

Decelerated Degradation of a Sulfonylurea Herbicide in Four Fungicide-Treated Soils

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Table S1: Iodosulfuron-methyl-sodium and metabolites metsulfuron-methyl, AE F145740 and AE 0014966 (mean \pm standard deviation (SD)) recovered from soil samples (n = 3) treated with iodosulfuron-methyl-sodium only (controls, H), or with tebuconazole and prothioconazole (HF) 14 days prior to (dose 1), then on the same day as the herbicide treatment (day 0; dose 2), and again 5 days after application of radiolabeled iodosulfuron-methyl-sodium (dose 3). The samples were incubated under controlled aerobic conditions in the dark for up to 77 days at 20 ± 2 °C.

Degradation pattern Mean \pm SD (% AR)	Soil	Condition	Incubation time in days								
			0	1	2	3	6	12	20	35	
Iodosulfuron-methyl-sodium	Am Fischteich Silt loam (1)	H		70.2 \pm 0.6	50.4 \pm 3.2	38.6 \pm 4.3	17.4 \pm 3.3	9.5 \pm 2.6	3.0 \pm 0.4	1.4 \pm 0.1	
		HF	86.9 \pm 1.0	88.1 \pm 0.5	76.8 \pm 0.7	75.1 \pm 3.3	39.2 \pm 4.3	29.9 \pm 5.3	10.5 \pm 4.2	2.6 \pm 0.4	
	Bellevue Silt loam (2)	H		67.7 \pm 2.4	57.5 \pm 3.3	52.6 \pm 4.1	36.7 \pm 0.9	15.1 \pm 1.6	14.0 \pm 4.2	4.3 \pm 0.3	
		HF	91.6 \pm 0.7	83.0 \pm 4.4	79.8 \pm 2.4	76.1 \pm 2.4	57.4 \pm 1.3	25.8 \pm 3.2	19.5 \pm 0.1	6.9 \pm 2.5	
	Speyer 2.1 Loamy sand	H		81.4 \pm 1.9	77.0 \pm 1.0	67.7 \pm 5.7	59.3 \pm 3.7	59.2 \pm 2.2	48.0 \pm 1.2	29.5 \pm 1.9	
		HF	95.4 \pm 1.2	88.7 \pm 2.7	84.9 \pm 1.3	80.4 \pm 4.9	71.2 \pm 2.3	71.2 \pm 0.7	62.8 \pm 3.7	51.0 \pm 7.8	
	Pavillion Sandy loam	H		76.4 \pm 2.1	52.4 \pm 2.9	33.4 \pm 8.5	16.5 \pm 6.1	3.0 \pm 1.1	2.4 \pm 1.5	2.8 \pm 1.1	
		HF	100.8 \pm 1.7	85.4 \pm 2.0	73.8 \pm 3.4	44.7 \pm 5.6	28.3 \pm 2.9	13.0 \pm 4.8	2.9 \pm 1.0	2.1 \pm 0.2	
	Metsulfuron-methyl	Am Fischteich Silt loam (1)	H		16.0 \pm 1.6	27.0 \pm 1.7	35.2 \pm 2.3	42.8 \pm 2.2	67.9 \pm 2.5	43.7 \pm 7.5	34.5 \pm 2.7
			HF	2.8 \pm 0.3	5.0 \pm 0.3	10.9 \pm 0.7	13.5 \pm 1.4	26.4 \pm 2.9	51.1 \pm 5.5	53.2 \pm 5.6	37.3 \pm 3.7
Bellevue Silt loam (2)		H		22.3 \pm 1.5	30.1 \pm 2.9	33.0 \pm 4.3	43.7 \pm 1.3	57.4 \pm 0.3	58.0 \pm 6.4	42.7 \pm 2.6	
		HF	3.0 \pm 0.1	5.1 \pm 0.6	7.4 \pm 0.2	12.4 \pm 1.2	30.6 \pm 1.3	53.9 \pm 4.8	59.4 \pm 0.2	48.2 \pm 6.4	
Speyer 2.1 Loamy sand		H		11.9 \pm 1.0	10.8 \pm 1.1	20.1 \pm 6.8	24.5 \pm 5.1	17.3 \pm 1.9	25.5 \pm 1.2	40.9 \pm 2.1	
		HF	4.3 \pm 0.1	6.0 \pm 1.1	7.8 \pm 0.4	10.6 \pm 3.8	14.3 \pm 2.7	11.5 \pm 0.4	14.8 \pm 3.3	18.7 \pm 8.3	
Pavillion Sandy loam		H		12.3 \pm 1.5	35.6 \pm 2.5	47.4 \pm 3.9	62.2 \pm 5.5	65.0 \pm 0.8	62.5 \pm 2.0	56.6 \pm 0.4	
		HF	2.4 \pm 0.2	4.6 \pm 0.3	19.0 \pm 4.7	40.2 \pm 4.2	51.6 \pm 1.5	63.2 \pm 3.1	67.4 \pm 1.4	60.2 \pm 3.9	
AE F145740		Am Fischteich Silt loam (1)	H		7.1 \pm 0.4	9.0 \pm 0.4	8.0 \pm 0.7	9.2 \pm 1.0	5.4 \pm 0.7	9.5 \pm 1.1	6.2 \pm 1.0
			HF	6.2 \pm 1.6	3.5 \pm 0.5	7.5 \pm 0.8	4.8 \pm 0.6	14.0 \pm 1.2	5.9 \pm 0.9	5.5 \pm 0.8	6.0 \pm 0.7
	Bellevue Silt loam (2)	H		5.6 \pm 0.5	5.6 \pm 0.7	5.8 \pm 1.2	6.3 \pm 0.7	6.9 \pm 0.3	6.4 \pm 0.7	7.3 \pm 0.9	
		HF	4.1 \pm 0.1	6.1 \pm 2.5	5.1 \pm 1.1	4.9 \pm 1.4	5.8 \pm 1.6	6.1 \pm 1.4	4.9 \pm 0.1	7.0 \pm 0.5	
	Speyer 2.1 Loamy sand	H		5.1 \pm 0.8	6.5 \pm 1.4	7.8 \pm 1.2	9.0 \pm 2.0	10.3 \pm 0.7	11.1 \pm 0.4	9.9 \pm 0.7	
		HF	1.5 \pm 0.1	3.0 \pm 1.1	4.4 \pm 0.7	7.9 \pm 1.2	8.2 \pm 2.6	8.6 \pm 0.8	9.4 \pm 1.1	10.6 \pm 0.8	
	Pavillion Sandy loam	H		4.8 \pm 0.8	7.4 \pm 0.2	8.0 \pm 1.2	8.4 \pm 0.5	7.2 \pm 0.2	6.8 \pm 0.3	7.5 \pm 0.3	
		HF	1.6 \pm 0.2	3.2 \pm 0.1	5.0 \pm 0.5	6.9 \pm 1.3	7.1 \pm 0.3	6.8 \pm 0.3	6.0 \pm 0.2	6.7 \pm 0.7	
	AE 0014966	Am Fischteich Silt loam (1)	H		*	*	*	0.4 \pm 0.6	2.8 \pm 0.1	3.0 \pm 1.0	20.6 \pm 0.7
			HF	*	*	*	*	*	1.4 \pm 0.1	3.7 \pm 1.3	18.7 \pm 0.4
Bellevue Silt loam (2)		H		0.4 \pm 0.7	*	*	0.8 \pm 0.7	5.0 \pm 0.9	5.0 \pm 2.4	18.9 \pm 0.3	
		HF	*	*	*	*	*	2.7 \pm 2.5	3.8 \pm 0.1	13.9 \pm 5.6	
Speyer 2.1 Loamy sand		H		*	*	*	*	1.8 \pm 0.4	1.7 \pm 0.7	1.5 \pm 0.1	
		HF	*	*	*	*	*	1.4 \pm 0.4	1.7 \pm 0.5	2.4 \pm 0.8	
Pavillion Sandy loam		H		*	*	1.5 \pm 0.5	3.1 \pm 1.1	2.7 \pm 0.5	3.0 \pm 3.2	8.9 \pm 1.3	
		HF	*	*	*	0.9 \pm 0.7	2.4 \pm 0.6	6.0 \pm 0.5	5.1 \pm 1.6	5.0 \pm 1.0	