

Cal/Ecotox Toxicity Data for Song Sparrow (*Melospiza melodia*)*

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Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
DIAZINON	500 g active ingredient/litre	TOX-EXP IND - biomarkers	% reduction of blood serum cholinesterase compared to untreated	27% (43% SD)	a	1
DIAZINON	500 g active ingred/litre	TOX-MORT - mortality in the field	mortality of eggs and nestlings (control 21 %)	38%	b	1
DIMETHOATE	480 g active ingredient/litre	TOX-EXP IND - biomarkers	mean reduction in blood serum cholinesterase activity compared to untreated	34% (27% SD)	c	1
DIMETHOATE	average food intake 2.14 g (0.48SE)/d ; 0.24 g Dimethoate sprayed over 1 m2 seeds;	TOX-Non-Repro-Sublethal - behavioral effects		significant reduction of mean daily activity levels (perch hopping)	d	2
DIMETHOATE	0.24 g Dimethoate sprayed over 1 m2 seeds	TOX-Non-Repro-Sublethal - indirect effects	weight loss (3.4 g over experiment period; controls gained 0.43 g)	3.4	e	2
FONOFOS; TERBUFOS	6 fields treated with fonofos; 5 fields treated with terbufos (application rates were according to recommended guidelines, Ontario Ministry of Agriculture and Food)	TOX-MORT - mortality in the field	survival of banded individuals, pre- versus post-application, up to 50 days post-application	no effect	f	3
FONOFOS; TERBUFOS	6 fields treated with fonofos; 5 fields treated with terbufos (application rates were according to recommended guidelines, Ontario Ministry of Agriculture and Food)	TOX-REPRO - reproductive success	reproductive parameters (reproductive success, clutch size, number of unhatched eggs, number of young fledged/nest) of nests located on edges of sprayed fields	no effect	g	3

Notes

- a NR; CANADA; NR; Species - California (R)=Melospiza melodia; TOX - Chemical=333-41-5; N=20-29 sparrows; spring; Christmas tree farms; Sherbrooke, Quebec; Tox Exp Tech=field application; Tox Exp Dur=single; Tox Study Dur=several days or weeks ; not specified; Tox Stat Sig=yes
- b Embryo; Nestling; CANADA; NR; Species - California (R)=Melospiza melodia; TOX - Chemical=333-41-5; N=9 nests; spring; Sherbrooke, Quebec; Tox Exp Tech=field application; Tox Exp Dur=single; Tox Study Dur=several days or weeks/not reported; Tox Stat Sig=no
- c Adult; CANADA; M; Species - California (R)=Melospiza melodia; TOX - Chemical=60-51-5; N=15-20 sparrows; spring; Christmas tree farms; Sherbrooke, Quebec; Tox Exp Tech=field application; Tox Exp Dur=single; Tox Study Dur=several days or weeks ; not specified; Tox Stat Sig=yes
- d NR; Lab; CANADA; NR; Species - California (R)=Melospiza melodia; TOX - Chemical=60-51-5; N=7 treated; 7 control; Tox Exp Tech=diet; Tox Exp Dur=single; (1 seed lot0; Tox Study Dur=30 days; Tox Stat Sig=yes; recovery time from intoxication was 10 days post exposure
- e NR; Lab; CANADA; NR; Species - California (R)=Melospiza melodia; TOX - Chemical=60-51-5; N=7 treated; 7 control; Tox Exp Tech=diet; Tox Exp Dur=single; (1 seed lot0; Tox Study Dur=30 days; Tox Stat Sig=yes
- f Adult; CANADA; B; Species - California (R)=Melospiza melodia; TOX - Chemical=944-22-9; TOX - Chemical=013071-79-9; N=88 males, 44 females (treatment); 69 males, 27 females (control); southwestern Ontario; Tox Exp Tech=field application; Tox Exp Dur=NR; Tox Stat Sig=N
- g Both Adult and Juv.; CANADA; B; Species - California (R)=Melospiza melodia; TOX - Chemical=944-22-9; TOX - Chemical=013071-79-9; N=60 treatment, 32 control nests; southwestern Ontario; Tox Exp Tech=field application; Tox Exp Dur=NR; Tox Stat Sig=N

References

- 1 Rondeau, Guy and Jean-Luc DesGranges. 1995. Effects of insecticide use on breeding birds in Christmas tree plantations in Quebec. *Ecotoxicology*. 4:281-298.
- 2 Brunet, Richard and Andre Cyr. 1992. The impact of dimethoate on rhythms of three granivorous bird species. *Agric. Ecosyst. Environ.* 41:327-336.
- 3 Knapton, Richard W., and Pierre Mineau. 1995. Effects of granular formulations of terbufos and fonofos applied to cornfields on mortality and reproductive success of songbirds. *Ecotoxicology*. 4:138-153.

* Cal/EPA, OEHHA and the University of California Regents are not responsible for damages of any kind resulting from the use of or reliance on information in this report. Users are encouraged to consult the original data. Updated: February 1999.