

Supplemental Table 1: Intensity-weighted lifetime-days of use of specific pesticides and ESRD risk, adjusted for age and state, among male pesticide applicators in the Agricultural Health Study (1993-1997), excluding: cases diagnosed within 5 years after enrollment and 5 years of post-enrollment person-time for non-cases

Pesticides	Intensity-weighted lifetime-days	Non-cases (N=53,928)	ESRD Cases (N=268)	HR (95% CI)	p-value
		N (%)	N (%)		
FUMIGANTS					
Methyl Bromide	< 558	3337 (6.4)	18 (7.2)	0.73 (0.44, 1.2)	0.8469
	≥558 to <1898.75	2173 (4.2)	16 (6.4)	0.87 (0.51, 1.48)	
	≥1898.75	1946 (3.8)	16 (6.4)	0.92 (0.54, 1.56)	
FUNGICIDES					
Chlorothalonil *	<588	1305 (2.5)	13 (5.2)	1.75 (0.99, 3.08)	0.3986
	588-3254	1446 (2.8)	13 (5.2)	1.51 (0.85, 2.67)	
	≥3255	1292 (2.5)	10 (4)	1.29 (0.67, 2.46)	
Metalaxyl *	< 310	1336 (5.9)	10 (9.4)	1.78 (0.91, 3.48)	0.0204
	≥310 to <1764	1489 (6.5)	10 (9.4)	1.66 (0.81, 3.38)	
	≥1764	1262 (5.5)	12 (11.3)	2.42 (1.21, 4.82)	
HERBICIDES					
Phenoxy herbicides 2,4-D *	Phenoxy herbicides < 1756.7	15529 (30.2)	61 (24.4)	0.81 (0.57, 1.14)	0.4394
	≥1756.7 to <6770.25	12782 (24.9)	56 (22.4)	0.89 (0.62, 1.27)	
	≥6770.25	10290 (20)	59 (23.6)	1.02 (0.72, 1.46)	
2,4,5,T *	<780	2363 (10.3)	9 (8.4)	0.52 (0.26, 1.04)	0.5749
	≥ 780	1715 (7.5)	11 (10.3)	0.82 (0.44, 1.55)	
Triazine herbicides Atrazine	Triazine herbicides < 1306.7	13205 (25.5)	60 (23.5)	1.12 (0.8, 1.57)	
	≥1306.7 to <6961.5	14205 (27.5)	57 (22.4)	0.94 (0.66, 1.33)	
	≥6961.5	8433 (16.3)	54 (21.2)	1.32 (0.93, 1.87)	

					0.1344
Cyanazine	< 784	7691 (15.9)	25 (11.5)	0.89 (0.57, 1.4)	
	≥784 to <3110.3	6765 (14)	23 (10.6)	0.9 (0.56, 1.43)	
	≥3110.3	5647 (11.7)	22 (10.1)	1.16 (0.73, 1.86)	
					0.4804
Metribuzin *	< 472.5	3586 (15.7)	12 (11.1)	0.89 (0.47, 1.69)	
	≥472.5 to <1344	2397 (10.5)	14 (13)	1.61 (0.89, 2.91)	
	≥1344	2545 (11.1)	13 (12)	1.47 (0.8, 2.7)	
					0.1375
Dinitroaniline herbicides		Dinitroaniline herbicides			
Pendimethalin *	< 793.3	4227 (18.4)	12 (11.2)	0.7 (0.38, 1.3)	
	≥793.3 to <3307.5	2873 (12.5)	14 (13.1)	1.35 (0.76, 2.41)	
	≥3307.5	1651 (7.2)	11 (10.3)	1.98 (1.04, 3.78)	
					0.0214
Trifluralin	< 1128.75	8790 (18.2)	34 (16)	0.98 (0.66, 1.45)	
	≥1128.75 to <3596	7517 (15.6)	31 (14.6)	1.12 (0.74, 1.68)	
	≥3596	8958 (18.6)	32 (15.1)	0.96 (0.64, 1.45)	
					0.8937
Chloroacetanilide herbicides		Chloroacetanilide herbicides			
Metolachlor	<1006	9033 (18.7)	35 (15.8)	1.08 (0.74, 1.59)	
	1006-3827	7379 (15.3)	28 (12.6)	1.12 (0.74, 1.7)	
	≥ 3828	6001 (12.4)	32 (14.4)	1.49 (1.01, 2.2)	
					0.0486
Alachlor	< 1053.5	9759 (20.3)	42 (18.9)	1.1 (0.76, 1.59)	
	≥1053.5 to <5568	9389 (19.5)	42 (18.9)	1.1 (0.77, 1.58)	
	≥5568	5887 (12.3)	37 (16.7)	1.4 (0.96, 2.04)	
					0.0915
all other herbicides	all other herbicides				
Dicamba	< 490	7033 (14.7)	31 (14)	1.22 (0.8, 1.87)	
	≥490 to <2766.75	10048 (21)	28 (12.7)	0.8 (0.51, 1.24)	
	≥2766.75	7165 (14.9)	25 (11.3)	1.06 (0.67, 1.67)	

					0.9559
Chlorimuron-ethyl*	< 385	3462 (15.1)	11 (10.1)	0.92 (0.48, 1.74)	
	≥385 to <918.75	1530 (6.7)	10 (9.2)	1.8 (0.93, 3.49)	
	≥918.75	2457 (10.7)	13 (11.9)	1.45 (0.8, 2.62)	
					0.1509
EPTC	< 638	4467 (9.3)	11 (5.1)	0.78 (0.42, 1.45)	
	≥638 to <2088	2711 (5.7)	11 (5.1)	1.32 (0.71, 2.45)	
	≥2088	2666 (5.6)	9 (4.2)	1.14 (0.58, 2.23)	
					0.5962
Paraquat*	< 708.75	1999 (8.7)	7 (6.4)	0.79 (0.36, 1.73)	
	≥708.75 to <2334.5	896 (3.9)	10 (9.1)	2.53 (1.27, 5.03)	
	≥2334.5	942 (4.1)	10 (9.1)	2.38 (1.18, 4.77)	
					0.0087
Petroleum Oil*	<784	1917 (8.4)	8 (7.3)	1.09 (0.53, 2.26)	
	784-2024	986 (4.3)	11 (10.1)	3.5 (1.86, 6.6)	
	≥ 2025	1932 (8.5)	11 (10.1)	1.54 (0.82, 2.89)	
					0.1278
Imazethapyr	6748 (13.8)	6647 (13.9)	22 (10)	1.15 (0.71, 1.87)	
	5034 (10.3)	4956 (10.3)	27 (12.3)	2.04 (1.29, 3.23)	
	9178 (18.7)	9073 (18.9)	22 (10)	1 (0.61, 1.63)	
					0.9253
Glyphosate	< 609	11976 (23.1)	61 (24.1)	0.93 (0.66, 1.31)	
	≥609 to <2821	14935 (28.9)	60 (23.7)	0.68 (0.48, 0.97)	
	≥2821	12203 (23.6)	62 (24.5)	0.88 (0.62, 1.25)	
					0.865
Butylate*	<918.75	2936 (12.8)	9 (8.4)	0.68 (0.34, 1.37)	
	≥918.75	3077 (13.4)	13 (12.1)	1.02 (0.56, 1.84)	
					0.9357
INSECTICIDES	INSECTICIDES				
Organochlorines	Organochlorines				
Aldrin*	< 326.7	1253 (5.5)	10 (9.8)	1.21 (0.61, 2.4)	
	≥326.7 to <1019.2	1161 (5.1)	9 (8.8)	1.13 (0.55, 2.3)	

	≥1019.2	1194 (5.2)	10 (9.8)	1.16 (0.59, 2.3)	
Chlordane *	< 560	2519 (11)	10 (9.3)	0.63 (0.33, 1.23)	0.6787
	≥560 to <1260	812 (3.6)	11 (10.3)	1.88 (0.99, 3.56)	
	≥1260	800 (3.5)	10 (9.3)	1.72 (0.89, 3.35)	
DDT *	< 437.5	1822 (8)	11 (10.4)	0.66 (0.34, 1.25)	0.042
	≥437.5 to <2327.5	1628 (7.1)	14 (13.2)	0.85 (0.47, 1.54)	
	≥2327.5	1269 (5.6)	14 (13.2)	1.11 (0.61, 2)	
Heptachlor *	<440	1249 (5.4)	8 (7.5)	1 (0.47, 2.11)	0.5671
	≥440	1350 (5.9)	12 (11.3)	1.31 (0.7, 2.46)	
Toxaphene *	<1006	1508 (6.6)	8 (7.6)	0.82 (0.4, 1.69)	0.3933
	≥ 1006	939 (4.1)	7 (6.7)	0.93 (0.42, 2.04)	
					0.8395
Organophosphates	Organophosphates				
Terbufos	< 840	7045 (14.6)	25 (11.6)	1.03 (0.66, 1.61)	
	≥840 to <2182.25	4356 (9)	23 (10.6)	1.45 (0.93, 2.28)	
	≥2182.25	6659 (13.8)	27 (12.5)	1.09 (0.72, 1.66)	0.5841
Fonofos	< 672	4053 (8.4)	8 (3.7)	0.52 (0.25, 1.07)	
	≥672 to <1837.5	2722 (5.6)	6 (2.8)	0.57 (0.25, 1.3)	
	≥1837.5	3308 (6.8)	9 (4.2)	0.59 (0.29, 1.2)	0.1155
Chlorpyrifos	< 437.5	5856 (13.1)	22 (9.9)	0.76 (0.49, 1.19)	
	≥437.5 to <2262	7780 (17.4)	25 (11.3)	0.65 (0.43, 1)	
	≥2262	5696 (12.8)	26 (11.7)	0.93 (0.61, 1.41)	0.7539
Malathion *	< 644	6461 (28.4)	23 (21.7)	0.9 (0.53, 1.53)	
	≥644 to <1792	3553 (15.6)	24 (22.6)	1.5 (0.89, 2.53)	

	≥1792	4211 (18.5)	24 (22.6)	1.1 (0.65, 1.86)	
Parathion *	<1392	995 (4.4)	8 (7.7)	1.37 (0.66, 2.86)	0.6859
	≥1392	660 (2.9)	6 (5.8)	1.53 (0.66, 3.57)	
					0.3265
Diazinon *	<1260	3109 (13.6)	10 (9.4)	0.61 (0.32, 1.19)	
	≥1260	1653 (7.2)	12 (11.3)	1.22 (0.65, 2.28)	
					0.4855
Phorate *	< 437.5	2592 (11.3)	11 (10.9)	0.88 (0.45, 1.7)	
	≥437.5 to <2688	2721 (11.9)	5 (5)	0.37 (0.15, 0.93)	
	≥2688	1188 (5.2)	10 (9.9)	1.69 (0.87, 3.29)	
					0.1716
Coumaphos	<957	2058 (4.3)	12 (5.6)	1.32 (0.74, 2.37)	
	≥957	1618 (3.4)	13 (6.1)	1.81 (1.03, 3.17)	
					0.0345
Dichlorvos	<3136	2938 (6.1)	9 (4.3)	0.84 (0.43, 1.65)	
	≥ 3136	1655 (3.4)	10 (4.8)	1.7 (0.89, 3.23)	
					0.1051
Pyrethroids					
Permethrin for crops	< 420	2885 (6)	8 (3.7)	0.84 (0.42, 1.72)	
	≥420 to <4002	2809 (5.9)	10 (4.7)	0.95 (0.5, 1.8)	
	≥4002	1138 (2.4)	10 (4.7)	2.1 (1.1, 3.98)	
					0.0259
Permethrin for animals	<630	2660 (5.5)	8 (3.7)	1.15 (0.56, 2.35)	
	≥630	3209 (6.6)	11 (5.1)	1.31 (0.71, 2.42)	
					0.383
Carbamates					
Carbofuran	<696	5630 (11.7)	17 (8)	0.62 (0.38, 1.03)	
	696-2299	3674 (7.7)	16 (7.5)	0.79 (0.47, 1.33)	
	≥ 2300	3123 (6.5)	20 (9.4)	1.12 (0.7, 1.79)	
					0.614
Carbaryl *	< 1006.3	4930 (21.6)	16 (15.2)	0.58 (0.34, 1.02)	

	≥1006.3 to <7280	3129 (13.7)	14 (13.3)	0.64 (0.34, 1.2)	
	≥7280	1500 (6.6)	15 (14.3)	1.13 (0.59, 2.18)	0.278
Aldicarb *	<1176	814 (3.5)	7 (6.5)	1.9 (0.85, 4.24)	
	≥1176	877 (3.8)	6 (5.6)	1.68 (0.71, 3.99)	0.2459
*Indicates pesticides with duration and frequency information only available on the take-home questionnaire: N (non-cases) = 23,812 and N (cases) =114.					