

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

CASE: GS0333

FENAMIPHOS

CONT-CAT: 01 GUIDELINES: 71-5

MRID: 25957

Lamb, D.W.; Jones, R.E. (1975) Toxicity of Nema-cur 15% Granular to Bobwhite Quail and Ring-Necked Pheasant under Simulated Field Conditions: Report No. 43811. (Unpublished study received March 28, 1979 under 3125-236; submitted by Mobay Chemical Corp., Kansas City, MO; CDL:237905-D).

REVIEW RESULTS:

VALID _____ INVALID X INCOMPLETE _____

GUIDELINE: SATISFIED _____ PARTIALLY SATISFIED _____ NOT SATISFIED X

DIRECT RVW TIME = START DATE: END DATE:

REVIEWED BY: Richard W. Felthousen

TITLE: Wildlife Biologist

ORG: EEB/HED

LOC/TEL: 557-1392

SIGNATURE: 

DATE: 12/05/86

APPROVED BY: O. Gutenson

TITLE: Acting Registration Standard Coordinator

ORG: EEB/HED

LOC/TEL:

SIGNATURE: 

DATE: 12/21/87

The study is not scientifically sound and does not fulfill the data requirement for an avian simulated test for upland game birds.

00001

DATA EVALUATION RECORD

1. CHEMICAL: Nemaicur
2. FORMULATION: Nemaicur 15% Granular (Formulated Product)
3. CITATION: Lamb, D.W. and R.E. Jones. (1975) Toxicity of Nemaicur 15% Granular to Bobwhite Quail and Ring-Necked Pheasant Under Simulated Field Conditions. Report No. 43811 submitted by Mobay Chemical Corp., Kansas City, MO.
4. REVIEWED BY: L.W. Touart
 Fisheries Biologist
 EEB/HED
5. DATE REVIEWED:
6. TEST TYPE: Simulated Field Test - Small Pen Study
 - A. TEST SPECIES: 1. Bobwhite Quail 2. Ring-Necked Pheasant
7. REPORTED RESULTS: Under the conditions of this study there was little or no hazard to bobwhite quail or ring-necked pheasant when Nemaicur 15% Granular was applied by band (incorporated and unincorporated) and broadcast (incorporated) at 27 oz. formulation/1000 ft. of row and 40 lb. formulation/acre, respectively.
8. REVIEWERS CONCLUSIONS: The study is not scientifically sound, it failed to adhere to suggested protocol of EPA guidelines (July 10, 1978). The study does not fulfill the requirements for an acceptable Avian simulated field test - small pen study with upland game birds.

Materials/Methods

The study was conducted on a freshly disced soil plot on the Chemagro Research Farm. The adult bobwhite quail were obtained from a central Kansas breeder at 12 months of age and ring-necked pheasants were obtained from an Eastern South Dakota breeder at 12 weeks of age. Prior to initiation of the test the birds were housed in a building with access to an outdoor run. NemaCur 15% Granular was applied by 2 methods. The first method was broadcasted at a rate of 40 lbs. formulation/acre with a hand operated whirl-type spreader. The granules were incorporated into the soil by discing the plot once at a depth of 6 inches. The second method was a 12 inch band on 30 inch rows at a rate of 27 oz. formulation/1000 ft. row.

The cages were placed on the plots after the granules were applied and incorporated. Birds were paired by sex and one pair placed per cage. Half of the cages did not receive feed for 22 hours after the birds were introduced.

Discussion/Results

Two female quail died in each of the incorporated, the non-incorporated band treatment groups as well as the controls. The broadcast treated group had one female quail mortality. On experimental day 2 ulcerative enteritis was diagnosed in the quail study. Quail in all 3 treatments and the controls were given procaine penicillin G in dihydrostreptomycin solution. There were no deaths of pheasant in any of the treated or control cages. The average weight change for each group of quail were as follows: - 12g for band incorporated; -14g for band unincorporated; -3g for broadcast; and -11g for controls. The pheasant had the following averages: +53 for band incorporated; +43 for band unincorporated; +50 for broadcast; and +35 for controls.

Under the conditions of this study there was little or no hazard to bobwhite quail or ring-necked pheasant when NemaCur 15% granular was applied by band (incorporated and unincorporated) and broadcast (incorporated) at 27 oz. formulation/1000 ft. of row and 40 lb. formulation/acre, respectively.

Reviewers Evaluation

A. Test Procedure

The test procedure generally complies with the recommended EPA 1978 protocol, except the age of the ring-necked pheasant at 12 weeks is too young and the control mortality and diseased condition of the bobwhite quail are unacceptable.

B. Statistical Analysis N/A

C. Discussion/Results

The suggested protocol for short term field studies with birds in the proposed guidelines of 1978 indicate a minimum age for test animals as not less than 16 weeks and the age of preference for simulated field tests is one year (with known history). Clearly, the test involving 12 week old ring-necked pheasant is not acceptable. The mortality among the bobwhite quail controls (2/12) plus the admitted diseased condition of the birds in the test and their subsequent treatment with antibiotics invalidate this test. The soil plot test site is not similar to tobacco fields or non-bearing fruit tree orchards.

D. Conclusions

1. Category: Invalid
2. Rationale: Unacceptable due to age of ring-necked pheasant used in the test and the control mortality and diseased state of bobwhite quail used in the study.
3. Repairability: No. Healthy animals of acceptable age are needed.