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1-20-84

(TDR03B)

DATA EVALUATION RECORD

PAGE 1 OF 1

CASE ALDICARB PM 1/20/84

CHEM 098301

BRANCH EEB DISC TOPIC

FORMULATION 00 Active Ingredient

FICHE/MASTER ID BOWOAL04 CONTENT CAT 02

Hill, E F. 1983. Unpublished avian acute oral LD50 toxicity data.  
U.S. Fish and Wildlife Service. Patuxent Wildlife Research  
Center, Laurel, Md. (BOWOAL04).

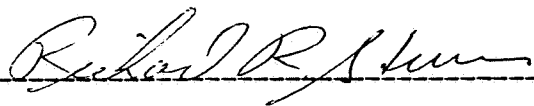
SUBST. CLASS =

OTHER SUBJECT DESCRIPTORS

PRIM:  
SEC:

DIRECT REVIEW TIME = 4 hrs. (MH) START DATE 10/22/83 END DATE 10/22/83

REVIEWED BY: Charles Bowen II  
TITLE: Fisheries Biologist  
ORG: EEB  
LOC/TEL:

SIGNATURE:  DATE: 1/20/84

REVIEWED BY:  
TITLE:  
ORG:  
LOC/TEL:

SIGNATURE: DATE:

Chemical: Aldicarb

Formulation: Technical (99% A.I)

Citation: Hill, E F. 1983. Unpublished avian acute oral LD50 toxicity data.  
U.S. Fish and Wildlife Service. Patuxent Wildlife Research  
Center, Laurel, Md. (BOWOAL04).

Reviewed By: Charles A. Bowen II

Title: Fishery Biologist

ORG: Ecological Effects Branch (EEB)

Test Type: Avian Acute Oral LD50

A. Species - Bobwhite Quail (Colinus virginianus)

Reported Results:

95 % C.L.

LD50 = 2 mg/kg (1.4 - 2.9)

Reviewer's Conclusions:

This bioassay is scientifically sound and demonstrates that technical Aldicarb is very highly toxic to upland game birds. This study will not fulfill the requirements for an avian acute oral LD50 study. See Conclusions for additional data needed to upgrade this bioassay.

Methods and Materials: Not reported

Author's Results:

Bobwhite Quail \*

Sex: Mixed      Age: Adult      Test-date: Not reported

| Conc.<br>mg/kg | Birds | Deaths by test-day |   |   |   |   |   |   |   | Mortality<br>(Individuals) |
|----------------|-------|--------------------|---|---|---|---|---|---|---|----------------------------|
|                |       | 1                  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |                            |
| Control        | 8     | 0                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                          |
| 1.0            | 8     | 0                  |   |   |   |   |   |   |   | 0                          |
| 1.3            | 8     | 3                  |   |   |   |   |   |   |   | 3                          |
| 2.0            | 8     | 4                  |   |   |   |   |   |   |   | 4                          |
| 2.7            | 8     | 6                  |   |   |   |   |   |   |   | 6                          |
| 4.0            | 8     | 8                  |   |   |   |   |   |   |   | 8                          |
| 5.4            | 8     | 7                  |   |   |   |   |   |   |   | 7                          |
| 8.0            | 8     | 7                  |   |   |   |   |   |   |   | 7                          |

Statistical summary: LC50: 2.0 mg/kg, 95% CI: 1.4-2.9 mg/kg, Slope: 3.2

| Conc.<br>(ppm) | Birds<br>(n) | Feed consumption, g/bird-day |   |   |   |   | Mortality<br>(%) |
|----------------|--------------|------------------------------|---|---|---|---|------------------|
|                |              | 1                            | 2 | 3 | 4 | 5 |                  |

Control

Not Reported

\* Note that all mortalities occurred within 3 hours after dosing.

\*\* Dose mortality data obtained from author via telephone 6/17/83.

Statistical Conclusions:

The LC50 calculated by the above method does not differ significantly from the value reported by the author.

Reviewer's Conclusions:

The conclusions drawn by the author are supported by dose mortality data. Deviations from EPA's current guidelines for avian acute oral studies are noted below:

1. lighting regimes were not reported.
2. Feed consumption data were not reported.
3. Temperature and relative humidity regimes were not reported.
4. Gross pathology was not reported.
5. Less than the recommended number of birds (10) were tested at each level.
6. Testing methodology was not reported.

Validation Status: Supplemental

Category repairability:

This bioassay will be re-evaluated and possibly upgrade provided the deficiencies cited above are corrected.