

US EPA ARCHIVE DOCUMENT

CASE G50097 CHLOROTHALONIL PM 400 08/03/82

CHEM 081901 Chlorothalonil (tetrachloroisophthalon

BRANCH EEB DISC 40 TOPIC 10200042

FORMULATION 00 - ACTIVE INGREDIENT

FICHE/MASTER ID 00041440 CONTENT CAT 01

Fink, R. (1976) Final Report: One-Generation Reproduction Study--
Bobwhite Quail; Project No. 111-107. (Unpublished study in-
cluding submitter summary, received Feb 19, 1980 under 677-313;
prepared by Wildlife International, Ltd., submitted by Diamond
Shamrock Agricultural Chemicals, Cleveland, Ohio; CDL:099247-F)

SUBST, CLASS = S.

DIRECT RVW TIME = (MH) START-DATE END DATE

REVIEWED BY: Daniel Rieder
TITLE: Wildlife Biologist
ORG: EEB/HED
LOC/TEL: 557-7666

SIGNATURE: *Daniel Rieder*

DATE: 12/16/82

APPROVED BY:
TITLE:
ORG:
LOC/TEL:

SIGNATURE:

DATE:

DATA EVALUATION SHEET

1. CHEMICAL: Bravo 500
2. FORMULATION: Chlorothalonol
3. CITATION
Fink, Robert, 1976. One Generation Reproduction Study - Bobwhite Quail. Received 2/19/80. Unpublished report prepared by Wildlife International Ltd. for Diamond. (Acc. No. 099247)
4. REVIEWED BY: Daniel Rieder
Wildlife Biologist
EEB/HED
5. DATE REVIEWED: March 14, 1980
6. TEST TYPE: Avian Reproduction, one generation
 - A. Test Species: Bobwhite Quail
 - B. Test Material: Chlorothalonil (99.6% pure)

7. REPORTED RESULTS

Bobwhite quail receiving chlorothalonil at dietary concentrations of 5 ppm and 50 ppm showed no symptoms of toxicity or behavioral abnormalities. Reproduction was not impaired at any concentrations.

8. REVIEWERS CONCLUSION

- A. Validation Category: Core
- B. Discussion

This study is scientifically sound and demonstrates that chlorothalonil does not impair one generation reproduction of Bobwhite Quail 50 ppm dietary concentration. The requirements for an avian reproduction study were fulfilled by this study.

METHODS/RESULTSA. Test Procedure

One hundred and eight pen reared-bobwhite quail were divided randomly into 3 groups. One group was the control, two groups were fed 5 ppm and 50 ppm of chlorothalonil with game bird breeder ration. Tests were conducted indoors with light, temperature, and humidity controlled. Twelve pens were used, with 1 male and 2 females per pen. The procedure generally followed the protocol recommended by EPA with the following exceptions:

1. The birds were described as mature, their exact ages were not given nor whether it would be their first breeding season;
2. Body weights were measured at initiation, immediately prior to onset of egg laying, and at termination of study rather than every 2 weeks; and
3. Only 6 weeks were spent at 7 hours of light/day rather than 8 weeks.

B. Statistical Analysis

The differences in reproductive success between the 3 groups were not statistically significant ($p < 0.05$).

C. Results

No mortality occurred at any concentration level. Chlorothalonil did not appear to affect reproductive success in this study of bobwhite quail.

REVIEWERS EVALUATIONA. Test Procedure

With the exception of the deficiencies reported above, this study meets the procedural requirements for an avian reproductive test. The deficiencies are considered acceptable and do not invalidate this study.

B. Statistical Analysis

Anova was performed on the individual pen data on number of eggs laid and eggs hatched. The results verified those provided in the report.

C. Discussion

There was no significant difference between the control and the 5 ppm and 50 ppm test levels. At these levels, chlorothalonil did not adversely affect reproduction.

D. Conclusions

1. Category: Core
2. Rationale: N/A
3. Repairable: N/A

Reproductive Data - Bobwhite quail

<u>Parameter</u>	<u>DTX 76-0044 (chlorothalonil) ppm</u>		
	<u>Controls</u>	<u>5</u>	<u>50</u>
Eggs Laid	566	539	648
Eggs cracked	70	50	55
Eggs set	449	447	563
Viable Embryos	407	553	478
Live 3-week Embryos	399	348	469
Normal Hatchlings	358	314	405
14-day old survivors	328	289	343