

US EPA ARCHIVE DOCUMENT

4/20/81

Non-target Insects

Chemagro Accession No. 120301 contains six studies which deal with effects of Nemacur on non-target insects. Brief review of the studies indicates that the following submissions are unacceptable for hazard assessment, due to the reasons indicated:

- | | | |
|-------|---|--|
| 23662 | - | insufficient information |
| 23757 | - | insufficient information (species not reported); numbers of non-targets very small |
| 26431 | - | insufficient information (species not reported); numbers of non-targets very small |
| 26700 | - | numbers of non-targets too small to draw conclusions |
| 26804 | - | insufficient information; no numerical data |

Report No. 24211 was found to be scientifically sound; review follows:

Chemical : Nemacur (Bay 68135)

Citation : Johansen, C., and J. Eves. 1968.

Bee Research Investigations, 1968. Wash. State Univ., Unpubl. rept. 23 pp.

(Report No. 24211)

Reviewer : Allen W. Vaughan
Entomologist

Date Reviewed : April 17, 1981

Test Type : Toxicity to honey bee

Test species : Honey bee (Apis mellifera)

Reported Results :

reasons indicated :

- 23662 - insufficient information
- 23757 - insufficient information (species not reported); numbers of nontargets very small
- 26431 - insufficient information (species not reported); numbers of nontargets very small
- 26700 - numbers of nontargets too small to draw conclusions
- 26804 - insufficient information; no numerical data

Report No. 24211 was found to be scientifically sound; review follows:

Chemical : Nematicur (Bay 6.8135)

Citation : Johansen, C., and J. Eves. 1968.
Bee Research Investigations, 1968. Wash.
State Univ., Unpubl. rept. 23 pp.
(Report No. 24211)

Reviewer : Allen W. Vaughan
Entomologist

Date Reviewed : April 17, 1981

Test Type : Toxicity to honey bee

Test species : Honey bee (Apis mellifera)

Reported Results :

At 5.16 AI/A, Nematicur 10% G was relatively non-toxic to honey bees exposed to direct application or caged on treated foliage. Nematicur 3E, at the same rate, was highly

toxic to honey bees exposed to direct application or caged on treated foliage 1 day posttreatment.

Reviewer's Conclusions:

This study is scientifically sound and shows that Nemariv³⁵ is highly toxic to bees at 5 lb AI/A. Granular formulation does not present a hazard as bees are not exposed.

Materials and Methods

Test Procedures

Treatments were applied to 1/100 acre plots of alfalfa. Direct effects were tested on honey bees in small cages placed in the plots during treatment. Residual test exposures were replicated four times. Bees were fed honey syrup and held at 80°F. for 24-hr. mortality counts.

Statistical Analysis

None reported.

Discussion/Results

See "Reported Results," above. Also, note that 5 lb AI/A is 5x recommended rate for spray application of EC formulation.

Reviewer's Evaluation

A. Test Procedure

Procedure is sound.

B. Statistical Analysis

None reported.

C. Discussion/Results

Study is scientifically sound.

Nontarget Insects - Discussion

EEB has not received sufficient information to adequately assess the Nematic hazard to bees. One study showed Nematic 10% G to be harmless to bees; this is as expected, as use of this formulation results in little or no bee exposure. The EC formulation tested highly toxic, but the test was run at 5% recommended rate. No conclusions can be drawn at this time.

Also, no scientifically sound data on effects on other nontarget insects (e.g., predators and parasites) are available at this time.

A. Vaughan
4/20/81