23058.00
167	9	Tile	1	1	1	13.42			
168	9	Tile	1	0	0	0.00			
169	9	Tile	1	1	1	16.70			
171	10	Tile	1	1	1	59.23	48.57	17394.11	35810.00
171	10	Tile	1	1	1	45.59			
171	10	Tile	1	1	1	40.90			
201	11	Tile	1	1	1	21.16	25.89	4656.06	17984.00
201	11	Tile	1	1	1	9.80			
201	11	Tile	1	0	0	0.00			
201	11	Tile	1	1	1	64.03			
202	11	Tile	1	1	1	8.57			
320	12	Tile	1	0	0	0.00	25.89	143.69	555.00
320	12	Tile	1	0	0	0.00			
8	1	Surface	2	1	1	1.19	1.19	451.62	37951.10
26	2	Surface	2	0	0	0.00	0.00	0.00	0.00
93	3	Surface	2	1	1	1.06	1.06	70.04	6607.50
108	4	Surface	2	0	0	0.00	1.06	9.66	911.60
146	5	Surface	2	1	1	368.00	512.06	23687.38	4625.90
146	5	Surface	2	1	1	600.00			
146	5	Surface	2	1	1	492.00			
146	5	Surface	2	1	1	588.24			

Appendix 24B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989

- 3

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
151	6	Surface	2	1	1	317.65	226.24	36019.63	15920.70
151	6	Surface	2	1	1	258.57			
151	6	Surface	2	1	1	126.00			
152	6	Surface	2	1	1	242.00			
153	6	Surface	2	1	1	187.00			
155	7	Surface	2	1	1	71.02	79.88	2912.62	3646.40
155	7	Surface	2	1	1	88.96			
155	7	Surface	2	1	1	79.65			
167	8	Surface	2	1	1	92.55	59.80	1500.17	2508.50
167	8	Surface	2	1	1	73.79			
167	8	Surface	2	1	1	80.85			
167	8	Surface	2	1	1	53.72			
167	8	Surface	2	1	1	46.81			
167	8	Surface	2	1	1	36.89			
167	8	Surface	2	1	1	59.57			
168	8	Surface	2	1	1	50.00			
168	8	Surface	2	0	0	44.05			
168	8	Surface	2	1	1	0.00			
169	8	Surface	2	0	0	0.00			
171	9	Surface	2	1	1	81.50	106.18	4688.70	4415.80
171	9	Surface	2	1	1	16.78			
171	9	Surface	2	1	1	220.26			
171	9	Surface	2	0	0	0.00			
201	10	Surface	2	0	0	0.00	27.23	0.00	0.00
201	10	Surface	2	1	1	27.23			
320	11	Surface	2	0	0	0.00	0.00	0.00	0.00
320	11	Surface	2	0	0	0.00			
8	1	Tile	2	1	1	3.13	3.13	105.45	3369.00
26	2	Tile	2	1	1	2.34	2.34	41.30	1765.00
87	3	Tile	2	1	1	1.33	1.33	105.88	7961.00
93	4	Tile	2	1	1	3.14	3.14	624.39	19885.00
108	6	Tile	2	0	0	0.00	3.14	343.83	10950.00
145	6	Tile	2	1	0	0.00	120.27	6309.26	5246.00
145	6	Tile	2	1	1	81.60			
146	6	Tile	2	1	1	47.54			
146	6	Tile	2	1	1	95.20			
146	6	Tile	2	1	1	197.00			
146	6	Tile	2	1	1	180.00			
147	6	Tile	2	0	0	0.00			
151	7	Tile	2	1	1	29.00	121.36	13921.64	11471.00

Appendix 24B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
151	7	Tile	2	1	1	74.70			
151	7	Tile	2	1	1	145.00			
152	7	Tile	2	1	1	175.00			
152	7	Tile	2	1	1	92.60			
153	7	Tile	2	1	1	55.53			
153	7	Tile	2	1	1	99.59			
153	7	Tile	2	1	1	299.49			
154	8	Tile	2	0	0	0.00	68.02	4523.33	6 650.00
155	8	Tile	2	1	1	65.90			
155	8	Tile	2	1	1	70.14			
167	9	Tile	2	1	1	425.89	188.76	16445.06	8712.00
167	9	Tile	2	1	1	49.93			
168	9	Tile	2	0	0	0.00			
169	9	Tile	2	1	1	90.47			
171	10	Tile	2	1	1	55.00	50.63	5545.36	10952.00
171	10	Tile	2	1	1	67.10			
171	10	Tile	2	1	1	29.80			
201	11	Tile	2	1	1	17.59	18.63	2622.17	14075.00
201	11	Tile	2	1	1	16.83			
201	11	Tile	2	0	0	0.00			
201	11	Tile	2	1	1	22.13			
202	11	Tile	2	1	1	17.97			
320	12	Tile	2	1	1	3.89	3.89	89.98	2313.00
320	12	Tile	2	0	0	0.00			

Appendix 25B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
4	1	Surface	1	1	0	2	5.02	415.11	8269
4	1	Surface	1	1	0	8			
10	2	Surface	1	1	0	8	7.89	793.73	10060
18	3	Surface	1	0	0	0	0.00	0.00	0
38	4	Surface	1	0	0	0	0.00	0.00	0
39	5	Surface	1	0	0	6	5.98	513.44	8586
39	5	Surface	1	1	0	6			
39	5	Surface	1	1	0	6			
53	6	Surface	1	1	0	1	0.80	136.91	17114
53	6	Surface	1	1	1	1			
58	7	Surface	1	0	0	0	0.00	0.00	0
101	8	Surface	1	1	1	2.00	2.00	80.82	4041
134	9	Surface	1	0	0	6	5.98	274.12	4584
136	10	Surface	1	1	0	6	5.98	330.18	5521
137	10	Surface	1	1	0	6			
137	11	Surface	1	1	0	6	5.98	180.75	3023
159	12	Surface	1	0	0	0	0.00	0.00	0
159	12	Surface	1	0	0	0			
195	13	Surface	1	1	0	0	0.00	0.00	0
225	14	Surface	1	1	0	0	0.00	0.00	0
231	15	Surface	1	0	0	0	0.00	0.00	0
250	16	Surface	1	1	1	6.71	8.89	617.19	6940
250	16	Surface	1	1	1	11.07			
250	17	Surface	1	1	1	12.82	12.82	913.96	7131
250	17	Surface	1	0	0	0			
258	18	Surface	1	1	1	2.32	3.88	293.70	7574
258	18	Surface	1	1	1	7.00			
258	18	Surface	1	1	1	2.32			
259	19	Surface	1	1	1	4.83	4.83	288.20	5964
262	20	Surface	1	1	1	1.74	3.22	178.05	5531
262	20	Surface	1	1	1	3.81			
262	20	Surface	1	1	1	4.11			
265	21	Surface	1	0	0	0	4.51	119.15	2641
265	22	Surface	1	1	1	4.51			
4	1	Tile	1	0	0	0	0.00	0.00	0
10	2	Tile	1	0	0	0			166
12	2	Tile	1	1	0	0	0.29	0.00	
18	3	Tile	1	1	0	0	0.36	46.16	12822
18	3	Tile	1	1	0	0			
24	4	Tile	1	1	0	0	0.29	19.67	6783

Appendix 25B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
32	5	Tile	1	1	0	0	0.29	25.36	8745
38	6	Tile	1	0	0	0	0.29	34.36	11849
38	6	Tile	1	1	1	0			
39	6	Tile	1	1	0	0			
39	6	Tile	1	0	0	0			
40	6	Tile	1	0	0	0			
45	7	Tile	1	0	0	0	0.29	7.16	2468
53	8	Tile	1	1	0	0	0.29	80.69	27825
53	8	Tile	1	1	0	0			
70	9	Tile	1	1	1	0	0.38	69.26	18227
71	9	Tile	1	1	1	0			
92	10	Tile	1	1	0	0	0.29	16.85	5811
101	11	Tile	1	1	0	0	0.29	48.76	16813
101	11	Tile	1	1	0	0			
111	12	Tile	1	1	0	0	0.29	13.98	4821
125	13	Tile	1	1	0	0	0.29	25.87	8919
134	14	Tile	1	1	0	0	0.29	37.34	12876
135	14	Tile	1	1	0	0			
136	15	Tile	1	1	0	0	0.33	52.83	15848
137	15	Tile	1	1	0	0			
137	15	Tile	1	1	1	0.33			
159	16	Tile	1	1	1	139.66	99.45	6267.22	6302
159	16	Tile	1	1	1	106.25			
159	16	Tile	1	1	1	52.44			
179	16	Tile	1	0	0	0		0.00	
195	17	Tile	1	1	1	18.02	13.38	185.40	1386
195	17	Tile	1	1	1	17.56			
196	17	Tile	1	1	1	4.55			
225	18	Tile	1	0	0	0.00	0.00	0.00	0
225	19	Tile	1	1	1	7.73	7.73	42.27	547
231	20	Tile	1	1	1	2.14	2.14	69.24	3231.00
250	21	Tile	1	0	0	0	5.45	972.26	17853
250	21	Tile	1	1	1	5.32			
250	21	Tile	1	1	1	8.72			
250	21	Tile	1	1	1	6.67			
250	21	Tile	1	1	1	5.23			
251	21	Tile	1	1	1	1.29			
258	22	Tile	1	1	1	3.49	3.67	323.15	8800
258	22	Tile	1	1	1	4.67			

Appendix 25B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
258	22	Tile	1	1	1	1.99			
258	22	Tile	1	1	1	4.55			
259	23	Tile	1	1	1	2.65	2.65	177.35	6695
262	24	Tile	1	1	1	3.15	3.32	182.94	5509
262	24	Tile	1	1	1	4.51			
262	24	Tile	1	1	1	3.19			
263	24	Tile	1	1	1	3.36			
263	24	Tile	1	1	1	2.40			
265	25	Tile	1	1	1	1.77	1.77	46.86	2643
4	1	Surface	2	1	0	2	2.06	292.03	14211
4	1	Surface	2	1	0	2			
10	2	Surface	2	1	0	7	6.93	411.08	5932
18	3	Surface	2	1	0	2	2.38	59.24	2489
38	4	Surface	2	1	0	3	3.36	105.03	3126
39	5	Surface	2	1	0	3	3.36	107.64	3204
39	5	Surface	2	0	0	3			
39	5	Surface	2	1	0	3			
53	6	Surface	2	1	0	0	0.48	85.98	17912
53	6	Surface	2	1	1	0.48			
58	7	Surface	2	0	0	0	0.00	0.00	0
101	8	Surface	2	1	1	1.20	1.20	35.26	2938
134	9	Surface	2	1	0	3	3.36	115.02	3423
136	10	Surface	2	1	0	3	3.36	143.59	4274
137	10	Surface	2	1	0	3			
137	11	Surface	2	1	0	3	3.36	57.24	1704
159	12	Surface	2	1	1	426.83	597.64	7901.64	1322.15
159	12	Surface	2	1	1	768.44			
195	13	Surface	2	1	0	0	0.00	0.00	0
225	14	Surface	2	1	0	0	0.00	0.00	0
231	15	Surface	2	1	1	0.15	0.15	6.30	4186.26
250	16	Surface	2	1	1	8.87	8.33	488.19	5864
250	16	Surface	2	1	1	7.79			
250	17	Surface	2	1	1	9.11	9.33	550.93	5906
250	17	Surface	2	1	1	9.54			
258	18	Surface	2	1	1	5.23	5.23	305.71	5841
258	18	Surface	2	1	1	5.30			
258	18	Surface	2	1	1	5.17			
259	19	Surface	2	1	1	4.70	4.70	319.08	6792
262	20	Surface	2	1	1	3.23	4.35	330.71	7610

Appendix 25B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990

- 4

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
262	20	Surface	2	1	1	6.04			
262	20	Surface	2	1	1	3.77			
265	21	Surface	2	1	1	3.73	3.75	100.13	2673
265	21	Surface	2	1	1	3.76			
4	1	Tile	2	0	0	0	0.00	0.00	0
10	2	Tile	2	1	0	1	1.17	24.87	2126
12	2	Tile	2	1	0	1			
18	3	Tile	2	1	0	1	0.76	103.05	13559
18	3	Tile	2	1	0	0			
24	4	Tile	2	0	0	1	0.50	30.22	6043
32	5	Tile	2	0	0	1	0.50	36.19	7237
38	6	Tile	2	0	0	1	0.27	30.01	11115
38	6	Tile	2	1	0	0			
39	6	Tile	2	1	0	1			
39	6	Tile	2	1	0	1			
40	6	Tile	2	0	0	1			
45	7	Tile	2	0	0	1	0.50	26.11	5222
53	8	Tile	2	1	0	1	0.50	79.39	15878
53	8	Tile	2	1	0	1			
70	9	Tile	2	0	0	1	0.50	128.65	25729
71	9	Tile	2	0	0	1			
92	10	Tile	2	1	0	1	0.50	28.72	5744
101	11	Tile	2	1	1	1	0.50	60.26	12052
101	11	Tile	2	1	0	1			
111	12	Tile	2	1	0	1	0.50	26.34	5268
125	13	Tile	2	1	0	1	0.50	43.59	8718
134	14	Tile	2	1	0	1	0.50	41.19	8237
135	14	Tile	2	1	0	1			
136	15	Tile	2	1	0	1	0.50	56.66	11331
137	15	Tile	2	1	0	1			
137	15	Tile	2	1	0	1			
159	16	Tile	2	1	1	205.56	151.73	21938.92	14459
159	16	Tile	2	1	1	200.00			
159	16	Tile	2	1	1	49.64			
179	16	Tile	2	1	1	5.24			
195	17	Tile	2	1	1	4.78	12.34	598.92	4853
195	17	Tile	2	1	1	18.60			
196	17	Tile	2	1	1	13.64			
225	18	Tile	2	0	0	5.00	5.00	6.75	135
225	19	Tile	2	1	1	5.00	5.00	88.50	1770

Appendix 25B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990

- 5

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
231	20	Tile	2	1	1	2.16	2.16	54.63	2531
250	21	Tile	2	0	0	0	10.16	2116.81	20840
250	21	Tile	2	1	1	12.06			
250	21	Tile	2	1	1	8.56			
250	21	Tile	2	1	1	12.06			
250	21	Tile	2	1	1	12.42			
251	21	Tile	2	1	1	5.70			
258	22	Tile	2	1	1	4.23	4.39	205.37	4674
258	22	Tile	2	1	1	7.33			
258	22	Tile	2	1	1	1.68			
258	22	Tile	2	1	1	4.34			
259	23	Tile	2	1	1	4.50	4.50	132.22	2936
262	24	Tile	2	1	1	2.10	3.34	99.22	2975
262	24	Tile	2	1	1	5.41			
262	24	Tile	2	1	1	1.77			
263	24	Tile	2	1	1	4.06			
263	24	Tile	2	0	0	0			
265	25	Tile	2	1	1	6.03	6.03	88.13	1462

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
4	1	Surface	1	1	1	1.09	1.15	134.43	11740.91
4	1	Surface	1	1	1	1.20			
10	2	Surface	1	1	1	1.73	1.73	105.08	6074.11
18	3	Surface	1	0	0	1.34	1.34	0.00	0.00
38	4	Surface	1	0	0	1.34	1.34	0.00	0.00
39	5	Surface	1	0	0	1.34	1.34	123.89	9245.32
39	5	Surface	1	1	0	1.34			
39	5	Surface	1	1	0	1.34			
53	6	Surface	1	1	0	1.34	0.80	146.79	18348.41
53	6	Surface	1	1	1	0.80			
58	7	Surface	1	0	0		0.00	0.00	0.00
101	8	Surface	1	1	0	0.88	0.88	34.85	3959.97
134	9	Surface	1	1	0	1.34	1.34	65.06	4855.41
136	10	Surface	1	1	0	1.34	1.34	90.14	6727.10
137	10	Surface	1	1	0	1.34			
137	11	Surface	1	1	0	1.34	1.34	50.51	3769.25
159	12	Surface	1	0	0		0.00	0.00	0.00
159	12	Surface	1	0	0				
195	13	Surface	1	1	0		0.00	0.00	0.00
225	14	Surface	1	1	0		0.00	0	0.00
231	15	Surface	1	0	1	0.07	0.07	3	4289.70
250	16	Surface	1	1	1	2.01	2.35	178	7590.22
250	16	Surface	1	1	1	2.68			
250	17	Surface	1	1	1	5.79	5.18	504	9720.52
250	17	Surface	1	1	1	4.58			
258	18	Surface	1	1	1	1.51	4.18	261	6238.98
258	18	Surface	1	1	1	4.20			
258	18	Surface	1	1	1	6.82			
259	19	Surface	1	1	1	2.82	2.82	177	6293.93
262	20	Surface	1	1	1	1.29	2.02	131	6468.49
262	20	Surface	1	1	1	3.06			
262	20	Surface	1	1	1	1.71			
265	21	Surface	1	1	1	8.28	5.72	71	1241.33
265	21	Surface	1	1	1	3.16			
4	1	Tile	1	0	0	0.98	1.64	10	624.00
10	2	Tile	1	1	1	2.30	2.30	114	4957.00
12	2	Tile	1	1	0	0.98			
18	3	Tile	1	1	1	0.27	0.32	42	13052.00
18	3	Tile	1	1	1	0.37			
24	4	Tile	1	0	0	0.98	0.98	53	5404.00

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
32	5	Tile	1	0	0	0.98	0.98	54	5532.00
38	6	Tile	1	0	0	0.98	0.65	77	11738.00
38	6	Tile	1	1	0	0.65			
39	6	Tile	1	1	0	0.98			
39	6	Tile	1	1	0	0.98			
40	6	Tile	1	0	0	0.98			
46	7	Tile	1	0	0	0.98	0.98	12	1255.00
53	8	Tile	1	1	0	0.98	0.98	263	26871.00
53	8	Tile	1	1	0	0.98			
71	9	Tile	1	0	0	0.98	0.98	198	20169.00
92	10	Tile	1	1	0	0.98	0.98	56	5723.00
101	11	Tile	1	1	0	0.98	0.98	136	13866.00
101	11	Tile	1	1	0	0.98			
111	12	Tile	1	1	0	0.98	0.98	41	4209.00
125	13	Tile	1	1	0	0.98	0.98	77	7829.00
134	14	Tile	1	1	0	0.98	0.98	97	9866.00
135	14	Tile	1	1	0	0.98			
136	15	Tile	1	1	0	0.98	0.33	48	14257.00
137	15	Tile	1	1	0	0.98			
137	15	Tile	1	1	1	0.33			
159	16	Tile	1	1	1	210.19	133.45	9522	7135.00
159	16	Tile	1	1	1	132.46			
159	16	Tile	1	1	1	57.69			
179	16	Tile	1	0	0				
195	17	Tile	1	1	1	3.07	3.23	29	902.00
195	17	Tile	1	1	1	4.20			
196	17	Tile	1	1	1	2.42			
225	18	Tile	1	0	0	6.36	6.36	0	0.00
225	19	Tile	1	1	1	6.36	6.36	63	990.00
231	20	Tile	1	1	1	2.07	2.07	51	2472.00
250	21	Tile	1	0	0		3.76	606	16113.00
250	21	Tile	1	1	1	4.43			
250	21	Tile	1	1	1	5.37			
250	21	Tile	1	1	1	3.73			
250	21	Tile	1	1	1	2.68			
251	21	Tile	1	1	1	2.58			
258	22	Tile	1	1	1	1.34	2.32	189	8152.00
258	22	Tile	1	1	1	2.53			
258	22	Tile	1	1	1	3.31			
258	22	Tile	1	1	1	2.10			

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
259	23	Tile	1	1	1	1.99	1.99	105	5274.00
262	24	Tile	1	1	1	1.40	1.76	85	4834.00
262	24	Tile	1	1	1	2.63			
262	24	Tile	1	1	1	1.77			
263	24	Tile	1	1	1	1.40			
263	24	Tile	1	1	1	1.58			
265	25	Tile	1	1	1	1.77	1.77	37	2084.00
4	1	Surface	2	1	1		0.00	0	15733.21
4	1	Surface	2	1	1				
10	2	Surface	2	1	1	0.65	0.65	42	6491.12
18	3	Surface	2	1	1	2.23	2.23	66	2941.69
38	4	Surface	2	1	0	0.72	0.72	29	4021.39
39	5	Surface	2	1	0	0.72	0.72	26	3620.55
39	5	Surface	2	0	0	0.72			
39	5	Surface	2	1	0	0.72			
53	6	Surface	2	1	0	0.72	0.72	140	19466.90
53	6	Surface	2	1	1	0.72			
58	7	Surface	2	0	0	0.72	0.72	0	0.00
101	8	Surface	2	1	1	0.72	0.72	38	5343.54
134	9	Surface	2	1	0	0.72	0.72	47	6533.15
136	10	Surface	2	1	0	0.72	0.72	44	6109.67
137	10	Surface	2	1	0	0.72			
137	11	Surface	2	1	0	0.72	0.72	30	4144.23
159	12	Surface	2	1	1	396.34	427.34	12087	2828.55
159	12	Surface	2	1	1	458.33			
195	13	Surface	2	1	1	44.58	44.58	582	1305.98
225	14	Surface	2	1	1	11.00	11.00	209	1900.79
231	15	Surface	2	1	1	0.08	0.08	4	5094.62
250	16	Surface	2	1	1	4.43	6.49	351	5398.49
250	16	Surface	2	1	1	8.56			
250	17	Surface	2	1	1	5.70	11.67	707	6061.18
250	17	Surface	2	1	1	17.65			
258	18	Surface	2	1	1	2.89	5.11	415	8126.83
258	18	Surface	2	1	1	7.15			
258	18	Surface	2	1	1	5.30			
259	19	Surface	2	1	1	2.18	2.18	138	6345.65
262	20	Surface	2	1	1	2.26	2.54	228	8967.32
262	20	Surface	2	1	1	1.94			
262	20	Surface	2	1	1	3.42			
265	21	Surface	2	1	1	3.13	4.31	116	2683.08

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

- 4

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
265	21	Surface	2	1	1	5.49			
4	1	Tile	2	0	0	0.56	0.56	0	0.00
10	2	Tile	2	1	1	0.49	0.53	18	3381.00
12	2	Tile	2	1	0	0.56			
18	3	Tile	2	1	1	0.98	0.81	111	13714.00
18	3	Tile	2	1	1	0.64			
24	4	Tile	2	1	0	0.56	0.56	33	5813.00
32	5	Tile	2	1	0	0.56	0.56	39	7033.00
38	6	Tile	2	0	0	0.56	0.25	33	13331.00
38	6	Tile	2	1	1	0.25			
39	6	Tile	2	1	0	0.56			
39	6	Tile	2	1	0	0.56			
40	6	Tile	2	0	0	0.56			
46	7	Tile	2	1	0	0.56	0.56	18	3303.00
53	8	Tile	2	1	0	0.56	0.56	117	20929.00
53	8	Tile	2	1	0	0.56			
71	9	Tile	2	0	0	0.56	0.56	150	26822.00
92	10	Tile	2	1	0	0.56	0.56	33	5936.00
101	11	Tile	2	1	0	0.56	0.56	59	10529.00
101	11	Tile	2	1	0	0.56			
111	12	Tile	2	1	0	0.56	0.56	28	5061.00
125	13	Tile	2	1	0	0.56	0.56	40	7163.00
134	14	Tile	2	1	0	0.56	0.56	29	5144.00
135	14	Tile	2	1	0	0.56			
136	15	Tile	2	1	0	0.56	0.56	48	8562.00
137	15	Tile	2	1	0	0.56			
137	15	Tile	2	1	0				
159	16	Tile	2	1	1	262.22	128.26	19605	15285.00
159	16	Tile	2	1	1	162.50			
159	16	Tile	2	1	1	82.68			
179	16	Tile	2	1	1	5.65			
195	17	Tile	2	1	1	1.75	7.65	527	6879.00
195	17	Tile	2	1	1	11.36			
196	17	Tile	2	1	1	9.85			
225	18	Tile	2	0	0	5.90	5.90	0	0.00
225	19	Tile	2	1	1	5.90	5.90	52	881.00
231	20	Tile	2	1	1	2.59	2.59	75	2874.00
250	21	Tile	2	0	0		7.79	1100	14125.00
250	21	Tile	2	1	1	7.09			
250	21	Tile	2	1	1	6.04			

Appendix 26B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

- 5

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
250	21	Tile	2	1	1	4.41			
250	21	Tile	2	1	1	15.69			
251	21	Tile	2	1	1	5.70			
258	22	Tile	2	1	1	1.68	5.25	212	4041.00
258	22	Tile	2	1	1	5.33			
258	22	Tile	2	1	1	7.13			
258	22	Tile	2	1	1	6.85			
259	23	Tile	2	1	1	2.52	2.52	82	3265.00
262	24	Tile	2	1	1	3.08	3.29	99	3002.00
262	24	Tile	2	1	1	4.66			
262	24	Tile	2	1	1	5.32			
263	24	Tile	2	1	1	3.15			
263	24	Tile	2	0	0	0.25			
265	25	Tile	2	1	1	2.20	2.20	27	1236.00

Appendix 27B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
4	1	Surface	1	1	1	0.50	1.60	220.28	13767.77
4	1	Surface	1	1	1	2.70		0.00	
10	2	Surface	1	0	0	0.00	0.00	0.00	0.00
18	3	Surface	1	0	0	0.00	0.00	0.00	0.00
38	4	Surface	1	0	0	0.00	0.00	0.00	0.00
39	5	Surface	1	0	0	0.00	0.00	0.00	0.00
39	5	Surface	1	0	0	1.35		0.00	
39	5	Surface	1	0	0	1.35		0.00	
53	6	Surface	1	1	0	1.35	1.35	307.58	22783.58
53	6	Surface	1	1	0	1.35		0.00	
58	7	Surface	1	0	0	1.35	1.35	71.05	5262.72
101	8	Surface	1	0	0	0.00	0.00	0.00	0.00
134	9	Surface	1	0	0	0.00	0.00	0.00	0.00
136	10	Surface	1	0	0	0.00	0.00	0.00	0.00
137	10	Surface	1	0	0	0.00		0.00	
137	11	Surface	1	0	0	0.00	0.00	0.00	0.00
159	12	Surface	1	1	1	289.37	289.37	6435.74	2224.05
159	12	Surface	1	0	0	0.00		0.00	
195	13	Surface	1	1	0	0.00	0.00	0.00	0.00
225	14	Surface	1	1	0	0.00	0.00	0.00	0.00
231	15	Surface	1	0	0	0.00	0.00	0.00	0.00
250	16	Surface	1	1	1	12.77	16.95	865.36	5104.32
250	16	Surface	1	1	1	21.14		0.00	
250	17	Surface	1	1	1	22.78	22.78	1393.55	6116.14
250	17	Surface	1	0	0	0.00		0.00	
258	18	Surface	1	1	1	4.23	11.04	516.55	4677.62
258	18	Surface	1	1	1	14.00		0.00	
258	18	Surface	1	1	1	14.90		0.00	
259	19	Surface	1	1	1	8.56	8.56	364.03	4254.14
262	20	Surface	1	1	1	3.87	6.75	297.75	4412.54
262	21	Surface	1	1	1	7.95		0.00	
262	20	Surface	1	1	1	8.42		0.00	
265	21	Surface	1	0	0	0.00	0.00	0.00	0.00
265	21	Surface	1	0	0	0.00		0.00	
4	1	Tile	1	0	0	0.03	0.03	0.16	525.00
10	2	Tile	1	1	1	0.03	0.03	1.16	3858.00
12	2	Tile	1	1	0	0.81		0.00	
18	3	Tile	1	1	1	0.98	1.46	369.16	25372.00
18	3	Tile	1	1	1	1.93		0.00	
24	4	Tile	1	1	0	0.81	0.81	77.44	9560.00

Appendix 27B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
32	5	Tile	1	1	0	0.81	0.81	89.44	11042.00
38	6	Tile	1	0	0	0.81	0.81	141.09	17419.00
38	6	Tile	1	1	1	0.81		0.00	
39	6	Tile	1	1	0	0.81		0.00	
39	6	Tile	1	1	0	0.81		0.00	
40	6	Tile	1	1	0	0.81		0.00	
46	7	Tile	1	1	0	0.81	0.81	30.08	3714.00
53	8	Tile	1	1	0	0.81	0.81	315.75	38982.00
53	8	Tile	1	1	0	0.81		0.00	
71	9	Tile	1	1	0	0.81	0.81	291.29	35962.00
92	10	Tile	1	1	0	0.81	0.81	55.02	6792.00
101	11	Tile	1	1	0	0.81	0.81	184.96	22835.00
101	11	Tile	1	1	0	0.81		0.00	
111	12	Tile	1	1	0	0.81	0.81	57.54	7104.00
125	13	Tile	1	1	0	0.81	0.81	101.20	12494.00
134	14	Tile	1	1	0	0.81	0.81	145.35	17945.00
135	14	Tile	1	1	0	0.81		0.00	
136	15	Tile	1	1	0	0.81	0.83	279.83	33715.00
137	15	Tile	1	1	0	0.81		0.00	
137	15	Tile	1	1	1	0.83		0.00	
159	16	Tile	1	1	1	91.90	60.12	2128.21	3540.00
159	16	Tile	1	1	1	60.00		0.00	
159	16	Tile	1	1	1	28.46		0.00	
179	16	Tile	1	0	0	0.00		0.00	
195	17	Tile	1	1	1	17.44	9.69	265.92	2743.00
195	17	Tile	1	1	1	5.58		0.00	
196	17	Tile	1	1	1	6.06		0.00	
225	18	Tile	1	1	1	10.00	10.00	10.90	109.00
225	19	Tile	1	1	1	10.00	10.00	118.70	1187.00
231	20	Tile	1	1	1	2.07	2.07	58.51	2828.00
250	21	Tile	1	1	1	0.55	7.35	2523.86	34342.00
250	21	Tile	1	1	1	11.35		0.00	
250	21	Tile	1	1	1	10.37		0.00	
250	21	Tile	1	1	1	10.59		0.00	
250	21	Tile	1	1	1	9.31		0.00	
251	21	Tile	1	1	1	6.17		0.00	
258	22	Tile	1	1	1	3.02	6.09	880.78	14459.00
258	22	Tile	1	1	1	7.50		0.00	
258	22	Tile	1	1	1	8.25		0.00	
258	22	Tile	1	1	1	5.59		0.00	

Appendix 27B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Meta, mg/ha	Event Volume, L/plot
259	23	Tile	1	1	1	2.98	2.98	356.22	11953.00
262	24	Tile	1	1	1	2.10	4.48	472.46	10541.00
262	24	Tile	1	1	1	5.64		0.00	
262	24	Tile	1	1	1	5.32		0.00	
263	24	Tile	1	1	1	5.24		0.00	
263	24	Tile	1	1	1	4.11		0.00	
265	25	Tile	1	1	1	2.23	2.23	105.69	4731.00
4	1	Surface	2	1	1	3.12	1.56	240.34	15406.71
4	1	Surface	2	0	0	0.00		0.00	
10	2	Surface	2	1	1	0.00	0.00	0.00	0.00
18	3	Surface	2	1	1	7.13	7.13	156.96	2201.42
38	4	Surface	2	1	0	3.42	3.42	80.48	2353.35
39	5	Surface	2	0	0	3.42	3.42	68.88	2013.93
39	5	Surface	2	1	0	3.42		0.00	
39	5	Surface	2	1	0	3.42		0.00	
53	6	Surface	2	1	1	3.42	0.80	78.05	22256.66
53	6	Surface	2	0	0	0.80		0.00	
58	7	Surface	2	1	1	0.00	0.00	0.00	0.00
101	8	Surface	2	1	0	2.00	2.00	77.91	3895.32
134	9	Surface	2	1	0	3.42	3.42	203.31	5944.81
136	10	Surface	2	1	0	3.42	3.42	202.65	5925.41
137	10	Surface	2	1	0	3.42		0.00	
137	11	Surface	2	1	1	1.00	1.00	33.59	3358.70
159	12	Surface	2	1	1	435.48	435.48	4012.11	921.30
159	12	Surface	2	1	0	0.00		0.00	
195	13	Surface	2	1	0	0.00	0.00	0.00	0.00
225	14	Surface	2	1	1	0.00	0.00	0.00	0.00
231	15	Surface	2	1	1	0.15	0.15	4.03	2721.87
250	16	Surface	2	1	1	12.77	16.79	880.13	5243.33
250	16	Surface	2	1	1	20.81		0.00	
250	17	Surface	2	1	1	23.73	20.53	1191.11	5802.57
250	17	Surface	2	1	1	17.32		0.00	
258	18	Surface	2	1	1	7.85	9.70	504.33	5201.30
258	18	Surface	2	1	1	6.67		0.00	
258	18	Surface	2	1	1	14.57		0.00	
259	19	Surface	2	1	1	7.95	7.95	527.55	6633.36
262	20	Surface	2	1	1	3.23	3.95	219.64	5556.89
262	20	Surface	2	1	1	6.27		0.00	
262	20	Surface	2	1	1	2.36		0.00	
265	21	Surface	2	1	1	2.24	2.13	42.37	1984.83

Appendix 27B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1990_

-4

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot
265	21	Surface	2	0	0	2.03		0.00	
4	1	Tile	2	1	1	1.83	1.83	13.36	730.00
10	2	Tile	2	1	0	0.17	0.17	7.65	4501.00
12	2	Tile	2	1	1	1.83		0.00	
18	3	Tile	2	1	1	1.19	3.09	470.65	15256.00
18	3	Tile	2	1	0	4.98		0.00	
24	4	Tile	2	1	0	1.83	1.83	162.08	8857.00
32	5	Tile	2	0	0	1.83	1.83	140.29	7666.00
38	6	Tile	2	1	0	1.83	1.83	335.53	18335.00
38	6	Tile	2	1	0	1.83		0.00	
39	6	Tile	2	1	0	1.83		0.00	
39	6	Tile	2	1	0	1.83		0.00	
40	6	Tile	2	1	0	1.83		0.00	
46	7	Tile	2	1	0	1.83	1.83	138.17	7550.00
53	8	Tile	2	1	0	1.83	1.83	283.60	15497.00
53	8	Tile	2	1	0	1.83		0.00	
71	9	Tile	2	1	0	1.83	1.83	487.51	26640.00
92	10	Tile	2	1	0	1.83	1.83	83.63	4570.00
101	11	Tile	2	1	0	1.83	1.83	188.75	10314.00
101	11	Tile	2	1	0	1.83		0.00	
111	12	Tile	2	1	0	1.83	1.83	79.40	4339.00
125	13	Tile	2	1	0	1.83	1.83	131.30	7175.00
134	14	Tile	2	1	0	1.83	1.83	150.99	8251.00
135	14	Tile	2	1	0	1.83		0.00	
136	15	Tile	2	1	0	1.83	1.00	158.79	15879.00
137	15	Tile	2	1	1	1.83		0.00	
137	15	Tile	2	1	1	1.00		0.00	
159	16	Tile	2	1	1	6.67	28.88	1199.65	4154.00
159	16	Tile	2	1	1	26.40		0.00	
159	16	Tile	2	0	0	53.57		0.00	
179	16	Tile	2	1	1	0.00		0.00	
195	17	Tile	2	1	1	25.00	13.83	505.22	3653.00
195	17	Tile	2	1	1	5.58		0.00	
196	17	Tile	2	1	1	10.91		0.00	
225	18	Tile	2	1	1	3.36	3.36	8.78	261.00
225	19	Tile	2	1	1	3.36	3.36	77.46	2303.00
231	20	Tile	2	1	1	2.07	2.07	65.40	3161.00
250	21	Tile	2	1	1	2.00	8.98	2365.05	26348.00
250	21	Tile	2	1	1	15.89		0.00	
250	21	Tile	2	1	1	4.70		0.00	

Appendix 27B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1990

- 5

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., µg/L	Event Metol. Conc., µg/L	Event loss, Metol., mg/ha	Event Volume, L/plot L/plot
250	21	Tile	2	1	1	22.79		0.00	
250	21	Tile	2	1	1	3.92		0.00	
251	21	Tile	2	1	1	4.56		0.00	
258	22	Tile	2	1	1	6.54	10.04	591.25	5887.00
258	22	Tile	2	1	1	13.00		0.00	
258	22	Tile	2	1	1	7.34		0.00	
258	22	Tile	2	1	1	13.29		0.00	
259	23	Tile	2	1	1	4.27	4.27	160.31	3753.00
262	24	Tile	2	1	1	4.72	9.39	364.92	3887.00
262	24	Tile	2	1	1	9.02		0.00	
262	24	Tile	2	1	1	11.17		0.00	
263	24	Tile	2	1	1	12.06		0.00	
263	24	Tile	2	1	1	9.97		0.00	
265	25	Tile	2	1	1	7.77	7.77	197.80	2547.00