

US EPA ARCHIVE DOCUMENT

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2-4-81
BENEFIN
MULTIPLE

TDMS0030

DATA EVALUATION RECORD

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CASE GS0016

AMMONIUM SULFAMATE

PM 210 09/10/80

CHEM 005501 Ammonium sulfamate

BRANCH EEB DISC 40 TOPIC 05050045

FORMULATION 90 - FORMULATION NOT IDENTIFIED

FICHE/MASTER ID 00018842 CONTENT CAT 02

Atkins, E.L., Jr.; Anderson, L.D.; Greywood, E.A. (1969) Effect of Pesticides on Apiculture: Project No. 1499; Research Report CF-7501. (Unpublished study received May 8, 1971 under 1F1174; prepared by Univ. of California--Riverside, Dept. of Entomology, submitted by Ciba Agrochemical Co., Summit, N.J.; CDL:090973-B)

SUBST. CLASS = S.

DIRECT RVW TIME = 2 Hrs. (MH) START-DATE 10/16/80 END DATE 10/16/80

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CONCLUSIONS: This study is scientifically sound. See Table 1 for results.

METHODS AND MATERIALS:

Test Type: Toxicity to bees.

A. Test Species: Honey bees, (Apis mellifera)

Test Procedures: A bell-jar vacuum duster is used to apply the pesticide, mixed with a pyrolite dust diluent, to the test bees. Dosages of dust are weighed, bees are aspirated into dusting cages and treated, and bees are then transferred into holding cages. Observations are recorded at 12, 24, 48, 72, and 96 hours.

REPORTED RESULTS: Results are reported in Table 1. Pesticides are grouped according to their relative toxicity to honey bees. Ammonium sulfamate (AMS) is relatively non-toxic to honey bees.

Discussion/Results

See table for LD₅₀ values, slope values, and toxicity categories.

Statistical Analysis

Analysis of the data was performed to enable the authors to determine LD₅₀ values of pesticides from either dosage-mortality curves or from LC₅₀ values. The slope value was also obtained from the dosage-mortality curve.

Table 1.--1969 Laboratory Comparative Toxicity Tests on Honey Bees (cont.)

Pesticide	ug/ bee	LD value	Slope value	Type of Activity ^{1/}
Ethrel [®] (68-240)	12.09	7.0		GR
bromoxynil (Brominil [®] , Buctril [®])	14.50	2.0		
Topcide (S-6173)	14.50	2.4		H
amiben (Amiben [®] , ammonium salt)	14.50	2.8		H
cypromid (Clobber [®] , S-6000)	14.50	2.9		H
2,4-DB (Butyrac [®] 118, 4-(2,4-DB), 2,4-D-butyric, dimethylamine salt)	14.50	3.6		H
barban (Carbyne [®])	14.50	5.6		H
✓ benefin (Balan [®])	14.50	7.1		H
picloram (Tordon [®] 22K)	14.50	7.4		H
2,4-D, low volatile oil sol. form (Dacamine [®])	18.13	6.4		H
erbon (Baron [®])	18.13	6.6		H
chloropropylate (Acaralate [®])	24.17	1.6		A
bensulide (Prefar [®] , Betasan [®] , R-4461)	24.17	1.6		H
MCPA (Weedar [®])	24.17	2.4		H
propanil (DPA, Stam [®] F-34, Rogue)	24.17	3.7		H
Indopol [®] (Polybutenene H-300)	24.17	3.7		solvent
MSMA (Ansar [®] 170, Daconate [®])	24.17	4.1		H
Pipron [®]	36.26	2.0		P