

US EPA ARCHIVE DOCUMENT

CASE GS0097 CHLOROTHALONIL PM 400 08/03/82

CHEM 081901 Chlorothalonil (tetrachloroisophthalon

BRANCH EEB DISC 40 TOPIC 10200042

FORMULATION 00 - ACTIVE INGREDIENT

FICHE/MASTER ID 00041441 CONTENT CAT 01

Fink, R. (1976) Final Report: One-Generation Reproduction Study--
Mallard Duck: Project No. 111-108. (Unpublished study including
submitter summary, received Feb 19, 1980 under 677-313; pre-
pared by Wildlife International, Ltd., submitted by Diamond
Shamrock Agricultural Chemicals, Cleveland, Ohio; CDL:099247-G)

SUBST. CLASS = S.

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

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DATA EVALUATION SHEET

1. CHEMICAL: Bravo 500

2. FORMULATION: Chlorothalonil

3. CITATION

Fink, Robert, 1976. One Generation Reproduction Study Mallard Duck. Received February 19, 1980. Unpublished report prepared by Wildlife International Ltd. For Diamond Shamrock Chemical Company. (Acc No 099247)

4. REVIEWED BY: Daniel Rieder
Wildlife Biologist
EEB/HED

5. DATE REVIEWED: March 18, 1980

6. TEST TYPE: Avian Reproduction, one generation

A. Test Species: Mallard Duck

B. Test Material: Chlorothalonil (99.6% pure)

7. REPORTED RESULTS

Mallard ducks 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 mallard ducks at dietary concentrations up to 50 ppm. The requirements for an avian reproduction study were fulfilled by this study.

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METHODS/RESULTSA. Procedure

One hundred and five pen reared Mallard ducks (30 males and 75 females) were divided into 3 groups with 10 males and 25 females in each group. These groups made up the control, the 5 ppm and 50 ppm dietary concentration level test groups. Five pens were used at each test level with 2 males and 5 females per pen. Ages and rearing history were not provided. Body weights were measured at beginning, just prior to onset of egg laying, and at termination of the study. Protocol conformed generally with that proposed in EPA guidelines.

B. Statistical Analysis

The differences in reproductive success between the control, the low, and the high concentration level were not statistically significant ($p < 0.05$).

C. Results

Dietary concentration of chlorothalonil at 5 ppm and 50 ppm had no effect on the overall reproductive success of mallard ducks in a one generation avian reproduction study.

REVIEWERS EVALUATIONA. Test Procedure

The protocol generally followed that specified in the EPA proposed guidelines of 1978. The variations described above are not considered significant and do not affect the validity of the test.

B. Statistical Analysis

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

C. Discussion

There was no significant difference between the control and the 5 ppm and 50 ppm test levels. Chlorothalonil is apparently innocuous to reproducing mallard ducks at dietary concentrations up to 50 ppm.

D. Conclusions

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

Reproductive Data Mallard ducks

<u>Parameter</u>	<u>Control</u>	<u>DTX 76-0044 (Chlorothalonil) (ppm)</u>	
		<u>5</u>	<u>50</u>
Eggs Laid	618	641	660
Eggs Cracked	10	12	22
Eggs Set	568	589	598
Viable Embryos	523	557	558
Live 3week embryos	516	542	530
Normal Hatchlings	370	411	399
14 day old survivors	340	390	369