



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

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OFFICE OF  
PESTICIDES AND TOXIC  
SUBSTANCES

June 15, 1990

MEMORANDUM

SUBJECT: Review of Mallard Reproduction Study with Dicofol  
Reg# 000707-00107

FROM: James W. Akerman, Chief  
Ecological Effects Branch  
Environmental Fate and Effects Division H7507C

TO: Herman Toma PM 74  
Reregistration Branch  
Special Review and Reregistration Division H7508C

The registrant, Rohm and Haas has submitted an avian reproduction study conducted using dicofol. The test was specially designed to allow parental incubation of eggs. This was required because it was assumed that the activities of parental incubation would tend to cause more eggs to break once the shells had been weakened by dicofol.

71-48 Study Identification: Beavers, Joann, Gloria Marselas, and Mark Jaber; 1989; Dicofol (Kelthane Miticide): A One-Generation Reproduction Study with Mallard (Anas platyrhynchos) Using Parental Incubation; Performed by Wildlife International, submitted by Rohm and Haas Co.; MRID No: 412313-01

Conclusions: This study is scientifically sound and indicates that dicofol significantly reduces egg shell strength at 40 ppm and possibly 10 ppm. The percent of eggs cracked relative to the number laid was significantly greater at the 40 ppm test level and in the DDE group than in the control. Other parameters such as eggs laid, eggs hatched and 14-day survivors were not significantly reduced at any test level (40 ppm is highest). A positive control indicated that DDE (40 ppm) also caused weakened egg shells as well as reduced 14-day survivors, and possibly number of eggs hatched. DDE did not reduce number of eggs laid. This study partially

fulfills the requirement for avian reproduction testing with dicofol. The registrant was required to perform 2 avian reproduction tests, one with the mallard and another with a raptor. Several raptor studies have been submitted, however, even though they provide useful information, none fulfills the requirement for the test required by EPA.

Summary

The submitted study shows that dicofol reduces egg shell quality in mallard ducks at around 10 ppm dietary exposure. The data requirement for avian reproduction testing is not fulfilled in that an acceptable raptor study has not been provided.

Please contact Dan Rieder if you have questions.