

WILDLIFE DAMAGE CONTROL

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CONTROLLING RATS AND MICE WITH ANTICOAGULANTS

This leaflet gives information on using anticoagulants for rat and mouse control, and exposing and handling the baits for the best results.

It is impossible to recognize anticoagulants by trade names alone. In the table of ingredients on the label, the active ingredient is identified by such chemical names as Chlorophacinone, Diphacinone, Fumarin, Pival, PMP, Prolin, Warfarin, Brodifacoum or Bromadiolone. As others are developed, their names and characteristics will be available through Rodent and Predatory Animal Control Service personnel. All are available in ready-to-use forms and usually are packaged in cardboard boxes or paper sacks.

Anticoagulants prevent blood clotting and cause death from internal hemorrhages. Anticoagulant baits are available in multiple-dose and single-dose formulations. Rats and mice must eat the multiple-dose bait every day for 5 or 6 days, or every other day for at least 12 days before hemorrhages are fatal. Single-dose anti-

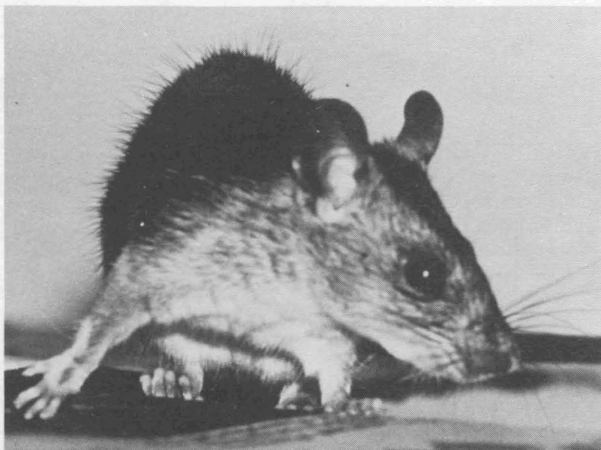
coagulant bait needs to be eaten by rats and mice only once. Death from single-dose anticoagulant bait containing brodifacoum or bromadiolone is available only to licensed pest control operators and certified pesticide applicators. Further information regarding single-dose anticoagulant baits is available through Rodent and Predatory Animal Control Service personnel. Since no pain is connected with the action of anticoagulant bait and there is no warning, rats and mice apparently continue returning to feed if the bait is attractive.

EXPOSING THE BAIT

For Rat Control. Offer dry cereal anticoagulant bait to rats in $\frac{1}{2}$ to $\frac{1}{4}$ pound sacks or packages. Place bait where rats feed along walls, inside and outside buildings, in dark corners, under floors, in attics and under stairways less than 25 feet apart. To hasten feeding, slit paper sacks so that bait spills out.

The number of baits to distribute varies. For small buildings with a few rats, 2 pounds is sufficient. If there are many rats, use 4 or 5 pounds. The average for a Texas farm is about 10 pounds. Use at least 3 pounds in treating a residence.

If rats are eating the bait in certain places and not in others, move the bait to the location where they prefer to eat. Keep replenishing the bait until the rats stop eating. Where there is a source of reinfestation from other areas, such as dump grounds or nearby infested buildings, keep baits out at all times for new rats as they come in. When anticoagulant baits become weevily or rancid with age, replace them with fresh bait. Multiple-dose bait placed outside buildings by burrows under foundations should be covered with heavy boxes, leaving one or



more small openings large enough only for rat entry. Place single-dose bait in tamper-proof bait boxes or in areas inaccessible to children, pets and wildlife.

In addition to the dry form, a water soluble material is available for use in water bait. This is particularly effective in dry surroundings and where an attractive source of food is already available. Use one packet of multiple-dose, soluble anticoagulant per quart of water in baby chick water fountains or similar containers. Where freezing occurs, use plastic containers rather than glass. Freezing, however, does not seem to alter the effect of the anticoagulant. Water soluble bait and cereal bait placed together are a very effective control program.

For Mouse Control. Mice are effectively controlled with anticoagulant baits. Smaller amounts of bait are needed for mice than for rats. Place tablespoon amounts ($\frac{1}{2}$ to $\frac{1}{4}$ ounces) of bait at 8- to 12-foot intervals. Place baits where mice feed, water or travel along walls, in corners and concealed places. Cigar boxes with small entrances for mice have been used successfully as bait boxes for multiple-dose anticoagulant baits. Place single-dose anticoagulant bait in tamper-proof bait boxes or in areas inaccessible to children, pets or wildlife. Clean the boxes and replenish with fresh bait every 2 or 3 days, especially if mice are feeding heavily.

Water soluble bait is not as important in mouse control as in rat control, since mice require very little water other than that derived from food.

MEASURING RESULTS

Results cannot always be measured by counting dead rats and mice. When baits are no longer being eaten, when there are no fresh droppings and when no live rats or mice are seen, results are as good as can be expected from any type of bait.

SAFETY PRECAUTIONS

Read the label carefully. Do not purchase bait that does not have full instructions on the label. Look for the Environmental Protection Agency (EPA) registration number.

Anticoagulant bait can harm any animal or human eating it every day or every other day for several days. In some cases, one feeding may cause death, but the amount must be large before this happens in most cases. Generally, the larger the animal, the greater the amount it would have to eat. But take no chances. Keep pets, livestock and people out of buildings where the bait is placed, or use a bait box similar to the one illustrated.

When a human consumes an anticoagulant bait, force the person to vomit by administering a tablespoon of salt in a glass of warm water. Call a physician immediately. All anticoagulant labels or instruction leaflets give further instructions for physicians.

Destroy unused bait and containers by burning or burying deeply. Store any bait or poison out of reach of children, domestic animals or pets.

BAIT BOXES

Place bait only where rats and mice can feed on it. Figure 1 shows a simple method of protecting bait.

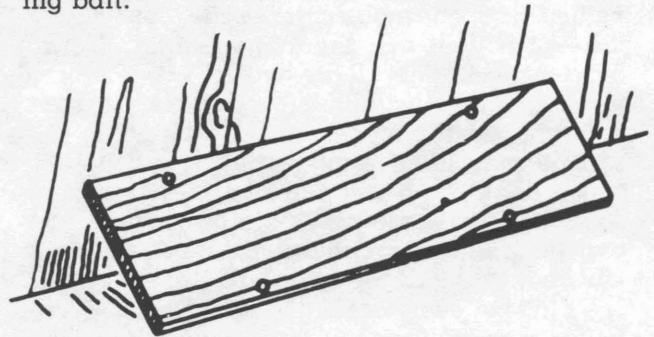


Figure 1

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Animal Damage Control Program is implied.

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The Texas Rodent and Predatory Animal Control Service is a cooperative program involving the Texas Agricultural Extension Service, U.S. Fish and Wildlife Service and the Texas Animal Damage Control Association.