

## MAMMAL REPELLENTS

Chemical repellents are useful tools in preventing or controlling damage caused to resources by certain wild mammals. Depending on the situation, they may be used alone or as part of an integrated approach in conjunction with other techniques such as fencing, frightening, or hunting.

Repellents can be classified as area (odor) repellents or taste repellents, although some compounds have both properties. Area repellents repel animals by imparting odors to plants or to localities where they are applied. Ammonia compounds, bone tar oil, putrescent eggs, and naphthalene have odors which are repellent to some species. Tankage (a byproduct of meat packing plants) and creosote have also been used as odors to repel deer. Various "home remedy" repellents, including human hair, blood meal, and lion scent have also been suggested as possible deer or rabbit repellents, although data on their effectiveness is largely unavailable.

Taste repellents give plants a disagreeable taste, lowering the animals' preference for that particular food. The most commonly used taste repellents contain the fungicide Thiram (tetramethylthiuram disulfide). Such repellents will not protect plants during the growing season unless new growth is treated frequently.

Under conditions of food stress as may occur in fall, winter, and early spring, repellents often do not give adequate protection to plants. This is because many animals, when facing a choice between starvation and eating a food of low preference, will continue to feed. Also, the effectiveness of repellents may be reduced as animals become accustomed to the novel odor or taste. The use of repellents to control mammal damage is in many circumstances only a short-term solution.

Mention of specific products implies neither endorsement of products nor criticism of products not listed.



REPELLENTS FOR THE CONTROL OF WILDLIFE DAMAGE (MAMMALS)

<u>Chemical</u>	<u>Trade Name &amp; Company</u>	<u>Target Species</u>	<u>Use Locations</u>
1. Ammonium soaps of higher fatty acids (15%)	HINDER Leffingwell Division Thompson-Hayward Chemical Co. P.O. Box 1880 Brea, California 92621 (714) 529-3973  (24c registration in Nebraska)	Deer Rabbits	Fruit trees, vines, vegetable & field crops, forage crops, grain crops, ornamentals, nursery stock, and non-crop areas.
2. Bone tar oil (93.75%)	MAGIC CIRCLE DEER REPELLENT J.C. Ehrlich Chemical Co. State College Laboratories 800 Hiesters Lane Reading, Pennsylvania 19605 (215) 921-0614	Deer	Perimeter spray on ground or on hanging burlap strips surrounding plants to be protected.
3. Putrescent whole egg solids (15%)	BIG GAME REPELLENT CONCENTRATE 2103 McLaughlin Gormley King Co. 8810 Tenth Ave. N. Minneapolis, Minnesota 55427 (612) 544-0341	Deer Roosevelt Elk	Conifer seedlings, (all seasons). Ornamental shrub plantings and non-bearing fruit tree seedlings (dormant season use only).
4. Thiram* (7%)	CHAPERONE Sudbury Laboratory, Inc. 572 Dutton Rd. Sudbury, Massachusetts 01776 (617) 443-8844	Deer Rabbits Meadow Mice	Foliage, bark, and twigs to be protected.
5. Thiram* (10%)	+ RABBIT RID Animal Repellents Inc. 980 Ellicott Street Buffalo, New York 14209 (800) 241-5064 (Georgia Office)	Rabbits	Fruit trees, shrubs, ornamentals, and nursery stock.



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6. Thiram* (11%)	BONIDE RABBIT-DEER REPELLENT & BULB SAVER Bonide Chemical Co., Inc. Yorkville, New York 13495 (315) 736-8231	Deer Rabbits Field Mice	Shrubs, fruit trees, plants, ornamentals and nursery stock.
7. Thiram*	MAGIC CIRCLE RABBIT REPELLENT J.C. Ehrlich Chemical Co. State College Laboratories 800 Hiesters Lane Reading, Pennsylvania 19605 (215) 921-0614	Rabbits	Trees and shrubs.
8. Thiram* (20%)	NOTT CHEW-NOT Nott Manufacturing Pleasant Valley, New York 12569 (914) 635-3243	Deer Rabbits Meadow Mice	Trees and plants.
9. Thiram* (20%)	+ SCIENCE RABBIT & DEER REPELLENT Science Products Company, Inc. 5801 No. Tripp Ave. Chicago, Illinois 60646 (312) 583-3171	Deer Rabbits Meadow Mice	Nursery stock, fruit trees, ornamentals.
10. Thiram* (42%)	HOPKINS THIRAM 42-S FUNGICIDE AND REPELLENT Hopkins Agricultural Chemical Co. Box 7532 Madison, Wisconsin 53707	Deer Rabbits	Fruit trees, shrubs, ornamentals, and nursery stock.

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11. Thiram* (42%)	GUSTAFSON 42-S Gustafson, Inc. 6350 LBJ Freeway, Suite 180 Dallas, Texas 75240 (214) 661-1334	Deer Rabbits	Fruit trees, shrubs, ornamentals, nursery stock. Also can be used as a seed treatment by following label direc- tions.
12. Thiram* (42%)	SCRAM 42-S Wilbur-Ellis Co. P.O. Box 8838 Portland, Oregon 97208 (503) 227-3525	Deer Rabbits	Fruit trees, shrubs, ornamentals, nursery stock.
13. Thiram* (42%)	SPOTRETE-F FLOWABLE TURF FUNGICIDE W.A. Cleary Co. P.O. Box 10 Somerset, New Jersey 08873 (201) 247-8000 (As a repellent, 24c registration in Nebraska pending.)	Deer Rabbits Rodents	Nursery stock, shrubs, and ornamentals. Grow- ing season only.
14. <u>tert</u> -Butylsulfenyl- dimethyldithiocarbamate and related compounds (25.76%)	R-55 REPELLENT CONCENTRATE 25E Phillips Petroleum Co. Bartlesville, Oklahoma 74007 (918) 336-6600	Plains Pocket Gopher Northern Pocket Gopher	For treatment of soil surrounding buried cables.
15. Naphthalene (100% granules)	Naphthalene (Various manufacturers and suppliers)	Bats Tree Squirrels	In buildings.



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16. Capsaicin (2.54%)	HOT SAUCE ANIMAL REPELLENT Miller Chemical and Fertilizer Corp. Box 333 Hanover, Pennsylvania 17331 (717) 632-8921 (National registration expected in early 1980.)	Deer Rabbits Meadow Mice Pine Mice	Dormant fruit trees and ornamentals.

\* Thiram formulations must not be applied to plant parts that are to be used for food or feed.  
+ Available only in quantities of less than 1 gallon.

Robert M. Timm  
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