1-3-84

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1. CHEMICAL: FMC 54800

2. FORMULATION: 0.8 EC

3. CITATION: Atkins, E.L., and D. Kellum. 1981. Effect of pesticides on agriculture: maximizing the effectiveness of honey bees as pollinators. 1981 Report of Research to California Alfalfa Seed Production Research Board. In EPA Acc. No. 251727, Vol. C-2 Subm. by FMC Corporation, Phila., PA, Nov. 1983.

4. REVIEWER: Allen W. Vaughan
Entomologist
EEB/HED

5. DATE REVIEWED: January 3, 1984

6. TEST TYPE: Bee toxicity

A. Test Species: Honey bee (Apis mellifera)

7. REPORTED RESULTS:

FMC 54800 was determined to be highly toxic to honey bees in a laboratory acute contact toxicity test (LD_{50} = 0.01462 micrograms per bee.)

8. REVIEWER's CONCLUSIONS:

This study is scientifically sound, and shows FMC 54800 to be highly toxic to honey bees.

Materials and Methods

Test Procedure

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 treaetd, and bees are then transferred into holding cages. Observations are recorded at 12, 24, 48, 72, and 96 hours.

Statistical Analysis

Analysis of the data was performed to enable the authors to determine LD_{50} values of pesticides from either dosage - mortality curves or from LC_{50} values. The slope value was also obtained from the dosage - mortality curve.

Discussion/Results

With an LD_{50} of 0.01462 micrograms per bee, FMC 54800 is extremely toxic to honey bees exposed to direct application.

Reviewer's Evaluation

A. Test Procedures

Procedures were sound.

B. Statistical Analysis

Analysis as performed by the authors was assumed to be valid. No validation was performed by EEB.

C. Discussion/Results

This study is scientifically sound.