

ACCEPTED
SEP 14 1976
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 36765-1

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GUIDELINES FOR THE USE OF DDT IN THE CONTROL OF BATS

DDT 75% WETTABLE POWDER
300 grams net weight
(10.5 ozs.)

Active Ingredient:
Dichloro-diphenyl-trichloroethane (DDT) 75%
Inert Ingredients 25%

CAUTION

KEEP OUT OF REACH OF CHILDREN

Not For Sale To The Public

FOR INDOOR USE ONLY

NOTE: For the use only by agencies approved by the Center for Disease Control (CDC), Public Health Service, HEW, for control of bats which constitute a health hazard as potential rabies vectors. Users of this product must be familiar with the CDC policy on use of toxicants for RABIES CONTROL and the information required within 30 days of the field program's completion.

MIXING INSTRUCTIONS: Prepare only the quantity of DDT suspension that is necessary to spray the area to be treated. To determine the amount of spray required, calculate the size of the area to be treated in square feet. One gallon of spray suspension is sufficient to treat approximately 1,000 square feet to the saturation point. Add 300 grams (10.5 ozs) DDT 75% Wettable Powder to one (1) gallon water for each 1,000 square feet area to be treated and agitate or stir thoroughly to ensure adequate dispersal. If the area to be treated is less than 1,000 square feet, a smaller amount of spray should be prepared. For Example: 75.0 grams (2.6 ozs) of DDT 75% Wettable Powder to one (1) quart of water will treat an area of 250 square feet. Care should be taken to prepare only that amount of spray that is necessary to cover the area to be treated. Avoid spillage of powder or liquid suspension.

DIRECTIONS: Spray should be applied to all surfaces in roost where bats are known to rest. This may include such areas as attic floors and ceilings, cornices, roof crevices, walls, chimneys, hollow floors, and behind rafters or sheathing. All bat entrance holes should also be sprayed. Actual spraying of bats themselves is not necessary since spray residual deposited on roost surfaces is sufficient to kill bats.

CAUTION: Keep out of reach of children. Harmful if swallowed. Avoid inhalation and skin contact. In case of skin contact wash immediately with soap and water. Do not store near feed or foodstuffs. For indoor use only. Do not apply where wind or rain will move the powder from its original site of application. When treating an attic, protective covering should be placed over stored material and belongings. Do not over-spray which could result in "run-off" and damage to floors below. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply only as specified on this label.

Do not handle live bats. Wear gloves when picking up and destroying dead bats. It is recommended that persons exposed to colonies of live bats be pre-immunized against rabies.

CONTAINER DISPOSAL: Do not reuse empty container. Destroy it by perforating or crushing. Bury or discard in a safe place away from water supplies.

LIABILITY: The Center for Disease Control makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. User assumes all risk for use and/or handling of this material when such use and/or handling is contrary to label instructions.

CENTER FOR DISEASE CONTROL (HEW) 1600 Clifton Road, Atlanta, Georgia 30333
EPA REGISTRATION NO. 36765-1
EPA ESTABLISHMENT NO. 9990-GA-01

BACKGROUND

The use of DDT as a toxicant and repellent for bats inhabiting human dwellings was systematically evaluated by Greenhall and Stell¹ in 1959. DDT (one pound of 50 percent wettable powder suspended in one gallon of water), sprayed into roof spaces, eliminated colonies of *Molossus spp.* bats in Trinidad within three to four weeks after application. Girard² obtained similar results in Massachusetts using DDT against *Eptesicus fuscus*, and other colonial species, inhabiting human dwellings. Girard observed that in no instances were moribund bats found in the immediate vicinity of the treated dwelling later than two days after DDT application.

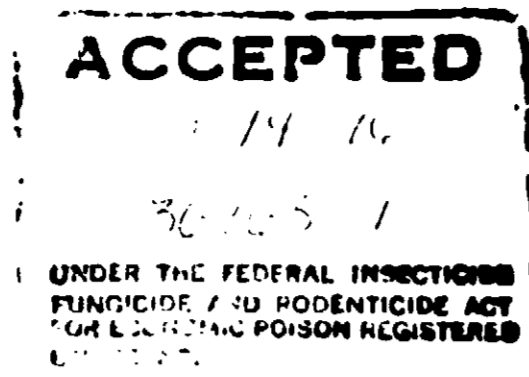
Greenhall and Stell concluded that DDT served as both a primary toxicant and a repellent to *Molossus spp.* Approximately one-third of the bats in the colony in their study were killed by the insecticide. The rest were either repelled by the DDT and survived, or they died away from the site of application.

The possibility that there will be increased human and animal contact with moribund bats following application of DDT and thus increased risk of rabies were emphasized by Greenhall and Stell. Thus, for at least two days (Girard) or for as long as three to four weeks (Greenhall and Stell) the likelihood of contact with moribund bats--and the possibility of exposure to rabies--may be increased in the immediate vicinity of the treated site.

CRITERIA FOR USE

DDT is a restricted insecticide, and specific limitations have been placed on the use of DDT for bat control. (See CDC Policy Statement on Use of Toxicants for Rabies Control - Appendix A.) Its release for this purpose is contingent upon demonstration of proof of need and agreement to provide the required post-treatment efficacy and safety data. Proof of need is a subjective judgment that will be based upon data presented by the applicant showing that a significant human health hazard exists due to the continued presence of bats at the site and that other measures to remove the bats have been unsuccessful or are impractical. Control measures that have been recommended as preferable to the use of DDT include the use of other repellents and/or the physical blocking of entrance holes. Closing entrance holes is the most effective means of ridding a building of bats; wire screen, wood, or fiberglass insulation are commonly used to seal entrances. When practical it is best to close the holes at night while the bats are away from the roost area; this minimizes the risk of exposure of the individual and avoids the problem of trapping bats in the roost. Entrance holes are best found by observing bats emerging from roosts at dusk.

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In structures in which closing roost sites is impractical, chemical repellants have been used in the past with varying degrees of success, however, there are no compounds currently registered with EPA for this purpose.

Fiberglass insulation has also been found an effective physical repellant if it can be placed where bats are roosting.

If other methods of control are unsuccessful or impractical, DDT may then be considered. The presence of rabies in the colony and/or a high risk of potential contact between bats and man or domestic animals must be specifically described. These data will be evaluated by the State and reviewed by the Center for Disease Control before approval to use DDT will be granted.

REQUESTING PROCEDURE

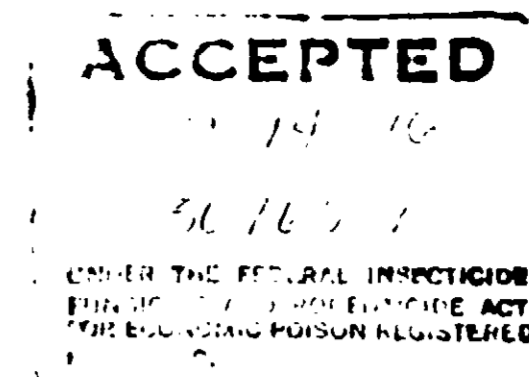
The use of DDT for bat control must be approved by CDC in consultation with an individual (state coordinator) designated by the State Health Officer in each state.

The applicant must provide the state coordinator with the information requested in "DDT for Control of Bats" (Appendix B) and such additional data as he deems appropriate. If he judges the request to be justified, he will forward the request with supporting data to Viral Diseases Division, Bureau of Epidemiology, CDC and a copy to the Regional Health Administrator, Attention: Director, Division of Prevention in your region, for final approval and action. If in the judgment of CDC the request is not justified, approval will be denied. If the request is approved by CDC, DDT will be provided to the state coordinator, who will be responsible for ensuring that the DDT is used as indicated and that required post-treatment data are provided.

In instances where control measures should be applied immediately, data may be presented and approval granted by telephone; in such cases the written request and written approval shall follow as soon as possible.

APPLICATION TECHNIQUES

CDC will provide the coordinator with one 300 gram (10.5 ozs) package of 75 percent DDT wettable powder on approval of a request. The approved label is shown in Appendix C. DDT is mixed with water in the proportion of 300 grams (10.5 ozs)/gallon of water in strict compliance with label instructions. This mixture should be sprayed at entrance and exit holes of roosts and on any surfaces where bats crawl or roost. It is not necessary to spray the bats since spray residual deposited on roost surfaces is sufficient to kill bats, and direct spraying may cause the bats to fly and thereby increase the risk of exposure to the applicator.



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Persons who will engage in actual spraying operations must be licensed in accordance with applicable Federal and state regulations, must be familiar with the health hazards of DDT, and must take appropriate precautions to minimize the risk of exposure to DDT for themselves, others, and the environment. Because of the potential for exposure of applicators to rabies, it is recommended that these persons also be pre-immunized against rabies.

Prior to application of DDT in a building, an entry agreement must be signed by landowner, tenant, lessee, or administrator. Signs warning of the potential hazard of rabid bats must be posted at all entries to premises for a period of at least seven days after application. A suggested warning sign is shown in Appendix D.

The roost site and immediate environs should be inspected for dead and moribund bats at least daily for seven days after DDT is applied. Bats should be collected by the pest control operator and placed in plastic bags to be delivered to health authorities for disposal. He must wear heavy leather gloves when picking up bats. Local residents must be warned of the potential hazard to themselves and their pets from touching sick or dead bats.

The described procedure is the only method of application of DDT approved for the control of bats. An experimental use permit must be obtained from the Environmental Protection Agency for all other application procedures. Information on such permits can be obtained from:

Special Projects Section
Registration Division (WH567)
Environmental Protection Agency
401 "M" Street, S.W.
Washington, D.C. 20460

REPORTING

To ensure that proper technique is utilized, to evaluate the efficacy of this technique, and to measure the health hazards associated with this procedure, applicators are required to provide to CDC, through state coordinators, the data required in Appendix B.

REFERENCES

1. Greenhall AM, Stell G: Bionomics and Chemical Control of Free-Tailed House Bats (*Molossus* spp.) in Trinidad. USDI/FWS Special Scientific Report--Wildlife No. 53, 1960
2. Girard KF: Personal communication, 1975

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UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
WHICH IS A POISON REGISTERED

APPENDIX A

CDC POLICY STATEMENT ON USE OF TOXICANTS FOR RABIES CONTROL

Control programs should be instituted only when the risk of human exposure to rabies has become abnormally high as a result of over-population of reservoir species or increased human (or domestic animals) - reservoir contact. Total elimination of the rabies threat is seldom a practical goal; rather, reduction to "normal" levels of risk is more often a realistic goal. Programs will not be approved simply to control depredating or nuisance animals.

Approval for control programs must be preceded by the provision of data from the applicant as described in information sheet. Approval presupposes that a final report will also be provided as indicated.

Toxicants may be placed only on those lands or premises where entry agreements are signed by landowner, tenant, lessee, or administrator.

Control programs can be carried out only by trained personnel responsible to the state health agency assigned the task of protecting the public against rabies outbreaks. Where states provide for licensing pesticide applicators, personnel involved in the program should be licensed in accordance with state regulations.

Every effort must be made to avoid human or non-target animal exposure to either toxicants or rabies as a consequence of the control program. Warning signs will be posted at all entries to premises so long as a health hazard continues as a result of the control program.

Upon termination of control program within the specified time period, appropriate measures will be taken to ensure that all toxic substances remaining will be removed and disposed of according to label directions.

Adequate records will be maintained of all phases of a control program to permit evaluation of the efficacy, cost, and safety of the program.

Control programs are normally authorized for short periods of time, usually 30 days; extensions may be granted. Control programs are not intended to replace other rabies management techniques as ongoing permanent type rabies control activities. In addition, programs will not be approved simply to control depredating or nuisance animals.

The approved applicant (state) is expected to cooperate with regional IPA personnel or CDC personnel during all phases of a control program to ensure that all practicable steps are taken to ensure a safe and effective operation.

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APPENDIX B

DDT FOR CONTROL OF BATS

A. Information to accompany formal request for approval to use:

1. Alternative methods for control which have been considered and reasons for their rejection.
2. Location of bat colony(ies) to be destroyed. Description structure to be treated (house, barn, etc.)
3. Approximate number of bats in colony, species, how long in this location (if known).
4. Proximity of colony to human habitation.
5. Presence of rabies in bat colony, incidence if known.
6. Number of persons in bat colony, incidence if known.
7. Amount of DDT to be used, assurance that only DDT supplied by CDC will be used.
8. How and when DDT is to be applied and by whom.
9. Mean normal temperature during the month of control and subsequent month.
10. Rabies immunity status of personnel conducting control operation.

B. Information to be provided within 30 days of completion of field program:

1. Statement that information provided in program request (above) is correct and that procedures as outlined were followed; or, description of any deviations which occurred, including specific information on how and why proposed procedures were modified.
2. Numbers and species of bats known or estimated killed.
3. Numbers of collected bats tested for rabies, by what laboratory, and diagnostic results.
4. Percent of original bats tested for rabies, by what laboratory, and diagnostic results.
5. Has treated roost site been bat-proofed (or will it be).
6. Details of any accidental human or non-target species exposure to DDT or rabies as a result of control program.
7. Estimation of success of objectives.